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(54)【発明の名称】　ｓａＲＮＡ組成物および使用方法

(57)【要約】　（修正有）
【課題】予防的な診断および／または治療のために、ＮＡＴの先験的な同定を必要とせずポリコーム複合体における相互作用に依拠しないｓａＲＮＡを用いた活性化による遺伝子の標的化モジュレーションのための組成物および方法を提供する。
【解決手段】特定の標的遺伝子により発現される任意のタンパク質からなる群から選択される、標的タンパク質の発現をアップレギュレートする単離された合成ｓａＲＮＡを提供する。
【選択図】なし

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【特許請求の範囲】
【請求項１】
表１の標的遺伝子により発現される任意のタンパク質からなる群から選択される標的タンパク質の発現をアップレギュレートする単離された合成ｓａＲＮＡ。
【請求項２】
一本鎖であり、かつ１４～３０ヌクレオチド長である、請求項１に記載のｓａＲＮＡ。
【請求項３】
配列番号１～４０４７、３１５２３６～３１８７２６、５８４７８５～５８９０６１、９１３３１０～９１７５３１、１２４１０８０～１２４５４０１、および１５５９９３２～１５６４３７２からなる群から選択されるヌクレオチド配列の逆相補体と少なくとも８０％同一である、請求項２に記載のｓａＲＮＡ。
【請求項４】
３’オーバーハングを含む、請求項１または２に記載のｓａＲＮＡ。
【請求項５】
本出願の冒頭で参照された配列表に記載のアンチセンス配列からなる群から選択されるアンチセンス配列を含む、請求項２に記載のｓａＲＮＡ。
【請求項６】
３’テールを含む、請求項２～５のいずれか一項に記載のｓａＲＮＡ。
【請求項７】
少なくとも１つの修飾を含む、請求項２～６のいずれか一項に記載のｓａＲＮＡ。
【請求項８】
アンチセンス鎖とセンス鎖とを含むｓａＲＮＡ二本鎖であり、各鎖が独立して１４～３０ヌクレオチド長である、請求項１に記載のｓａＲＮＡ。
【請求項９】
前記ｓａＲＮＡ二本鎖の前記アンチセンス鎖が、配列番号１～４０４７、３１５２３６～３１８７２６、５８４７８５～５８９０６１、９１３３１０～９１７５３１、１２４１０８０～１２４５４０１、および１５５９９３２～１５６４３７２からなる群から選択されるヌクレオチド配列の逆相補体と少なくとも８０％同一である、請求項８に記載のｓａＲＮＡ。
【請求項１０】
前記ｓａＲＮＡの前記アンチセンス鎖または前記センス鎖が独立して３’オーバーハングを含む、請求項８または９に記載のｓａＲＮＡ。
【請求項１１】
本出願の冒頭で参照された配列表に記載のセンス配列および対応するアンチセンス配列からなる配列の群から選択されるセンス配列およびアンチセンス配列を含む、請求項８に記載のｓａＲＮＡ。
【請求項１２】
３’テールを含む、請求項８～１１のいずれか一項に記載のｓａＲＮＡ。
【請求項１３】
前記アンチセンス鎖および前記センス鎖が独立して少なくとも１つの修飾を含む、請求項８～１２のいずれか一項に記載のｓａＲＮＡ。
【請求項１４】
請求項１～１３のいずれか一項に記載のｓａＲＮＡと、少なくとも１種の薬学的に許容可能な賦形剤とを含む医薬組成物。
【請求項１５】
請求項１～１３のいずれか一項に記載のｓａＲＮＡを投与する工程を含む、標的タンパク質の発現をモジュレートする方法。
【請求項１６】
前記標的タンパク質の前記発現が増加される、請求項１５に記載の方法。
【請求項１７】

前記標的タンパク質の前記発現が少なくとも３０％だけ増加される、請求項１６に記載の方法。
【請求項１８】
前記標的タンパク質の前記発現が少なくとも５０％だけ増加される、請求項１７に記載の方法。
【請求項１９】
表２の任意の非コード標的遺伝子からなる群から選択される標的遺伝子の発現をアップレギュレートする単離された合成ｓａＲＮＡ。
【請求項２０】
一本鎖であり、かつ１４～３０ヌクレオチド長である、請求項１９に記載のｓａＲＮＡ。
【請求項２１】
配列番号１８７９１８９～１８８９２０７からなる群から選択されるヌクレオチド配列の逆相補体と少なくとも８０％同一である、請求項２０に記載のｓａＲＮＡ。
【請求項２２】
３’オーバーハングを含む、請求項１９または２０に記載のｓａＲＮＡ。
【請求項２３】
本出願の冒頭で参照された配列表に記載のアンチセンス配列からなる群から選択されるアンチセンス配列を含む、請求項２０に記載のｓａＲＮＡ。
【請求項２４】
３’テールを含む、請求項２０～２３のいずれか一項に記載のｓａＲＮＡ。
【請求項２５】
少なくとも１つの修飾を含む、請求項２０～２４のいずれか一項に記載のｓａＲＮＡ。
【請求項２６】
アンチセンス鎖とセンス鎖とを含むｓａＲＮＡ二本鎖であり、各鎖が独立して１４～３０ヌクレオチド長である、請求項１９に記載のｓａＲＮＡ。
【請求項２７】
前記ｓａＲＮＡ二本鎖の前記アンチセンス鎖が、配列番号１８７９１８９～１８８９２０７からなる群から選択されるヌクレオチド配列の逆相補体と少なくとも８０％同一である、請求項２６に記載のｓａＲＮＡ。
【請求項２８】
前記ｓａＲＮＡの前記アンチセンス鎖または前記センス鎖が独立して３’オーバーハングを含む、請求項２６または２７に記載のｓａＲＮＡ。
【請求項２９】
本出願の冒頭で参照された配列表に記載のセンス配列および対応するアンチセンス配列からなる配列の群から選択されるセンス配列およびアンチセンス配列を含む、請求項２６に記載のｓａＲＮＡ。
【請求項３０】
３’テールを含む、請求項２６～２９のいずれか一項に記載のｓａＲＮＡ。
【請求項３１】
前記アンチセンス鎖および前記センス鎖が独立して少なくとも１つの修飾を含む、請求項２６～３０のいずれか一項に記載のｓａＲＮＡ。
【請求項３２】
請求項１９～３１のいずれか一項に記載のｓａＲＮＡと、少なくとも１種の薬学的に許容可能な賦形剤とを含む医薬組成物。
【請求項３３】
請求項１９～３１のいずれか一項に記載のｓａＲＮＡを投与する工程を含む、標的タンパク質の発現をモジュレートする方法。
【請求項３４】
前記標的タンパク質の前記発現が増加される、請求項３３に記載の方法。

【請求項３５】
前記標的タンパク質の前記発現が少なくとも３０％だけ増加される、請求項３４に記載の方法。
【請求項３６】
前記標的タンパク質の前記発現が少なくとも５０％だけ増加される、請求項３５に記載の方法。
【発明の詳細な説明】
【技術分野】
【０００１】
本明細書は、配列表テキストファイルとして電子的に提出された「長い」配列表を含んでおり、その全体が参照により本明細書に組み込まれる。
本発明は、オリゴヌクレオチド、特にｓａＲＮＡと、標的遺伝子発現をモジュレートするための組成物と、診断用途および治療用途において組成物を使用する方法とに関する。
【背景技術】
【０００２】
近年、所与のｍＲＮＡに対してセンスまたはアンチセンスであり、かつ非コード転写物と推定される転写物を破壊することにより、低分子ＲＮＡが転写をレギュレート可能であることが発見されてきた。所与のｍＲＮＡに対してセンスであるかまたはそれと同一である非コード転写物を破壊すると、そのｍＲＮＡの転写の抑制が起こり、一方、所与のｍＲＮＡに対してアンチセンスである非コード転写物を破壊すると、そのｍＲＮＡの転写の活性化および／もしくは発現の増加、またはそのｍＲＮＡによりコードされるタンパク質のレベルの増加が起こる。したがって、低分子ＲＮＡは、かかる非コード転写物を標的とすることにより、特定の遺伝子を核酸またはタンパク質のいずれかでアップレギュレートするために使用可能である。低分子二本鎖ＲＮＡも、遺伝子プロモータにオーバーラップするｎｃＲＮＡを標的とすることにより、遺伝子発現を増加させることが発見されてきた（非特許文献１）（その内容はその全体が参照により本明細書に組み込まれる）。
【０００３】
何らかの機序により標的遺伝子の発現のアップレギュレーションをもたらす低分子ＲＮＡは、いずれも低分子活性化ＲＮＡ（ｓｈｏｒｔ　ａｃｔｉｖａｔｉｎｇ　ＲＮＡ）または小分子活性化ＲＮＡ（ｓｍａｌｌ　ａｃｔｉｖａｔｉｎｇ　ＲＮＡ）（ｓａＲＮＡ）と称される。ｓａＲＮＡの使用により標的遺伝子をアップレギュレートする公知の方法は、対象標的遺伝子に対してアンチセンスであるＲＮＡ転写物を検出する工程と、同定された転写物をダウンレギュレートする低分子ＲＮＡを設計する工程とを含みうる。たとえば、ウォーレステット（Ｗａｈｌｅｓｔｅｄｔ）の特許文献１（その内容はその全体が参照により本明細書に組み込まれる）には、標的細胞内で標的遺伝子のセンス鎖の天然に存在するアンチセンス転写物（ＮＡＴ：ｎａｔｕｒａｌｌｙ－ｏｃｃｕｒｒｉｎｇ　ａｎｔｉ－ｓｅｎｓｅ　ｔｒａｎｓｃｒｉｐｔ）に核酸分子を標的化する工程を含む、標的遺伝子の発現をモジュレートする方法が開示されている。この場合、ＮＡＴを標的とする核酸分子はＮＡＴに相補的である。ＮＡＴは、コードＲＮＡ転写物でありうるか、または広範なオープンリーディングフレームがいずれも欠如している非コードＲＮＡ転写物でありうる。他の例として、クリーグ（Ｋｒｉｅｇ）らの特許文献２（その内容はその全体が参照により本明細書に組み込まれる）には、ポリコーム抑制性複合体２（ＰＲＣ２）タンパク質への長鎖非コードＲＮＡ（ｌｎｃ－ＲＮＡ）の結合を一本鎖オリゴヌクレオチドによりブロックすることにより、ｌｎｃ－ＲＮＡによる標的遺伝子の抑制を防止する工程を含む、標的遺伝子の発現を活性化する方法が教示されている。
【先行技術文献】
【特許文献】
【０００４】
【特許文献１】米国特許第８，２８８，３５４号明細書
【特許文献２】国際公開第２０１２／０６５１４３号

【非特許文献】
【０００５】
【非特許文献１】ジャノウスキー（Ｊａｎｏｗｓｋｉ）ら著、ネイチャー・ケミカル・バイオロジー（Ｎａｔｕｒｅ　Ｃｈｅｍｉｃａｌ　Ｂｉｏｌｏｇｙ）、２００７年、第３巻、ｐ．１６６～１７３
【発明の概要】
【発明が解決しようとする課題】
【０００６】
しかしながら、予防的な診断および／または治療のために、ＮＡＴの先験的な同定を必要とせずポリコーム複合体における相互作用に依拠しないｓａＲＮＡを用いた活性化による遺伝子の標的化モジュレーションのための組成物および方法の必要性が残されている。
【課題を解決するための手段】
【０００７】
本発明は、診断および予後予測を含めて治療目的で標的遺伝子発現および／または機能をモジュレートする低分子（または小分子）活性化ＲＮＡ（ｓａＲＮＡ）の設計、調製、製造、製剤化、および／または使用のための組成物、方法、およびキットを提供する。
【０００８】
ｓａＲＮＡという用語は、当業者により、単数形のｓａＲＮＡまたは複数形のｓａＲＮＡ（ｓａＲＮＡｓ）を意味しうるものと理解される。
本発明の一態様は、標的遺伝子のアンチセンスＲＮＡ転写物を標的とするｓａＲＮＡを提供する。以降では、標的遺伝子のアンチセンスＲＮＡ転写物は標的アンチセンスＲＮＡ転写物と呼ばれる。標的アンチセンスＲＮＡ転写物は、標的遺伝子のコード鎖から転写される。
【０００９】
本発明の他の態様は、標的遺伝子のアンチセンスＲＮＡ転写物を標的とするｓａＲＮＡと、少なくとも１種の薬学的に許容可能な賦形剤とを含み、標的遺伝子の発現がアップレギュレートされる、医薬組成物を提供する。
【００１０】
本発明の他の態様は、標的遺伝子のアンチセンスＲＮＡ転写物を標的とするｓａＲＮＡを投与する工程を含む、標的遺伝子の発現をモジュレートする方法を提供する。
本発明の他の態様は、標的遺伝子のアンチセンスＲＮＡ転写物を標的とするｓａＲＮＡを投与する工程を含み、標的遺伝子が疾患に関連付けられる、疾患の予防または治療を提供する。
【００１１】
上記および他の目的、特徴、および利点は、添付の図面に例示される本発明の特定の実施形態の以下の説明から明らかになるであろう。図中、同一の参照文字は異なる図全体を通じて同一の部分を意味する。図面は、必ずしも原寸通りとは限らず、その代わりに本発明の種々の実施形態の原理を例示することに重点が置かれている。
【００１２】
本発明の種々の実施形態の詳細は以下の説明に示される。本発明の他の特徴、目的、および利点は、説明および図面ならびに特許請求の範囲から明らかになるであろう。
【図面の簡単な説明】
【００１３】
【図１】本発明のｓａＲＮＡの機能に関与する核酸部分の関係を例示する概略図。
【発明を実施するための形態】
【００１４】
本発明は、治療目的で標的遺伝子発現および／または機能をモジュレートするための組成物、方法、およびキットを提供する。これらの組成物、方法、およびキットは、標的遺伝子の発現をアップレギュレートする少なくとも１種のｓａＲＮＡを含む。
【００１５】

Ｉ．ｓａＲＮＡの設計および合成

本発明の一態様は、ｓａＲＮＡの設計および合成の方法を提供する。

本発明に関連する「低分子活性化ＲＮＡ」または「ｓａＲＮＡ」という用語は、特定の遺伝子の発現をアップレギュレートするか、またはそれに対する正の作用を有する一本鎖または二本鎖のＲＮＡを意味する。ｓａＲＮＡは、１４～３０ヌクレオチドの一本鎖でありうる。ｓａＲＮＡはまた、各鎖が１４～３０ヌクレオチドを含む二本鎖でありうる。この遺伝子は、ｓａＲＮＡの標的遺伝子と呼ばれる。本明細書で用いられる場合、標的遺伝子は、コード鎖と鋳型鎖とを含む二本鎖ＤＮＡである。たとえば、Ａ３ＧＡＬＴ２遺伝子の発現をアップレギュレートするｓａＲＮＡは「Ａ３ＧＡＬＴ２－ｓａＲＮＡ」と呼ばれ、Ａ３ＧＡＬＴ２遺伝子はＡ３ＧＡＬＴ２－ｓａＲＮＡの標的遺伝子である。標的遺伝子は任意の対象遺伝子でありうる。いくつかの実施形態では、標的遺伝子は鋳型鎖のプロモータ領域を有する。

【００１６】

遺伝子の「アップレギュレーション」または「活性化」とは、遺伝子の発現レベル、遺伝子によりコードされるポリペプチドのレベルもしくはその活性、または遺伝子の鋳型鎖から転写されるＲＮＡ転写物のレベルが本発明のｓａＲＮＡの不在下で観測されるよりも増加することを意味する。本発明のｓａＲＮＡは、標的遺伝子の発現に対する直接的アップレギュレート作用を有しうる。

【００１７】

本発明のｓａＲＮＡは、標的遺伝子の鋳型鎖から転写されるＲＮＡ転写物および／または標的遺伝子もしくはｍＲＮＡによりコードされるポリペプチドに対する間接的アップレギュレート作用を有しうる。以降では、標的遺伝子から転写されるＲＮＡ転写物は標的転写物と呼ばれる。標的転写物は標的遺伝子のｍＲＮＡでありうる。標的転写物はミトコンドリアに存在しうる。本発明のｓａＲＮＡは、生物学的プロセスまたは活性に対する下流作用を有しうる。かかる実施形態では、第１の転写物を標的とするｓａＲＮＡは、第２の非標的転写物に対する作用（アップレギュレーションまたはダウンレギュレーションのいずれか）を有しうる。

【００１８】

一実施形態では、本発明のｓａＲＮＡは、増殖細胞で効力を示しうる。細胞に関して本明細書で用いられる場合、「増殖」とは、急速に成長および／または複製している細胞を意味する。

【００１９】

標的遺伝子の標的アンチセンスＲＮＡ転写物

一実施形態では、本発明のｓａＲＮＡは、標的遺伝子の標的アンチセンスＲＮＡ転写物に相補的になるよう設計され、標的アンチセンスＲＮＡ転写物をダウンレギュレートすることにより、標的遺伝子発現および／または機能に対する作用を発揮しうる。標的アンチセンスＲＮＡ転写物は標的遺伝子のコード鎖から転写され、細胞の核に存在しうる。

【００２０】

これに関連する「相補的」という用語は、ストリンジェント条件下で標的アンチセンスＲＮＡ転写物にハイブリダイズ可能であることを意味する。

本発明に関連する標的アンチセンスＲＮＡ転写物を記述するために用いられるときの「アンチセンス」という用語は、配列が遺伝子のコード鎖の配列に相補的であることを意味する。

【００２１】

ＤＮＡのチミジンはＲＮＡのウリジンに置き換えられること。およびこの差は「アンチセンス」または「相補性」という用語の解釈を変えるものではないことを理解すべきである。

【００２２】

標的アンチセンスＲＮＡ転写物は、標的遺伝子の転写開始部位（ＴＳＳ：ｔｒａｎｓｃｒｉｐｔｉｏｎ　ｓｔａｒｔ　ｓｉｔｅ）に対応する位置の１００、８０、６０、４０、

２０、または１０ｋｂ上流までと、標的遺伝子の転写停止部位に対応する位置の１００、８０、６０、４０、２０、または１０ｋｂ下流までとの間のコード鎖の遺伝子座から転写しうる。

【００２３】

一実施形態では、標的アンチセンスＲＮＡ転写物は、標的遺伝子の転写開始部位から＋／－１ｋｂ以内に位置するコード鎖の遺伝子座から転写される。

他の実施形態では、標的アンチセンスＲＮＡ転写物は、標的遺伝子の転写開始部位から＋／－５００ｎｔ、＋／－２５０ｎｔ、＋／－１００ｎｔ、＋／－１０ｎｔ、＋／－５ｎｔ、または＋／－１ｎｔ以内に位置するコード鎖の遺伝子座から転写される。

【００２４】

他の実施形態では、標的アンチセンスＲＮＡ転写物は、標的遺伝子の転写開始部位から＋／－２０００ヌクレオチドに位置するコード鎖の遺伝子座から転写される。

他の実施形態では、コード鎖の遺伝子座は、標的遺伝子の転写開始部位に対応する位置から上流または下流の１０００ヌクレオチド以下である。

【００２５】

他の実施形態では、コード鎖の遺伝子座は、標的遺伝子の転写開始部位に対応する位置から上流または下流の５００ヌクレオチド以下である。

本明細書で用いられる「転写開始部位」（ＴＳＳ）という用語は、転写の開始位置に対応するまたはそれをマークする遺伝子の鋳型鎖のヌクレオチドを意味する。ＴＳＳは、遺伝子の鋳型鎖のプロモータ領域内に位置しうる。

【００２６】

本明細書で用いられる「転写停止部位」という用語は、遺伝子の鋳型鎖の１ヌクレオチド以上でありうる領域を意味し、少なくとも１つの特徴部、限定されるものではないが、例として標的転写物の少なくとも１つの停止コドンをコードする領域、標的転写物の３’ＵＴＲの直前の配列をコードする領域、ＲＮＡポリメラーゼが遺伝子を放出する領域、スプライス部位またはスプライス部位の前の部分をコードする領域、および標的転写物の転写が終了する鋳型鎖の領域を有する。

【００２７】

本発明の標的アンチセンスＲＮＡ転写物に関連する「特定の遺伝子座から転写される」という語句は、標的アンチセンスＲＮＡ転写物の転写が特定の遺伝子座から開始されることを意味する。

【００２８】

標的アンチセンスＲＮＡ転写物は、標的遺伝子のゲノム配列のコード鎖に相補的であり、「ゲノム配列」への本明細書での参照はいずれも「ゲノム配列のコード鎖」に対する簡略表現である。

【００２９】

遺伝子の「コード鎖」は、ＴがｍＲＮＡのＵに置き換えられること以外、産生されるｍＲＮＡと同一の塩基配列を有する。したがって、遺伝子の「鋳型鎖」は、産生されるｍＲＮＡに相補的かつ逆平行である。

【００３０】

したがって、標的アンチセンスＲＮＡ転写物は、標的遺伝子の転写開始部位の１００、８０、６０、４０、２０、または１０ｋｂ上流と、標的遺伝子の転写停止部位の１００、８０、６０、４０、２０、または１０ｋｂ下流との間に位置するゲノム配列に相補的な配列を含みうる。

【００３１】

一実施形態では、標的アンチセンスＲＮＡ転写物は、標的遺伝子の転写開始部位の１ｋｂ上流と標的遺伝子の転写停止部位の１ｋｂ下流との間に位置するゲノム配列に相補的な配列を含む。

【００３２】

他の実施形態では、標的アンチセンスＲＮＡ転写物は、標的遺伝子の転写開始部位の５

００、２５０、１００、１０、５、または１ヌクレオチド上流と、標的遺伝子の転写停止部位の５００、２５０、１００、１０、５、または１ヌクレオチド下流の終了部との間に位置するゲノム配列に相補的な配列を含む。

【００３３】

標的アンチセンスＲＮＡ転写物は、標的遺伝子のコード領域を含むゲノム配列に相補的な配列を含みうる。標的アンチセンスＲＮＡ転写物は、鋳型鎖の標的遺伝子のプロモータ領域にアライメントするゲノム配列に相補的な配列を含みうる。遺伝子は複数のプロモータ領域を有しうる。その場合、標的アンチセンスＲＮＡ転写物は、１つ、２つ、またはそれを超えるプロモータ領域にアライメントしうる。遺伝子のプロモータ領域を同定するために、アノテートされた遺伝子座のオンラインデータベースを使用しうる。ヌクレオチド配列の対に関連して用いられるときの「アライン」または「アライメント」という用語は、ヌクレオチド配列の対が互いに相補的であるかまたは互いに配列同一性を有することを意味する。

【００３４】

標的アンチセンスＲＮＡ転写物と標的遺伝子のプロモータ領域との間のアライメント領域は、部分的でありうると共に１ヌクレオチド長程度の短いものでありうるが、少なくとも１５もしくは少なくとも２０ヌクレオチド長、または少なくとも２５ヌクレオチド長、または少なくとも３０、３５、４０、４５、もしくは５０ヌクレオチド長、または少なくとも５５、６０、６５、７０、もしくは７５ヌクレオチド長、または少なくとも１００ヌクレオチド長でありうる。次の特定の各配置は、「アライメント」という用語の範囲内に含まれることが意図される。

【００３５】

ａ）標的アンチセンスＲＮＡ転写物および標的遺伝子のプロモータ領域は、同一の長さでアライメントする（すなわち、それらの全長にわたりアライメントする）。

ｂ）標的アンチセンスＲＮＡ転写物は、標的遺伝子のプロモータ領域よりも短く、その全長にわたり標的遺伝子のプロモータ領域にアライメントする（すなわち、それはその全長にわたり標的遺伝子のプロモータ領域内の配列にアライメントする）。

【００３６】

ｃ）標的アンチセンスＲＮＡ転写物は、標的遺伝子のプロモータ領域よりも長く、標的遺伝子のプロモータ領域は、それにより完全にアライメントされる（すなわち、標的遺伝子のプロモータ領域は、その全長にわたり標的アンチセンスＲＮＡ転写物内の配列にアライメントする）。

【００３７】

ｄ）標的アンチセンスＲＮＡ転写物および標的遺伝子のプロモータ領域は、同一の長さまたは異なる長さであり、アライメント領域は、標的アンチセンスＲＮＡ転写物の長さおよび標的遺伝子のプロモータ領域の長さの両方よりも短い。

【００３８】

「アライン」および「アライメント」の以上の定義は、しかるべき変更を加えて、本明細書全体を通じて他のオーバーラップ配列、たとえばアライメント配列の記述にも当てはまる。明らかなように、標的アンチセンスＲＮＡ転写物がプロモータ領域以外の標的遺伝子の領域にアライメントすると記述されている場合、標的アンチセンスＲＮＡ転写物の配列は、標的遺伝子のプロモータ領域内ではなく記載の領域内の配列にアライメントする。

【００３９】

一実施形態では、標的アンチセンスＲＮＡ転写物は、少なくとも１ｋｂまたは少なくとも２、３、４、５、６、７、８、９、もしくは１０ｋｂ、たとえば、２０、２５、３０、３５、もしくは４０ｋｂの長さである。

【００４０】

一実施形態では、標的アンチセンスＲＮＡ転写物は、その全長に沿って標的遺伝子のコード鎖の配列に少なくとも７５％、または少なくとも８５％、または少なくとも９０％、または少なくとも９５％で相補的な配列を含む。

【００４１】
本発明は、標的アンチセンスＲＮＡ転写物を標的とするｓａＲＮＡを提供し、かかる標的アンチセンスＲＮＡ転写物を効果的かつ特異的にダウンレギュレートしうる。これは、標的アンチセンスＲＮＡ転写物内の領域との高度の相補性を有するｓａＲＮＡにより達成可能である。ｓａＲＮＡは、標的とすべき標的アンチセンスＲＮＡ転写物内の領域とのミスマッチが５以下、または４もしくは３以下、または２以下または１以下であるかあるいはまったくないであろう。
【００４２】
図１を参照すると、標的アンチセンスＲＮＡ転写物が標的遺伝子の鋳型鎖の領域との配列同一性を有するため、標的アンチセンスＲＮＡ転写物は標的遺伝子の鋳型鎖内の領域と部分的に同一であろう。このことから遺伝子の鋳型鎖または標的アンチセンスＲＮＡ転写物のいずれへの参照も可能になるであろう。ｓａＲＮＡが標的アンチセンスＲＮＡ転写物にハイブリダイズまたは結合する位置（すなわち鋳型鎖の同位置）は、「標的配列」または「標的部位」と呼ばれる。
【００４３】
ｓａＲＮＡのアンチセンス鎖（一本鎖または二本鎖にかかわらず）は、標的配列の逆相補体と少なくとも８０％、９０％、９５％、９８％、９９％、または１００％同一である。したがって、ｓａＲＮＡのアンチセンス鎖の逆相補体は、標的配列との高度の配列同一性を有する。標的配列は、ｓａＲＮＡおよび／またはｓａＲＮＡの逆相補体と同一の長さすなわち同一のヌクレオチド数を有しうる。
【００４４】
いくつかの実施形態では、標的配列は少なくとも１４かつ３０未満のヌクレオチドを含む。
いくつかの実施形態では、標的配列は１９、２０、２１、２２、または２３ヌクレオチドを有する。
【００４５】
いくつかの実施形態では、標的配列の位置は鋳型鎖のプロモータ領域内に位置する。
いくつかの実施形態では、標的配列は鋳型鎖のＴＳＳ（転写開始部位）コア内に位置する。本明細書で用いられる「コアＴＳＳ」または「ＴＳＳコア配列」とは、ＴＳＳ（転写開始部位）の２０００ヌクレオチド上流と２０００ヌクレオチド下流との間の領域を意味する。したがって、ＴＳＳコアは４００１ヌクレオチドを含み、ＴＳＳはＴＳＳコア配列の５’末端を基準にして位置２００１に位置する。ＣＥＢＰＡ　ＴＳＳコア配列は以下の表に示される。
【００４６】
いくつかの実施形態では、標的配列は、ＴＳＳの１０００ヌクレオチド上流と１０００ヌクレオチド下流との間に位置する。
いくつかの実施形態では、標的配列は、ＴＳＳの５００ヌクレオチド上流と５００ヌクレオチド下流との間に位置する。
【００４７】
いくつかの実施形態では、標的配列は、ＴＳＳの２５０ヌクレオチド上流と２５０ヌクレオチド下流との間に位置する。
いくつかの実施形態では、標的配列は、ＴＳＳの１００ヌクレオチド上流と１００ヌクレオチド下流との間に位置する。
【００４８】
いくつかの実施形態では、標的配列は、ＴＳＳの１０ヌクレオチド上流と１０ヌクレオチド下流との間に位置する。
いくつかの実施形態では、標的配列は、ＴＳＳの５ヌクレオチド上流と５ヌクレオチド下流との間に位置する。
【００４９】
いくつかの実施形態では、標的配列は、ＴＳＳの１ヌクレオチド上流と１ヌクレオチド

下流との間に位置する。
いくつかの実施形態では、標的配列は、ＴＳＳコア内のＴＳＳの上流に位置する。標的配列は、ＴＳＳの上流の２０００ヌクレオチド未満、１０００ヌクレオチド未満、５００ヌクレオチド未満、２５０ヌクレオチド未満、１００ヌクレオチド未満、１０ヌクレオチド未満、または５ヌクレオチド未満でありうる。
【００５０】
いくつかの実施形態では、標的配列は、ＴＳＳコア内のＴＳＳの下流に位置する。標的配列は、ＴＳＳの下流の２０００ヌクレオチド未満、１０００ヌクレオチド未満、５００ヌクレオチド未満、２５０ヌクレオチド未満、１００ヌクレオチド未満、１０ヌクレオチド未満、または５ヌクレオチド未満でありうる。
【００５１】
いくつかの実施形態では、標的配列は、ＴＳＳコアのＴＳＳの周囲の＋／－５０ヌクレオチドに位置する。いくつかの実施形態では、標的配列は、ＴＳＳコアのＴＳＳに実質的にオーバーラップする。いくつかの実施形態では、標的配列は、ＴＳＳコアのＴＳＳにオーバーラップするかまたはＴＳＳコアのＴＳＳで開始もしくは終了する。いくつかの実施形態では、標的配列は、上流方向または下流方向のいずれかの１、２、３、４、５、６、７、８、９、１０、１１、１２、１３、１４、１５、１６、１７、１８、または１９ヌクレオチドがＴＳＳコアのＴＳＳにオーバーラップする。
【００５２】
鋳型鎖の標的配列の位置は、標的配列の５’末端の位置により定義される。標的配列の５’末端は、ＴＳＳコアの任意の位置でありうると共に、標的配列は、ＴＳＳコアの位置１～位置４００１から選択される任意の位置で開始しうる。本明細書の参照では、標的配列の最も５’側の末端がＴＳＳコアの位置１～位置２０００にある場合、標的配列はＴＳＳの上流にあると見なされ、標的配列の最も５’側の末端が位置２００２～４００１にある場合、標的配列はＴＳＳの下流にあると見なされる。標的配列の最も５’側の末端がヌクレオチド２００１である場合、標的配列はＴＳＳ中心配列であると見なされ、ＴＳＳの上流でも下流でもない。
【００５３】
さらなる参照では、たとえば、標的配列の５’末端がＴＳＳコアの位置１６００にある場合、すなわち、ＴＳＳコアの１６００番目のヌクレオチドである場合、標的配列はＴＳＳコアの位置１６００から開始し、ＴＳＳの上流にあると見なされる。
【００５４】
一実施形態では、ＴＳＳコアは、表１および２に記載される標的遺伝子の配列である。
一実施形態では、ＴＳＳコアは、限定されるものではないが、配列番号１～４０４７、３１５２３６～３１８７２６、５８４７８５～５８９０６１、９１３３１０～９１７５３１、１２４１０８０～１２４５４０１、１５５９９３２～１５６４３７２、１８７９１８９～１８８９２０７などの配列である。
【００５５】
一実施形態では、本発明のｓａＲＮＡは二本鎖を形成する２つの鎖を有し、一方の鎖はガイド鎖である。ｓａＲＮＡ二本鎖は二本鎖ｓａＲＮＡとも呼ばれる。本明細書で用いられる二本鎖ｓａＲＮＡまたはｓａＲＮＡ二本鎖は、鎖間ハイブリダイゼーションが二本鎖構造の領域を形成可能な２本以上の、好ましくは２本の鎖を含むｓａＲＮＡである。二本鎖ｓａＲＮＡの２つの鎖は、アンチセンス鎖またはガイド鎖およびセンス鎖またはパッセンジャー鎖と呼ばれる。
【００５６】
アンチセンス鎖ｓａＲＮＡまたはアンチセンスｓａＲＮＡと同義的に用いられるｓａＲＮＡ二本鎖のアンチセンス鎖は、標的アンチセンスＲＮＡ転写物内の領域との高度の相補性を有する。アンチセンス鎖は、標的アンチセンスＲＮＡ転写物内または標的配列内の領域とのミスマッチが５以下または４もしくは３以下または２以下または１以下でありうるか、あるいはまったくないこともありうる。したがって、アンチセンス鎖は鋳型鎖の標的

配列との高度の相補性を有する。センス鎖ｓａＲＮＡまたはセンスｓａＲＮＡと同義的に用いられるｓａＲＮＡ二本鎖のセンス鎖は、鋳型鎖の標的配列との高度の配列同一性を有する。いくつかの実施形態では、標的配列は鋳型鎖のプロモータ領域内に位置する。いくつかの実施形態では、標的配列は鋳型鎖のＴＳＳコア内に位置する。

【００５７】

標的配列を基準にしたｓａＲＮＡ二本鎖のアンチセンス鎖および／またはセンス鎖の位置は、ＴＳＳコア配列を参照することにより定義される。たとえば、標的配列がＴＳＳの下流にある場合、アンチセンスｓａＲＮＡおよびセンスｓａＲＮＡはＴＳＳの下流から開始する。他の例では、標的配列がＴＳＳコアの位置２００から開始する場合、アンチセンスｓａＲＮＡおよびセンスｓａＲＮＡはＴＳＳの上流から開始する。

【００５８】

ｓａＲＮＡ、標的遺伝子、標的遺伝子のコード鎖、標的遺伝子の鋳型鎖、標的アンチセンスＲＮＡ転写物、標的転写物、標的配列／標的部位、およびＴＳＳの関係は図１に示されている。

【００５９】

本発明に関連する「鎖」は、天然に存在しないまたは修飾されたヌクレオチドを含めてヌクレオチドの連続配列を意味する。２つ以上の鎖は、個別分子でありうるかもしくは個別分子の一部を形成しうるか、またはたとえばポリエチレングリコールリンカーなどのリンカーにより共有結合しうる。ｓａＲＮＡの少なくとも１つの鎖は、標的アンチセンスＲＮＡに相補的な領域を含みうる。かかる鎖は、ｓａＲＮＡ二本鎖のアンチセンス鎖またはガイド鎖と呼ばれる。ｓａＲＮＡのアンチセンス鎖に相補的な領域を含むｓａＲＮＡの第２の鎖は、センス鎖またはパッセンジャー鎖と呼ばれる。

【００６０】

ｓａＲＮＡ二本鎖はまた、二本鎖領域を含めてヘアピン構造を形成する少なくとも部分的に自己相補的な単分子から形成しうる。かかる場合、「鎖」という用語は、ｓａＲＮＡの他の内部領域に相補的なｓａＲＮＡの領域の１つを意味する。ｓａＲＮＡのガイド鎖は、標的アンチセンスＲＮＡ転写物内の配列とのミスマッチが５以下、または４もしくは３以下、または２以下または１以下であるかあるいはまったくないであろう。

【００６１】

いくつかの実施形態では、ｓａＲＮＡのパッセンジャー鎖は、ガイド鎖の対応するヌクレオチドに相補的でない少なくとも１つのヌクレオチド（ガイド鎖とのミスマッチと呼ばれる）を含みうる。ガイド鎖とのミスマッチはガイド鎖の優先的なローディングを促進しうる（ウー（Ｗｕ）ら著、プロス・ワン（ＰＬｏＳ　ＯＮＥ）、２０１１年、第６巻、第１２号、ｐ．ｅ２８５８０（その内容はその全体が参照により本明細書に組み込まれる））。一実施形態では、ガイド鎖との少なくとも１つミスマッチはパッセンジャー鎖の３’末端にありうる。一実施形態では、パッセンジャー鎖の３’末端はガイド鎖との１～５ミスマッチを含みうる。一実施形態では、パッセンジャー鎖の３’末端はガイド鎖との２～３ミスマッチを含みうる。一実施形態では、パッセンジャー鎖の３’末端はガイド鎖との６～１０ミスマッチを含みうる。

【００６２】

一実施形態では、ｓａＲＮＡ二本鎖は増殖細胞で効力を示しうる。

ｓａＲＮＡ二本鎖は、標的アンチセンスＲＮＡ転写物の領域とのｓｉＲＮＡ様相補性、すなわち、ｓａＲＮＡ二本鎖のガイド鎖の５’末端を基準にしてヌクレオチド２～６と標的アンチセンスＲＮＡ転写物の領域との間の１００％の相補性を有しうる。加えて、ｓａＲＮＡの他のヌクレオチドは、標的アンチセンスＲＮＡ転写物の領域との少なくとも８０％、９０％、９５％、９８％、９９％、または１００％の相補性を有しうる。たとえば、ヌクレオチド７（５’末端から数えて）～ｓａＲＮＡの３’末端は、標的アンチセンスＲＮＡ転写物の領域との少なくとも８０％、９０％、９５％、９８％、９９％、または１００％の相補性を有しうる。

【００６３】

これに関連する「低分子干渉ＲＮＡ」または「ｓｉＲＮＡ」という用語は、ＲＮＡ干渉（ＲＮＡｉ）経路に関与して特定の遺伝子を干渉するまたはその発現を阻害する典型的には２０～２５ヌクレオチド長の二本鎖ＲＮＡを意味する。この遺伝子はｓｉＲＮＡの標的遺伝子である。たとえば、Ａ３ＧＡＬＴ２遺伝子の発現を干渉するｓｉＲＮＡは「Ａ３ＧＡＬＴ２－ｓｉＲＮＡ」と呼ばれ、Ａ３ＧＡＬＴ２遺伝子は標的遺伝子である。ｓｉＲＮＡは、通常、約２１ヌクレオチド長であり、２つの鎖の各末端に３’オーバーハング（たとえば、２ヌクレオチド）を有する。

【００６４】

ｓｉＲＮＡは、標的遺伝子の１つ以上のＲＮＡ転写物の特定の配列に結合してその切断を促進することにより標的遺伝子発現を阻害する。典型的には、ＲＮＡｉではＲＮＡ転写物はｍＲＮＡであるため、ｍＲＮＡの切断は遺伝子発現のダウンレギュレーションをもたらす。いかなる理論にも拘束されることを望むものではないが、本発明では、可能な機序の１つは、本発明のｓａＲＮＡが標的アンチセンスＲＮＡ転写物の切断により標的遺伝子発現をモジュレートしうることである。

【００６５】

二本鎖ｓａＲＮＡは、１つ以上の一本鎖ヌクレオチドオーバーハングを含みうる。二本鎖ｓａＲＮＡおよびｓｉＲＮＡに関連する「オーバーハング」または「テール」という用語は、ｓａＲＮＡまたはｓｉＲＮＡの二本鎖構造から突出する少なくとも１つの非対合ヌクレオチドを意味する。たとえば、ｓａＲＮＡの１つの鎖の３’末端が他の鎖の５’末端を越えて延在するかまたはその逆が成り立つ場合、ヌクレオチドオーバーハングが存在する。ｓａＲＮＡは、少なくとも１ヌクレオチドのオーバーハングを含みうると共に、代替的に、オーバーハングは、少なくとも２ヌクレオチド、少なくとも３ヌクレオチド、少なくとも４ヌクレオチド、少なくとも５ヌクレオチド、またはそれを超えるヌクレオチドを含みうる。ヌクレオチドオーバーハングは、デオキシヌクレオチド／ヌクレオシドを含めてヌクレオチド／ヌクレオシドアナログを含みうるかまたはそれらからなりうる。オーバーハングは、センス鎖、アンチセンス鎖、またはそれらの任意の組合せに存在しうる。さらに、オーバーハングのヌクレオチドは、ｓａＲＮＡのアンチセンス鎖またはセンス鎖のいずれかの５’末端、３’末端、または両末端に存在可能である。ハイブリダイゼーション時に１つ以上の一本鎖オーバーハングを形成するように２つのオリゴヌクレオチドを設計する場合、かかるオーバーハングは相補性の決定に関してミスマッチと見なさないものとする。たとえば、１９ヌクレオチド長の一方のオリゴヌクレオチドと２１ヌクレオチド長の他方のオリゴヌクレオチドとを含むｓａＲＮＡは、長い方のオリゴヌクレオチドが短い方のオリゴヌクレオチドに完全に相補的な１９ヌクレオチドの配列を含む場合、本明細書に記載の目的では依然として「完全に相補的」と見なしうる。

【００６６】

一実施形態では、二本鎖ｓａＲＮＡのアンチセンス鎖は、３’末端および／または５’末端に１～１０ヌクレオチドのオーバーハングを有する。一実施形態では、二本鎖ｓａＲＮＡのアンチセンス鎖は、その３’末端に１～４ヌクレオチドのオーバーハングまたはその３’末端に１～２ヌクレオチドのオーバーハングを有する。一実施形態では、二本鎖ｓａＲＮＡのセンス鎖は、３’末端および／または５’末端に１～１０ヌクレオチドのオーバーハングを有する。一実施形態では、二本鎖ｓａＲＮＡのセンス鎖は、その３’末端に１～４ヌクレオチドのオーバーハングまたはその３’末端に１～２ヌクレオチドのオーバーハングを有する。一実施形態では、二本鎖ｓａＲＮＡのセンス鎖およびアンチセンス鎖は両方とも３’オーバーハングを有する。３’オーバーハングは、１つ以上のウラシル、たとえば配列ＵＵまたはＵＵＵを含みうる。一実施形態では、オーバーハングのヌクレオチドの１つ以上はヌクレオシドチオホスフェートで置き換えられ、ヌクレオシド間結合はチオホスフェートとなる。一実施形態では、オーバーハングは、１つ以上のデオキシリボヌクレオシド、たとえば配列ｄＴｄＴまたはｄＴｄＴｄＴを含む。一実施形態では、オーバーハングは配列ｄＴ＊ｄＴを含む。ただし、＊はチオホスフェートヌクレオシド間結合である。

【００６７】
ｓａＲＮＡが標的遺伝子発現をモジュレートする機序にかかわらず、標的アンチセンスＲＮＡ転写物または標的配列を基準にして本発明のｓａＲＮＡを定義するのが便利であることは、当業者であれば分かるであろう。しかしながら、本発明のｓａＲＮＡは、代替的に標的遺伝子を基準にして定義しうる。標的アンチセンスＲＮＡ転写物は標的遺伝子のコード鎖のゲノム領域に相補的であり、一方、本発明のｓａＲＮＡは標的アンチセンスＲＮＡ転写物の領域に相補的であるため、本発明のｓａＲＮＡは、標的遺伝子のコード鎖の領域との配列同一性を有すると見なしうる。標的アンチセンスＲＮＡ転写物を基準にした本発明のｓａＲＮＡの定義に関して本明細書で考察される特徴はすべて、しかるべき変更を加えて、標的遺伝子を基準にした本発明のｓａＲＮＡの定義にも当てはまるため、標的アンチセンスＲＮＡ転写物との相補性に関するいずれの考察も標的遺伝子のゲノム配列との同一性を含むと理解すべきである。したがって、本発明のｓａＲＮＡは、標的遺伝子のゲノム配列との高いパーセントの同一性、たとえば、少なくとも８０％、９０％、９５％、９８％、もしくは９９％または１００％の同一性を有しうる。ゲノム配列は、標的遺伝子の転写開始部位の上流または下流の２０００、１０００、５００、２５０、または１００ヌクレオチドまででありうる。それは標的遺伝子のプロモータ領域にアライメントしうる。したがって、ｓａＲＮＡは、標的遺伝子のプロモータ領域にアライメントする配列との配列同一性を有しうる。

【００６８】
一実施形態では、本発明のｓａＲＮＡを設計するために標的アンチセンスＲＮＡ転写物の存在を決定する必要はない。換言すれば、ｓａＲＮＡの設計は標的アンチセンスＲＮＡ転写物の同定を必要としない。たとえば、ＴＳＳコアのヌクレオチド配列、すなわち、標的遺伝子の転写開始部位の上流の２０００ヌクレオチド領域の配列から標的遺伝子の転写開始部の下流の２０００ヌクレオチドまでは、標的遺伝子のコード鎖のゲノム配列により、シーケンシングにより、またはデータベース検索により得られうる。鋳型鎖のＴＳＳコアの位置１～位置４００１の任意の位置から開始するコアＴＳＳコア内の標的配列を選択可能であり、次いで、ｓａＲＮＡ配列を設計するためにそれを使用可能である。以上で考察したように、ｓａＲＮＡは、標的配列の逆相補体との高度の配列同一性を有する。

【００６９】
次いで、全ゲノムのｓａＲＮＡ配列のオフターゲットヒット数、０ミスマッチ（０ｍｍ）ヒット数、および１ミスマッチ（１ｍｍ）ヒット数を決定する。「オフターゲットヒット数」という用語は、標的遺伝子の鋳型鎖のｓａＲＮＡの標的配列と同一の全ゲノム中の他の部位の数を意味する。「０ｍｍヒット数」という用語は、ｓａＲＮＡの標的転写物以外の既知のタンパク質コード転写物のうち、その相補体にｓａＲＮＡが０ミスマッチでハイブリダイズまたは結合しうるものの数を意味する。換言すれば、「０ｍｍヒット数」は、ｓａＲＮＡ配列と完全に同一の領域を含むｓａＲＮＡの標的転写物以外の既知のタンパク質コード転写物の数をカウントする。「１ｍｍヒット数」という用語は、ｓａＲＮＡの標的転写物以外の既知のタンパク質コード転写物のうち、その相補体にｓａＲＮＡが１ミスマッチでハイブリダイズまたは結合しうるものの数を意味する。換言すれば、「１ｍｍヒット数」は、１ミスマッチのみを有してｓａＲＮＡ配列と同一の領域を含むｓａＲＮＡの標的転写物以外の既知のタンパク質コード転写物の数をカウントする。一実施形態では、オフターゲットヒットなし、０ｍｍヒットなし、かつ１ｍｍヒットなしのｓａＲＮＡ配列のみを選択する。本出願に開示されるｓａＲＮＡ配列は、それぞれオフターゲットヒットなし、０ｍｍヒットなし、かつ１ｍｍヒットなしである。

【００７０】
２０１１年６月２３日出願の米国特許出願公開第２０１３／０１６４８４６号明細書（ｓａＲＮＡアルゴリズム）（その内容はその全体が参照により本明細書に組み込まれる）に開示される方法は、ｓａＲＮＡを設計するためにも使用しうる。ｓａＲＮＡの設計は、コーリ（Ｃｏｒｅｙ）らに付与された米国特許第８，３２４，１８１号明細書および米国特許第７，７０９，５６６号明細書、リー（Ｌｉ）らに付与された米国特許出願公開第２

０１０／０２１０７０７号明細書、ならびにボウティラ（Ｖｏｕｔｉｌａ）ら著、モレキュラー・セラピー－ヌクレイック・アシッズ（Ｍｏｌ　Ｔｈｅｒ　Ｎｕｃｌｅｉｃ　Ａｃｉｄｓ）、２０１２年、第１巻、ｐ．ｅ３５（それぞれの内容はその全体が参照により本明細書に組み込まれる）にも開示されている。

【００７１】

「存在の決定」とは、標的遺伝子の遺伝子座の周りのＥＳＴおよび／もしくはアンチセンスＲＮＡ転写物のデータベースを探索して好適な標的アンチセンスＲＮＡ転写物を同定すること、またはＲＴ　ＰＣＲもしくは任意の他の公知の技術を用いて細胞内の標的アンチセンスＲＮＡ転写物の物理的存在を確認することのいずれかを意味する。

【００７２】

いくつかの実施形態では、本発明のｓａＲＮＡは一本鎖または二本鎖でありうる。二本鎖分子は第１の鎖と第２の鎖とを含む。二本鎖の場合、二本鎖の各鎖は、少なくとも１４または少なくとも１８ヌクレオチド長、たとえば、１９、２０、２１、または２２ヌクレオチド長でありうる。二本鎖は、少なくとも１２、または少なくとも１５、または少なくとも１７、または少なくとも１９ヌクレオチドの長さ全体にわたりハイブリダイズしうる。各鎖はちょうど１９ヌクレオチド長でありうる。この長さを超えるオリゴヌクレオチド二本鎖はインターフェロン反応を誘導するリスクを増加させうるため、好ましくはｓａＲＮＡの長さは３０ヌクレオチド未満である。一実施形態では、ｓａＲＮＡの長さは１９～２５ヌクレオチドである。ｓａＲＮＡ二本鎖を形成する鎖は等しいまたは等しくない長さでありうる。

【００７３】

一実施形態では、本発明のｓａＲＮＡは、標的配列との少なくとも８０％、９０％、９５％、９８％、９９％、または１００％の相補性を有する少なくとも１４ヌクレオチドかつ３０ヌクレオチド未満の配列を含む。一実施形態では、標的配列との少なくとも８０％、９０％、９５％、９８％、９９％、または１００％の相補性を有する配列は、少なくとも１５、１６、１７、１８、もしくは１９ヌクレオチド長または１８～２２または１９～２１またはちょうど１９ヌクレオチド長である。

【００７４】

本発明のｓａＲＮＡは、標的アンチセンスＲＮＡ転写物に相補的でない短い３’または５’配列を含みうる。一実施形態では、かかる配列は鎖の３’末端にある。配列は、１～５ヌクレオチド長または２もしくは３ヌクレオチド長でありうる。配列はウラシルを含みうるため、２または３ウラシルの３’ストレッチでありうる。配列は、ｄＴなどのデオキシリボヌクレオシドを１つ以上含みうる。一実施形態では、配列のヌクレオチドの１つ以上はヌクレオシドチオホスフェートで置き換えられ、ヌクレオシド間結合はチオホスフェートとなる。たとえば、限定されるものではないが、配列は配列ｄＴ＊ｄＴを含む。ただし、＊はチオホスフェートヌクレオシド間結合である。この非相補的配列は「テール」と呼びうる。３’テールが存在する場合、鎖はより長くなりうる。たとえば、１９ヌクレオチド＋３’テール（ＵＵまたはＵＵＵでありうる）。かかる３’テールは、ｓａＲＮＡと標的アンチセンスＲＮＡ転写物との間の相補性の決定に関してミスマッチと見なさないものとする。

【００７５】

したがって、本発明のｓａＲＮＡは、（ｉ）標的アンチセンスＲＮＡ転写物の領域との少なくとも８０％の相補性を有する配列と（ｉｉ）ウラシル残基を含みうるまたはそれからなりうる１～５ヌクレオチドの３’テールとからなりうる。したがって、ｓａＲＮＡは、存在するのであれば３’テールを除いて、典型的にはその全長にわたり標的アンチセンスＲＮＡ転写物の領域との相補性を有するであろう。本出願に開示されるｓａＲＮＡ配列はいずれもかかる３’テールを任意選択的に含みうる。したがって、ｓａＲＮＡの表および配列表に開示されるｓａＲＮＡ配列はいずれもかかる３’テールを任意選択的に含みうる。本発明のｓａＲＮＡは、ダイサーまたはドローシャの基質配列をさらに含みうる。

【００７６】

本発明のｓａＲＮＡはフランキング配列を含有しうる。フランキング配列は、本発明のｓａＲＮＡの３’末端または５’末端に挿入しうる。一実施形態では、フランキング配列は、ｓａＲＮＡにｍｉＲＮＡ構成を持たせるｍｉＲＮＡの配列であり、ドローシャおよびダイサーで処理しうる。限定されるものではないが、一例では、本発明のｓａＲＮＡは２つの鎖を有し、マイクロＲＮＡ前駆体、たとえばｍｉＲ－３０骨格フランキング配列にクローニングされる。

【００７７】

本発明のｓａＲＮＡは、制限酵素の基質または認識配列を含みうる。制限酵素の認識配列は、本発明のｓａＲＮＡの３’末端または５’末端にありうる。制限酵素の例としては、ＮｏｔＩおよびＡｓｃＩが挙げられるが、これらに限定されるものではない。

【００７８】

一実施形態では、本発明のｓａＲＮＡは安定に塩基対合されて一体化された２つの鎖からなる。いくつかの実施形態では、パッセンジャー鎖は、ガイド鎖の対応するヌクレオチドに相補的でない少なくとも１つのヌクレオチド（ガイド鎖とのミスマッチと呼ばれる）を含みうる。一実施形態では、ガイド鎖との少なくとも１つミスマッチはパッセンジャー鎖の３’末端にありうる。一実施形態では、パッセンジャー鎖の３’末端はガイド鎖との１～５ミスマッチを含みうる。一実施形態では、パッセンジャー鎖の３’末端はガイド鎖との２～３ミスマッチを含みうる。一実施形態では、パッセンジャー鎖の３’末端はガイド鎖との６～１０ミスマッチを含みうる。

【００７９】

いくつかの実施形態では、二本鎖ｓａＲＮＡは、３’オーバーハングを形成する各鎖の３’末端にいくつかの非対合ヌクレオチドを含みうる。各鎖の３’オーバーハングを形成する非対合ヌクレオチドの数は、１～５ヌクレオチドもしくは１～３ヌクレオチドの範囲内または２ヌクレオチドでありうる。３’オーバーハングは上述した３’テールに形成しうるため、３’テールは二本鎖ｓａＲＮＡの３’オーバーハングでありうる。

【００８０】

したがって、本発明のｓａＲＮＡは一本鎖でありうると共に、（ｉ）標的アンチセンスＲＮＡ転写物の領域との少なくとも８０％の相補性を有する配列と（ｉｉ）ウラシル残基を含みうる１～５ヌクレオチドの３’テールとからなる。本発明のｓａＲＮＡは、存在するのであれば３’テールを除いて、その全長にわたり標的アンチセンスＲＮＡ転写物の領域との相補性を有しうる。上述したように、「標的アンチセンスＲＮＡ転写物に相補的」である代わりに、本発明のｓａＲＮＡはまた、標的遺伝子のコード鎖との「同一性」を有するものとして定義しうる。本発明のｓａＲＮＡは二本鎖でありうると共に、（ｉ）標的アンチセンスＲＮＡ転写物の領域との少なくとも８０％の相補性を有する第１の配列と（ｉｉ）１～５ヌクレオチドの３’オーバーハングとを含む第１の鎖と、（ｉ）第１の配列と二本鎖を形成する第２の配列と（ｉｉ）１～５ヌクレオチドの３’オーバーハングとを含む第２の鎖とからなる。

【００８１】

本明細書に記載されるように、標的遺伝子のゲノム配列は、標的遺伝子のｓａＲＮＡを設計するために使用されうる。標的遺伝子のｓａＲＮＡを設計するために標的遺伝子の配列から標的アンチセンスＲＮＡ転写物の配列を決定しうる。しかしながら、かかる標的アンチセンスＲＮＡ転写物の存在を決定する必要はない。

【００８２】

本発明の一態様は、標的遺伝子の発現をモジュレートするｓａＲＮＡを提供する。標的転写物のレベルをモジュレートするｓａＲＮＡも提供する。いくつかの実施形態では、標的転写物はコード転写物（たとえば、ｍＲＮＡ）である。本発明の他の態様は、コード標的転写物によりコードされるタンパク質のレベルをモジュレートするｓａＲＮＡを提供する。一実施形態では、標的遺伝子の発現は、本発明のｓａＲＮＡの存在下で、本発明のｓａＲＮＡの不在下での標的遺伝子の発現と比較して少なくとも２０、３０、４０％、より好ましくは少なくとも４５、５０、５５、６０、６５、７０、７５％、または少なくとも

８０％だけ増加される。さらなる実施形態では、標的遺伝子の発現は、本発明のｓａＲＮＡの存在下で、本発明のｓａＲＮＡの不在下での標的遺伝子の発現と比較して少なくとも２、３、４、５、６、７、８、９、１０倍、または少なくとも１５、２０、２５、３０、３５、４０、４５、５０倍、または少なくとも６０、７０、８０、９０、１００倍だけ増加される。標的遺伝子の発現のモジュレーションは、標的遺伝子をコードするｍＲＮＡのレベルの変化により反映または決定しうる。

【００８３】

本発明にかかるｓａＲＮＡによりモジュレートされうる標的遺伝子の非限定的な例は、以下のような、表１に記載された標的遺伝子を含むコード配列でありうる。すなわち、以下を含む染色体１～２に位置する標的遺伝子：Ａ３ＧＡＬＴ２，ＡＡＤＡＣＬ３，ＡＡＤＡＣＬ４，ＡＡＫ１，ＡＡＭＰ，ＡＢＣＡ１２，ＡＢＣＡ４，ＡＢＣＢ１０，ＡＢＣＢ１１，ＡＢＣＢ６，ＡＢＣＤ３，ＡＢＣＧ５，ＡＢＣＧ８，ＡＢＨＤ１，ＡＢＩ２，ＡＢＬ２，ＡＣＡＤＬ，ＡＣＡＤＭ，ＡＣＡＰ３，ＡＣＢＤ３，ＡＣＢＤ６，ＡＣＫＲ１，ＡＣＫＲ３，ＡＣＭＳＤ，ＡＣＯＴ１１，ＡＣＯＴ７，ＡＣＯＸＬ，ＡＣＰ１，ＡＣＰ６，ＡＣＳＬ３，ＡＣＴＡ１，ＡＣＴＧ２，ＡＣＴＬ８，ＡＣＴＮ２，ＡＣＴＲ１Ｂ，ＡＣＴＲ２，ＡＣＴＲ３，ＡＣＴＲＴ２，ＡＣＶＲ１，ＡＣＶＲ１Ｃ，ＡＣＶＲ２Ａ，ＡＣＹＰ２，ＡＤＡＭ１５，ＡＤＡＭ１７，ＡＤＡＭ２３，ＡＤＡＭ３０，ＡＤＡＭＴＳ４，ＡＤＡＭＴＳＬ４，ＡＤＡＲ，ＡＤＣＫ３，ＡＤＣＹ１０，ＡＤＣＹ３，ＡＤＤ２，ＡＤＩ１，ＡＤＩＰＯＲ１，ＡＤＯＲＡ１，ＡＤＯＲＡ３，ＡＤＰＲＨＬ２，ＡＤＲＡ２Ｂ，ＡＤＳＳ，ＡＦＦ３，ＡＦＴＰＨ，ＡＧＡＰ１，ＡＧＢＬ４，ＡＧＢＬ５，ＡＧＦＧ１，ＡＧＬ，ＡＧＭＡＴ，ＡＧＯ１，ＡＧＯ３，ＡＧＯ４，ＡＧＰＳ，ＡＧＲＮ，ＡＧＴ，ＡＧＴＲＡＰ，ＡＧＸＴ，ＡＨＣＴＦ１，ＡＨＣＹＬ１，ＡＨＤＣ１，ＡＨＳＡ２，ＡＩＤＡ，ＡＩＭ１Ｌ，ＡＩＭ２，ＡＪＡＰ１，ＡＫ２，ＡＫ４，ＡＫ５，ＡＫＩＲＩＮ１，ＡＫＮＡＤ１，ＡＫＲ１Ａ１，ＡＫＲ７Ａ２，ＡＫＲ７Ａ３，ＡＫＴ３，ＡＬＤＨ４Ａ１，ＡＬＤＨ９Ａ１，ＡＬＧ１４，ＡＬＧ６，ＡＬＫ，ＡＬＬＣ，ＡＬＭＳ１，ＡＬＰＩ，ＡＬＰＬ，ＡＬＰＰ，ＡＬＰＰＬ２，ＡＬＳ２，ＡＬＳ２ＣＲ１１，ＡＬＳ２ＣＲ１２，ＡＬＸ３，ＡＭＥＲ３，ＡＭＩＧＯ１，ＡＭＭＥＣＲ１Ｌ，ＡＭＰＤ１，ＡＭＰＤ２，ＡＭＹ１Ａ，ＡＭＹ１Ｂ，ＡＭＹ１Ｃ，ＡＭＹ２Ａ，ＡＭＹ２Ｂ，ＡＮＡＰＣ１，ＡＮＧＥＬ２，ＡＮＧＰＴＬ１，ＡＮＧＰＴＬ３，ＡＮＧＰＴＬ７，ＡＮＫＡＲ，ＡＮＫＭＹ１，ＡＮＫＲＤ１３Ｃ，ＡＮＫＲＤ２３，ＡＮＫＲＤ３４Ａ，ＡＮＫＲＤ３５，ＡＮＫＲＤ３６，ＡＮＫＲＤ３６Ｂ，ＡＮＫＲＤ３９，ＡＮＫＲＤ４４，ＡＮＫＲＤ４５，ＡＮＫＲＤ５３，ＡＮＫＲＤ６５，ＡＮＫＺＦ１，ＡＮＯ７，ＡＮＰ３２Ｅ，ＡＮＴＸＲ１，ＡＮＸＡ４，ＡＮＸＡ９，ＡＯＸ１，ＡＰ１Ｓ３，ＡＰ４Ｂ１，ＡＰＣＳ，ＡＰＨ１Ａ，ＡＰＩＴＤ１，ＡＰＩＴＤ１－ＣＯＲＴ，ＡＰＬＦ，ＡＰＯＡ１ＢＰ，ＡＰＯＡ２，ＡＰＯＢ，ＡＰＯＢＥＣ４，ＡＱＰ１０，ＡＱＰ１２Ａ，ＡＱＰ１２Ｂ，ＡＲＦ１，ＡＲＨＧＡＰ１５，ＡＲＨＧＡＰ２５，ＡＲＨＧＡＰ２９，ＡＲＨＧＡＰ３０，ＡＲＨＧＥＦ１０Ｌ，ＡＲＨＧＥＦ１１，ＡＲＨＧＥＦ１６，ＡＲＨＧＥＦ１９，ＡＲＨＧＥＦ２，ＡＲＨＧＥＦ３３，ＡＲＨＧＥＦ４，ＡＲＩＤ１Ａ，ＡＲＩＤ４Ｂ，ＡＲＩＤ５Ａ，ＡＲＬ４Ｃ，ＡＲＬ５Ａ，ＡＲＬ６ＩＰ６，ＡＲＬ８Ａ，ＡＲＭＣ９，ＡＲＮＴ，ＡＲＰＣ２，ＡＲＰＣ５，ＡＲＴＮ，ＡＲＶ１，ＡＳＡＰ２，ＡＳＡＰ３，ＡＳＢ１，ＡＳＢ１７，ＡＳＢ１８，ＡＳＢ３，ＡＳＣＬ５，ＡＳＨ１Ｌ，ＡＳＩＣ４，ＡＳＮＳＤ１，ＡＳＰＭ，ＡＳＰＲＶ１，ＡＳＴＬ，ＡＳＴＮ１，ＡＳＸＬ２，ＡＴＡＤ２Ｂ，ＡＴＡＤ３Ａ，ＡＴＡＤ３Ｂ，ＡＴＡＤ３Ｃ，ＡＴＦ２，ＡＴＦ３，ＡＴＦ６，ＡＴＧ１６Ｌ１，ＡＴＧ４Ｂ，ＡＴＧ４Ｃ，ＡＴＧ９Ａ，ＡＴＩＣ，ＡＴＬ２，ＡＴＯＨ８，ＡＴＰ１３Ａ２，ＡＴＰ１Ａ１，ＡＴＰ１Ａ２，ＡＴＰ１Ａ４，ＡＴＰ１Ｂ１，ＡＴＰ２Ｂ４，

ATP5F1, ATP5G3, ATP6V0B, ATP6V1B1, ATP6V1C2, ATP6V1E2, ATP6V1G3, ATP8B2, ATPAF1, ATPIF1, ATRAID, ATXN7L2, AUNIP, AUP1, AURKAIP1, AVPR1B, AXDND1, AZIN2, B3GALNT2, B3GALT1, B3GALT2, B3GALT6, B3GNT2, B3GNT7, B4GALT2, B4GALT3, BAI2, BARD1, BARHL2, BATF3, BAZ2B, BBS5, BCAN, BCAR3, BCAS2, BCL10, BCL11A, BCL2L11, BCL2L15, BCL9, BCS1L, BECN1P1, BEND5, BEST4, BGLAP, BIN1, BIRC6, BLZF1, BMP10, BMP8A, BMP8B, BMPR2, BNIPL, BOK, BOLA1, BOLA3, BOLL, BPNT1, BRDT, BRE, BRINP2, BRINP3, BROX, BSDC1, BSND, BTBD19, BTBD8, BTF3L4, BTG2, BTNL10, BUB1, BZW1, C1D, C1orf100, C1orf101, C1orf105, C1orf106, C1orf109, C1orf110, C1orf111, C1orf112, C1orf115, C1orf116, C1orf122, C1orf123, C1orf127, C1orf131, C1orf137, C1orf141, C1orf146, C1orf158, C1orf159, C1orf162, C1orf167, C1orf168, C1orf174, C1orf177, C1orf185, C1orf186, C1orf189, C1orf194, C1orf195, C1orf198, C1orf204, C1orf21, C1orf210, C1orf216, C1orf226, C1orf228, C1orf229, C1orf233, C1orf234, C1orf27, C1orf35, C1orf43, C1orf50, C1orf52, C1orf53, C1orf54, C1orf56, C1orf61, C1orf64, C1orf68, C1orf74, C1orf85, C1orf86, C1orf87, C1orf94, C1orf95, C1QA, C1QB, C1QC, C1QL2, C2CD4D, C2orf15, C2orf16, C2orf27A, C2orf27B, C2orf40, C2orf42, C2orf43, C2orf44, C2orf47, C2orf48, C2orf49, C2orf50, C2orf54, C2orf57, C2orf61, C2orf66, C2orf68, C2orf69, C2orf70, C2orf71, C2orf72, C2orf73, C2orf74, C2orf76, C2orf78, C2orf80, C2orf81, C2orf82, C2orf83, C2orf88, C2orf91, C4BPA, C4BPB, C8A, C8B, CA14, CA6, CAB39, CACHD1, CACNA1E, CACNA1S, CACNB4, CACYBP, CAD, CADM3, CALCRL, CALM2, CALML6, CAMK1G, CAMK2N1, CAMKMT, CAMSAP2, CAMTA1, CAP1, CAPG, CAPN10, CAPN13, CAPN14, CAPN2, CAPN8, CAPN9, CAPZA1, CAPZB, CARF, CASP10, CASP8, CASP9, CASQ1, CASQ2, CASZ1, CATIP, CATSPER4, CBWD2, CC2D1B, CCBL2, CCDC108, CCDC115, CCDC121, CCDC138, CCDC140, CCDC141, CCDC142, CCDC148, CCDC150, CCDC17, CCDC173, CCDC18, CCDC181, CCDC185, CCDC23, CCDC24, CCDC27, CCDC28B, CCDC30, CCDC74A, CCDC74B, CCDC85A, CCDC88A, CCDC93, CCL20, CCNL2, CCNT2, CCNYL1, CCSAP, CCT3, CCT4, CCT7, CD101, CD160,

CD164L2, CD1A, CD1B, CD1C, CD1D, CD1E, CD2, CD207, CD244, CD247, CD28, CD302, CD34, CD46, CD48, CD52, CD53, CD55, CD58, CD5L, CD84, CD8A, CD8B, CDA, CDC14A, CDC20, CDC42, CDC42BPA, CDC42EP3, CDC42SE1, CDC7, CDC73, CDCA7, CDCA8, CDCP2, CDK11A, CDK11B, CDK15, CDK18, CDK5R2, CDKL4, CDKN2C, CEBPZ, CELA2A, CELA2B, CELA3A, CELA3B, CELF3, CELSR2, CENPA, CENPF, CENPL, CENPO, CEP104, CEP170, CEP350, CEP68, CEP85, CEPT1, CERKL, CERS2, CERS6, CFAP126, CFAP221, CFAP36, CFAP45, CFAP57, CFAP74, CFC1, CFC1B, CFH, CFHR1, CFHR2, CFHR3, CFHR4, CFHR5, CFLAR, CGN, CGREF1, CHAC2, CHCHD5, CHD1L, CHD5, CHI3L1, CHI3L2, CHIA, CHIT1, CHML, CHMP3, CHN1, CHPF, CHRM3, CHRNA1, CHRNB2, CHRND, CHRNG, CHST10, CHTOP, CIAO1, CIART, CIB4, CIR1, CITED4, CKAP2L, CKS1B, CLASP1, CLCA1, CLCA2, CLCA4, CLCC1, CLCN6, CLCNKA, CLCNKB, CLDN19, CLEC4F, CLHC1, CLIC4, CLIP4, CLK1, CLK2, CLSPN, CLSTN1, CMPK1, CMPK2, CNGA3, CNIH3, CNIH4, CNKSR1, CNN3, CNNM3, CNNM4, CNOT11, CNPPD1, CNR2, CNRIP1, CNST, CNTN2, CNTNAP5, COA5, COA6, COA7, COBLL1, COG2, COL11A1, COL16A1, COL24A1, COL3A1, COL4A3, COL4A4, COL5A2, COL6A3, COL8A2, COL9A2, COLEC11, COLGALT2, COMMD1, COPA, COPS7B, COPS8, COQ10B, CORT, COX20, COX5B, COX7A2L, CPO, CPS1, CPSF3, CPSF3L, CPT2, CPTP, CR1, CR1L, CR2, CRABP2, CRB1, CRCT1, CREB1, CREB3L4, CREG1, CREG2, CRIM1, CRIPT, CRNN, CROCC, CRP, CRTC2, CRYBA2, CRYGA, CRYGB, CRYGC, CRYGD, CRYZ, CSDE1, CSF1, CSF3R, CSMD2, CSRNP3, CSRP1, CTBS, CTDSP1, CTH, CTLA4, CTNNA2, CTNNBIP1, CTPS1, CTRC, CTSE, CTSK, CTSS, CTTNBP2NL, CUL3, CWC22, CXCR1, CXCR2, CXCR4, CYB561D1, CYB5R1, CYB5RL, CYBRD1, CYP1B1, CYP20A1, CYP26B1, CYP27A1, CYP27C1, CYP2J2, CYP4A11, CYP4A22, CYP4B1, CYP4X1, CYP4Z1, CYR61, CYS1, CYTIP, D2HGDH, DAB1, DAP3, DAPL1, DARS, DARS2, DAW1, DBI, DBT, DCAF17, DCAF6, DCAF8, DCDC2B, DCDC2C, DCLRE1B, DCST1, DCST2, DCTN1, DDAH1, DDI2, DDOST, DDR2, DDX1, DDX18, DDX20, DDX59, DEDD, DEGS1, DENND1B, DENND2C, DENND2D, DENND4B, DEPDC1, DES, DESI2, DFFA, DFFB, DFNB59, DGKD, DGUOK, DHCR24, DHDDS, DHRS3, DHRS9, DHX57, DHX9, DIEXF,

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FHL3, FIGLA, FIGN, FKBP1B, FKBP7, FLAD1, FLG, FLG2, FLVCR1, FMN2, FMNL2, FMO1, FMO2, FMO3, FMO4, FMO5, FMOD, FN1, FNBP1L, FNDC4, FNDC5, FNDC7, FOSL2, FOXD2, FOXD3, FOXD4L1, FOXE3, FOXI3, FOXJ3, FOXN2, FOXO6, FPGT, FPGT-TNNI3K, FRRS1, FRZB, FSHR, FSIP2, FUBP1, FUCA1, FZD5, FZD7, G0S2, G6PC2, GABPB2, GABRD, GAD1, GADD45A, GAL3ST2, GALE, GALM, GALNT13, GALNT14, GALNT2, GALNT3, GALNT5, GAREML, GATAD2B, GBA, GBP1, GBP2, GBP3, GBP4, GBP5, GBP6, GBP7, GBX2, GCA, GCC2, GCFC2, GCG, GCKR, GCLM, GCSAML, GDAP2, GDF7, GEMIN6, GEN1, GFI1, GFPT1, GGCX, GGPS1, GIGYF2, GIPC2, GJA4, GJA5, GJA8, GJA9, GJB3, GJB4, GJB5, GJC2, GKN1, GKN2, GLB1L, GLI2, GLIS1, GLMN, GLRX2, GLS, GLUL, GMCL1, GMEB1, GMPPA, GNAI3, GNAT2, GNB1, GNG12, GNG4, GNG5, GNL2, GNLY, GNPAT, GOLPH3L, GOLT1A, GON4L, GORAB, GORASP2, GPA33, GPAT2, GPATCH11, GPATCH2, GPATCH3, GPATCH4, GPBAR1, GPBP1L1, GPC1, GPD2, GPN1, GPN2, GPR1, GPR113, GPR137B, GPR148, GPR153, GPR155, GPR157, GPR161, GPR17, GPR25, GPR3, GPR35, GPR37L1, GPR39, GPR45, GPR52, GPR55, GPR61, GPR75, GPR75-ASB3, GPR88, GPR89A, GPR89B, GPSM2, GPX7, GRB14, GREB1, GREM2, GRHL1, GRHL3, GRIK3, GSTM1, GSTM2, GSTM3, GSTM4, GSTM5, GTDC1, GTF2A1L, GTF2B, GTF3C2, GTF3C3, GUCA2A, GUCA2B, GUK1, GULP1, GYPC, H3F3A, H6PD, HAAO, HADHA, HADHB, HAO2, HAPLN2, HAT1, HAX1, HCN3, HCRTR1, HDAC1, HDAC4, HDGF, HDLBP, HEATR1, HEATR5B, HECTD3, HECW2, HENMT1, HES2, HES3, HES4, HES5, HES6, HEYL, HFE2, HFM1, HHAT, HHIPL2, HHLA3, HIAT1, HIBCH, HIPK1, HIST2H2AA3, HIST2H2AA4, HIST2H2AB, HIST2H2AC, HIST2H2BE, HIST2H2BF, HIST2H3A, HIST2H3C, HIST2H3D, HIST2H4A, HIST2H4B, HIST3H2A, HIST3H2BB, HIST3H3, HIVEP3, HJURP, HK2, HLX, HMCN1, HMGB4, HMGCL, HMGCS2, HMGN2, HNMT, HNRNPA3, HNRNPCL1, HNRNPCL2, HNRNPCL3, HNRNPCL4, HNRNPLL, HNRNPR, HNRNPU, HOOK1, HORMAD1, HOXD1, HOXD10, HOXD11, HOXD12, HOXD13, HOXD3, HOXD4, HOXD8, HOXD9, HP1BP3, HPCA, HPCAL1, HPCAL4, HPDL, HRNR, HS1BP3, HS2ST1, HS6ST1, HSD11B1, HSD17B7, HSD3B1, HSD3B2, HSPA6, HSPB11, HSPB7, HSPD1, HSPE1, HSPE1-MOB4, HSPG2, HTR1D, HTR2B, HTR6, HTR

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, ZCCHC11, ZCCHC17, ZDBF2, ZDHHC18, ZEB2
, ZFAND2B, ZFP36L2, ZFP69, ZFP69B, ZFYVE

９，ＺＭＰＳＴＥ２４，ＺＭＹＭ１，ＺＭＹＭ４，ＺＭＹＭ６，ＺＭＹＭ６ＮＢ，ＺＭＹＮＤ１２，ＺＮＦ１２４，ＺＮＦ１４２，ＺＮＦ２，ＺＮＦ２８１，ＺＮＦ３２６，ＺＮＦ３６２，ＺＮＦ３８５Ｂ，ＺＮＦ４３６，ＺＮＦ４９６，ＺＮＦ５１２，ＺＮＦ５１３，ＺＮＦ５１４，ＺＮＦ５９３，ＺＮＦ６３８，ＺＮＦ６４４，ＺＮＦ６４８，ＺＮＦ６６９，ＺＮＦ６７０，ＺＮＦ６７２，ＺＮＦ６７８，ＺＮＦ６８３，ＺＮＦ６８４，ＺＮＦ６８７，ＺＮＦ６９１，ＺＮＦ６９２，ＺＮＦ６９５，ＺＮＦ６９７，ＺＮＦ８０４Ａ，ＺＮＨＩＴ６，ＺＰ４，ＺＲＡＮＢ２，ＺＲＡＮＢ３，ＺＳＣＡＮ２０，ＺＳＷＩＭ２，ＺＳＷＩＭ５，ＺＹＧ１１Ａ，ＺＹＧ１１Ｂ，およびＺＺＺ３；以下を含む染色体３～５に位置する標的遺伝子：Ａ４ＧＮＴ，ＡＡＤＡＣ，ＡＡＤＡＣＬ２，ＡＡＤＡＴ，ＡＡＳＤＨ，ＡＢＣＣ５，ＡＢＣＥ１，ＡＢＣＦ３，ＡＢＣＧ２，ＡＢＨＤ１０，ＡＢＨＤ１４Ａ，ＡＢＨＤ１４Ｂ，ＡＢＨＤ５，ＡＢＨＤ６，ＡＢＩ３ＢＰ，ＡＢＬＩＭ２，ＡＢＬＩＭ３，ＡＢＴＢ１，ＡＣＡＡ１，ＡＣＡＤ１１，ＡＣＡＤ９，ＡＣＡＰ２，ＡＣＫＲ２，ＡＣＫＲ４，ＡＣＯＴ１２，ＡＣＯＸ２，ＡＣＯＸ３，ＡＣＰＰ，ＡＣＳＬ１，ＡＣＳＬ６，ＡＣＴＢＬ２，ＡＣＴＬ６Ａ，ＡＣＴＲ８，ＡＣＴＲＴ３，ＡＣＶＲ２Ｂ，ＡＣＹ１，ＡＤＡＤ１，ＡＤＡＭ１９，ＡＤＡＭ２９，ＡＤＡＭＴＳ１２，ＡＤＡＭＴＳ１６，ＡＤＡＭＴＳ１９，ＡＤＡＭＴＳ２，ＡＤＡＭＴＳ３，ＡＤＡＭＴＳ６，ＡＤＡＭＴＳ９，ＡＤＣＹ２，ＡＤＣＹ５，ＡＤＤ１，ＡＤＨ１Ａ，ＡＤＨ１Ｂ，ＡＤＨ１Ｃ，ＡＤＨ４，ＡＤＨ５，ＡＤＨ６，ＡＤＨ７，ＡＤＩＰＯＱ，ＡＤＰＲＨ，ＡＤＲＡ１Ｂ，ＡＤＲＡ２Ｃ，ＡＤＲＢ２，ＡＦＡＰ１，ＡＦＡＰ１Ｌ１，ＡＦＦ１，ＡＦＦ４，ＡＦＭ，ＡＦＰ，ＡＧＡ，ＡＧＧＦ１，ＡＧＰＡＴ９，ＡＧＴＲ１，ＡＧＸＴ２，ＡＨＲＲ，ＡＨＳＧ，ＡＩＭＰ１，ＡＫ６，ＡＬＡＳ１，ＡＬＢ，ＡＬＣＡＭ，ＡＬＤＨ１Ｌ１，ＡＬＤＨ７Ａ１，ＡＬＧ１Ｌ，ＡＬＧ１Ｌ２，ＡＬＧ３，ＡＬＰＫ１，ＡＬＳ２ＣＬ，ＡＭＡＣＲ，ＡＭＢＮ，ＡＭＩＧＯ３，ＡＭＯＴＬ２，ＡＭＴ，ＡＭＴＮ，ＡＮＡＰＣ１０，ＡＮＡＰＣ１３，ＡＮＡＰＣ４，ＡＮＫ２，ＡＮＫＤＤ１Ｂ，ＡＮＫＨ，ＡＮＫＨＤ１，ＡＮＫＨＤ１－ＥＩＦ４ＥＢＰ３，ＡＮＫＲＡ２，ＡＮＫＲＤ１７，ＡＮＫＲＤ２８，ＡＮＫＲＤ３１，ＡＮＫＲＤ３２，ＡＮＫＲＤ３３Ｂ，ＡＮＫＲＤ３４Ｂ，ＡＮＫＲＤ３７，ＡＮＫＲＤ５０，ＡＮＫＲＤ５５，ＡＮＫＵＢ１，ＡＮＯ１０，ＡＮＰ３２Ｃ，ＡＮＴＸＲ２，ＡＮＸＡ１０，ＡＮＸＡ２Ｒ，ＡＮＸＡ３，ＡＮＸＡ５，ＡＮＸＡ６，ＡＰ１ＡＲ，ＡＰ２Ｍ１，ＡＰ３Ｂ１，ＡＰ３Ｓ１，ＡＰＢＢ２，ＡＰＢＢ３，ＡＰＣ，ＡＰＥＨ，ＡＰＥＬＡ，ＡＰＯＤ，ＡＰＰＬ１，ＡＱＰＥＰ，ＡＲＡＰ２，ＡＲＡＰ３，ＡＲＥＧ，ＡＲＦ４，ＡＲＦＩＰ１，ＡＲＧＦＸ，ＡＲＨＧＡＰ１０，ＡＲＨＧＡＰ２４，ＡＲＨＧＡＰ２６，ＡＲＨＧＡＰ３１，ＡＲＨＧＥＦ２６，ＡＲＨＧＥＦ２８，ＡＲＨＧＥＦ３，ＡＲＨＧＥＦ３７，ＡＲＨＧＥＦ３８，ＡＲＩＨ２，ＡＲＩＨ２ＯＳ，ＡＲＬ１０，ＡＲＬ１３Ｂ，ＡＲＬ１４，ＡＲＬ１４ＥＰＬ，ＡＲＬ１５，ＡＲＬ６，ＡＲＬ６ＩＰ５，ＡＲＬ８Ｂ，ＡＲＬ９，ＡＲＭＣ８，ＡＲＰＣ４，ＡＲＰＣ４－ＴＴＬＬ３，ＡＲＰＰ２１，ＡＲＲＤＣ３，ＡＲＳＢ，ＡＲＳＩ，ＡＲＳＪ，ＡＲＳＫ，ＡＲＴ３，ＡＳＢ１４，ＡＳＢ５，ＡＳＩＣ５，ＡＳＴＥ１，ＡＴＧ１０，ＡＴＧ１２，ＡＴＧ３，ＡＴＧ７，ＡＴＯＨ１，ＡＴＯＸ１，ＡＴＰ１０Ｂ，ＡＴＰ１０Ｄ，ＡＴＰ１１Ｂ，ＡＴＰ１３Ａ３，ＡＴＰ１３Ａ４，ＡＴＰ１３Ａ５，ＡＴＰ１Ｂ３，ＡＴＰ２Ｂ２，ＡＴＰ２Ｃ１，ＡＴＰ５Ｉ，ＡＴＰ６ＡＰ１Ｌ，ＡＴＰ６Ｖ０Ｅ１，ＡＴＰ６Ｖ１Ａ，ＡＴＰ８Ａ１，ＡＴＲ，ＡＴＲＩＰ，ＡＴＸＮ７，ＡＺＩ２，Ｂ３ＧＡＬＮＴ１，Ｂ３ＧＮＴ５，Ｂ４ＧＡＬＴ４，Ｂ４ＧＡＬＴ７，ＢＡＮＫ１，ＢＡＰ１，ＢＡＳＰ１，ＢＢＳ１２，ＢＢＳ７，ＢＢＸ，ＢＣＨＥ，ＢＣＬ６，ＢＤＨ１，ＢＤＨ２，ＢＤＰ１，ＢＥＮＤ４，ＢＦＳＰ２，ＢＨＬＨＥ４０，ＢＨＭＴ，ＢＨＭＴ２，ＢＬＯＣ１Ｓ４，Ｂ

MP2K, BMP3, BMPR1B, BNIP1, BOC, BOD1, BOD1L1, BRD8, BRD9, BRIX1, BRK1, BRPF1, BSN, BST1, BTC, BTD, BTF3, BTLA, BTNL3, BTNL8, BTNL9, C1QTNF2, C1QTNF3, C1QTNF7, C3orf14, C3orf17, C3orf18, C3orf20, C3orf22, C3orf30, C3orf33, C3orf35, C3orf36, C3orf38, C3orf52, C3orf56, C3orf58, C3orf62, C3orf67, C3orf70, C3orf79, C3orf80, C3orf84, C4orf17, C4orf19, C4orf22, C4orf26, C4orf27, C4orf29, C4orf3, C4orf32, C4orf33, C4orf36, C4orf45, C4orf46, C4orf47, C4orf48, C4orf51, C4orf6, C5orf15, C5orf22, C5orf24, C5orf28, C5orf30, C5orf34, C5orf38, C5orf42, C5orf45, C5orf46, C5orf47, C5orf49, C5orf51, C5orf52, C5orf55, C5orf58, C5orf60, C5orf63, C5orf64, C5orf66, C6, C7, C9, CABS1, CACNA1D, CACNA2D2, CACNA2D3, CADM2, CADPS, CAMK1, CAMK2A, CAMK2D, CAMK2N2, CAMK4, CAMKV, CAMLG, CAMP, CAND2, CANX, CAPN7, CAPSL, CARD6, CARTPT, CASP3, CASP6, CASR, CAST, CATSPER3, CAV3, CBLB, CBR4, CBY3, CC2D2A, CCDC109B, CCDC110, CCDC112, CCDC12, CCDC125, CCDC127, CCDC13, CCDC14, CCDC149, CCDC152, CCDC158, CCDC174, CCDC36, CCDC37, CCDC39, CCDC50, CCDC51, CCDC54, CCDC58, CCDC66, CCDC69, CCDC71, CCDC80, CCDC96, CCK, CCKAR, CCL28, CCNA2, CCNB1, CCNG1, CCNG2, CCNH, CCNI, CCNI2, CCNJL, CCNL1, CCNO, CCR1, CCR2, CCR3, CCR4, CCR5, CCR8, CCR9, CCRL2, CCRN4L, CCSER1, CCT5, CD14, CD180, CD200, CD200R1, CD200R1L, CD38, CD47, CD74, CD80, CD86, CD96, CDC20B, CDC23, CDC25A, CDC25C, CDC42SE2, CDCP1, CDH10, CDH12, CDH18, CDH6, CDH9, CDHR2, CDHR4, CDK7, CDKL2, CDKL3, CDKN2AIP, CDKN2AIPNL, CDO1, CDS1, CDV3, CDX1, CELSR3, CENPC, CENPE, CENPH, CENPK, CENPU, CEP120, CEP135, CEP19, CEP44, CEP63, CEP70, CEP72, CEP97, CETN3, CFAP44, CFAP97, CFAP99, CFI, CGGBP1, CHCHD4, CHCHD6, CHD1, CHDH, CHIC2, CHL1, CHMP2B, CHRD, CHRNA9, CHST13, CHST2, CHSY3, CIDEC, CISD2, CISH, CKMT2, CLASP2, CLCN2, CLCN3, CLDN1, CLDN11, CLDN16, CLDN18, CLDN22, CLDN24, CLDND1, CLEC3B, CLGN, CLINT1, CLK4, CLNK, CLOCK, CLPTM1L, CLRN1, CLRN2, CLSTN2, CLTB, CMBL, CMC1, CMSS1, CMTM6, CMTM7, CMTM8, CMYA5, CNBP, CNGA1, CNOT10, CNOT6, CNOT6L, CNOT8, CNTN3, CNTN4, CNTN6,

COL23A1, COL25A1, COL4A3BP, COL6A5, COL6A6, COL7A1, COL8A1, COLQ, COMMD10, COMMD2, COMMD8, COPB2, COPG1, COPS4, COQ2, CORIN, COX17, COX18, COX7B2, COX7C, CP, CPA3, CPB1, CPE, CPEB2, CPEB4, CPLX1, CPLX2, CPN2, CPNE4, CPNE9, CPOX, CPZ, CRBN, CREBRF, CRELD1, CRHBP, CRIPAK, CRMP1, CRTAP, CRYBG3, CRYGS, CSF1R, CSF2, CSN1S1, CSN2, CSN3, CSNK1A1, CSNK1G3, CSPG5, CSRNP1, CSTA, CTBP1, CTDSPL, CTNNA1, CTNNB1, CTNND2, CTSO, CTXN3, CWC27, CWH43, CX3CR1, CXCL1, CXCL10, CXCL11, CXCL13, CXCL14, CXCL2, CXCL3, CXCL5, CXCL6, CXCL8, CXCL9, CXCR6, CXXC4, CXXC5, CYB561D2, CYFIP2, CYP2U1, CYP4V2, CYP8B1, CYSTM1, CYTL1, DAB2, DAG1, DALRD3, DAP, DAPP1, DAZL, DBN1, DBR1, DCAF16, DCAF4L1, DCANP1, DCBLD2, DCHS2, DCK, DCLK2, DCLK3, DCP1A, DCP2, DCTD, DCTN4, DCUN1D1, DCUN1D4, DDIT4L, DDX4, DDX41, DDX46, DDX60, DDX60L, DEFB131, DENND6A, DEPDC1B, DGKG, DGKQ, DHFR, DHFRL1, DHX15, DHX29, DHX30, DHX36, DIAPH1, DIMT1, DIRC2, DKK2, DLEC1, DLG1, DMGDH, DMP1, DMXL1, DNAH1, DNAH12, DNAH5, DNAJB11, DNAJB14, DNAJB8, DNAJC13, DNAJC18, DNAJC19, DNAJC21, DNASE1L3, DND1, DOCK2, DOCK3, DOK3, DOK7, DPH3, DPPA2, DPPA4, DPYSL3, DRD1, DRD3, DRD5, DROSHA, DSPP, DTHD1, DTWD2, DTX3L, DUSP1, DUSP7, DUX4, DVL3, DYNC1LI1, DZIP1L, DZIP3, EAF1, EAF2, EBF1, EBLN2, ECE2, ECSCR, ECT2, EDEM1, EDIL3, EDNRA, EEFSEC, EFCAB12, EFCAB9, EFCC1, EFHB, EFNA5, EGF, EGFLAM, EGR1, EHHADH, EIF1B, EIF2A, EIF2B5, EIF4A2, EIF4E, EIF4E1B, EIF4E3, EIF4EBP3, EIF4G1, EIF5A2, ELF2, ELL2, ELMOD2, ELOVL6, ELOVL7, ELP6, EMB, EMC3, EMCN, ENAM, ENC1, ENOPH1, ENPEP, ENPP6, ENTPD3, EOGT, EOMES, EPB41L4A, EPGN, EPHA3, EPHA5, EPHA6, EPHB1, EPHB3, EPM2AIP1, ERAP1, ERAP2, ERBB2IP, ERC2, ERCC8, EREG, ERGIC1, ERICH6, ERVMER34−1, ESM1, ESYT3, ETF1, ETFDH, ETNPPL, ETV5, EVC, EVC2, EXOC1, EXOC3, EXOG, EXOSC7, EXOSC9, F11, F12, F2R, F2RL1, F2RL2, FABP2, FABP6, FAF2, FAIM, FAM105A, FAM107A, FAM114A1, FAM114A2, FAM131A, FAM134B, FAM13A, FAM13B, FAM149A, FAM151B, FAM153A, FAM153B, FAM157A, FAM159B, FAM160A1, FAM162A, FAM169A, FAM170A, FAM172A, FAM173B, FAM174A, FAM1

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ＴＮＩＰ１，ＴＮＩＰ２，ＴＮＩＰ３，ＴＮＫ２，ＴＮＮＣ１，ＴＮＰＯ１，ＴＯＭＭ７０Ａ，ＴＯＰ２Ｂ，ＴＯＰＡＺ１，ＴＯＰＢＰ１，ＴＰ６３，ＴＰＰＰ，ＴＰＲＡ１，ＴＰＲＧ１，ＴＲＡ２Ｂ，ＴＲＡＩＰ，ＴＲＡＫ１，ＴＲＡＭ１Ｌ１，ＴＲＡＮＫ１，ＴＲＡＰＰＣ１１，ＴＲＡＰＰＣ１３，ＴＲＡＴ１，ＴＲＥＸ１，ＴＲＨ，ＴＲＩＭ２，ＴＲＩＭ２３，ＴＲＩＭ３６，ＴＲＩＭ４１，ＴＲＩＭ４２，ＴＲＩＭ５２，ＴＲＩＭ５９，ＴＲＩＭ６０，ＴＲＩＭ６１，ＴＲＩＭ７，ＴＲＩＭ７１，ＴＲＩＭＬ１，ＴＲＩＭＬ２，ＴＲＩＯ，ＴＲＩＰ１３，ＴＲＭＴ１０Ａ，ＴＲＭＴ１０Ｃ，ＴＲＭＴ４４，ＴＲＮＴ１，ＴＲＰＣ１，ＴＲＰＣ３，ＴＲＰＣ７，ＴＳＣ２２Ｄ２，ＴＳＥＮ２，ＴＳＬＰ，ＴＳＰＡＮ１７，ＴＳＰＡＮ５，ＴＳＳＫ１Ｂ，ＴＴＣ１，ＴＴＣ１４，ＴＴＣ２１Ａ，ＴＴＣ２３Ｌ，ＴＴＣ２９，ＴＴＣ３３，ＴＴＣ３７，ＴＴＬＬ３，ＴＵＳＣ２，ＴＷＦ２，ＴＸＫ，ＴＸＮＤＣ１５，ＴＸＮＲＤ３，ＴＸＮＲＤ３ＮＢ，Ｕ２ＳＵＲＰ，ＵＢＡ３，ＵＢＡ５，ＵＢＡ６，ＵＢＡ７，ＵＢＥ２Ｂ，ＵＢＥ２Ｄ２，ＵＢＥ２Ｄ３，ＵＢＥ２Ｅ１，ＵＢＥ２Ｅ２，ＵＢＥ２Ｋ，ＵＢＥ２ＱＬ１，ＵＢＬＣＰ１，ＵＢＰ１，ＵＢＴＤ２，ＵＢＸＮ７，ＵＣＨＬ１，ＵＣＮ２，ＵＣＰ１，ＵＦＳＰ２，ＵＧＤＨ，ＵＧＴ２Ａ１，ＵＧＴ２Ａ２，ＵＧＴ２Ａ３，ＵＧＴ２Ｂ１０，ＵＧＴ２Ｂ１１，ＵＧＴ２Ｂ１５，ＵＧＴ２Ｂ１７，ＵＧＴ２Ｂ２８，ＵＧＴ２Ｂ４，ＵＧＴ２Ｂ７，ＵＧＴ３Ａ１，ＵＧＴ３Ａ２，ＵＧＴ８，ＵＩＭＣ１，ＵＬＫ４，ＵＭＰＳ，ＵＮＣ５Ａ，ＵＮＣ５Ｃ，ＵＰＫ１Ｂ，ＵＱＣＲＣ１，ＵＱＣＲＱ，ＵＲＯＣ１，ＵＳＯ１，ＵＳＰ１３，ＵＳＰ１７Ｌ１０，ＵＳＰ１７Ｌ１１，ＵＳＰ１７Ｌ１２，ＵＳＰ１７Ｌ１３，ＵＳＰ１７Ｌ１５，ＵＳＰ１７Ｌ１７，ＵＳＰ１７Ｌ１８，ＵＳＰ１７Ｌ１９，ＵＳＰ１７Ｌ２０，ＵＳＰ１７Ｌ２１，ＵＳＰ１７Ｌ２２，ＵＳＰ１７Ｌ２４，ＵＳＰ１７Ｌ２５，ＵＳＰ１７Ｌ２６，ＵＳＰ１７Ｌ２７，ＵＳＰ１７Ｌ２８，ＵＳＰ１７Ｌ２９，ＵＳＰ１７Ｌ３０，ＵＳＰ１７Ｌ５，ＵＳＰ１９，ＵＳＰ３８，ＵＳＰ４，ＵＳＰ４６，ＵＳＰ５３，ＵＴＰ１５，ＵＴＰ３，ＵＴＳ２Ｂ，ＵＶＳＳＡ，ＶＣＡＮ，ＶＤＡＣ１，ＶＥＧＦＣ，ＶＥＰＨ１，ＶＧＬＬ３，ＶＧＬＬ４，ＶＨＬ，ＶＩＬＬ，ＶＩＰＲ１，ＶＰＲＢＰ，ＶＰＳ８，ＶＷＡ５Ｂ２，ＷＤＦＹ３，ＷＤＲ１，ＷＤＲ１７，ＷＤＲ１９，ＷＤＲ３６，ＷＤＲ４１，ＷＤＲ４８，ＷＤＲ４９，ＷＤＲ５３，ＷＤＲ５５，ＷＤＲ５Ｂ，ＷＤＲ６，ＷＤＲ７０，ＷＤＲ８２，ＷＦＳ１，ＷＨＳＣ１，ＷＮＴ５Ａ，ＷＮＴ７Ａ，ＷＮＴ８Ａ，ＷＷＣ１，ＷＷＣ２，ＷＷＴＲ１，ＸＣＲ１，ＸＩＲＰ１，ＸＰＣ，ＸＲＣＣ４，ＸＲＮ１，ＸＸＹＬＴ１，ＸＹＬＢ，ＹＥＡＴＳ２，ＹＩＰＦ５，ＹＩＰＦ７，ＹＴＨＤＣ１，ＹＴＨＤＣ２，ＺＡＲ１，ＺＢＢＸ，ＺＢＥＤ２，ＺＢＥＤ３，ＺＢＥＤ８，ＺＢＴＢ１１，ＺＢＴＢ２０，ＺＢＴＢ３８，ＺＢＴＢ４７，ＺＢＴＢ４９，ＺＣＣＨＣ１０，ＺＣＣＨＣ４，ＺＣＣＨＣ９，ＺＣＷＰＷ２，ＺＤＨＨＣ１１，ＺＤＨＨＣ１９，ＺＤＨＨＣ２３，ＺＤＨＨＣ３，ＺＦＰ２，ＺＦＰ４２，ＺＦＰ６２，ＺＦＲ，ＺＦＹＶＥ１６，ＺＦＹＶＥ２８，ＺＧＲＦ１，ＺＩＣ１，ＺＩＣ４，ＺＫＳＣＡＮ７，ＺＭＡＴ２，ＺＭＡＴ３，ＺＭＹＮＤ１０，ＺＮＦ１３１，ＺＮＦ１４１，ＺＮＦ１４８，ＺＮＦ１９７，ＺＮＦ３００，ＺＮＦ３３０，ＺＮＦ３４６，ＺＮＦ３５，ＺＮＦ３５４Ａ，ＺＮＦ３５４Ｂ，ＺＮＦ３５４Ｃ，ＺＮＦ３６６，ＺＮＦ３８５Ｄ，ＺＮＦ４４５，ＺＮＦ４５４，ＺＮＦ４７４，ＺＮＦ５０１，ＺＮＦ５０２，ＺＮＦ５１８Ｂ，ＺＮＦ５８９，ＺＮＦ５９５，ＺＮＦ６０８，ＺＮＦ６１９，ＺＮＦ６２０，ＺＮＦ６２１，ＺＮＦ６２２，ＺＮＦ６３９，ＺＮＦ６５４，ＺＮＦ６６０，ＺＮＦ６６２，ＺＮＦ７１７，ＺＮＦ７１８，ＺＮＦ７２１，ＺＮＦ７３２，ＺＮＦ８０，ＺＮＦ８２７，ＺＮＦ８５２，ＺＮＦ８６０，ＺＮＦ８７９，ＺＰＬＤ１，ＺＳＷＩＭ６，およびＺＸＤＣ；

以下を含む染色体６～９に位置する標的遺伝子：ＡＡＥＤ１，ＡＡＲＤ，ＡＡＲＳ２

, AASS, ABCA1, ABCA13, ABCA2, ABCB1, ABCB4, ABCB5, ABCB8, ABCC10, ABCF1, ABCF2, ABHD11, ABHD16A, ABHD17B, ABL1, ABO, ABRA, ABRACL, ABT1, ACAT2, ACER2, ACHE, ACN9, ACO1, ACOT13, ACTB, ACTL6B, ACTL7A, ACTL7B, ACTR3B, ACTR3C, ADAM18, ADAM2, ADAM22, ADAM28, ADAM32, ADAM7, ADAM9, ADAMDEC1, ADAMTS13, ADAMTSL1, ADAMTSL2, ADAP1, ADAT2, ADCK2, ADCK5, ADCY1, ADCY8, ADCYAP1R1, ADGB, ADHFE1, ADRA1A, ADRB3, ADTRP, AEBP1, AGAP3, AGBL3, AGER, AGFG2, AGK, AGMO, AGO2, AGPAT1, AGPAT2, AGPAT4, AGPAT5, AGPAT6, AGR2, AGR3, AGTPBP1, AHCYL2, AHI1, AHR, AIF1, AIF1L, AIG1, AIM1, AIMP2, AK1, AK3, AK8, AK9, AKAP12, AKAP2, AKAP7, AKAP9, AKIRIN2, AKNA, AKR1B1, AKR1B10, AKR1B15, AKR1D1, ALAD, ALDH1A1, ALDH1B1, ALDH5A1, ALDH8A1, ALDOB, ALG2, ALKBH4, AMBP, AMD1, AMPH, AMZ1, ANAPC2, ANGPT1, ANGPT2, ANGPTL2, ANK1, ANKIB1, ANKMY2, ANKRD18A, ANKRD18B, ANKRD20A1, ANKRD20A2, ANKRD20A3, ANKRD20A4, ANKRD46, ANKRD6, ANKRD61, ANKRD66, ANKRD7, ANKS1A, ANKS6, ANLN, ANP32B, ANXA1, ANXA13, AOAH, AOC1, AP1S1, AP3M2, AP4M1, AP5Z1, APBA1, APOBEC2, APOM, APTX, AQP1, AQP3, AQP7, ARC, ARF5, ARFGEF1, ARG1, ARHGAP18, ARHGAP39, ARHGEF10, ARHGEF35, ARHGEF39, ARHGEF5, ARID1B, ARID3C, ARL4A, ARMC1, ARMC10, ARMC12, ARMC2, ARPC1A, ARPC1B, ARPC5L, ARRDC1, ASAH1, ASAP1, ASB10, ASB15, ASB4, ASB6, ASCC3, ASF1A, ASH2L, ASIC3, ASL, ASNS, ASPH, ASPN, ASS1, ASTN2, ASZ1, ATAD2, ATAT1, ATF6B, ATG5, ATG9B, ATP5J2, ATP5J2−PTCD1, ATP6V0A4, ATP6V0D2, ATP6V0E2, ATP6V1B2, ATP6V1C1, ATP6V1F, ATP6V1G1, ATP6V1G2, ATP6V1H, ATXN1, ATXN7L1, AUH, AUTS2, AVL9, AZGP1, AZIN1, B3GALT4, B3GAT2, B4GALT1, BAALC, BAAT, BACH2, BAG1, BAG2, BAG4, BAG6, BAI1, BAI3, BAIAP2L1, BAK1, BARHL1, BARX1, BAZ1B, BBS9, BCAP29, BCKDHB, BCL7B, BCLAF1, BEND3, BEND6, BET1, BHLHA15, BHLHE22, BICD2, BIN3, BLK, BLOC1S5, BLVRA, BMP1, BMP5, BMP6, BMPER, BNC2, BNIP3L, BOP1, BPGM, BPHL, BRAF, BRAT1, BRD2, BRD3, BRF2, BRI3, BRINP1, BRPF3, BSPRY, BTBD9, BTN1A1, BTN2A1, BTN2A2, BTN3A1, BTN3A2, BTN3A3, BTNL2, BUD31, BVES, BYSL, BZW2, C1GALT1, C2, C4A, C4B, C4B_2, C5, C6orf1, C6orf10, C6

orf106, C6orf118, C6orf120, C6orf132, C6orf136, C6orf141, C6orf15, C6orf163, C6orf165, C6orf195, C6orf201, C6orf203, C6orf211, C6orf222, C6orf223, C6orf226, C6orf229, C6orf25, C6orf47, C6orf48, C6orf52, C6orf57, C6orf58, C6orf62, C6orf7, C6orf89, C6orf99, C7orf25, C7orf26, C7orf31, C7orf33, C7orf34, C7orf43, C7orf49, C7orf50, C7orf55, C7orf55-LUC7L2, C7orf57, C7orf60, C7orf61, C7orf62, C7orf65, C7orf66, C7orf69, C7orf71, C7orf72, C7orf73, C7orf76, C8G, C8orf22, C8orf31, C8orf33, C8orf34, C8orf37, C8orf4, C8orf44, C8orf44-SGK3, C8orf46, C8orf48, C8orf58, C8orf59, C8orf74, C8orf76, C8orf82, C8orf86, C8orf87, C8orf88, C8orf89, C9orf106, C9orf114, C9orf116, C9orf117, C9orf129, C9orf131, C9orf135, C9orf139, C9orf142, C9orf152, C9orf153, C9orf156, C9orf16, C9orf163, C9orf170, C9orf171, C9orf172, C9orf173, C9orf24, C9orf3, C9orf40, C9orf41, C9orf43, C9orf47, C9orf50, C9orf57, C9orf62, C9orf64, C9orf66, C9orf69, C9orf72, C9orf78, C9orf84, C9orf85, C9orf89, C9orf9, C9orf91, C9orf92, CA1, CA13, CA2, CA3, CA8, CA9, CAAP1, CACFD1, CACNA1B, CACNA2D1, CADPS2, CAGE1, CALB1, CALCR, CALD1, CALN1, CALU, CAMK2B, CAMSAP1, CAP2, CAPN11, CAPZA2, CARD11, CARD9, CASD1, CASP2, CASP8AP2, CAV1, CAV2, CBLL1, CBWD1, CBWD3, CBWD5, CBWD6, CBX3, CCAR2, CCBL1, CCDC107, CCDC126, CCDC129, CCDC132, CCDC136, CCDC146, CCDC166, CCDC167, CCDC170, CCDC171, CCDC180, CCDC183, CCDC25, CCDC28A, CCDC71L, CCHCR1, CCIN, CCL19, CCL21, CCL24, CCL26, CCL27, CCM2, CCNC, CCND3, CCNE2, CCR6, CCT6A, CCZ1, CCZ1B, CD109, CD164, CD24, CD274, CD2AP, CD36, CD72, CD83, CDC14B, CDC26, CDC37L1, CDC40, CDC5L, CDCA2, CDCA7L, CDH17, CDHR3, CDK13, CDK14, CDK19, CDK20, CDK5, CDK5RAP2, CDK6, CDK9, CDKAL1, CDKN1A, CDKN2A, CDKN2B, CDSN, CDYL, CEBPD, CEL, CENPP, CENPQ, CENPW, CEP162, CEP41, CEP57L1, CEP78, CEP85L, CER1, CERCAM, CFAP69, CFB, CFTR, CGA, CHCHD2, CHCHD3, CHCHD7, CHD7, CHMP4C, CHMP5, CHMP7, CHN2, CHPF2, CHRAC1, CHRM2, CHRNA2, CHRNA6, CHRNB3, CHST12, CITED2, CIZ1, CKS2, CLCN1, CLDN12, CLDN15, CLDN20, CLDN23, CLDN3, CLDN4, CLEC2

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EDN1, EEF1A1, EEF1D, EEF1E1, EEPD1, EFCAB1, EFHC1, EFR3A, EGFL7, EGFL8, EGFR, EGR3, EHMT1, EHMT2, EIF2AK1, EIF3B, EIF3E, EIF3H, EIF4EBP1, EIF4H, ELAVL2, ELFN1, ELMO1, ELN, ELOVL2, ELOVL4, ELOVL5, ELP3, EMC2, EN2, ENDOG, ENG, ENHO, ENPP1, ENPP2, ENPP3, ENPP4, ENPP5, ENTPD2, ENTPD4, ENTPD8, ENY2, EPB41L2, EPB41L4B, EPDR1, EPHA1, EPHA7, EPHB4, EPHB6, EPHX2, EPM2A, EPO, EPPK1, EQTN, ERCC6L2, ERI1, ERICH1, ERICH5, ERLIN2, ERMARD, ERMP1, ERP44, ERV3-1, ERVFRD-1, ERVW-1, ESCO2, ESR1, ESRP1, ESYT2, ETV1, ETV7, EVX1, EXD3, EXOC2, EXOC4, EXOSC2, EXOSC3, EXOSC4, EXT1, EXTL3, EYA1, EYA4, EYS, EZH2, EZR, F13A1, FABP12, FABP4, FABP5, FABP7, FABP9, FAM102A, FAM110B, FAM115A, FAM115C, FAM120A, FAM120AOS, FAM120B, FAM122A, FAM126A, FAM129B, FAM131B, FAM133B, FAM135A, FAM135B, FAM150A, FAM154A, FAM157B, FAM160B2, FAM162B, FAM163B, FAM166A, FAM166B, FAM167A, FAM180A, FAM184A, FAM185A, FAM188B, FAM189A2, FAM200A, FAM205A, FAM206A, FAM20C, FAM214B, FAM217A, FAM219A, FAM220A, FAM221A, FAM221B, FAM229B, FAM26D, FAM26E, FAM26F, FAM3C, FAM46A, FAM49B, FAM50B, FAM65B, FAM69B, FAM71F1, FAM71F2, FAM73B, FAM78A, FAM83A, FAM83B, FAM83H, FAM84B, FAM86B1, FAM86B2, FAM8A1, FAM91A1, FAM92A1, FANCC, FANCE, FANCG, FARS2, FASTK, FAXC, FBP1, FBP2, FBXL13, FBXL18, FBXL4, FBXL6, FBXO10, FBXO16, FBXO24, FBXO25, FBXO30, FBXO32, FBXO43, FBXO5, FBXO9, FBXW2, FBXW5, FCN1, FCN2, FDFT1, FER1L6, FERD3L, FEZF1, FGD2, FGD3, FGF17, FGF20, FGFR1, FGFR1OP, FGL1, FGL2, FHL5, FIBCD1, FIG4, FIGNL1, FILIP1, FIS1, FKBP14, FKBP15, FKBP5, FKBP6, FKBP9, FKBPL, FKTN, FLNC, FLOT1, FNBP1, FNDC1, FNTA, FOCAD, FOXB2, FOXC1, FOXD4, FOXD4L3, FOXD4L4, FOXD4L5, FOXD4L6, FOXE1, FOXF2, FOXH1, FOXK1, FOXO3, FOXP2, FOXP4, FOXQ1, FPGS, FREM1, FRK, FRMD1, FRMD3, FRMPD1, FRRS1L, FRS3, FSBP, FSCN1, FSCN3, FSD1L, FTSJ2, FUBP3, FUCA2, FUT10, FUT7, FUT9, FXN, FYN, FZD1, FZD3, FZD6, FZD9, GABBR1, GABBR2, GABRR1, GABRR2, GADD45G, GAL3ST4, GALNT11, GALNT12, GALNTL5, GALT, GAPVD1, GARNL3, GARS, GAS1, GATA4, GATAD1, GATS, GATSL2, GBA2, GBAS, GBGT1, GBX1,

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A－G，HMBOX1，HMCN2，HMGA1，HMGCLL1，HMGN3，HMGN4，HNF4G，HNRNPA2B1，HNRNPK，HOOK3，HOXA1，HOXA10，HOXA11，HOXA13，HOXA2，HOXA3，HOXA4，HOXA5，HOXA6，HOXA7，HOXA9，HR，HRCT1，HRSP12，HS3ST5，HSD17B3，HSD17B8，HSDL2，HSF1，HSF2，HSP90AB1，HSPA1A，HSPA1B，HSPA1L，HSPA5，HSPB1，HTR1B，HTR1E，HTR5A，HTRA4，HUS1，HUS1B，HYAL4，IARS，IBTK，ICA1，ICK，ID4，IDNK，IDO1，IDO2，IER3，IER5L，IFNA1，IFNA10，IFNA13，IFNA14，IFNA16，IFNA17，IFNA2，IFNA21，IFNA4，IFNA5，IFNA6，IFNA7，IFNA8，IFNB1，IFNE，IFNGR1，IFNK，IFNW1，IFRD1，IFT22，IFT74，IGF2BP3，IGF2R，IGFBP1，IGFBP3，IGFBPL1，IKBKAP，IKBKB，IKZF1，IL11RA，IL17A，IL17F，IL20RA，IL22RA2，IL33，IL6，IL7，IMMP2L，IMPA1，IMPAD1，IMPDH1，IMPG1，ING3，INHBA，INIP，INMT，INPP5E，INSIG1，INSL4，INSL6，INTS1，INTS10，INTS8，INTS9，INVS，IP6K3，IPCEF1，IPPK，IQCE，IQUB，IRAK1BP1，IRF4，IRF5，ISCA1，ISPD，ITGB8，ITPR3，IYD，IZUMO3，JAK2，JARID2，JAZF1，JPH1，JRK，KAAG1，KANK1，KAT6A，KATNA1，KBTBD11，KBTBD2，KCNB2，KCND2，KCNH2，KCNK16，KCNK17，KCNK5，KCNK9，KCNQ3，KCNQ5，KCNS2，KCNT1，KCNU1，KCNV1，KCNV2，KCP，KCTD20，KCTD7，KCTD9，KDELR2，KDM1B，KDM4C，KDM7A，KEL，KHDC1，KHDC1L，KHDC3L，KHDRBS2，KHDRBS3，KIAA0020，KIAA0196，KIAA0319，KIAA0368，KIAA0408，KIAA0895，KIAA1045，KIAA1147，KIAA1161，KIAA1244，KIAA1324L，KIAA1429，KIAA1456，KIAA1549，KIAA1586，KIAA1919，KIAA1958，KIAA2026，KIF12，KIF13A，KIF13B，KIF24，KIF25，KIF27，KIF6，KIFC1，KIFC2，KLC4，KLF10，KLF14，KLF4，KLF9，KLHDC10，KLHDC3，KLHL31，KLHL32，KLHL38，KLHL7，KLHL9，KLRG2，KMT2C，KMT2E，KPNA5，KPNA7，KRBA1，KRIT1，L3MBTL3，LACE1，LACTB2，LAMA2，LAMA4，LAMB1，LAMB4，LAMC3，LAMTOR4，LANCL2，LAPTM4B，LAT2，LATS1，LCA5，LCN1，LCN10，LCN12，LCN15，LCN2，LCN6，LCN8，LCN9，LCNL1，LEMD2，LEP，LEPROTL1，LETM2，LFNG，LGI3，LGSN，LHFPL3，LHFPL5，LHX2，LHX3，LHX6，LIMK1，LIN28B，LINGO2，LMBR1，LMBRD1，LMOD2，LMTK2，LMX1B，LOC100130357，LOC100130705，LOC100130880，LOC100133267，LOC100289561，LOC100505478，LOC100506422，LOC100507462，LOC100996634，LOC154872，LOC158434，LOC286238，LOC

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ＺＤＨＨＣ１２，ＺＤＨＨＣ１４，ＺＤＨＨＣ２，ＺＤＨＨＣ２１，ＺＤＨＨＣ４，ＺＥＲ１，ＺＦＡＮＤ１，ＺＦＡＮＤ２Ａ，ＺＦＡＮＤ３，ＺＦＡＮＤ５，ＺＦＡＴ，ＺＦＨＸ４，ＺＦＰ３７，ＺＦＰ４１，ＺＦＰ５７，ＺＦＰＭ２，ＺＨＸ１，ＺＨＸ１－Ｃ８ｏｒｆ７６，ＺＨＸ２，ＺＫＳＣＡＮ１，ＺＫＳＣＡＮ３，ＺＫＳＣＡＮ４，ＺＫＳＣＡＮ５，ＺＫＳＣＡＮ８，ＺＭＡＴ４，ＺＭＩＺ２，ＺＭＹＮＤ１９，ＺＮＦ１０７，ＺＮＦ１１７，ＺＮＦ１２，ＺＮＦ１３８，ＺＮＦ１６，ＺＮＦ１６５，ＺＮＦ１６９，ＺＮＦ１８４，ＺＮＦ１８９，ＺＮＦ２１２，ＺＮＦ２５０，ＺＮＦ２５１，ＺＮＦ２７３，ＺＮＦ２７７，ＺＮＦ２８２，ＺＮＦ２９２，ＺＮＦ３，ＺＮＦ３１１，ＺＮＦ３１６，ＺＮＦ３１８，ＺＮＦ３２２，ＺＮＦ３４，ＺＮＦ３６７，ＺＮＦ３９１，ＺＮＦ３９４，ＺＮＦ３９５，ＺＮＦ３９８，ＺＮＦ４２５，ＺＮＦ４５１，ＺＮＦ４６２，ＺＮＦ４６７，ＺＮＦ４７９，ＺＮＦ４８３，ＺＮＦ４８４，ＺＮＦ５１０，ＺＮＦ５１７，ＺＮＦ５７２，ＺＮＦ５９６，ＺＮＦ６１８，ＺＮＦ６２３，ＺＮＦ６５５，ＺＮＦ６５８，ＺＮＦ６７９，ＺＮＦ６８０，ＺＮＦ６９６，ＺＮＦ７，ＺＮＦ７０３，ＺＮＦ７０４，ＺＮＦ７０５Ｂ，ＺＮＦ７０５Ｄ，ＺＮＦ７０５Ｇ，ＺＮＦ７０６，ＺＮＦ７０７，ＺＮＦ７１３，ＺＮＦ７１６，ＺＮＦ７２７，ＺＮＦ７３５，ＺＮＦ７３６，ＺＮＦ７４６，ＺＮＦ７６，ＺＮＦ７７５，ＺＮＦ７７７，ＺＮＦ７８２，ＺＮＦ７８３，ＺＮＦ７８６，ＺＮＦ７８９，ＺＮＦ７９，ＺＮＦ８００，ＺＮＦ８０４Ｂ，ＺＮＦ８５３，ＺＮＦ８６２，ＺＮＦ８８３，ＺＮＦ９２，ＺＮＨＩＴ１，ＺＮＲＤ１，ＺＮＲＦ２，ＺＰ３，ＺＰＢＰ，ＺＳＣＡＮ１２，ＺＳＣＡＮ１６，ＺＳＣＡＮ２１，ＺＳＣＡＮ２３，ＺＳＣＡＮ２５，ＺＳＣＡＮ２６，ＺＳＣＡＮ３１，ＺＳＣＡＮ９，ＺＵＦＳＰ，および ＺＹＸ；以下を含む染色体１０～１３に位置する標的遺伝子：Ａ１ＣＦ，Ａ２Ｍ，Ａ２ＭＬ１，ＡＡＡＳ，ＡＡＣＳ，ＡＡＭＤＣ，ＡＡＳＤＨＰＰＴ，ＡＢＣＢ９，ＡＢＣＣ２，ＡＢＣＣ４，ＡＢＣＣ８，ＡＢＣＣ９，ＡＢＣＤ２，ＡＢＣＧ４，ＡＢＨＤ１３，ＡＢＩ１，ＡＢＬＩＭ１，ＡＢＴＢ２，ＡＣＡＣＢ，ＡＣＡＤ１０，ＡＣＡＤ８，ＡＣＡＤＳ，ＡＣＡＤＳＢ，ＡＣＡＴ１，ＡＣＢＤ５，ＡＣＢＤ７，ＡＣＣＳ，ＡＣＣＳＬ，ＡＣＥＲ３，ＡＣＰ２，ＡＣＲＢＰ，ＡＣＲＶ１，ＡＣＳＬ５，ＡＣＳＭ４，ＡＣＳＭ６，ＡＣＳＳ３，ＡＣＴＡ２，ＡＣＴＮ３，ＡＣＴＲ１Ａ，ＡＣＴＲ６，ＡＣＶＲ１Ｂ，ＡＣＶＲＬ１，ＡＣＹ３，ＡＤＡＭ１２，ＡＤＡＭ８，ＡＤＡＭＴＳ１４，ＡＤＡＭＴＳ１５，ＡＤＡＭＴＳ２０，ＡＤＡＭＴＳ８，ＡＤＡＲＢ２，ＡＤＣＹ６，ＡＤＤ３，ＡＤＩＰＯＲ２，ＡＤＩＲＦ，ＡＤＫ，ＡＤＭ，ＡＤＯ，ＡＤＰＲＨＬ１，ＡＤＲＡ２Ａ，ＡＤＲＢ１，ＡＤＲＢＫ１，ＡＥＢＰ２，ＡＦＡＰ１Ｌ２，ＡＧＡＰ１１，ＡＧＡＰ２，ＡＧＡＰ４，ＡＧＡＰ５，ＡＧＡＰ６，ＡＧＡＰ７Ｐ，ＡＧＡＰ９，ＡＧＢＬ２，ＡＨＮＡＫ，ＡＩＣＤＡ，ＡＩＦＭ２，ＡＩＰ，ＡＫＡＰ１１，ＡＫＡＰ３，ＡＫＩＰ１，ＡＫＲ１Ｃ１，ＡＫＲ１Ｃ２，ＡＫＲ１Ｃ３，ＡＫＲ１Ｃ４，ＡＫＲ１Ｅ２，ＡＬＤＨ１８Ａ１，ＡＬＤＨ１Ｌ２，ＡＬＤＨ２，ＡＬＤＨ３Ｂ１，ＡＬＤＨ３Ｂ２，ＡＬＧ１０，ＡＬＧ１０Ｂ，ＡＬＧ１１，ＡＬＧ５，ＡＬＧ８，ＡＬＧ９，ＡＬＫＢＨ２，ＡＬＫＢＨ３，ＡＬＫＢＨ８，ＡＬＯＸ５，ＡＬＯＸ５ＡＰ，ＡＬＸ１，ＡＬＸ４，ＡＭＢＲＡ１，ＡＭＤＨＤ１，ＡＭＥＲ２，ＡＭＨＲ２，ＡＭＩＣＡ１，ＡＭＩＧＯ２，ＡＭＮ１，ＡＭＯＴＬ１，ＡＭＰＤ３，ＡＮＡＰＣ１５，ＡＮＡＰＣ１６，ＡＮＡＰＣ５，ＡＮＡＰＣ７，ＡＮＧＰＴＬ５，ＡＮＨＸ，ＡＮＫ３，ＡＮＫＫ１，ＡＮＫＬＥ２，ＡＮＫＲＤ１，ＡＮＫＲＤ１０，ＡＮＫＲＤ１３Ａ，ＡＮＫＲＤ１３Ｄ，ＡＮＫＲＤ１６，ＡＮＫＲＤ２，ＡＮＫＲＤ２２，ＡＮＫＲＤ２６，ＡＮＫＲＤ３０Ａ，ＡＮＫＲＤ３３，ＡＮＫＲＤ４２，ＡＮＫＲＤ４９，ＡＮＫＲＤ５２，ＡＮＫＳ１Ｂ，ＡＮＯ１，ＡＮＯ２，ＡＮＯ３，ＡＮＯ４，ＡＮＯ５，ＡＮＯ６，ＡＮＯ９，ＡＮＰ３２Ｄ，ＡＮＴＸＲＬ，ＡＮＸ

A11, ANXA7, ANXA8, ANXA8L1, AP2A2, AP3M1, AP5B1, APAF1, APBB1, APBB1IP, API5, API P, APLNR, APLP2, APOA1, APOA4, APOA5, APOBEC1, APOC3, APOF, APOLD1, APPL2, AQP11, AQP2, AQP5, AQP6, ARAP1, ARCN1, ARF3, ARFGAP2, ARFIP2, ARGLU1, ARHGAP1, ARHGAP12, ARHGAP19, ARHGAP20, ARHGAP21, ARHGAP22, ARHGAP32, ARHGAP42, ARHGAP9, ARHGDIB, ARHGEF12, ARHGEF17, ARHGEF25, ARHGEF7, ARID2, ARID5B, ARL1, ARL11, ARL14EP, ARL2, ARL3, ARL5B, ARL6IP4, ARMC3, ARMC4, ARMS2, ARNTL, ARNTL2, ARPC3, ARRB1, ART1, ART4, ART5, AS3MT, ASAH2, ASAH2B, ASB13, ASB8, ASCC1, ASCL1, ASCL2, ASCL3, ASCL4, ASIC1, ASRGL1, ASUN, ATAD1, ATE1, ATF1, ATF7, ATF7IP, ATG101, ATG13, ATG16L2, ATG2A, ATHL1, ATL3, ATM, ATN1, ATOH7, ATP11A, ATP11AUN, ATP12A, ATP2A2, ATP2B1, ATP4B, ATP5B, ATP5C1, ATP5G2, ATP5L, ATP6V0A2, ATP7B, ATP8A2, ATRNL1, ATXN2, ATXN7L3B, AVIL, AVPI1, AVPR1A, B3GALTL, B3GAT1, B3GAT3, B3GNT1, B3GNT4, B3GNT6, B4GALNT1, B4GALNT3, B4GALNT4, BACE1, BAD, BAG3, BAMBI, BANF1, BARX2, BATF2, BAZ2A, BBIP1, BBOX1, BBS1, BBS10, BCAT1, BCCIP, BCDIN3D, BCL2L14, BCL7A, BCL9L, BCO2, BDNF, BEND7, BEST1, BEST3, BET1L, BHLHE41, BICC1, BICD1, BIN2, BIRC2, BIRC3, BIVM, BIVM-ERCC5, BLID, BLNK, BLOC1S1, BLOC1S2, BMI1, BMPR1A, BMS1, BNIP3, BORA, BRAP, BRCA2, BRI3BP, BRMS1, BRSK2, BSCL2, BSX, BTAF1, BTBD10, BTBD11, BTBD16, BTBD18, BTG1, BTG4, BTRC, BUB3, BUD13, C10orf10, C10orf105, C10orf107, C10orf11, C10orf111, C10orf113, C10orf12, C10orf120, C10orf126, C10orf128, C10orf131, C10orf2, C10orf25, C10orf32, C10orf35, C10orf53, C10orf54, C10orf55, C10orf62, C10orf67, C10orf71, C10orf76, C10orf82, C10orf88, C10orf90, C10orf91, C10orf95, C10orf99, C11orf1, C11orf16, C11orf21, C11orf24, C11orf30, C11orf31, C11orf40, C11orf42, C11orf44, C11orf45, C11orf49, C11orf52, C11orf53, C11orf54, C11orf57, C11orf58, C11orf63, C11orf65, C11orf68, C11orf70, C11orf71, C11orf73, C11orf74, C11orf80, C11orf84, C11orf85, C11orf86, C11orf87, C11orf88, C11orf91, C11orf94, C11orf95, C11orf96, C11orf97, C11orf98, C12orf10, C12orf29, C12orf4, C12orf40, C12orf42,

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, COLCA1, COLCA2, COMMD3, COMMD3-BMI1, COMMD6, COMMD9, COMTD1, COPB1, COPS7A, COPZ1, COQ10A, COQ5, CORO1B, CORO1C, COX14, COX15, COX6A1, COX8A, CPB2, CPEB3, CPM, CPN1, CPNE8, CPSF6, CPSF7, CPT1A, CPXM2, CRACR2A, CRACR2B, CRADD, CREB3L1, CREBL2, CREBZF, CREM, CRTAC1, CRTAM, CRY1, CRY2, CRYAB, CRYL1, CS, CSAD, CSGALNACT2, CSNK1A1L, CSNK2A3, CSRNP2, CSRP2, CSRP3, CST6, CSTF2T, CSTF3, CTBP2, CTDSP2, CTNNA3, CTNND1, CTR9, CTSC, CTSD, CTSF, CTSW, CTTN, CUBN, CUEDC2, CUL2, CUL4A, CUL5, CUTC, CUX2, CUZD1, CWC15, CWF19L1, CWF19L2, CXCL12, CXCR5, CYB561A3, CYB5R2, CYP17A1, CYP26A1, CYP26C1, CYP27B1, CYP2C18, CYP2C19, CYP2C8, CYP2C9, CYP2E1, CYP2R1, CYSLTR2, DACH1, DAGLA, DAK, DAO, DAOA, DAZAP2, DBX1, DBX2, DCD, DCDC1, DCDC5, DCHS1, DCLK1, DCLRE1A, DCLRE1C, DCN, DCP1B, DCPS, DCT, DCTN2, DCUN1D2, DCUN1D5, DDB1, DDB2, DDI1, DDIAS, DDIT3, DDIT4, DDN, DDX10, DDX11, DDX21, DDX23, DDX25, DDX47, DDX50, DDX51, DDX54, DDX55, DDX6, DEAF1, DEFB108B, DENND5A, DENND5B, DENR, DEPDC4, DEPDC7, DERA, DGAT2, DGKA, DGKH, DGKZ, DHCR7, DHH, DHRS12, DHTKD1, DHX32, DHX37, DIABLO, DIAPH3, DIP2B, DIP2C, DIS3, DIXDC1, DKK1, DKK3, DLAT, DLEU7, DLG2, DLG5, DMBT1, DNA2, DNAH10, DNAJB12, DNAJB13, DNAJC1, DNAJC12, DNAJC14, DNAJC15, DNAJC22, DNAJC24, DNAJC3, DNAJC4, DNAJC9, DNHD1, DNM1L, DNMBP, DNTT, DOCK1, DOCK9, DPAGT1, DPCD, DPF2, DPP3, DPPA3, DPY19L2, DPYSL4, DRAM1, DRAP1, DRD2, DRD4, DRGX, DSCAML1, DTX1, DTX3, DTX4, DUPD1, DUSP13, DUSP16, DUSP5, DUSP6, DUSP8, DYDC1, DYDC2, DYNC2H1, DYNLL1, DYRK2, DYRK4, DZIP1, E2F7, E2F8, EBF3, EBLN1, EBPL, ECD, ECHDC3, ECHS1, EDNRB, EDRF1, EEA1, EED, EEF1G, EFEMP2, EFNB2, EGR2, EHBP1L1, EHD1, EHF, EI24, EID3, EIF1AD, EIF2B1, EIF3A, EIF3F, EIF3M, EIF4B, EIF4EBP2, EIF4G2, EIF5AL1, ELF1, ELF5, ELK3, ELMOD1, ELOVL3, ELP4, EMG1, EML3, EMP1, EMX2, ENDOD1, ENDOU, ENKUR, ENO2, ENO4, ENOX1, ENTPD1, ENTPD7, EP400, EPC1, EPS8, EPS8L2, EPSTI1, EPYC, ERBB3, ERC1, ERCC5, ERCC6, ERCC6-PGBD3, ERGIC2, ERICH6B, ERLIN1, ERP27, ERP29, ESAM, ESD, ESPL1, ESRRA, ESYT1, ETNK1, ETS1, ETV6, E

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RTN4RL2, RUFY2, RXFP2, SAA1, SAA2, SAA2-SAA4, SAA4, SAAL1, SAC3D1, SACS, SAMD8, SAP18, SAR1A, SARNP, SART1, SART3, SBF2, SBNO1, SC5D, SCAF11, SCARB1, SCD, SCEL, SCGB1A1, SCGB1C1, SCGB1D1, SCGB1D2, SCGB1D4, SCGB2A1, SCGB2A2, SCN2B, SCN3B, SCN4B, SCN8A, SCNN1A, SCT, SCUBE2, SCYL1, SCYL2, SDHAF2, SDHD, SDR9C7, SDS, SDSL, SEC23IP, SEC24C, SEC31B, SEC61A2, SELPLG, SEMA4G, SENP1, SEPHS1, SERGEF, SERP2, SERPINE3, SERPING1, SERPINH1, SERTM1, SESN3, SETD1B, SETD8, SETDB2, SF1, SF3B2, SFMBT2, SFR1, SFRP5, SFSWAP, SFTPA1, SFTPA2, SFTPD, SFXN2, SFXN3, SFXN4, SGCG, SGMS1, SGPL1, SH2B3, SH2D4B, SH3PXD2A, SHANK2, SHISA2, SHMT2, SHOC2, SIAE, SIAH3, SIDT2, SIGIRR, SIK2, SIK3, SIPA1, SIRT1, SIRT3, SIRT4, SKA3, SKIDA1, SLAIN1, SLC10A2, SLC11A2, SLC15A1, SLC15A3, SLC15A4, SLC15A5, SLC16A12, SLC16A7, SLC16A9, SLC17A6, SLC17A8, SLC18A2, SLC18A3, SLC1A2, SLC22A10, SLC22A11, SLC22A12, SLC22A18, SLC22A18AS, SLC22A20, SLC22A24, SLC22A25, SLC22A6, SLC22A8, SLC22A9, SLC25A15, SLC25A16, SLC25A22, SLC25A28, SLC25A3, SLC25A30, SLC25A45, SLC26A10, SLC29A2, SLC29A3, SLC2A13, SLC2A14, SLC2A3, SLC35C1, SLC35E3, SLC35F2, SLC35G1, SLC36A4, SLC37A2, SLC37A4, SLC38A1, SLC38A2, SLC38A4, SLC39A12, SLC39A13, SLC39A5, SLC3A2, SLC41A2, SLC43A1, SLC43A3, SLC46A3, SLC48A1, SLC4A8, SLC5A12, SLC5A8, SLC6A12, SLC6A13, SLC6A15, SLC6A5, SLC7A1, SLC8B1, SLCO1A2, SLCO1B1, SLCO1B3, SLCO1B7, SLCO1C1, SLCO2B1, SLIT1, SLITRK1, SLITRK5, SLITRK6, SLK, SLN, SMAD9, SMAGP, SMARCC2, SMARCD1, SMC3, SMCO2, SMCO3, SMCO4, SMIM2, SMNDC1, SMPD1, SMTNL1, SMUG1, SNCG, SNRNP35, SNRPF, SNX15, SNX19, SNX32, SOAT2, SOCS2, SOHLH2, SORBS1, SORCS1, SORCS3, SORL1, SOX1, SOX21, SOX5, SOX6, SP1, SP7, SPA17, SPACA7, SPAG6, SPATA13, SPATA19, SPATS2, SPCS2, SPDYC, SPERT, SPG20, SPI1, SPIC, SPOCK2, SPON1, SPPL3, SPRN, SPRY2, SPRYD3, SPRYD4, SPRYD7, SPSB2, SPTBN2, SPTY2D1, SPX, SRGAP1, SRGN, SRPR, SRRM4, SRSF8, SRSF9, SSH1, SSH3, SSPN, SSRP1, SSSCA1, ST14, ST3GAL4, ST5, ST8SIA1, ST8SIA6, STAB2, STAC3, STAM, STAMBPL1, STARD10, STARD13, STAT2, STAT6,

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ＧＡ１０ＩＰ，ＴＳＫＵ，ＴＳＰＡＮ１１，ＴＳＰＡＮ１４，ＴＳＰＡＮ１５，ＴＳＰＡＮ１８，ＴＳＰＡＮ１９，ＴＳＰＡＮ３１，ＴＳＰＡＮ３２，ＴＳＰＡＮ４，ＴＳＰＡＮ８，ＴＳＰＡＮ９，ＴＳＳＣ４，ＴＴＣ１２，ＴＴＣ１７，ＴＴＣ３６，ＴＴＣ９Ｃ，ＴＵＢ，ＴＵＢＡ１Ａ，ＴＵＢＡ１Ｂ，ＴＵＢＡ１Ｃ，ＴＵＢＡ３Ｃ，ＴＵＢＡＬ３，ＴＵＢＢ８，ＴＵＢＧＣＰ２，ＴＵＢＧＣＰ３，ＴＵＬＰ３，ＴＵＴ１，ＴＷＦ１，ＴＸＮＲＤ１，ＴＹＲ，ＴＹＳＮＤ１，ＵＢＡＣ２，ＵＢＡＳＨ３Ｂ，ＵＢＣ，ＵＢＥ２Ｄ１，ＵＢＥ２Ｌ６，ＵＢＥ２Ｎ，ＵＢＥ３Ｂ，ＵＢＥ４Ａ，ＵＢＬ３，ＵＢＱＬＮ３，ＵＢＱＬＮＬ，ＵＢＴＤ１，ＵＢＴＦＬ１，ＵＢＸＮ１，ＵＣＨＬ３，ＵＣＭＡ，ＵＣＮ３，ＵＣＰ２，ＵＣＰ３，ＵＥＶＬＤ，ＵＦＭ１，ＵＧＧＴ２，ＵＨＲＦ１ＢＰ１Ｌ，ＵＬＫ１，ＵＮＣ１１９Ｂ，ＵＮＣ５Ｂ，ＵＮＣ９３Ｂ１，ＵＮＧ，ＵＰＦ２，ＵＰＦ３Ａ，ＵＰＫ２，ＵＱＣＣ３，ＵＲＡＤ，ＵＲＯＳ，ＵＳＨ１Ｃ，ＵＳＭＧ５，ＵＳＰ１２，ＵＳＰ１５，ＵＳＰ２，ＵＳＰ２８，ＵＳＰ３０，ＵＳＰ３５，ＵＳＰ４４，ＵＳＰ４７，ＵＳＰ５，ＵＳＰ５４，ＵＳＰ６ＮＬ，ＵＳＰＬ１，ＵＴＦ１，ＵＴＰ１４Ｃ，ＵＴＰ２０，ＵＶＲＡＧ，ＶＡＭＰ１，ＶＡＸ１，ＶＣＬ，ＶＤＡＣ２，ＶＤＲ，ＶＥＧＦＢ，ＶＥＮＴＸ，ＶＥＺＴ，ＶＩＭ，ＶＰＳ１１，ＶＰＳ２６Ａ，ＶＰＳ２６Ｂ，ＶＰＳ２９，ＶＰＳ３３Ａ，ＶＰＳ３６，ＶＰＳ３７Ｂ，ＶＰＳ３７Ｃ，ＶＰＳ５１，ＶＳＩＧ１０，ＶＳＩＧ２，ＶＳＴＭ４，ＶＳＴＭ５，ＶＴＩ１Ａ，ＶＷＡ２，ＶＷＡ５Ａ，ＶＷＡ８，ＶＷＣＥ，ＶＷＦ，ＷＡＣ，ＷＡＰＡＬ，ＷＡＳＦ３，ＷＢＰ１１，ＷＢＰ１Ｌ，ＷＢＰ４，ＷＤＦＹ２，ＷＤＦＹ４，ＷＤＲ１１，ＷＤＲ３７，ＷＤＲ６６，ＷＤＲ７４，ＷＥＥ１，ＷＩＢＧ，ＷＩＦ１，ＷＮＫ１，ＷＮＴ１，ＷＮＴ１０Ｂ，ＷＮＴ１１，ＷＮＴ５Ｂ，ＷＮＴ８Ｂ，ＷＳＢ２，ＷＳＣＤ２，ＷＴ１，ＸＰＮＰＥＰ１，ＸＰＯ４，ＸＰＯＴ，ＸＲＣＣ６ＢＰ１，ＸＲＲＡ１，ＹＡＦ２，ＹＡＰ１，ＹＡＲＳ２，ＹＢＸ３，ＹＥＡＴＳ４，ＹＩＦ１Ａ，ＹＭＥ１Ｌ１，ＹＰＥＬ４，ＺＡＲ１Ｌ，ＺＢＥＤ５，ＺＢＴＢ１６，ＺＢＴＢ３，ＺＢＴＢ３９，ＺＢＴＢ４４，ＺＣ３Ｈ１０，ＺＣ３Ｈ１２Ｃ，ＺＣ３Ｈ１３，ＺＣＣＨＣ２４，ＺＣＣＨＣ８，ＺＣＲＢ１，ＺＤＨＨＣ１３，ＺＤＨＨＣ１６，ＺＤＨＨＣ１７，ＺＤＨＨＣ２０，ＺＤＨＨＣ２４，ＺＤＨＨＣ５，ＺＤＨＨＣ６，ＺＥＢ１，ＺＦＡＮＤ４，ＺＦＣ３Ｈ１，ＺＦＰ９１，ＺＦＰＬ１，ＺＦＹＶＥ２７，ＺＩＣ２，ＺＩＣ５，ＺＭＩＺ１，ＺＭＹＭ２，ＺＭＹＭ５，ＺＭＹＮＤ１１，ＺＮＦ１０，ＺＮＦ１４０，ＺＮＦ１４３，ＺＮＦ１９５，ＺＮＦ２０２，ＺＮＦ２１４，ＺＮＦ２１５，ＺＮＦ２２，ＺＮＦ２３９，ＺＮＦ２４８，ＺＮＦ２５，ＺＮＦ２６，ＺＮＦ２６８，ＺＮＦ３２，ＺＮＦ３３Ａ，ＺＮＦ３３Ｂ，ＺＮＦ３６５，ＺＮＦ３７Ａ，ＺＮＦ３８４，ＺＮＦ３８５Ａ，ＺＮＦ４０８，ＺＮＦ４３８，ＺＮＦ４８５，ＺＮＦ４８８，ＺＮＦ５０３，ＺＮＦ５１１，ＺＮＦ５１８Ａ，ＺＮＦ６０５，ＺＮＦ６４１，ＺＮＦ６６４，ＺＮＦ６６４－ＦＡＭ１０１Ａ，ＺＮＦ７０５Ａ，ＺＮＦ７０５Ｅ，ＺＮＦ７４０，ＺＮＦ８４，ＺＮＦ８９１，ＺＮＨＩＴ２，ＺＰ１，ＺＰＲ１，ＺＲＡＮＢ１，ＺＳＷＩＭ８，ＺＷ１０，および ＺＷＩＮＴ；以下を含む染色体１４～１８に位置する標的遺伝子：ＡＡＧＡＢ，ＡＡＮＡＴ，ＡＡＲＳ，ＡＡＲＳＤ１，ＡＡＴＦ，ＡＡＴＫ，ＡＢＡＴ，ＡＢＣＡ１０，ＡＢＣＡ３，ＡＢＣＡ５，ＡＢＣＡ６，ＡＢＣＡ８，ＡＢＣＡ９，ＡＢＣＣ１，ＡＢＣＣ１１，ＡＢＣＣ１２，ＡＢＣＣ３，ＡＢＣＣ６，ＡＢＣＤ４，ＡＢＨＤ１２Ｂ，ＡＢＨＤ１５，ＡＢＨＤ１７Ｃ，ＡＢＨＤ２，ＡＢＨＤ３，ＡＢＨＤ４，ＡＢＩ３，ＡＢＲ，ＡＣＡＡ２，ＡＣＡＣＡ，ＡＣＡＤＶＬ，ＡＣＡＮ，ＡＣＡＰ１，ＡＣＢＤ４，ＡＣＤ，ＡＣＥ，ＡＣＩＮ１，ＡＣＬＹ，ＡＣＯＴ１，ＡＣＯＴ２，ＡＣＯＴ４，ＡＣＯＴ６，ＡＣＯＸ１，ＡＣＳＢＧ１，ＡＣＳＦ２，ＡＣＳＦ３，ＡＣＳＭ１，ＡＣＳＭ２Ａ，ＡＣＳＭ２Ｂ，ＡＣＳＭ３，

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TM4SF5, TM6SF1, TM9SF1, TMC3, TMC5, TMC6, TMC7, TMC8, TMCO5A, TMED10, TMED3, TMED6, TMED8, TMEM100, TMEM101, TMEM102, TMEM104, TMEM105, TMEM106A, TMEM107, TMEM111, TMEM114, TMEM121, TMEM132E, TMEM159, TMEM170A, TMEM179, TMEM186, TMEM199, TMEM200C, TMEM202, TMEM204, TMEM208, TMEM219, TMEM220, TMEM229B, TMEM231, TMEM235, TMEM241, TMEM251, TMEM253, TMEM256, TMEM260, TMEM30B, TMEM55B, TMEM62, TMEM63C, TMEM87A, TMEM88, TMEM8A, TMEM92, TMEM95, TMEM97, TMEM98, TMEM99, TMIGD1, TMOD2, TMOD3, TMUB2, TMX1, TMX3, TNFAIP1, TNFAIP2, TNFAIP8L3, TNFRSF11A, TNFRSF12A, TNFRSF13B, TNFRSF17, TNFSF12, TNFSF12-TNFSF13, TNFSF13, TNK1, TNP2, TNRC6A, TNRC6C, TNS4, TOB1, TOM1L1, TOM1L2, TOMM20L, TOP2A, TOP3A, TOX3, TOX4, TP53, TP53BP1, TP53I13, TP53TG3, TP53TG3B, TP53TG3C, TP53TG3D, TPGS2, TPM1, TPPP2, TPPP3, TPSAB1, TPSB2, TPSD1, TPSG1, TRADD, TRAF3, TRAF4, TRAF7, TRAP1, TRAPPC1, TRAPPC2L, TRAPPC6B, TRAPPC8, TRIM16, TRIM16L, TRIM25, TRIM37, TRIM47, TRIM65, TRIM69, TRIM72, TRIM9, TRIP11, TRIP4, TRMT5, TRMT61A, TRPM1, TRPM7, TRPV1, TRPV2, TRPV3, TSC2, TSEN54, TSHR, TSHZ1, TSNAXIP1, TSPAN10, TSPAN3, TSR1, TSR3, TSSK4, TTBK2, TTC19, TTC23, TTC25, TTC39C, TTC5, TTC7B, TTC8, TTC9, TTLL5, TTLL6, TTR, TTYH2, TUBB3, TUBB6, TUBD1, TUBG1, TUBG2, TUBGCP4, TUBGCP5, TUFM, TUSC5, TVP23A, TVP23B, TVP23C, TVP23C-CDRT4, TWSG1, TXNDC11, TXNDC16, TXNDC17, TXNDC2, TXNL1, TXNL4A, TXNL4B, TYMS, TYMSOS, TYRO3, UACA, UBALD1, UBALD2, UBAP1L, UBB, UBE2G1, UBE2I, UBE2O, UBE2Q2, UBE2Q2L, UBE2Z, UBE3A, UBFD1, UBL7, UBN1, UBR1, UBR7, UBTF, ULK2, ULK3, UMOD, UNC119, UNC13C, UNC13D, UNC45A, UNC45B, UNC79, UNK, UNKL, UQCRC2, USB1, USH1G, USP10, USP14, USP22, USP3, USP31, USP32, USP36, USP43, USP50, USP6, USP7, USP8, UTP18, UTP6, UTS2R, VAC14, VAMP2, VAPA, VASH1, VASN, VAT1, VAT1L, VCPKMT, VEZF1, VIMP, VIPAS39, VKORC1, VMO1, VMP1, VPS13C, VPS18, VPS25, VPS33B, VPS35, VPS39, VPS4A, VPS4B, VPS53, VPS9D1, VRK1, VRTN, VSX2, VTI1B, VTN, VWA3A, VWA9, WARS, WBP2, WDHD1, WDR20, WDR24, WDR25, WDR45B, WDR59, WDR61, WDR7, WDR72, WDR73,

ＷＤＲ７６，ＷＤＲ８１，ＷＤＲ８９，ＷＤＲ９０，ＷＤＲ９３，ＷＦＤＣ１，ＷＦＩＫＫＮ１，ＷＦＩＫＫＮ２，ＷＨＡＭＭ，ＷＩＰＦ２，ＷＩＰＩ１，ＷＮＫ４，ＷＮＴ３，ＷＮＴ９Ｂ，ＷＲＡＰ５３，ＷＳＢ１，ＷＳＣＤ１，ＷＷＯＸ，ＷＷＰ２，ＸＡＦ１，ＸＰＯ６，ＸＲＣＣ３，ＸＹＬＴ１，ＸＹＬＴ２，ＹＢＸ２，ＹＥＳ１，ＹＬＰＭ１，ＹＰＥＬ２，ＹＰＥＬ３，ＹＷＨＡＥ，ＹＹ１，ＺＡＣＮ，ＺＡＤＨ２，ＺＢＴＢ１，ＺＢＴＢ１４，ＺＢＴＢ２５，ＺＢＴＢ４，ＺＢＴＢ４２，ＺＢＴＢ７Ｃ，ＺＣ２ＨＣ１Ｃ，ＺＣ３Ｈ１４，ＺＣ３Ｈ１８，ＺＣ３Ｈ７Ａ，ＺＣＣＨＣ１４，ＺＣＣＨＣ２，ＺＤＨＨＣ１，ＺＤＨＨＣ２２，ＺＤＨＨＣ７，ＺＦＡＮＤ６，ＺＦＨＸ２，ＺＦＨＸ３，ＺＦＰ１，ＺＦＰ３，ＺＦＰ３６Ｌ１，ＺＦＰ９０，ＺＦＰＭ１，ＺＦＹＶＥ１，ＺＦＹＶＥ１９，ＺＦＹＶＥ２１，ＺＦＹＶＥ２６，ＺＧ１６，ＺＧ１６Ｂ，ＺＫＳＣＡＮ２，ＺＭＹＮＤ１５，ＺＮＦ１０６，ＺＮＦ１７４，ＺＮＦ１８，ＺＮＦ１９，ＺＮＦ２００，ＺＮＦ２０５，ＺＮＦ２０７，ＺＮＦ２１３，ＺＮＦ２１９，ＺＮＦ２３，ＺＮＦ２３２，ＺＮＦ２３６，ＺＮＦ２４，ＺＮＦ２６３，ＺＮＦ２６７，ＺＮＦ２７６，ＺＮＦ２８０Ｄ，ＺＮＦ２８６Ａ，ＺＮＦ２８６Ｂ，ＺＮＦ２８７，ＺＮＦ３１９，ＺＮＦ３８５Ｃ，ＺＮＦ３９６，ＺＮＦ３９７，ＺＮＦ４０７，ＺＮＦ４１０，ＺＮＦ４２３，ＺＮＦ４６９，ＺＮＦ４８，ＺＮＦ５００，ＺＮＦ５１６，ＺＮＦ５１９，ＺＮＦ５２１，ＺＮＦ５３２，ＺＮＦ５９２，ＺＮＦ５９４，ＺＮＦ５９７，ＺＮＦ５９８，ＺＮＦ６０９，ＺＮＦ６２４，ＺＮＦ６２９，ＺＮＦ６４６，ＺＮＦ６５２，ＺＮＦ６６８，ＺＮＦ６８８，ＺＮＦ６８９，ＺＮＦ７１０，ＺＮＦ７２０，ＺＮＦ７４７，ＺＮＦ７５０，ＺＮＦ７５Ａ，ＺＮＦ７６４，ＺＮＦ７６８，ＺＮＦ７７０，ＺＮＦ７７１，ＺＮＦ７７４，ＺＮＦ７７８，ＺＮＦ７８５，ＺＮＦ８２１，ＺＮＦ８３０，ＺＮＦ８３９，ＺＮＦ８４３，ＺＮＨＩＴ３，ＺＮＲＦ１，ＺＰ２，ＺＰＢＰ２，ＺＳＣＡＮ１０，ＺＳＣＡＮ２，ＺＳＣＡＮ２９，ＺＳＣＡＮ３０，ＺＳＣＡＮ３２，ＺＳＷＩＭ７，ＺＷＩＬＣＨ，および ＺＺＥＦ１； 以下を含む染色体１９，Ｘ，またはＹに位置する標的遺伝子：Ａ１ＢＧ，Ａ４ＧＡＬＴ，ＡＡＲ２，ＡＢＣＡ７，ＡＢＣＢ７，ＡＢＣＤ１，ＡＢＣＧ１，ＡＢＨＤ１２，ＡＢＨＤ１６Ｂ，ＡＢＨＤ１７Ａ，ＡＢＨＤ８，ＡＣＥ２，ＡＣＥＲ１，ＡＣＯ２，ＡＣＯＴ８，ＡＣＯＴ９，ＡＣＰ５，ＡＣＰＴ，ＡＣＲ，ＡＣＲＣ，ＡＣＳＢＧ２，ＡＣＳＬ４，ＡＣＳＳ１，ＡＣＳＳ２，ＡＣＴＬ１０，ＡＣＴＬ９，ＡＣＴＮ４，ＡＣＴＲ５，ＡＣＴＲＴ１，ＡＤＡ，ＡＤＡＭ３３，ＡＤＡＭＴＳ１，ＡＤＡＭＴＳ１０，ＡＤＡＭＴＳ５，ＡＤＡＭＴＳＬ５，ＡＤＡＲＢ１，ＡＤＡＴ３，ＡＤＣＫ４，ＡＤＩＧ，ＡＤＭ２，ＡＤＭ５，ＡＤＮＰ，ＡＤＯＲＡ２Ａ，ＡＤＲＡ１Ｄ，ＡＤＲＢＫ２，ＡＤＲＭ１，ＡＤＳＬ，ＡＥＳ，ＡＦＦ２，ＡＧＰＡＴ３，ＡＧＴＲ２，ＡＨＣＹ，ＡＩＦＭ１，ＡＩＦＭ３，ＡＩＲＥ，ＡＫＡＰ１４，ＡＫＡＰ１７Ａ，ＡＫＡＰ４，ＡＫＡＰ８，ＡＫＡＰ８Ｌ，ＡＫＴ１Ｓ１，ＡＫＴ２，ＡＬＡＳ２，ＡＬＤＨ１６Ａ１，ＡＬＧ１２，ＡＬＧ１３，ＡＬＫＢＨ６，ＡＬＫＢＨ７，ＡＭＥＬＸ，ＡＭＥＲ１，ＡＭＨ，ＡＭＭＥＣＲ１，ＡＭＯＴ，ＡＮＧＰＴ４，ＡＮＧＰＴＬ４，ＡＮＧＰＴＬ６，ＡＮＫＥＦ１，ＡＮＫＬＥ１，ＡＮＫＲＤ２４，ＡＮＫＲＤ２７，ＡＮＫＲＤ５４，ＡＮＯ８，ＡＰ１Ｂ１，ＡＰ１Ｍ１，ＡＰ１Ｍ２，ＡＰ１Ｓ２，ＡＰ２Ａ１，ＡＰ２Ｓ１，ＡＰ３Ｄ１，ＡＰ５Ｓ１，ＡＰＢＡ３，ＡＰＣ２，ＡＰＣＤＤ１Ｌ，ＡＰＥＸ２，ＡＰＬＮ，ＡＰＬＰ１，ＡＰＭＡＰ，ＡＰＯＢＥＣ３Ａ，ＡＰＯＢＥＣ３Ａ＿Ｂ，ＡＰＯＢＥＣ３Ｂ，ＡＰＯＢＥＣ３Ｃ，ＡＰＯＢＥＣ３Ｄ，ＡＰＯＢＥＣ３Ｆ，ＡＰＯＢＥＣ３Ｇ，ＡＰＯＢＥＣ３Ｈ，ＡＰＯＣ１，ＡＰＯＣ２，ＡＰＯＣ４，ＡＰＯＥ，ＡＰＯＬ１，ＡＰＯＬ２，ＡＰＯＬ３，ＡＰＯＬ４，ＡＰＯＬ５，ＡＰＯＬ６，ＡＰＯＯ，ＡＰＯＯＬ，ＡＰＰ，ＡＲ，ＡＲＡＦ，ＡＲＦＧＡＰ１，ＡＲＦＧＡＰ３，ＡＲＦＧＥＦ２，ＡＲＦ

RP1, ARHGAP33, ARHGAP35, ARHGAP36, ARHGAP4, ARHGAP40, ARHGAP6, ARHGAP8, ARHGEF1, ARHGEF18, ARHGEF6, ARHGEF9, ARID3A, ARL13A, ARMC6, ARMCX1, ARMCX2, ARMCX3, ARMCX4, ARMCX5, ARMCX5-GPRASP2, ARMCX6, ARR3, ARRDC2, ARRDC5, ARSA, ARSD, ARSE, ARSF, ARSH, ARVCF, ARX, ASB11, ASB12, ASB9, ASCC2, ASF1B, ASIP, ASMT, ASMTL, ASNA1, ASPDH, ASPHD2, ASXL1, ATCAY, ATF4, ATF5, ATG4A, ATG4D, ATP11C, ATP13A1, ATP1A3, ATP1B4, ATP2B3, ATP4A, ATP5D, ATP5E, ATP5J, ATP5L2, ATP5O, ATP5SL, ATP6AP1, ATP6AP2, ATP6V1E1, ATP7A, ATP8B3, ATP9A, ATRN, ATRX, ATXN10, ATXN3L, AURKA, AURKC, AVP, AVPR2, AWAT1, AWAT2, AXL, AZU1, B3GALT5, B3GNT3, B3GNT8, B4GALT5, B9D2, BABAM1, BACE2, BACH1, BAGE, BAGE2, BAGE3, BAGE4, BAGE5, BAIAP2L2, BANF2, BAX, BBC3, BCAM, BCAP31, BCAS1, BCAS4, BCAT2, BCKDHA, BCL2L1, BCL2L12, BCL2L13, BCL3, BCOR, BCORL1, BCR, BEND2, BEST2, BEX1, BEX2, BEX4, BEX5, BFSP1, BGN, BHLHB9, BHLHE23, BID, BIK, BIRC7, BIRC8, BLCAP, BLOC1S3, BLVRB, BMP15, BMP2, BMP7, BMX, BPI, BPIFA1, BPIFA2, BPIFA3, BPIFB1, BPIFB2, BPIFB3, BPIFB4, BPIFB6, BPIFC, BRCC3, BRD1, BRD4, BRS3, BRSK1, BRWD1, BRWD3, BSG, BSPH1, BST2, BTBD2, BTBD3, BTG3, BTK, C19orf10, C19orf12, C19orf18, C19orf24, C19orf25, C19orf26, C19orf33, C19orf35, C19orf38, C19orf40, C19orf43, C19orf44, C19orf45, C19orf47, C19orf48, C19orf52, C19orf53, C19orf54, C19orf57, C19orf60, C19orf66, C19orf67, C19orf68, C19orf70, C19orf71, C19orf73, C19orf80, C19orf81, C19orf83, C19orf84, C1GALT1C1, C1QTNF6, C20orf141, C20orf144, C20orf173, C20orf194, C20orf195, C20orf196, C20orf197, C20orf202, C20orf203, C20orf24, C20orf27, C20orf62, C20orf78, C20orf85, C20orf96, C21orf140, C21orf2, C21orf33, C21orf58, C21orf59, C21orf62, C21orf91, C22orf15, C22orf23, C22orf24, C22orf29, C22orf31, C22orf34, C22orf39, C22orf42, C22orf46, C2CD2, C2CD4C, C3, C5AR1, C5AR2, CA11, CA5B, CABIN1, CABLES2, CABP5, CABP7, CACNA1A, CACNA1F, CACNA1I, CACNG2, CACNG6, CACNG7, CACNG8, CACTIN, CADM4, CALM3, CALR, CALR3, CAMSAP3, CAPN12, CAPN6, CAPNS1, CAPS, CARD10, CARD8, CARM1, CASK, CASP14,

CASS4, CATSPERD, CATSPERG, CBFA2T2, CBLC, CBLN4, CBR1, CBR3, CBS, CBX6, CBX7, CBY1, CC2D1A, CCDC105, CCDC106, CCDC114, CCDC116, CCDC117, CCDC120, CCDC124, CCDC130, CCDC134, CCDC151, CCDC155, CCDC157, CCDC159, CCDC160, CCDC22, CCDC61, CCDC8, CCDC9, CCDC94, CCDC97, CCER2, CCL25, CCM2L, CCNB3, CCNE1, CCT8, CCT8L2, CD177, CD209, CD22, CD320, CD33, CD37, CD3EAP, CD40, CD40LG, CD70, CD79A, CD93, CD97, CD99, CD99L2, CDC25B, CDC34, CDC37, CDC42EP1, CDC42EP5, CDC45, CDH22, CDH26, CDH4, CDK16, CDK5RAP1, CDKL5, CDKN2D, CDPF1, CDR1, CDS2, CDX4, CEACAM1, CEACAM16, CEACAM18, CEACAM19, CEACAM20, CEACAM21, CEACAM3, CEACAM4, CEACAM5, CEACAM6, CEACAM7, CEACAM8, CEBPB, CEBPG, CECR1, CECR2, CECR5, CECR6, CELF5, CELSR1, CENPB, CENPI, CENPM, CEP250, CEP89, CERK, CERS1, CERS4, CETN2, CFAP61, CFD, CFP, CGB, CGB1, CGB2, CGB5, CGB7, CGB8, CHADL, CHAF1A, CHAF1B, CHCHD10, CHD6, CHDC2, CHEK2, CHERP, CHGB, CHIC1, CHKB, CHM, CHMP2A, CHMP4B, CHODL, CHRDL1, CHRNA4, CHST7, CHST8, CIB3, CIC, CILP2, CIRBP, CITED1, CKM, CLASRP, CLC, CLCN4, CLCN5, CLDN14, CLDN17, CLDN2, CLDN5, CLDN8, CLDND2, CLEC11A, CLEC17A, CLEC4G, CLEC4M, CLIC2, CLIC6, CLIP3, CLPP, CLPTM1, CLTCL1, CMC4, CNBD2, CNFN, CNGA2, CNKSR2, CNN1, CNN2, CNOT3, CNTD2, COL18A1, COL20A1, COL4A5, COL4A6, COL5A3, COL6A1, COL6A2, COL9A3, COLGALT1, COMMD7, COMP, COMT, COPE, COX4I2, COX6B1, COX6B2, COX7A1, COX7B, CPAMD8, CPNE1, CPT1B, CPT1C, CPXCR1, CPXM1, CRB3, CREB3L3, CRELD2, CRKL, CRLF1, CRLF2, CRLS1, CRNKL1, CRTC1, CRX, CRYAA, CRYBA4, CRYBB1, CRYBB2, CRYBB3, CRYZL1, CSAG1, CSAG3, CSDC2, CSE1L, CSF2RA, CSF2RB, CSNK1E, CSNK1G2, CSNK2A1, CSRP2BP, CST1, CST11, CST2, CST3, CST4, CST5, CST7, CST8, CST9, CST9L, CSTB, CSTF1, CSTF2, CSTL1, CT45A1, CT45A10, CT45A2, CT45A3, CT45A4, CT45A5, CT45A6, CT45A7, CT45A8, CT45A9, CT47A1, CT47A10, CT47A11, CT47A12, CT47A2, CT47A3, CT47A4, CT47A5, CT47A6, CT47A7, CT47A8, CT47A9, CT47B1, CT55, CT83, CTAG1A, CTAG1B, CTAG2, CTCFL, CTNNBL1, CTPS2, CTSA, CTSZ, CTU1, CTXN1, CUL4B, CXADR, CXCL17, CXCR3, CXorf21, CXorf22, CXorf23

ＣＸｏｒｆ３０，ＣＸｏｒｆ３６，ＣＸｏｒｆ３８，ＣＸｏｒｆ４０Ａ，ＣＸｏｒｆ４０Ｂ，ＣＸｏｒｆ４９，ＣＸｏｒｆ４９Ｂ，ＣＸｏｒｆ５１Ａ，ＣＸｏｒｆ５１Ｂ，ＣＸｏｒｆ５６，ＣＸｏｒｆ５７，ＣＸｏｒｆ５８，ＣＸｏｒｆ６５，ＣＸｏｒｆ６６，ＣＸｏｒｆ６７，ＣＹＢ５Ｒ３，ＣＹＢＢ，ＣＹＬＣ１，ＣＹＰ２４Ａ１，ＣＹＰ２Ａ１３，ＣＹＰ２Ａ６，ＣＹＰ２Ａ７，ＣＹＰ２Ｂ６，ＣＹＰ２Ｄ６，ＣＹＰ２Ｆ１，ＣＹＰ２Ｓ１，ＣＹＰ４Ｆ１１，ＣＹＰ４Ｆ１２，ＣＹＰ４Ｆ２，ＣＹＰ４Ｆ２２，ＣＹＰ４Ｆ３，ＣＹＰ４Ｆ８，ＣＹＳＬＴＲ１，ＣＹＴＨ２，ＣＹＴＨ４，ＣＹＹＲ１，ＤＡＣＨ２，ＤＡＣＴ３，ＤＡＮＤ５，ＤＡＰＫ３，ＤＡＺＡＰ１，ＤＢＮＤＤ２，ＤＢＰ，ＤＣＡＦ１２Ｌ１，ＤＣＡＦ１２Ｌ２，ＤＣＡＦ１５，ＤＣＡＦ８Ｌ１，ＤＣＡＦ８Ｌ２，ＤＣＸ，ＤＤＡ１，ＤＤＲＧＫ１，ＤＤＴ，ＤＤＴＬ，ＤＤＸ１７，ＤＤＸ２６Ｂ，ＤＤＸ２７，ＤＤＸ３９Ａ，ＤＤＸ３Ｘ，ＤＤＸ４９，ＤＤＸ５３，ＤＥＤＤ２，ＤＥＦＢ１１５，ＤＥＦＢ１１６，ＤＥＦＢ１１８，ＤＥＦＢ１１９，ＤＥＦＢ１２１，ＤＥＦＢ１２３，ＤＥＦＢ１２４，ＤＥＦＢ１２５，ＤＥＦＢ１２６，ＤＥＦＢ１２７，ＤＥＦＢ１２８，ＤＥＦＢ１２９，ＤＥＦＢ１３２，ＤＥＮＮＤ１Ｃ，ＤＥＮＮＤ６Ｂ，ＤＥＰＤＣ５，ＤＥＲＬ３，ＤＥＳＩ１，ＤＧＡＴ２Ｌ６，ＤＧＣＲ１４，ＤＧＣＲ２，ＤＧＣＲ６，ＤＧＣＲ６Ｌ，ＤＧＣＲ８，ＤＧＫＫ，ＤＨＤＨ，ＤＨＰＳ，ＤＨＲＳＸ，ＤＨＸ３４，ＤＨＸ３５，ＤＩＡＰＨ２，ＤＩＤＯ１，ＤＩＰ２Ａ，ＤＩＲＡＳ１，ＤＫＣ１，ＤＫＫＬ１，ＤＬＧ３，ＤＬＧＡＰ４，ＤＬＬ３，ＤＭＣ１，ＤＭＤ，ＤＭＫＮ，ＤＭＰＫ，ＤＭＲＴＣ１，ＤＭＲＴＣ１Ｂ，ＤＭＲＴＣ２，ＤＭＷＤ，ＤＮＡＡＦ３，ＤＮＡＪＢ１，ＤＮＡＪＢ７，ＤＮＡＪＣ２８，ＤＮＡＪＣ５，ＤＮＡＬ４，ＤＮＡＳＥ１Ｌ１，ＤＮＡＳＥ２，ＤＮＭ２，ＤＮＭＴ１，ＤＮＭＴ３Ｂ，ＤＮＭＴ３Ｌ，ＤＮＴＴＩＰ１，ＤＯＣＫ１１，ＤＯＣＫ６，ＤＯＨＨ，ＤＯＫ５，ＤＯＮＳＯＮ，ＤＯＰＥＹ２，ＤＯＴ１Ｌ，ＤＰＦ１，ＤＰＨ３Ｐ１，ＤＰＭ１，ＤＰＰ９，ＤＰＰ９－ＡＳ１，ＤＰＲＸ，ＤＰＹ１９Ｌ３，ＤＲＧ１，ＤＲＩＣＨ１，ＤＲＰ２，ＤＳＣＡＭ，ＤＳＣＲ３，ＤＳＣＲ４，ＤＳＮ１，ＤＳＴＮ，ＤＴＤ１，ＤＵＳ３Ｌ，ＤＵＳＰ１５，ＤＵＳＰ１８，ＤＵＳＰ２１，ＤＵＳＰ９，ＤＵＸＡ，ＤＹＮＬＲＢ１，ＤＹＮＬＴ３，ＤＹＲＫ１Ａ，ＤＹＲＫ１Ｂ，ＤＺＡＮＫ１，Ｅ２Ｆ１，ＥＢＦ４，ＥＢＩ３，ＥＢＰ，ＥＣＨ１，ＥＣＳＩＴ，ＥＤＡ，ＥＤＡ２Ｒ，ＥＤＥＭ２，ＥＤＮ３，ＥＥＦ１Ａ２，ＥＥＦ２，ＥＦＣＡＢ６，ＥＦＨＣ２，ＥＦＮＡ２，ＥＦＮＢ１，ＥＧＦＬ６，ＥＧＬＮ２，ＥＨＤ２，ＥＩＤ２，ＥＩＤ２Ｂ，ＥＩＦ１ＡＸ，ＥＩＦ２Ｓ２，ＥＩＦ２Ｓ３，ＥＩＦ３Ｄ，ＥＩＦ３Ｇ，ＥＩＦ３Ｋ，ＥＩＦ３Ｌ，ＥＩＦ４ＥＮＩＦ１，ＥＩＦ６，ＥＬＡＮＥ，ＥＬＡＶＬ１，ＥＬＡＶＬ３，ＥＬＦ４，ＥＬＦＮ２，ＥＬＫ１，ＥＬＬ，ＥＬＭＯ２，ＥＬＯＦ１，ＥＬＳＰＢＰ１，ＥＭＣ１０，ＥＭＤ，ＥＭＩＤ１，ＥＭＩＬＩＮ３，ＥＭＬ２，ＥＭＰ３，ＥＭＲ１，ＥＭＲ２，ＥＭＲ３，ＥＮＯＸ２，ＥＮＴＨＤ１，ＥＮＴＰＤ６，ＥＰ３００，ＥＰＢ４１Ｌ１，ＥＰＨＸ３，ＥＰＮ１，ＥＰＯＲ，ＥＰＰＩＮ，ＥＰＰＩＮ－ＷＦＤＣ６，ＥＰＳ１５Ｌ１，ＥＰＳ８Ｌ１，ＥＲＡＳ，ＥＲＣＣ１，ＥＲＣＣ２，ＥＲＣＣ６Ｌ，ＥＲＦ，ＥＲＧ，ＥＲＧＩＣ３，ＥＲＩＣＨ４，ＥＲＶＶ－１，ＥＲＶＶ－２，ＥＳＦ１，ＥＳＸ１，ＥＴＦＢ，ＥＴＨＥ１，ＥＴＳ２，ＥＴＶ２，ＥＶＡ１Ｃ，ＥＶＩ５Ｌ，ＥＷＳＲ１，ＥＸＯＣ３Ｌ２，ＥＸＯＳＣ５，ＥＹＡ２，Ｆ２ＲＬ３，Ｆ８，Ｆ８Ａ１，Ｆ８Ａ２，Ｆ８Ａ３，Ｆ９，ＦＡＡＨ２，ＦＡＭ１０４Ｂ，ＦＡＭ１０９Ｂ，ＦＡＭ１１０Ａ，ＦＡＭ１１８Ａ，ＦＡＭ１２０Ｃ，ＦＡＭ１２２Ｂ，ＦＡＭ１２２Ｃ，ＦＡＭ１２７Ａ，ＦＡＭ１２７Ｂ，ＦＡＭ１２７Ｃ，ＦＡＭ１２９Ｃ，ＦＡＭ１３３Ａ，ＦＡＭ１５５Ｂ，ＦＡＭ１５６Ａ，ＦＡＭ１５６Ｂ，ＦＡＭ１８７Ｂ，ＦＡＭ１９９Ｘ，ＦＡＭ１９Ａ５，ＦＡＭ２０７Ａ，ＦＡＭ２０９

A, FAM209B, FAM210B, FAM217B, FAM227A, FAM32A, FAM3A, FAM3B, FAM46D, FAM47A, FAM47B, FAM47C, FAM50A, FAM58A, FAM65C, FAM71E1, FAM71E2, FAM83C, FAM83D, FAM83E, FAM83F, FAM98C, FAM9A, FAM9B, FAM9C, FANCB, FARSA, FASTKD5, FATE1, FBL, FBLN1, FBN3, FBXL12, FBXO17, FBXO27, FBXO46, FBXO7, FBXW9, FCAR, FCER2, FCGBP, FCGRT, FCHO1, FDX1L, FEM1A, FERMT1, FFAR1, FFAR2, FFAR3, FGD1, FGF13, FGF16, FGF21, FGF22, FHL1, FIGF, FITM2, FIZ1, FKBP1A, FKBP8, FKRP, FLJ44635, FLNA, FLRT3, FLT3LG, FMR1, FMR1NB, FOSB, FOXA2, FOXA3, FOXO4, FOXP3, FOXR2, FOXRED2, FOXS1, FPR1, FPR2, FPR3, FRMD7, FRMPD3, FRMPD4, FSD1, FSTL3, FTCD, FTH1P18, FTHL17, FTL, FTSJ1, FUNDC1, FUNDC2, FUT1, FUT2, FUT3, FUT5, FUT6, FUZ, FXYD1, FXYD3, FXYD5, FXYD7, FZR1, G6PD, GAB3, GAB4, GABPA, GABRA3, GABRE, GABRQ, GADD45B, GADD45GIP1, GAGE1, GAGE10, GAGE12B, GAGE12C, GAGE12D, GAGE12E, GAGE12F, GAGE12G, GAGE12H, GAGE12I, GAGE12J, GAGE13, GAGE2A, GAGE2B, GAGE2C, GAGE2D, GAGE2E, GAGE4, GAGE5, GAGE6, GAGE7, GAGE8, GAL3ST1, GALP, GALR3, GAMT, GAPDHS, GART, GAS2L1, GATA1, GATA5, GATAD2A, GATSL3, GCAT, GCDH, GCNT7, GDAP1L1, GDF1, GDF15, GDF5, GDI1, GDPD2, GEMIN7, GEMIN8, GFRA4, GFY, GGA1, GGN, GGT1, GGT5, GGT7, GGTLC1, GGTLC2, GHRH, GID8, GINS1, GIPC1, GIPC3, GIPR, GJB1, GK, GLA, GLOD5, GLRA2, GLRA4, GLTSCR1, GLTSCR2, GLUD2, GMEB2, GMFG, GMIP, GNA11, GNA15, GNAS, GNAZ, GNB1L, GNG7, GNG8, GNL3L, GNRH2, GP1BB, GP6, GPATCH1, GPC3, GPC4, GPCPD1, GPI, GPKOW, GPM6B, GPR101, GPR108, GPR112, GPR119, GPR143, GPR173, GPR174, GPR32, GPR34, GPR4, GPR50, GPR64, GPR82, GPRASP1, GPRASP2, GPX4, GRAMD1A, GRAMD4, GRAP2, GRIA3, GRIK1, GRIK5, GRIN2D, GRIN3B, GRIPAP1, GRPR, GRWD1, GSC2, GSK3A, GSPT2, GSS, GSTT2, GSTT2B, GTF2F1, GTPBP1, GTPBP3, GTPBP6, GTSE1, GTSF1L, GUCD1, GUCY2F, GYG2, GYS1, GZF1, GZMM, H1F0, H2AFB1, H2AFB2, H2AFB3, H2BFM, H2BFWT, HAMP, HAO1, HAPLN4, HAS1, HAUS5, HAUS7, HAUS8, HCCS, HCFC1, HCK, HCN2, HCST, HDAC10, HDAC6, HDAC8, HDGFRP2, HDHD1, HDX, HELZ2, HEPH, HIC2, HIF3A, HIPK4, HIRA, HKR1, HLCS, HM13, HMG20B, HMGB3, HMGN1, HMGN5, HMGXB4,

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IGLL1, IGLL5, IGLON5, IGSF1, IGSF23, IGSF5, IKBKG, IL10RB, IL11, IL12RB1, IL13RA1, IL13RA2, IL17RA, IL17REL, IL1RAPL1,
IL1RAPL2, IL27RA, IL2RB, IL2RG, IL3RA, IL4I1, IL9R, ILF3, ILVBL, INAFM1, INPP5J,
INSL3, INSM1, INSR, IQSEC2, IRAK1, IRF2BP1, IRF3, IRGC, IRGQ, IRS4, ISM1, ISOC2, ISX, ISYNA1, ITCH, ITGB1BP2, ITGB2, ITIH6, ITM2A, ITPA, ITPKC, ITSN1, IZUMO1, IZUMO2, IZUMO4, JADE3, JAG1, JAK3, JAM2,
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ＮＦ７０９，ＺＮＦ７１，ＺＮＦ７１１，ＺＮＦ７１４，ＺＮＦ７２６，ＺＮＦ７２８，ＺＮＦ７２９，ＺＮＦ７３０，ＺＮＦ７３７，ＺＮＦ７４，ＺＮＦ７４９，ＺＮＦ７５Ｄ，ＺＮＦ７６１，ＺＮＦ７６３，ＺＮＦ７６５，ＺＮＦ７６６，ＺＮＦ７７，ＺＮＦ７７２，ＺＮＦ７７３，ＺＮＦ７７６，ＺＮＦ７８０Ａ，ＺＮＦ７８０Ｂ，ＺＮＦ７８１，ＺＮＦ７８４，ＺＮＦ７８７，ＺＮＦ７９０，ＺＮＦ７９１，ＺＮＦ７９２，ＺＮＦ７９３，ＺＮＦ７９９，ＺＮＦ８，ＺＮＦ８０５，ＺＮＦ８０８，ＺＮＦ８１，ＺＮＦ８１２，ＺＮＦ８１３，ＺＮＦ８１４，ＺＮＦ８１６，ＺＮＦ８１６－ＺＮＦ３２１Ｐ，ＺＮＦ８２３，ＺＮＦ８２９，ＺＮＦ８３，ＺＮＦ８３１，ＺＮＦ８３５，ＺＮＦ８３６，ＺＮＦ８３７，ＺＮＦ８４１，ＺＮＦ８４４，ＺＮＦ８４５，ＺＮＦ８４６，ＺＮＦ８５，ＺＮＦ８５０，ＺＮＦ８６５，ＺＮＦ８７８，ＺＮＦ８８０，ＺＮＦ９０，ＺＮＦ９１，ＺＮＦ９３，ＺＮＦ９８，ＺＮＦ９９，ＺＮＦＸ１，ＺＮＲＦ３，ＺＮＲＦ４，ＺＲＳＲ２，ＺＳＣＡＮ１，ＺＳＣＡＮ１８，ＺＳＣＡＮ２２，ＺＳＣＡＮ４，ＺＳＣＡＮ５Ａ，ＺＳＣＡＮ５Ｂ，ＺＳＷＩＭ１，ＺＳＷＩＭ３，ＺＳＷＩＭ４，ＺＸＤＡ，およびＺＸＤＢ、である。

【００８４】

いくつかの他の実施形態では、本発明にかかるｓａＲＮＡによりモジュレートされうる標的遺伝子の非限定的な例は、以下のような、表２に記載された標的遺伝子を含む非コード遺伝子でありうる。すなわち、Ａ１ＢＧ，Ａ１ＢＧ－ＡＳ１，Ａ１ＣＦ，Ａ２Ｍ，Ａ２Ｍ－ＡＳ１，Ａ２ＭＬ１，Ａ２ＭＰ１，Ａ３ＧＡＬＴ２，Ａ４ＧＡＬＴ，Ａ４ＧＮＴ，ＡＡ０６，ＡＡＡＳ，ＡＡＣＳ，ＡＡＣＳＰ１，ＡＡＤＡＣ，ＡＡＤＡＣＬ２，ＡＡＤＡＣＬ２－ＡＳ１，ＡＡＤＡＣＬ３，ＡＡＤＡＣＬ４，ＡＡＤＡＣＰ１，ＡＡＤＡＴ，ＡＡＥＤ１，ＡＡＧＡＢ，ＡＡＫ１，ＡＡＭＤＣ，ＡＡＭＰ，ＡＡＮＡＴ，ＡＡＲ２，ＡＡＲＤ，ＡＡＲＳ，ＡＡＲＳ２，ＡＡＲＳＤ１，ＡＡＳＤＨ，ＡＡＳＤＨＰＰＴ，ＡＡＳＳ，ＡＡＴＦ，ＡＡＴＫ，ＡＡＴＫ－ＡＳ１，ＡＢＡＴ，ＡＢＣＡ１，ＡＢＣＡ１０，ＡＢＣＡ１１Ｐ，ＡＢＣＡ１２，ＡＢＣＡ１３，ＡＢＣＡ１７Ｐ，ＡＢＣＡ２，ＡＢＣＡ３，ＡＢＣＡ４，ＡＢＣＡ５，ＡＢＣＡ６，ＡＢＣＡ７，ＡＢＣＡ８，ＡＢＣＡ９，ＡＢＣＡ９－ＡＳ１，ＡＢＣＢ１，ＡＢＣＢ１０，ＡＢＣＢ１１，ＡＢＣＢ４，ＡＢＣＢ５，ＡＢＣＢ６，ＡＢＣＢ７，ＡＢＣＢ８，ＡＢＣＢ９，ＡＢＣＣ１，ＡＢＣＣ１０，ＡＢＣＣ１１，ＡＢＣＣ１２，ＡＢＣＣ１３，ＡＢＣＣ２，ＡＢＣＣ３，ＡＢＣＣ４，ＡＢＣＣ５，ＡＢＣＣ５－ＡＳ１，ＡＢＣＣ６，ＡＢＣＣ６Ｐ１，ＡＢＣＣ６Ｐ２，ＡＢＣＣ８，ＡＢＣＣ９，ＡＢＣＤ１，ＡＢＣＤ２，ＡＢＣＤ３，ＡＢＣＤ４，ＡＢＣＥ１，ＡＢＣＦ１，ＡＢＣＦ２，ＡＢＣＦ３，ＡＢＣＧ１，ＡＢＣＧ２，ＡＢＣＧ４，ＡＢＣＧ５，ＡＢＣＧ８，ＡＢＨＤ１，ＡＢＨＤ１０，ＡＢＨＤ１１，ＡＢＨＤ１１－ＡＳ１，ＡＢＨＤ１２，ＡＢＨＤ１２Ｂ，ＡＢＨＤ１３，ＡＢＨＤ１４Ａ，ＡＢＨＤ１４Ａ－ＡＣＹ１，ＡＢＨＤ１４Ｂ，ＡＢＨＤ１５，ＡＢＨＤ１６Ａ，ＡＢＨＤ１６Ｂ，ＡＢＨＤ１７Ａ，ＡＢＨＤ１７Ｂ，ＡＢＨＤ１７Ｃ，ＡＢＨＤ２，ＡＢＨＤ３，ＡＢＨＤ４，ＡＢＨＤ５，ＡＢＨＤ６，ＡＢＨＤ８，ＡＢＩ１，ＡＢＩ２，ＡＢＩ３，ＡＢＩ３ＢＰ，ＡＢＬ１，ＡＢＬ２，ＡＢＬＩＭ１，ＡＢＬＩＭ２，ＡＢＬＩＭ３，ＡＢＯ，ＡＢＲ，ＡＢＲＡ，ＡＢＲＡＣＬ，ＡＢＴ１，ＡＢＴＢ１，ＡＢＴＢ２，ＡＣＡＡ１，ＡＣＡＡ２，ＡＣＡＣＡ，ＡＣＡＣＢ，ＡＣＡＤ１０，ＡＣＡＤ１１，ＡＣＡＤ８，ＡＣＡＤ９，ＡＣＡＤＬ，ＡＣＡＤＭ，ＡＣＡＤＳ，ＡＣＡＤＳＢ，ＡＣＡＤＶＬ，ＡＣＡＮ，ＡＣＡＰ１，ＡＣＡＰ２，ＡＣＡＰ３，ＡＣＡＴ１，ＡＣＡＴ２，ＡＣＢＤ３，ＡＣＢＤ４，ＡＣＢＤ５，ＡＣＢＤ６，ＡＣＢＤ７，ＡＣＣＳ，ＡＣＣＳＬ，ＡＣＤ，ＡＣＥ，ＡＣＥ２，ＡＣＥＲ１，ＡＣＥＲ２，ＡＣＥＲ３，ＡＣＨＥ，ＡＣＩＮ１，ＡＣＫＲ１，ＡＣＫＲ２，ＡＣＫＲ３，ＡＣＫＲ４，ＡＣＬＹ，ＡＣＭＳＤ，ＡＣＮ９，ＡＣＯ１，ＡＣＯ２，ＡＣＯ

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H6, ERICH6-AS1, ERICH6B, ERLEC1, ERLIN1, ERLIN2, ERMAP, ERMARD, ERMN, ERMP1, ERN1, ERN2, ERO1L, ERO1LB, ERP27, ERP29, ERP44, ERRFI1, ERV3-1, ERVFRD-1, ERVK13-1, ERVMER34-1, ERVV-1, ERVV-2, ERVW-1, ESAM, ESCO1, ESCO2, ESD, ESF1, ESM1, ESPL1, ESPN, ESPNL, ESPNP, ESR1, ESR2, ESRG, ESRP1, ESRP2, ESRRA, ESRRB, ESRRG, ESX1, ESYT1, ESYT2, ESYT3, ETAA1, ETF1, ETFA, ETFB, ETFDH, ETHE1, ETNK1, ETNK2, ETNPPL, ETS1, ETS2, ETV1, ETV2, ETV3, ETV3L, ETV4, ETV5, ETV6, ETV7, EVA1A, EVA1B, EVA1C, EVC, EVC2, EVI2A, EVI2B, EVI5, EVI5L, EVL, EVPL, EVPLL, EVX1, EVX1-AS, EVX2, EWSAT1, EWSR1, EXD1, EXD2, EXD3, EXO1, EXO5, EXOC1, EXOC2, EXOC3, EXOC3-AS1, EXOC3L1, EXOC3L2, EXOC3L4, EXOC4, EXOC5, EXOC6, EXOC6B, EXOC7, EXOC8, EXOG, EXOSC1, EXOSC10, EXOSC2, EXOSC3, EXOSC4, EXOSC5, EXOSC6, EXOSC7, EXOSC8, EXOSC9, EXPH5, EXT1, EXT2, EXTL1, EXTL2, EXTL3, EXTL3-AS1, EYA1, EYA2, EYA3, EYA4, EYS, EZH1, EZH2, EZR, EZR-AS1, F10, F10-AS1, F11, F11-AS1, F11R, F12, F13A1, F13B, F2, F2R, F2RL1, F2RL2, F2RL3, F3, F5, F7, F8, F8A1, F8A2, F8A3, F9, FA2H, FAAH, FAAH2, FAAHP1, FABP1, FABP12, FABP2, FABP3, FABP4, FABP5, FABP5P3, FABP6, FABP7, FABP9, FADD, FADS1, FADS2, FADS3, FADS6, FAF1, FAF2, FAH, FAHD1, FAHD2A, FAHD2B, FAHD2CP, FAIM, FAIM2, FAIM3, FALEC, FAM101A, FAM101B, FAM102A, FAM102B, FAM103A1, FAM104A, FAM104B, FAM105A, FAM106A, FAM106B, FAM106CP, FAM107A, FAM107B, FAM109A, FAM109B, FAM110A, FAM110B, FAM110C, FAM110D, FAM111A, FAM111B, FAM114A1, FAM114A2, FAM115A, FAM115C, FAM115D, FAM117A, FAM117B, FAM118A, FAM118B, FAM120A, FAM120AOS, FAM120B, FAM120C, FAM122A, FAM122B, FAM122C, FAM124A, FAM124B, FAM126A, FAM126B, FAM127A, FAM127B, FAM127C, FAM129A, FAM129B, FAM129C, FAM131A, FAM131B, FAM131C, FAM132A, FAM132B, FAM133A, FAM133B, FAM133CP, FAM133DP, FAM134A, FAM134B, FAM134C, FAM135A, FAM135B, FAM136A, FAM138A, FAM138B, FAM138C, FAM138D, FAM138E, FAM138F, FAM13A, FAM13A-AS1, FAM13B, FAM13C, FAM149A, FAM149B1, FAM150A, FAM150B, FAM151A, FAM151B, FAM153A, FAM153B, FAM153C, FAM154A, FAM154B, FAM155A, F

ＡＭ１５５Ａ－ＩＴ１，ＦＡＭ１５５Ｂ，ＦＡＭ１５６Ａ，ＦＡＭ１５６Ｂ，ＦＡＭ１５７Ａ，ＦＡＭ１５７Ｂ，ＦＡＭ１５７Ｃ，ＦＡＭ１５９Ａ，ＦＡＭ１５９Ｂ，ＦＡＭ１６０Ａ１，ＦＡＭ１６０Ａ２，ＦＡＭ１６０Ｂ１，ＦＡＭ１６０Ｂ２，ＦＡＭ１６１Ａ，ＦＡＭ１６１Ｂ，ＦＡＭ１６２Ａ，ＦＡＭ１６２Ｂ，ＦＡＭ１６３Ａ，ＦＡＭ１６３Ｂ，ＦＡＭ１６６Ａ，ＦＡＭ１６６Ｂ，ＦＡＭ１６７Ａ，ＦＡＭ１６７Ａ－ＡＳ１，ＦＡＭ１６７Ｂ，ＦＡＭ１６８Ａ，ＦＡＭ１６８Ｂ，ＦＡＭ１６９Ａ，ＦＡＭ１６９Ｂ，ＦＡＭ１７０Ａ，ＦＡＭ１７０Ｂ，ＦＡＭ１７０Ｂ－ＡＳ１，ＦＡＭ１７１Ａ１，ＦＡＭ１７１Ａ２，ＦＡＭ１７１Ｂ，ＦＡＭ１７２Ａ，ＦＡＭ１７２ＢＰ，ＦＡＭ１７３Ａ，ＦＡＭ１７３Ｂ，ＦＡＭ１７４Ａ，ＦＡＭ１７４Ｂ，ＦＡＭ１７５Ａ，ＦＡＭ１７５Ｂ，ＦＡＭ１７７Ａ１，ＦＡＭ１７７Ｂ，ＦＡＭ１７８Ａ，ＦＡＭ１７８Ｂ，ＦＡＭ１７９Ａ，ＦＡＭ１７９Ｂ，ＦＡＭ１８０Ａ，ＦＡＭ１８０Ｂ，ＦＡＭ１８１Ａ，ＦＡＭ１８１Ａ－ＡＳ１，ＦＡＭ１８１Ｂ，ＦＡＭ１８２Ａ，ＦＡＭ１８２Ｂ，ＦＡＭ１８３Ａ，ＦＡＭ１８３Ｂ，ＦＡＭ１８３ＣＰ，ＦＡＭ１８４Ａ，ＦＡＭ１８４Ｂ，ＦＡＭ１８５Ａ，ＦＡＭ１８６Ａ，ＦＡＭ１８６Ｂ，ＦＡＭ１８７Ｂ，ＦＡＭ１８８Ａ，ＦＡＭ１８８Ｂ，ＦＡＭ１８９Ａ１，ＦＡＭ１８９Ａ２，ＦＡＭ１８９Ｂ，ＦＡＭ１９２Ａ，ＦＡＭ１９３Ａ，ＦＡＭ１９３Ｂ，ＦＡＭ１９５Ａ，ＦＡＭ１９５Ｂ，ＦＡＭ１９６Ａ，ＦＡＭ１９６Ｂ，ＦＡＭ１９７Ｙ２，ＦＡＭ１９７Ｙ５，ＦＡＭ１９８Ａ，ＦＡＭ１９８Ｂ，ＦＡＭ１９９Ｘ，ＦＡＭ１９Ａ１，ＦＡＭ１９Ａ２，ＦＡＭ１９Ａ３，ＦＡＭ１９Ａ４，ＦＡＭ１９Ａ５，ＦＡＭ２００Ａ，ＦＡＭ２００Ｂ，ＦＡＭ２０１Ａ，ＦＡＭ２０４Ａ，ＦＡＭ２０５Ａ，ＦＡＭ２０５ＢＰ，ＦＡＭ２０６Ａ，ＦＡＭ２０７Ａ，ＦＡＭ２０８Ａ，ＦＡＭ２０８Ｂ，ＦＡＭ２０９Ａ，ＦＡＭ２０９Ｂ，ＦＡＭ２０Ａ，ＦＡＭ２０Ｂ，ＦＡＭ２０Ｃ，ＦＡＭ２１０Ａ，ＦＡＭ２１０Ｂ，ＦＡＭ２１２Ａ，ＦＡＭ２１２Ｂ，ＦＡＭ２１２Ｂ－ＡＳ１，ＦＡＭ２１３Ａ，ＦＡＭ２１３Ｂ，ＦＡＭ２１４Ａ，ＦＡＭ２１４Ｂ，ＦＡＭ２１５Ａ，ＦＡＭ２１６Ａ，ＦＡＭ２１６Ｂ，ＦＡＭ２１７Ａ，ＦＡＭ２１７Ｂ，ＦＡＭ２１８Ａ，ＦＡＭ２１９Ａ，ＦＡＭ２１９Ｂ，ＦＡＭ２１Ａ，ＦＡＭ２１Ｃ，ＦＡＭ２１ＥＰ，ＦＡＭ２２０Ａ，ＦＡＭ２２１Ａ，ＦＡＭ２２１Ｂ，ＦＡＭ２２２Ａ，ＦＡＭ２２２Ａ－ＡＳ１，ＦＡＭ２２２Ｂ，ＦＡＭ２２３Ａ，ＦＡＭ２２３Ｂ，ＦＡＭ２２４Ａ，ＦＡＭ２２４Ｂ，ＦＡＭ２２５Ａ，ＦＡＭ２２５Ｂ，ＦＡＭ２２６Ａ，ＦＡＭ２２６Ｂ，ＦＡＭ２２７Ａ，ＦＡＭ２２７Ｂ，ＦＡＭ２２８Ａ，ＦＡＭ２２８Ｂ，ＦＡＭ２２９Ａ，ＦＡＭ２２９Ｂ，ＦＡＭ２３０Ｂ，ＦＡＭ２３０Ｃ，ＦＡＭ２３１Ａ，ＦＡＭ２３１Ｄ，ＦＡＭ２４Ａ，ＦＡＭ２４Ｂ，ＦＡＭ２４Ｂ－ＣＵＺＤ１，ＦＡＭ２５Ａ，ＦＡＭ２５ＢＰ，ＦＡＭ２５Ｃ，ＦＡＭ２５Ｇ，ＦＡＭ２６Ｄ，ＦＡＭ２６Ｅ，ＦＡＭ２６Ｆ，ＦＡＭ２７Ｂ，ＦＡＭ２７Ｃ，ＦＡＭ２７Ｅ２，ＦＡＭ２７Ｅ３，ＦＡＭ２７Ｌ，ＦＡＭ３２Ａ，ＦＡＭ３５Ａ，ＦＡＭ３５ＢＰ，ＦＡＭ３５ＤＰ，ＦＡＭ３Ａ，ＦＡＭ３Ｂ，ＦＡＭ３Ｃ，ＦＡＭ３Ｄ，ＦＡＭ４１ＡＹ１，ＦＡＭ４１ＡＹ２，ＦＡＭ４１Ｃ，ＦＡＭ４３Ａ，ＦＡＭ４３Ｂ，ＦＡＭ４５Ａ，ＦＡＭ４５Ｂ，ＦＡＭ４６Ａ，ＦＡＭ４６Ｂ，ＦＡＭ４６Ｃ，ＦＡＭ４６Ｄ，ＦＡＭ４７Ａ，ＦＡＭ４７Ｂ，ＦＡＭ４７Ｃ，ＦＡＭ４７Ｅ，ＦＡＭ４７Ｅ－ＳＴＢＤ１，ＦＡＭ４９Ａ，ＦＡＭ４９Ｂ，ＦＡＭ５０Ａ，ＦＡＭ５０Ｂ，ＦＡＭ５３Ａ，ＦＡＭ５３Ｂ，ＦＡＭ５３Ｂ－ＡＳ１，ＦＡＭ５３Ｃ，ＦＡＭ５７Ａ，ＦＡＭ５７Ｂ，ＦＡＭ５８Ａ，ＦＡＭ６０Ａ，ＦＡＭ６３Ａ，ＦＡＭ６３Ｂ，ＦＡＭ６４Ａ，ＦＡＭ６５Ａ，ＦＡＭ６５Ｂ，ＦＡＭ６５Ｃ，ＦＡＭ６６Ａ，ＦＡＭ６６Ｂ，ＦＡＭ６６Ｃ，ＦＡＭ６６Ｄ，ＦＡＭ６６Ｅ，ＦＡＭ６９Ａ，ＦＡＭ６９Ｂ，ＦＡＭ６９Ｃ，ＦＡＭ７１Ａ，ＦＡＭ７１Ｂ，ＦＡＭ７１Ｃ，ＦＡＭ７１Ｄ，ＦＡＭ７１Ｅ１，ＦＡＭ７１Ｅ２，ＦＡＭ７１Ｆ１，ＦＡＭ７１Ｆ２，ＦＡＭ７２Ａ，ＦＡＭ７２Ｂ，ＦＡＭ７２Ｃ，ＦＡＭ７２Ｄ，ＦＡＭ７３Ａ，ＦＡＭ７３Ｂ，ＦＡＭ７４Ａ

1，ＦＡＭ７４Ａ３，ＦＡＭ７４Ａ４，ＦＡＭ７４Ａ６，ＦＡＭ７４Ａ７，ＦＡＭ７６Ａ，ＦＡＭ７６Ｂ，ＦＡＭ７８Ａ，ＦＡＭ７８Ｂ，ＦＡＭ８１Ａ，ＦＡＭ８１Ｂ，ＦＡＭ８３Ａ，ＦＡＭ８３Ａ－ＡＳ１，ＦＡＭ８３Ｂ，ＦＡＭ８３Ｃ，ＦＡＭ８３Ｃ－ＡＳ１，ＦＡＭ８３Ｄ，ＦＡＭ８３Ｅ，ＦＡＭ８３Ｆ，ＦＡＭ８３Ｇ，ＦＡＭ８３Ｈ，ＦＡＭ８３Ｈ－ＡＳ１，ＦＡＭ８４Ａ，ＦＡＭ８４Ｂ，ＦＡＭ８６Ｂ１，ＦＡＭ８６Ｂ２，ＦＡＭ８６Ｂ３Ｐ，ＦＡＭ８６Ｃ１，ＦＡＭ８６Ｃ２Ｐ，ＦＡＭ８６ＤＰ，ＦＡＭ８６ＥＰ，ＦＡＭ８６ＦＰ，ＦＡＭ８６ＨＰ，ＦＡＭ８６ＪＰ，ＦＡＭ８７Ａ，ＦＡＭ８７Ｂ，ＦＡＭ８９Ａ，ＦＡＭ８９Ｂ，ＦＡＭ８Ａ１，ＦＡＭ９０Ａ１，ＦＡＭ９０Ａ１０Ｐ，ＦＡＭ９０Ａ２５Ｐ，ＦＡＭ９０Ａ２７Ｐ，ＦＡＭ９０Ａ２Ｐ，ＦＡＭ９０Ａ７Ｐ，ＦＡＭ９１Ａ１，ＦＡＭ９２Ａ１，ＦＡＭ９２Ａ１Ｐ２，ＦＡＭ９２Ｂ，ＦＡＭ９５Ａ，ＦＡＭ９５Ｂ１，ＦＡＭ９５Ｃ，ＦＡＭ９６Ａ，ＦＡＭ９６Ｂ，ＦＡＭ９８Ａ，ＦＡＭ９８Ｂ，ＦＡＭ９８Ｃ，ＦＡＭ９９Ａ，ＦＡＭ９９Ｂ，ＦＡＭ９Ａ，ＦＡＭ９Ｂ，ＦＡＭ９Ｃ，ＦＡＮ１，ＦＡＮＣＡ，ＦＡＮＣＢ，ＦＡＮＣＣ，ＦＡＮＣＤ２，ＦＡＮＣＤ２ＯＳ，ＦＡＮＣＥ，ＦＡＮＣＦ，ＦＡＮＣＧ，ＦＡＮＣＩ，ＦＡＮＣＬ，ＦＡＮＣＭ，ＦＡＮＫ１，ＦＡＮＫ１－ＡＳ１，ＦＡＰ，ＦＡＲ１，ＦＡＲ２，ＦＡＲ２Ｐ１，ＦＡＲ２Ｐ２，ＦＡＲＰ１，ＦＡＲＰ２，ＦＡＲＳ２，ＦＡＲＳＡ，ＦＡＲＳＢ，ＦＡＳ，ＦＡＳ－ＡＳ１，ＦＡＳＬＧ，ＦＡＳＮ，ＦＡＳＴＫ，ＦＡＳＴＫＤ１，ＦＡＳＴＫＤ２，ＦＡＳＴＫＤ３，ＦＡＳＴＫＤ５，ＦＡＴ１，ＦＡＴ２，ＦＡＴ３，ＦＡＴ４，ＦＡＴＥ１，ＦＡＵ，ＦＡＸＣ，ＦＡＸＤＣ２，ＦＢＦ１，ＦＢＬ，ＦＢＬＩＭ１，ＦＢＬＬ１，ＦＢＬＮ１，ＦＢＬＮ２，ＦＢＬＮ５，ＦＢＬＮ７，ＦＢＮ１，ＦＢＮ２，ＦＢＮ３，ＦＢＰ１，ＦＢＰ２，ＦＢＲＳ，ＦＢＲＳＬ１，ＦＢＸＬ１２，ＦＢＸＬ１３，ＦＢＸＬ１４，ＦＢＸＬ１５，ＦＢＸＬ１６，ＦＢＸＬ１７，ＦＢＸＬ１８，ＦＢＸＬ１９，ＦＢＸＬ１９－ＡＳ１，ＦＢＸＬ２，ＦＢＸＬ２０，ＦＢＸＬ２１，ＦＢＸＬ２２，ＦＢＸＬ３，ＦＢＸＬ４，ＦＢＸＬ５，ＦＢＸＬ６，ＦＢＸＬ７，ＦＢＸＬ８，ＦＢＸＯ１０，ＦＢＸＯ１１，ＦＢＸＯ１５，ＦＢＸＯ１６，ＦＢＸＯ１７，ＦＢＸＯ１８，ＦＢＸＯ２，ＦＢＸＯ２１，ＦＢＸＯ２２，ＦＢＸＯ２２－ＡＳ１，ＦＢＸＯ２４，ＦＢＸＯ２５，ＦＢＸＯ２７，ＦＢＸＯ２８，ＦＢＸＯ３，ＦＢＸＯ３０，ＦＢＸＯ３１，ＦＢＸＯ３２，ＦＢＸＯ３３，ＦＢＸＯ３４，ＦＢＸＯ３６，ＦＢＸＯ３８，ＦＢＸＯ３９，ＦＢＸＯ３－ＡＳ１，ＦＢＸＯ４，ＦＢＸＯ４０，ＦＢＸＯ４１，ＦＢＸＯ４２，ＦＢＸＯ４３，ＦＢＸＯ４４，ＦＢＸＯ４５，ＦＢＸＯ４６，ＦＢＸＯ４７，ＦＢＸＯ４８，ＦＢＸＯ５，ＦＢＸＯ６，ＦＢＸＯ７，ＦＢＸＯ８，ＦＢＸＯ９，ＦＢＸＷ１０，ＦＢＸＷ１１，ＦＢＸＷ１２，ＦＢＸＷ２，ＦＢＸＷ４，ＦＢＸＷ４Ｐ１，ＦＢＸＷ５，ＦＢＸＷ７，ＦＢＸＷ８，ＦＢＸＷ９，ＦＣＡＭＲ，ＦＣＡＲ，ＦＣＥＲ１Ａ，ＦＣＥＲ１Ｇ，ＦＣＥＲ２，ＦＣＦ１，ＦＣＧＢＰ，ＦＣＧＲ１Ａ，ＦＣＧＲ１Ｂ，ＦＣＧＲ１Ｃ，ＦＣＧＲ２Ａ，ＦＣＧＲ２Ｂ，ＦＣＧＲ２Ｃ，ＦＣＧＲ３Ａ，ＦＣＧＲ３Ｂ，ＦＣＧＲＴ，ＦＣＨＯ１，ＦＣＨＯ２，ＦＣＨＳＤ１，ＦＣＨＳＤ２，ＦＣＮ１，ＦＣＮ２，ＦＣＮ３，ＦＣＲＬ１，ＦＣＲＬ２，ＦＣＲＬ３，ＦＣＲＬ４，ＦＣＲＬ５，ＦＣＲＬ６，ＦＣＲＬＡ，ＦＣＲＬＢ，ＦＤＣＳＰ，ＦＤＦＴ１，ＦＤＰＳ，ＦＤＰＳＰ２，ＦＤＸ１，ＦＤＸ１Ｌ，ＦＤＸＡＣＢ１，ＦＤＸＲ，ＦＥＣＨ，ＦＥＭ１Ａ，ＦＥＭ１Ｂ，ＦＥＭ１Ｃ，ＦＥＮ１，ＦＥＮＤＲＲ，ＦＥＲ，ＦＥＲ１Ｌ４，ＦＥＲ１Ｌ５，ＦＥＲ１Ｌ６，ＦＥＲ１Ｌ６－ＡＳ１，ＦＥＲ１Ｌ６－ＡＳ２，ＦＥＲＤ３Ｌ，ＦＥＲＭＴ１，ＦＥＲＭＴ２，ＦＥＲＭＴ３，ＦＥＳ，ＦＥＴＵＢ，ＦＥＶ，ＦＥＺ１，ＦＥＺ２，ＦＥＺＦ１，ＦＥＺＦ１－ＡＳ１，ＦＥＺＦ２，ＦＦＡＲ１，ＦＦＡＲ２，ＦＦＡＲ３，ＦＦＡＲ４，ＦＧＡ，ＦＧＢ，ＦＧＤ１，ＦＧＤ２，ＦＧＤ３，ＦＧＤ４，ＦＧＤ５，ＦＧＤ５－ＡＳ１，Ｆ

GD5P1, FGD6, FGF1, FGF10, FGF10-AS1, FGF11, FGF12, FGF12-AS1, FGF13, FGF13-AS1, FGF14, FGF14-AS1, FGF14-AS2, FGF14-IT1, FGF16, FGF17, FGF18, FGF19, FGF2, FGF20, FGF21, FGF22, FGF23, FGF3, FGF4, FGF5, FGF6, FGF7, FGF8, FGF9, FGFBP1, FGFBP2, FGFBP3, FGFR1, FGFR1OP, FGFR1OP2, FGFR2, FGFR3, FGFR4, FGFRL1, FGG, FGGY, FGL1, FGL2, FGR, FH, FHAD1, FHDC1, FHIT, FHL1, FHL2, FHL3, FHL5, FHOD1, FHOD3, FIBCD1, FIBIN, FIBP, FICD, FIG4, FIGF, FIGLA, FIGN, FIGNL1, FIGNL2, FILIP1, FILIP1L, FIP1L1, FIRRE, FIS1, FITM1, FITM2, FIZ1, FJX1, FKBP10, FKBP11, FKBP14, FKBP15, FKBP1A, FKBP1AP1, FKBP1A-SDCBP2, FKBP1B, FKBP2, FKBP3, FKBP4, FKBP5, FKBP6, FKBP7, FKBP8, FKBP9, FKBP9P1, FKBPL, FKRP, FKSG29, FKTN, FLAD1, FLCN, FLG, FLG2, FLG-AS1, FLI1, FLII, FLJ10038, FLJ12825, FLJ13224, FLJ16171, FLJ16779, FLJ20021, FLJ21408, FLJ22447, FLJ22763, FLJ23867, FLJ25758, FLJ26245, FLJ26850, FLJ27354, FLJ30679, FLJ31104, FLJ31356, FLJ31662, FLJ32255, FLJ33360, FLJ33534, FLJ33581, FLJ34503, FLJ35934, FLJ36000, FLJ36777, FLJ37035, FLJ37201, FLJ37453, FLJ37505, FLJ38122, FLJ38576, FLJ39080, FLJ40194, FLJ40288, FLJ41200, FLJ41278, FLJ41941, FLJ42102, FLJ42351, FLJ42393, FLJ42627, FLJ42969, FLJ43315, FLJ43681, FLJ43879, FLJ44511, FLJ44635, FLJ45079, FLJ45513, FLJ46066, FLJ46284, FLJ46906, FLNA, FLNB, FLNC, FLOT1, FLOT2, FLRT1, FLRT2, FLRT3, FLT1, FLT3, FLT3LG, FLT4, FLVCR1, FLVCR1-AS1, FLVCR2, FLYWCH1, FLYWCH2, FMN1, FMN2, FMNL1, FMNL2, FMNL3, FMO1, FMO2, FMO3, FMO4, FMO5, FMO6P, FMO9P, FMOD, FMR1, FMR1-AS1, FMR1NB, FN1, FN3K, FN3KRP, FNBP1, FNBP1L, FNBP4, FNDC1, FNDC3A, FNDC3B, FNDC4, FNDC5, FNDC7, FNDC8, FNDC9, FNIP1, FNIP2, FNTA, FNTB, FOCAD, FOCAD-AS1, FOLH1, FOLH1B, FOLR1, FOLR2, FOLR3, FOPNL, FOS, FOSB, FOSL1, FOSL2, FOXA1, FOXA2, FOXA3, FOXB1, FOXB2, FOXC1, FOXC2, FOXC2-AS1, FOXCUT, FOXD1, FOXD2, FOXD2-AS1, FOXD3, FOXD3-AS1, FOXD4, FOXD4L1, FOXD4L3, FOXD4L4, FOXD4L5, FOXD4L6, FOXE1, FOXE3, FOXF1, FOXF2, FOXG1, FOXG1-AS1, FOXH1, FOXI1, FOXI2, FOXI3, FOXJ1, FOXJ2, FOXJ3, FOXK1, FOXK2, FOXL1, FOXL2, FOXL2N

B, FOXM1, FOXN1, FOXN2, FOXN3, FOXN3-AS1, FOXN3-AS2, FOXN4, FOXO1, FOXO3, FOXO3B, FOXO4, FOXO6, FOXP1, FOXP1-AS1, FOXP2, FOXP3, FOXP4, FOXP4-AS1, FOXQ1, FOXR1, FOXR2, FOXRED1, FOXRED2, FOXS1, FPGS, FPGT, FPGT-TNNI3K, FPR1, FPR2, FPR3, FRA10AC1, FRAS1, FRAT1, FRAT2, FREM1, FREM2, FREM3, FRG1, FRG1B, FRG2, FRG2B, FRG2C, FRG2DP, FRG2EP, FRK, FRMD1, FRMD3, FRMD4A, FRMD4B, FRMD5, FRMD6, FRMD6-AS1, FRMD6-AS2, FRMD7, FRMD8, FRMD8P1, FRMPD1, FRMPD2, FRMPD2B, FRMPD3, FRMPD3-AS1, FRMPD4, FRRS1, FRRS1L, FRS2, FRS3, FRY, FRY-AS1, FRYL, FRZB, FSBP, FSCB, FSCN1, FSCN2, FSCN3, FSD1, FSD1L, FSD2, FSHB, FSHR, FSIP1, FSIP2, FST, FSTL1, FSTL3, FSTL4, FSTL5, FTCD, FTCDNL1, FTH1, FTH1P18, FTH1P3, FTHL17, FTL, FTLP10, FTMT, FTO, FTO-IT1, FTSJ1, FTSJ2, FTSJ3, FTX, FUBP1, FUBP3, FUCA1, FUCA2, FUK, FUNDC1, FUNDC2, FUNDC2P2, FUOM, FURIN, FUS, FUT1, FUT10, FUT11, FUT2, FUT3, FUT4, FUT5, FUT6, FUT7, FUT8, FUT8-AS1, FUT9, FUZ, FXN, FXR1, FXR2, FXYD1, FXYD2, FXYD3, FXYD4, FXYD5, FXYD6, FXYD6-FXYD2, FXYD7, FYB, FYCO1, FYN, FYTTD1, FZD1, FZD10, FZD10-AS1, FZD2, FZD3, FZD4, FZD5, FZD6, FZD7, FZD8, FZD9, FZR1, G0S2, G2E3, G3BP1, G3BP2, G6PC, G6PC2, G6PC3, G6PD, GAA, GAB1, GAB2, GAB3, GAB4, GABARAP, GABARAPL1, GABARAPL2, GABARAPL3, GABBR1, GABBR2, GABPA, GABPB1, GABPB1-AS1, GABPB2, GABRA1, GABRA2, GABRA3, GABRA4, GABRA5, GABRA6, GABRB1, GABRB2, GABRB3, GABRD, GABRE, GABRG1, GABRG2, GABRG3, GABRG3-AS1, GABRP, GABRQ, GABRR1, GABRR2, GABRR3, GACAT1, GACAT2, GACAT3, GAD1, GAD2, GADD45A, GADD45B, GADD45G, GADD45GIP1, GADL1, GAGE1, GAGE10, GAGE12B, GAGE12C, GAGE12D, GAGE12E, GAGE12F, GAGE12G, GAGE12H, GAGE12I, GAGE12J, GAGE13, GAGE2A, GAGE2B, GAGE2C, GAGE2D, GAGE2E, GAGE4, GAGE5, GAGE6, GAGE7, GAGE8, GAK, GAL, GAL3ST1, GAL3ST2, GAL3ST3, GAL3ST4, GALC, GALE, GALK1, GALK2, GALM, GALNS, GALNT1, GALNT10, GALNT11, GALNT12, GALNT13, GALNT14, GALNT15, GALNT16, GALNT18, GALNT2, GALNT3, GALNT4, GALNT5, GALNT6, GALNT7, GALNT8, GALNT9, GALNTL5, GALNTL6, GALP, GALR1, GALR2, GALR3, GALT, GAMT, GAN, GANAB, GANC, GAP43, G

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CTK-AS1, GLYR1, GM140, GM2A, GMCL1, GMCL1P1, GMDS, GMDS-AS1, GMEB1, GMEB2, GMFB, GMFG, GMIP, GML, GMNC, GMNN, GMPPA, GMPPB, GMPR, GMPR2, GMPS, GNA11, GNA12, GNA13, GNA14, GNA14-AS1, GNA15, GNAI1, GNAI2, GNAI3, GNAL, GNAO1, GNAQ, GNAS, GNAS-AS1, GNAT1, GNAT2, GNAT3, GNAZ, GNB1, GNB1L, GNB2, GNB2L1, GNB3, GNB4, GNB5, GNE, GNG10, GNG11, GNG12, GNG12-AS1, GNG13, GNG2, GNG3, GNG4, GNG5, GNG7, GNG8, GNGT1, GNGT2, GNL1, GNL2, GNL3, GNL3L, GNLY, GNMT, GNN, GNPAT, GNPDA1, GNPDA2, GNPNAT1, GNPTAB, GNPTG, GNRH1, GNRH2, GNRHR, GNRHR2, GNS, GOLGA1, GOLGA2, GOLGA2P10, GOLGA2P2Y, GOLGA2P3Y, GOLGA2P5, GOLGA2P6, GOLGA2P7, GOLGA2P9, GOLGA3, GOLGA4, GOLGA5, GOLGA6A, GOLGA6B, GOLGA6C, GOLGA6D, GOLGA6L1, GOLGA6L10, GOLGA6L17P, GOLGA6L22, GOLGA6L4, GOLGA6L5P, GOLGA6L6, GOLGA6L7P, GOLGA6L9, GOLGA7, GOLGA7B, GOLGA8A, GOLGA8B, GOLGA8CP, GOLGA8DP, GOLGA8EP, GOLGA8F, GOLGA8G, GOLGA8H, GOLGA8IP, GOLGA8J, GOLGA8K, GOLGA8M, GOLGA8N, GOLGA8O, GOLGA8R, GOLGA8S, GOLGA8T, GOLGB1, GOLIM4, GOLM1, GOLPH3, GOLPH3L, GOLT1A, GOLT1B, GON4L, GOPC, GORAB, GORASP1, GORASP2, GOSR1, GOSR2, GOT1, GOT1L1, GOT2, GP1BA, GP1BB, GP2, GP5, GP6, GP9, GPA33, GPAA1, GPALPP1, GPAM, GPANK1, GPAT2, GPATCH1, GPATCH11, GPATCH2, GPATCH2L, GPATCH3, GPATCH4, GPATCH8, GPBAR1, GPBP1, GPBP1L1, GPC1, GPC2, GPC3, GPC4, GPC5, GPC5-AS1, GPC5-AS2, GPC6, GPC6-AS1, GPC6-AS2, GPCPD1, GPD1, GPD1L, GPD2, GPER1, GPHA2, GPHB5, GPHN, GPI, GPIHBP1, GPKOW, GPLD1, GPM6A, GPM6B, GPN1, GPN2, GPN3, GPNMB, GPR1, GPR101, GPR107, GPR108, GPR110, GPR111, GPR112, GPR113, GPR114, GPR115, GPR116, GPR119, GPR12, GPR123, GPR123-AS1, GPR124, GPR125, GPR126, GPR128, GPR132, GPR133, GPR135, GPR137, GPR137B, GPR137C, GPR139, GPR141, GPR142, GPR143, GPR146, GPR148, GPR149, GPR15, GPR150, GPR151, GPR152, GPR153, GPR155, GPR156, GPR157, GPR158, GPR158-AS1, GPR160, GPR161, GPR162, GPR17, GPR171, GPR173, GPR174, GPR176, GPR179, GPR18, GPR180, GPR182, GPR183, GPR19, GPR1-AS, GPR20, GPR21, GPR22, GPR25, GPR26, GPR27, GPR3, GPR31, GPR32, GPR33, GPR34, GPR35, GPR37, GP

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１Ｒ１６Ｂ，ＰＰＰ１Ｒ１７，ＰＰＰ１Ｒ１８，ＰＰＰ１Ｒ１Ａ，ＰＰＰ１Ｒ１Ｂ，ＰＰＰ１Ｒ１Ｃ，ＰＰＰ１Ｒ２，ＰＰＰ１Ｒ２１，ＰＰＰ１Ｒ２６，ＰＰＰ１Ｒ２６－ＡＳ１，ＰＰＰ１Ｒ２７，ＰＰＰ１Ｒ２Ｐ３，ＰＰＰ１Ｒ２Ｐ９，ＰＰＰ１Ｒ３２，ＰＰＰ１Ｒ３５，ＰＰＰ１Ｒ３６，ＰＰＰ１Ｒ３７，ＰＰＰ１Ｒ３Ａ，ＰＰＰ１Ｒ３Ｂ，ＰＰＰ１Ｒ３Ｃ，ＰＰＰ１Ｒ３Ｄ，ＰＰＰ１Ｒ３Ｅ，ＰＰＰ１Ｒ３Ｆ，ＰＰＰ１Ｒ３Ｇ，ＰＰＰ１Ｒ４２，ＰＰＰ１Ｒ７，ＰＰＰ１Ｒ８，ＰＰＰ１Ｒ９Ａ，ＰＰＰ１Ｒ９Ｂ，ＰＰＰ２ＣＡ，ＰＰＰ２ＣＢ，ＰＰＰ２Ｒ１Ａ，ＰＰＰ２Ｒ１Ｂ，ＰＰＰ２Ｒ２Ａ，ＰＰＰ２Ｒ２Ｂ，ＰＰＰ２Ｒ２Ｂ－ＩＴ１，ＰＰＰ２Ｒ２Ｃ，ＰＰＰ２Ｒ２Ｄ，ＰＰＰ２Ｒ３Ａ，ＰＰＰ２Ｒ３Ｂ，ＰＰＰ２Ｒ３Ｃ，ＰＰＰ２Ｒ４，ＰＰＰ２Ｒ５Ａ，ＰＰＰ２Ｒ５Ｂ，ＰＰＰ２Ｒ５Ｃ，ＰＰＰ２Ｒ５Ｄ，ＰＰＰ２Ｒ５Ｅ，ＰＰＰ３ＣＡ，ＰＰＰ３ＣＢ，ＰＰＰ３ＣＣ，ＰＰＰ３Ｒ１，ＰＰＰ３Ｒ２，ＰＰＰ４Ｃ，ＰＰＰ４Ｒ１，ＰＰＰ４Ｒ１－ＡＳ１，ＰＰＰ４Ｒ１Ｌ，ＰＰＰ４Ｒ２，ＰＰＰ４Ｒ４，ＰＰＰ５Ｃ，ＰＰＰ５Ｄ１，ＰＰＰ６Ｃ，ＰＰＰ６Ｒ１，ＰＰＰ６Ｒ２，ＰＰＰ６Ｒ３，ＰＰＲＣ１，ＰＰＴ１，ＰＰＴ２，ＰＰＴ２－ＥＧＦＬ８，ＰＰＴＣ７，ＰＰＷＤ１，ＰＰＹ，ＰＰＹ２，ＰＱＢＰ１，ＰＱＬＣ１，ＰＱＬＣ２，ＰＱＬＣ２Ｌ，ＰＱＬＣ３，ＰＲＡＣ１，ＰＲＡＣ２，ＰＲＡＤＣ１，ＰＲＡＦ２，ＰＲＡＭ１，ＰＲＡＭＥ，ＰＲＡＭＥＦ１，ＰＲＡＭＥＦ１０，ＰＲＡＭＥＦ１１，ＰＲＡＭＥＦ１２，ＰＲＡＭＥＦ１４，ＰＲＡＭＥＦ１５，ＰＲＡＭＥＦ１６，ＰＲＡＭＥＦ１７，ＰＲＡＭＥＦ１９，ＰＲＡＭＥＦ２，ＰＲＡＭＥＦ２０，ＰＲＡＭＥＦ２２，ＰＲＡＭＥＦ４，ＰＲＡＭＥＦ５，ＰＲＡＭＥＦ６，ＰＲＡＭＥＦ７，ＰＲＡＭＥＦ８，ＰＲＡＭＥＦ９，ＰＲＡＰ１，ＰＲＢ１，ＰＲＢ２，ＰＲＢ３，ＰＲＢ４，ＰＲＣ１，ＰＲＣ１－ＡＳ１，ＰＲＣＣ，ＰＲＣＤ，ＰＲＣＰ，ＰＲＤＭ１，ＰＲＤＭ１０，ＰＲＤＭ１１，ＰＲＤＭ１２，ＰＲＤＭ１３，ＰＲＤＭ１４，ＰＲＤＭ１５，ＰＲＤＭ１６，ＰＲＤＭ２，ＰＲＤＭ４，ＰＲＤＭ５，ＰＲＤＭ６，ＰＲＤＭ７，ＰＲＤＭ８，ＰＲＤＭ９，ＰＲＤＸ１，ＰＲＤＸ２，ＰＲＤＸ３，ＰＲＤＸ４，ＰＲＤＸ５，ＰＲＤＸ６，ＰＲＥＢ，ＰＲＥＬＩＤ１，ＰＲＥＬＩＤ２，ＰＲＥＬＰ，ＰＲＥＰ，ＰＲＥＰＬ，ＰＲＥＸ１，ＰＲＥＸ２，ＰＲＦ１，ＰＲＧ１，ＰＲＧ２，ＰＲＧ３，ＰＲＧ４，ＰＲＨ１，ＰＲＨ１－ＰＲＲ４，ＰＲＨ２，ＰＲＩＣＫＬＥ１，ＰＲＩＣＫＬＥ２，ＰＲＩＣＫＬＥ２－ＡＳ１，ＰＲＩＣＫＬＥ２－ＡＳ２，ＰＲＩＣＫＬＥ２－ＡＳ３，ＰＲＩＣＫＬＥ３，ＰＲＩＣＫＬＥ４，ＰＲＩＭ１，ＰＲＩＭ２，ＰＲＩＭＡ１，ＰＲＩＭＰＯＬ，ＰＲＫＡＡ１，ＰＲＫＡＡ２，ＰＲＫＡＢ１，ＰＲＫＡＢ２，ＰＲＫＡＣＡ，ＰＲＫＡＣＢ，ＰＲＫＡＣＧ，ＰＲＫＡＧ１，ＰＲＫＡＧ２，ＰＲＫＡＧ２－ＡＳ１，ＰＲＫＡＧ３，ＰＲＫＡＲ１Ａ，ＰＲＫＡＲ１Ｂ，ＰＲＫＡＲ２Ａ，ＰＲＫＡＲ２Ａ－ＡＳ１，ＰＲＫＡＲ２Ｂ，ＰＲＫＣＡ，ＰＲＫＣＡ－ＡＳ１，ＰＲＫＣＢ，ＰＲＫＣＤ，ＰＲＫＣＤＢＰ，ＰＲＫＣＥ，ＰＲＫＣＧ，ＰＲＫＣＨ，ＰＲＫＣＩ，ＰＲＫＣＱ，ＰＲＫＣＱ－ＡＳ１，ＰＲＫＣＳＨ，ＰＲＫＣＺ，ＰＲＫＤ１，ＰＲＫＤ２，ＰＲＫＤ３，ＰＲＫＤＣ，ＰＲＫＧ１，ＰＲＫＧ１－ＡＳ１，ＰＲＫＧ２，ＰＲＫＲＡ，ＰＲＫＲＩＰ１，ＰＲＫＲＩＲ，ＰＲＫＸ，ＰＲＫＸ－ＡＳ１，ＰＲＫＸＰ１，ＰＲＫＹ，ＰＲＬ，ＰＲＬＨ，ＰＲＬＨＲ，ＰＲＬＲ，ＰＲＭ１，ＰＲＭ２，ＰＲＭ３，ＰＲＭＴ１，ＰＲＭＴ２，ＰＲＭＴ３，ＰＲＭＴ５，ＰＲＭＴ５－ＡＳ１，ＰＲＭＴ６，ＰＲＭＴ７，ＰＲＭＴ８，ＰＲＭＴ９，ＰＲＮＣＲ１，ＰＲＮＤ，ＰＲＮＰ，ＰＲＮＴ，ＰＲＯＢ１，ＰＲＯＣ，ＰＲＯＣＡ１，ＰＲＯＣＲ，ＰＲＯＤＨ，ＰＲＯＤＨ２，ＰＲＯＫ１，ＰＲＯＫ２，ＰＲＯＫＲ１，ＰＲＯＫＲ２，ＰＲＯＬ１，ＰＲＯＭ１，ＰＲＯＭ２，ＰＲＯＰ１，ＰＲＯＲＳＤ１Ｐ，ＰＲＯＳ１，ＰＲＯＳＣ，ＰＲＯＳＥＲ１，ＰＲＯＳＥＲ２，ＰＲＯＳＥＲ２－ＡＳ１，ＰＲＯＳＥＲ３，ＰＲＯＸ１，ＰＲＯＸ２，ＰＲＯＺ，ＰＲＰＦ１８，ＰＲＰＦ１９，ＰＲ

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NB, TWSG1, TXK, TXLNA, TXLNB, TXLNG, TXLNGY, TXN, TXN2, TXNDC11, TXNDC12, TXNDC12-AS1, TXNDC15, TXNDC16, TXNDC17, TXNDC2, TXNDC5, TXNDC8, TXNDC9, TXNIP, TXNL1, TXNL4A, TXNL4B, TXNRD1, TXNRD2, TXNRD3, TXNRD3NB, TYK2, TYMP, TYMS, TYMSOS, TYR, TYRO3, TYRO3P, TYROBP, TYRP1, TYSND1, TYW1, TYW1B, TYW3, TYW5, U2AF1, U2AF1L4, U2AF2, U2SURP, UACA, UAP1, UAP1L1, UBA1, UBA2, UBA3, UBA5, UBA52, UBA6, UBA6-AS1, UBA7, UBAC1, UBAC2, UBAC2-AS1, UBALD1, UBALD2, UBAP1, UBAP1L, UBAP2, UBAP2L, UBASH3A, UBASH3B, UBB, UBC, UBD, UBE2A, UBE2B, UBE2C, UBE2D1, UBE2D2, UBE2D3, UBE2D4, UBE2DNL, UBE2E1, UBE2E1-AS1, UBE2E2, UBE2E3, UBE2E4P, UBE2F, UBE2F-SCLY, UBE2G1, UBE2G2, UBE2H, UBE2I, UBE2J1, UBE2J2, UBE2K, UBE2L3, UBE2L6, UBE2M, UBE2MP1, UBE2N, UBE2NL, UBE2O, UBE2Q1, UBE2Q1-AS1, UBE2Q2, UBE2Q2L, UBE2Q2P1, UBE2Q2P2, UBE2QL1, UBE2R2, UBE2S, UBE2T, UBE2U, UBE2V1, UBE2V2, UBE2W, UBE2Z, UBE3A, UBE3B, UBE3C, UBE3D, UBE4A, UBE4B, UBFD1, UBIAD1, UBL3, UBL4A, UBL4B, UBL5, UBL7, UBL7-AS1, UBLCP1, UBN1, UBN2, UBOX5, UBOX5-AS1, UBP1, UBQLN1, UBQLN2, UBQLN3, UBQLN4, UBQLNL, UBR1, UBR2, UBR3, UBR4, UBR5, UBR7, UBTD1, UBTD2, UBTF, UBTFL1, UBXN1, UBXN10, UBXN10-AS1, UBXN11, UBXN2A, UBXN2B, UBXN4, UBXN6, UBXN7, UBXN8, UCA1, UCHL1, UCHL1-AS1, UCHL3, UCHL5, UCK1, UCK2, UCKL1, UCKL1-AS1, UCMA, UCN, UCN2, UCN3, UCP1, UCP2, UCP3, UEVLD, UFC1, UFD1L, UFL1, UFM1, UFSP1, UFSP2, UG0898H09, UGCG, UGDH, UGDH-AS1, UGGT1, UGGT2, UGP2, UGT1A1, UGT1A10, UGT1A3, UGT1A4, UGT1A5, UGT1A6, UGT1A7, UGT1A8, UGT1A9, UGT2A1, UGT2A2, UGT2A3, UGT2B10, UGT2B11, UGT2B15, UGT2B17, UGT2B28, UGT2B4, UGT2B7, UGT3A1, UGT3A2, UGT8, UHMK1, UHRF1, UHRF1BP1, UHRF1BP1L, UHRF2, UIMC1, ULBP1, ULBP2, ULBP3, ULK1, ULK2, ULK3, ULK4, ULK4P1, ULK4P2, ULK4P3, UMAD1, UMOD, UMODL1, UMODL1-AS1, UMPS, UNC119, UNC119B, UNC13A, UNC13B, UNC13C, UNC13D, UNC45A, UNC45B, UNC50, UNC5A, UNC5B, UNC5B-AS1, UNC5C, UNC5CL, UNC5D, UNC79, UNC80, UNC93A, UNC93B1, UNCX, UNG, UNK, UNKL, UNQ6494, UOX, UPB1, UPF1, UPF2, UPF3A, UPF3B, UPK1A, UPK1A-AS1, UPK1B, UPK2, UPK3A, UPK3B

ＵＰＫ３ＢＬ，ＵＰＰ１，ＵＰＰ２，ＵＰＲＴ，ＵＱＣＣ１，ＵＱＣＣ２，ＵＱＣＣ３，ＵＱＣＲ１０，ＵＱＣＲ１１，ＵＱＣＲＢ，ＵＱＣＲＢＰ１，ＵＱＣＲＣ１，ＵＱＣＲＣ２，ＵＱＣＲＦＳ１，ＵＱＣＲＨ，ＵＱＣＲＨＬ，ＵＱＣＲＱ，ＵＲＡＤ，ＵＲＡＨＰ，ＵＲＢ１，ＵＲＢ１－ＡＳ１，ＵＲＢ２，ＵＲＧＣＰ，ＵＲＧＣＰ－ＭＲＰＳ２４，ＵＲＩ１，ＵＲＭ１，ＵＲＯＣ１，ＵＲＯＤ，ＵＲＯＳ，ＵＳＢ１，ＵＳＥ１，ＵＳＦ１，ＵＳＦ２，ＵＳＨ１Ｃ，ＵＳＨ１Ｇ，ＵＳＨ２Ａ，ＵＳＨＢＰ１，ＵＳＭＧ５，ＵＳＯ１，ＵＳＰ１，ＵＳＰ１０，ＵＳＰ１１，ＵＳＰ１２，ＵＳＰ１２－ＡＳ１，ＵＳＰ１２－ＡＳ２，ＵＳＰ１３，ＵＳＰ１４，ＵＳＰ１５，ＵＳＰ１６，ＵＳＰ１７Ｌ１，ＵＳＰ１７Ｌ１０，ＵＳＰ１７Ｌ１１，ＵＳＰ１７Ｌ１２，ＵＳＰ１７Ｌ１３，ＵＳＰ１７Ｌ１５，ＵＳＰ１７Ｌ１７，ＵＳＰ１７Ｌ１８，ＵＳＰ１７Ｌ１９，ＵＳＰ１７Ｌ２，ＵＳＰ１７Ｌ２０，ＵＳＰ１７Ｌ２１，ＵＳＰ１７Ｌ２２，ＵＳＰ１７Ｌ２４，ＵＳＰ１７Ｌ２５，ＵＳＰ１７Ｌ２６，ＵＳＰ１７Ｌ２７，ＵＳＰ１７Ｌ２８，ＵＳＰ１７Ｌ２９，ＵＳＰ１７Ｌ３，ＵＳＰ１７Ｌ３０，ＵＳＰ１７Ｌ４，ＵＳＰ１７Ｌ５，ＵＳＰ１７Ｌ６Ｐ，ＵＳＰ１７Ｌ７，ＵＳＰ１７Ｌ８，ＵＳＰ１７Ｌ９Ｐ，ＵＳＰ１８，ＵＳＰ１９，ＵＳＰ２，ＵＳＰ２０，ＵＳＰ２１，ＵＳＰ２２，ＵＳＰ２４，ＵＳＰ２５，ＵＳＰ２６，ＵＳＰ２７Ｘ，ＵＳＰ２７Ｘ－ＡＳ１，ＵＳＰ２８，ＵＳＰ２９，ＵＳＰ２－ＡＳ１，ＵＳＰ３，ＵＳＰ３０，ＵＳＰ３０－ＡＳ１，ＵＳＰ３１，ＵＳＰ３２，ＵＳＰ３２Ｐ１，ＵＳＰ３２Ｐ２，ＵＳＰ３３，ＵＳＰ３４，ＵＳＰ３５，ＵＳＰ３６，ＵＳＰ３７，ＵＳＰ３８，ＵＳＰ３９，ＵＳＰ３－ＡＳ１，ＵＳＰ４，ＵＳＰ４０，ＵＳＰ４２，ＵＳＰ４３，ＵＳＰ４４，ＵＳＰ４５，ＵＳＰ４６，ＵＳＰ４６－ＡＳ１，ＵＳＰ４７，ＵＳＰ４８，ＵＳＰ４９，ＵＳＰ５，ＵＳＰ５０，ＵＳＰ５１，ＵＳＰ５３，ＵＳＰ５４，ＵＳＰ６，ＵＳＰ６ＮＬ，ＵＳＰ７，ＵＳＰ８，ＵＳＰ９Ｘ，ＵＳＰＬ１，ＵＳＴ，ＵＴＦ１，ＵＴＰ１１Ｌ，ＵＴＰ１４Ａ，ＵＴＰ１４Ｃ，ＵＴＰ１５，ＵＴＰ１８，ＵＴＰ２０，ＵＴＰ２３，ＵＴＰ３，ＵＴＰ６，ＵＴＲＮ，ＵＴＳ２，ＵＴＳ２Ｂ，ＵＴＳ２Ｒ，ＵＴＹ，ＵＶＲＡＧ，ＵＶＳＳＡ，ＵＸＳ１，ＵＸＴ，ＵＸＴ－ＡＳ１，ＶＡＣ１４，ＶＡＣ１４－ＡＳ１，ＶＡＭＰ１，ＶＡＭＰ２，ＶＡＭＰ３，ＶＡＭＰ４，ＶＡＭＰ５，ＶＡＭＰ７，ＶＡＭＰ８，ＶＡＮＧＬ１，ＶＡＮＧＬ２，ＶＡＰＡ，ＶＡＰＢ，ＶＡＲＳ，ＶＡＲＳ２，ＶＡＳＨ１，ＶＡＳＨ２，ＶＡＳＮ，ＶＡＳＰ，ＶＡＴ１，ＶＡＴ１Ｌ，ＶＡＶ１，ＶＡＶ２，ＶＡＶ３，ＶＡＶ３－ＡＳ１，ＶＡＸ１，ＶＡＸ２，ＶＢＰ１，ＶＣＡＭ１，ＶＣＡＮ，ＶＣＬ，ＶＣＰ，ＶＣＰＩＰ１，ＶＣＰＫＭＴ，ＶＣＸ，ＶＣＸ２，ＶＣＸ３Ａ，ＶＣＸ３Ｂ，ＶＤＡＣ１，ＶＤＡＣ２，ＶＤＡＣ３，ＶＤＲ，ＶＥＧＦＡ，ＶＥＧＦＢ，ＶＥＧＦＣ，ＶＥＮＴＸ，ＶＥＮＴＸＰ１，ＶＥＮＴＸＰ７，ＶＥＰＨ１，ＶＥＺＦ１，ＶＥＺＴ，ＶＧＦ，ＶＧＬＬ１，ＶＧＬＬ２，ＶＧＬＬ３，ＶＧＬＬ４，ＶＨＬ，ＶＨＬＬ，ＶＩＬ１，ＶＩＬＬ，ＶＩＭ，ＶＩＭ－ＡＳ１，ＶＩＭＰ，ＶＩＰ，ＶＩＰＡＳ３９，ＶＩＰＲ１，ＶＩＰＲ１－ＡＳ１，ＶＩＰＲ２，ＶＩＴ，ＶＫＯＲＣ１，ＶＫＯＲＣ１Ｌ１，ＶＬＤＬＲ，ＶＬＤＬＲ－ＡＳ１，ＶＭＡ２１，ＶＭＡＣ，ＶＭＯ１，ＶＭＰ１，ＶＮ１Ｒ１，ＶＮ１Ｒ１０Ｐ，ＶＮ１Ｒ２，ＶＮ１Ｒ４，ＶＮ１Ｒ５，ＶＮＮ１，ＶＮＮ２，ＶＮＮ３，ＶＯＰＰ１，ＶＰＲＢＰ，ＶＰＲＥＢ１，ＶＰＲＥＢ３，ＶＰＳ１１，ＶＰＳ１３Ａ，ＶＰＳ１３Ａ－ＡＳ１，ＶＰＳ１３Ｂ，ＶＰＳ１３Ｃ，ＶＰＳ１３Ｄ，ＶＰＳ１６，ＶＰＳ１８，ＶＰＳ２５，ＶＰＳ２６Ａ，ＶＰＳ２６Ｂ，ＶＰＳ２８，ＶＰＳ２９，ＶＰＳ３３Ａ，ＶＰＳ３３Ｂ，ＶＰＳ３５，ＶＰＳ３６，ＶＰＳ３７Ａ，ＶＰＳ３７Ｂ，ＶＰＳ３７Ｃ，ＶＰＳ３７Ｄ，ＶＰＳ３９，ＶＰＳ４１，ＶＰＳ４５，ＶＰＳ４Ａ，ＶＰＳ４Ｂ，ＶＰＳ５１，ＶＰＳ５２，ＶＰＳ５３，ＶＰＳ５４，ＶＰＳ７２，ＶＰＳ８，ＶＰＳ９Ｄ１，

VPS9D1－AS1, VRK1, VRK2, VRK3, VRTN, VSIG1, VSIG10, VSIG10L, VSIG2, VSIG4, VSIG8, VSNL1, VSTM1, VSTM2A, VSTM2A－OT1, VSTM2B, VSTM2L, VSTM4, VSTM5, VSX1, VSX2, VTA1, VTCN1, VTI1A, VTI1B, VTN, VTRNA1－1, VTRNA1－2, VTRNA1－3, VTRNA2－1, VWA1, VWA2, VWA3A, VWA3B, VWA5A, VWA5B1, VWA5B2, VWA7, VWA8, VWA8－AS1, VWA9, VWC2, VWC2L, VWC2L－IT1, VWCE, VWDE, VWF, WAC, WAC－AS1, WAPAL, WARS, WARS2, WARS2－IT1, WAS, WASF1, WASF2, WASF3, WASH1, WASH2P, WASH3P, WASH5P, WASH7P, WASL, WBP1, WBP11, WBP11P1, WBP1L, WBP2, WBP2NL, WBP4, WBP5, WBSCR16, WBSCR17, WBSCR22, WBSCR27, WBSCR28, WDFY1, WDFY2, WDFY3, WDFY3－AS2, WDFY4, WDHD1, WDPCP, WDR1, WDR11, WDR11－AS1, WDR12, WDR13, WDR17, WDR18, WDR19, WDR20, WDR24, WDR25, WDR26, WDR27, WDR3, WDR31, WDR33, WDR34, WDR35, WDR36, WDR37, WDR38, WDR4, WDR41, WDR43, WDR44, WDR45, WDR45B, WDR46, WDR47, WDR48, WDR49, WDR5, WDR53, WDR54, WDR55, WDR59, WDR5B, WDR6, WDR60, WDR61, WDR62, WDR63, WDR64, WDR66, WDR7, WDR70, WDR72, WDR73, WDR74, WDR75, WDR76, WDR77, WDR78, WDR81, WDR82, WDR83, WDR83OS, WDR86, WDR86－AS1, WDR87, WDR88, WDR89, WDR90, WDR91, WDR92, WDR93, WDSUB1, WDTC1, WDYHV1, WEE1, WEE2, WEE2－AS1, WFDC1, WFDC10A, WFDC10B, WFDC11, WFDC12, WFDC13, WFDC2, WFDC21P, WFDC3, WFDC5, WFDC6, WFDC8, WFDC9, WFIKKN1, WFIKKN2, WFS1, WHAMM, WHAMMP1, WHAMMP2, WHAMMP3, WHSC1, WHSC1L1, WI2－2373I1.2, WIBG, WIF1, WIPF1, WIPF2, WIPF3, WIPI1, WIPI2, WISP1, WISP2, WISP3, WIZ, WLS, WNK1, WNK2, WNK3, WNK4, WNT1, WNT10A, WNT10B, WNT11, WNT16, WNT2, WNT2B, WNT3, WNT3A, WNT4, WNT5A, WNT5B, WNT6, WNT7A, WNT7B, WNT8A, WNT8B, WNT9A, WNT9B, WRAP53, WRAP73, WRB, WRN, WRNIP1, WSB1, WSB2, WSCD1, WSCD2, WT1, WT1－AS, WTAP, WTAPP1, WTH3DI, WTIP, WWC1, WWC2, WWC2－AS1, WWC2－AS2, WWC3, WWOX, WWP1, WWP2, WWTR1, WWTR1－AS1, XAB2, XAF1, XAGE1B, XAGE1E, XAGE2, XAGE3, XAGE5, XBP1, XCL1, XCL2, XCR1, XDH, XG, XGY2, XIAP, XIRP1, XIRP2, XIRP2－AS1, XIST, XK, XKR3, XKR4, XKR5, XKR6, XKR7, XKR8, XKR9, XKRX, XPA, XPC, XPNPEP1, XPNPEP2, XPNPEP3, XPO1, XPO4, XPO5, XPO6, XPO7, XPOT, XPR1, XRCC1, XRCC2, XRCC3,

XRCC4, XRCC5, XRCC6, XRCC6BP1, XRCC6P5, XRN1, XRN2, XRRA1, XXYLT1, XXYLT1-AS1, XXYLT1-AS2, XYLB, XYLT1, XYLT2, YAE1D1, YAF2, YAP1, YARS, YARS2, YBEY, YBX1, YBX2, YBX3, YBX3P1, YDJC, YEATS2, YEATS4, YES1, YIF1A, YIF1B, YIPF1, YIPF2, YIPF3, YIPF4, YIPF5, YIPF6, YIPF7, YJEFN3, YKT6, YLPM1, YME1L1, YOD1, YPEL1, YPEL2, YPEL3, YPEL4, YPEL5, YRDC, YTHDC1, YTHDC2, YTHDF1, YTHDF2, YTHDF3, YTHDF3-AS1, YWHAB, YWHAE, YWHAEP1, YWHAEP7, YWHAG, YWHAH, YWHAQ, YWHAZ, YY1, YY1AP1, YY1P2, YY2, ZACN, ZADH2, ZAK, ZAN, ZAP70, ZAR1, ZAR1L, ZASP, ZBBX, ZBED1, ZBED2, ZBED3, ZBED3-AS1, ZBED4, ZBED5, ZBED5-AS1, ZBED6, ZBED6CL, ZBED8, ZBED9, ZBP1, ZBTB1, ZBTB10, ZBTB11, ZBTB11-AS1, ZBTB12, ZBTB14, ZBTB16, ZBTB17, ZBTB18, ZBTB2, ZBTB20, ZBTB20-AS1, ZBTB20-AS3, ZBTB20-AS4, ZBTB21, ZBTB22, ZBTB24, ZBTB25, ZBTB26, ZBTB3, ZBTB32, ZBTB33, ZBTB34, ZBTB37, ZBTB38, ZBTB39, ZBTB4, ZBTB40, ZBTB41, ZBTB42, ZBTB43, ZBTB44, ZBTB45, ZBTB46, ZBTB46-AS1, ZBTB47, ZBTB48, ZBTB49, ZBTB5, ZBTB6, ZBTB7A, ZBTB7B, ZBTB7C, ZBTB8A, ZBTB8B, ZBTB8OS, ZBTB9, ZC2HC1A, ZC2HC1B, ZC2HC1C, ZC3H10, ZC3H11A, ZC3H12A, ZC3H12B, ZC3H12C, ZC3H12D, ZC3H13, ZC3H14, ZC3H15, ZC3H18, ZC3H3, ZC3H4, ZC3H6, ZC3H7A, ZC3H7B, ZC3H8, ZC3HAV1, ZC3HAV1L, ZC3HC1, ZC4H2, ZCCHC10, ZCCHC11, ZCCHC12, ZCCHC13, ZCCHC14, ZCCHC16, ZCCHC17, ZCCHC18, ZCCHC2, ZCCHC24, ZCCHC3, ZCCHC4, ZCCHC5, ZCCHC6, ZCCHC7, ZCCHC8, ZCCHC9, ZCRB1, ZCWPW1, ZCWPW2, ZDBF2, ZDHHC1, ZDHHC11, ZDHHC12, ZDHHC13, ZDHHC14, ZDHHC15, ZDHHC16, ZDHHC17, ZDHHC18, ZDHHC19, ZDHHC2, ZDHHC20, ZDHHC21, ZDHHC22, ZDHHC23, ZDHHC24, ZDHHC3, ZDHHC4, ZDHHC5, ZDHHC6, ZDHHC7, ZDHHC8, ZDHHC8P1, ZDHHC9, ZEB1, ZEB1-AS1, ZEB2, ZEB2-AS1, ZER1, ZFAND1, ZFAND2A, ZFAND2B, ZFAND3, ZFAND4, ZFAND5, ZFAND6, ZFAS1, ZFAT, ZFAT-AS1, ZFC3H1, ZFHX2, ZFHX3, ZFHX4, ZFHX4-AS1, ZFP1, ZFP14, ZFP2, ZFP28, ZFP3, ZFP30, ZFP36, ZFP36L1, ZFP36L2, ZFP37, ZFP41, ZFP42, ZFP57, ZFP62, ZFP64, ZFP69, ZFP69B, ZFP82, ZFP90, ZFP91, ZFP91-CNTF, ZFP92, ZFPL1, ZFPM1, ZFPM2, ZFPM2-AS1, ZFR, ZFR2, ZFX, ZFX-AS1, ZFYVE1, ZFYVE16, ZFYVE19, ZFYVE2

1，ＺＦＹＶＥ２６，ＺＦＹＶＥ２７，ＺＦＹＶＥ２８，ＺＦＹＶＥ９，ＺＧ１６，ＺＧ１６Ｂ，ＺＧＬＰ１，ＺＧＰＡＴ，ＺＧＲＦ１，ＺＨＸ１，ＺＨＸ１－Ｃ８ｏｒｆ７６，ＺＨＸ２，ＺＨＸ３，ＺＩＣ１，ＺＩＣ２，ＺＩＣ３，ＺＩＣ４，ＺＩＣ５，ＺＩＫ１，ＺＩＭ２，ＺＩＭ２－ＡＳ１，ＺＩＭ３，ＺＫＳＣＡＮ１，ＺＫＳＣＡＮ２，ＺＫＳＣＡＮ３，ＺＫＳＣＡＮ４，ＺＫＳＣＡＮ５，ＺＫＳＣＡＮ７，ＺＫＳＣＡＮ８，ＺＭＡＴ１，ＺＭＡＴ２，ＺＭＡＴ３，ＺＭＡＴ４，ＺＭＡＴ５，ＺＭＩＺ１，ＺＭＩＺ１－ＡＳ１，ＺＭＩＺ２，ＺＭＰＳＴＥ２４，ＺＭＹＭ１，ＺＭＹＭ２，ＺＭＹＭ３，ＺＭＹＭ４，ＺＭＹＭ５，ＺＭＹＭ６，ＺＭＹＭ６ＮＢ，ＺＭＹＮＤ１０，ＺＭＹＮＤ１１，ＺＭＹＮＤ１２，ＺＭＹＮＤ１５，ＺＭＹＮＤ１９，ＺＭＹＮＤ８，ＺＮＦ１０，ＺＮＦ１００，ＺＮＦ１０１，ＺＮＦ１０６，ＺＮＦ１０７，ＺＮＦ１１２，ＺＮＦ１１４，ＺＮＦ１１７，ＺＮＦ１２，ＺＮＦ１２１，ＺＮＦ１２４，ＺＮＦ１３１，ＺＮＦ１３２，ＺＮＦ１３３，ＺＮＦ１３４，ＺＮＦ１３５，ＺＮＦ１３６，ＺＮＦ１３７Ｐ，ＺＮＦ１３８，ＺＮＦ１４，ＺＮＦ１４０，ＺＮＦ１４１，ＺＮＦ１４２，ＺＮＦ１４３，ＺＮＦ１４６，ＺＮＦ１４８，ＺＮＦ１５４，ＺＮＦ１５５，ＺＮＦ１５７，ＺＮＦ１６，ＺＮＦ１６０，ＺＮＦ１６５，ＺＮＦ１６９，ＺＮＦ１７，ＺＮＦ１７４，ＺＮＦ１７５，ＺＮＦ１７７，ＺＮＦ１８，ＺＮＦ１８０，ＺＮＦ１８１，ＺＮＦ１８２，ＺＮＦ１８４，ＺＮＦ１８５，ＺＮＦ１８９，ＺＮＦ１９，ＺＮＦ１９２Ｐ１，ＺＮＦ１９５，ＺＮＦ１９７，ＺＮＦ１９７－ＡＳ１，ＺＮＦ２，ＺＮＦ２０，ＺＮＦ２００，ＺＮＦ２０２，ＺＮＦ２０４Ｐ，ＺＮＦ２０５，ＺＮＦ２０５－ＡＳ１，ＺＮＦ２０７，ＺＮＦ２０８，ＺＮＦ２１１，ＺＮＦ２１２，ＺＮＦ２１３，ＺＮＦ２１３－ＡＳ１，ＺＮＦ２１４，ＺＮＦ２１５，ＺＮＦ２１７，ＺＮＦ２１９，ＺＮＦ２２，ＺＮＦ２２１，ＺＮＦ２２２，ＺＮＦ２２３，ＺＮＦ２２４，ＺＮＦ２２５，ＺＮＦ２２６，ＺＮＦ２２７，ＺＮＦ２２９，ＺＮＦ２３，ＺＮＦ２３０，ＺＮＦ２３２，ＺＮＦ２３３，ＺＮＦ２３４，ＺＮＦ２３５，ＺＮＦ２３６，ＺＮＦ２３９，ＺＮＦ２４，ＺＮＦ２４８，ＺＮＦ２５，ＺＮＦ２５０，ＺＮＦ２５１，ＺＮＦ２５２Ｐ，ＺＮＦ２５２Ｐ－ＡＳ１，ＺＮＦ２５３，ＺＮＦ２５４，ＺＮＦ２５６，ＺＮＦ２５７，ＺＮＦ２６，ＺＮＦ２６０，ＺＮＦ２６３，ＺＮＦ２６４，ＺＮＦ２６６，ＺＮＦ２６７，ＺＮＦ２６８，ＺＮＦ２７１Ｐ，ＺＮＦ２７３，ＺＮＦ２７４，ＺＮＦ２７５，ＺＮＦ２７６，ＺＮＦ２７７，ＺＮＦ２８，ＺＮＦ２８０Ａ，ＺＮＦ２８０Ｂ，ＺＮＦ２８０Ｃ，ＺＮＦ２８０Ｄ，ＺＮＦ２８１，ＺＮＦ２８２，ＺＮＦ２８３，ＺＮＦ２８４，ＺＮＦ２８５，ＺＮＦ２８６Ａ，ＺＮＦ２８６Ｂ，ＺＮＦ２８７，ＺＮＦ２９２，ＺＮＦ２９５－ＡＳ１，ＺＮＦ２９６，ＺＮＦ３，ＺＮＦ３０，ＺＮＦ３００，ＺＮＦ３００Ｐ１，ＺＮＦ３０２，ＺＮＦ３０４，ＺＮＦ３０－ＡＳ１，ＺＮＦ３１１，ＺＮＦ３１６，ＺＮＦ３１７，ＺＮＦ３１８，ＺＮＦ３１９，ＺＮＦ３２，ＺＮＦ３２０，ＺＮＦ３２１Ｐ，ＺＮＦ３２２，ＺＮＦ３２４，ＺＮＦ３２４Ｂ，ＺＮＦ３２６，ＺＮＦ３２９，ＺＮＦ３２－ＡＳ１，ＺＮＦ３２－ＡＳ２，ＺＮＦ３２－ＡＳ３，ＺＮＦ３３０，ＺＮＦ３３１，ＺＮＦ３３３，ＺＮＦ３３４，ＺＮＦ３３５，ＺＮＦ３３７，ＺＮＦ３３７－ＡＳ１，ＺＮＦ３３Ａ，ＺＮＦ３３Ｂ，ＺＮＦ３３ＢＰ１，ＺＮＦ３４，ＺＮＦ３４１，ＺＮＦ３４１－ＡＳ１，ＺＮＦ３４３，ＺＮＦ３４５，ＺＮＦ３４６，ＺＮＦ３４７，ＺＮＦ３５，ＺＮＦ３５０，ＺＮＦ３５０－ＡＳ１，ＺＮＦ３５４Ａ，ＺＮＦ３５４Ｂ，ＺＮＦ３５４Ｃ，ＺＮＦ３５８，ＺＮＦ３６２，ＺＮＦ３６５，ＺＮＦ３６６，ＺＮＦ３６７，ＺＮＦ３７Ａ，ＺＮＦ３７ＢＰ，ＺＮＦ３８２，ＺＮＦ３８３，ＺＮＦ３８４，ＺＮＦ３８５Ａ，ＺＮＦ３８５Ｂ，ＺＮＦ３８５Ｃ，ＺＮＦ３８５Ｄ，ＺＮＦ３８５Ｄ－ＡＳ１，ＺＮＦ３８５Ｄ－ＡＳ２，ＺＮＦ３９１，ＺＮＦ３９４，ＺＮＦ３９５，ＺＮＦ３９６，ＺＮＦ３９７，ＺＮＦ３９８，ＺＮＦ４０４，ＺＮＦ４０７，

ZNF408, ZNF41, ZNF410, ZNF414, ZNF415, ZNF416, ZNF417, ZNF418, ZNF419, ZNF420, ZNF423, ZNF425, ZNF426, ZNF428, ZNF429, ZNF43, ZNF430, ZNF431, ZNF432, ZNF433, ZNF436, ZNF436-AS1, ZNF438, ZNF439, ZNF44, ZNF440, ZNF441, ZNF442, ZNF443, ZNF444, ZNF445, ZNF446, ZNF449, ZNF45, ZNF451, ZNF454, ZNF460, ZNF461, ZNF462, ZNF467, ZNF468, ZNF469, ZNF470, ZNF471, ZNF473, ZNF474, ZNF479, ZNF48, ZNF480, ZNF483, ZNF484, ZNF485, ZNF486, ZNF487, ZNF488, ZNF490, ZNF491, ZNF492, ZNF493, ZNF496, ZNF497, ZNF500, ZNF501, ZNF502, ZNF503, ZNF503-AS1, ZNF503-AS2, ZNF506, ZNF507, ZNF510, ZNF511, ZNF512, ZNF512B, ZNF513, ZNF514, ZNF516, ZNF517, ZNF518A, ZNF518B, ZNF519, ZNF521, ZNF524, ZNF525, ZNF526, ZNF527, ZNF528, ZNF528-AS1, ZNF529, ZNF529-AS1, ZNF530, ZNF532, ZNF534, ZNF536, ZNF540, ZNF541, ZNF542P, ZNF543, ZNF544, ZNF546, ZNF547, ZNF548, ZNF549, ZNF550, ZNF551, ZNF552, ZNF554, ZNF555, ZNF556, ZNF557, ZNF558, ZNF559, ZNF559-ZNF177, ZNF560, ZNF561, ZNF561-AS1, ZNF562, ZNF563, ZNF564, ZNF565, ZNF566, ZNF567, ZNF568, ZNF569, ZNF57, ZNF570, ZNF571, ZNF571-AS1, ZNF572, ZNF573, ZNF574, ZNF575, ZNF576, ZNF577, ZNF578, ZNF579, ZNF580, ZNF581, ZNF582, ZNF582-AS1, ZNF583, ZNF584, ZNF585A, ZNF585B, ZNF586, ZNF587, ZNF587B, ZNF589, ZNF592, ZNF593, ZNF594, ZNF595, ZNF596, ZNF597, ZNF598, ZNF599, ZNF600, ZNF605, ZNF606, ZNF607, ZNF608, ZNF609, ZNF610, ZNF611, ZNF613, ZNF614, ZNF615, ZNF616, ZNF618, ZNF619, ZNF620, ZNF621, ZNF622, ZNF623, ZNF624, ZNF625, ZNF625-ZNF20, ZNF626, ZNF627, ZNF628, ZNF629, ZNF630, ZNF630-AS1, ZNF638, ZNF639, ZNF641, ZNF644, ZNF645, ZNF646, ZNF648, ZNF649, ZNF649-AS1, ZNF652, ZNF653, ZNF654, ZNF655, ZNF658, ZNF658B, ZNF660, ZNF662, ZNF663P, ZNF664, ZNF664-FAM101A, ZNF665, ZNF667, ZNF667-AS1, ZNF668, ZNF669, ZNF670, ZNF670-ZNF695, ZNF671, ZNF672, ZNF674, ZNF674-AS1, ZNF675, ZNF676, ZNF677, ZNF678, ZNF679, ZNF680, ZNF681, ZNF682, ZNF683, ZNF684, ZNF687, ZNF688, ZNF689, ZNF69, ZNF691, ZNF692, ZNF695, ZNF696, ZNF697, ZNF699, ZNF7, ZNF70, ZNF700, ZNF701, ZNF702P, ZNF703, ZNF704, ZNF

７０５Ａ，ＺＮＦ７０５Ｂ，ＺＮＦ７０５Ｄ，ＺＮＦ７０５Ｅ，ＺＮＦ７０５Ｇ，ＺＮＦ７０６，ＺＮＦ７０７，ＺＮＦ７０８，ＺＮＦ７０９，ＺＮＦ７１，ＺＮＦ７１０，ＺＮＦ７１１，ＺＮＦ７１３，ＺＮＦ７１４，ＺＮＦ７１６，ＺＮＦ７１７，ＺＮＦ７１８，ＺＮＦ７２０，ＺＮＦ７２１，ＺＮＦ７２４Ｐ，ＺＮＦ７２６，ＺＮＦ７２７，ＺＮＦ７２８，ＺＮＦ７２９，ＺＮＦ７３０，ＺＮＦ７３２，ＺＮＦ７３３Ｐ，ＺＮＦ７３５，ＺＮＦ７３６，ＺＮＦ７３７，ＺＮＦ７３８，ＺＮＦ７４，ＺＮＦ７４０，ＺＮＦ７４６，ＺＮＦ７４７，ＺＮＦ７４９，ＺＮＦ７５０，ＺＮＦ７５Ａ，ＺＮＦ７５Ｄ，ＺＮＦ７６，ＺＮＦ７６１，ＺＮＦ７６３，ＺＮＦ７６４，ＺＮＦ７６５，ＺＮＦ７６６，ＺＮＦ７６７Ｐ，ＺＮＦ７６８，ＺＮＦ７７，ＺＮＦ７７０，ＺＮＦ７７１，ＺＮＦ７７２，ＺＮＦ７７３，ＺＮＦ７７４，ＺＮＦ７７５，ＺＮＦ７７６，ＺＮＦ７７７，ＺＮＦ７７８，ＺＮＦ７８０Ａ，ＺＮＦ７８０Ｂ，ＺＮＦ７８１，ＺＮＦ７８２，ＺＮＦ７８３，ＺＮＦ７８４，ＺＮＦ７８５，ＺＮＦ７８６，ＺＮＦ７８７，ＺＮＦ７８８，ＺＮＦ７８９，ＺＮＦ７９，ＺＮＦ７９０，ＺＮＦ７９０－ＡＳ１，ＺＮＦ７９１，ＺＮＦ７９２，ＺＮＦ７９３，ＺＮＦ７９３－ＡＳ１，ＺＮＦ７９９，ＺＮＦ８，ＺＮＦ８０，ＺＮＦ８００，ＺＮＦ８０４Ａ，ＺＮＦ８０４Ｂ，ＺＮＦ８０５，ＺＮＦ８０８，ＺＮＦ８１，ＺＮＦ８１２，ＺＮＦ８１３，ＺＮＦ８１４，ＺＮＦ８１５Ｐ，ＺＮＦ８１６，ＺＮＦ８１６－ＺＮＦ３２１Ｐ，ＺＮＦ８１８Ｐ，ＺＮＦ８２１，ＺＮＦ８２３，ＺＮＦ８２６Ｐ，ＺＮＦ８２７，ＺＮＦ８２９，ＺＮＦ８３，ＺＮＦ８３０，ＺＮＦ８３１，ＺＮＦ８３３Ｐ，ＺＮＦ８３５，ＺＮＦ８３６，ＺＮＦ８３７，ＺＮＦ８３９，ＺＮＦ８４，ＺＮＦ８４１，ＺＮＦ８４３，ＺＮＦ８４４，ＺＮＦ８４５，ＺＮＦ８４６，ＺＮＦ８４７Ｐ，ＺＮＦ８５，ＺＮＦ８５０，ＺＮＦ８５２，ＺＮＦ８５３，ＺＮＦ８６０，ＺＮＦ８６２，ＺＮＦ８６５，ＺＮＦ８７６Ｐ，ＺＮＦ８７８，ＺＮＦ８７９，ＺＮＦ８８０，ＺＮＦ８８３，ＺＮＦ８９０Ｐ，ＺＮＦ８９１，ＺＮＦ９０，ＺＮＦ９１，ＺＮＦ９２，ＺＮＦ９３，ＺＮＦ９８，ＺＮＦ９９，ＺＮＦＸ１，ＺＮＨＩＴ１，ＺＮＨＩＴ２，ＺＮＨＩＴ３，ＺＮＨＩＴ６，ＺＮＲＤ１，ＺＮＲＤ１－ＡＳ１，ＺＮＲＦ１，ＺＮＲＦ２，ＺＮＲＦ２Ｐ１，ＺＮＲＦ２Ｐ２，ＺＮＲＦ３，ＺＮＲＦ３－ＡＳ１，ＺＮＲＦ４，ＺＰ１，ＺＰ２，ＺＰ３，ＺＰ４，ＺＰＢＰ，ＺＰＢＰ２，ＺＰＬＤ１，ＺＰＲ１，ＺＲＡＮＢ１，ＺＲＡＮＢ２，ＺＲＡＮＢ２－ＡＳ１，ＺＲＡＮＢ２－ＡＳ２，ＺＲＡＮＢ３，ＺＲＳＲ２，ＺＳＣＡＮ１，ＺＳＣＡＮ１０，ＺＳＣＡＮ１２，ＺＳＣＡＮ１２Ｐ１，ＺＳＣＡＮ１６，ＺＳＣＡＮ１６－ＡＳ１，ＺＳＣＡＮ１８，ＺＳＣＡＮ２，ＺＳＣＡＮ２０，ＺＳＣＡＮ２１，ＺＳＣＡＮ２２，ＺＳＣＡＮ２３，ＺＳＣＡＮ２５，ＺＳＣＡＮ２６，ＺＳＣＡＮ２９，ＺＳＣＡＮ３０，ＺＳＣＡＮ３１，ＺＳＣＡＮ３２，ＺＳＣＡＮ４，ＺＳＣＡＮ５Ａ，ＺＳＣＡＮ５Ｂ，ＺＳＣＡＮ９，ＺＳＷＩＭ１，ＺＳＷＩＭ２，ＺＳＷＩＭ３，ＺＳＷＩＭ４，ＺＳＷＩＭ５，ＺＳＷＩＭ６，ＺＳＷＩＭ７，ＺＳＷＩＭ８，ＺＳＷＩＭ８－ＡＳ１，ＺＵＦＳＰ，ＺＷ１０，ＺＷＩＬＣＨ，ＺＷＩＮＴ，ＺＸＤＡ，ＺＸＤＢ，ＺＸＤＣ，ＺＹＧ１１Ａ，ＺＹＧ１１Ｂ，ＺＹＸ，ＺＺＥＦ１，および　ＺＺＺ３、である。

【００８５】

表１および表２は、標的遺伝子、決定すべき標的参照ＩＤ（たとえば、Ａ３ＧＡＬＴ２に対するＮＭ＿００１０８０４３８）、コードしている場合には標的転写物によりコードされるタンパク質（Ａ３ＧＡＬＴ２に対するＮＰ＿００１０７３９０７）、標的転写物の性質（たとえば、Ａ３ＧＡＬＴ２をコードしている（Ｃｏｄｉｎｇ））、ＴＳＳの位置（たとえば、Ａ３ＧＡＬＴ２に対するｃｈｒ１：３３３２１０９８マイナス鎖（ｍｉｎｕｓ　ｓｔｒａｎｄ））、およびＴＳＳコアの配列識別子（たとえば、Ａ３ＧＡＬＴ２に対するＴＳＳコアの配列番号１）を記載する。本発明のｓａＲＮＡは、任意の好適な方法により、たとえば、合成によりまたは当業者に周知の標準的分子生物学技術を用いて細胞内の

発現により生成しうる。たとえば、本発明のｓａＲＮＡは、当技術分野で公知の方法を用いて化学合成または組換え産生しうる。

【００８６】

以下の表１は、コード標的遺伝子およびそのＴＳＳ位置を記載する。

表１（次頁）．コード標的遺伝子、標的転写物、およびＴＳＳ位置

表中、「Ｔａｒｇｅｔ　Ｇｅｎｅ」は「標的遺伝子」、「Ｔａｒｇｅｔ　ｔｒａｎｓｃｒｉｐｔ　ＲＥＦ．ＩＤ　Ｎｏ．」は「標的転写物参照ＩＤ番号」、「Ｐｒｏｔｅｉｎ　ｅｎｃｏｄｅｄ　ｂｙ　ｔａｒｇｅｔ　ｔｒａｎｓｃｒｉｐｔ」は「標的転写物によりコードされるタンパク質」、「Ｎａｔｕｒｅ　ｏｆ　ｔａｒｇｅｔ　ｔｒａｎｓｃｒｉｐｔ」は「標的転写物の性質」、「Ｔｒａｎｓｃｒｉｐｔ　ＴＳＳ　ｌｏｃａｔｉｏｎ」は「転写物ＴＳＳ位置」、「ＳＥＱ　ＩＤ　ｏｆ　ＴＳＳ　ｃｏｒｅ」は「ＴＳＳコアの配列番号」、「Ｃｏｄｉｎｇ」は「コード」、「ｍｉｎｕｓ　ｓｔｒａｎｄ」は「マイナス鎖」、「ｐｌｕｓ　ｓｔｒａｎｄ」は「プラス鎖」をそれぞれ表す。

【００８７】

【表１】

Target Gene	Target transcript REF. ID No.	Protein encoded by target transcript	Nature of target transcript	Transcript TSS location	SEQ ID of TSS core
A3GALT2	NM_001080438	NP_001073907	Coding	chr1:33321098 minus strand	1
AADACL3	NM_001103170	NP_001096640	Coding	chr1:12716114 plus strand	2
AADACL4	NM_001013630	NP_001013652	Coding	chr1:12644546 plus strand	3
ABCA4	NM_000350	NP_000341	Coding	chr1:94121149 minus strand	4
ABCB10	NM_012089	NP_036221	Coding	chr1:229558695 minus strand	5
ABCD3	NM_001122674	NP_001116146	Coding	chr1:94418376 plus strand	6
ABCD3	NM_002858	NP_002849	Coding	chr1:94418376 plus strand	6
ABL2	NM_001136001	NP_001129473	Coding	chr1:179229684 minus strand	7
ABL2	NM_001168236	NP_001161708	Coding	chr1:179229684 minus strand	7
ABL2	NM_001168237	NP_001161709	Coding	chr1:179229684 minus strand	7
ABL2	NM_001168238	NP_001161710	Coding	chr1:179229684 minus strand	7
ABL2	NM_007314	NP_009298	Coding	chr1:179229684 minus strand	7
ABL2	NM_001136000	NP_001129472	Coding	chr1:179143089 minus strand	8
ABL2	NM_001168239	NP_001161711	Coding	chr1:179143089 minus strand	8
ABL2	NM_005158	NP_005149	Coding	chr1:179143089 minus strand	8
ACADM	NM_000016	NP_000007	Coding	chr1:75724346 plus strand	9
ACADM	NM_001127328	NP_001120800	Coding	chr1:75724346 plus strand	9
ACADM	NM_001286042	NP_001272971	Coding	chr1:75724346 plus strand	9
ACADM	NM_001286043	NP_001272972	Coding	chr1:75724346 plus strand	9
ACADM	NM_001286044	NP_001272973	Coding	chr1:75724346 plus strand	9
ACAP3	NM_030649	NP_085152	Coding	chr1:1307889 minus strand	10
ACBD3	NM_022735	NP_073572	Coding	chr1:226186722 minus strand	11
ACBD6	NM_032360	NP_115736	Coding	chr1:180502887 minus strand	12
ACKR1	NM_001122951	NP_001116423	Coding	chr1:159205258 plus strand	13
ACKR1	NM_002036	NP_002027	Coding	chr1:159204012 plus strand	14
ACOT11	NM_015547	NP_056362	Coding	chr1:54548133 plus strand	15
ACOT11	NM_147161	NP_671517	Coding	chr1:54548133 plus strand	15
ACOT7	NM_181865	NP_863655	Coding	chr1:6360704 minus strand	16
ACOT7	NM_181864	NP_863654	Coding	chr1:6385823 minus strand	17
ACOT7	NM_181866	NP_863656	Coding	chr1:6358944 minus strand	18

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ACOT7	NM_007274	NP_009205	Coding	chr1:6393766 minus strand	19
ACP6	NM_016361	NP_057445	Coding	chr1:147670512 minus strand	20
ACTA1	NM_001100	NP_001091	Coding	chr1:229434096 minus strand	21
ACTL8	NM_030812	NP_110439	Coding	chr1:17755312 plus strand	22
ACTN2	NM_001103	NP_001094	Coding	chr1:236686453 plus strand	23
ACTN2	NM_001278343	NP_001265272	Coding	chr1:236686453 plus strand	23
ACTN2	NM_001278344	NP_001265273	Coding	chr1:236686453 plus strand	23
ACTRT2	NM_080431	NP_536356	Coding	chr1:3021481 plus strand	24
ADAM15	NM_001261464	NP_001248393	Coding	chr1:155051271 plus strand	25
ADAM15	NM_001261465	NP_001248394	Coding	chr1:155051271 plus strand	25
ADAM15	NM_001261466	NP_001248395	Coding	chr1:155051271 plus strand	25
ADAM15	NM_003815	NP_003806	Coding	chr1:155051271 plus strand	25
ADAM15	NM_207191	NP_997074	Coding	chr1:155051271 plus strand	25
ADAM15	NM_207194	NP_997077	Coding	chr1:155051271 plus strand	25
ADAM15	NM_207195	NP_997078	Coding	chr1:155051271 plus strand	25
ADAM15	NM_207196	NP_997079	Coding	chr1:155051271 plus strand	25
ADAM15	NM_207197	NP_997080	Coding	chr1:155051271 plus strand	25
ADAM30	NM_021794	NP_068566	Coding	chr1:119896524 minus strand	26
ADAMTS4	NM_005099	NP_005090	Coding	chr1:161199055 minus strand	27
ADAMTSL4	NM_001288607	NP_001275536	Coding	chr1:150549368 plus strand	28
ADAMTSL4	NM_001288608	NP_001275537	Coding	chr1:150549368 plus strand	28
ADAMTSL4	NM_019032	NP_061905	Coding	chr1:150549368 plus strand	28
ADAMTSL4	NM_025008	NP_079284	Coding	chr1:150549368 plus strand	28
ADAR	NM_001111	NP_001102	Coding	chr1:154608248 minus strand	29
ADAR	NM_015840	NP_056655	Coding	chr1:154608248 minus strand	29
ADAR	NM_015841	NP_056656	Coding	chr1:154608248 minus strand	29
ADAR	NM_001025107	NP_001020278	Coding	chr1:154627980 minus strand	30
ADAR	NM_001193495	NP_001180424	Coding	chr1:154606300 minus strand	31

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ADCK3	NM_020247	NP_064632	Coding	chr1:226940236 plus strand	32
ADCY10	NM_001167749	NP_001161221	Coding	chr1:167914226 minus strand	33
ADCY10	NM_001297772	NP_001284701	Coding	chr1:167914226 minus strand	33
ADCY10	NM_018417	NP_060887	Coding	chr1:167914226 minus strand	33
ADIPOR1	NM_001290553	NP_001277482	Coding	chr1:202957984 minus strand	34
ADIPOR1	NM_001290629	NP_001277558	Coding	chr1:202958572 minus strand	35
ADIPOR1	NM_001290557	NP_001277486	Coding	chr1:202958396 minus strand	36
ADIPOR1	NM_015999	NP_057083	Coding	chr1:202958396 minus strand	36
ADORA1	NM_000674	NP_000665	Coding	chr1:203127707 plus strand	37
ADORA1	NM_001048230	NP_001041695	Coding	chr1:203127707 plus strand	37
ADORA3	NM_000677	NP_000668	Coding	chr1:111504121 minus strand	38
ADORA3	NM_001302678	NP_001289607	Coding	chr1:111504121 minus strand	38
ADORA3	NM_001302679	NP_001289608	Coding	chr1:111504121 minus strand	38
ADPRHL2	NM_017825	NP_060295	Coding	chr1:36088851 plus strand	39
ADSS	NM_001126	NP_001117	Coding	chr1:244452134 minus strand	40
AGBL4	NM_032785	NP_116174	Coding	chr1:50023954 minus strand	41
AGL	NM_000646	NP_000637	Coding	chr1:99850974 plus strand	42
AGL	NM_000645	NP_000636	Coding	chr1:99861209 plus strand	43
AGL	NM_000642	NP_000633	Coding	chr1:99850083 plus strand	44
AGL	NM_000028	NP_000019	Coding	chr1:99850488 plus strand	45
AGL	NM_000643	NP_000634	Coding	chr1:99850488 plus strand	45
AGL	NM_000644	NP_000635	Coding	chr1:99850488 plus strand	45
AGMAT	NM_024758	NP_079034	Coding	chr1:15585110 minus strand	46
AGO1	NM_012199	NP_036331	Coding	chr1:35883208 plus strand	47
AGO3	NM_024852	NP_079128	Coding	chr1:35931081 plus strand	48
AGO3	NM_177422	NP_803171	Coding	chr1:35931081 plus strand	48
AGO4	NM_017629	NP_060099	Coding	chr1:35808226 plus strand	49
AGRN	NM_198576	NP_940978	Coding	chr1:1020122 plus strand	50
AGT	NM_000029	NP_000020	Coding	chr1:230714590 minus strand	51
AGTRAP	NM_001040194	NP_001035284	Coding	chr1:11736084 plus strand	52
AGTRAP	NM_001040195	NP_001035285	Coding	chr1:11736084 plus strand	52
AGTRAP	NM_001040196	NP_001035286	Coding	chr1:11736084 plus strand	52
AGTRAP	NM_001040197	NP_001035287	Coding	chr1:11736084 plus strand	52

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AGTRAP	NM_020350	NP_065083	Coding	chr1:11736084 plus strand	52
AHCTF1	NM_015446	NP_056261	Coding	chr1:246931424 minus strand	53
AHCYL1	NM_001242673	NP_001229602	Coding	chr1:109984764 plus strand	54
AHCYL1	NM_006621	NP_006612	Coding	chr1:109984764 plus strand	54
AHCYL1	NM_001242675	NP_001229604	Coding	chr1:110003947 plus strand	55
AHCYL1	NM_001242676	NP_001229605	Coding	chr1:110003947 plus strand	55
AHCYL1	NM_001242674	NP_001229603	Coding	chr1:110000926 plus strand	56
AHDC1	NM_001029882	NP_001025053	Coding	chr1:27603494 minus strand	57
AIDA	NM_022831	NP_073742	Coding	chr1:222712522 minus strand	58
AIM1L	NM_001039775	NP_001034864	Coding	chr1:26354130 minus strand	59
AIM2	NM_004833	NP_004824	Coding	chr1:159076857 minus strand	60
AJAP1	NM_001042478	NP_001035943	Coding	chr1:4655044 plus strand	61
AJAP1	NM_018836	NP_061324	Coding	chr1:4655044 plus strand	61
AK2	NM_001199199	NP_001186128	Coding	chr1:33036911 minus strand	62
AK2	NM_001625	NP_001616	Coding	chr1:33036911 minus strand	62
AK2	NM_013411	NP_037543	Coding	chr1:33036911 minus strand	62
AK4	NM_001005353	NP_001005353	Coding	chr1:65147829 plus strand	63
AK4	NM_203464	NP_982289	Coding	chr1:65147548 plus strand	64
AK4	NM_013410	NP_037542	Coding	chr1:65148166 plus strand	65
AK5	NM_174858	NP_777283	Coding	chr1:77281976 plus strand	66
AK5	NM_012093	NP_036225	Coding	chr1:77282601 plus strand	67
AKIRIN1	NM_001136275	NP_001129747	Coding	chr1:38991243 plus strand	68
AKIRIN1	NM_024595	NP_078871	Coding	chr1:38991243 plus strand	68
AKNAD1	NM_152763	NP_689976	Coding	chr1:108857104 minus strand	69
AKR1A1	NM_001202413	NP_001189342	Coding	chr1:45550782 plus strand	70
AKR1A1	NM_001202414	NP_001189343	Coding	chr1:45550782 plus strand	70
AKR1A1	NM_006066	NP_006057	Coding	chr1:45550782 plus strand	70
AKR1A1	NM_153326	NP_697021	Coding	chr1:45550782 plus strand	70
AKR7A2	NM_003689	NP_003680	Coding	chr1:19312146 minus strand	71
AKR7A3	NM_012067	NP_036199	Coding	chr1:19288786 minus strand	72
AKT3	NM_001206729	NP_001193658	Coding	chr1:243843584 minus strand	73
AKT3	NM_005465	NP_005456	Coding	chr1:243843282 minus strand	74

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AKT3	NM_181690	NP_859029	Coding	chr1:243843282 minus strand	74
ALDH4A1	NM_003748	NP_003739	Coding	chr1:18902799 minus strand	75
ALDH4A1	NM_170726	NP_733844	Coding	chr1:18902799 minus strand	75
ALDH4A1	NM_001161504	NP_001154976	Coding	chr1:18890891 minus strand	76
ALDH9A1	NM_000696	NP_000687	Coding	chr1:165698663 minus strand	77
ALG14	NM_144988	NP_659425	Coding	chr1:95072951 minus strand	78
ALG6	NM_013339	NP_037471	Coding	chr1:63367589 plus strand	79
ALPL	NM_000478	NP_000469	Coding	chr1:21509364 plus strand	80
ALPL	NM_001127501	NP_001120973	Coding	chr1:21509364 plus strand	80
ALPL	NM_001177520	NP_001170991	Coding	chr1:21509364 plus strand	80
ALX3	NM_006492	NP_006483	Coding	chr1:110070700 minus strand	81
AMIGO1	NM_020703	NP_065754	Coding	chr1:109509714 minus strand	82
AMPD1	NM_000036	NP_000027	Coding	chr1:114695618 minus strand	83
AMPD1	NM_001172626	NP_001166097	Coding	chr1:114695618 minus strand	83
AMPD2	NM_004037	NP_004028	Coding	chr1:109620580 plus strand	84
AMPD2	NM_001257360	NP_001244289	Coding	chr1:109619812 plus strand	85
AMPD2	NM_139156	NP_631895	Coding	chr1:109619812 plus strand	85
AMPD2	NM_001257361	NP_001244290	Coding	chr1:109623987 plus strand	86
AMPD2	NM_203404	NP_981949	Coding	chr1:109625426 plus strand	87
AMY1A	NM_004038	NP_004029	Coding	chr1:103655679 plus strand	88
AMY1A	NM_004038	NP_004029	Coding	chr1:103749817 plus strand	89
AMY1A	NM_004038	NP_004029	Coding	chr1:103696290 minus strand	90
AMY1A	NM_001008221	NP_001008222	Coding	chr1:103696451 minus strand	91
AMY1A	NM_001008221	NP_001008222	Coding	chr1:103749656 plus strand	92
AMY1A	NM_001008221	NP_001008222	Coding	chr1:103655518 plus strand	93
AMY1B	NM_001008218	NP_001008219	Coding	chr1:103696267 minus strand	94
AMY1B	NM_001008218	NP_001008219	Coding	chr1:103749840 plus strand	95
AMY1B	NM_001008218	NP_001008219	Coding	chr1:103655702 plus strand	96
AMY1C	NM_001008219	NP_001008220	Coding	chr1:103655680 plus	97

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				strand	
AMY1C	NM_001008219	NP_001008220	Coding	chr1:103749818 plus strand	98
AMY1C	NM_001008219	NP_001008220	Coding	chr1:103696289 minus strand	99
AMY2A	NM_000699	NP_000690	Coding	chr1:103617376 plus strand	100
AMY2B	NM_020978	NP_066188	Coding	chr1:103554643 plus strand	101
ANGEL2	NM_001300753	NP_001287682	Coding	chr1:213015875 minus strand	102
ANGEL2	NM_001300757	NP_001287686	Coding	chr1:213015875 minus strand	102
ANGEL2	NM_001300758	NP_001287687	Coding	chr1:213015875 minus strand	102
ANGEL2	NM_144567	NP_653168	Coding	chr1:213015875 minus strand	102
ANGEL2	NM_001300755	NP_001287684	Coding	chr1:213015509 minus strand	103
ANGPTL1	NM_004673	NP_004664	Coding	chr1:178871080 minus strand	104
ANGPTL3	NM_014495	NP_055310	Coding	chr1:62597486 plus strand	105
ANGPTL7	NM_021146	NP_066969	Coding	chr1:11189288 plus strand	106
ANKRD13C	NM_030816	NP_110443	Coding	chr1:70354734 minus strand	107
ANKRD34A	NM_001039888	NP_001034977	Coding	chr1:145964582 minus strand	108
ANKRD35	NM_001280799	NP_001267728	Coding	chr1:145885866 minus strand	109
ANKRD35	NM_144698	NP_653299	Coding	chr1:145885866 minus strand	109
ANKRD45	NM_198493	NP_940895	Coding	chr1:173669862 minus strand	110
ANKRD65	NM_001145210	NP_001138682	Coding	chr1:1421444 minus strand	111
ANKRD65	NM_001243535	NP_001230464	Coding	chr1:1421444 minus strand	111
ANKRD65	NM_001243536	NP_001230465	Coding	chr1:1421444 minus strand	111
ANP32E	NM_001136479	NP_001129951	Coding	chr1:150234678 minus strand	112
ANP32E	NM_001136478	NP_001129950	Coding	chr1:150236156 minus strand	113
ANP32E	NM_001280559	NP_001267488	Coding	chr1:150236156 minus strand	113
ANP32E	NM_001280560	NP_001267489	Coding	chr1:150236156 minus strand	113
ANP32E	NM_030920	NP_112182	Coding	chr1:150236156 minus strand	113
ANXA9	NM_003568	NP_003559	Coding	chr1:150982022 plus strand	114
AP4B1	NM_001253853	NP_001240782	Coding	chr1:113905119 minus strand	115
AP4B1	NM_006594	NP_006585	Coding	chr1:113905119 minus strand	115

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AP4B1	NM_001253852	NP_001240781	Coding	chr1:113904903 minus strand	116
APCS	NM_001639	NP_001630	Coding	chr1:159587825 plus strand	117
APH1A	NM_001077628	NP_001071096	Coding	chr1:150269209 minus strand	118
APH1A	NM_001243771	NP_001230700	Coding	chr1:150269209 minus strand	118
APH1A	NM_001243772	NP_001230701	Coding	chr1:150269209 minus strand	118
APH1A	NM_016022	NP_057106	Coding	chr1:150269209 minus strand	118
APITD1	NM_199294	NP_954988	Coding	chr1:10430101 plus strand	119
APITD1-CORT	NM_001270517	NP_001257446	Coding	chr1:10430101 plus strand	119
APITD1-CORT	NM_198544	NP_940946	Coding	chr1:10430101 plus strand	119
APITD1-CORT	NM_199006	NP_950171	Coding	chr1:10430101 plus strand	119
APITD1-CORT	NM_001243768	NP_001230697	Coding	chr1:10430746 plus strand	120
APOA1BP	NM_144772	NP_658985	Coding	chr1:156591765 plus strand	121
APOA2	NM_001643	NP_001634	Coding	chr1:161223628 minus strand	122
APOBEC4	NM_203454	NP_982279	Coding	chr1:183653313 minus strand	123
AQP10	NM_080429	NP_536354	Coding	chr1:154321115 plus strand	124
ARF1	NM_001024227	NP_001019398	Coding	chr1:228083149 plus strand	125
ARF1	NM_001024228	NP_001019399	Coding	chr1:228083149 plus strand	125
ARF1	NM_001024226	NP_001019397	Coding	chr1:228082659 plus strand	126
ARF1	NM_001658	NP_001649	Coding	chr1:228082659 plus strand	126
ARHGAP29	NM_004815	NP_004806	Coding	chr1:94237751 minus strand	127
ARHGAP30	NM_001025598	NP_001020769	Coding	chr1:161069970 minus strand	128
ARHGAP30	NM_001287600	NP_001274529	Coding	chr1:161069970 minus strand	128
ARHGAP30	NM_001287602	NP_001274531	Coding	chr1:161069970 minus strand	128
ARHGAP30	NM_181720	NP_859071	Coding	chr1:161069970 minus strand	128
ARHGEF10L	NM_001011722	NP_001011722	Coding	chr1:17580552 plus strand	129
ARHGEF10L	NM_018125	NP_060595	Coding	chr1:17539834 plus strand	130
ARHGEF11	NM_014784	NP_055599	Coding	chr1:157045370 minus strand	131
ARHGEF11	NM_198236	NP_937879	Coding	chr1:157045370 minus strand	131
ARHGEF16	NM_014448	NP_055263	Coding	chr1:3454582 plus strand	132
ARHGEF19	NM_153213	NP_694945	Coding	chr1:16212609 minus strand	133

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ARHGEF2	NM_001162383	NP_001155855	Coding	chr1:155978545 minus strand	134
ARHGEF2	NM_001162384	NP_001155856	Coding	chr1:155978545 minus strand	134
ARHGEF2	NM_004723	NP_004714	Coding	chr1:155978175 minus strand	135
ARID1A	NM_006015	NP_006006	Coding	chr1:26696030 plus strand	136
ARID1A	NM_139135	NP_624361	Coding	chr1:26696030 plus strand	136
ARID4B	NM_001206794	NP_001193723	Coding	chr1:235327487 minus strand	137
ARID4B	NM_016374	NP_057458	Coding	chr1:235328217 minus strand	138
ARID4B	NM_031371	NP_112739	Coding	chr1:235328217 minus strand	138
ARL8A	NM_001256129	NP_001243058	Coding	chr1:202144743 minus strand	139
ARL8A	NM_138795	NP_620150	Coding	chr1:202144743 minus strand	139
ARNT	NM_001197325	NP_001184254	Coding	chr1:150876768 minus strand	140
ARNT	NM_001286035	NP_001272964	Coding	chr1:150876768 minus strand	140
ARNT	NM_001286036	NP_001272965	Coding	chr1:150876768 minus strand	140
ARNT	NM_001668	NP_001659	Coding	chr1:150876768 minus strand	140
ARNT	NM_178427	NP_848514	Coding	chr1:150876768 minus strand	140
ARPC5	NM_001270439	NP_001257368	Coding	chr1:183635941 minus strand	141
ARPC5	NM_005717	NP_005708	Coding	chr1:183635941 minus strand	141
ARTN	NM_001136215	NP_001129687	Coding	chr1:43933319 plus strand	142
ARTN	NM_057090	NP_476431	Coding	chr1:43933319 plus strand	142
ARTN	NM_057091	NP_476432	Coding	chr1:43933319 plus strand	142
ARV1	NM_022786	NP_073623	Coding	chr1:230979076 plus strand	143
ASAP3	NM_001143778	NP_001137250	Coding	chr1:23484257 minus strand	144
ASAP3	NM_017707	NP_060177	Coding	chr1:23484257 minus strand	144
ASB17	NM_080868	NP_543144	Coding	chr1:75932431 minus strand	145
ASCL5	NM_001270601	NP_001257530	Coding	chr1:201115372 minus strand	146
ASH1L	NM_018489	NP_060959	Coding	chr1:155562533 minus strand	147
ASPM	NM_001206846	NP_001193775	Coding	chr1:197146694 minus strand	148
ASPM	NM_018136	NP_060606	Coding	chr1:197146694 minus strand	148
ASTN1	NM_001286164	NP_001273093	Coding	chr1:177164904 minus strand	149

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ASTN1	NM_004319	NP_004310	Coding	chr1:177164904 minus strand	149
ASTN1	NM_207108	NP_996991	Coding	chr1:177164904 minus strand	149
ATAD3A	NM_001170536	NP_001164007	Coding	chr1:1512529 plus strand	150
ATAD3A	NM_001170535	NP_001164006	Coding	chr1:1512142 plus strand	151
ATAD3A	NM_018188	NP_060658	Coding	chr1:1512142 plus strand	151
ATAD3B	NM_031921	NP_114127	Coding	chr1:1471783 plus strand	152
ATAD3C	NM_001039211	NP_001034300	Coding	chr1:1449688 plus strand	153
ATF3	NM_001030287	NP_001025458	Coding	chr1:212565333 plus strand	154
ATF3	NM_001206486	NP_001193415	Coding	chr1:212615017 plus strand	155
ATF3	NM_001040619	NP_001035709	Coding	chr1:212608627 plus strand	156
ATF3	NM_001206484	NP_001193413	Coding	chr1:212608627 plus strand	156
ATF3	NM_001206488	NP_001193417	Coding	chr1:212608627 plus strand	156
ATF3	NM_001674	NP_001665	Coding	chr1:212608627 plus strand	156
ATF6	NM_007348	NP_031374	Coding	chr1:161766243 plus strand	157
ATG4C	NM_032852	NP_116241	Coding	chr1:62784105 plus strand	158
ATG4C	NM_178221	NP_835739	Coding	chr1:62784105 plus strand	158
ATP13A2	NM_001141973	NP_001135445	Coding	chr1:17011972 minus strand	159
ATP13A2	NM_001141974	NP_001135446	Coding	chr1:17011972 minus strand	159
ATP13A2	NM_022089	NP_071372	Coding	chr1:17011972 minus strand	159
ATP1A1	NM_000701	NP_000692	Coding	chr1:116373172 plus strand	160
ATP1A1	NM_001160234	NP_001153706	Coding	chr1:116383369 plus strand	161
ATP1A1	NM_001160233	NP_001153705	Coding	chr1:116373866 plus strand	162
ATP1A2	NM_000702	NP_000693	Coding	chr1:160115729 plus strand	163
ATP1A4	NM_144699	NP_653300	Coding	chr1:160151561 plus strand	164
ATP1A4	NM_001001734	NP_001001734	Coding	chr1:160177410 plus strand	165
ATP1B1	NM_001677	NP_001668	Coding	chr1:169106708 plus strand	166
ATP2B4	NM_001001396	NP_001001396	Coding	chr1:203626786 plus strand	167
ATP2B4	NM_001684	NP_001675	Coding	chr1:203626786 plus strand	167
ATP5F1	NM_001688	NP_001679	Coding	chr1:111449120 plus strand	168
ATP6V0B	NM_001039457	NP_001034546	Coding	chr1:43974647 plus strand	169

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ATP6V0B	NM_001294333	NP_001281262	Coding	chr1:43974647 plus strand	169
ATP6V0B	NM_004047	NP_004038	Coding	chr1:43974647 plus strand	169
ATP6V1G3	NM_133262	NP_573569	Coding	chr1:198540945 minus strand	170
ATP6V1G3	NM_133326	NP_579872	Coding	chr1:198540945 minus strand	170
ATP8B2	NM_001005855	NP_001005855	Coding	chr1:154325559 plus strand	171
ATP8B2	NM_020452	NP_065185	Coding	chr1:154327799 plus strand	172
ATPAF1	NM_001243728	NP_001230657	Coding	chr1:46665878 minus strand	173
ATPAF1	NM_001256418	NP_001243347	Coding	chr1:46665878 minus strand	173
ATPAF1	NM_001042546	NP_001036011	Coding	chr1:46668427 minus strand	174
ATPAF1	NM_022745	NP_073582	Coding	chr1:46668427 minus strand	174
ATPIF1	NM_016311	NP_057395	Coding	chr1:28236090 plus strand	175
ATPIF1	NM_178190	NP_835497	Coding	chr1:28236090 plus strand	175
ATPIF1	NM_178191	NP_835498	Coding	chr1:28236090 plus strand	175
ATXN7L2	NM_153340	NP_699171	Coding	chr1:109483938 plus strand	176
AUNIP	NM_001287490	NP_001274419	Coding	chr1:25859458 minus strand	177
AUNIP	NM_024037	NP_076942	Coding	chr1:25859458 minus strand	177
AURKAIP1	NM_001127230	NP_001120702	Coding	chr1:1375182 minus strand	178
AURKAIP1	NM_017900	NP_060370	Coding	chr1:1375438 minus strand	179
AURKAIP1	NM_001127229	NP_001120701	Coding	chr1:1375200 minus strand	180
AVPR1B	NM_000707	NP_000698	Coding	chr1:206117048 minus strand	181
AXDND1	NM_144696	NP_653297	Coding	chr1:179365719 plus strand	182
AZIN2	NM_001301823	NP_001288752	Coding	chr1:33081128 plus strand	183
AZIN2	NM_001301824	NP_001288753	Coding	chr1:33081128 plus strand	183
AZIN2	NM_001301825	NP_001288754	Coding	chr1:33082177 plus strand	184
AZIN2	NM_001301826	NP_001288755	Coding	chr1:33082177 plus strand	184
AZIN2	NM_001293562	NP_001280491	Coding	chr1:33081112 plus strand	185
AZIN2	NM_052998	NP_443724	Coding	chr1:33081112 plus strand	185
B3GALNT2	NM_001277155	NP_001264084	Coding	chr1:235504481 minus strand	186
B3GALNT2	NM_152490	NP_689703	Coding	chr1:235504481 minus strand	186
B3GALT2	NM_003783	NP_003774	Coding	chr1:193186613 minus strand	187
B3GALT6	NM_080605	NP_542172	Coding	chr1:1232248 plus strand	188
B4GALT2	NM_030587	NP_085076	Coding	chr1:43979935 plus strand	189
B4GALT2	NM_003780	NP_003771	Coding	chr1:43979201 plus strand	190

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B4GALT2	NM_001005417	NP_001005417	Coding	chr1:43980504 plus strand	191
B4GALT3	NM_001199873	NP_001186802	Coding	chr1:161177968 minus strand	192
B4GALT3	NM_001199874	NP_001186803	Coding	chr1:161177968 minus strand	192
B4GALT3	NM_003779	NP_003770	Coding	chr1:161177968 minus strand	192
BAI2	NM_001294335	NP_001281264	Coding	chr1:31764063 minus strand	193
BAI2	NM_001294336	NP_001281265	Coding	chr1:31764063 minus strand	193
BARHL2	NM_020063	NP_064447	Coding	chr1:90717237 minus strand	194
BATF3	NM_018664	NP_061134	Coding	chr1:212699985 minus strand	195
BCAN	NM_021948	NP_068767	Coding	chr1:156641947 plus strand	196
BCAN	NM_198427	NP_940819	Coding	chr1:156641947 plus strand	196
BCAR3	NM_001261408	NP_001248337	Coding	chr1:93847150 minus strand	197
BCAR3	NM_003567	NP_003558	Coding	chr1:93681838 minus strand	198
BCAR3	NM_001261410	NP_001248339	Coding	chr1:93614145 minus strand	199
BCAR3	NM_001261409	NP_001248338	Coding	chr1:93681370 minus strand	200
BCAS2	NM_005872	NP_005863	Coding	chr1:114581644 minus strand	201
BCL10	NM_003921	NP_003912	Coding	chr1:85276904 minus strand	202
BCL2L15	NM_001010922	NP_001010922	Coding	chr1:113887547 minus strand	203
BCL9	NM_004326	NP_004317	Coding	chr1:147541500 plus strand	204
BECN1P1	NM_001290693	NP_001277622	Coding	chr1:241957766 plus strand	205
BEND5	NM_001302082	NP_001289011	Coding	chr1:48776969 minus strand	206
BEND5	NM_024603	NP_078879	Coding	chr1:48776969 minus strand	206
BEST4	NM_153274	NP_695006	Coding	chr1:44787754 minus strand	207
BGLAP	NM_199173	NP_954642	Coding	chr1:156242159 plus strand	208
BLZF1	NM_003666	NP_003657	Coding	chr1:169367955 plus strand	209
BMP8A	NM_181809	NP_861525	Coding	chr1:39491645 plus strand	210
BMP8B	NM_001720	NP_001711	Coding	chr1:39788861 minus strand	211
BNIPL	NM_001159642	NP_001153114	Coding	chr1:151036552 plus strand	212
BNIPL	NM_138278	NP_612122	Coding	chr1:151036552 plus strand	212

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BOLA1	NM_016074	NP_057158	Coding	chr1:149899601 plus strand	213
BPNT1	NM_001286149	NP_001273078	Coding	chr1:220089853 minus strand	214
BPNT1	NM_001286150	NP_001273079	Coding	chr1:220089853 minus strand	214
BPNT1	NM_001286151	NP_001273080	Coding	chr1:220089853 minus strand	214
BPNT1	NM_006085	NP_006076	Coding	chr1:220089853 minus strand	214
BRDT	NM_001726	NP_001717	Coding	chr1:91952151 plus strand	215
BRDT	NM_001242805	NP_001229734	Coding	chr1:91949370 plus strand	216
BRDT	NM_001242806	NP_001229735	Coding	chr1:91949370 plus strand	216
BRDT	NM_001242807	NP_001229736	Coding	chr1:91949370 plus strand	216
BRDT	NM_001242808	NP_001229737	Coding	chr1:91949370 plus strand	216
BRDT	NM_001242810	NP_001229739	Coding	chr1:91949370 plus strand	216
BRDT	NM_207189	NP_997072	Coding	chr1:91949370 plus strand	216
BRINP2	NM_021165	NP_066988	Coding	chr1:177171496 plus strand	217
BRINP3	NM_199051	NP_950252	Coding	chr1:190477629 minus strand	218
BROX	NM_001288579	NP_001275508	Coding	chr1:222712552 plus strand	219
BROX	NM_144695	NP_653296	Coding	chr1:222712552 plus strand	219
BROX	NM_001288580	NP_001275509	Coding	chr1:222713320 plus strand	220
BROX	NM_001288581	NP_001275510	Coding	chr1:222713320 plus strand	220
BSDC1	NM_001143888	NP_001137360	Coding	chr1:32394461 minus strand	221
BSDC1	NM_001143889	NP_001137361	Coding	chr1:32394461 minus strand	221
BSDC1	NM_001143890	NP_001137362	Coding	chr1:32394461 minus strand	221
BSDC1	NM_001300958	NP_001287887	Coding	chr1:32394461 minus strand	221
BSDC1	NM_018045	NP_060515	Coding	chr1:32394461 minus strand	221
BSND	NM_057176	NP_476517	Coding	chr1:54998943 plus strand	222
BTBD19	NM_001136537	NP_001130009	Coding	chr1:44808481 plus strand	223
BTBD8	NM_183242	NP_899065	Coding	chr1:92080304 plus strand	224
BTF3L4	NM_001136497	NP_001129969	Coding	chr1:52056184 plus strand	225
BTF3L4	NM_001243767	NP_001230696	Coding	chr1:52056184 plus strand	225
BTF3L4	NM_152265	NP_689478	Coding	chr1:52056184 plus strand	225
BTG2	NM_006763	NP_006754	Coding	chr1:203305535 plus strand	226
BTNL10	NM_001287262	NP_001274191	Coding	chr1:228512288 minus strand	227
C1orf100	NM_001012970	NP_001012988	Coding	chr1:244352634 plus	228

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				strand	
C1orf100	NM_001276348	NP_001263277	Coding	chr1:244352634 plus strand	228
C1orf100	NM_001276349	NP_001263278	Coding	chr1:244352634 plus strand	228
C1orf101	NM_001130957	NP_001124429	Coding	chr1:244461370 plus strand	229
C1orf101	NM_001242340	NP_001229269	Coding	chr1:244461370 plus strand	229
C1orf101	NM_173807	NP_776168	Coding	chr1:244461370 plus strand	229
C1orf105	NM_139240	NP_640333	Coding	chr1:172420687 plus strand	230
C1orf105	NM_001300760	NP_001287689	Coding	chr1:172452892 plus strand	231
C1orf106	NM_001142569	NP_001136041	Coding	chr1:200894820 plus strand	232
C1orf106	NM_018265	NP_060735	Coding	chr1:200891498 plus strand	233
C1orf109	NM_017850	NP_060320	Coding	chr1:37690520 minus strand	234
C1orf110	NM_178550	NP_848645	Coding	chr1:162868815 minus strand	235
C1orf111	NM_182581	NP_872387	Coding	chr1:162376854 minus strand	236
C1orf112	NM_018186	NP_060656	Coding	chr1:169795408 plus strand	237
C1orf115	NM_024709	NP_078985	Coding	chr1:220690285 plus strand	238
C1orf116	NM_001083924	NP_001077393	Coding	chr1:207032756 minus strand	239
C1orf116	NM_023938	NP_076427	Coding	chr1:207032756 minus strand	239
C1orf122	NM_001142726	NP_001136198	Coding	chr1:37807800 plus strand	240
C1orf122	NM_198446	NP_940848	Coding	chr1:37807800 plus strand	240
C1orf123	NM_017887	NP_060357	Coding	chr1:53220617 minus strand	241
C1orf127	NM_001170754	NP_001164225	Coding	chr1:10982037 minus strand	242
C1orf131	NM_001300830	NP_001287759	Coding	chr1:231241187 minus strand	243
C1orf131	NM_152379	NP_689592	Coding	chr1:231241187 minus strand	243
C1orf137	NM_001013643	NP_001013665	Coding	chr1:116694111 plus strand	244
C1orf141	NM_001276351	NP_001263280	Coding	chr1:67134971 minus strand	245
C1orf141	NM_001276352	NP_001263281	Coding	chr1:67134971 minus strand	245
C1orf146	NM_001012425	NP_001012425	Coding	chr1:92218015 plus strand	246
C1orf158	NM_152290	NP_689503	Coding	chr1:12746185 plus strand	247
C1orf159	NM_017891	NP_060361	Coding	chr1:1116356 minus strand	248

【０１００】

C1orf162	NM_001300834	NP_001287763	Coding	chr1:111473868 plus strand	249
C1orf162	NM_001300835	NP_001287764	Coding	chr1:111473868 plus strand	249
C1orf162	NM_174896	NP_777556	Coding	chr1:111473868 plus strand	249
C1orf167	NM_001010881	NP_001010881	Coding	chr1:11762192 plus strand	250
C1orf168	NM_001004303	NP_001004303	Coding	chr1:56819696 minus strand	251
C1orf174	NM_207356	NP_997239	Coding	chr1:3900293 minus strand	252
C1orf177	NM_001110533	NP_001104003	Coding	chr1:54806062 plus strand	253
C1orf177	NM_152607	NP_689820	Coding	chr1:54806062 plus strand	253
C1orf185	NM_001136508	NP_001129980	Coding	chr1:51102233 plus strand	254
C1orf186	NM_001007544	NP_001007545	Coding	chr1:206052722 plus strand	255
C1orf189	NM_001010979	NP_001010979	Coding	chr1:154206365 minus strand	256
C1orf194	NM_001122961	NP_001116433	Coding	chr1:109113857 minus strand	257
C1orf195	NM_001278501	NP_001265430	Coding	chr1:15171624 minus strand	258
C1orf195	NM_001278502	NP_001265431	Coding	chr1:15171624 minus strand	258
C1orf198	NM_001136494	NP_001129966	Coding	chr1:230869589 minus strand	259
C1orf198	NM_032800	NP_116189	Coding	chr1:230868556 minus strand	260
C1orf198	NM_001136495	NP_001129967	Coding	chr1:230856036 minus strand	261
C1orf204	NM_001134233	NP_001127705	Coding	chr1:159855347 minus strand	262
C1orf21	NM_030806	NP_110433	Coding	chr1:184387015 plus strand	263
C1orf210	NM_001164829	NP_001158301	Coding	chr1:43285617 minus strand	264
C1orf210	NM_182517	NP_872323	Coding	chr1:43285579 minus strand	265
C1orf216	NM_152374	NP_689587	Coding	chr1:35719189 minus strand	266
C1orf226	NM_001085375	NP_001078844	Coding	chr1:162381729 plus strand	267
C1orf226	NM_001135240	NP_001128712	Coding	chr1:162378905 plus strand	268
C1orf228	NM_001145636	NP_001139108	Coding	chr1:44674721 plus strand	269
C1orf229	NM_207401	NP_997284	Coding	chr1:247112417 minus strand	270
C1orf233	NM_001242659	NP_001229588	Coding	chr1:1600096 minus strand	271
C1orf234	NM_001242521	NP_001229450	Coding	chr1:23015850 minus strand	272
C1orf27	NM_001164245	NP_001157717	Coding	chr1:186375757 plus strand	273
C1orf27	NM_001164246	NP_001157718	Coding	chr1:186375757 plus	273

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				strand	
C1orf27	NM_017847	NP_060317	Coding	chr1:186375757 plus strand	273
C1orf35	NM_024319	NP_077295	Coding	chr1:228103321 minus strand	274
C1orf43	NM_001098616	NP_001092086	Coding	chr1:154220797 minus strand	275
C1orf43	NM_001297717	NP_001284646	Coding	chr1:154220797 minus strand	275
C1orf43	NM_001297718	NP_001284647	Coding	chr1:154220797 minus strand	275
C1orf43	NM_001297720	NP_001284649	Coding	chr1:154220797 minus strand	275
C1orf43	NM_001297721	NP_001284650	Coding	chr1:154220797 minus strand	275
C1orf43	NM_001297723	NP_001284652	Coding	chr1:154220797 minus strand	275
C1orf43	NM_015449	NP_056264	Coding	chr1:154220797 minus strand	275
C1orf43	NM_138740	NP_620077	Coding	chr1:154220797 minus strand	275
C1orf50	NM_024097	NP_077002	Coding	chr1:42767244 plus strand	276
C1orf52	NM_198077	NP_932343	Coding	chr1:85259672 minus strand	277
C1orf53	NM_001024594	NP_001019765	Coding	chr1:197902551 plus strand	278
C1orf54	NM_001301039	NP_001287968	Coding	chr1:150272283 plus strand	279
C1orf54	NM_001301040	NP_001287969	Coding	chr1:150272283 plus strand	279
C1orf54	NM_024579	NP_078855	Coding	chr1:150272779 plus strand	280
C1orf54	NM_001301041	NP_001287970	Coding	chr1:150272798 plus strand	281
C1orf54	NM_001301042	NP_001287971	Coding	chr1:150272798 plus strand	281
C1orf56	NM_017860	NP_060330	Coding	chr1:151047782 plus strand	282
C1orf61	NM_006365	NP_006356	Coding	chr1:156429392 minus strand	283
C1orf64	NM_178840	NP_849162	Coding	chr1:16004235 plus strand	284
C1orf68	NM_001024679	NP_001019850	Coding	chr1:152719521 plus strand	285
C1orf74	NM_152485	NP_689698	Coding	chr1:209784545 minus strand	286
C1orf85	NM_001256604	NP_001243533	Coding	chr1:156295689 minus strand	287
C1orf85	NM_001256605	NP_001243534	Coding	chr1:156295689 minus strand	287
C1orf85	NM_001256608	NP_001243537	Coding	chr1:156295689 minus strand	287
C1orf85	NM_001256609	NP_001243538	Coding	chr1:156295689 minus strand	287

【０１０２】

C1orf85	NM_144580	NP_653181	Coding	chr1:156295689 minus strand	287
C1orf86	NM_001256945	NP_001243874	Coding	chr1:2194775 minus strand	288
C1orf86	NM_001256946	NP_001243875	Coding	chr1:2194775 minus strand	288
C1orf86	NM_001256947	NP_001243876	Coding	chr1:2194775 minus strand	288
C1orf86	NM_001282671	NP_001269600	Coding	chr1:2194775 minus strand	288
C1orf86	NM_001282672	NP_001269601	Coding	chr1:2194775 minus strand	288
C1orf86	NM_001282673	NP_001269602	Coding	chr1:2194775 minus strand	288
C1orf86	NM_182533	NP_872339	Coding	chr1:2194775 minus strand	288
C1orf86	NM_001282670	NP_001269599	Coding	chr1:2212720 minus strand	289
C1orf86	NM_001146310	NP_001139782	Coding	chr1:2207733 minus strand	290
C1orf87	NM_152377	NP_689590	Coding	chr1:60073770 minus strand	291
C1orf94	NM_032884	NP_116273	Coding	chr1:34166882 plus strand	292
C1orf94	NM_001134734	NP_001128206	Coding	chr1:34176951 plus strand	293
C1orf95	NM_001003665	NP_001003665	Coding	chr1:226548799 plus strand	294
C1QA	NM_015991	NP_057075	Coding	chr1:22636624 plus strand	295
C1QB	NM_000491	NP_000482	Coding	chr1:22653188 plus strand	296
C1QC	NM_001114101	NP_001107573	Coding	chr1:22643624 plus strand	297
C1QC	NM_172369	NP_758957	Coding	chr1:22643624 plus strand	297
C2CD4D	NM_001136003	NP_001129475	Coding	chr1:151840557 minus strand	298
C4BPA	NM_000715	NP_000706	Coding	chr1:207104261 plus strand	299
C4BPB	NM_001017367	NP_001017367	Coding	chr1:207089282 plus strand	300
C4BPB	NM_000716	NP_000707	Coding	chr1:207089238 plus strand	301
C4BPB	NM_001017364	NP_001017364	Coding	chr1:207089238 plus strand	301
C4BPB	NM_001017365	NP_001017365	Coding	chr1:207088866 plus strand	302
C4BPB	NM_001017366	NP_001017366	Coding	chr1:207088866 plus strand	302
C8A	NM_000562	NP_000553	Coding	chr1:56854769 plus strand	303
C8B	NM_000066	NP_000057	Coding	chr1:56966140 minus strand	304
C8B	NM_001278543	NP_001265472	Coding	chr1:56966140 minus strand	304
C8B	NM_001278544	NP_001265473	Coding	chr1:56966140 minus strand	304
CA14	NM_012113	NP_036245	Coding	chr1:150257822 plus strand	305
CA6	NM_001215	NP_001206	Coding	chr1:8945833 plus strand	306
CA6	NM_001270500	NP_001257429	Coding	chr1:8945833 plus strand	306
CA6	NM_001270501	NP_001257430	Coding	chr1:8945833 plus strand	306
CA6	NM_001270502	NP_001257431	Coding	chr1:8945833 plus strand	306

【０１０３】

CACHD1	NM_001293274	NP_001280203	Coding	chr1:64505913 plus strand	307
CACHD1	NM_020925	NP_065976	Coding	chr1:64470792 plus strand	308
CACNA1E	NM_000721	NP_000712	Coding	chr1:181483549 plus strand	309
CACNA1E	NM_001205293	NP_001192222	Coding	chr1:181483549 plus strand	309
CACNA1E	NM_001205294	NP_001192223	Coding	chr1:181483549 plus strand	309
CACNA1S	NM_000069	NP_000060	Coding	chr1:201112566 minus strand	310
CACYBP	NM_014412	NP_055227	Coding	chr1:174999755 plus strand	311
CACYBP	NM_001007214	NP_001007215	Coding	chr1:174999434 plus strand	312
CADM3	NM_021189	NP_067012	Coding	chr1:159171586 plus strand	313
CADM3	NM_001127173	NP_001120645	Coding	chr1:159171623 plus strand	314
CALML6	NM_138705	NP_619650	Coding	chr1:1914826 plus strand	315
CAMK1G	NM_020439	NP_065172	Coding	chr1:209583699 plus strand	316
CAMK2N1	NM_018584	NP_061054	Coding	chr1:20486235 minus strand	317
CAMSAP2	NM_001297707	NP_001284636	Coding	chr1:200739557 plus strand	318
CAMSAP2	NM_001297708	NP_001284637	Coding	chr1:200739557 plus strand	318
CAMSAP2	NM_203459	NP_982284	Coding	chr1:200739557 plus strand	318
CAMTA1	NM_001195563	NP_001182492	Coding	chr1:6785323 plus strand	319
CAMTA1	NM_001242701	NP_001229630	Coding	chr1:6785323 plus strand	319
CAMTA1	NM_015215	NP_056030	Coding	chr1:6785323 plus strand	319
CAP1	NM_001105530	NP_001099000	Coding	chr1:40040582 plus strand	320
CAP1	NM_006367	NP_006358	Coding	chr1:40040582 plus strand	320
CAPN2	NM_001146068	NP_001139540	Coding	chr1:223701592 plus strand	321
CAPN2	NM_001748	NP_001739	Coding	chr1:223712416 plus strand	322
CAPN8	NM_001143962	NP_001137434	Coding	chr1:223665734 minus strand	323
CAPN9	NM_016452	NP_057536	Coding	chr1:230747414 plus strand	324
CAPN9	NM_006615	NP_006606	Coding	chr1:230747383 plus strand	325
CAPZA1	NM_006135	NP_006126	Coding	chr1:112619452 plus strand	326
CAPZB	NM_001282162	NP_001269091	Coding	chr1:19484707 minus strand	327
CAPZB	NM_001206540	NP_001193469	Coding	chr1:19485641 minus strand	328
CAPZB	NM_001206541	NP_001193470	Coding	chr1:19485641 minus strand	328

【０１０４】

CAPZB	NM_004930	NP_004921	Coding	chr1:19485641 minus strand	328
CASP9	NM_032996	NP_127463	Coding	chr1:15524790 minus strand	329
CASP9	NM_001229	NP_001220	Coding	chr1:15524445 minus strand	330
CASP9	NM_001278054	NP_001264983	Coding	chr1:15524445 minus strand	330
CASQ1	NM_001231	NP_001222	Coding	chr1:160190494 plus strand	331
CASQ2	NM_001232	NP_001223	Coding	chr1:115768805 minus strand	332
CASZ1	NM_001079843	NP_001073312	Coding	chr1:10796676 minus strand	333
CASZ1	NM_017766	NP_060236	Coding	chr1:10796676 minus strand	333
CATSPER4	NM_198137	NP_937770	Coding	chr1:26190627 plus strand	334
CC2D1B	NM_032449	NP_115825	Coding	chr1:52366205 minus strand	335
CCBL2	NM_001008661	NP_001008661	Coding	chr1:88992960 minus strand	336
CCBL2	NM_001008662	NP_001008662	Coding	chr1:88992960 minus strand	336
CCDC17	NM_001114938	NP_001108410	Coding	chr1:45624059 minus strand	337
CCDC17	NM_001190182	NP_001177111	Coding	chr1:45624059 minus strand	337
CCDC18	NM_206886	NP_996769	Coding	chr1:93180715 plus strand	338
CCDC181	NM_001300969	NP_001287898	Coding	chr1:169427474 minus strand	339
CCDC181	NM_021179	NP_067002	Coding	chr1:169427474 minus strand	339
CCDC181	NM_001300968	NP_001287897	Coding	chr1:169460669 minus strand	340
CCDC185	NM_152610	NP_689823	Coding	chr1:223393372 plus strand	341
CCDC23	NM_199342	NP_955374	Coding	chr1:42817388 minus strand	342
CCDC24	NM_152499	NP_689712	Coding	chr1:43991607 plus strand	343
CCDC27	NM_152492	NP_689705	Coding	chr1:3752400 plus strand	344
CCDC28B	NM_001301011	NP_001287940	Coding	chr1:32200385 plus strand	345
CCDC28B	NM_024296	NP_077272	Coding	chr1:32200385 plus strand	345
CCDC30	NM_001080850	NP_001074319	Coding	chr1:42534888 plus strand	346
CCNL2	NM_001039577	NP_001034666	Coding	chr1:1399338 minus strand	347
CCNL2	NM_030937	NP_112199	Coding	chr1:1399338 minus strand	347
CCSAP	NM_145257	NP_660300	Coding	chr1:229342941 minus strand	348
CCT3	NM_001008800	NP_001008800	Coding	chr1:156338415 minus strand	349
CCT3	NM_005998	NP_005989	Coding	chr1:156338415 minus strand	349

【０１０５】

CD101	NM_001256106	NP_001243035	Coding	chr1:117001749 plus strand	350
CD101	NM_001256109	NP_001243038	Coding	chr1:117001749 plus strand	350
CD101	NM_001256111	NP_001243040	Coding	chr1:117001749 plus strand	350
CD101	NM_004258	NP_004249	Coding	chr1:117001749 plus strand	350
CD160	NM_007053	NP_008984	Coding	chr1:145719445 plus strand	351
CD164L2	NM_207397	NP_997280	Coding	chr1:27383333 minus strand	352
CD1A	NM_001763	NP_001754	Coding	chr1:158254136 plus strand	353
CD1B	NM_001764	NP_001755	Coding	chr1:158331531 minus strand	354
CD1C	NM_001765	NP_001756	Coding	chr1:158289772 plus strand	355
CD1D	NM_001766	NP_001757	Coding	chr1:158179946 plus strand	356
CD1E	NM_001042583	NP_001036048	Coding	chr1:158353695 plus strand	357
CD1E	NM_001042584	NP_001036049	Coding	chr1:158353695 plus strand	357
CD1E	NM_001042585	NP_001036050	Coding	chr1:158353695 plus strand	357
CD1E	NM_001042586	NP_001036051	Coding	chr1:158353695 plus strand	357
CD1E	NM_001042587	NP_001036052	Coding	chr1:158353695 plus strand	357
CD1E	NM_001185107	NP_001172036	Coding	chr1:158353695 plus strand	357
CD1E	NM_001185108	NP_001172037	Coding	chr1:158353695 plus strand	357
CD1E	NM_001185110	NP_001172039	Coding	chr1:158353695 plus strand	357
CD1E	NM_001185112	NP_001172041	Coding	chr1:158353695 plus strand	357
CD1E	NM_001185113	NP_001172042	Coding	chr1:158353695 plus strand	357
CD1E	NM_001185114	NP_001172043	Coding	chr1:158353695 plus strand	357
CD1E	NM_001185115	NP_001172044	Coding	chr1:158353695 plus strand	357
CD1E	NM_030893	NP_112155	Coding	chr1:158353695 plus strand	357
CD2	NM_001767	NP_001758	Coding	chr1:116754463 plus strand	358
CD244	NM_001166663	NP_001160135	Coding	chr1:160862902 minus strand	359
CD244	NM_001166664	NP_001160136	Coding	chr1:160862902 minus strand	359
CD244	NM_016382	NP_057466	Coding	chr1:160862902 minus strand	359

【０１０６】

CD247	NM_000734	NP_000725	Coding	chr1:167518610 minus strand	360
CD247	NM_198053	NP_932170	Coding	chr1:167518610 minus strand	360
CD34	NM_001025109	NP_001020280	Coding	chr1:207911338 minus strand	361
CD34	NM_001773	NP_001764	Coding	chr1:207911338 minus strand	361
CD46	NM_002389	NP_002380	Coding	chr1:207752037 plus strand	362
CD46	NM_153826	NP_722548	Coding	chr1:207752037 plus strand	362
CD46	NM_172350	NP_758860	Coding	chr1:207752037 plus strand	362
CD46	NM_172351	NP_758861	Coding	chr1:207752037 plus strand	362
CD46	NM_172352	NP_758862	Coding	chr1:207752037 plus strand	362
CD46	NM_172353	NP_758863	Coding	chr1:207752037 plus strand	362
CD46	NM_172359	NP_758869	Coding	chr1:207752037 plus strand	362
CD46	NM_172361	NP_758871	Coding	chr1:207752037 plus strand	362
CD48	NM_001256030	NP_001242959	Coding	chr1:160711851 minus strand	363
CD48	NM_001778	NP_001769	Coding	chr1:160711851 minus strand	363
CD52	NM_001803	NP_001794	Coding	chr1:26317919 plus strand	364
CD53	NM_000560	NP_000551	Coding	chr1:110873099 plus strand	365
CD53	NM_001040033	NP_001035122	Coding	chr1:110871198 plus strand	366
CD55	NM_000574	NP_000565	Coding	chr1:207321471 plus strand	367
CD55	NM_001114752	NP_001108224	Coding	chr1:207321471 plus strand	367
CD55	NM_001300902	NP_001287831	Coding	chr1:207321471 plus strand	367
CD55	NM_001300903	NP_001287832	Coding	chr1:207321471 plus strand	367
CD55	NM_001300904	NP_001287833	Coding	chr1:207321471 plus strand	367
CD58	NM_001144822	NP_001138294	Coding	chr1:116571093 minus strand	368
CD58	NM_001779	NP_001770	Coding	chr1:116571093 minus strand	368
CD5L	NM_005894	NP_005885	Coding	chr1:157841844 minus strand	369
CD84	NM_001184879	NP_001171808	Coding	chr1:160579516 minus strand	370
CD84	NM_001184881	NP_001171810	Coding	chr1:160579516 minus strand	370
CD84	NM_001184882	NP_001171811	Coding	chr1:160579516 minus	370

【０１０７】

				strand	
CD84	NM_003874	NP_003865	Coding	chr1:160579516 minus strand	370
CDA	NM_001785	NP_001776	Coding	chr1:20588950 plus strand	371
CDC14A	NM_003672	NP_003663	Coding	chr1:100352466 plus strand	372
CDC14A	NM_033312	NP_201569	Coding	chr1:100352466 plus strand	372
CDC14A	NM_033313	NP_201570	Coding	chr1:100352466 plus strand	372
CDC20	NM_001255	NP_001246	Coding	chr1:43358954 plus strand	373
CDC42	NM_001039802	NP_001034891	Coding	chr1:22052626 plus strand	374
CDC42	NM_001791	NP_001782	Coding	chr1:22052626 plus strand	374
CDC42	NM_044472	NP_426359	Coding	chr1:22052626 plus strand	374
CDC42BPA	NM_003607	NP_003598	Coding	chr1:227318125 minus strand	375
CDC42BPA	NM_014826	NP_055641	Coding	chr1:227318125 minus strand	375
CDC42SE1	NM_001038707	NP_001033796	Coding	chr1:151059649 minus strand	376
CDC42SE1	NM_020239	NP_064624	Coding	chr1:151059649 minus strand	376
CDC7	NM_001134419	NP_001127891	Coding	chr1:91500846 plus strand	377
CDC7	NM_003503	NP_003494	Coding	chr1:91500846 plus strand	377
CDC7	NM_001134420	NP_001127892	Coding	chr1:91501107 plus strand	378
CDC73	NM_024529	NP_078805	Coding	chr1:193121957 plus strand	379
CDCA8	NM_001256875	NP_001243804	Coding	chr1:37692400 plus strand	380
CDCA8	NM_018101	NP_060571	Coding	chr1:37692400 plus strand	380
CDCP2	NM_201546	NP_963840	Coding	chr1:54153006 minus strand	381
CDK11A	NM_024011	NP_076916	Coding	chr1:1724352 minus strand	382
CDK11A	NM_033529	NP_277071	Coding	chr1:1724352 minus strand	382
CDK11B	NM_001291345	NP_001278274	Coding	chr1:1659097 minus strand	383
CDK11B	NM_001787	NP_001778	Coding	chr1:1659097 minus strand	383
CDK11B	NM_033486	NP_277021	Coding	chr1:1659097 minus strand	383
CDK11B	NM_033487	NP_277022	Coding	chr1:1659097 minus strand	383
CDK11B	NM_033489	NP_277024	Coding	chr1:1659097 minus strand	383
CDK11B	NM_033490	NP_277025	Coding	chr1:1659097 minus strand	383
CDK18	NM_002596	NP_002587	Coding	chr1:205504555 plus strand	384
CDK18	NM_212502	NP_997667	Coding	chr1:205504555 plus strand	384
CDK18	NM_212503	NP_997668	Coding	chr1:205504555 plus strand	384
CDKN2C	NM_001262	NP_001253	Coding	chr1:50968694 plus strand	385
CDKN2C	NM_078626	NP_523240	Coding	chr1:50969969 plus strand	386
CELA2A	NM_033440	NP_254275	Coding	chr1:15456727 plus strand	387

【０１０８】

CELA2B	NM_015849	NP_056933	Coding	chr1:15476100 plus strand	388
CELA3A	NM_005747	NP_005738	Coding	chr1:22001655 plus strand	389
CELA3B	NM_007352	NP_031378	Coding	chr1:21976924 plus strand	390
CELF3	NM_001172649	NP_001166120	Coding	chr1:151716820 minus strand	391
CELF3	NM_001291106	NP_001278035	Coding	chr1:151716820 minus strand	391
CELF3	NM_001291107	NP_001278036	Coding	chr1:151716820 minus strand	391
CELF3	NM_007185	NP_009116	Coding	chr1:151716820 minus strand	391
CELF3	NM_001172648	NP_001166119	Coding	chr1:151716316 minus strand	392
CELSR2	NM_001408	NP_001399	Coding	chr1:109250018 plus strand	393
CENPF	NM_016343	NP_057427	Coding	chr1:214603188 plus strand	394
CENPL	NM_001171182	NP_001164653	Coding	chr1:173824132 minus strand	395
CENPL	NM_001127181	NP_001120653	Coding	chr1:173824639 minus strand	396
CENPL	NM_033319	NP_201576	Coding	chr1:173824639 minus strand	396
CEP104	NM_014704	NP_055519	Coding	chr1:3857233 minus strand	397
CEP170	NM_001042404	NP_001035863	Coding	chr1:243255406 minus strand	398
CEP170	NM_001042405	NP_001035864	Coding	chr1:243255406 minus strand	398
CEP170	NM_014812	NP_055627	Coding	chr1:243255406 minus strand	398
CEP350	NM_014810	NP_055625	Coding	chr1:179954772 plus strand	399
CEP85	NM_001281518	NP_001268447	Coding	chr1:26269282 plus strand	400
CEP85	NM_001281517	NP_001268446	Coding	chr1:26234152 plus strand	401
CEP85	NM_022778	NP_073615	Coding	chr1:26234152 plus strand	401
CEPT1	NM_006090	NP_006081	Coding	chr1:111140210 plus strand	402
CEPT1	NM_001007794	NP_001007795	Coding	chr1:111139626 plus strand	403
CERS2	NM_022075	NP_071358	Coding	chr1:150975003 minus strand	404
CERS2	NM_181746	NP_859530	Coding	chr1:150975003 minus strand	404
CFAP126	NM_001013625	NP_001013647	Coding	chr1:161367883 minus strand	405
CFAP45	NM_012337	NP_036469	Coding	chr1:159900116 minus strand	406
CFAP57	NM_001167965	NP_001161437	Coding	chr1:43172329 plus strand	407
CFAP57	NM_001195831	NP_001182760	Coding	chr1:43172329 plus strand	407
CFAP57	NM_152498	NP_689711	Coding	chr1:43172329 plus strand	407
CFAP74	NM_001080484	NP_001073953	Coding	chr1:2003837 minus strand	408

【０１０９】

CFH	NM_000186	NP_000177	Coding	chr1:196651877 plus strand	409
CFH	NM_001014975	NP_001014975	Coding	chr1:196651877 plus strand	409
CFHR1	NM_002113	NP_002104	Coding	chr1:196819730 plus strand	410
CFHR2	NM_005666	NP_005657	Coding	chr1:196943803 plus strand	411
CFHR3	NM_001166624	NP_001160096	Coding	chr1:196774799 plus strand	412
CFHR3	NM_021023	NP_066303	Coding	chr1:196774799 plus strand	412
CFHR4	NM_001201550	NP_001188479	Coding	chr1:196888013 plus strand	413
CFHR4	NM_001201551	NP_001188480	Coding	chr1:196888013 plus strand	413
CFHR4	NM_006684	NP_006675	Coding	chr1:196888013 plus strand	413
CFHR5	NM_030787	NP_110414	Coding	chr1:196977536 plus strand	414
CGN	NM_020770	NP_065821	Coding	chr1:151511385 plus strand	415
CHD1L	NM_001256336	NP_001243265	Coding	chr1:147242640 plus strand	416
CHD1L	NM_001256337	NP_001243266	Coding	chr1:147242640 plus strand	416
CHD1L	NM_001256338	NP_001243267	Coding	chr1:147242640 plus strand	416
CHD1L	NM_004284	NP_004275	Coding	chr1:147242640 plus strand	416
CHD1L	NM_024568	NP_078844	Coding	chr1:147242640 plus strand	416
CHD5	NM_015557	NP_056372	Coding	chr1:6180134 minus strand	417
CHI3L1	NM_001276	NP_001267	Coding	chr1:203186794 minus strand	418
CHI3L2	NM_001025197	NP_001020368	Coding	chr1:111227658 plus strand	419
CHI3L2	NM_004000	NP_003991	Coding	chr1:111227658 plus strand	419
CHI3L2	NM_001025199	NP_001020370	Coding	chr1:111229710 plus strand	420
CHIA	NM_001040623	NP_001035713	Coding	chr1:111290851 plus strand	421
CHIA	NM_001258001	NP_001244930	Coding	chr1:111290851 plus strand	421
CHIA	NM_001258002	NP_001244931	Coding	chr1:111290851 plus strand	421
CHIA	NM_001258003	NP_001244932	Coding	chr1:111290851 plus strand	421
CHIA	NM_001258004	NP_001244933	Coding	chr1:111290851 plus strand	421
CHIA	NM_001258005	NP_001244934	Coding	chr1:111290851 plus strand	421
CHIA	NM_021797	NP_068569	Coding	chr1:111290851 plus	421

【０１１０】

				strand	
CHIA	NM_201653	NP_970615	Coding	chr1:111290851 plus strand	421
CHIT1	NM_001256125	NP_001243054	Coding	chr1:203229732 minus strand	422
CHIT1	NM_001270509	NP_001257438	Coding	chr1:203229732 minus strand	422
CHIT1	NM_003465	NP_003456	Coding	chr1:203229732 minus strand	422
CHML	NM_001821	NP_001812	Coding	chr1:241635930 minus strand	423
CHRM3	NM_000740	NP_000731	Coding	chr1:239629072 plus strand	424
CHRNB2	NM_000748	NP_000739	Coding	chr1:154567780 plus strand	425
CHTOP	NM_001206612	NP_001193541	Coding	chr1:153633981 plus strand	426
CHTOP	NM_001244664	NP_001231593	Coding	chr1:153633981 plus strand	426
CHTOP	NM_015607	NP_056422	Coding	chr1:153633981 plus strand	426
CIART	NM_001300838	NP_001287767	Coding	chr1:150282532 plus strand	427
CIART	NM_001300839	NP_001287768	Coding	chr1:150282532 plus strand	427
CIART	NM_001300840	NP_001287769	Coding	chr1:150282532 plus strand	427
CIART	NM_144697	NP_653298	Coding	chr1:150282532 plus strand	427
CIART	NM_001300841	NP_001287770	Coding	chr1:150282721 plus strand	428
CITED4	NM_133467	NP_597724	Coding	chr1:40862346 minus strand	429
CKS1B	NM_001826	NP_001817	Coding	chr1:154974641 plus strand	430
CLCA1	NM_001285	NP_001276	Coding	chr1:86468842 plus strand	431
CLCA2	NM_006536	NP_006527	Coding	chr1:86424085 plus strand	432
CLCA4	NM_012128	NP_036260	Coding	chr1:86547075 plus strand	433
CLCC1	NM_001048210	NP_001041675	Coding	chr1:108963499 minus strand	434
CLCC1	NM_015127	NP_055942	Coding	chr1:108963499 minus strand	434
CLCC1	NM_001278202	NP_001265131	Coding	chr1:108950448 minus strand	435
CLCC1	NM_001278203	NP_001265132	Coding	chr1:108950448 minus strand	435
CLCN6	NM_001256959	NP_001243888	Coding	chr1:11806095 plus strand	436
CLCN6	NM_001286	NP_001277	Coding	chr1:11806095 plus strand	436
CLCNKA	NM_001042704	NP_001036169	Coding	chr1:16021990 plus strand	437
CLCNKA	NM_001257139	NP_001244068	Coding	chr1:16021990 plus strand	437
CLCNKA	NM_004070	NP_004061	Coding	chr1:16021990 plus strand	437

【０１１１】

CLCNKB	NM_000085	NP_000076	Coding	chr1:16043735 plus strand	438
CLCNKB	NM_001165945	NP_001159417	Coding	chr1:16048761 plus strand	439
CLDN19	NM_001123395	NP_001116867	Coding	chr1:42740254 minus strand	440
CLDN19	NM_001185117	NP_001172046	Coding	chr1:42740254 minus strand	440
CLDN19	NM_148960	NP_683763	Coding	chr1:42740254 minus strand	440
CLIC4	NM_013943	NP_039234	Coding	chr1:24745268 plus strand	441
CLK2	NM_001294338	NP_001281267	Coding	chr1:155273529 minus strand	442
CLK2	NM_001294339	NP_001281268	Coding	chr1:155273529 minus strand	442
CLK2	NM_003993	NP_003984	Coding	chr1:155273529 minus strand	442
CLSPN	NM_001190481	NP_001177410	Coding	chr1:35769950 minus strand	443
CLSPN	NM_022111	NP_071394	Coding	chr1:35769950 minus strand	443
CLSTN1	NM_001009566	NP_001009566	Coding	chr1:9824526 minus strand	444
CLSTN1	NM_001302883	NP_001289812	Coding	chr1:9824526 minus strand	444
CLSTN1	NM_014944	NP_055759	Coding	chr1:9824526 minus strand	444
CMPK1	NM_001136140	NP_001129612	Coding	chr1:47333796 plus strand	445
CMPK1	NM_016308	NP_057392	Coding	chr1:47333796 plus strand	445
CNIH3	NM_152495	NP_689708	Coding	chr1:224616476 plus strand	446
CNIH4	NM_001277197	NP_001264126	Coding	chr1:224356810 plus strand	447
CNIH4	NM_001277198	NP_001264127	Coding	chr1:224356810 plus strand	447
CNIH4	NM_001277199	NP_001264128	Coding	chr1:224356810 plus strand	447
CNIH4	NM_001277200	NP_001264129	Coding	chr1:224356810 plus strand	447
CNIH4	NM_014184	NP_054903	Coding	chr1:224356810 plus strand	447
CNKSR1	NM_001297647	NP_001284576	Coding	chr1:26177489 plus strand	448
CNKSR1	NM_001297648	NP_001284577	Coding	chr1:26177489 plus strand	448
CNKSR1	NM_006314	NP_006305	Coding	chr1:26177489 plus strand	448
CNN3	NM_001286055	NP_001272984	Coding	chr1:94927223 minus strand	449
CNN3	NM_001839	NP_001830	Coding	chr1:94927223 minus strand	449
CNN3	NM_001286056	NP_001272985	Coding	chr1:94925808 minus strand	450
CNR2	NM_001841	NP_001832	Coding	chr1:23913327 minus strand	451
CNST	NM_001139459	NP_001132931	Coding	chr1:246566336 plus strand	452
CNST	NM_152609	NP_689822	Coding	chr1:246566336 plus strand	452

【０１１２】

CNTN2	NM_005076	NP_005067	Coding	chr1:205043211 plus strand	453
COA6	NM_001012985	NP_001013003	Coding	chr1:234373682 plus strand	454
COA6	NM_001301733	NP_001288662	Coding	chr1:234373700 plus strand	455
COA6	NM_001206641	NP_001193570	Coding	chr1:234373436 plus strand	456
COA7	NM_023077	NP_075565	Coding	chr1:52698366 minus strand	457
COG2	NM_001145036	NP_001138508	Coding	chr1:230642455 plus strand	458
COG2	NM_007357	NP_031383	Coding	chr1:230642455 plus strand	458
COL11A1	NM_001190709	NP_001177638	Coding	chr1:103108496 minus strand	459
COL11A1	NM_001854	NP_001845	Coding	chr1:103108496 minus strand	459
COL11A1	NM_080629	NP_542196	Coding	chr1:103108496 minus strand	459
COL11A1	NM_080630	NP_542197	Coding	chr1:103108496 minus strand	459
COL16A1	NM_001856	NP_001847	Coding	chr1:31704167 minus strand	460
COL24A1	NM_152890	NP_690850	Coding	chr1:86156438 minus strand	461
COL8A2	NM_001294347	NP_001281276	Coding	chr1:36125084 minus strand	462
COL8A2	NM_005202	NP_005193	Coding	chr1:36125084 minus strand	462
COL9A2	NM_001852	NP_001843	Coding	chr1:40317267 minus strand	463
COLGALT2	NM_015101	NP_055916	Coding	chr1:184037729 minus strand	464
COPA	NM_001098398	NP_001091868	Coding	chr1:160343564 minus strand	465
COPA	NM_004371	NP_004362	Coding	chr1:160343564 minus strand	465
CORT	NM_001302	NP_001293	Coding	chr1:10449718 plus strand	466
COX20	NM_198076	NP_932342	Coding	chr1:244835336 plus strand	467
CPSF3L	NM_001256456	NP_001243385	Coding	chr1:1324687 minus strand	468
CPSF3L	NM_001256460	NP_001243389	Coding	chr1:1324687 minus strand	468
CPSF3L	NM_001256462	NP_001243391	Coding	chr1:1324687 minus strand	468
CPSF3L	NM_001256463	NP_001243392	Coding	chr1:1324687 minus strand	468
CPSF3L	NM_017871	NP_060341	Coding	chr1:1324687 minus strand	468
CPT2	NM_000098	NP_000089	Coding	chr1:53196428 plus strand	469
CPTP	NM_001029885	NP_001025056	Coding	chr1:1324762 plus strand	470
CR1	NM_000573	NP_000564	Coding	chr1:207496127 plus strand	471
CR1	NM_000651	NP_000642	Coding	chr1:207496127 plus strand	471

【０１１３】

CR1L	NM_175710	NP_783641	Coding	chr1:207645112 plus strand	472
CR2	NM_001006658	NP_001006659	Coding	chr1:207454299 plus strand	473
CR2	NM_001877	NP_001868	Coding	chr1:207454299 plus strand	473
CRABP2	NM_001878	NP_001869	Coding	chr1:156705667 minus strand	474
CRABP2	NM_001199723	NP_001186652	Coding	chr1:156705816 minus strand	475
CRB1	NM_001257965	NP_001244894	Coding	chr1:197201461 plus strand	476
CRB1	NM_001193640	NP_001180569	Coding	chr1:197268203 plus strand	477
CRB1	NM_001257966	NP_001244895	Coding	chr1:197268203 plus strand	477
CRB1	NM_201253	NP_957705	Coding	chr1:197268203 plus strand	477
CRCT1	NM_019060	NP_061933	Coding	chr1:152514501 plus strand	478
CREB3L4	NM_001255979	NP_001242908	Coding	chr1:153968198 plus strand	479
CREB3L4	NM_001255981	NP_001242910	Coding	chr1:153968198 plus strand	479
CREB3L4	NM_001255978	NP_001242907	Coding	chr1:153967838 plus strand	480
CREB3L4	NM_001255980	NP_001242909	Coding	chr1:153967838 plus strand	480
CREB3L4	NM_130898	NP_570968	Coding	chr1:153967838 plus strand	480
CREG1	NM_003851	NP_003842	Coding	chr1:167553819 minus strand	481
CRNN	NM_016190	NP_057274	Coding	chr1:152414274 minus strand	482
CROCC	NM_014675	NP_055490	Coding	chr1:16921949 plus strand	483
CRP	NM_000567	NP_000558	Coding	chr1:159714589 minus strand	484
CRTC2	NM_181715	NP_859066	Coding	chr1:153958656 minus strand	485
CRYZ	NM_001130042	NP_001123514	Coding	chr1:74733408 minus strand	486
CRYZ	NM_001130043	NP_001123515	Coding	chr1:74733408 minus strand	486
CRYZ	NM_001134759	NP_001128231	Coding	chr1:74733408 minus strand	486
CRYZ	NM_001889	NP_001880	Coding	chr1:74733408 minus strand	486
CSDE1	NM_001007553	NP_001007554	Coding	chr1:114758050 minus strand	487
CSDE1	NM_001130523	NP_001123995	Coding	chr1:114758050 minus strand	487
CSDE1	NM_001242891	NP_001229820	Coding	chr1:114758050 minus strand	487
CSDE1	NM_001242892	NP_001229821	Coding	chr1:114758050 minus	487

【０１１４】

				strand	
CSDE1	NM_001242893	NP_001229822	Coding	chr1:114758050 minus strand	487
CSDE1	NM_007158	NP_009089	Coding	chr1:114758050 minus strand	487
CSF1	NM_000757	NP_000748	Coding	chr1:109910610 plus strand	488
CSF1	NM_172210	NP_757349	Coding	chr1:109910610 plus strand	488
CSF1	NM_172211	NP_757350	Coding	chr1:109910610 plus strand	488
CSF1	NM_172212	NP_757351	Coding	chr1:109910610 plus strand	488
CSF3R	NM_000760	NP_000751	Coding	chr1:36483314 minus strand	489
CSF3R	NM_156039	NP_724781	Coding	chr1:36483314 minus strand	489
CSF3R	NM_172313	NP_758519	Coding	chr1:36483314 minus strand	489
CSMD2	NM_001281956	NP_001268885	Coding	chr1:34165274 minus strand	490
CSMD2	NM_052896	NP_443128	Coding	chr1:34165842 minus strand	491
CSRP1	NM_001193570	NP_001180499	Coding	chr1:201507259 minus strand	492
CSRP1	NM_004078	NP_004069	Coding	chr1:201507259 minus strand	492
CSRP1	NM_001193572	NP_001180501	Coding	chr1:201496573 minus strand	493
CSRP1	NM_001193571	NP_001180500	Coding	chr1:201506839 minus strand	494
CTBS	NM_004388	NP_004379	Coding	chr1:84574480 minus strand	495
CTH	NM_001190463	NP_001177392	Coding	chr1:70411217 plus strand	496
CTH	NM_001902	NP_001893	Coding	chr1:70411217 plus strand	496
CTH	NM_153742	NP_714964	Coding	chr1:70411217 plus strand	496
CTNNBIP1	NM_001012329	NP_001012329	Coding	chr1:9910258 minus strand	497
CTNNBIP1	NM_020248	NP_064633	Coding	chr1:9910258 minus strand	497
CTPS1	NM_001905	NP_001896	Coding	chr1:40979298 plus strand	498
CTPS1	NM_001301237	NP_001288166	Coding	chr1:40988447 plus strand	499
CTRC	NM_007272	NP_009203	Coding	chr1:15438441 plus strand	500
CTSE	NM_001910	NP_001901	Coding	chr1:206023909 minus strand	501
CTSE	NM_148964	NP_683865	Coding	chr1:206023909 minus strand	501
CTSK	NM_000396	NP_000387	Coding	chr1:150808441 minus strand	502
CTSS	NM_001199739	NP_001186668	Coding	chr1:150765957 minus strand	503
CTSS	NM_004079	NP_004070	Coding	chr1:150765957 minus strand	503

【０１１５】

CTTNBP2NL	NM_018704	NP_061174	Coding	chr1:112396177 plus strand	504
CYB561D1	NM_001134402	NP_001127874	Coding	chr1:109494035 plus strand	505
CYB561D1	NM_001134400	NP_001127872	Coding	chr1:109494078 plus strand	506
CYB561D1	NM_001134403	NP_001127875	Coding	chr1:109494078 plus strand	506
CYB561D1	NM_001134404	NP_001127876	Coding	chr1:109494078 plus strand	506
CYB561D1	NM_182580	NP_872386	Coding	chr1:109494078 plus strand	506
CYB5R1	NM_016243	NP_057327	Coding	chr1:202967276 minus strand	507
CYB5RL	NM_001031672	NP_001026842	Coding	chr1:54200073 minus strand	508
CYP2J2	NM_000775	NP_000766	Coding	chr1:59926751 minus strand	509
CYP4A11	NM_000778	NP_000769	Coding	chr1:46941484 minus strand	510
CYP4A22	NM_001010969	NP_001010969	Coding	chr1:47137434 plus strand	511
CYP4B1	NM_000779	NP_000770	Coding	chr1:46798997 plus strand	512
CYP4B1	NM_001099772	NP_001093242	Coding	chr1:46798997 plus strand	512
CYP4X1	NM_178033	NP_828847	Coding	chr1:47023567 plus strand	513
CYP4Z1	NM_178134	NP_835235	Coding	chr1:47067487 plus strand	514
CYR61	NM_001554	NP_001545	Coding	chr1:85580760 plus strand	515
DAB1	NM_021080	NP_066566	Coding	chr1:58250539 minus strand	516
DAP3	NM_001199849	NP_001186778	Coding	chr1:155689090 plus strand	517
DAP3	NM_001199850	NP_001186779	Coding	chr1:155689090 plus strand	517
DAP3	NM_001199851	NP_001186780	Coding	chr1:155689090 plus strand	517
DAP3	NM_004632	NP_004623	Coding	chr1:155689093 plus strand	518
DAP3	NM_033657	NP_387506	Coding	chr1:155689093 plus strand	518
DARS2	NM_018122	NP_060592	Coding	chr1:173824658 plus strand	519
DBT	NM_001918	NP_001909	Coding	chr1:100249853 minus strand	520
DCAF6	NM_001017977	NP_001017977	Coding	chr1:167936558 plus strand	521
DCAF6	NM_001198956	NP_001185885	Coding	chr1:167936558 plus strand	521
DCAF6	NM_001198957	NP_001185886	Coding	chr1:167936558 plus strand	521
DCAF6	NM_018442	NP_060912	Coding	chr1:167936558 plus strand	521
DCAF8	NM_015726	NP_056541	Coding	chr1:160262560 minus strand	522

【０１１６】

DCDC2B	NM_001099434	NP_001092904	Coding	chr1:32209093 plus strand	523
DCLRE1B	NM_022836	NP_073747	Coding	chr1:113905292 plus strand	524
DCST1	NM_001143687	NP_001137159	Coding	chr1:155033805 plus strand	525
DCST1	NM_152494	NP_689707	Coding	chr1:155033805 plus strand	525
DCST2	NM_144622	NP_653223	Coding	chr1:155033781 minus strand	526
DDAH1	NM_001134445	NP_001127917	Coding	chr1:85578363 minus strand	527
DDAH1	NM_012137	NP_036269	Coding	chr1:85465206 minus strand	528
DDI2	NM_032341	NP_115717	Coding	chr1:15617457 plus strand	529
DDOST	NM_005216	NP_005207	Coding	chr1:20661544 minus strand	530
DDR2	NM_001014796	NP_001014796	Coding	chr1:162632437 plus strand	531
DDR2	NM_006182	NP_006173	Coding	chr1:162632437 plus strand	531
DDX20	NM_007204	NP_009135	Coding	chr1:111755567 plus strand	532
DDX59	NM_001031725	NP_001026895	Coding	chr1:200669998 minus strand	533
DEDD	NM_001039711	NP_001034800	Coding	chr1:161132688 minus strand	534
DEDD	NM_032998	NP_127491	Coding	chr1:161132688 minus strand	534
DEDD	NM_001039712	NP_001034801	Coding	chr1:161132466 minus strand	535
DEGS1	NM_003676	NP_003667	Coding	chr1:224183207 plus strand	536
DENND1B	NM_001195215	NP_001182144	Coding	chr1:197775493 minus strand	537
DENND1B	NM_001195216	NP_001182145	Coding	chr1:197775493 minus strand	537
DENND1B	NM_001300858	NP_001287787	Coding	chr1:197775493 minus strand	537
DENND1B	NM_144977	NP_659414	Coding	chr1:197775493 minus strand	537
DENND2C	NM_001256404	NP_001243333	Coding	chr1:114670111 minus strand	538
DENND2C	NM_198459	NP_940861	Coding	chr1:114670111 minus strand	538
DENND2D	NM_001271833	NP_001258762	Coding	chr1:111204538 minus strand	539
DENND2D	NM_024901	NP_079177	Coding	chr1:111200703 minus strand	540
DENND4B	NM_014856	NP_055671	Coding	chr1:153946678 minus strand	541
DEPDC1	NM_001114120	NP_001107592	Coding	chr1:68497221 minus strand	542
DEPDC1	NM_017779	NP_060249	Coding	chr1:68497221 minus strand	542

【０１１７】

DESI2	NM_001297746	NP_001284675	Coding	chr1:244653047 plus strand	543
DESI2	NM_016076	NP_057160	Coding	chr1:244653047 plus strand	543
DFFA	NM_004401	NP_004392	Coding	chr1:10472556 minus strand	544
DFFA	NM_213566	NP_998731	Coding	chr1:10472556 minus strand	544
DFFB	NM_001282669	NP_001269598	Coding	chr1:3857266 plus strand	545
DFFB	NM_004402	NP_004393	Coding	chr1:3857266 plus strand	545
DHCR24	NM_014762	NP_055577	Coding	chr1:54887248 minus strand	546
DHDDS	NM_001243564	NP_001230493	Coding	chr1:26432281 plus strand	547
DHDDS	NM_001243565	NP_001230494	Coding	chr1:26432281 plus strand	547
DHDDS	NM_024887	NP_079163	Coding	chr1:26432281 plus strand	547
DHDDS	NM_205861	NP_995583	Coding	chr1:26432281 plus strand	547
DHRS3	NM_004753	NP_004744	Coding	chr1:12617731 minus strand	548
DHX9	NM_001357	NP_001348	Coding	chr1:182839303 plus strand	549
DIEXF	NM_014388	NP_055203	Coding	chr1:209827966 plus strand	550
DIO1	NM_000792	NP_000783	Coding	chr1:53894187 plus strand	551
DIO1	NM_001039715	NP_001034804	Coding	chr1:53894187 plus strand	551
DIO1	NM_001039716	NP_001034805	Coding	chr1:53894187 plus strand	551
DIO1	NM_213593	NP_998758	Coding	chr1:53894187 plus strand	551
DIRAS3	NM_004675	NP_004666	Coding	chr1:68050777 minus strand	552
DISC1	NM_001012957	NP_001012975	Coding	chr1:231626814 plus strand	553
DISC1	NM_001012958	NP_001012976	Coding	chr1:231626814 plus strand	553
DISC1	NM_001012959	NP_001012977	Coding	chr1:231626814 plus strand	553
DISC1	NM_001164537	NP_001158009	Coding	chr1:231626814 plus strand	553
DISC1	NM_001164538	NP_001158010	Coding	chr1:231626814 plus strand	553
DISC1	NM_001164539	NP_001158011	Coding	chr1:231626814 plus strand	553
DISC1	NM_001164540	NP_001158012	Coding	chr1:231626814 plus strand	553
DISC1	NM_001164541	NP_001158013	Coding	chr1:231626814 plus strand	553
DISC1	NM_001164542	NP_001158014	Coding	chr1:231626814 plus strand	553
DISC1	NM_001164544	NP_001158016	Coding	chr1:231626814 plus strand	553
DISC1	NM_001164545	NP_001158017	Coding	chr1:231626814 plus strand	553
DISC1	NM_001164546	NP_001158018	Coding	chr1:231626814 plus	553

【０１１８】

				strand	
DISC1	NM_001164547	NP_001158019	Coding	chr1:231626814 plus strand	553
DISC1	NM_001164548	NP_001158020	Coding	chr1:231626814 plus strand	553
DISC1	NM_001164549	NP_001158021	Coding	chr1:231626814 plus strand	553
DISC1	NM_001164550	NP_001158022	Coding	chr1:231626814 plus strand	553
DISC1	NM_001164551	NP_001158023	Coding	chr1:231626814 plus strand	553
DISC1	NM_001164552	NP_001158024	Coding	chr1:231626814 plus strand	553
DISC1	NM_001164553	NP_001158025	Coding	chr1:231626814 plus strand	553
DISC1	NM_001164554	NP_001158026	Coding	chr1:231626814 plus strand	553
DISC1	NM_001164555	NP_001158027	Coding	chr1:231626814 plus strand	553
DISC1	NM_001164556	NP_001158028	Coding	chr1:231626814 plus strand	553
DISC1	NM_018662	NP_061132	Coding	chr1:231626814 plus strand	553
DISP1	NM_032890	NP_116279	Coding	chr1:222815088 plus strand	554
DLGAP3	NM_001080418	NP_001073887	Coding	chr1:34929585 minus strand	555
DMAP1	NM_001034023	NP_001029195	Coding	chr1:44213452 plus strand	556
DMAP1	NM_001034024	NP_001029196	Coding	chr1:44213452 plus strand	556
DMAP1	NM_019100	NP_061973	Coding	chr1:44213452 plus strand	556
DMBX1	NM_147192	NP_671725	Coding	chr1:46506995 plus strand	557
DMBX1	NM_172225	NP_757379	Coding	chr1:46506995 plus strand	557
DMRTA2	NM_032110	NP_115486	Coding	chr1:50423447 minus strand	558
DMRTB1	NM_033067	NP_149056	Coding	chr1:53459398 plus strand	559
DNAH14	NM_144989	NP_659426	Coding	chr1:224929660 plus strand	560
DNAH14	NM_001145154	NP_001138626	Coding	chr1:224929653 plus strand	561
DNAH14	NM_001373	NP_001364	Coding	chr1:224929653 plus strand	561
DNAJB4	NM_007034	NP_008965	Coding	chr1:78004951 plus strand	562
DNAJC11	NM_018198	NP_060668	Coding	chr1:6701906 minus strand	563
DNAJC16	NM_001287811	NP_001274740	Coding	chr1:15526812 plus strand	564
DNAJC16	NM_015291	NP_056106	Coding	chr1:15526812 plus strand	564
DNAJC6	NM_001256864	NP_001243793	Coding	chr1:65309534 plus strand	565
DNAJC6	NM_001256865	NP_001243794	Coding	chr1:65264693 plus strand	566
DNAJC6	NM_014787	NP_055602	Coding	chr1:65264693 plus strand	566
DNAJC8	NM_014280	NP_055095	Coding	chr1:28233031 minus strand	567

【０１１９】

DNALI1	NM_003462	NP_003453	Coding	chr1:37556918 plus strand	568
DNASE2B	NM_058248	NP_490649	Coding	chr1:84408350 plus strand	569
DNASE2B	NM_021233	NP_067056	Coding	chr1:84398531 plus strand	570
DNM3	NM_001136127	NP_001129599	Coding	chr1:171841477 plus strand	571
DNM3	NM_001278252	NP_001265181	Coding	chr1:171841477 plus strand	571
DNM3	NM_015569	NP_056384	Coding	chr1:171841477 plus strand	571
DNTTIP2	NM_014597	NP_055412	Coding	chr1:93879206 minus strand	572
DOCK7	NM_001271999	NP_001258928	Coding	chr1:62688368 minus strand	573
DOCK7	NM_001272000	NP_001258929	Coding	chr1:62688368 minus strand	573
DOCK7	NM_001272001	NP_001258930	Coding	chr1:62688368 minus strand	573
DOCK7	NM_001272002	NP_001258931	Coding	chr1:62688368 minus strand	573
DOCK7	NM_033407	NP_212132	Coding	chr1:62688368 minus strand	573
DPH2	NM_001039589	NP_001034678	Coding	chr1:43969980 plus strand	574
DPH2	NM_001384	NP_001375	Coding	chr1:43969980 plus strand	574
DPH5	NM_001077394	NP_001070862	Coding	chr1:101025806 minus strand	575
DPH5	NM_001077395	NP_001070863	Coding	chr1:101025806 minus strand	575
DPH5	NM_015958	NP_057042	Coding	chr1:101025806 minus strand	575
DPM3	NM_153741	NP_714963	Coding	chr1:155140520 minus strand	576
DPM3	NM_018973	NP_061846	Coding	chr1:155140407 minus strand	577
DPT	NM_001937	NP_001928	Coding	chr1:168729204 minus strand	578
DPYD	NM_000110	NP_000101	Coding	chr1:97921059 minus strand	579
DPYD	NM_001160301	NP_001153773	Coding	chr1:97921059 minus strand	579
DR1	NM_001938	NP_001929	Coding	chr1:93345920 plus strand	580
DRAM2	NM_178454	NP_848549	Coding	chr1:111140216 minus strand	581
DRAXIN	NM_198545	NP_940947	Coding	chr1:11691723 plus strand	582
DSTYK	NM_015375	NP_056190	Coding	chr1:205211599 minus strand	583
DSTYK	NM_199462	NP_955749	Coding	chr1:205211599 minus strand	583
DTL	NM_001286229	NP_001273158	Coding	chr1:212035552 plus strand	584
DTL	NM_001286230	NP_001273159	Coding	chr1:212035552 plus strand	584
DTL	NM_016448	NP_057532	Coding	chr1:212035552 plus	584

【０１２０】

				strand	
DUSP10	NM_007207	NP_009138	Coding	chr1:221742176 minus strand	585
DUSP12	NM_007240	NP_009171	Coding	chr1:161749767 plus strand	586
DUSP23	NM_017823	NP_060293	Coding	chr1:159780968 plus strand	587
DUSP27	NM_001080426	NP_001073895	Coding	chr1:167094849 plus strand	588
DVL1	NM_004421	NP_004412	Coding	chr1:1349112 minus strand	589
DYRK3	NM_001004023	NP_001004023	Coding	chr1:206635535 plus strand	590
DYRK3	NM_003582	NP_003573	Coding	chr1:206635535 plus strand	590
E2F2	NM_004091	NP_004082	Coding	chr1:23531220 minus strand	591
EBNA1BP2	NM_001159936	NP_001153408	Coding	chr1:43172570 minus strand	592
EBNA1BP2	NM_006824	NP_006815	Coding	chr1:43172315 minus strand	593
ECE1	NM_001113348	NP_001106819	Coding	chr1:21345541 minus strand	594
ECE1	NM_001397	NP_001388	Coding	chr1:21290489 minus strand	595
ECE1	NM_001113349	NP_001106820	Coding	chr1:21290273 minus strand	596
ECE1	NM_001113347	NP_001106818	Coding	chr1:21279690 minus strand	597
ECHDC2	NM_001198961	NP_001185890	Coding	chr1:52921774 minus strand	598
ECHDC2	NM_001198962	NP_001185891	Coding	chr1:52921774 minus strand	598
ECHDC2	NM_018281	NP_060751	Coding	chr1:52921774 minus strand	598
ECM1	NM_001202858	NP_001189787	Coding	chr1:150508010 plus strand	599
ECM1	NM_004425	NP_004416	Coding	chr1:150508010 plus strand	599
ECM1	NM_022664	NP_073155	Coding	chr1:150508010 plus strand	599
EDARADD	NM_145861	NP_665860	Coding	chr1:236394379 plus strand	600
EDARADD	NM_080738	NP_542776	Coding	chr1:236395415 plus strand	601
EDEM3	NM_025191	NP_079467	Coding	chr1:184754907 minus strand	602
EDN2	NM_001302269	NP_001289198	Coding	chr1:41484683 minus strand	603
EDN2	NM_001956	NP_001947	Coding	chr1:41484683 minus strand	603
EFCAB14	NM_014774	NP_055589	Coding	chr1:46719064 minus strand	604
EFCAB2	NM_032328	NP_115704	Coding	chr1:244969868 plus strand	605

【０１２１】

EFCAB2	NM_001143943	NP_001137415	Coding	chr1:244970328 plus strand	606
EFCAB2	NM_001290327	NP_001277256	Coding	chr1:244970328 plus strand	606
EFCAB7	NM_032437	NP_115813	Coding	chr1:63523341 plus strand	607
EFHD2	NM_024329	NP_077305	Coding	chr1:15409894 plus strand	608
EFNA1	NM_004428	NP_004419	Coding	chr1:155127872 plus strand	609
EFNA1	NM_182685	NP_872626	Coding	chr1:155127872 plus strand	609
EFNA3	NM_004952	NP_004943	Coding	chr1:155078871 plus strand	610
EFNA4	NM_005227	NP_005218	Coding	chr1:155063736 plus strand	611
EFNA4	NM_182689	NP_872631	Coding	chr1:155063736 plus strand	611
EFNA4	NM_182690	NP_872632	Coding	chr1:155063736 plus strand	611
EGLN1	NM_022051	NP_071334	Coding	chr1:231425044 minus strand	612
EIF2B3	NM_001166588	NP_001160060	Coding	chr1:44986722 minus strand	613
EIF2B3	NM_001261418	NP_001248347	Coding	chr1:44986722 minus strand	613
EIF2B3	NM_020365	NP_065098	Coding	chr1:44986722 minus strand	613
EIF2D	NM_001201478	NP_001188407	Coding	chr1:206612551 minus strand	614
EIF2D	NM_006893	NP_008824	Coding	chr1:206612551 minus strand	614
EIF3I	NM_003757	NP_003748	Coding	chr1:32222369 plus strand	615
EIF4G3	NM_001198801	NP_001185730	Coding	chr1:21176888 minus strand	616
EIF4G3	NM_001198802	NP_001185731	Coding	chr1:21176888 minus strand	616
EIF4G3	NM_001198803	NP_001185732	Coding	chr1:21174758 minus strand	617
EIF4G3	NM_003760	NP_003751	Coding	chr1:21111383 minus strand	618
ELAVL4	NM_001144777	NP_001138249	Coding	chr1:50048013 plus strand	619
ELAVL4	NM_001144775	NP_001138247	Coding	chr1:50106264 plus strand	620
ELAVL4	NM_001144774	NP_001138246	Coding	chr1:50108919 plus strand	621
ELAVL4	NM_021952	NP_068771	Coding	chr1:50108919 plus strand	621
ELAVL4	NM_001294348	NP_001281277	Coding	chr1:50109615 plus strand	622
ELAVL4	NM_001144776	NP_001138248	Coding	chr1:50103909 plus strand	623
ELF3	NM_001114309	NP_001107781	Coding	chr1:202010561 plus strand	624
ELF3	NM_004433	NP_004424	Coding	chr1:202010561 plus strand	624
ELK4	NM_001973	NP_001964	Coding	chr1:205632872 minus strand	625

【０１２２】

ELK4	NM_021795	NP_068567	Coding	chr1:205632872 minus strand	625
ELOVL1	NM_001256399	NP_001243328	Coding	chr1:43367738 minus strand	626
ELOVL1	NM_001256401	NP_001243330	Coding	chr1:43368074 minus strand	627
ELOVL1	NM_001256402	NP_001243331	Coding	chr1:43368074 minus strand	627
ELOVL1	NM_022821	NP_073732	Coding	chr1:43368074 minus strand	627
ELTD1	NM_022159	NP_071442	Coding	chr1:79006810 minus strand	628
EMC1	NM_001271427	NP_001258356	Coding	chr1:19251559 minus strand	629
EMC1	NM_001271428	NP_001258357	Coding	chr1:19251559 minus strand	629
EMC1	NM_001271429	NP_001258358	Coding	chr1:19251559 minus strand	629
EMC1	NM_015047	NP_055862	Coding	chr1:19251559 minus strand	629
ENAH	NM_001008493	NP_001008493	Coding	chr1:225653143 minus strand	630
ENAH	NM_018212	NP_060682	Coding	chr1:225653143 minus strand	630
ENO1	NM_001428	NP_001419	Coding	chr1:8879092 minus strand	631
ENO1	NM_001201483	NP_001188412	Coding	chr1:8871576 minus strand	632
ENSA	NM_004436	NP_004427	Coding	chr1:150629622 minus strand	633
ENSA	NM_207042	NP_996925	Coding	chr1:150629622 minus strand	633
ENSA	NM_207043	NP_996926	Coding	chr1:150629622 minus strand	633
ENSA	NM_207044	NP_996927	Coding	chr1:150629622 minus strand	633
ENSA	NM_207168	NP_997051	Coding	chr1:150629622 minus strand	633
ENSA	NM_207045	NP_996928	Coding	chr1:150629133 minus strand	634
ENSA	NM_207046	NP_996929	Coding	chr1:150629133 minus strand	634
ENSA	NM_207047	NP_996930	Coding	chr1:150629133 minus strand	634
EPB41	NM_001166006	NP_001159478	Coding	chr1:28914575 plus strand	635
EPB41	NM_001166005	NP_001159477	Coding	chr1:28887090 plus strand	636
EPB41	NM_001166007	NP_001159479	Coding	chr1:28887090 plus strand	636
EPB41	NM_004437	NP_004428	Coding	chr1:28887090 plus strand	636
EPB41	NM_203342	NP_976217	Coding	chr1:28887090 plus strand	636
EPB41	NM_203343	NP_976218	Coding	chr1:28887090 plus strand	636
EPHA10	NM_001099439	NP_001092909	Coding	chr1:37765152 minus strand	637
EPHA10	NM_173641	NP_775912	Coding	chr1:37765152 minus strand	637

【０１２３】

EPHA2	NM_004431	NP_004422	Coding	chr1:16156087 minus strand	638
EPHA8	NM_001006943	NP_001006944	Coding	chr1:22563510 plus strand	639
EPHA8	NM_020526	NP_065387	Coding	chr1:22563510 plus strand	639
EPHB2	NM_004442	NP_004433	Coding	chr1:22710837 plus strand	640
EPHB2	NM_017449	NP_059145	Coding	chr1:22710837 plus strand	640
EPHX1	NM_001136018	NP_001129490	Coding	chr1:225810073 plus strand	641
EPHX1	NM_001291163	NP_001278092	Coding	chr1:225810133 plus strand	642
EPHX1	NM_000120	NP_000111	Coding	chr1:225825300 plus strand	643
EPHX4	NM_173567	NP_775838	Coding	chr1:92029975 plus strand	644
EPRS	NM_004446	NP_004437	Coding	chr1:220046658 minus strand	645
EPS15	NM_001981	NP_001972	Coding	chr1:51519323 minus strand	646
EPS15	NM_001159969	NP_001153441	Coding	chr1:51422121 minus strand	647
EPS8L3	NM_024526	NP_078802	Coding	chr1:109764022 minus strand	648
EPS8L3	NM_133181	NP_573444	Coding	chr1:109764022 minus strand	648
EPS8L3	NM_139053	NP_620641	Coding	chr1:109764022 minus strand	648
ERI3	NM_001301698	NP_001288627	Coding	chr1:44355279 minus strand	649
ERI3	NM_001301699	NP_001288628	Coding	chr1:44355279 minus strand	649
ERI3	NM_001301700	NP_001288629	Coding	chr1:44355279 minus strand	649
ERI3	NM_001301701	NP_001288630	Coding	chr1:44355279 minus strand	649
ERI3	NM_024066	NP_076971	Coding	chr1:44355279 minus strand	649
ERICH3	NM_001002912	NP_001002912	Coding	chr1:74673738 minus strand	650
ERMAP	NM_018538	NP_061008	Coding	chr1:42825577 plus strand	651
ERMAP	NM_001017922	NP_001017922	Coding	chr1:42817104 plus strand	652
ERO1LB	NM_019891	NP_063944	Coding	chr1:236282039 minus strand	653
ERRFI1	NM_018948	NP_061821	Coding	chr1:8026333 minus strand	654
ESPN	NM_031475	NP_113663	Coding	chr1:6424787 plus strand	655
ESRRG	NM_001243506	NP_001230435	Coding	chr1:217089645 minus strand	656
ESRRG	NM_206594	NP_996317	Coding	chr1:217089645 minus strand	656
ESRRG	NM_206595	NP_996318	Coding	chr1:217089645 minus strand	656
ESRRG	NM_001243512	NP_001230441	Coding	chr1:216939673 minus strand	657

【０１２４】

ESRRG	NM_001243513	NP_001230442	Coding	chr1:216939673 minus strand	657
ESRRG	NM_001243507	NP_001230436	Coding	chr1:217076970 minus strand	658
ESRRG	NM_001243509	NP_001230438	Coding	chr1:217076970 minus strand	658
ESRRG	NM_001134285	NP_001127757	Coding	chr1:217137755 minus strand	659
ESRRG	NM_001243514	NP_001230443	Coding	chr1:216805367 minus strand	660
ESRRG	NM_001243510	NP_001230439	Coding	chr1:216939675 minus strand	661
ESRRG	NM_001243511	NP_001230440	Coding	chr1:216939675 minus strand	661
ESRRG	NM_001243515	NP_001230444	Coding	chr1:216723472 minus strand	662
ESRRG	NM_001243518	NP_001230447	Coding	chr1:216723472 minus strand	662
ESRRG	NM_001243519	NP_001230448	Coding	chr1:216723472 minus strand	662
ESRRG	NM_001438	NP_001429	Coding	chr1:216723472 minus strand	662
ESRRG	NM_001243505	NP_001230434	Coding	chr1:217089854 minus strand	663
ETNK2	NM_001297760	NP_001284689	Coding	chr1:204152182 minus strand	664
ETNK2	NM_001297761	NP_001284690	Coding	chr1:204152182 minus strand	664
ETNK2	NM_001297762	NP_001284691	Coding	chr1:204152182 minus strand	664
ETNK2	NM_018208	NP_060678	Coding	chr1:204152182 minus strand	664
ETV3	NM_001145312	NP_001138784	Coding	chr1:157138591 minus strand	665
ETV3	NM_005240	NP_005231	Coding	chr1:157138385 minus strand	666
ETV3L	NM_001004341	NP_001004341	Coding	chr1:157099808 minus strand	667
EVA1B	NM_018166	NP_060636	Coding	chr1:36324154 minus strand	668
EVI5	NM_005665	NP_005656	Coding	chr1:92792404 minus strand	669
EXO1	NM_003686	NP_003677	Coding	chr1:241848730 plus strand	670
EXO1	NM_006027	NP_006018	Coding	chr1:241848730 plus strand	670
EXO1	NM_130398	NP_569082	Coding	chr1:241848190 plus strand	671
EXO5	NM_022774	NP_073611	Coding	chr1:40508760 plus strand	672
EXOC8	NM_175876	NP_787072	Coding	chr1:231337832 minus strand	673
EXOSC10	NM_001001998	NP_001001998	Coding	chr1:11099881 minus strand	674
EXOSC10	NM_002685	NP_002676	Coding	chr1:11099881 minus	674

【０１２５】

				strand	
EXTL1	NM_004455	NP_004446	Coding	chr1:26021779 plus strand	675
EXTL2	NM_001033025	NP_001028197	Coding	chr1:100895179 minus strand	676
EXTL2	NM_001261440	NP_001248369	Coding	chr1:100895179 minus strand	676
EXTL2	NM_001261441	NP_001248370	Coding	chr1:100895179 minus strand	676
EXTL2	NM_001261442	NP_001248371	Coding	chr1:100895179 minus strand	676
EXTL2	NM_001439	NP_001430	Coding	chr1:100895179 minus strand	676
EYA3	NM_001282560	NP_001269489	Coding	chr1:28088637 minus strand	677
EYA3	NM_001282561	NP_001269490	Coding	chr1:28088637 minus strand	677
EYA3	NM_001282562	NP_001269491	Coding	chr1:28088637 minus strand	677
EYA3	NM_001990	NP_001981	Coding	chr1:28088637 minus strand	677
F11R	NM_016946	NP_058642	Coding	chr1:161021343 minus strand	678
F13B	NM_001994	NP_001985	Coding	chr1:197067267 minus strand	679
F3	NM_001178096	NP_001171567	Coding	chr1:94541857 minus strand	680
F3	NM_001993	NP_001984	Coding	chr1:94541857 minus strand	680
F5	NM_000130	NP_000121	Coding	chr1:169586531 minus strand	681
FAAH	NM_001441	NP_001432	Coding	chr1:46394266 plus strand	682
FABP3	NM_004102	NP_004093	Coding	chr1:31373076 minus strand	683
FAF1	NM_007051	NP_008982	Coding	chr1:50960264 minus strand	684
FAIM3	NM_001142473	NP_001135945	Coding	chr1:206922033 minus strand	685
FAIM3	NM_005449	NP_005440	Coding	chr1:206922033 minus strand	685
FAIM3	NM_001193338	NP_001180267	Coding	chr1:206921890 minus strand	686
FAM102B	NM_001010883	NP_001010883	Coding	chr1:108560348 plus strand	687
FAM110D	NM_024869	NP_079145	Coding	chr1:26159019 plus strand	688
FAM129A	NM_052966	NP_443198	Coding	chr1:184974586 minus strand	689
FAM131C	NM_182623	NP_872429	Coding	chr1:16073632 minus strand	690
FAM132A	NM_001014980	NP_001014980	Coding	chr1:1246722 minus strand	691
FAM151A	NM_176782	NP_788954	Coding	chr1:54623527 minus strand	692
FAM159A	NM_001042693	NP_001036158	Coding	chr1:52633393 plus strand	693

【０１２６】

FAM163A	NM_173509	NP_775780	Coding	chr1:179743162 plus strand	694
FAM167B	NM_032648	NP_116037	Coding	chr1:32247216 plus strand	695
FAM177B	NM_207468	NP_997351	Coding	chr1:222737215 plus strand	696
FAM183A	NM_001101376	NP_001094846	Coding	chr1:43147922 plus strand	697
FAM189B	NM_001267608	NP_001254537	Coding	chr1:155255483 minus strand	698
FAM189B	NM_006589	NP_006580	Coding	chr1:155255483 minus strand	698
FAM189B	NM_198264	NP_937995	Coding	chr1:155255483 minus strand	698
FAM19A3	NM_001004440	NP_001004440	Coding	chr1:112720566 plus strand	699
FAM19A3	NM_182759	NP_877436	Coding	chr1:112720566 plus strand	699
FAM20B	NM_014864	NP_055679	Coding	chr1:179025938 plus strand	700
FAM212B	NM_198926	NP_945120	Coding	chr1:111755797 minus strand	701
FAM212B	NM_019099	NP_061972	Coding	chr1:111739424 minus strand	702
FAM213B	NM_001195736	NP_001182665	Coding	chr1:2586749 plus strand	703
FAM213B	NM_001195737	NP_001182666	Coding	chr1:2586749 plus strand	703
FAM213B	NM_001195738	NP_001182667	Coding	chr1:2586749 plus strand	703
FAM213B	NM_001195740	NP_001182669	Coding	chr1:2586749 plus strand	703
FAM213B	NM_001195741	NP_001182670	Coding	chr1:2586749 plus strand	703
FAM213B	NM_152371	NP_689584	Coding	chr1:2586749 plus strand	703
FAM229A	NM_001167676	NP_001161148	Coding	chr1:32362243 minus strand	704
FAM231A	NM_001282321	NP_001269250	Coding	chr1:16734461 minus strand	705
FAM231A	NM_001282321	NP_001269250	Coding	chr1:16673002 plus strand	706
FAM43B	NM_207334	NP_997217	Coding	chr1:20552438 plus strand	707
FAM46B	NM_052943	NP_443175	Coding	chr1:27012842 minus strand	708
FAM46C	NM_017709	NP_060179	Coding	chr1:117605981 plus strand	709
FAM63A	NM_001163258	NP_001156730	Coding	chr1:151008378 minus strand	710
FAM63A	NM_018379	NP_060849	Coding	chr1:151008378 minus strand	710
FAM63A	NM_001040217	NP_001035307	Coding	chr1:151006909 minus strand	711
FAM63A	NM_001163259	NP_001156731	Coding	chr1:151006797 minus strand	712
FAM63A	NM_001163260	NP_001156732	Coding	chr1:151006797 minus strand	712
FAM69A	NM_001006605	NP_001006606	Coding	chr1:92961522 minus strand	713
FAM69A	NM_001252269	NP_001239198	Coding	chr1:92961522 minus	713

【０１２７】

				strand	
FAM69A	NM_001252270	NP_001239199	Coding	chr1:92961522 minus strand	713
FAM69A	NM_001252273	NP_001239202	Coding	chr1:92961522 minus strand	713
FAM69A	NM_001252271	NP_001239200	Coding	chr1:92877150 minus strand	714
FAM71A	NM_153606	NP_705834	Coding	chr1:212624446 plus strand	715
FAM72A	NM_001123168	NP_001116640	Coding	chr1:206202419 minus strand	716
FAM72B	NM_001100910	NP_001094380	Coding	chr1:121184318 minus strand	717
FAM72C	NM_001287385	NP_001274314	Coding	chr1:143972006 minus strand	718
FAM72D	NM_207418	NP_997301	Coding	chr1:145095999 plus strand	719
FAM73A	NM_001270384	NP_001257313	Coding	chr1:77779623 plus strand	720
FAM73A	NM_198549	NP_940951	Coding	chr1:77779623 plus strand	720
FAM76A	NM_001143912	NP_001137384	Coding	chr1:27725978 plus strand	721
FAM76A	NM_001143913	NP_001137385	Coding	chr1:27725978 plus strand	721
FAM76A	NM_001143914	NP_001137386	Coding	chr1:27725978 plus strand	721
FAM76A	NM_001143915	NP_001137387	Coding	chr1:27725978 plus strand	721
FAM76A	NM_152660	NP_689873	Coding	chr1:27725978 plus strand	721
FAM78B	NM_001017961	NP_001017961	Coding	chr1:166166721 minus strand	722
FAM89A	NM_198552	NP_940954	Coding	chr1:231040249 minus strand	723
FASLG	NM_000639	NP_000630	Coding	chr1:172659007 plus strand	724
FASLG	NM_001302746	NP_001289675	Coding	chr1:172659007 plus strand	724
FBLIM1	NM_017556	NP_060026	Coding	chr1:15758759 plus strand	725
FBLIM1	NM_001024215	NP_001019386	Coding	chr1:15764498 plus strand	726
FBLIM1	NM_001024216	NP_001019387	Coding	chr1:15764963 plus strand	727
FBXO2	NM_012168	NP_036300	Coding	chr1:11654831 minus strand	728
FBXO28	NM_001136115	NP_001129587	Coding	chr1:224114086 plus strand	729
FBXO28	NM_015176	NP_055991	Coding	chr1:224114086 plus strand	729
FBXO42	NM_018994	NP_061867	Coding	chr1:16352453 minus strand	730
FBXO44	NM_183412	NP_904319	Coding	chr1:11654374 plus strand	731
FBXO44	NM_001014765	NP_001014765	Coding	chr1:11654856 plus strand	732
FBXO44	NM_033182	NP_149438	Coding	chr1:11654856 plus strand	732
FBXO44	NM_183413	NP_904320	Coding	chr1:11654856 plus strand	732
FBXO6	NM_018438	NP_060908	Coding	chr1:11664092 plus strand	733
FCAMR	NM_001122979	NP_001116451	Coding	chr1:206970625 minus strand	734

【０１２８】

FCAMR	NM_001170631	NP_001164102	Coding	chr1:206970625 minus strand	734
FCAMR	NM_032029	NP_114418	Coding	chr1:206970625 minus strand	734
FCER1A	NM_002001	NP_001992	Coding	chr1:159289713 plus strand	735
FCER1G	NM_004106	NP_004097	Coding	chr1:161215296 plus strand	736
FCGR1A	NM_000566	NP_000557	Coding	chr1:149782693 plus strand	737
FCGR1B	NM_001004340	NP_001004340	Coding	chr1:121087344 plus strand	738
FCGR1B	NM_001017986	NP_001017986	Coding	chr1:121087344 plus strand	738
FCGR1B	NM_001244910	NP_001231839	Coding	chr1:121087344 plus strand	738
FCGR2A	NM_001136219	NP_001129691	Coding	chr1:161505414 plus strand	739
FCGR2A	NM_021642	NP_067674	Coding	chr1:161505414 plus strand	739
FCGR2B	NM_001002273	NP_001002273	Coding	chr1:161663114 plus strand	740
FCGR2B	NM_001002274	NP_001002274	Coding	chr1:161663114 plus strand	740
FCGR2B	NM_001002275	NP_001002275	Coding	chr1:161663114 plus strand	740
FCGR2B	NM_001190828	NP_001177757	Coding	chr1:161663114 plus strand	740
FCGR2B	NM_004001	NP_003992	Coding	chr1:161663114 plus strand	740
FCGR2C	NM_201563	NP_963857	Coding	chr1:161581338 plus strand	741
FCGR3A	NM_000569	NP_000560	Coding	chr1:161550028 minus strand	742
FCGR3A	NM_001127592	NP_001121064	Coding	chr1:161550028 minus strand	742
FCGR3A	NM_001127593	NP_001121065	Coding	chr1:161550623 minus strand	743
FCGR3A	NM_001127595	NP_001121067	Coding	chr1:161550623 minus strand	743
FCGR3A	NM_001127596	NP_001121068	Coding	chr1:161550623 minus strand	743
FCGR3B	NM_001244753	NP_001231682	Coding	chr1:161631462 minus strand	744
FCGR3B	NM_001271035	NP_001257964	Coding	chr1:161631462 minus strand	744
FCGR3B	NM_000570	NP_000561	Coding	chr1:161631963 minus strand	745
FCGR3B	NM_001271036	NP_001257965	Coding	chr1:161631047 minus strand	746
FCGR3B	NM_001271037	NP_001257966	Coding	chr1:161631047 minus strand	746
FCN3	NM_003665	NP_003656	Coding	chr1:27374824 minus strand	747

【０１２９】

FCN3	NM_173452	NP_775628	Coding	chr1:27374824 minus strand	747
FCRL1	NM_001159397	NP_001152869	Coding	chr1:157820150 minus strand	748
FCRL1	NM_001159398	NP_001152870	Coding	chr1:157820150 minus strand	748
FCRL1	NM_052938	NP_443170	Coding	chr1:157820150 minus strand	748
FCRL2	NM_001159488	NP_001152960	Coding	chr1:157777132 minus strand	749
FCRL2	NM_030764	NP_110391	Coding	chr1:157777132 minus strand	749
FCRL3	NM_052939	NP_443171	Coding	chr1:157700857 minus strand	750
FCRL4	NM_031282	NP_112572	Coding	chr1:157598080 minus strand	751
FCRL5	NM_001195388	NP_001182317	Coding	chr1:157552520 minus strand	752
FCRL5	NM_031281	NP_112571	Coding	chr1:157552520 minus strand	752
FCRL6	NM_001284217	NP_001271146	Coding	chr1:159800510 plus strand	753
FCRL6	NM_001004310	NP_001004310	Coding	chr1:159802382 plus strand	754
FCRLA	NM_001184866	NP_001171795	Coding	chr1:161706971 plus strand	755
FCRLA	NM_001184867	NP_001171796	Coding	chr1:161706971 plus strand	755
FCRLA	NM_001184870	NP_001171799	Coding	chr1:161706971 plus strand	755
FCRLA	NM_001184871	NP_001171800	Coding	chr1:161706971 plus strand	755
FCRLA	NM_001184872	NP_001171801	Coding	chr1:161706971 plus strand	755
FCRLA	NM_001184873	NP_001171802	Coding	chr1:161706971 plus strand	755
FCRLA	NM_032738	NP_116127	Coding	chr1:161706971 plus strand	755
FCRLB	NM_001002901	NP_001002901	Coding	chr1:161721543 plus strand	756
FCRLB	NM_001288829	NP_001275758	Coding	chr1:161722652 plus strand	757
FCRLB	NM_001288830	NP_001275759	Coding	chr1:161722652 plus strand	757
FCRLB	NM_001288831	NP_001275760	Coding	chr1:161722652 plus strand	757
FCRLB	NM_001288832	NP_001275761	Coding	chr1:161722652 plus strand	757
FDPS	NM_001135821	NP_001129293	Coding	chr1:155308913 plus strand	758
FDPS	NM_001135822	NP_001129294	Coding	chr1:155308747 plus strand	759
FDPS	NM_001242824	NP_001229753	Coding	chr1:155308747 plus strand	759

【０１３０】

FDPS	NM_001242825	NP_001229754	Coding	chr1:155308747 plus strand	759
FDPS	NM_002004	NP_001995	Coding	chr1:155308747 plus strand	759
FGGY	NM_001244714	NP_001231643	Coding	chr1:59310077 plus strand	760
FGGY	NM_001113411	NP_001106882	Coding	chr1:59296952 plus strand	761
FGGY	NM_018291	NP_060761	Coding	chr1:59296952 plus strand	761
FGGY	NM_001278224	NP_001265153	Coding	chr1:59515628 plus strand	762
FGR	NM_005248	NP_005239	Coding	chr1:27635216 minus strand	763
FGR	NM_001042729	NP_001036194	Coding	chr1:27626595 minus strand	764
FGR	NM_001042747	NP_001036212	Coding	chr1:27626240 minus strand	765
FH	NM_000143	NP_000134	Coding	chr1:241519785 minus strand	766
FHAD1	NM_052929	NP_443161	Coding	chr1:15247271 plus strand	767
FHL3	NM_001243878	NP_001230807	Coding	chr1:38005515 minus strand	768
FHL3	NM_004468	NP_004459	Coding	chr1:38005515 minus strand	768
FLAD1	NM_001184891	NP_001171820	Coding	chr1:154983293 plus strand	769
FLAD1	NM_001184892	NP_001171821	Coding	chr1:154983293 plus strand	769
FLAD1	NM_025207	NP_079483	Coding	chr1:154983293 plus strand	769
FLAD1	NM_201398	NP_958800	Coding	chr1:154983293 plus strand	769
FLG	NM_002016	NP_002007	Coding	chr1:152325203 minus strand	770
FLG2	NM_001014342	NP_001014364	Coding	chr1:152360006 minus strand	771
FLVCR1	NM_014053	NP_054772	Coding	chr1:212858254 plus strand	772
FMN2	NM_020066	NP_064450	Coding	chr1:240091884 plus strand	773
FMO1	NM_001282692	NP_001269621	Coding	chr1:171257922 plus strand	774
FMO1	NM_001282693	NP_001269622	Coding	chr1:171248470 plus strand	775
FMO1	NM_001282694	NP_001269623	Coding	chr1:171248470 plus strand	775
FMO1	NM_002021	NP_002012	Coding	chr1:171248470 plus strand	775
FMO2	NM_001301347	NP_001288276	Coding	chr1:171185207 plus strand	776
FMO2	NM_001460	NP_001451	Coding	chr1:171185207 plus strand	776
FMO3	NM_001002294	NP_001002294	Coding	chr1:171090876 plus strand	777
FMO3	NM_006894	NP_008825	Coding	chr1:171090876 plus strand	777

【０１３１】

FMO4	NM_002022	NP_002013	Coding	chr1:171314346 plus strand	778
FMO5	NM_001144829	NP_001138301	Coding	chr1:147225638 minus strand	779
FMO5	NM_001144830	NP_001138302	Coding	chr1:147225638 minus strand	779
FMO5	NM_001461	NP_001452	Coding	chr1:147225638 minus strand	779
FMOD	NM_002023	NP_002014	Coding	chr1:203351429 minus strand	780
FNBP1L	NM_001024948	NP_001020119	Coding	chr1:93448130 plus strand	781
FNBP1L	NM_001164473	NP_001157945	Coding	chr1:93448130 plus strand	781
FNBP1L	NM_017737	NP_060207	Coding	chr1:93448130 plus strand	781
FNDC5	NM_001171940	NP_001165411	Coding	chr1:32870813 minus strand	782
FNDC5	NM_153756	NP_715637	Coding	chr1:32870813 minus strand	782
FNDC5	NM_001171941	NP_001165412	Coding	chr1:32872492 minus strand	783
FNDC7	NM_001144937	NP_001138409	Coding	chr1:108712933 plus strand	784
FOXD2	NM_004474	NP_004465	Coding	chr1:47436016 plus strand	785
FOXD3	NM_012183	NP_036315	Coding	chr1:63323058 plus strand	786
FOXE3	NM_012186	NP_036318	Coding	chr1:47416071 plus strand	787
FOXJ3	NM_014947	NP_055762	Coding	chr1:42335232 minus strand	788
FOXJ3	NM_001198851	NP_001185780	Coding	chr1:42334965 minus strand	789
FOXJ3	NM_001198852	NP_001185781	Coding	chr1:42335215 minus strand	790
FOXJ3	NM_001198850	NP_001185779	Coding	chr1:42335877 minus strand	791
FOXO6	NM_001291281	NP_001278210	Coding	chr1:41361930 plus strand	792
FPGT	NM_001199328	NP_001186257	Coding	chr1:74198211 plus strand	793
FPGT	NM_001199329	NP_001186258	Coding	chr1:74198211 plus strand	793
FPGT	NM_003838	NP_003829	Coding	chr1:74198211 plus strand	793
FPGT-TNNI3K	NM_001112808	NP_001106279	Coding	chr1:74198211 plus strand	793
FPGT-TNNI3K	NM_001199327	NP_001186256	Coding	chr1:74198211 plus strand	793
FRRS1	NM_001013660	NP_001013682	Coding	chr1:99765793 minus strand	794
FUBP1	NM_003902	NP_003893	Coding	chr1:77979093 minus strand	795
FUCA1	NM_000147	NP_000138	Coding	chr1:23868369 minus strand	796
G0S2	NM_015714	NP_056529	Coding	chr1:209675324 plus strand	797
GABPB2	NM_144618	NP_653219	Coding	chr1:151070603 plus strand	798
GABRD	NM_000815	NP_000806	Coding	chr1:2019328 plus strand	799
GADD45A	NM_001199741	NP_001186670	Coding	chr1:67685176 plus strand	800

【０１３２】

GADD45A	NM_001199742	NP_001186671	Coding	chr1:67685176 plus strand	800
GADD45A	NM_001924	NP_001915	Coding	chr1:67685176 plus strand	800
GALE	NM_000403	NP_000394	Coding	chr1:23800544 minus strand	801
GALE	NM_001008216	NP_001008217	Coding	chr1:23800804 minus strand	802
GALE	NM_001127621	NP_001121093	Coding	chr1:23799570 minus strand	803
GALNT2	NM_004481	NP_004472	Coding	chr1:230067194 plus strand	804
GALNT2	NM_001291866	NP_001278795	Coding	chr1:230057788 plus strand	805
GATAD2B	NM_020699	NP_065750	Coding	chr1:153922975 minus strand	806
GBA	NM_000157	NP_000148	Coding	chr1:155241278 minus strand	807
GBA	NM_001005741	NP_001005741	Coding	chr1:155244862 minus strand	808
GBA	NM_001005742	NP_001005742	Coding	chr1:155244862 minus strand	808
GBA	NM_001171811	NP_001165282	Coding	chr1:155244862 minus strand	808
GBA	NM_001171812	NP_001165283	Coding	chr1:155241275 minus strand	809
GBP1	NM_002053	NP_002044	Coding	chr1:89065360 minus strand	810
GBP2	NM_004120	NP_004111	Coding	chr1:89126159 minus strand	811
GBP3	NM_018284	NP_060754	Coding	chr1:89022866 minus strand	812
GBP4	NM_052941	NP_443173	Coding	chr1:89198950 minus strand	813
GBP5	NM_001134486	NP_001127958	Coding	chr1:89272861 minus strand	814
GBP5	NM_052942	NP_443174	Coding	chr1:89272861 minus strand	814
GBP6	NM_198460	NP_940862	Coding	chr1:89363876 plus strand	815
GBP7	NM_207398	NP_997281	Coding	chr1:89176040 minus strand	816
GCLM	NM_002061	NP_002052	Coding	chr1:93909456 minus strand	817
GCSAML	NM_001281837	NP_001268766	Coding	chr1:247518451 plus strand	818
GCSAML	NM_145278	NP_660321	Coding	chr1:247549044 plus strand	819
GCSAML	NM_001281834	NP_001268763	Coding	chr1:247507057 plus strand	820
GCSAML	NM_001281835	NP_001268764	Coding	chr1:247507057 plus strand	820
GCSAML	NM_001281836	NP_001268765	Coding	chr1:247507057 plus strand	820
GCSAML	NM_001281838	NP_001268767	Coding	chr1:247507057 plus strand	820

【０１３３】

GCSAML	NM_001281853	NP_001268782	Coding	chr1:247507057 plus strand	820
GDAP2	NM_001135589	NP_001129061	Coding	chr1:117929679 minus strand	821
GDAP2	NM_017686	NP_060156	Coding	chr1:117929679 minus strand	821
GFI1	NM_001127216	NP_001120688	Coding	chr1:92486071 minus strand	822
GFI1	NM_005263	NP_005254	Coding	chr1:92486876 minus strand	823
GFI1	NM_001127215	NP_001120687	Coding	chr1:92483799 minus strand	824
GGPS1	NM_001037277	NP_001032354	Coding	chr1:235328437 plus strand	825
GIPC2	NM_017655	NP_060125	Coding	chr1:78045904 plus strand	826
GJA4	NM_002060	NP_002051	Coding	chr1:34792997 plus strand	827
GJA5	NM_181703	NP_859054	Coding	chr1:147760606 minus strand	828
GJA5	NM_005266	NP_005257	Coding	chr1:147773362 minus strand	829
GJA8	NM_005267	NP_005258	Coding	chr1:147902819 plus strand	830
GJA9	NM_030772	NP_110399	Coding	chr1:38881626 minus strand	831
GJB3	NM_001005752	NP_001005752	Coding	chr1:34782309 plus strand	832
GJB3	NM_024009	NP_076872	Coding	chr1:34781188 plus strand	833
GJB4	NM_153212	NP_694944	Coding	chr1:34759740 plus strand	834
GJB5	NM_005268	NP_005259	Coding	chr1:34755046 plus strand	835
GJC2	NM_020435	NP_065168	Coding	chr1:228149713 plus strand	836
GLIS1	NM_147193	NP_671726	Coding	chr1:53734204 minus strand	837
GLMN	NM_053274	NP_444504	Coding	chr1:92299009 minus strand	838
GLRX2	NM_001243399	NP_001230328	Coding	chr1:193106057 minus strand	839
GLRX2	NM_016066	NP_057150	Coding	chr1:193106114 minus strand	840
GLRX2	NM_197962	NP_932066	Coding	chr1:193105478 minus strand	841
GLUL	NM_001033044	NP_001028216	Coding	chr1:182392206 minus strand	842
GLUL	NM_002065	NP_002056	Coding	chr1:182392206 minus strand	842
GLUL	NM_001033056	NP_001028228	Coding	chr1:182391404 minus strand	843
GMEB1	NM_006582	NP_006573	Coding	chr1:28668727 plus strand	844
GMEB1	NM_024482	NP_077808	Coding	chr1:28668727 plus strand	844
GNAI3	NM_006496	NP_006487	Coding	chr1:109548563 plus strand	845
GNAT2	NM_005272	NP_005263	Coding	chr1:109613083 minus strand	846

【０１３４】

GNB1	NM_001282538	NP_001269467	Coding	chr1:1891117 minus strand	847
GNB1	NM_001282539	NP_001269468	Coding	chr1:1891117 minus strand	847
GNB1	NM_002074	NP_002065	Coding	chr1:1891117 minus strand	847
GNG12	NM_018841	NP_061329	Coding	chr1:67833472 minus strand	848
GNG4	NM_001098721	NP_001092191	Coding	chr1:235650754 minus strand	849
GNG4	NM_004485	NP_004476	Coding	chr1:235650754 minus strand	849
GNG4	NM_001098722	NP_001092192	Coding	chr1:235649993 minus strand	850
GNG5	NM_005274	NP_005265	Coding	chr1:84506579 minus strand	851
GNL2	NM_013285	NP_037417	Coding	chr1:37595985 minus strand	852
GNPAT	NM_014236	NP_055051	Coding	chr1:231241172 plus strand	853
GOLPH3L	NM_018178	NP_060648	Coding	chr1:150697196 minus strand	854
GOLT1A	NM_198447	NP_940849	Coding	chr1:204214092 minus strand	855
GON4L	NM_001282858	NP_001269787	Coding	chr1:155857295 minus strand	856
GON4L	NM_001282860	NP_001269789	Coding	chr1:155857295 minus strand	856
GON4L	NM_001282861	NP_001269790	Coding	chr1:155857295 minus strand	856
GON4L	NM_032292	NP_115668	Coding	chr1:155857295 minus strand	856
GON4L	NM_001282856	NP_001269785	Coding	chr1:155859400 minus strand	857
GORAB	NM_001146039	NP_001139511	Coding	chr1:170532121 plus strand	858
GORAB	NM_152281	NP_689494	Coding	chr1:170532121 plus strand	858
GPA33	NM_005814	NP_005805	Coding	chr1:167090631 minus strand	859
GPATCH2	NM_001297754	NP_001284683	Coding	chr1:217631102 minus strand	860
GPATCH2	NM_018040	NP_060510	Coding	chr1:217631102 minus strand	860
GPATCH3	NM_022078	NP_071361	Coding	chr1:26900471 minus strand	861
GPATCH4	NM_015590	NP_056405	Coding	chr1:156601487 minus strand	862
GPATCH4	NM_182679	NP_872620	Coding	chr1:156601487 minus strand	862
GPBP1L1	NM_021639	NP_067652	Coding	chr1:45686630 minus strand	863
GPN2	NM_018066	NP_060536	Coding	chr1:26890378 minus strand	864
GPR137B	NM_003272	NP_003263	Coding	chr1:236142531 plus strand	865

【０１３５】

GPR153	NM_207370	NP_997253	Coding	chr1:6260975 minus strand	866
GPR157	NM_024980	NP_079256	Coding	chr1:9129170 minus strand	867
GPR161	NM_001267612	NP_001254541	Coding	chr1:168136436 minus strand	868
GPR161	NM_001267609	NP_001254538	Coding	chr1:168137667 minus strand	869
GPR161	NM_001267610	NP_001254539	Coding	chr1:168137667 minus strand	869
GPR161	NM_001267611	NP_001254540	Coding	chr1:168137573 minus strand	870
GPR161	NM_001267614	NP_001254543	Coding	chr1:168137573 minus strand	870
GPR161	NM_001267613	NP_001254542	Coding	chr1:168136707 minus strand	871
GPR161	NM_153832	NP_722561	Coding	chr1:168136707 minus strand	871
GPR25	NM_005298	NP_005289	Coding	chr1:200872954 plus strand	872
GPR3	NM_005281	NP_005272	Coding	chr1:27392643 plus strand	873
GPR37L1	NM_004767	NP_004758	Coding	chr1:202122900 plus strand	874
GPR52	NM_005684	NP_005675	Coding	chr1:174448073 plus strand	875
GPR61	NM_031936	NP_114142	Coding	chr1:109539871 plus strand	876
GPR88	NM_022049	NP_071332	Coding	chr1:100538171 plus strand	877
GPR89A	NM_001097612	NP_001091081	Coding	chr1:145607959 plus strand	878
GPR89A	NM_001097613	NP_001091082	Coding	chr1:145607959 plus strand	878
GPR89B	NM_016334	NP_057418	Coding	chr1:147928392 plus strand	879
GPSM2	NM_013296	NP_037428	Coding	chr1:108876980 plus strand	880
GPX7	NM_015696	NP_056511	Coding	chr1:52602370 plus strand	881
GREM2	NM_022469	NP_071914	Coding	chr1:240612162 minus strand	882
GRHL3	NM_001195010	NP_001181939	Coding	chr1:24319565 plus strand	883
GRHL3	NM_198173	NP_937816	Coding	chr1:24319321 plus strand	884
GRHL3	NM_198174	NP_937817	Coding	chr1:24319321 plus strand	884
GRHL3	NM_021180	NP_067003	Coding	chr1:24323039 plus strand	885
GRIK3	NM_000831	NP_000822	Coding	chr1:37034243 minus strand	886
GSTM1	NM_000561	NP_000552	Coding	chr1:109687795 plus strand	887
GSTM1	NM_146421	NP_666533	Coding	chr1:109687795 plus strand	887
GSTM2	NM_000848	NP_000839	Coding	chr1:109668021 plus strand	888
GSTM2	NM_001142368	NP_001135840	Coding	chr1:109668021 plus strand	888

【０１３６】

GSTM3	NM_000849	NP_000840	Coding	chr1:109741038 minus strand	889
GSTM4	NM_000850	NP_000841	Coding	chr1:109656075 plus strand	890
GSTM4	NM_147148	NP_671489	Coding	chr1:109656075 plus strand	890
GSTM5	NM_000851	NP_000842	Coding	chr1:109712241 plus strand	891
GTF2B	NM_001514	NP_001505	Coding	chr1:88891618 minus strand	892
GUCA2A	NM_033553	NP_291031	Coding	chr1:42164724 minus strand	893
GUCA2B	NM_007102	NP_009033	Coding	chr1:42153420 plus strand	894
GUK1	NM_001159391	NP_001152863	Coding	chr1:228144702 plus strand	895
GUK1	NM_001242839	NP_001229768	Coding	chr1:228140083 plus strand	896
GUK1	NM_000858	NP_000849	Coding	chr1:228140227 plus strand	897
GUK1	NM_001159390	NP_001152862	Coding	chr1:228140227 plus strand	897
GUK1	NM_001242840	NP_001229769	Coding	chr1:228140227 plus strand	897
H3F3A	NM_002107	NP_002098	Coding	chr1:226062706 plus strand	898
H6PD	NM_001282587	NP_001269516	Coding	chr1:9239843 plus strand	899
H6PD	NM_004285	NP_004276	Coding	chr1:9234803 plus strand	900
HAO2	NM_001005783	NP_001005783	Coding	chr1:119368775 plus strand	901
HAO2	NM_016527	NP_057611	Coding	chr1:119368775 plus strand	901
HAPLN2	NM_021817	NP_068589	Coding	chr1:156619293 plus strand	902
HAX1	NM_001018837	NP_001018238	Coding	chr1:154272562 plus strand	903
HAX1	NM_006118	NP_006109	Coding	chr1:154272562 plus strand	903
HCN3	NM_020897	NP_065948	Coding	chr1:155277426 plus strand	904
HCRTR1	NM_001525	NP_001516	Coding	chr1:31617699 plus strand	905
HDAC1	NM_004964	NP_004955	Coding	chr1:32292106 plus strand	906
HDGF	NM_001126050	NP_001119522	Coding	chr1:156752448 minus strand	907
HDGF	NM_004494	NP_004485	Coding	chr1:156751751 minus strand	908
HDGF	NM_001126051	NP_001119523	Coding	chr1:156752232 minus strand	909
HEATR1	NM_018072	NP_060542	Coding	chr1:236604541 minus strand	910
HECTD3	NM_024602	NP_078878	Coding	chr1:45011355 minus strand	911
HENMT1	NM_144584	NP_653185	Coding	chr1:108661526 minus strand	912

【０１３７】

HENMT1	NM_001102592	NP_001096062	Coding	chr1:108661122 minus strand	913
HES2	NM_019089	NP_061962	Coding	chr1:6419919 minus strand	914
HES3	NM_001024598	NP_001019769	Coding	chr1:6244191 plus strand	915
HES4	NM_001142467	NP_001135939	Coding	chr1:1000172 minus strand	916
HES4	NM_021170	NP_066993	Coding	chr1:1000172 minus strand	916
HES5	NM_001010926	NP_001010926	Coding	chr1:2530245 minus strand	917
HEYL	NM_014571	NP_055386	Coding	chr1:39639676 minus strand	918
HFE2	NM_145277	NP_660320	Coding	chr1:146021822 minus strand	919
HFE2	NM_202004	NP_973733	Coding	chr1:146021822 minus strand	919
HFE2	NM_213652	NP_998817	Coding	chr1:146021822 minus strand	919
HFE2	NM_213653	NP_998818	Coding	chr1:146021822 minus strand	919
HFM1	NM_001017975	NP_001017975	Coding	chr1:91404869 minus strand	920
HHAT	NM_001170580	NP_001164051	Coding	chr1:210329295 plus strand	921
HHAT	NM_001122834	NP_001116306	Coding	chr1:210328251 plus strand	922
HHAT	NM_001170564	NP_001164035	Coding	chr1:210328251 plus strand	922
HHAT	NM_001170587	NP_001164058	Coding	chr1:210328905 plus strand	923
HHAT	NM_001170588	NP_001164059	Coding	chr1:210328905 plus strand	923
HHAT	NM_018194	NP_060664	Coding	chr1:210328905 plus strand	923
HHIPL2	NM_024746	NP_079022	Coding	chr1:222548102 minus strand	924
HHLA3	NM_001031693	NP_001026863	Coding	chr1:70354809 plus strand	925
HHLA3	NM_001036645	NP_001031722	Coding	chr1:70354809 plus strand	925
HHLA3	NM_001036646	NP_001031723	Coding	chr1:70354809 plus strand	925
HIAT1	NM_033055	NP_149044	Coding	chr1:100038232 plus strand	926
HIPK1	NM_152696	NP_689909	Coding	chr1:113929373 plus strand	927
HIPK1	NM_198268	NP_938009	Coding	chr1:113929373 plus strand	927
HIPK1	NM_198269	NP_938010	Coding	chr1:113951144 plus strand	928
HIPK1	NM_181358	NP_852003	Coding	chr1:113953876 plus strand	929
HIST2H2AA3	NM_003516	NP_003507	Coding	chr1:149842751 minus strand	930
HIST2H2AA3	NM_003516	NP_003507	Coding	chr1:149851060 plus strand	931
HIST2H2AA4	NM_001040874	NP_001035807	Coding	chr1:149842751 minus strand	930

【０１３８】

HIST2H2AA4	NM_001040874	NP_001035807	Coding	chr1:149851060 plus strand	931
HIST2H2AB	NM_175065	NP_778235	Coding	chr1:149887916 minus strand	932
HIST2H2AC	NM_003517	NP_003508	Coding	chr1:149886974 plus strand	933
HIST2H2BE	NM_003528	NP_003519	Coding	chr1:149886682 minus strand	934
HIST2H2BF	NM_001024599	NP_001019770	Coding	chr1:149812373 minus strand	935
HIST2H2BF	NM_001161334	NP_001154806	Coding	chr1:149812373 minus strand	935
HIST2H3A	NM_001005464	NP_001005464	Coding	chr1:149852618 plus strand	936
HIST2H3A	NM_001005464	NP_001005464	Coding	chr1:149841193 minus strand	937
HIST2H3C	NM_021059	NP_066403	Coding	chr1:149852618 plus strand	936
HIST2H3C	NM_021059	NP_066403	Coding	chr1:149841193 minus strand	937
HIST2H3D	NM_001123375	NP_001116847	Coding	chr1:149813681 minus strand	938
HIST2H4A	NM_003548	NP_003539	Coding	chr1:149861159 minus strand	939
HIST2H4A	NM_003548	NP_003539	Coding	chr1:149832656 plus strand	940
HIST2H4B	NM_001034077	NP_001029249	Coding	chr1:149861159 minus strand	939
HIST2H4B	NM_001034077	NP_001029249	Coding	chr1:149832656 plus strand	940
HIST3H2A	NM_033445	NP_254280	Coding	chr1:228457859 minus strand	941
HIST3H2BB	NM_175055	NP_778225	Coding	chr1:228458106 plus strand	942
HIST3H3	NM_003493	NP_003484	Coding	chr1:228425325 minus strand	943
HIVEP3	NM_001127714	NP_001121186	Coding	chr1:41918707 minus strand	944
HIVEP3	NM_024503	NP_078779	Coding	chr1:41918707 minus strand	944
HLX	NM_021958	NP_068777	Coding	chr1:220879400 plus strand	945
HMCN1	NM_031935	NP_114141	Coding	chr1:185734550 plus strand	946
HMGB4	NM_145205	NP_660206	Coding	chr1:33860474 plus strand	947
HMGCL	NM_000191	NP_000182	Coding	chr1:23825459 minus strand	948
HMGCL	NM_001166059	NP_001159531	Coding	chr1:23825459 minus strand	948
HMGCS2	NM_001166107	NP_001159579	Coding	chr1:119768932 minus strand	949
HMGCS2	NM_005518	NP_005509	Coding	chr1:119768932 minus strand	949
HMGN2	NM_005517	NP_005508	Coding	chr1:26472410 plus strand	950

【０１３９】

HNRNPCL1	NM_001013631	NP_001013653	Coding	chr1:12848725 minus strand	951
HNRNPCL2	NM_001136561	NP_001130033	Coding	chr1:13116854 minus strand	952
HNRNPCL3	NM_001146181	NP_001139653	Coding	chr1:13165560 minus strand	953
HNRNPCL3	NM_001146181	NP_001139653	Coding	chr1:13061231 plus strand	954
HNRNPCL4	NM_001302551	NP_001289480	Coding	chr1:13061309 plus strand	955
HNRNPCL4	NM_001302551	NP_001289480	Coding	chr1:13165482 minus strand	956
HNRNPR	NM_001102397	NP_001095867	Coding	chr1:23344364 minus strand	957
HNRNPR	NM_001102398	NP_001095868	Coding	chr1:23344364 minus strand	957
HNRNPR	NM_001102399	NP_001095869	Coding	chr1:23344364 minus strand	957
HNRNPR	NM_001297620	NP_001284549	Coding	chr1:23344364 minus strand	957
HNRNPR	NM_001297621	NP_001284550	Coding	chr1:23344364 minus strand	957
HNRNPR	NM_001297622	NP_001284551	Coding	chr1:23344364 minus strand	957
HNRNPR	NM_005826	NP_005817	Coding	chr1:23344364 minus strand	957
HNRNPU	NM_004501	NP_004492	Coding	chr1:244864525 minus strand	958
HNRNPU	NM_031844	NP_114032	Coding	chr1:244864525 minus strand	958
HOOK1	NM_015888	NP_056972	Coding	chr1:59814860 plus strand	959
HORMAD1	NM_001199829	NP_001186758	Coding	chr1:150720888 minus strand	960
HORMAD1	NM_032132	NP_115508	Coding	chr1:150720888 minus strand	960
HP1BP3	NM_016287	NP_057371	Coding	chr1:20786688 minus strand	961
HPCA	NM_002143	NP_002134	Coding	chr1:32886496 plus strand	962
HPCAL4	NM_001282396	NP_001269325	Coding	chr1:39691485 minus strand	963
HPCAL4	NM_001282397	NP_001269326	Coding	chr1:39691485 minus strand	963
HPCAL4	NM_016257	NP_057341	Coding	chr1:39691710 minus strand	964
HPDL	NM_032756	NP_116145	Coding	chr1:45326872 plus strand	965
HRNR	NM_001009931	NP_001009931	Coding	chr1:152224196 minus strand	966
HS2ST1	NM_001134492	NP_001127964	Coding	chr1:86914651 plus strand	967
HS2ST1	NM_012262	NP_036394	Coding	chr1:86914651 plus strand	967
HSD11B1	NM_001206741	NP_001193670	Coding	chr1:209686179 plus strand	968
HSD11B1	NM_181755	NP_861420	Coding	chr1:209686179 plus strand	968
HSD11B1	NM_005525	NP_005516	Coding	chr1:209704790 plus	969

【０１４０】

				strand	
HSD17B7	NM_016371	NP_057455	Coding	chr1:162790705 plus strand	970
HSD3B1	NM_000862	NP_000853	Coding	chr1:119507202 plus strand	971
HSD3B2	NM_001166120	NP_001159592	Coding	chr1:119414930 plus strand	972
HSD3B2	NM_000198	NP_000189	Coding	chr1:119415119 plus strand	973
HSPA6	NM_002155	NP_002146	Coding	chr1:161524539 plus strand	974
HSPB11	NM_016126	NP_057210	Coding	chr1:53945615 minus strand	975
HSPB7	NM_014424	NP_055239	Coding	chr1:16018790 minus strand	976
HSPG2	NM_001291860	NP_001278789	Coding	chr1:21937297 minus strand	977
HSPG2	NM_005529	NP_005520	Coding	chr1:21937297 minus strand	977
HTR1D	NM_000864	NP_000855	Coding	chr1:23194729 minus strand	978
HTR6	NM_000871	NP_000862	Coding	chr1:19665286 plus strand	979
HYI	NM_001190880	NP_001177809	Coding	chr1:43453989 minus strand	980
HYI	NM_001243526	NP_001230455	Coding	chr1:43453989 minus strand	980
HYI	NM_031207	NP_112484	Coding	chr1:43453989 minus strand	980
IARS2	NM_018060	NP_060530	Coding	chr1:220094112 plus strand	981
IBA57	NM_001010867	NP_001010867	Coding	chr1:228165727 plus strand	982
ICMT	NM_012405	NP_036537	Coding	chr1:6235984 minus strand	983
ID3	NM_002167	NP_002158	Coding	chr1:23559794 minus strand	984
IER5	NM_016545	NP_057629	Coding	chr1:181088501 plus strand	985
IFFO2	NM_001136265	NP_001129737	Coding	chr1:18956332 minus strand	986
IFI16	NM_001206567	NP_001193496	Coding	chr1:159009891 plus strand	987
IFI16	NM_005531	NP_005522	Coding	chr1:159009891 plus strand	987
IFI44	NM_006417	NP_006408	Coding	chr1:78649791 plus strand	988
IFI44L	NM_006820	NP_006811	Coding	chr1:78620402 plus strand	989
IFI6	NM_002038	NP_002029	Coding	chr1:27672213 minus strand	990
IFI6	NM_022872	NP_075010	Coding	chr1:27672213 minus strand	990
IFI6	NM_022873	NP_075011	Coding	chr1:27672213 minus strand	990
IFNLR1	NM_170743	NP_734464	Coding	chr1:24187275 minus strand	991

【０１４１】

IFNLR1	NM_173064	NP_775087	Coding	chr1:24187275 minus strand	991
IFNLR1	NM_173065	NP_775088	Coding	chr1:24187275 minus strand	991
IGFN1	NM_001164586	NP_001158058	Coding	chr1:201190824 plus strand	992
IGSF21	NM_032880	NP_116269	Coding	chr1:18107745 plus strand	993
IGSF3	NM_001007237	NP_001007238	Coding	chr1:116667755 minus strand	994
IGSF3	NM_001542	NP_001533	Coding	chr1:116666956 minus strand	995
IGSF8	NM_052868	NP_443100	Coding	chr1:160098649 minus strand	996
IGSF8	NM_001206665	NP_001193594	Coding	chr1:160098828 minus strand	997
IGSF9	NM_001135050	NP_001128522	Coding	chr1:159945596 minus strand	998
IGSF9	NM_020789	NP_065840	Coding	chr1:159945596 minus strand	998
IKBKE	NM_001193321	NP_001180250	Coding	chr1:206470242 plus strand	999
IKBKE	NM_001193322	NP_001180251	Coding	chr1:206470242 plus strand	999
IKBKE	NM_014002	NP_054721	Coding	chr1:206470242 plus strand	999
IL10	NM_000572	NP_000563	Coding	chr1:206772494 minus strand	1000
IL12RB2	NM_001258214	NP_001245143	Coding	chr1:67307363 plus strand	1001
IL12RB2	NM_001258215	NP_001245144	Coding	chr1:67307363 plus strand	1001
IL12RB2	NM_001258216	NP_001245145	Coding	chr1:67307363 plus strand	1001
IL12RB2	NM_001559	NP_001550	Coding	chr1:67307363 plus strand	1001
IL19	NM_013371	NP_037503	Coding	chr1:206828876 plus strand	1002
IL19	NM_153758	NP_715639	Coding	chr1:206798869 plus strand	1003
IL20	NM_018724	NP_061194	Coding	chr1:206865808 plus strand	1004
IL22RA1	NM_021258	NP_067081	Coding	chr1:24143285 minus strand	1005
IL23R	NM_144701	NP_653302	Coding	chr1:67166485 plus strand	1006
IL24	NM_001185156	NP_001172085	Coding	chr1:206897442 plus strand	1007
IL24	NM_001185157	NP_001172086	Coding	chr1:206897442 plus strand	1007
IL24	NM_001185158	NP_001172087	Coding	chr1:206897442 plus strand	1007
IL24	NM_006850	NP_006841	Coding	chr1:206897442 plus strand	1007
IL6R	NM_000565	NP_000556	Coding	chr1:154405192 plus strand	1008
IL6R	NM_001206866	NP_001193795	Coding	chr1:154405192 plus strand	1008

【０１４２】

IL6R	NM_181359	NP_852004	Coding	chr1:154405192 plus strand	1008
ILDR2	NM_199351	NP_955383	Coding	chr1:166975324 minus strand	1009
ILF2	NM_001267809	NP_001254738	Coding	chr1:153671028 minus strand	1010
ILF2	NM_004515	NP_004506	Coding	chr1:153671028 minus strand	1010
INADL	NM_176877	NP_795352	Coding	chr1:61742476 plus strand	1011
INPP5B	NM_005540	NP_005531	Coding	chr1:37947057 minus strand	1012
INPP5B	NM_001297434	NP_001284363	Coding	chr1:37931791 minus strand	1013
INSL5	NM_005478	NP_005469	Coding	chr1:66801259 minus strand	1014
INSRR	NM_014215	NP_055030	Coding	chr1:156858920 minus strand	1015
INTS3	NM_023015	NP_075391	Coding	chr1:153728090 plus strand	1016
INTS7	NM_001199809	NP_001186738	Coding	chr1:212035660 minus strand	1017
INTS7	NM_001199811	NP_001186740	Coding	chr1:212035660 minus strand	1017
INTS7	NM_001199812	NP_001186741	Coding	chr1:212035660 minus strand	1017
INTS7	NM_015434	NP_056249	Coding	chr1:212035660 minus strand	1017
IPO13	NM_014652	NP_055467	Coding	chr1:43946805 plus strand	1018
IPO9	NM_018085	NP_060555	Coding	chr1:201829159 plus strand	1019
IPP	NM_001145349	NP_001138821	Coding	chr1:45750813 minus strand	1020
IPP	NM_005897	NP_005888	Coding	chr1:45750813 minus strand	1020
IQCC	NM_001160042	NP_001153514	Coding	chr1:32205634 plus strand	1021
IQCC	NM_018134	NP_060604	Coding	chr1:32205634 plus strand	1021
IQGAP3	NM_178229	NP_839943	Coding	chr1:156572604 minus strand	1022
IRF2BP2	NM_001077397	NP_001070865	Coding	chr1:234609525 minus strand	1023
IRF2BP2	NM_182972	NP_892017	Coding	chr1:234609525 minus strand	1023
IRF6	NM_001206696	NP_001193625	Coding	chr1:209806175 minus strand	1024
IRF6	NM_006147	NP_006138	Coding	chr1:209806175 minus strand	1024
ISG15	NM_005101	NP_005092	Coding	chr1:1013466 plus strand	1025
ISG20L2	NM_030980	NP_112242	Coding	chr1:156727913 minus strand	1026
ITGA10	NM_003637	NP_003628	Coding	chr1:145910090 minus strand	1027
ITGB3BP	NM_001206739	NP_001193668	Coding	chr1:63523273 minus strand	1028

【０１４３】

ITGB3BP	NM_014288	NP_055103	Coding	chr1:63523273 minus strand	1028
ITLN1	NM_017625	NP_060095	Coding	chr1:160885170 minus strand	1029
ITLN2	NM_080878	NP_543154	Coding	chr1:160954799 minus strand	1030
ITPKB	NM_002221	NP_002212	Coding	chr1:226739175 minus strand	1031
IVL	NM_005547	NP_005538	Coding	chr1:152908562 plus strand	1032
IVNS1ABP	NM_006469	NP_006460	Coding	chr1:185317329 minus strand	1033
JAK1	NM_002227	NP_002218	Coding	chr1:64966504 minus strand	1034
JMJD4	NM_001161465	NP_001154937	Coding	chr1:227735411 minus strand	1035
JMJD4	NM_023007	NP_075383	Coding	chr1:227735411 minus strand	1035
JTB	NM_006694	NP_006685	Coding	chr1:153977975 minus strand	1036
JUN	NM_002228	NP_002219	Coding	chr1:58784113 minus strand	1037
KANK4	NM_181712	NP_859063	Coding	chr1:62319412 minus strand	1038
KAZN	NM_015209	NP_056024	Coding	chr1:14598716 plus strand	1039
KAZN	NM_201628	NP_963922	Coding	chr1:14598716 plus strand	1039
KAZN	NM_001017999	NP_001017999	Coding	chr1:14945918 plus strand	1040
KAZN	NM_001018000	NP_001018000	Coding	chr1:14924128 plus strand	1041
KAZN	NM_001018001	NP_001018001	Coding	chr1:14929799 plus strand	1042
KCNA10	NM_005549	NP_005540	Coding	chr1:110519175 minus strand	1043
KCNA2	NM_004974	NP_004965	Coding	chr1:110606353 minus strand	1044
KCNA2	NM_001204269	NP_001191198	Coding	chr1:110631474 minus strand	1045
KCNA3	NM_002232	NP_002223	Coding	chr1:110675033 minus strand	1046
KCNAB2	NM_001199861	NP_001186790	Coding	chr1:5992297 plus strand	1047
KCNAB2	NM_001199862	NP_001186791	Coding	chr1:6045920 plus strand	1048
KCNAB2	NM_001199863	NP_001186792	Coding	chr1:6046113 plus strand	1049
KCNAB2	NM_003636	NP_003627	Coding	chr1:6026012 plus strand	1050
KCNAB2	NM_172130	NP_742128	Coding	chr1:6026012 plus strand	1050
KCNAB2	NM_001199860	NP_001186789	Coding	chr1:6034287 plus strand	1051
KCNC4	NM_001039574	NP_001034663	Coding	chr1:110210713 plus strand	1052
KCNC4	NM_004978	NP_004969	Coding	chr1:110210713 plus strand	1052
KCND3	NM_004980	NP_004971	Coding	chr1:111989155 minus strand	1053
KCND3	NM_172198	NP_751948	Coding	chr1:111989155 minus strand	1053

【０１４４】

KCNH1	NM_002238	NP_002229	Coding	chr1:211134115 minus strand	1054
KCNH1	NM_172362	NP_758872	Coding	chr1:211134115 minus strand	1054
KCNJ10	NM_002241	NP_002232	Coding	chr1:160070261 minus strand	1055
KCNJ9	NM_004983	NP_004974	Coding	chr1:160081569 plus strand	1056
KCNK1	NM_002245	NP_002236	Coding	chr1:233614003 plus strand	1057
KCNK2	NM_001017424	NP_001017424	Coding	chr1:215005541 plus strand	1058
KCNK2	NM_001017425	NP_001017425	Coding	chr1:215083216 plus strand	1059
KCNK2	NM_014217	NP_055032	Coding	chr1:215083216 plus strand	1059
KCNN3	NM_001204087	NP_001191016	Coding	chr1:154870278 minus strand	1060
KCNN3	NM_002249	NP_002240	Coding	chr1:154870278 minus strand	1060
KCNN3	NM_170782	NP_740752	Coding	chr1:154859862 minus strand	1061
KCNQ4	NM_004700	NP_004691	Coding	chr1:40784011 plus strand	1062
KCNQ4	NM_172163	NP_751895	Coding	chr1:40784011 plus strand	1062
KCNT2	NM_001287819	NP_001274748	Coding	chr1:196608431 minus strand	1063
KCNT2	NM_001287820	NP_001274749	Coding	chr1:196608431 minus strand	1063
KCNT2	NM_198503	NP_940905	Coding	chr1:196608431 minus strand	1063
KCTD3	NM_016121	NP_057205	Coding	chr1:215567391 plus strand	1064
KDF1	NM_152365	NP_689578	Coding	chr1:26960410 minus strand	1065
KDM1A	NM_001009999	NP_001009999	Coding	chr1:23019447 plus strand	1066
KDM1A	NM_015013	NP_055828	Coding	chr1:23019447 plus strand	1066
KDM4A	NM_014663	NP_055478	Coding	chr1:43650125 plus strand	1067
KDM5B	NM_006618	NP_006609	Coding	chr1:202808421 minus strand	1068
KHDRBS1	NM_001271878	NP_001258807	Coding	chr1:32013693 plus strand	1069
KHDRBS1	NM_006559	NP_006550	Coding	chr1:32013693 plus strand	1069
KIAA0040	NM_001162893	NP_001156365	Coding	chr1:175193093 minus strand	1070
KIAA0040	NM_001162894	NP_001156366	Coding	chr1:175193093 minus strand	1070
KIAA0040	NM_001162895	NP_001156367	Coding	chr1:175192813 minus strand	1071
KIAA0040	NM_014656	NP_055471	Coding	chr1:175192813 minus strand	1071
KIAA0319L	NM_024874	NP_079150	Coding	chr1:35557436 minus strand	1072
KIAA0754	NM_015038	NP_055853	Coding	chr1:39409503 plus strand	1073

【０１４５】

KIAA0907	NM_014949	NP_055764	Coding	chr1:155934397 minus strand	1074
KIAA1107	NM_015237	NP_056052	Coding	chr1:92167051 plus strand	1075
KIAA1324	NM_001284353	NP_001271282	Coding	chr1:109186548 plus strand	1076
KIAA1324	NM_001267048	NP_001253977	Coding	chr1:109113962 plus strand	1077
KIAA1324	NM_001284352	NP_001271281	Coding	chr1:109113962 plus strand	1077
KIAA1324	NM_020775	NP_065826	Coding	chr1:109113962 plus strand	1077
KIAA1522	NM_001198972	NP_001185901	Coding	chr1:32765633 plus strand	1078
KIAA1522	NM_001198973	NP_001185902	Coding	chr1:32765633 plus strand	1078
KIAA1522	NM_020888	NP_065939	Coding	chr1:32741910 plus strand	1079
KIAA1614	NM_020950	NP_066001	Coding	chr1:180913176 plus strand	1080
KIAA1804	NM_032435	NP_115811	Coding	chr1:233327767 plus strand	1081
KIAA2013	NM_138346	NP_612355	Coding	chr1:11926428 minus strand	1082
KIF14	NM_014875	NP_055690	Coding	chr1:200620734 minus strand	1083
KIF17	NM_001122819	NP_001116291	Coding	chr1:20718017 minus strand	1084
KIF17	NM_001287212	NP_001274141	Coding	chr1:20718017 minus strand	1084
KIF17	NM_020816	NP_065867	Coding	chr1:20718017 minus strand	1084
KIF1B	NM_015074	NP_055889	Coding	chr1:10210705 plus strand	1085
KIF1B	NM_183416	NP_904325	Coding	chr1:10210705 plus strand	1085
KIF21B	NM_001252100	NP_001239029	Coding	chr1:201023700 minus strand	1086
KIF21B	NM_001252102	NP_001239031	Coding	chr1:201023700 minus strand	1086
KIF21B	NM_001252103	NP_001239032	Coding	chr1:201023700 minus strand	1086
KIF21B	NM_017596	NP_060066	Coding	chr1:201023700 minus strand	1086
KIF26B	NM_018012	NP_060482	Coding	chr1:245154984 plus strand	1087
KIF2C	NM_001297656	NP_001284585	Coding	chr1:44746361 plus strand	1088
KIF2C	NM_001297657	NP_001284586	Coding	chr1:44746361 plus strand	1088
KIF2C	NM_001297655	NP_001284584	Coding	chr1:44739817 plus strand	1089
KIF2C	NM_006845	NP_006836	Coding	chr1:44739817 plus strand	1089
KIFAP3	NM_001204514	NP_001191443	Coding	chr1:170074738 minus strand	1090
KIFAP3	NM_001204516	NP_001191445	Coding	chr1:170074738 minus strand	1090
KIFAP3	NM_014970	NP_055785	Coding	chr1:170074738 minus strand	1090
KIFAP3	NM_001204517	NP_001191446	Coding	chr1:170068915 minus	1091

【０１４６】

				strand	
KIRREL	NM_001286349	NP_001273278	Coding	chr1:157993272 plus strand	1092
KIRREL	NM_018240	NP_060710	Coding	chr1:157993272 plus strand	1092
KISS1	NM_002256	NP_002247	Coding	chr1:204196491 minus strand	1093
KLF17	NM_173484	NP_775755	Coding	chr1:44118849 plus strand	1094
KLHDC7A	NM_152375	NP_689588	Coding	chr1:18480929 plus strand	1095
KLHDC8A	NM_018203	NP_060673	Coding	chr1:205357000 minus strand	1096
KLHDC8A	NM_001271863	NP_001258792	Coding	chr1:205357090 minus strand	1097
KLHDC8A	NM_001271864	NP_001258793	Coding	chr1:205357090 minus strand	1097
KLHDC8A	NM_001271865	NP_001258794	Coding	chr1:205357090 minus strand	1097
KLHDC9	NM_001007255	NP_001007256	Coding	chr1:161098390 plus strand	1098
KLHDC9	NM_152366	NP_689579	Coding	chr1:161098390 plus strand	1098
KLHL12	NM_021633	NP_067646	Coding	chr1:202927243 minus strand	1099
KLHL17	NM_198317	NP_938073	Coding	chr1:960586 plus strand	1100
KLHL20	NM_014458	NP_055273	Coding	chr1:173714940 plus strand	1101
KLHL21	NM_014851	NP_055666	Coding	chr1:6602869 minus strand	1102
KMO	NM_003679	NP_003670	Coding	chr1:241532133 plus strand	1103
KNCN	NM_001097611	NP_001091080	Coding	chr1:46551215 minus strand	1104
KPNA6	NM_012316	NP_036448	Coding	chr1:32108042 plus strand	1105
KPRP	NM_001025231	NP_001020402	Coding	chr1:152758029 plus strand	1106
KRTCAP2	NM_173852	NP_776251	Coding	chr1:155173328 minus strand	1107
KTI12	NM_138417	NP_612426	Coding	chr1:52033800 minus strand	1108
L1TD1	NM_001164835	NP_001158307	Coding	chr1:62194801 plus strand	1109
L1TD1	NM_019079	NP_061952	Coding	chr1:62194801 plus strand	1109
LACTBL1	NM_001289974	NP_001276903	Coding	chr1:22965430 minus strand	1110
LAD1	NM_005558	NP_005549	Coding	chr1:201399541 minus strand	1111
LAMB3	NM_000228	NP_000219	Coding	chr1:209652475 minus strand	1112
LAMB3	NM_001017402	NP_001017402	Coding	chr1:209651334 minus strand	1113
LAMB3	NM_001127641	NP_001121113	Coding	chr1:209652329 minus strand	1114
LAMC1	NM_002293	NP_002284	Coding	chr1:183023459 plus strand	1115

【０１４７】

LAMC2	NM_005562	NP_005553	Coding	chr1:183186038 plus strand	1116
LAMC2	NM_018891	NP_061486	Coding	chr1:183186038 plus strand	1116
LAMTOR2	NM_001145264	NP_001138736	Coding	chr1:156054725 plus strand	1117
LAMTOR2	NM_014017	NP_054736	Coding	chr1:156054725 plus strand	1117
LAMTOR5	NM_006402	NP_006393	Coding	chr1:110407924 minus strand	1118
LAPTM5	NM_006762	NP_006753	Coding	chr1:30757836 minus strand	1119
LAX1	NM_001136190	NP_001129662	Coding	chr1:203765155 plus strand	1120
LAX1	NM_017773	NP_060243	Coding	chr1:203765155 plus strand	1120
LAX1	NM_001282878	NP_001269807	Coding	chr1:203769637 plus strand	1121
LBR	NM_002296	NP_002287	Coding	chr1:225428113 minus strand	1122
LBR	NM_194442	NP_919424	Coding	chr1:225428855 minus strand	1123
LCE1A	NM_178348	NP_848125	Coding	chr1:152827472 plus strand	1124
LCE1B	NM_178349	NP_848126	Coding	chr1:152811970 plus strand	1125
LCE1C	NM_001276331	NP_001263260	Coding	chr1:152806631 minus strand	1126
LCE1C	NM_178351	NP_848128	Coding	chr1:152806631 minus strand	1126
LCE1D	NM_178352	NP_848129	Coding	chr1:152796750 plus strand	1127
LCE1E	NM_178353	NP_848130	Coding	chr1:152786276 plus strand	1128
LCE1F	NM_178354	NP_848131	Coding	chr1:152776371 plus strand	1129
LCE2A	NM_178428	NP_848515	Coding	chr1:152698363 plus strand	1130
LCE2B	NM_014357	NP_055172	Coding	chr1:152686122 plus strand	1131
LCE2C	NM_178429	NP_848516	Coding	chr1:152675314 plus strand	1132
LCE2D	NM_178430	NP_848517	Coding	chr1:152663410 plus strand	1133
LCE3A	NM_178431	NP_848518	Coding	chr1:152623103 minus strand	1134
LCE3B	NM_178433	NP_848520	Coding	chr1:152613810 plus strand	1135
LCE3C	NM_178434	NP_848521	Coding	chr1:152600661 plus strand	1136
LCE3D	NM_032563	NP_115952	Coding	chr1:152580504 minus strand	1137
LCE3E	NM_178435	NP_848522	Coding	chr1:152566753 minus strand	1138

【０１４８】

LCE4A	NM_178356	NP_848133	Coding	chr1:152709046 plus strand	1139
LCE5A	NM_178438	NP_848525	Coding	chr1:152510843 plus strand	1140
LCE6A	NM_001128600	NP_001122072	Coding	chr1:152842853 plus strand	1141
LCK	NM_005356	NP_005347	Coding	chr1:32251238 plus strand	1142
LCK	NM_001042771	NP_001036236	Coding	chr1:32274110 plus strand	1143
LDLRAD1	NM_001010978	NP_001010978	Coding	chr1:54018186 minus strand	1144
LDLRAD1	NM_001276392	NP_001263321	Coding	chr1:54018186 minus strand	1144
LDLRAD1	NM_001276393	NP_001263322	Coding	chr1:54018186 minus strand	1144
LDLRAD1	NM_001276394	NP_001263323	Coding	chr1:54018186 minus strand	1144
LDLRAD1	NM_001276395	NP_001263324	Coding	chr1:54018186 minus strand	1144
LDLRAD2	NM_001013693	NP_001013715	Coding	chr1:21812264 plus strand	1145
LDLRAP1	NM_015627	NP_056442	Coding	chr1:25543584 plus strand	1146
LEFTY1	NM_020997	NP_066277	Coding	chr1:225889146 minus strand	1147
LEFTY2	NM_001172425	NP_001165896	Coding	chr1:225941383 minus strand	1148
LEFTY2	NM_003240	NP_003231	Coding	chr1:225941383 minus strand	1148
LELP1	NM_001010857	NP_001010857	Coding	chr1:153203429 plus strand	1149
LEMD1	NM_001001552	NP_001001552	Coding	chr1:205422086 minus strand	1150
LEMD1	NM_001199050	NP_001185979	Coding	chr1:205422086 minus strand	1150
LEMD1	NM_001199051	NP_001185980	Coding	chr1:205422086 minus strand	1150
LEMD1	NM_001199052	NP_001185981	Coding	chr1:205422086 minus strand	1150
LENEP	NM_018655	NP_061125	Coding	chr1:154993585 plus strand	1151
LEPR	NM_001003679	NP_001003679	Coding	chr1:65420651 plus strand	1152
LEPR	NM_001003680	NP_001003680	Coding	chr1:65420651 plus strand	1152
LEPR	NM_002303	NP_002294	Coding	chr1:65420651 plus strand	1152
LEPR	NM_001198687	NP_001185616	Coding	chr1:65525688 plus strand	1153
LEPR	NM_001198688	NP_001185617	Coding	chr1:65525688 plus strand	1153
LEPR	NM_001198689	NP_001185618	Coding	chr1:65525688 plus strand	1153
LEPREL1	NM_001146289	NP_001139761	Coding	chr1:42767084 minus strand	1154
LEPREL1	NM_001243246	NP_001230175	Coding	chr1:42767084 minus strand	1154
LEPREL1	NM_022356	NP_071751	Coding	chr1:42767084 minus strand	1154
LEPROT	NM_001198681	NP_001185610	Coding	chr1:65420715 plus strand	1155

【０１４９】

LEPROT	NM_001198683	NP_001185612	Coding	chr1:65420447 plus strand	1156
LEPROT	NM_017526	NP_059996	Coding	chr1:65420447 plus strand	1156
LGALS8	NM_006499	NP_006490	Coding	chr1:236523438 plus strand	1157
LGALS8	NM_201543	NP_963837	Coding	chr1:236523438 plus strand	1157
LGALS8	NM_201545	NP_963839	Coding	chr1:236518213 plus strand	1158
LGALS8	NM_201544	NP_963838	Coding	chr1:236523726 plus strand	1159
LGR6	NM_001017403	NP_001017403	Coding	chr1:202193989 plus strand	1160
LGR6	NM_001017404	NP_001017404	Coding	chr1:202214154 plus strand	1161
LGR6	NM_021636	NP_067649	Coding	chr1:202203776 plus strand	1162
LHX4	NM_033343	NP_203129	Coding	chr1:180230297 plus strand	1163
LHX8	NM_001256114	NP_001243043	Coding	chr1:75134881 plus strand	1164
LHX8	NM_001001933	NP_001001933	Coding	chr1:75128433 plus strand	1165
LHX9	NM_020204	NP_064589	Coding	chr1:197917386 plus strand	1166
LHX9	NM_001014434	NP_001014434	Coding	chr1:197912504 plus strand	1167
LIN28A	NM_024674	NP_078950	Coding	chr1:26410777 plus strand	1168
LIN9	NM_001270409	NP_001257338	Coding	chr1:226309503 minus strand	1169
LIN9	NM_173083	NP_775106	Coding	chr1:226309503 minus strand	1169
LIN9	NM_001270410	NP_001257339	Coding	chr1:226309748 minus strand	1170
LINGO4	NM_001004432	NP_001004432	Coding	chr1:151805406 minus strand	1171
LIX1L	NM_153713	NP_714924	Coding	chr1:145958019 minus strand	1172
LMNA	NM_001282626	NP_001269555	Coding	chr1:156114669 plus strand	1173
LMNA	NM_005572	NP_005563	Coding	chr1:156114669 plus strand	1173
LMNA	NM_170707	NP_733821	Coding	chr1:156114669 plus strand	1173
LMNA	NM_170708	NP_733822	Coding	chr1:156114669 plus strand	1173
LMNA	NM_001282625	NP_001269554	Coding	chr1:156082545 plus strand	1174
LMNA	NM_001257374	NP_001244303	Coding	chr1:156126116 plus strand	1175
LMNA	NM_001282624	NP_001269553	Coding	chr1:156126116 plus strand	1175
LMO4	NM_006769	NP_006760	Coding	chr1:87328467 plus strand	1176
LMOD1	NM_012134	NP_036266	Coding	chr1:201946588 minus strand	1177

【０１５０】

LMX1A	NM_177398	NP_796372	Coding	chr1:165356715 minus strand	1178
LMX1A	NM_001174069	NP_001167540	Coding	chr1:165356241 minus strand	1179
LOC100129924	NM_001242750	NP_001229679	Coding	chr1:42787989 plus strand	1180
LOC101927844	NM_001290053	NP_001276982	Coding	chr1:87212668 plus strand	1181
LOC101928436	NM_001286997	NP_001273926	Coding	chr1:103525483 minus strand	1182
LOC101929983	NM_001300891	NP_001287820	Coding	chr1:13053659 minus strand	1183
LOC101929983	NM_001300891	NP_001287820	Coding	chr1:13175280 plus strand	1184
LOC149373	NM_001256615	NP_001243544	Coding	chr1:231187627 minus strand	1185
LOC391003	NM_001099850	NP_001093320	Coding	chr1:13226154 minus strand	1186
LOC400736	NM_001291380	NP_001278309	Coding	chr1:13201409 minus strand	1187
LOC643355	NM_001270945	NP_001257874	Coding	chr1:111990567 plus strand	1188
LOC645382	NM_001291381	NP_001278310	Coding	chr1:13303538 plus strand	1189
LOC730159	NM_001195190	NP_001182119	Coding	chr1:173635521 plus strand	1190
LOR	NM_000427	NP_000418	Coding	chr1:153259702 plus strand	1191
LPAR3	NM_012152	NP_036284	Coding	chr1:84893213 minus strand	1192
LPGAT1	NM_014873	NP_055688	Coding	chr1:211830772 minus strand	1193
LPHN2	NM_001297705	NP_001284634	Coding	chr1:81800396 plus strand	1194
LPHN2	NM_001297706	NP_001284635	Coding	chr1:81800396 plus strand	1194
LPHN2	NM_012302	NP_036434	Coding	chr1:81800396 plus strand	1194
LPHN2	NM_001297704	NP_001284633	Coding	chr1:81699769 plus strand	1195
LPPR4	NM_001166252	NP_001159724	Coding	chr1:99264291 plus strand	1196
LPPR4	NM_014839	NP_055654	Coding	chr1:99264291 plus strand	1196
LPPR5	NM_001010861	NP_001010861	Coding	chr1:99004893 minus strand	1197
LPPR5	NM_001037317	NP_001032394	Coding	chr1:99004893 minus strand	1197
LRIF1	NM_001006945	NP_001006946	Coding	chr1:110963944 minus strand	1198
LRIF1	NM_018372	NP_060842	Coding	chr1:110963944 minus strand	1198
LRIG2	NM_014813	NP_055628	Coding	chr1:113073169 plus strand	1199
LRP8	NM_001018054	NP_001018064	Coding	chr1:53328149 minus strand	1200
LRP8	NM_004631	NP_004622	Coding	chr1:53328149 minus strand	1200
LRP8	NM_017522	NP_059992	Coding	chr1:53328149 minus strand	1200
LRP8	NM_033300	NP_150643	Coding	chr1:53328149 minus	1200

【０１５１】

				strand	
LRRC38	NM_001010847	NP_001010847	Coding	chr1:13513747 minus strand	1201
LRRC39	NM_001256385	NP_001243314	Coding	chr1:100178273 minus strand	1202
LRRC39	NM_001256386	NP_001243315	Coding	chr1:100178273 minus strand	1202
LRRC39	NM_001256387	NP_001243316	Coding	chr1:100178273 minus strand	1202
LRRC39	NM_144620	NP_653221	Coding	chr1:100178273 minus strand	1202
LRRC40	NM_017768	NP_060238	Coding	chr1:70205678 minus strand	1203
LRRC41	NM_006369	NP_006360	Coding	chr1:46303366 minus strand	1204
LRRC42	NM_001256409	NP_001243338	Coding	chr1:53946325 plus strand	1205
LRRC42	NM_052940	NP_443172	Coding	chr1:53946325 plus strand	1205
LRRC47	NM_020710	NP_065761	Coding	chr1:3796504 minus strand	1206
LRRC52	NM_001005214	NP_001005214	Coding	chr1:165544240 plus strand	1207
LRRC7	NM_020794	NP_065845	Coding	chr1:69760174 plus strand	1208
LRRC71	NM_144702	NP_653303	Coding	chr1:156920631 plus strand	1209
LRRC8B	NM_015350	NP_056165	Coding	chr1:89558712 plus strand	1210
LRRC8B	NM_001134476	NP_001127948	Coding	chr1:89524837 plus strand	1211
LRRC8C	NM_032270	NP_115646	Coding	chr1:89633084 plus strand	1212
LRRC8D	NM_001134479	NP_001127951	Coding	chr1:89821013 plus strand	1213
LRRC8D	NM_018103	NP_060573	Coding	chr1:89821920 plus strand	1214
LRRIQ3	NM_001105659	NP_001099129	Coding	chr1:74198187 minus strand	1215
LRRN2	NM_201630	NP_963924	Coding	chr1:204685469 minus strand	1216
LRRN2	NM_006338	NP_006329	Coding	chr1:204685353 minus strand	1217
LSM10	NM_032881	NP_116270	Coding	chr1:36397892 minus strand	1218
LURAP1	NM_001013615	NP_001013633	Coding	chr1:46203333 plus strand	1219
LUZP1	NM_001142546	NP_001136018	Coding	chr1:23168858 minus strand	1220
LUZP1	NM_033631	NP_361013	Coding	chr1:23168858 minus strand	1220
LY9	NM_001033667	NP_001028839	Coding	chr1:160796073 plus strand	1221
LY9	NM_001261456	NP_001248385	Coding	chr1:160796073 plus strand	1221
LY9	NM_001261457	NP_001248386	Coding	chr1:160796073 plus strand	1221
LY9	NM_002348	NP_002339	Coding	chr1:160796073 plus strand	1221
LYPD8	NM_001085474	NP_001078943	Coding	chr1:248755787 minus strand	1222

【０１５２】

LYPD8	NM_001291283	NP_001278212	Coding	chr1:248755787 minus strand	1222
LYPLA2	NM_007260	NP_009191	Coding	chr1:23791155 plus strand	1223
LYPLAL1	NM_001300769	NP_001287698	Coding	chr1:219173830 plus strand	1224
LYPLAL1	NM_001300770	NP_001287699	Coding	chr1:219173830 plus strand	1224
LYPLAL1	NM_138794	NP_620149	Coding	chr1:219173830 plus strand	1224
LYPLAL1	NM_001300772	NP_001287701	Coding	chr1:219174968 plus strand	1225
LYPLAL1	NM_001300771	NP_001287700	Coding	chr1:219174170 plus strand	1226
LYSMD1	NM_001136543	NP_001130015	Coding	chr1:151165948 minus strand	1227
LYSMD1	NM_212551	NP_997716	Coding	chr1:151165894 minus strand	1228
LYST	NM_000081	NP_000072	Coding	chr1:235866927 minus strand	1229
LYST	NM_001301365	NP_001288294	Coding	chr1:235883708 minus strand	1230
LZIC	NM_032368	NP_115744	Coding	chr1:9942768 minus strand	1231
MAB21L3	NM_152367	NP_689580	Coding	chr1:116111754 plus strand	1232
MACF1	NM_012090	NP_036222	Coding	chr1:39084166 plus strand	1233
MAD2L2	NM_001127325	NP_001120797	Coding	chr1:11691621 minus strand	1234
MAD2L2	NM_006341	NP_006332	Coding	chr1:11681214 minus strand	1235
MAEL	NM_001286378	NP_001273307	Coding	chr1:166975581 plus strand	1236
MAEL	NM_001286377	NP_001273306	Coding	chr1:166989088 plus strand	1237
MAEL	NM_032858	NP_116247	Coding	chr1:166989088 plus strand	1237
MAGI3	NM_001142782	NP_001136254	Coding	chr1:113390852 plus strand	1238
MAGI3	NM_152900	NP_690864	Coding	chr1:113390852 plus strand	1238
MAGOH	NM_002370	NP_002361	Coding	chr1:53238610 minus strand	1239
MAN1A2	NM_006699	NP_006690	Coding	chr1:117367462 plus strand	1240
MAN1C1	NM_001289010	NP_001275939	Coding	chr1:25617467 plus strand	1241
MAN1C1	NM_020379	NP_065112	Coding	chr1:25617467 plus strand	1241
MANEAL	NM_152496	NP_689709	Coding	chr1:37795487 plus strand	1242
MANEAL	NM_001031740	NP_001026910	Coding	chr1:37794101 plus strand	1243
MANEAL	NM_001113482	NP_001106954	Coding	chr1:37794101 plus strand	1243
MAP10	NM_019090	NP_061963	Coding	chr1:232804891 plus strand	1244
MAP1LC3C	NM_001004343	NP_001004343	Coding	chr1:241999083 minus strand	1245

【０１５３】

MAP3K6	NM_001297609	NP_001284538	Coding	chr1:27366866 minus strand	1246
MAP3K6	NM_004672	NP_004663	Coding	chr1:27366866 minus strand	1246
MAP7D1	NM_001286365	NP_001273294	Coding	chr1:36155964 plus strand	1247
MAP7D1	NM_001286366	NP_001273295	Coding	chr1:36155964 plus strand	1247
MAP7D1	NM_018067	NP_060537	Coding	chr1:36155964 plus strand	1247
MAPKAPK2	NM_004759	NP_004750	Coding	chr1:206685019 plus strand	1248
MAPKAPK2	NM_032960	NP_116584	Coding	chr1:206685019 plus strand	1248
MARC1	NM_022746	NP_073583	Coding	chr1:220786696 plus strand	1249
MARC2	NM_017898	NP_060368	Coding	chr1:220748333 plus strand	1250
MARCKSL1	NM_023009	NP_075385	Coding	chr1:32336239 minus strand	1251
MARK1	NM_001286124	NP_001273053	Coding	chr1:220528182 plus strand	1252
MARK1	NM_001286126	NP_001273055	Coding	chr1:220528182 plus strand	1252
MARK1	NM_001286128	NP_001273057	Coding	chr1:220528182 plus strand	1252
MARK1	NM_001286129	NP_001273058	Coding	chr1:220528182 plus strand	1252
MARK1	NM_018650	NP_061120	Coding	chr1:220528182 plus strand	1252
MASP2	NM_006610	NP_006601	Coding	chr1:11047239 minus strand	1253
MASP2	NM_139208	NP_631947	Coding	chr1:11047239 minus strand	1253
MAST2	NM_015112	NP_055927	Coding	chr1:45803612 plus strand	1254
MATN1	NM_002379	NP_002370	Coding	chr1:30723585 minus strand	1255
MCL1	NM_001197320	NP_001184249	Coding	chr1:150579738 minus strand	1256
MCL1	NM_021960	NP_068779	Coding	chr1:150579738 minus strand	1256
MCL1	NM_182763	NP_877495	Coding	chr1:150579738 minus strand	1256
MCOLN2	NM_153259	NP_694991	Coding	chr1:84997113 minus strand	1257
MCOLN3	NM_001253693	NP_001240622	Coding	chr1:85048540 minus strand	1258
MCOLN3	NM_018298	NP_060768	Coding	chr1:85048540 minus strand	1258
MDM4	NM_001204171	NP_001191100	Coding	chr1:204516378 plus strand	1259
MDM4	NM_001204172	NP_001191101	Coding	chr1:204516378 plus strand	1259
MDM4	NM_001278516	NP_001265445	Coding	chr1:204516378 plus strand	1259
MDM4	NM_001278517	NP_001265446	Coding	chr1:204516378 plus	1259

【０１５４】

				strand	
MDM4	NM_001278518	NP_001265447	Coding	chr1:204516378 plus strand	1259
MDM4	NM_001278519	NP_001265448	Coding	chr1:204516378 plus strand	1259
MDM4	NM_002393	NP_002384	Coding	chr1:204516378 plus strand	1259
MEAF6	NM_001270875	NP_001257804	Coding	chr1:37514819 minus strand	1260
MEAF6	NM_001270876	NP_001257805	Coding	chr1:37514819 minus strand	1260
MEAF6	NM_022756	NP_073593	Coding	chr1:37514819 minus strand	1260
MECR	NM_001024732	NP_001019903	Coding	chr1:29230958 minus strand	1261
MECR	NM_016011	NP_057095	Coding	chr1:29230958 minus strand	1261
MED18	NM_001127350	NP_001120822	Coding	chr1:28329001 plus strand	1262
MED18	NM_017638	NP_060108	Coding	chr1:28329001 plus strand	1262
MED8	NM_001001653	NP_001001653	Coding	chr1:43389812 minus strand	1263
MED8	NM_052877	NP_443109	Coding	chr1:43389812 minus strand	1263
MED8	NM_201542	NP_963836	Coding	chr1:43389812 minus strand	1263
MEF2D	NM_005920	NP_005911	Coding	chr1:156500842 minus strand	1264
MEF2D	NM_001271629	NP_001258558	Coding	chr1:156490599 minus strand	1265
MEGF6	NM_001409	NP_001400	Coding	chr1:3611495 minus strand	1266
METTL11B	NM_001136107	NP_001129579	Coding	chr1:170146046 plus strand	1267
METTL13	NM_001007239	NP_001007240	Coding	chr1:171781620 plus strand	1268
METTL13	NM_014955	NP_055770	Coding	chr1:171781620 plus strand	1268
METTL13	NM_015935	NP_057019	Coding	chr1:171781620 plus strand	1268
METTL18	NM_033418	NP_219486	Coding	chr1:169794920 minus strand	1269
MEX3A	NM_001093725	NP_001087194	Coding	chr1:156081998 minus strand	1270
MFAP2	NM_001135247	NP_001128719	Coding	chr1:16981586 minus strand	1271
MFAP2	NM_017459	NP_059453	Coding	chr1:16981586 minus strand	1271
MFAP2	NM_001135248	NP_001128720	Coding	chr1:16980678 minus strand	1272
MFAP2	NM_002403	NP_002394	Coding	chr1:16980678 minus strand	1272
MFN2	NM_001127660	NP_001121132	Coding	chr1:11980180 plus strand	1273
MFN2	NM_014874	NP_055689	Coding	chr1:11980180 plus strand	1273

【０１５５】

MFSD2A	NM_001136493	NP_001129965	Coding	chr1:39955111 plus strand	1274
MFSD2A	NM_001287808	NP_001274737	Coding	chr1:39955111 plus strand	1274
MFSD2A	NM_001287809	NP_001274738	Coding	chr1:39955111 plus strand	1274
MFSD2A	NM_032793	NP_116182	Coding	chr1:39955111 plus strand	1274
MFSD4	NM_181644	NP_857595	Coding	chr1:205568983 plus strand	1275
MGST3	NM_004528	NP_004519	Coding	chr1:165630872 plus strand	1276
MIA3	NM_198551	NP_940953	Coding	chr1:222618101 plus strand	1277
MIA3	NM_001300867	NP_001287796	Coding	chr1:222644302 plus strand	1278
MIB2	NM_001170686	NP_001164157	Coding	chr1:1615414 plus strand	1279
MIB2	NM_001170687	NP_001164158	Coding	chr1:1615414 plus strand	1279
MIB2	NM_001170688	NP_001164159	Coding	chr1:1615414 plus strand	1279
MIB2	NM_080875	NP_543151	Coding	chr1:1615414 plus strand	1279
MIB2	NM_001170689	NP_001164160	Coding	chr1:1615864 plus strand	1280
MIER1	NM_001077701	NP_001071169	Coding	chr1:66930242 plus strand	1281
MIER1	NM_001077704	NP_001071172	Coding	chr1:66930242 plus strand	1281
MIER1	NM_001077700	NP_001071168	Coding	chr1:66924894 plus strand	1282
MIER1	NM_001077702	NP_001071170	Coding	chr1:66924894 plus strand	1282
MIER1	NM_001077703	NP_001071171	Coding	chr1:66924894 plus strand	1282
MIER1	NM_001146110	NP_001139582	Coding	chr1:66924894 plus strand	1282
MIER1	NM_001146111	NP_001139583	Coding	chr1:66924894 plus strand	1282
MIER1	NM_001146112	NP_001139584	Coding	chr1:66924894 plus strand	1282
MIER1	NM_001146113	NP_001139585	Coding	chr1:66924894 plus strand	1282
MIER1	NM_001278215	NP_001265144	Coding	chr1:66924894 plus strand	1282
MIER1	NM_020948	NP_065999	Coding	chr1:66924894 plus strand	1282
MIIP	NM_021933	NP_068752	Coding	chr1:12019241 plus strand	1283
MINOS1	NM_001032363	NP_001027535	Coding	chr1:19596976 plus strand	1284
MINOS1	NM_001204082	NP_001191011	Coding	chr1:19596976 plus strand	1284
MINOS1	NM_001204083	NP_001191012	Coding	chr1:19596976 plus strand	1284
MINOS1-NBL1	NM_001204088	NP_001191017	Coding	chr1:19596976 plus strand	1284
MINOS1-NBL1	NM_001204089	NP_001191018	Coding	chr1:19596976 plus strand	1284
MIR205HG	NM_001104548	NP_001098018	Coding	chr1:209428822 plus strand	1285
MIXL1	NM_001282402	NP_001269331	Coding	chr1:226223617 plus strand	1286
MIXL1	NM_031944	NP_114150	Coding	chr1:226223617 plus strand	1286
MKNK1	NM_001135553	NP_001129025	Coding	chr1:46604294 minus strand	1287
MKNK1	NM_003684	NP_003675	Coding	chr1:46604294 minus strand	1287
MKNK1	NM_198973	NP_945324	Coding	chr1:46604294 minus strand	1287

【０１５６】

MLLT11	NM_006818	NP_006809	Coding	chr1:151059674 plus strand	1288
MMACHC	NM_015506	NP_056321	Coding	chr1:45500183 plus strand	1289
MMEL1	NM_033467	NP_258428	Coding	chr1:2633042 minus strand	1290
MMP23B	NM_006983	NP_008914	Coding	chr1:1632180 plus strand	1291
MNDA	NM_002432	NP_002423	Coding	chr1:158831377 plus strand	1292
MOB3C	NM_201403	NP_958805	Coding	chr1:46616891 minus strand	1293
MOB3C	NM_145279	NP_660322	Coding	chr1:46615133 minus strand	1294
MORN1	NM_001301060	NP_001287989	Coding	chr1:2391751 minus strand	1295
MORN1	NM_024848	NP_079124	Coding	chr1:2391751 minus strand	1295
MOV10	NM_001130079	NP_001123551	Coding	chr1:112674472 plus strand	1296
MOV10	NM_001286072	NP_001273001	Coding	chr1:112674311 plus strand	1297
MOV10	NM_020963	NP_066014	Coding	chr1:112674311 plus strand	1297
MPC2	NM_001143674	NP_001137146	Coding	chr1:167937069 minus strand	1298
MPC2	NM_015415	NP_056230	Coding	chr1:167937069 minus strand	1298
MPL	NM_005373	NP_005364	Coding	chr1:43337803 plus strand	1299
MPZ	NM_000530	NP_000521	Coding	chr1:161309972 minus strand	1300
MPZL1	NM_001146191	NP_001139663	Coding	chr1:167721949 plus strand	1301
MPZL1	NM_003953	NP_003944	Coding	chr1:167721949 plus strand	1301
MPZL1	NM_024569	NP_078845	Coding	chr1:167721949 plus strand	1301
MR1	NM_001194999	NP_001181928	Coding	chr1:181033424 plus strand	1302
MR1	NM_001195000	NP_001181929	Coding	chr1:181033424 plus strand	1302
MR1	NM_001195035	NP_001181964	Coding	chr1:181033424 plus strand	1302
MR1	NM_001531	NP_001522	Coding	chr1:181033424 plus strand	1302
MROH7	NM_001039464	NP_001034553	Coding	chr1:54641739 plus strand	1303
MROH7	NM_001291332	NP_001278261	Coding	chr1:54641739 plus strand	1303
MROH9	NM_001163629	NP_001157101	Coding	chr1:170935470 plus strand	1304
MROH9	NM_025063	NP_079339	Coding	chr1:170935494 plus strand	1305
MRPL20	NM_017971	NP_060441	Coding	chr1:1407313 minus strand	1306
MRPL24	NM_024540	NP_078816	Coding	chr1:156741131 minus strand	1307
MRPL24	NM_145729	NP_663781	Coding	chr1:156741131 minus strand	1307

【０１５７】

MRPL37	NM_016491	NP_057575	Coding	chr1:54200166 plus strand	1308
MRPL55	NM_181441	NP_852106	Coding	chr1:228109312 minus strand	1309
MRPL55	NM_181454	NP_852119	Coding	chr1:228109312 minus strand	1309
MRPL55	NM_181455	NP_852120	Coding	chr1:228109312 minus strand	1309
MRPL55	NM_181456	NP_852121	Coding	chr1:228109312 minus strand	1309
MRPL55	NM_181462	NP_852127	Coding	chr1:228109312 minus strand	1309
MRPL55	NM_181463	NP_852128	Coding	chr1:228109312 minus strand	1309
MRPL55	NM_181464	NP_852129	Coding	chr1:228109312 minus strand	1309
MRPL55	NM_181465	NP_852130	Coding	chr1:228109312 minus strand	1309
MRPL9	NM_001300733	NP_001287662	Coding	chr1:151763916 minus strand	1310
MRPL9	NM_031420	NP_113608	Coding	chr1:151763916 minus strand	1310
MRPS14	NM_022100	NP_071383	Coding	chr1:175023455 minus strand	1311
MRPS15	NM_031280	NP_112570	Coding	chr1:36464439 minus strand	1312
MRPS21	NM_018997	NP_061870	Coding	chr1:150293841 plus strand	1313
MRPS21	NM_031901	NP_114107	Coding	chr1:150293841 plus strand	1313
MRTO4	NM_016183	NP_057267	Coding	chr1:19251580 plus strand	1314
MSH4	NM_002440	NP_002431	Coding	chr1:75796870 plus strand	1315
MST1L	NM_001271733	NP_001258662	Coding	chr1:16764480 minus strand	1316
MSTO1	NM_001256532	NP_001243461	Coding	chr1:155610169 plus strand	1317
MSTO1	NM_001256533	NP_001243462	Coding	chr1:155610169 plus strand	1317
MSTO1	NM_018116	NP_060586	Coding	chr1:155610169 plus strand	1317
MT1HL1	NM_001276687	NP_001263616	Coding	chr1:237004418 minus strand	1318
MTF1	NM_005955	NP_005946	Coding	chr1:37859620 minus strand	1319
MTF2	NM_001164391	NP_001157863	Coding	chr1:93079234 plus strand	1320
MTF2	NM_001164392	NP_001157864	Coding	chr1:93079234 plus strand	1320
MTF2	NM_001164393	NP_001157865	Coding	chr1:93079234 plus strand	1320
MTF2	NM_007358	NP_031384	Coding	chr1:93079234 plus strand	1320
MTFR1L	NM_001099625	NP_001093095	Coding	chr1:25819905 plus strand	1321
MTFR1L	NM_001099627	NP_001093097	Coding	chr1:25819905 plus strand	1321
MTFR1L	NM_019557	NP_062457	Coding	chr1:25820192 plus strand	1322
MTFR1L	NM_001099626	NP_001093096	Coding	chr1:25820827 plus strand	1323

【０１５８】

MTHFR	NM_005957	NP_005948	Coding	chr1:11806103 minus strand	1324
MTMR11	NM_001145862	NP_001139334	Coding	chr1:149936898 minus strand	1325
MTMR11	NM_181873	NP_870988	Coding	chr1:149936373 minus strand	1326
MTOR	NM_004958	NP_004949	Coding	chr1:11262551 minus strand	1327
MTR	NM_000254	NP_000245	Coding	chr1:236795280 plus strand	1328
MTR	NM_001291939	NP_001278868	Coding	chr1:236795280 plus strand	1328
MTR	NM_001291940	NP_001278869	Coding	chr1:236795280 plus strand	1328
MTX1	NM_002455	NP_002446	Coding	chr1:155208698 plus strand	1329
MTX1	NM_198883	NP_942584	Coding	chr1:155208698 plus strand	1329
MUC1	NM_001018016	NP_001018016	Coding	chr1:155192915 minus strand	1330
MUC1	NM_001018017	NP_001018017	Coding	chr1:155192915 minus strand	1330
MUC1	NM_001044390	NP_001037855	Coding	chr1:155192915 minus strand	1330
MUC1	NM_001044391	NP_001037856	Coding	chr1:155192915 minus strand	1330
MUC1	NM_001044392	NP_001037857	Coding	chr1:155192915 minus strand	1330
MUC1	NM_001044393	NP_001037858	Coding	chr1:155192915 minus strand	1330
MUC1	NM_001204285	NP_001191214	Coding	chr1:155192915 minus strand	1330
MUC1	NM_001204286	NP_001191215	Coding	chr1:155192915 minus strand	1330
MUC1	NM_001204287	NP_001191216	Coding	chr1:155192915 minus strand	1330
MUC1	NM_001204288	NP_001191217	Coding	chr1:155192915 minus strand	1330
MUC1	NM_001204289	NP_001191218	Coding	chr1:155192915 minus strand	1330
MUC1	NM_001204290	NP_001191219	Coding	chr1:155192915 minus strand	1330
MUC1	NM_001204291	NP_001191220	Coding	chr1:155192915 minus strand	1330
MUC1	NM_001204292	NP_001191221	Coding	chr1:155192915 minus strand	1330
MUC1	NM_001204293	NP_001191222	Coding	chr1:155192915 minus strand	1330
MUC1	NM_001204294	NP_001191223	Coding	chr1:155192915 minus strand	1330
MUC1	NM_001204295	NP_001191224	Coding	chr1:155192915 minus strand	1330
MUC1	NM_001204296	NP_001191225	Coding	chr1:155192915 minus strand	1330

【０１５９】

MUC1	NM_001204297	NP_001191226	Coding	chr1:155192915 minus strand	1330
MUC1	NM_002456	NP_002447	Coding	chr1:155192915 minus strand	1330
MUL1	NM_024544	NP_078820	Coding	chr1:20508181 minus strand	1331
MUTYH	NM_001048174	NP_001041639	Coding	chr1:45339957 minus strand	1332
MUTYH	NM_001293191	NP_001280120	Coding	chr1:45339957 minus strand	1332
MUTYH	NM_001293195	NP_001280124	Coding	chr1:45339957 minus strand	1332
MUTYH	NM_001293196	NP_001280125	Coding	chr1:45340116 minus strand	1333
MUTYH	NM_001048172	NP_001041637	Coding	chr1:45340115 minus strand	1334
MUTYH	NM_001048173	NP_001041638	Coding	chr1:45340115 minus strand	1334
MUTYH	NM_001048171	NP_001041636	Coding	chr1:45340470 minus strand	1335
MUTYH	NM_001128425	NP_001121897	Coding	chr1:45340470 minus strand	1335
MUTYH	NM_001293190	NP_001280119	Coding	chr1:45340470 minus strand	1335
MUTYH	NM_001293192	NP_001280121	Coding	chr1:45340470 minus strand	1335
MUTYH	NM_012222	NP_036354	Coding	chr1:45340470 minus strand	1335
MXRA8	NM_001282585	NP_001269514	Coding	chr1:1358547 minus strand	1336
MXRA8	NM_001282584	NP_001269513	Coding	chr1:1358794 minus strand	1337
MXRA8	NM_032348	NP_115724	Coding	chr1:1358794 minus strand	1337
MXRA8	NM_001282583	NP_001269512	Coding	chr1:1361777 minus strand	1338
MXRA8	NM_001282582	NP_001269511	Coding	chr1:1363541 minus strand	1339
MYBPH	NM_004997	NP_004988	Coding	chr1:203175814 minus strand	1340
MYBPHL	NM_001010985	NP_001010985	Coding	chr1:109307041 minus strand	1341
MYBPHL	NM_001265613	NP_001252542	Coding	chr1:109307041 minus strand	1341
MYCBP	NM_012333	NP_036465	Coding	chr1:38873378 minus strand	1342
MYCL	NM_001033081	NP_001028253	Coding	chr1:39902015 minus strand	1343
MYCL	NM_001033082	NP_001028254	Coding	chr1:39902015 minus strand	1343
MYCL	NM_005376	NP_005367	Coding	chr1:39902015 minus strand	1343
MYOC	NM_000261	NP_000252	Coding	chr1:171652633 minus strand	1344
MYOG	NM_002479	NP_002470	Coding	chr1:203086038 minus strand	1345
MYOM3	NM_152372	NP_689585	Coding	chr1:24112175 minus strand	1346

【０１６０】

MYSM1	NM_001085487	NP_001078956	Coding	chr1:58700075 minus strand	1347
NADK	NM_023018	NP_075394	Coding	chr1:1778470 minus strand	1348
NADK	NM_001198994	NP_001185923	Coding	chr1:1780069 minus strand	1349
NADK	NM_001198995	NP_001185924	Coding	chr1:1758642 minus strand	1350
NADK	NM_001198993	NP_001185922	Coding	chr1:1778858 minus strand	1351
NASP	NM_001195193	NP_001182122	Coding	chr1:45583987 plus strand	1352
NASP	NM_002482	NP_002473	Coding	chr1:45583987 plus strand	1352
NASP	NM_152298	NP_689511	Coding	chr1:45583987 plus strand	1352
NAV1	NM_001167738	NP_001161210	Coding	chr1:201739834 plus strand	1353
NAV1	NM_020443	NP_065176	Coding	chr1:201648321 plus strand	1354
NBL1	NM_001278165	NP_001265094	Coding	chr1:19643408 plus strand	1355
NBL1	NM_001204086	NP_001191015	Coding	chr1:19645765 plus strand	1356
NBL1	NM_001278164	NP_001265093	Coding	chr1:19643228 plus strand	1357
NBL1	NM_182744	NP_877421	Coding	chr1:19643228 plus strand	1357
NBL1	NM_001278166	NP_001265095	Coding	chr1:19647609 plus strand	1358
NBL1	NM_001204085	NP_001191014	Coding	chr1:19645371 plus strand	1359
NBL1	NM_001204084	NP_001191013	Coding	chr1:19643713 plus strand	1360
NBL1	NM_005380	NP_005371	Coding	chr1:19644172 plus strand	1361
NBPF1	NM_017940	NP_060410	Coding	chr1:16613605 minus strand	1362
NBPF10	NM_001039703	NP_001034792	Coding	chr1:146144804 minus strand	1363
NBPF10	NM_001302371	NP_001289300	Coding	chr1:146144804 minus strand	1363
NBPF11	NM_183372	NP_899228	Coding	chr1:148152190 minus strand	1364
NBPF11	NM_001101663	NP_001095133	Coding	chr1:148135813 minus strand	1365
NBPF12	NM_001278141	NP_001265070	Coding	chr1:146938544 plus strand	1366
NBPF14	NM_015383	NP_056198	Coding	chr1:148595717 minus strand	1367
NBPF15	NM_173638	NP_775909	Coding	chr1:144456805 minus strand	1368
NBPF15	NM_001170755	NP_001164226	Coding	chr1:144459464 minus strand	1369
NBPF20	NM_001278267	NP_001265196	Coding	chr1:145405778 minus strand	1370
NBPF3	NM_001256416	NP_001243345	Coding	chr1:21440089 plus strand	1371
NBPF3	NM_001256417	NP_001243346	Coding	chr1:21440089 plus strand	1371
NBPF3	NM_032264	NP_115640	Coding	chr1:21440089 plus strand	1371
NBPF4	NM_001143989	NP_001137461	Coding	chr1:108244081 minus strand	1372
NBPF6	NM_001143987	NP_001137459	Coding	chr1:108450281 plus strand	1373
NBPF6	NM_001143988	NP_001137460	Coding	chr1:108450281 plus	1373

【０１６１】

				strand	
NBPF7	NM_001047980	NP_001041445	Coding	chr1:119844880 minus strand	1374
NBPF8	NM_001037501	NP_001032590	Coding	chr1:120436350 plus strand	1375
NBPF9	NM_001037675	NP_001032764	Coding	chr1:149082311 minus strand	1376
NBPF9	NM_001277444	NP_001264373	Coding	chr1:149082311 minus strand	1376
NCDN	NM_001014839	NP_001014839	Coding	chr1:35557791 plus strand	1377
NCDN	NM_001014841	NP_001014841	Coding	chr1:35557791 plus strand	1377
NCDN	NM_014284	NP_055099	Coding	chr1:35557791 plus strand	1377
NCF2	NM_001127651	NP_001121123	Coding	chr1:183590921 minus strand	1378
NCF2	NM_000433	NP_000424	Coding	chr1:183590604 minus strand	1379
NCF2	NM_001190789	NP_001177718	Coding	chr1:183590604 minus strand	1379
NCF2	NM_001190794	NP_001177723	Coding	chr1:183590604 minus strand	1379
NCMAP	NM_001010980	NP_001010980	Coding	chr1:24556075 plus strand	1380
NCSTN	NM_001290184	NP_001277113	Coding	chr1:160343272 plus strand	1381
NCSTN	NM_001290186	NP_001277115	Coding	chr1:160343272 plus strand	1381
NCSTN	NM_015331	NP_056146	Coding	chr1:160343272 plus strand	1381
NDC1	NM_001168551	NP_001162023	Coding	chr1:53838552 minus strand	1382
NDC1	NM_018087	NP_060557	Coding	chr1:53838552 minus strand	1382
NDUFS2	NM_004550	NP_004541	Coding	chr1:161199314 plus strand	1383
NDUFS2	NM_001166159	NP_001159631	Coding	chr1:161202146 plus strand	1384
NDUFS5	NM_001184979	NP_001171908	Coding	chr1:39026294 plus strand	1385
NDUFS5	NM_004552	NP_004543	Coding	chr1:39026294 plus strand	1385
NECAP2	NM_001145277	NP_001138749	Coding	chr1:16440671 plus strand	1386
NECAP2	NM_001145278	NP_001138750	Coding	chr1:16440671 plus strand	1386
NECAP2	NM_018090	NP_060560	Coding	chr1:16440671 plus strand	1386
NEGR1	NM_173808	NP_776169	Coding	chr1:72282594 minus strand	1387
NEK2	NM_001204182	NP_001191111	Coding	chr1:211675630 minus strand	1388
NEK2	NM_001204183	NP_001191112	Coding	chr1:211675630 minus strand	1388
NEK2	NM_002497	NP_002488	Coding	chr1:211675630 minus strand	1388
NEK7	NM_133494	NP_598001	Coding	chr1:198156977 plus strand	1389
NENF	NM_013349	NP_037481	Coding	chr1:212432886 plus	1390

【０１６２】

				strand	
NES	NM_006617	NP_006608	Coding	chr1:156677397 minus strand	1391
NEXN	NM_001172309	NP_001165780	Coding	chr1:77888514 plus strand	1392
NEXN	NM_144573	NP_653174	Coding	chr1:77888514 plus strand	1392
NFASC	NM_001005388	NP_001005388	Coding	chr1:204828653 plus strand	1393
NFASC	NM_001005389	NP_001005389	Coding	chr1:204828653 plus strand	1393
NFASC	NM_001160332	NP_001153804	Coding	chr1:204828653 plus strand	1393
NFASC	NM_001160333	NP_001153805	Coding	chr1:204828653 plus strand	1393
NFASC	NM_015090	NP_055905	Coding	chr1:204828653 plus strand	1393
NFASC	NM_001160331	NP_001153803	Coding	chr1:204944225 plus strand	1394
NFIA	NM_001145511	NP_001138983	Coding	chr1:61077273 plus strand	1395
NFIA	NM_001145512	NP_001138984	Coding	chr1:61081861 plus strand	1396
NFIA	NM_001134673	NP_001128145	Coding	chr1:61082307 plus strand	1397
NFIA	NM_005595	NP_005586	Coding	chr1:61082307 plus strand	1397
NFYC	NM_001142587	NP_001136059	Coding	chr1:40691569 plus strand	1398
NFYC	NM_001142588	NP_001136060	Coding	chr1:40691569 plus strand	1398
NFYC	NM_001142589	NP_001136061	Coding	chr1:40691569 plus strand	1398
NFYC	NM_014223	NP_055038	Coding	chr1:40691569 plus strand	1398
NFYC	NM_001142590	NP_001136062	Coding	chr1:40692007 plus strand	1399
NGF	NM_002506	NP_002497	Coding	chr1:115338236 minus strand	1400
NHLH1	NM_005598	NP_005589	Coding	chr1:160367070 plus strand	1401
NHLH2	NM_005599	NP_005590	Coding	chr1:115841126 minus strand	1402
NHLH2	NM_001111061	NP_001104531	Coding	chr1:115840712 minus strand	1403
NID1	NM_002508	NP_002499	Coding	chr1:236065181 minus strand	1404
NIPAL3	NM_020448	NP_065181	Coding	chr1:24415754 plus strand	1405
NIT1	NM_001185094	NP_001172023	Coding	chr1:161118117 plus strand	1406
NIT1	NM_001185093	NP_001172022	Coding	chr1:161118116 plus strand	1407
NIT1	NM_001185092	NP_001172021	Coding	chr1:161118071 plus strand	1408
NIT1	NM_005600	NP_005591	Coding	chr1:161118071 plus strand	1408
NKAIN1	NM_024522	NP_078798	Coding	chr1:31239887 minus strand	1409
NLRP3	NM_001127462	NP_001120934	Coding	chr1:247418048 plus strand	1410
NLRP3	NM_001243133	NP_001230062	Coding	chr1:247418048 plus	1410

【０１６３】

				strand	
NLRP3	NM_004895	NP_004886	Coding	chr1:247418048 plus strand	1410
NLRP3	NM_183395	NP_899632	Coding	chr1:247418048 plus strand	1410
NLRP3	NM_001079821	NP_001073289	Coding	chr1:247416155 plus strand	1411
NLRP3	NM_001127461	NP_001120933	Coding	chr1:247416155 plus strand	1411
NME7	NM_013330	NP_037462	Coding	chr1:169367963 minus strand	1412
NME7	NM_197972	NP_932076	Coding	chr1:169367963 minus strand	1412
NMNAT1	NM_001297779	NP_001284708	Coding	chr1:9943427 plus strand	1413
NMNAT1	NM_022787	NP_073624	Coding	chr1:9943427 plus strand	1413
NMNAT1	NM_001297778	NP_001284707	Coding	chr1:9942922 plus strand	1414
NMNAT2	NM_015039	NP_055854	Coding	chr1:183418499 minus strand	1415
NMNAT2	NM_170706	NP_733820	Coding	chr1:183304874 minus strand	1416
NOC2L	NM_015658	NP_056473	Coding	chr1:959299 minus strand	1417
NOL9	NM_024654	NP_078930	Coding	chr1:6554598 minus strand	1418
NOS1AP	NM_001126060	NP_001119532	Coding	chr1:162362982 plus strand	1419
NOS1AP	NM_001164757	NP_001158229	Coding	chr1:162069790 plus strand	1420
NOS1AP	NM_014697	NP_055512	Coding	chr1:162069790 plus strand	1420
NOTCH2	NM_001200001	NP_001186930	Coding	chr1:120069703 minus strand	1421
NOTCH2	NM_024408	NP_077719	Coding	chr1:120069703 minus strand	1421
NOTCH2NL	NM_203458	NP_982283	Coding	chr1:146229032 minus strand	1422
NPHP4	NM_001291593	NP_001278522	Coding	chr1:5992473 minus strand	1423
NPHP4	NM_001291594	NP_001278523	Coding	chr1:5992473 minus strand	1423
NPHP4	NM_015102	NP_055917	Coding	chr1:5992473 minus strand	1423
NPHS2	NM_001297575	NP_001284504	Coding	chr1:179575952 minus strand	1424
NPHS2	NM_014625	NP_055440	Coding	chr1:179575952 minus strand	1424
NPL	NM_001200050	NP_001186979	Coding	chr1:182789448 plus strand	1425
NPL	NM_001200051	NP_001186980	Coding	chr1:182789448 plus strand	1425
NPL	NM_001200052	NP_001186981	Coding	chr1:182789448 plus strand	1425
NPL	NM_001200056	NP_001186985	Coding	chr1:182789448 plus strand	1425
NPL	NM_030769	NP_110396	Coding	chr1:182789448 plus strand	1425

【０１６４】

NPPA	NM_006172	NP_006163	Coding	chr1:11847783 minus strand	1426
NPPB	NM_002521	NP_002512	Coding	chr1:11858935 minus strand	1427
NPR1	NM_000906	NP_000897	Coding	chr1:153678687 plus strand	1428
NR0B2	NM_021969	NP_068804	Coding	chr1:26914076 minus strand	1429
NR1I3	NM_001077469	NP_001070937	Coding	chr1:161238210 minus strand	1430
NR1I3	NM_001077470	NP_001070938	Coding	chr1:161238210 minus strand	1430
NR1I3	NM_001077471	NP_001070939	Coding	chr1:161238210 minus strand	1430
NR1I3	NM_001077472	NP_001070940	Coding	chr1:161238210 minus strand	1430
NR1I3	NM_001077473	NP_001070941	Coding	chr1:161238210 minus strand	1430
NR1I3	NM_001077474	NP_001070942	Coding	chr1:161238210 minus strand	1430
NR1I3	NM_001077475	NP_001070943	Coding	chr1:161238210 minus strand	1430
NR1I3	NM_001077476	NP_001070944	Coding	chr1:161238210 minus strand	1430
NR1I3	NM_001077477	NP_001070945	Coding	chr1:161238210 minus strand	1430
NR1I3	NM_001077478	NP_001070946	Coding	chr1:161238210 minus strand	1430
NR1I3	NM_001077479	NP_001070947	Coding	chr1:161238210 minus strand	1430
NR1I3	NM_001077480	NP_001070948	Coding	chr1:161238210 minus strand	1430
NR1I3	NM_001077481	NP_001070949	Coding	chr1:161238210 minus strand	1430
NR1I3	NM_001077482	NP_001070950	Coding	chr1:161238210 minus strand	1430
NR1I3	NM_005122	NP_005113	Coding	chr1:161238210 minus strand	1430
NR5A2	NM_003822	NP_003813	Coding	chr1:200027601 plus strand	1431
NR5A2	NM_205860	NP_995582	Coding	chr1:200027601 plus strand	1431
NR5A2	NM_001276464	NP_001263393	Coding	chr1:200042824 plus strand	1432
NRAS	NM_002524	NP_002515	Coding	chr1:114716894 minus strand	1433
NRD1	NM_001101662	NP_001095132	Coding	chr1:51878937 minus strand	1434
NRD1	NM_002525	NP_002516	Coding	chr1:51878937 minus strand	1434
NRD1	NM_001242361	NP_001229290	Coding	chr1:51878040 minus strand	1435
NSL1	NM_001042549	NP_001036014	Coding	chr1:212791797 minus strand	1436

【０１６５】

NSL1	NM_001297736	NP_001284665	Coding	chr1:212791797 minus strand	1436
NSL1	NM_001297737	NP_001284666	Coding	chr1:212791797 minus strand	1436
NSL1	NM_001297739	NP_001284668	Coding	chr1:212791797 minus strand	1436
NSL1	NM_015471	NP_056286	Coding	chr1:212791797 minus strand	1436
NSUN4	NM_199044	NP_950245	Coding	chr1:46340176 plus strand	1437
NSUN4	NM_001256127	NP_001243056	Coding	chr1:46341177 plus strand	1438
NSUN4	NM_001256128	NP_001243057	Coding	chr1:46341177 plus strand	1438
NT5C1A	NM_032526	NP_115915	Coding	chr1:39672038 minus strand	1439
NTNG1	NM_014917	NP_055732	Coding	chr1:107140122 plus strand	1440
NTNG1	NM_001113226	NP_001106697	Coding	chr1:107140006 plus strand	1441
NTNG1	NM_001113228	NP_001106699	Coding	chr1:107140006 plus strand	1441
NTPCR	NM_032324	NP_115700	Coding	chr1:232950623 plus strand	1442
NTRK1	NM_001007792	NP_001007793	Coding	chr1:156815749 plus strand	1443
NTRK1	NM_001012331	NP_001012331	Coding	chr1:156860878 plus strand	1444
NTRK1	NM_002529	NP_002520	Coding	chr1:156860878 plus strand	1444
NUAK2	NM_030952	NP_112214	Coding	chr1:205321755 minus strand	1445
NUCKS1	NM_022731	NP_073568	Coding	chr1:205750244 minus strand	1446
NUDC	NM_006600	NP_006591	Coding	chr1:26921721 plus strand	1447
NUDT17	NM_001012758	NP_001012776	Coding	chr1:145845632 plus strand	1448
NUF2	NM_031423	NP_113611	Coding	chr1:163321932 plus strand	1449
NUF2	NM_145697	NP_663735	Coding	chr1:163321932 plus strand	1449
NUP133	NM_018230	NP_060700	Coding	chr1:229508341 minus strand	1450
NUP210L	NM_001159484	NP_001152956	Coding	chr1:154155116 minus strand	1451
NUP210L	NM_207308	NP_997191	Coding	chr1:154155116 minus strand	1451
NVL	NM_001243146	NP_001230075	Coding	chr1:224330189 minus strand	1452
NVL	NM_001243147	NP_001230076	Coding	chr1:224330189 minus strand	1452
NVL	NM_002533	NP_002524	Coding	chr1:224330189 minus strand	1452
NVL	NM_206840	NP_996671	Coding	chr1:224330189 minus strand	1452
OAZ3	NM_001301371	NP_001288300	Coding	chr1:151763479 plus	1453

【０１６６】

				strand	
OAZ3	NM_016178	NP_057262	Coding	chr1:151766654 plus strand	1454
OAZ3	NM_001134939	NP_001128411	Coding	chr1:151762968 plus strand	1455
OBSCN	NM_001098623	NP_001092093	Coding	chr1:228208129 plus strand	1456
OBSCN	NM_001271223	NP_001258152	Coding	chr1:228208129 plus strand	1456
OBSCN	NM_052843	NP_443075	Coding	chr1:228208129 plus strand	1456
OCLM	NM_022375	NP_071770	Coding	chr1:186400571 plus strand	1457
ODF2L	NM_001007022	NP_001007023	Coding	chr1:86396342 minus strand	1458
ODF2L	NM_001184765	NP_001171694	Coding	chr1:86396342 minus strand	1458
ODF2L	NM_001184766	NP_001171695	Coding	chr1:86396342 minus strand	1458
ODF2L	NM_020729	NP_065780	Coding	chr1:86396342 minus strand	1458
OLFM3	NM_001288821	NP_001275750	Coding	chr1:101847080 minus strand	1459
OLFM3	NM_001288823	NP_001275752	Coding	chr1:101997234 minus strand	1460
OLFM3	NM_058170	NP_477518	Coding	chr1:101997234 minus strand	1460
OLFML2B	NM_001297713	NP_001284642	Coding	chr1:162024465 minus strand	1461
OLFML2B	NM_015441	NP_056256	Coding	chr1:162024465 minus strand	1461
OLFML3	NM_001286352	NP_001273281	Coding	chr1:113979390 plus strand	1462
OLFML3	NM_001286353	NP_001273282	Coding	chr1:113979390 plus strand	1462
OLFML3	NM_020190	NP_064575	Coding	chr1:113979390 plus strand	1462
OMA1	NM_145243	NP_660286	Coding	chr1:58546774 minus strand	1463
OPN3	NM_014322	NP_055137	Coding	chr1:241640399 minus strand	1464
OPRD1	NM_000911	NP_000902	Coding	chr1:28812141 plus strand	1465
OPTC	NM_014359	NP_055174	Coding	chr1:203494142 plus strand	1466
OR10J1	NM_012351	NP_036483	Coding	chr1:159439721 plus strand	1467
OR10J3	NM_001004467	NP_001004467	Coding	chr1:159314659 minus strand	1468
OR10J5	NM_001004469	NP_001004469	Coding	chr1:159536007 minus strand	1469
OR10K1	NM_001004473	NP_001004473	Coding	chr1:158465561 plus strand	1470
OR10K2	NM_001004476	NP_001004476	Coding	chr1:158420866 minus strand	1471

【０１６７】

OR10R2	NM_001004472	NP_001004472	Coding	chr1:158479877 plus strand	1472
OR10T2	NM_001004475	NP_001004475	Coding	chr1:158399466 minus strand	1473
OR10X1	NM_001004477	NP_001004477	Coding	chr1:158579899 minus strand	1474
OR10Z1	NM_001004478	NP_001004478	Coding	chr1:158606438 plus strand	1475
OR11L1	NM_001001959	NP_001001959	Coding	chr1:247841896 minus strand	1476
OR13G1	NM_001005487	NP_001005487	Coding	chr1:247673041 minus strand	1477
OR14A16	NM_001001966	NP_001001966	Coding	chr1:247815729 minus strand	1478
OR14C36	NM_001001918	NP_001001918	Coding	chr1:248348774 plus strand	1479
OR14I1	NM_001004734	NP_001004734	Coding	chr1:248682304 minus strand	1480
OR1C1	NM_012353	NP_036485	Coding	chr1:247758406 minus strand	1481
OR2AK2	NM_001004491	NP_001004491	Coding	chr1:247965331 plus strand	1482
OR2B11	NM_001004492	NP_001004492	Coding	chr1:247451982 minus strand	1483
OR2C3	NM_198074	NP_932340	Coding	chr1:247533839 minus strand	1484
OR2G2	NM_001001915	NP_001001915	Coding	chr1:247588359 plus strand	1485
OR2G3	NM_001001914	NP_001001914	Coding	chr1:247605585 plus strand	1486
OR2G6	NM_001013355	NP_001013373	Coding	chr1:248521646 plus strand	1487
OR2L13	NM_175911	NP_787107	Coding	chr1:247937190 plus strand	1488
OR2L2	NM_001004686	NP_001004686	Coding	chr1:248038171 plus strand	1489
OR2L3	NM_001004687	NP_001004687	Coding	chr1:248060681 plus strand	1490
OR2L5	NM_001258284	NP_001245213	Coding	chr1:248021947 plus strand	1491
OR2L8	NM_001001963	NP_001001963	Coding	chr1:247948857 plus strand	1492
OR2M2	NM_001004688	NP_001004688	Coding	chr1:248179985 plus strand	1493
OR2M3	NM_001004689	NP_001004689	Coding	chr1:248203067 plus strand	1494
OR2M4	NM_017504	NP_059974	Coding	chr1:248238928 plus strand	1495
OR2M5	NM_001004690	NP_001004690	Coding	chr1:248145147 plus strand	1496
OR2M7	NM_001004691	NP_001004691	Coding	chr1:248324568 minus strand	1497
OR2T1	NM_030904	NP_112166	Coding	chr1:248405994 plus strand	1498

【０１６８】

OR2T10	NM_001004693	NP_001004693	Coding	chr1:248593768 minus strand	1499
OR2T11	NM_001001964	NP_001001964	Coding	chr1:248627128 minus strand	1500
OR2T12	NM_001004692	NP_001004692	Coding	chr1:248295578 minus strand	1501
OR2T2	NM_001004136	NP_001004136	Coding	chr1:248452797 plus strand	1502
OR2T27	NM_001001824	NP_001001824	Coding	chr1:248650884 minus strand	1503
OR2T29	NM_001004694	NP_001004694	Coding	chr1:248559491 minus strand	1504
OR2T3	NM_001005495	NP_001005495	Coding	chr1:248473350 plus strand	1505
OR2T33	NM_001004695	NP_001004695	Coding	chr1:248273814 minus strand	1506
OR2T34	NM_001001821	NP_001001821	Coding	chr1:248574757 minus strand	1507
OR2T35	NM_001001827	NP_001001827	Coding	chr1:248639258 minus strand	1508
OR2T4	NM_001004696	NP_001004696	Coding	chr1:248361580 plus strand	1509
OR2T5	NM_001004697	NP_001004697	Coding	chr1:248488588 plus strand	1510
OR2T6	NM_001005471	NP_001005471	Coding	chr1:248387608 plus strand	1511
OR2T8	NM_001005522	NP_001005522	Coding	chr1:247921017 plus strand	1512
OR2W3	NM_001001957	NP_001001957	Coding	chr1:247895586 plus strand	1513
OR2W5	NM_001004698	NP_001004698	Coding	chr1:247491067 plus strand	1514
OR4F16	NM_001005277	NP_001005277	Coding	chr1:451678 minus strand	1515
OR4F16	NM_001005277	NP_001005277	Coding	chr1:686654 minus strand	1516
OR4F29	NM_001005221	NP_001005221	Coding	chr1:451678 minus strand	1515
OR4F29	NM_001005221	NP_001005221	Coding	chr1:686654 minus strand	1516
OR4F3	NM_001005224	NP_001005224	Coding	chr1:451678 minus strand	1515
OR4F3	NM_001005224	NP_001005224	Coding	chr1:686654 minus strand	1516
OR4F5	NM_001005484	NP_001005484	Coding	chr1:69090 plus strand	1517
OR6F1	NM_001005286	NP_001005286	Coding	chr1:247712755 minus strand	1518
OR6K2	NM_001005279	NP_001005279	Coding	chr1:158700652 minus strand	1519
OR6K3	NM_001005327	NP_001005327	Coding	chr1:158718115 minus strand	1520
OR6K6	NM_001005184	NP_001005184	Coding	chr1:158754815 plus strand	1521
OR6N1	NM_001005185	NP_001005185	Coding	chr1:158766682 minus strand	1522
OR6N2	NM_001005278	NP_001005278	Coding	chr1:158777635 minus strand	1523
OR6P1	NM_001160325	NP_001153797	Coding	chr1:158563604 minus	1524

【０１６９】

				strand	
OR6Y1	NM_001005189	NP_001005189	Coding	chr1:158548105 minus strand	1525
ORC1	NM_001190818	NP_001177747	Coding	chr1:52404471 minus strand	1526
ORC1	NM_001190819	NP_001177748	Coding	chr1:52404471 minus strand	1526
ORC1	NM_004153	NP_004144	Coding	chr1:52404471 minus strand	1526
OSBPL9	NM_148904	NP_683702	Coding	chr1:51729813 plus strand	1527
OSBPL9	NM_148905	NP_683703	Coding	chr1:51729813 plus strand	1527
OSBPL9	NM_148907	NP_683705	Coding	chr1:51729813 plus strand	1527
OSBPL9	NM_024586	NP_078862	Coding	chr1:51616873 plus strand	1528
OSBPL9	NM_148906	NP_683704	Coding	chr1:51616873 plus strand	1528
OSBPL9	NM_148908	NP_683706	Coding	chr1:51616873 plus strand	1528
OSBPL9	NM_148909	NP_683707	Coding	chr1:51616873 plus strand	1528
OSCP1	NM_145047	NP_659484	Coding	chr1:36450485 minus strand	1529
OSCP1	NM_206837	NP_996668	Coding	chr1:36450485 minus strand	1529
OTUD3	NM_015207	NP_056022	Coding	chr1:19882394 plus strand	1530
OTUD7B	NM_020205	NP_064590	Coding	chr1:150010737 minus strand	1531
OVGP1	NM_002557	NP_002548	Coding	chr1:111427777 minus strand	1532
OXCT2	NM_022120	NP_071403	Coding	chr1:39771348 minus strand	1533
PABPC4	NM_001135653	NP_001129125	Coding	chr1:39576849 minus strand	1534
PABPC4	NM_001135654	NP_001129126	Coding	chr1:39576849 minus strand	1534
PABPC4	NM_003819	NP_003810	Coding	chr1:39576849 minus strand	1534
PADI1	NM_013358	NP_037490	Coding	chr1:17205125 plus strand	1535
PADI2	NM_007365	NP_031391	Coding	chr1:17119453 minus strand	1536
PADI3	NM_016233	NP_057317	Coding	chr1:17249097 plus strand	1537
PADI4	NM_012387	NP_036519	Coding	chr1:17308194 plus strand	1538
PADI6	NM_207421	NP_997304	Coding	chr1:17372195 plus strand	1539
PAFAH2	NM_000437	NP_000428	Coding	chr1:25998157 minus strand	1540
PALMD	NM_017734	NP_060204	Coding	chr1:99645874 plus strand	1541
PANK4	NM_018216	NP_060686	Coding	chr1:2526596 minus strand	1542
PAPPA2	NM_020318	NP_064714	Coding	chr1:176463170 plus strand	1543
PAPPA2	NM_021936	NP_068755	Coding	chr1:176463170 plus strand	1543
PAQR6	NM_001272104	NP_001259033	Coding	chr1:156248117 minus strand	1544
PAQR6	NM_001272105	NP_001259034	Coding	chr1:156248117 minus	1544

【０１７０】

				strand	
PAQR6	NM_001272106	NP_001259035	Coding	chr1:156248117 minus strand	1544
PAQR6	NM_001272107	NP_001259036	Coding	chr1:156248117 minus strand	1544
PAQR6	NM_001272108	NP_001259037	Coding	chr1:156248117 minus strand	1544
PAQR6	NM_001272109	NP_001259038	Coding	chr1:156248117 minus strand	1544
PAQR6	NM_001272110	NP_001259039	Coding	chr1:156248117 minus strand	1544
PAQR6	NM_001272111	NP_001259040	Coding	chr1:156248117 minus strand	1544
PAQR6	NM_001272112	NP_001259041	Coding	chr1:156248117 minus strand	1544
PAQR6	NM_001272113	NP_001259042	Coding	chr1:156248117 minus strand	1544
PAQR6	NM_024897	NP_079173	Coding	chr1:156248117 minus strand	1544
PAQR6	NM_198406	NP_940798	Coding	chr1:156248117 minus strand	1544
PAQR7	NM_178422	NP_848509	Coding	chr1:25871253 minus strand	1545
PARK7	NM_001123377	NP_001116849	Coding	chr1:7961653 plus strand	1546
PARK7	NM_007262	NP_009193	Coding	chr1:7961653 plus strand	1546
PARP1	NM_001618	NP_001609	Coding	chr1:226408100 minus strand	1547
PARS2	NM_152268	NP_689481	Coding	chr1:54764553 minus strand	1548
PAX7	NM_001135254	NP_001128726	Coding	chr1:18631005 plus strand	1549
PAX7	NM_002584	NP_002575	Coding	chr1:18631005 plus strand	1549
PAX7	NM_013945	NP_039236	Coding	chr1:18631005 plus strand	1549
PBX1	NM_001204961	NP_001191890	Coding	chr1:164559359 plus strand	1550
PBX1	NM_001204963	NP_001191892	Coding	chr1:164559359 plus strand	1550
PBX1	NM_002585	NP_002576	Coding	chr1:164559359 plus strand	1550
PBXIP1	NM_020524	NP_065385	Coding	chr1:154956091 minus strand	1551
PCNXL2	NM_014801	NP_055616	Coding	chr1:233295713 minus strand	1552
PCP4L1	NM_001102566	NP_001096036	Coding	chr1:161258726 plus strand	1553
PCSK9	NM_174936	NP_777596	Coding	chr1:55039475 plus strand	1554
PDC	NM_022576	NP_072098	Coding	chr1:186448724 minus strand	1555
PDC	NM_002597	NP_002588	Coding	chr1:186461108 minus strand	1556
PDE4B	NM_001297442	NP_001284371	Coding	chr1:66354377 plus strand	1557
PDE4B	NM_001037339	NP_001032416	Coding	chr1:66332107 plus strand	1558

【０１７１】

PDE4B	NM_001037341	NP_001032418	Coding	chr1:65792509 plus strand	1559
PDE4B	NM_001297440	NP_001284369	Coding	chr1:65792509 plus strand	1559
PDE4B	NM_002600	NP_002591	Coding	chr1:65793172 plus strand	1560
PDE4B	NM_001037340	NP_001032417	Coding	chr1:65992615 plus strand	1561
PDE4B	NM_001297441	NP_001284370	Coding	chr1:65913244 plus strand	1562
PDE4DIP	NM_001002811	NP_001002811	Coding	chr1:148952123 plus strand	1563
PDE4DIP	NM_001195261	NP_001182190	Coding	chr1:148889402 plus strand	1564
PDE4DIP	NM_022359	NP_071754	Coding	chr1:148808180 plus strand	1565
PDE4DIP	NM_001002810	NP_001002810	Coding	chr1:148889451 plus strand	1566
PDE4DIP	NM_001002812	NP_001002812	Coding	chr1:148889451 plus strand	1566
PDE4DIP	NM_001198834	NP_001185763	Coding	chr1:148889451 plus strand	1566
PDE4DIP	NM_014644	NP_055459	Coding	chr1:148889451 plus strand	1566
PDE4DIP	NM_001195260	NP_001182189	Coding	chr1:148887372 plus strand	1567
PDE4DIP	NM_001198832	NP_001185761	Coding	chr1:148844388 plus strand	1568
PDIK1L	NM_001243532	NP_001230461	Coding	chr1:26111164 plus strand	1569
PDIK1L	NM_001243533	NP_001230462	Coding	chr1:26111776 plus strand	1570
PDIK1L	NM_152835	NP_690048	Coding	chr1:26111776 plus strand	1570
PDPN	NM_006474	NP_006465	Coding	chr1:13583756 plus strand	1571
PDPN	NM_198389	NP_938203	Coding	chr1:13583756 plus strand	1571
PDPN	NM_001006624	NP_001006625	Coding	chr1:13585471 plus strand	1572
PDPN	NM_001006625	NP_001006626	Coding	chr1:13585471 plus strand	1572
PDZK1	NM_001201325	NP_001188254	Coding	chr1:145707400 minus strand	1573
PDZK1	NM_001201326	NP_001188255	Coding	chr1:145707400 minus strand	1573
PDZK1	NM_002614	NP_002605	Coding	chr1:145707400 minus strand	1573
PDZK1IP1	NM_005764	NP_005755	Coding	chr1:47190099 minus strand	1574
PEA15	NM_001297576	NP_001284505	Coding	chr1:160205318 plus strand	1575
PEA15	NM_001297577	NP_001284506	Coding	chr1:160205318 plus strand	1575
PEA15	NM_001297578	NP_001284507	Coding	chr1:160205318 plus strand	1575
PEA15	NM_003768	NP_003759	Coding	chr1:160205318 plus strand	1575
PEAR1	NM_001080471	NP_001073940	Coding	chr1:156893730 plus strand	1576
PEF1	NM_012392	NP_036524	Coding	chr1:31645237 minus strand	1577

【０１７２】

PER3	NM_001289861	NP_001276790	Coding	chr1:7784428 plus strand	1578
PER3	NM_001289862	NP_001276791	Coding	chr1:7784428 plus strand	1578
PER3	NM_001289863	NP_001276792	Coding	chr1:7784428 plus strand	1578
PER3	NM_001289864	NP_001276793	Coding	chr1:7784428 plus strand	1578
PER3	NM_016831	NP_058515	Coding	chr1:7784428 plus strand	1578
PERM1	NM_001291366	NP_001278295	Coding	chr1:982117 minus strand	1579
PERM1	NM_001291367	NP_001278296	Coding	chr1:982117 minus strand	1579
PEX10	NM_002617	NP_002608	Coding	chr1:2412571 minus strand	1580
PEX10	NM_153818	NP_722540	Coding	chr1:2412571 minus strand	1580
PEX11B	NM_003846	NP_003837	Coding	chr1:145918924 minus strand	1581
PEX11B	NM_001184795	NP_001171724	Coding	chr1:145918529 minus strand	1582
PEX14	NM_004565	NP_004556	Coding	chr1:10474945 plus strand	1583
PEX19	NM_001193644	NP_001180573	Coding	chr1:160285151 minus strand	1584
PEX19	NM_002857	NP_002848	Coding	chr1:160285151 minus strand	1584
PFDN2	NM_012394	NP_036526	Coding	chr1:161118076 minus strand	1585
PFKFB2	NM_001018053	NP_001018063	Coding	chr1:207053274 plus strand	1586
PFKFB2	NM_006212	NP_006203	Coding	chr1:207053274 plus strand	1586
PGBD2	NM_001017434	NP_001017434	Coding	chr1:248906242 plus strand	1587
PGBD2	NM_170725	NP_733843	Coding	chr1:248906242 plus strand	1587
PGBD5	NM_001258311	NP_001245240	Coding	chr1:230425928 minus strand	1588
PGD	NM_002631	NP_002622	Coding	chr1:10399027 plus strand	1589
PGLYRP3	NM_052891	NP_443123	Coding	chr1:153310718 minus strand	1590
PGLYRP4	NM_020393	NP_065126	Coding	chr1:153348546 minus strand	1591
PGM1	NM_001172818	NP_001166289	Coding	chr1:63623215 plus strand	1592
PGM1	NM_001172819	NP_001166290	Coding	chr1:63593808 plus strand	1593
PGM1	NM_002633	NP_002624	Coding	chr1:63593275 plus strand	1594
PHACTR4	NM_001048183	NP_001041648	Coding	chr1:28369581 plus strand	1595
PHACTR4	NM_023923	NP_076412	Coding	chr1:28438149 plus strand	1596
PHC2	NM_004427	NP_004418	Coding	chr1:33349898 minus strand	1597
PHC2	NM_198040	NP_932157	Coding	chr1:33375593 minus strand	1598
PHF13	NM_153812	NP_722519	Coding	chr1:6613695 plus strand	1599
PHGDH	NM_006623	NP_006614	Coding	chr1:119711795 plus strand	1600
PHLDA3	NM_012396	NP_036528	Coding	chr1:201469171 minus strand	1601

【０１７３】

PHTF1	NM_006608	NP_006599	Coding	chr1:113759155 minus strand	1602
PI4KB	NM_001198774	NP_001185703	Coding	chr1:151327715 minus strand	1603
PI4KB	NM_001198773	NP_001185702	Coding	chr1:151327657 minus strand	1604
PI4KB	NM_001198775	NP_001185704	Coding	chr1:151327657 minus strand	1604
PI4KB	NM_002651	NP_002642	Coding	chr1:151327657 minus strand	1604
PIAS3	NM_006099	NP_006090	Coding	chr1:145859081 minus strand	1605
PIFO	NM_001300831	NP_001287760	Coding	chr1:111346559 plus strand	1606
PIFO	NM_181643	NP_857594	Coding	chr1:111346559 plus strand	1606
PIGC	NM_002642	NP_002633	Coding	chr1:172444090 minus strand	1607
PIGC	NM_153747	NP_714969	Coding	chr1:172444090 minus strand	1607
PIGK	NM_005482	NP_005473	Coding	chr1:77219447 minus strand	1608
PIGM	NM_145167	NP_660150	Coding	chr1:160031993 minus strand	1609
PIGR	NM_002644	NP_002635	Coding	chr1:206946466 minus strand	1610
PIGV	NM_001202554	NP_001189483	Coding	chr1:26788187 plus strand	1611
PIGV	NM_017837	NP_060307	Coding	chr1:26787962 plus strand	1612
PIK3C2B	NM_002646	NP_002637	Coding	chr1:204490346 minus strand	1613
PIK3CD	NM_005026	NP_005017	Coding	chr1:9651731 plus strand	1614
PIK3R3	NM_001114172	NP_001107644	Coding	chr1:46133036 minus strand	1615
PIK3R3	NM_003629	NP_003620	Coding	chr1:46132708 minus strand	1616
PINK1	NM_032409	NP_115785	Coding	chr1:20633454 plus strand	1617
PIP5K1A	NM_001135636	NP_001129108	Coding	chr1:151198544 plus strand	1618
PIP5K1A	NM_001135637	NP_001129109	Coding	chr1:151198544 plus strand	1618
PIP5K1A	NM_001135638	NP_001129110	Coding	chr1:151198544 plus strand	1618
PIP5K1A	NM_003557	NP_003548	Coding	chr1:151198544 plus strand	1618
PITHD1	NM_020362	NP_065095	Coding	chr1:23778385 plus strand	1619
PKLR	NM_000298	NP_000289	Coding	chr1:155301434 minus strand	1620
PKLR	NM_181871	NP_870986	Coding	chr1:155301001 minus strand	1621
PKN2	NM_006256	NP_006247	Coding	chr1:88684238 plus strand	1622
PKP1	NM_000299	NP_000290	Coding	chr1:201283451 plus strand	1623

【０１７４】

PKP1	NM_001005337	NP_001005337	Coding	chr1:201283451 plus strand	1623
PLA2G2A	NM_000300	NP_000291	Coding	chr1:19980439 minus strand	1624
PLA2G2A	NM_001161727	NP_001155199	Coding	chr1:19980439 minus strand	1624
PLA2G2A	NM_001161728	NP_001155200	Coding	chr1:19980439 minus strand	1624
PLA2G2A	NM_001161729	NP_001155201	Coding	chr1:19979659 minus strand	1625
PLA2G2C	NM_001105572	NP_001099042	Coding	chr1:20175194 minus strand	1626
PLA2G2D	NM_001271814	NP_001258743	Coding	chr1:20119566 minus strand	1627
PLA2G2D	NM_012400	NP_036532	Coding	chr1:20119566 minus strand	1627
PLA2G2E	NM_014589	NP_055404	Coding	chr1:19923617 minus strand	1628
PLA2G2F	NM_022819	NP_073730	Coding	chr1:20139329 plus strand	1629
PLA2G4A	NM_024420	NP_077734	Coding	chr1:186828899 plus strand	1630
PLA2G5	NM_000929	NP_000920	Coding	chr1:20070207 plus strand	1631
PLCH2	NM_001303012	NP_001289941	Coding	chr1:2467458 plus strand	1632
PLCH2	NM_001303013	NP_001289942	Coding	chr1:2476314 plus strand	1633
PLCH2	NM_014638	NP_055453	Coding	chr1:2476314 plus strand	1633
PLD5	NM_001195811	NP_001182740	Coding	chr1:242449482 minus strand	1634
PLD5	NM_001195812	NP_001182741	Coding	chr1:242449482 minus strand	1634
PLD5	NM_152666	NP_689879	Coding	chr1:242524696 minus strand	1635
PLEKHA6	NM_014935	NP_055750	Coding	chr1:204359929 minus strand	1636
PLEKHG5	NM_020631	NP_065682	Coding	chr1:6491701 minus strand	1637
PLEKHG5	NM_198681	NP_941374	Coding	chr1:6520061 minus strand	1638
PLEKHG5	NM_001265592	NP_001252521	Coding	chr1:6497096 minus strand	1639
PLEKHG5	NM_001265593	NP_001252522	Coding	chr1:6485469 minus strand	1640
PLEKHG5	NM_001042663	NP_001036128	Coding	chr1:6497424 minus strand	1641
PLEKHG5	NM_001265594	NP_001252523	Coding	chr1:6490594 minus strand	1642
PLEKHG5	NM_001042665	NP_001036130	Coding	chr1:6485954 minus strand	1643
PLEKHG5	NM_001042664	NP_001036129	Coding	chr1:6490580 minus strand	1644
PLEKHM2	NM_015164	NP_055979	Coding	chr1:15684331 plus strand	1645
PLEKHN1	NM_001160184	NP_001153656	Coding	chr1:966496 plus strand	1646
PLEKHN1	NM_032129	NP_115505	Coding	chr1:966496 plus strand	1646
PLEKHO1	NM_016274	NP_057358	Coding	chr1:150149979 plus strand	1647
PLK3	NM_004073	NP_004064	Coding	chr1:44800363 plus strand	1648
PLOD1	NM_000302	NP_000293	Coding	chr1:11934666 plus strand	1649
PLXNA2	NM_025179	NP_079455	Coding	chr1:208244320 minus	1650

【０１７５】

				strand	
PM20D1	NM_152491	NP_689704	Coding	chr1:205850148 minus strand	1651
PMF1	NM_001199653	NP_001186582	Coding	chr1:156212987 plus strand	1652
PMF1	NM_001199654	NP_001186583	Coding	chr1:156212987 plus strand	1652
PMF1	NM_007221	NP_009152	Coding	chr1:156212987 plus strand	1652
PMF1-BGLAP	NM_001199661	NP_001186590	Coding	chr1:156212987 plus strand	1652
PMF1-BGLAP	NM_001199662	NP_001186591	Coding	chr1:156212987 plus strand	1652
PMF1-BGLAP	NM_001199663	NP_001186592	Coding	chr1:156212987 plus strand	1652
PMF1-BGLAP	NM_001199664	NP_001186593	Coding	chr1:156212987 plus strand	1652
PMVK	NM_006556	NP_006547	Coding	chr1:154937008 minus strand	1653
PNRC2	NM_017761	NP_060231	Coding	chr1:23959810 plus strand	1654
PODN	NM_001199081	NP_001186010	Coding	chr1:53062212 plus strand	1655
PODN	NM_001199080	NP_001186009	Coding	chr1:53062051 plus strand	1656
PODN	NM_001199082	NP_001186011	Coding	chr1:53062051 plus strand	1656
PODN	NM_153703	NP_714914	Coding	chr1:53062051 plus strand	1656
POGK	NM_017542	NP_060012	Coding	chr1:166839486 plus strand	1657
POGZ	NM_207171	NP_997054	Coding	chr1:151442205 minus strand	1658
POGZ	NM_001194937	NP_001181866	Coding	chr1:151459465 minus strand	1659
POGZ	NM_001194938	NP_001181867	Coding	chr1:151459465 minus strand	1659
POGZ	NM_015100	NP_055915	Coding	chr1:151459465 minus strand	1659
POGZ	NM_145796	NP_665739	Coding	chr1:151459465 minus strand	1659
POLR3C	NM_006468	NP_006459	Coding	chr1:145824228 plus strand	1660
POLR3GL	NM_032305	NP_115681	Coding	chr1:145964702 plus strand	1661
POMGNT1	NM_001243766	NP_001230695	Coding	chr1:46220305 minus strand	1662
POMGNT1	NM_017739	NP_060209	Coding	chr1:46198449 minus strand	1663
POMGNT1	NM_001290129	NP_001277058	Coding	chr1:46197499 minus strand	1664
POMGNT1	NM_001290130	NP_001277059	Coding	chr1:46197499 minus strand	1664
POU2F1	NM_001198783	NP_001185712	Coding	chr1:167329043 plus strand	1665
POU2F1	NM_001198786	NP_001185715	Coding	chr1:167220828 plus strand	1666

【０１７６】

POU2F1	NM_002697	NP_002688	Coding	chr1:167220828 plus strand	1666
POU3F1	NM_002699	NP_002690	Coding	chr1:38046778 minus strand	1667
PPAP2B	NM_003713	NP_003704	Coding	chr1:56579584 minus strand	1668
PPCS	NM_001287506	NP_001274435	Coding	chr1:42456340 plus strand	1669
PPCS	NM_001287507	NP_001274436	Coding	chr1:42456340 plus strand	1669
PPCS	NM_001077447	NP_001070915	Coding	chr1:42456493 plus strand	1670
PPCS	NM_001287508	NP_001274437	Coding	chr1:42456493 plus strand	1670
PPCS	NM_001287509	NP_001274438	Coding	chr1:42456493 plus strand	1670
PPCS	NM_001287510	NP_001274439	Coding	chr1:42456493 plus strand	1670
PPCS	NM_001287511	NP_001274440	Coding	chr1:42456493 plus strand	1670
PPCS	NM_024664	NP_078940	Coding	chr1:42456493 plus strand	1670
PPFIA4	NM_015053	NP_055868	Coding	chr1:203051182 plus strand	1671
PPIAL4B	NM_001143883	NP_001137355	Coding	chr1:120889745 plus strand	1672
PPIAL4C	NM_001135789	NP_001129261	Coding	chr1:149583822 plus strand	1673
PPIAL4D	NM_001164261	NP_001157733	Coding	chr1:144592867 plus strand	1674
PPIAL4D	NM_001164261	NP_001157733	Coding	chr1:144373659 minus strand	1675
PPIAL4D	NM_001164261	NP_001157733	Coding	chr1:145242199 minus strand	1676
PPIAL4E	NM_001144032	NP_001137504	Coding	chr1:144592867 plus strand	1674
PPIAL4E	NM_001144032	NP_001137504	Coding	chr1:144373659 minus strand	1675
PPIAL4E	NM_001144032	NP_001137504	Coding	chr1:145242199 minus strand	1676
PPIAL4F	NM_001164262	NP_001157734	Coding	chr1:144592867 plus strand	1674
PPIAL4F	NM_001164262	NP_001157734	Coding	chr1:144373659 minus strand	1675
PPIAL4F	NM_001164262	NP_001157734	Coding	chr1:145242199 minus strand	1676
PPIAL4G	NM_001123068	NP_001116540	Coding	chr1:148483285 minus strand	1677
PPIE	NM_001195007	NP_001181936	Coding	chr1:39738844 plus strand	1678
PPIE	NM_006112	NP_006103	Coding	chr1:39738844 plus strand	1678
PPIE	NM_203456	NP_982281	Coding	chr1:39738844 plus strand	1678
PPIH	NM_006347	NP_006338	Coding	chr1:42658376 plus strand	1679
PPM1J	NM_005167	NP_005158	Coding	chr1:112715328 minus strand	1680
PPOX	NM_000309	NP_000300	Coding	chr1:161166390 plus strand	1681
PPOX	NM_001122764	NP_001116236	Coding	chr1:161166390 plus strand	1681

【０１７７】

PPP1R12B	NM_032103	NP_115286	Coding	chr1:202462742 plus strand	1682
PPP1R12B	NM_032104	NP_115287	Coding	chr1:202462742 plus strand	1682
PPP1R12B	NM_001197131	NP_001184060	Coding	chr1:202540113 plus strand	1683
PPP1R12B	NM_001167857	NP_001161329	Coding	chr1:202348701 plus strand	1684
PPP1R12B	NM_001167858	NP_001161330	Coding	chr1:202348701 plus strand	1684
PPP1R12B	NM_002481	NP_002472	Coding	chr1:202348701 plus strand	1684
PPP1R15B	NM_032833	NP_116222	Coding	chr1:204411817 minus strand	1685
PPP1R8	NM_002713	NP_002704	Coding	chr1:27830813 plus strand	1686
PPP1R8	NM_138558	NP_612568	Coding	chr1:27830813 plus strand	1686
PPP1R8	NM_014110	NP_054829	Coding	chr1:27830740 plus strand	1687
PPP2R5A	NM_001199756	NP_001186685	Coding	chr1:212301805 plus strand	1688
PPP2R5A	NM_006243	NP_006234	Coding	chr1:212285536 plus strand	1689
PPT1	NM_000310	NP_000301	Coding	chr1:40097470 minus strand	1690
PPT1	NM_001142604	NP_001136076	Coding	chr1:40097470 minus strand	1690
PQLC2	NM_001040125	NP_001035214	Coding	chr1:19312245 plus strand	1691
PQLC2	NM_001040126	NP_001035215	Coding	chr1:19312245 plus strand	1691
PQLC2	NM_001287531	NP_001274460	Coding	chr1:19312245 plus strand	1691
PQLC2	NM_017765	NP_060235	Coding	chr1:19312245 plus strand	1691
PRAMEF1	NM_001294139	NP_001281068	Coding	chr1:12794690 plus strand	1692
PRAMEF1	NM_023013	NP_075389	Coding	chr1:12791396 plus strand	1693
PRAMEF10	NM_001039361	NP_001034450	Coding	chr1:12898270 minus strand	1694
PRAMEF11	NM_001146344	NP_001139816	Coding	chr1:12831410 minus strand	1695
PRAMEF12	NM_001080830	NP_001074299	Coding	chr1:12774847 plus strand	1696
PRAMEF14	NM_001024661	NP_001019832	Coding	chr1:13347134 minus strand	1697
PRAMEF15	NM_001098376	NP_001091846	Coding	chr1:13315580 plus strand	1698
PRAMEF16	NM_001045480	NP_001038945	Coding	chr1:13389627 plus strand	1699
PRAMEF17	NM_001099851	NP_001093321	Coding	chr1:13389631 plus strand	1700
PRAMEF19	NM_001099790	NP_001093260	Coding	chr1:13371947 minus strand	1701
PRAMEF2	NM_023014	NP_075390	Coding	chr1:12857085 plus strand	1702
PRAMEF20	NM_001099852	NP_001093322	Coding	chr1:13410449 plus strand	1703
PRAMEF22	NM_001100631	NP_001094101	Coding	chr1:13226109 minus strand	1704
PRAMEF4	NM_001009611	NP_001009611	Coding	chr1:12886201 minus strand	1705
PRAMEF5	NM_001013407	NP_001013425	Coding	chr1:13254197 plus strand	1706

【０１７８】

PRAMEF6	NM_001010889	NP_001010889	Coding	chr1:12947580 minus strand	1707
PRAMEF7	NM_001012277	NP_001012277	Coding	chr1:12916646 plus strand	1708
PRAMEF8	NM_001012276	NP_001012276	Coding	chr1:13285137 minus strand	1709
PRAMEF9	NM_001010890	NP_001010890	Coding	chr1:13175280 plus strand	1184
PRCC	NM_005973	NP_005964	Coding	chr1:156767481 plus strand	1710
PRDM16	NM_022114	NP_071397	Coding	chr1:3069177 plus strand	1711
PRDM16	NM_199454	NP_955533	Coding	chr1:3069177 plus strand	1711
PRDM2	NM_001007257	NP_001007258	Coding	chr1:13749380 plus strand	1712
PRDM2	NM_012231	NP_036363	Coding	chr1:13704854 plus strand	1713
PRDM2	NM_015866	NP_056950	Coding	chr1:13704854 plus strand	1713
PRDM2	NM_001135610	NP_001129082	Coding	chr1:13700239 plus strand	1714
PRDX1	NM_001202431	NP_001189360	Coding	chr1:45522890 minus strand	1715
PRDX1	NM_002574	NP_002565	Coding	chr1:45521938 minus strand	1716
PRDX1	NM_181696	NP_859047	Coding	chr1:45521938 minus strand	1716
PRDX1	NM_181697	NP_859048	Coding	chr1:45521938 minus strand	1716
PRDX6	NM_004905	NP_004896	Coding	chr1:173477346 plus strand	1717
PRELP	NM_002725	NP_002716	Coding	chr1:203475754 plus strand	1718
PRELP	NM_201348	NP_958505	Coding	chr1:203475754 plus strand	1718
PRG4	NM_001127708	NP_001121180	Coding	chr1:186296272 plus strand	1719
PRG4	NM_001127709	NP_001121181	Coding	chr1:186296272 plus strand	1719
PRG4	NM_001127710	NP_001121182	Coding	chr1:186296272 plus strand	1719
PRG4	NM_005807	NP_005798	Coding	chr1:186296272 plus strand	1719
PRKAA2	NM_006252	NP_006243	Coding	chr1:56645316 plus strand	1720
PRKAB2	NM_005399	NP_005390	Coding	chr1:147172589 minus strand	1721
PRKACB	NM_001242862	NP_001229791	Coding	chr1:84181631 plus strand	1722
PRKACB	NM_002731	NP_002722	Coding	chr1:84077974 plus strand	1723
PRKACB	NM_207578	NP_997461	Coding	chr1:84077974 plus strand	1723
PRKACB	NM_001300916	NP_001287845	Coding	chr1:84144247 plus strand	1724
PRKACB	NM_182948	NP_891993	Coding	chr1:84144247 plus strand	1724
PRKACB	NM_001242857	NP_001229786	Coding	chr1:84164183 plus strand	1725
PRKACB	NM_001242858	NP_001229787	Coding	chr1:84164183 plus strand	1725
PRKACB	NM_001242859	NP_001229788	Coding	chr1:84164183 plus strand	1725
PRKACB	NM_001300917	NP_001287846	Coding	chr1:84164183 plus strand	1725
PRKACB	NM_001242860	NP_001229789	Coding	chr1:84164639 plus strand	1726

【０１７９】

PRKACB	NM_001242861	NP_001229790	Coding	chr1:84164639 plus strand	1726
PRKACB	NM_001300915	NP_001287844	Coding	chr1:84164639 plus strand	1726
PRKCZ	NM_001242874	NP_001229803	Coding	chr1:2073985 plus strand	1727
PRKCZ	NM_001033582	NP_001028754	Coding	chr1:2104715 plus strand	1728
PRKCZ	NM_002744	NP_002735	Coding	chr1:2050469 plus strand	1729
PRKCZ	NM_001033581	NP_001028753	Coding	chr1:2073646 plus strand	1730
PRMT6	NM_018137	NP_060607	Coding	chr1:107056644 plus strand	1731
PROK1	NM_032414	NP_115790	Coding	chr1:110451165 plus strand	1732
PROX1	NM_001270616	NP_001257545	Coding	chr1:213987934 plus strand	1733
PROX1	NM_002763	NP_002754	Coding	chr1:213988500 plus strand	1734
PRPF3	NM_004698	NP_004689	Coding	chr1:150321478 plus strand	1735
PRPF38A	NM_032864	NP_116253	Coding	chr1:52404546 plus strand	1736
PRPF38B	NM_018061	NP_060531	Coding	chr1:108692309 plus strand	1737
PRR9	NM_001195571	NP_001182500	Coding	chr1:153217583 plus strand	1738
PRRC2C	NM_015172	NP_055987	Coding	chr1:171485526 plus strand	1739
PRRX1	NM_006902	NP_008833	Coding	chr1:170664171 plus strand	1740
PRRX1	NM_022716	NP_073207	Coding	chr1:170664171 plus strand	1740
PRSS38	NM_183062	NP_898885	Coding	chr1:227815716 plus strand	1741
PRUNE	NM_021222	NP_067045	Coding	chr1:151008496 plus strand	1742
PSEN2	NM_000447	NP_000438	Coding	chr1:226870571 plus strand	1743
PSEN2	NM_012486	NP_036618	Coding	chr1:226870571 plus strand	1743
PSMA5	NM_001199774	NP_001186703	Coding	chr1:109426486 minus strand	1744
PSMA5	NM_001199773	NP_001186702	Coding	chr1:109426459 minus strand	1745
PSMA5	NM_001199772	NP_001186701	Coding	chr1:109426448 minus strand	1746
PSMA5	NM_002790	NP_002781	Coding	chr1:109426448 minus strand	1746
PSMB2	NM_001199780	NP_001186709	Coding	chr1:35631537 minus strand	1747
PSMB2	NM_002794	NP_002785	Coding	chr1:35641844 minus strand	1748
PSMB2	NM_001199779	NP_001186708	Coding	chr1:35641551 minus strand	1749
PSMB4	NM_002796	NP_002787	Coding	chr1:151399564 plus strand	1750
PSMD4	NM_002810	NP_002801	Coding	chr1:151254720 plus	1751

【０１８０】

				strand	
PSRC1	NM_001005290	NP_001005290	Coding	chr1:109283168 minus strand	1752
PSRC1	NM_001032291	NP_001027462	Coding	chr1:109283168 minus strand	1752
PSRC1	NM_032636	NP_116025	Coding	chr1:109283168 minus strand	1752
PTAFR	NM_001164721	NP_001158193	Coding	chr1:28193936 minus strand	1753
PTAFR	NM_001164722	NP_001158194	Coding	chr1:28193936 minus strand	1753
PTAFR	NM_000952	NP_000943	Coding	chr1:28176944 minus strand	1754
PTAFR	NM_001164723	NP_001158195	Coding	chr1:28176944 minus strand	1754
PTBP2	NM_001300985	NP_001287914	Coding	chr1:96721604 plus strand	1755
PTBP2	NM_001300986	NP_001287915	Coding	chr1:96721604 plus strand	1755
PTBP2	NM_001300987	NP_001287916	Coding	chr1:96721604 plus strand	1755
PTBP2	NM_001300988	NP_001287917	Coding	chr1:96721604 plus strand	1755
PTBP2	NM_001300989	NP_001287918	Coding	chr1:96721604 plus strand	1755
PTBP2	NM_001300990	NP_001287919	Coding	chr1:96721604 plus strand	1755
PTBP2	NM_021190	NP_067013	Coding	chr1:96721604 plus strand	1755
PTCH2	NM_001166292	NP_001159764	Coding	chr1:44842944 minus strand	1756
PTCH2	NM_003738	NP_003729	Coding	chr1:44842944 minus strand	1756
PTCHD2	NM_020780	NP_065831	Coding	chr1:11479237 plus strand	1757
PTGER3	NM_001126044	NP_001119516	Coding	chr1:71047808 minus strand	1758
PTGER3	NM_198714	NP_942007	Coding	chr1:71047808 minus strand	1758
PTGER3	NM_198715	NP_942008	Coding	chr1:71047808 minus strand	1758
PTGER3	NM_198716	NP_942009	Coding	chr1:71047808 minus strand	1758
PTGER3	NM_198717	NP_942010	Coding	chr1:71047808 minus strand	1758
PTGER3	NM_198718	NP_942011	Coding	chr1:71047808 minus strand	1758
PTGER3	NM_198719	NP_942012	Coding	chr1:71047808 minus strand	1758
PTGFR	NM_000959	NP_000950	Coding	chr1:78491042 plus strand	1759
PTGFR	NM_001039585	NP_001034674	Coding	chr1:78491042 plus strand	1759
PTGFRN	NM_020440	NP_065173	Coding	chr1:116909922 plus strand	1760
PTGS2	NM_000963	NP_000954	Coding	chr1:186680427 minus strand	1761
PTP4A2	NM_001195100	NP_001182029	Coding	chr1:31919658 minus strand	1762
PTP4A2	NM_001195101	NP_001182030	Coding	chr1:31919658 minus strand	1762

【０１８１】

PTP4A2	NM_080391	NP_536316	Coding	chr1:31938387 minus strand	1763
PTPN14	NM_005401	NP_005392	Coding	chr1:214551681 minus strand	1764
PTPN22	NM_001193431	NP_001180360	Coding	chr1:113871753 minus strand	1765
PTPN22	NM_012411	NP_036543	Coding	chr1:113871753 minus strand	1765
PTPN22	NM_015967	NP_057051	Coding	chr1:113871753 minus strand	1765
PTPN7	NM_001199797	NP_001186726	Coding	chr1:202161588 minus strand	1766
PTPN7	NM_002832	NP_002823	Coding	chr1:202161588 minus strand	1766
PTPN7	NM_080588	NP_542155	Coding	chr1:202159991 minus strand	1767
PTPRC	NM_001267798	NP_001254727	Coding	chr1:198638967 plus strand	1768
PTPRC	NM_002838	NP_002829	Coding	chr1:198638967 plus strand	1768
PTPRC	NM_080921	NP_563578	Coding	chr1:198638967 plus strand	1768
PTPRF	NM_002840	NP_002831	Coding	chr1:43530875 plus strand	1769
PTPRF	NM_130440	NP_569707	Coding	chr1:43530875 plus strand	1769
PTPRU	NM_001195001	NP_001181930	Coding	chr1:29236515 plus strand	1770
PTPRU	NM_005704	NP_005695	Coding	chr1:29236515 plus strand	1770
PTPRU	NM_133177	NP_573438	Coding	chr1:29236515 plus strand	1770
PTPRU	NM_133178	NP_573439	Coding	chr1:29236515 plus strand	1770
PUM1	NM_001020658	NP_001018494	Coding	chr1:31065717 minus strand	1771
PUM1	NM_014676	NP_055491	Coding	chr1:31065717 minus strand	1771
PUSL1	NM_153339	NP_699170	Coding	chr1:1308613 plus strand	1772
PVRL4	NM_030916	NP_112178	Coding	chr1:161089595 minus strand	1773
PYCR2	NM_001271681	NP_001258610	Coding	chr1:225924340 minus strand	1774
PYCR2	NM_013328	NP_037460	Coding	chr1:225924340 minus strand	1774
PYGO2	NM_138300	NP_612157	Coding	chr1:154961782 minus strand	1775
PYHIN1	NM_152501	NP_689714	Coding	chr1:158931546 plus strand	1776
PYHIN1	NM_198928	NP_945146	Coding	chr1:158931546 plus strand	1776
PYHIN1	NM_198929	NP_945147	Coding	chr1:158931546 plus strand	1776
PYHIN1	NM_198930	NP_945148	Coding	chr1:158931546 plus strand	1776
QSOX1	NM_001004128	NP_001004128	Coding	chr1:180154832 plus strand	1777
QSOX1	NM_002826	NP_002817	Coding	chr1:180154832 plus	1777

【０１８２】

				strand	
RAB13	NM_001272038	NP_001258967	Coding	chr1:153985366 minus strand	1778
RAB13	NM_002870	NP_002861	Coding	chr1:153986377 minus strand	1779
RAB25	NM_020387	NP_065120	Coding	chr1:156061174 plus strand	1780
RAB29	NM_001135662	NP_001129134	Coding	chr1:205775482 minus strand	1781
RAB29	NM_001135663	NP_001129135	Coding	chr1:205775482 minus strand	1781
RAB29	NM_001135664	NP_001129136	Coding	chr1:205775482 minus strand	1781
RAB29	NM_003929	NP_003920	Coding	chr1:205775482 minus strand	1781
RAB3B	NM_002867	NP_002858	Coding	chr1:51990764 minus strand	1782
RAB3GAP2	NM_012414	NP_036546	Coding	chr1:220272501 minus strand	1783
RAB42	NM_001193532	NP_001180461	Coding	chr1:28592494 plus strand	1784
RAB42	NM_152304	NP_689517	Coding	chr1:28592199 plus strand	1785
RAB4A	NM_001271998	NP_001258927	Coding	chr1:229271061 plus strand	1786
RAB4A	NM_004578	NP_004569	Coding	chr1:229271061 plus strand	1786
RAB7B	NM_177403	NP_796377	Coding	chr1:205994439 minus strand	1787
RAB7B	NM_001164522	NP_001157994	Coding	chr1:206003466 minus strand	1788
RABGAP1L	NM_001243764	NP_001230693	Coding	chr1:174964767 plus strand	1789
RABGAP1L	NM_001243765	NP_001230694	Coding	chr1:174799896 plus strand	1790
RABGAP1L	NM_014857	NP_055672	Coding	chr1:174159413 plus strand	1791
RABGAP1L	NM_001035230	NP_001030307	Coding	chr1:174875517 plus strand	1792
RABGAP1L	NM_001243763	NP_001230692	Coding	chr1:174874385 plus strand	1793
RABGGTB	NM_004582	NP_004573	Coding	chr1:75786193 plus strand	1794
RABIF	NM_002871	NP_002862	Coding	chr1:202889257 minus strand	1795
RAD54L	NM_001142548	NP_001136020	Coding	chr1:46247694 plus strand	1796
RAD54L	NM_003579	NP_003570	Coding	chr1:46247694 plus strand	1796
RALGPS2	NM_001286247	NP_001273176	Coding	chr1:178725146 plus strand	1797
RALGPS2	NM_152663	NP_689876	Coding	chr1:178725146 plus strand	1797
RAP1A	NM_001291896	NP_001278825	Coding	chr1:111620146 plus strand	1798
RAP1A	NM_001010935	NP_001010935	Coding	chr1:111619782 plus strand	1799

【０１８３】

RAP1A	NM_002884	NP_002875	Coding	chr1:111619782 plus strand	1799
RAP1GAP	NM_001145658	NP_001139130	Coding	chr1:21651855 minus strand	1800
RAP1GAP	NM_001145657	NP_001139129	Coding	chr1:21669363 minus strand	1801
RAP1GAP	NM_002885	NP_002876	Coding	chr1:21669363 minus strand	1801
RASAL2	NM_004841	NP_004832	Coding	chr1:178341470 plus strand	1802
RASAL2	NM_170692	NP_733793	Coding	chr1:178093728 plus strand	1803
RASSF5	NM_182665	NP_872606	Coding	chr1:206557163 plus strand	1804
RASSF5	NM_182663	NP_872604	Coding	chr1:206507529 plus strand	1805
RASSF5	NM_182664	NP_872605	Coding	chr1:206507529 plus strand	1805
RAVER2	NM_018211	NP_060681	Coding	chr1:64745094 plus strand	1806
RBBP4	NM_001135255	NP_001128727	Coding	chr1:32651147 plus strand	1807
RBBP4	NM_005610	NP_005601	Coding	chr1:32651147 plus strand	1807
RBBP4	NM_001135256	NP_001128728	Coding	chr1:32651357 plus strand	1808
RBBP5	NM_001193272	NP_001180201	Coding	chr1:205122022 minus strand	1809
RBBP5	NM_001193273	NP_001180202	Coding	chr1:205122022 minus strand	1809
RBBP5	NM_005057	NP_005048	Coding	chr1:205122022 minus strand	1809
RBM15	NM_001201545	NP_001188474	Coding	chr1:110339322 plus strand	1810
RBM15	NM_022768	NP_073605	Coding	chr1:110339322 plus strand	1810
RBM34	NM_001161533	NP_001155005	Coding	chr1:235161256 minus strand	1811
RBM34	NM_015014	NP_055829	Coding	chr1:235161256 minus strand	1811
RBM8A	NM_005105	NP_005096	Coding	chr1:145927536 minus strand	1812
RBMXL1	NM_001162536	NP_001156008	Coding	chr1:88992960 minus strand	336
RBMXL1	NM_019610	NP_062556	Coding	chr1:88992960 minus strand	336
RBP7	NM_052960	NP_443192	Coding	chr1:9997196 plus strand	1813
RC3H1	NM_001300850	NP_001287779	Coding	chr1:173993072 minus strand	1814
RC3H1	NM_001300851	NP_001287780	Coding	chr1:173993072 minus strand	1814
RC3H1	NM_001300852	NP_001287781	Coding	chr1:173993072 minus strand	1814
RC3H1	NM_172071	NP_742068	Coding	chr1:173993072 minus strand	1814
RCAN3	NM_001251978	NP_001238907	Coding	chr1:24507593 plus strand	1815

【０１８４】

RCAN3	NM_001251977	NP_001238906	Coding	chr1:24502896 plus strand	1816
RCAN3	NM_001251981	NP_001238910	Coding	chr1:24502896 plus strand	1816
RCAN3	NM_001251983	NP_001238912	Coding	chr1:24502896 plus strand	1816
RCAN3	NM_013441	NP_038469	Coding	chr1:24502896 plus strand	1816
RCAN3	NM_001251980	NP_001238909	Coding	chr1:24514313 plus strand	1817
RCAN3	NM_001251982	NP_001238911	Coding	chr1:24514313 plus strand	1817
RCAN3	NM_001251985	NP_001238914	Coding	chr1:24514313 plus strand	1817
RCAN3	NM_001251979	NP_001238908	Coding	chr1:24502350 plus strand	1818
RCAN3	NM_001251984	NP_001238913	Coding	chr1:24502350 plus strand	1818
RCC1	NM_001048194	NP_001041659	Coding	chr1:28518232 plus strand	1819
RCC1	NM_001048195	NP_001041660	Coding	chr1:28518232 plus strand	1819
RCC1	NM_001269	NP_001260	Coding	chr1:28518232 plus strand	1819
RCC1	NM_001048199	NP_001041664	Coding	chr1:28505942 plus strand	1820
RCC2	NM_001136204	NP_001129676	Coding	chr1:17438563 minus strand	1821
RCC2	NM_018715	NP_061185	Coding	chr1:17439754 minus strand	1822
RCOR3	NM_001136223	NP_001129695	Coding	chr1:211259365 plus strand	1823
RCOR3	NM_001136224	NP_001129696	Coding	chr1:211259365 plus strand	1823
RCOR3	NM_001136225	NP_001129697	Coding	chr1:211259365 plus strand	1823
RCOR3	NM_018254	NP_060724	Coding	chr1:211259946 plus strand	1824
RCSD1	NM_052862	NP_443094	Coding	chr1:167630236 plus strand	1825
RD3	NM_001164688	NP_001158160	Coding	chr1:211492917 minus strand	1826
RD3	NM_183059	NP_898882	Coding	chr1:211492917 minus strand	1826
REG4	NM_001159352	NP_001152824	Coding	chr1:119811580 minus strand	1827
REG4	NM_001159353	NP_001152825	Coding	chr1:119811580 minus strand	1827
REG4	NM_032044	NP_114433	Coding	chr1:119811580 minus strand	1827
REN	NM_000537	NP_000528	Coding	chr1:204166337 minus strand	1828
RER1	NM_007033	NP_008964	Coding	chr1:2391774 plus strand	1829
RERE	NM_001042682	NP_001036147	Coding	chr1:8423687 minus strand	1830
RERE	NM_001042681	NP_001036146	Coding	chr1:8817640 minus strand	1831
RERE	NM_012102	NP_036234	Coding	chr1:8817640 minus strand	1831
RFWD2	NM_001001740	NP_001001740	Coding	chr1:176207244 minus strand	1832
RFWD2	NM_001286644	NP_001273573	Coding	chr1:176207244 minus strand	1832
RFWD2	NM_022457	NP_071902	Coding	chr1:176207244 minus strand	1832

【０１８５】

RFX5	NM_000449	NP_000440	Coding	chr1:151347293 minus strand	1833
RFX5	NM_001025603	NP_001020774	Coding	chr1:151347293 minus strand	1833
RGL1	NM_001297671	NP_001284600	Coding	chr1:183805080 plus strand	1834
RGL1	NM_001297672	NP_001284601	Coding	chr1:183805080 plus strand	1834
RGL1	NM_001297669	NP_001284598	Coding	chr1:183636046 plus strand	1835
RGL1	NM_001297670	NP_001284599	Coding	chr1:183636046 plus strand	1835
RGL1	NM_015149	NP_055964	Coding	chr1:183636046 plus strand	1835
RGS1	NM_002922	NP_002913	Coding	chr1:192575726 plus strand	1836
RGS13	NM_002927	NP_002918	Coding	chr1:192636137 plus strand	1837
RGS13	NM_144766	NP_658912	Coding	chr1:192636137 plus strand	1837
RGS16	NM_002928	NP_002919	Coding	chr1:182604413 minus strand	1838
RGS18	NM_130782	NP_570138	Coding	chr1:192158461 plus strand	1839
RGS2	NM_002923	NP_002914	Coding	chr1:192809038 plus strand	1840
RGS21	NM_001039152	NP_001034241	Coding	chr1:192316991 plus strand	1841
RGS4	NM_001102445	NP_001095915	Coding	chr1:163068605 plus strand	1842
RGS4	NM_005613	NP_005604	Coding	chr1:163068973 plus strand	1843
RGS4	NM_001113381	NP_001106852	Coding	chr1:163069253 plus strand	1844
RGS4	NM_001113380	NP_001106851	Coding	chr1:163071904 plus strand	1845
RGS5	NM_001195303	NP_001182232	Coding	chr1:163203173 minus strand	1846
RGS5	NM_001254749	NP_001241678	Coding	chr1:163203173 minus strand	1846
RGS5	NM_003617	NP_003608	Coding	chr1:163203173 minus strand	1846
RGS5	NM_001254748	NP_001241677	Coding	chr1:163321791 minus strand	1847
RGS7	NM_001282773	NP_001269702	Coding	chr1:241357230 minus strand	1848
RGS7	NM_001282775	NP_001269704	Coding	chr1:241357230 minus strand	1848
RGS7	NM_001282778	NP_001269707	Coding	chr1:241357230 minus strand	1848
RGS7	NM_002924	NP_002915	Coding	chr1:241357230 minus strand	1848
RGS8	NM_001102450	NP_001095920	Coding	chr1:182672932 minus strand	1849

【０１８６】

RGS8	NM_033345	NP_203131	Coding	chr1:182672932 minus strand	1849
RGSL1	NM_001137669	NP_001131141	Coding	chr1:182450120 plus strand	1850
RHBDL2	NM_017821	NP_060291	Coding	chr1:38941784 minus strand	1851
RHBG	NM_001256395	NP_001243324	Coding	chr1:156369188 plus strand	1852
RHBG	NM_001256396	NP_001243325	Coding	chr1:156369188 plus strand	1852
RHBG	NM_020407	NP_065140	Coding	chr1:156369188 plus strand	1852
RHCE	NM_020485	NP_065231	Coding	chr1:25420872 minus strand	1853
RHCE	NM_138616	NP_619522	Coding	chr1:25420872 minus strand	1853
RHCE	NM_138617	NP_619523	Coding	chr1:25420872 minus strand	1853
RHCE	NM_138618	NP_619524	Coding	chr1:25420872 minus strand	1853
RHD	NM_001127691	NP_001121163	Coding	chr1:25272485 plus strand	1854
RHD	NM_001282867	NP_001269796	Coding	chr1:25272485 plus strand	1854
RHD	NM_001282868	NP_001269797	Coding	chr1:25272485 plus strand	1854
RHD	NM_001282869	NP_001269798	Coding	chr1:25272485 plus strand	1854
RHD	NM_001282870	NP_001269799	Coding	chr1:25272485 plus strand	1854
RHD	NM_001282871	NP_001269800	Coding	chr1:25272485 plus strand	1854
RHD	NM_001282872	NP_001269801	Coding	chr1:25272485 plus strand	1854
RHD	NM_016124	NP_057208	Coding	chr1:25272485 plus strand	1854
RHOC	NM_001042678	NP_001036143	Coding	chr1:112707403 minus strand	1855
RHOC	NM_175744	NP_786886	Coding	chr1:112707403 minus strand	1855
RHOC	NM_001042679	NP_001036144	Coding	chr1:112707056 minus strand	1856
RHOU	NM_021205	NP_067028	Coding	chr1:228735076 plus strand	1857
RIIAD1	NM_001144956	NP_001138428	Coding	chr1:151721536 plus strand	1858
RIMKLA	NM_173642	NP_775913	Coding	chr1:42380796 plus strand	1859
RIMS3	NM_014747	NP_055562	Coding	chr1:40665652 minus strand	1860
RIT1	NM_001256820	NP_001243749	Coding	chr1:155911402 minus strand	1861
RIT1	NM_006912	NP_008843	Coding	chr1:155911402 minus strand	1861
RIT1	NM_001256821	NP_001243750	Coding	chr1:155910915 minus strand	1862
RLF	NM_012421	NP_036553	Coding	chr1:40161368 plus strand	1863
RNASEL	NM_021133	NP_066956	Coding	chr1:182589259 minus strand	1864
RNF11	NM_014372	NP_055187	Coding	chr1:51236272 plus strand	1865

【０１８７】

RNF115	NM_014455	NP_055270	Coding	chr1:145824123 minus strand	1866
RNF186	NM_019062	NP_061935	Coding	chr1:19815278 minus strand	1867
RNF187	NM_001010858	NP_001010858	Coding	chr1:228487366 plus strand	1868
RNF19B	NM_001127361	NP_001120833	Coding	chr1:32964813 minus strand	1869
RNF19B	NM_001300826	NP_001287755	Coding	chr1:32964813 minus strand	1869
RNF19B	NM_153341	NP_699172	Coding	chr1:32964813 minus strand	1869
RNF2	NM_007212	NP_009143	Coding	chr1:185045418 plus strand	1870
RNF207	NM_207396	NP_997279	Coding	chr1:6206128 plus strand	1871
RNF220	NM_018150	NP_060620	Coding	chr1:44405287 plus strand	1872
RNF223	NM_001205252	NP_001192181	Coding	chr1:1074307 minus strand	1873
RNPC3	NM_017619	NP_060089	Coding	chr1:103525955 plus strand	1874
RNPEP	NM_020216	NP_064601	Coding	chr1:201982637 plus strand	1875
ROR1	NM_001083592	NP_001077061	Coding	chr1:63774018 plus strand	1876
ROR1	NM_005012	NP_005003	Coding	chr1:63774018 plus strand	1876
RORC	NM_005060	NP_005051	Coding	chr1:151831872 minus strand	1877
RORC	NM_001001523	NP_001001523	Coding	chr1:151826077 minus strand	1878
RPA2	NM_001286076	NP_001273005	Coding	chr1:27914797 minus strand	1879
RPA2	NM_001297558	NP_001284487	Coding	chr1:27914797 minus strand	1879
RPA2	NM_002946	NP_002937	Coding	chr1:27914797 minus strand	1879
RPAP2	NM_024813	NP_079089	Coding	chr1:92298964 plus strand	1880
RPE65	NM_000329	NP_000320	Coding	chr1:68449959 minus strand	1881
RPF1	NM_025065	NP_079341	Coding	chr1:84479236 plus strand	1882
RPL11	NM_000975	NP_000966	Coding	chr1:23691778 plus strand	1883
RPL11	NM_001199802	NP_001186731	Coding	chr1:23691778 plus strand	1883
RPL22	NM_000983	NP_000974	Coding	chr1:6199619 minus strand	1884
RPL5	NM_000969	NP_000960	Coding	chr1:92832036 plus strand	1885
RPRD2	NM_001297673	NP_001284602	Coding	chr1:150364110 plus strand	1886
RPRD2	NM_001297674	NP_001284603	Coding	chr1:150364110 plus strand	1886
RPRD2	NM_015203	NP_056018	Coding	chr1:150364110 plus strand	1886
RPS27	NM_001030	NP_001021	Coding	chr1:153990762 plus strand	1887
RPS6KA1	NM_002953	NP_002944	Coding	chr1:26529757 plus strand	1888

【０１８８】

RPS6KA1	NM_001006665	NP_001006666	Coding	chr1:26545851 plus strand	1889
RPS6KC1	NM_001136138	NP_001129610	Coding	chr1:213051232 plus strand	1890
RPS6KC1	NM_001287218	NP_001274147	Coding	chr1:213051232 plus strand	1890
RPS6KC1	NM_001287219	NP_001274148	Coding	chr1:213051232 plus strand	1890
RPS6KC1	NM_001287220	NP_001274149	Coding	chr1:213051232 plus strand	1890
RPS6KC1	NM_001287221	NP_001274150	Coding	chr1:213051232 plus strand	1890
RPS6KC1	NM_012424	NP_036556	Coding	chr1:213051232 plus strand	1890
RPS8	NM_001012	NP_001003	Coding	chr1:44775573 plus strand	1891
RPTN	NM_001122965	NP_001116437	Coding	chr1:152159228 minus strand	1892
RRAGC	NM_001271851	NP_001258780	Coding	chr1:38859823 minus strand	1893
RRAGC	NM_022157	NP_071440	Coding	chr1:38859823 minus strand	1893
RRNAD1	NM_001142560	NP_001136032	Coding	chr1:156728470 plus strand	1894
RRNAD1	NM_015997	NP_057081	Coding	chr1:156728470 plus strand	1894
RRP15	NM_016052	NP_057136	Coding	chr1:218285286 plus strand	1895
RSBN1	NM_018364	NP_060834	Coding	chr1:113812448 minus strand	1896
RSC1A1	NM_006511	NP_006502	Coding	chr1:15659868 plus strand	1897
RSG1	NM_030907	NP_112169	Coding	chr1:16237164 minus strand	1898
RSPO1	NM_001038633	NP_001033722	Coding	chr1:37634923 minus strand	1899
RSPO1	NM_001242908	NP_001229837	Coding	chr1:37634923 minus strand	1899
RSPO1	NM_001242909	NP_001229838	Coding	chr1:37634923 minus strand	1899
RSPO1	NM_001242910	NP_001229839	Coding	chr1:37634923 minus strand	1899
RSRP1	NM_020317	NP_064713	Coding	chr1:25247494 minus strand	1900
RTCA	NM_001130841	NP_001124313	Coding	chr1:100266157 plus strand	1901
RTCA	NM_003729	NP_003720	Coding	chr1:100266157 plus strand	1901
RUNX3	NM_001031680	NP_001026850	Coding	chr1:24965010 minus strand	1902
RUNX3	NM_004350	NP_004341	Coding	chr1:24930279 minus strand	1903
RUSC1	NM_001105205	NP_001098675	Coding	chr1:155323936 plus strand	1904
RUSC1	NM_001278227	NP_001265156	Coding	chr1:155323936 plus strand	1904

【０１８９】

RUSC1	NM_001278228	NP_001265157	Coding	chr1:155323936 plus strand	1904
RUSC1	NM_001278229	NP_001265158	Coding	chr1:155323936 plus strand	1904
RUSC1	NM_014328	NP_055143	Coding	chr1:155323936 plus strand	1904
RUSC1	NM_001105203	NP_001098673	Coding	chr1:155320848 plus strand	1905
RUSC1	NM_001105204	NP_001098674	Coding	chr1:155320848 plus strand	1905
RUSC1	NM_001278230	NP_001265159	Coding	chr1:155324394 plus strand	1906
RUSC1-AS1	NM_001039517	NP_001034606	Coding	chr1:155324147 minus strand	1907
RWDD3	NM_001128142	NP_001121614	Coding	chr1:95234154 plus strand	1908
RWDD3	NM_001199682	NP_001186611	Coding	chr1:95234154 plus strand	1908
RWDD3	NM_001278247	NP_001265176	Coding	chr1:95234154 plus strand	1908
RWDD3	NM_001278248	NP_001265177	Coding	chr1:95234154 plus strand	1908
RWDD3	NM_015485	NP_056300	Coding	chr1:95234154 plus strand	1908
RXFP4	NM_181885	NP_871001	Coding	chr1:155941688 plus strand	1909
RXRG	NM_001256571	NP_001243500	Coding	chr1:165424984 minus strand	1910
RXRG	NM_001256570	NP_001243499	Coding	chr1:165445355 minus strand	1911
RXRG	NM_006917	NP_008848	Coding	chr1:165445355 minus strand	1911
RYR2	NM_001035	NP_001026	Coding	chr1:237042401 plus strand	1912
S100A1	NM_006271	NP_006262	Coding	chr1:153628396 plus strand	1913
S100A10	NM_002966	NP_002957	Coding	chr1:151994238 minus strand	1914
S100A11	NM_005620	NP_005611	Coding	chr1:152037035 minus strand	1915
S100A12	NM_005621	NP_005612	Coding	chr1:153375599 minus strand	1916
S100A13	NM_001024211	NP_001019382	Coding	chr1:153627641 minus strand	1917
S100A13	NM_005979	NP_005970	Coding	chr1:153628239 minus strand	1918
S100A13	NM_001024210	NP_001019381	Coding	chr1:153634092 minus strand	1919
S100A13	NM_001024213	NP_001019384	Coding	chr1:153627048 minus strand	1920
S100A13	NM_001024212	NP_001019383	Coding	chr1:153627268 minus strand	1921
S100A14	NM_020672	NP_065723	Coding	chr1:153616332 minus strand	1922
S100A16	NM_080388	NP_525127	Coding	chr1:153613038 minus strand	1923
S100A2	NM_005978	NP_005969	Coding	chr1:153565830 minus strand	1924

【０１９０】

S100A3	NM_002960	NP_002951	Coding	chr1:153549258 minus strand	1925
S100A4	NM_002961	NP_002952	Coding	chr1:153545806 minus strand	1926
S100A4	NM_019554	NP_062427	Coding	chr1:153545806 minus strand	1926
S100A5	NM_002962	NP_002953	Coding	chr1:153541765 minus strand	1927
S100A6	NM_014624	NP_055439	Coding	chr1:153536241 minus strand	1928
S100A7	NM_002963	NP_002954	Coding	chr1:153460661 minus strand	1929
S100A7A	NM_176823	NP_789793	Coding	chr1:153416523 plus strand	1930
S100A7L2	NM_001045479	NP_001038944	Coding	chr1:153440027 minus strand	1931
S100A8	NM_002964	NP_002955	Coding	chr1:153391188 minus strand	1932
S100A9	NM_002965	NP_002956	Coding	chr1:153357853 plus strand	1933
S100PBP	NM_001256121	NP_001243050	Coding	chr1:32817441 plus strand	1934
S100PBP	NM_022753	NP_073590	Coding	chr1:32817517 plus strand	1935
S1PR1	NM_001400	NP_001391	Coding	chr1:101236748 plus strand	1936
SAMD11	NM_152486	NP_689699	Coding	chr1:925740 plus strand	1937
SAMD13	NM_001010971	NP_001010971	Coding	chr1:84298365 plus strand	1938
SAMD13	NM_001134664	NP_001128136	Coding	chr1:84302650 plus strand	1939
SAMD13	NM_001134663	NP_001128135	Coding	chr1:84301605 plus strand	1940
SARS	NM_006513	NP_006504	Coding	chr1:109213892 plus strand	1941
SASS6	NM_194292	NP_919268	Coding	chr1:100132955 minus strand	1942
SCAMP3	NM_005698	NP_005689	Coding	chr1:155262385 minus strand	1943
SCAMP3	NM_052837	NP_443069	Coding	chr1:155262385 minus strand	1943
SCCPDH	NM_016002	NP_057086	Coding	chr1:246724075 plus strand	1944
SCMH1	NM_001172222	NP_001165693	Coding	chr1:41159933 minus strand	1945
SCMH1	NM_001031694	NP_001026864	Coding	chr1:41161432 minus strand	1946
SCMH1	NM_001172221	NP_001165692	Coding	chr1:41163017 minus strand	1947
SCMH1	NM_001172218	NP_001165689	Coding	chr1:41242143 minus strand	1948
SCMH1	NM_001172219	NP_001165690	Coding	chr1:41242143 minus strand	1948
SCMH1	NM_001172220	NP_001165691	Coding	chr1:41242143 minus strand	1948
SCMH1	NM_012236	NP_036368	Coding	chr1:41242143 minus strand	1948

【０１９１】

SCNM1	NM_001204856	NP_001191785	Coding	chr1:151166021 plus strand	1949
SCNM1	NM_024041	NP_076946	Coding	chr1:151166021 plus strand	1949
SCNN1D	NM_001130413	NP_001123885	Coding	chr1:1280435 plus strand	1950
SCP2	NM_001007098	NP_001007099	Coding	chr1:52927228 plus strand	1951
SCP2	NM_001193599	NP_001180528	Coding	chr1:52927228 plus strand	1951
SCP2	NM_001193600	NP_001180529	Coding	chr1:52927228 plus strand	1951
SCP2	NM_001193617	NP_001180546	Coding	chr1:52927228 plus strand	1951
SCP2	NM_002979	NP_002970	Coding	chr1:52927228 plus strand	1951
SCP2	NM_001007099	NP_001007100	Coding	chr1:53014937 plus strand	1952
SCP2	NM_001007100	NP_001007101	Coding	chr1:53014937 plus strand	1952
SCP2	NM_001007250	NP_001007251	Coding	chr1:53014937 plus strand	1952
SCYL3	NM_020423	NP_065156	Coding	chr1:169893959 minus strand	1953
SCYL3	NM_181093	NP_851607	Coding	chr1:169893959 minus strand	1953
SDC3	NM_014654	NP_055469	Coding	chr1:30908633 minus strand	1954
SDCCAG8	NM_006642	NP_006633	Coding	chr1:243256004 plus strand	1955
SDE2	NM_152608	NP_689821	Coding	chr1:225999365 minus strand	1956
SDF4	NM_016176	NP_057260	Coding	chr1:1232067 minus strand	1957
SDF4	NM_016547	NP_057631	Coding	chr1:1232067 minus strand	1957
SDHB	NM_003000	NP_002991	Coding	chr1:17054170 minus strand	1958
SDHC	NM_001035511	NP_001030588	Coding	chr1:161314375 plus strand	1959
SDHC	NM_001035512	NP_001030589	Coding	chr1:161314375 plus strand	1959
SDHC	NM_001035513	NP_001030590	Coding	chr1:161314375 plus strand	1959
SDHC	NM_001278172	NP_001265101	Coding	chr1:161314375 plus strand	1959
SDHC	NM_003001	NP_002992	Coding	chr1:161314375 plus strand	1959
SEC16B	NM_033127	NP_149118	Coding	chr1:177969915 minus strand	1960
SEC22B	NM_004892	NP_004883	Coding	chr1:120176521 minus strand	1961
SELE	NM_000450	NP_000441	Coding	chr1:169734079 minus strand	1962
SELENBP1	NM_001258288	NP_001245217	Coding	chr1:151372734 minus strand	1963
SELENBP1	NM_001258289	NP_001245218	Coding	chr1:151372734 minus strand	1963
SELENBP1	NM_003944	NP_003935	Coding	chr1:151372734 minus strand	1963
SELL	NM_000655	NP_000646	Coding	chr1:169711702 minus strand	1964

【０１９２】

SELP	NM_003005	NP_002996	Coding	chr1:169630139 minus strand	1965
SEMA4A	NM_001193301	NP_001180230	Coding	chr1:156149943 plus strand	1966
SEMA4A	NM_001193302	NP_001180231	Coding	chr1:156153577 plus strand	1967
SEMA4A	NM_001193300	NP_001180229	Coding	chr1:156153530 plus strand	1968
SEMA4A	NM_022367	NP_071762	Coding	chr1:156153530 plus strand	1968
SEMA6C	NM_001178061	NP_001171532	Coding	chr1:151146664 minus strand	1969
SEMA6C	NM_001178062	NP_001171533	Coding	chr1:151146664 minus strand	1969
SEMA6C	NM_030913	NP_112175	Coding	chr1:151146664 minus strand	1969
SEP15	NM_004261	NP_004252	Coding	chr1:86914424 minus strand	1970
SEP15	NM_203341	NP_976086	Coding	chr1:86914424 minus strand	1970
SEPN1	NM_020451	NP_065184	Coding	chr1:25800175 plus strand	1971
SEPN1	NM_206926	NP_996809	Coding	chr1:25800175 plus strand	1971
SERBP1	NM_001018067	NP_001018077	Coding	chr1:67430440 minus strand	1972
SERBP1	NM_001018068	NP_001018078	Coding	chr1:67430440 minus strand	1972
SERBP1	NM_001018069	NP_001018079	Coding	chr1:67430440 minus strand	1972
SERBP1	NM_015640	NP_056455	Coding	chr1:67430440 minus strand	1972
SERINC2	NM_178865	NP_849196	Coding	chr1:31413115 plus strand	1973
SERINC2	NM_001199038	NP_001185967	Coding	chr1:31409564 plus strand	1974
SERINC2	NM_001199037	NP_001185966	Coding	chr1:31410173 plus strand	1975
SERINC2	NM_001199039	NP_001185968	Coding	chr1:31413812 plus strand	1976
SERINC2	NM_018565	NP_061035	Coding	chr1:31413812 plus strand	1976
SERPINC1	NM_000488	NP_000479	Coding	chr1:173917378 minus strand	1977
SERTAD4	NM_019605	NP_062551	Coding	chr1:210232849 plus strand	1978
SESN2	NM_031459	NP_113647	Coding	chr1:28259451 plus strand	1979
SETDB1	NM_001145415	NP_001138887	Coding	chr1:150926338 plus strand	1980
SETDB1	NM_001243491	NP_001230420	Coding	chr1:150926338 plus strand	1980
SETDB1	NM_012432	NP_036564	Coding	chr1:150926338 plus strand	1980
SETSIP	NM_001287737	NP_001274666	Coding	chr1:92075472 minus strand	1981
SF3A3	NM_006802	NP_006793	Coding	chr1:37990089 minus strand	1982
SF3B4	NM_005850	NP_005841	Coding	chr1:149928252 minus strand	1983

【０１９３】

SFN	NM_006142	NP_006133	Coding	chr1:26863141 plus strand	1984
SFPQ	NM_005066	NP_005057	Coding	chr1:35193142 minus strand	1985
SFT2D2	NM_199344	NP_955376	Coding	chr1:168226016 plus strand	1986
SGIP1	NM_032291	NP_115667	Coding	chr1:66534141 plus strand	1987
SH2D1B	NM_053282	NP_444512	Coding	chr1:162412138 minus strand	1988
SH2D2A	NM_001161441	NP_001154913	Coding	chr1:156816848 minus strand	1989
SH2D2A	NM_001161442	NP_001154914	Coding	chr1:156816848 minus strand	1989
SH2D2A	NM_001161444	NP_001154916	Coding	chr1:156816848 minus strand	1989
SH2D2A	NM_003975	NP_003966	Coding	chr1:156816848 minus strand	1989
SH2D2A	NM_001161443	NP_001154915	Coding	chr1:156816147 minus strand	1990
SH2D5	NM_001103160	NP_001096630	Coding	chr1:20732640 minus strand	1991
SH2D5	NM_001103161	NP_001096631	Coding	chr1:20732640 minus strand	1991
SH3BGRL3	NM_031286	NP_112576	Coding	chr1:26279721 plus strand	1992
SH3BP5L	NM_030645	NP_085148	Coding	chr1:248825955 minus strand	1993
SH3D21	NM_024676	NP_078952	Coding	chr1:36307106 plus strand	1994
SH3D21	NM_001162530	NP_001156002	Coding	chr1:36306392 plus strand	1995
SH3GLB1	NM_001206651	NP_001193580	Coding	chr1:86704569 plus strand	1996
SH3GLB1	NM_001206652	NP_001193581	Coding	chr1:86704569 plus strand	1996
SH3GLB1	NM_001206653	NP_001193582	Coding	chr1:86704569 plus strand	1996
SH3GLB1	NM_016009	NP_057093	Coding	chr1:86704569 plus strand	1996
SHC1	NM_001130040	NP_001123512	Coding	chr1:154970747 minus strand	1997
SHC1	NM_183001	NP_892113	Coding	chr1:154970747 minus strand	1997
SHC1	NM_001130041	NP_001123513	Coding	chr1:154974483 minus strand	1998
SHC1	NM_001202859	NP_001189788	Coding	chr1:154974483 minus strand	1998
SHC1	NM_003029	NP_003020	Coding	chr1:154974483 minus strand	1998
SHCBP1L	NM_030933	NP_112195	Coding	chr1:182953418 minus strand	1999
SHE	NM_001010846	NP_001010846	Coding	chr1:154502050 minus strand	2000
SHISA4	NM_198149	NP_937792	Coding	chr1:201888676 plus strand	2001
SIKE1	NM_001102396	NP_001095866	Coding	chr1:114780687 minus strand	2002
SIKE1	NM_025073	NP_079349	Coding	chr1:114780687 minus strand	2002

【０１９４】

SIPA1L2	NM_020808	NP_065859	Coding	chr1:232515497 minus strand	2003
SKI	NM_003036	NP_003027	Coding	chr1:2228694 plus strand	2004
SLAMF1	NM_003037	NP_003028	Coding	chr1:160647311 minus strand	2005
SLAMF6	NM_001184714	NP_001171643	Coding	chr1:160523262 minus strand	2006
SLAMF6	NM_001184715	NP_001171644	Coding	chr1:160523262 minus strand	2006
SLAMF6	NM_001184716	NP_001171645	Coding	chr1:160523262 minus strand	2006
SLAMF6	NM_052931	NP_443163	Coding	chr1:160523262 minus strand	2006
SLAMF7	NM_001282588	NP_001269517	Coding	chr1:160739056 plus strand	2007
SLAMF7	NM_001282589	NP_001269518	Coding	chr1:160739056 plus strand	2007
SLAMF7	NM_001282590	NP_001269519	Coding	chr1:160739056 plus strand	2007
SLAMF7	NM_001282591	NP_001269520	Coding	chr1:160739056 plus strand	2007
SLAMF7	NM_001282592	NP_001269521	Coding	chr1:160739056 plus strand	2007
SLAMF7	NM_001282593	NP_001269522	Coding	chr1:160739056 plus strand	2007
SLAMF7	NM_001282594	NP_001269523	Coding	chr1:160739056 plus strand	2007
SLAMF7	NM_001282595	NP_001269524	Coding	chr1:160739056 plus strand	2007
SLAMF7	NM_001282596	NP_001269525	Coding	chr1:160739056 plus strand	2007
SLAMF7	NM_021181	NP_067004	Coding	chr1:160739056 plus strand	2007
SLAMF8	NM_020125	NP_064510	Coding	chr1:159826688 plus strand	2008
SLAMF9	NM_001146172	NP_001139644	Coding	chr1:159954254 minus strand	2009
SLAMF9	NM_001146173	NP_001139645	Coding	chr1:159954254 minus strand	2009
SLAMF9	NM_033438	NP_254273	Coding	chr1:159954254 minus strand	2009
SLC16A1	NM_001166496	NP_001159968	Coding	chr1:112956063 minus strand	2010
SLC16A1	NM_003051	NP_003042	Coding	chr1:112956353 minus strand	2011
SLC16A4	NM_001201546	NP_001188475	Coding	chr1:110391082 minus strand	2012
SLC16A4	NM_001201547	NP_001188476	Coding	chr1:110391082 minus strand	2012
SLC16A4	NM_001201548	NP_001188477	Coding	chr1:110391082 minus strand	2012
SLC16A4	NM_001201549	NP_001188478	Coding	chr1:110391082 minus strand	2012
SLC16A4	NM_004696	NP_004687	Coding	chr1:110391082 minus	2012

【０１９５】

				strand	
SLC19A2	NM_006996	NP_008927	Coding	chr1:169485970 minus strand	2013
SLC1A7	NM_001287595	NP_001274524	Coding	chr1:53142632 minus strand	2014
SLC1A7	NM_001287596	NP_001274525	Coding	chr1:53142632 minus strand	2014
SLC1A7	NM_001287597	NP_001274526	Coding	chr1:53142632 minus strand	2014
SLC1A7	NM_006671	NP_006662	Coding	chr1:53142632 minus strand	2014
SLC22A15	NM_018420	NP_060890	Coding	chr1:115976497 plus strand	2015
SLC25A24	NM_013386	NP_037518	Coding	chr1:108200358 minus strand	2016
SLC25A24	NM_213651	NP_998816	Coding	chr1:108192809 minus strand	2017
SLC25A33	NM_032315	NP_115691	Coding	chr1:9539468 plus strand	2018
SLC25A34	NM_207348	NP_997231	Coding	chr1:15736313 plus strand	2019
SLC25A44	NM_001286184	NP_001273113	Coding	chr1:156193931 plus strand	2020
SLC25A44	NM_014655	NP_055470	Coding	chr1:156193931 plus strand	2020
SLC26A9	NM_052934	NP_443166	Coding	chr1:205943460 minus strand	2021
SLC26A9	NM_134325	NP_599152	Coding	chr1:205943460 minus strand	2021
SLC27A3	NM_024330	NP_077306	Coding	chr1:153775291 plus strand	2022
SLC2A1	NM_006516	NP_006507	Coding	chr1:42959176 minus strand	2023
SLC2A5	NM_001135585	NP_001129057	Coding	chr1:9069828 minus strand	2024
SLC2A5	NM_003039	NP_003030	Coding	chr1:9069828 minus strand	2024
SLC2A7	NM_207420	NP_997303	Coding	chr1:9026345 minus strand	2025
SLC30A1	NM_021194	NP_067017	Coding	chr1:211578757 minus strand	2026
SLC30A10	NM_018713	NP_061183	Coding	chr1:219928651 minus strand	2027
SLC30A2	NM_001004434	NP_001004434	Coding	chr1:26046113 minus strand	2028
SLC30A2	NM_032513	NP_115902	Coding	chr1:26046113 minus strand	2028
SLC30A7	NM_001144884	NP_001138356	Coding	chr1:100896075 plus strand	2029
SLC30A7	NM_133496	NP_598003	Coding	chr1:100896077 plus strand	2030
SLC35A3	NM_001271684	NP_001258613	Coding	chr1:99969788 plus strand	2031
SLC35A3	NM_012243	NP_036375	Coding	chr1:99969788 plus strand	2031
SLC35A3	NM_001271685	NP_001258614	Coding	chr1:99970435 plus strand	2032
SLC35D1	NM_015139	NP_055954	Coding	chr1:67054397 minus strand	2033

【０１９６】

SLC35E2	NM_001199787	NP_001186716	Coding	chr1:1745999 minus strand	2034
SLC35E2	NM_182838	NP_878258	Coding	chr1:1745999 minus strand	2034
SLC35E2B	NM_001110781	NP_001104251	Coding	chr1:1692804 minus strand	2035
SLC35E2B	NM_001290264	NP_001277193	Coding	chr1:1692804 minus strand	2035
SLC35F3	NM_001300845	NP_001287774	Coding	chr1:234214210 plus strand	2036
SLC35F3	NM_173508	NP_775779	Coding	chr1:233904711 plus strand	2037
SLC39A1	NM_001271957	NP_001258886	Coding	chr1:153963368 minus strand	2038
SLC39A1	NM_001271958	NP_001258887	Coding	chr1:153963641 minus strand	2039
SLC39A1	NM_001271961	NP_001258890	Coding	chr1:153963641 minus strand	2039
SLC39A1	NM_014437	NP_055252	Coding	chr1:153967732 minus strand	2040
SLC39A1	NM_001271959	NP_001258888	Coding	chr1:153963492 minus strand	2041
SLC39A1	NM_001271960	NP_001258889	Coding	chr1:153968184 minus strand	2042
SLC41A1	NM_173854	NP_776253	Coding	chr1:205813033 minus strand	2043
SLC44A3	NM_001301079	NP_001288008	Coding	chr1:94820543 plus strand	2044
SLC44A3	NM_152369	NP_689582	Coding	chr1:94820543 plus strand	2044
SLC44A3	NM_001114106	NP_001107578	Coding	chr1:94820341 plus strand	2045
SLC44A3	NM_001258340	NP_001245269	Coding	chr1:94820341 plus strand	2045
SLC44A3	NM_001258341	NP_001245270	Coding	chr1:94820341 plus strand	2045
SLC44A3	NM_001258342	NP_001245271	Coding	chr1:94820341 plus strand	2045
SLC44A3	NM_001258343	NP_001245272	Coding	chr1:94820341 plus strand	2045
SLC44A5	NM_001130058	NP_001123530	Coding	chr1:75611114 minus strand	2046
SLC44A5	NM_152697	NP_689910	Coding	chr1:75611114 minus strand	2046
SLC45A1	NM_001080397	NP_001073866	Coding	chr1:8318084 plus strand	2047
SLC45A3	NM_033102	NP_149093	Coding	chr1:205680502 minus strand	2048
SLC50A1	NM_001122837	NP_001116309	Coding	chr1:155135811 plus strand	2049
SLC50A1	NM_001122839	NP_001116311	Coding	chr1:155135811 plus strand	2049
SLC50A1	NM_001287586	NP_001274515	Coding	chr1:155135811 plus strand	2049
SLC50A1	NM_001287587	NP_001274516	Coding	chr1:155135811 plus strand	2049
SLC50A1	NM_001287588	NP_001274517	Coding	chr1:155135811 plus strand	2049
SLC50A1	NM_001287589	NP_001274518	Coding	chr1:155135811 plus strand	2049
SLC50A1	NM_018845	NP_061333	Coding	chr1:155135811 plus strand	2049

【０１９７】

SLC50A1	NM_001287590	NP_001274519	Coding	chr1:155135343 plus strand	2050
SLC50A1	NM_001287591	NP_001274520	Coding	chr1:155135343 plus strand	2050
SLC50A1	NM_001287592	NP_001274521	Coding	chr1:155135343 plus strand	2050
SLC5A9	NM_001011547	NP_001011547	Coding	chr1:48222684 plus strand	2051
SLC5A9	NM_001135181	NP_001128653	Coding	chr1:48222684 plus strand	2051
SLC6A17	NM_001010898	NP_001010898	Coding	chr1:110150509 plus strand	2052
SLC6A9	NM_001024845	NP_001020016	Coding	chr1:44031492 minus strand	2053
SLC6A9	NM_001261380	NP_001248309	Coding	chr1:44017340 minus strand	2054
SLC6A9	NM_006934	NP_008865	Coding	chr1:44017340 minus strand	2054
SLC6A9	NM_201649	NP_964012	Coding	chr1:44017340 minus strand	2054
SLC9A1	NM_003047	NP_003038	Coding	chr1:27155130 minus strand	2055
SLC9C2	NM_178527	NP_848622	Coding	chr1:173603094 minus strand	2056
SLFNL1	NM_001168247	NP_001161719	Coding	chr1:41021755 minus strand	2057
SLFNL1	NM_001300859	NP_001287788	Coding	chr1:41021755 minus strand	2057
SLFNL1	NM_144990	NP_659427	Coding	chr1:41021755 minus strand	2057
SMAP2	NM_022733	NP_073570	Coding	chr1:40373705 plus strand	2058
SMAP2	NM_001198979	NP_001185908	Coding	chr1:40393344 plus strand	2059
SMAP2	NM_001198980	NP_001185909	Coding	chr1:40396799 plus strand	2060
SMAP2	NM_001198978	NP_001185907	Coding	chr1:40374632 plus strand	2061
SMCP	NM_030663	NP_109588	Coding	chr1:152878321 plus strand	2062
SMG5	NM_015327	NP_056142	Coding	chr1:156282829 minus strand	2063
SMG7	NM_001174061	NP_001167532	Coding	chr1:183472370 plus strand	2064
SMG7	NM_173156	NP_775179	Coding	chr1:183472370 plus strand	2064
SMG7	NM_201568	NP_963862	Coding	chr1:183472370 plus strand	2064
SMG7	NM_201569	NP_963863	Coding	chr1:183472370 plus strand	2064
SMIM1	NM_001288583	NP_001275512	Coding	chr1:3772760 plus strand	2065
SMIM1	NM_001163724	NP_001157196	Coding	chr1:3772786 plus strand	2066
SMIM12	NM_001164825	NP_001158297	Coding	chr1:34859737 minus strand	2067
SMIM12	NM_001164824	NP_001158296	Coding	chr1:34859045 minus strand	2068
SMIM12	NM_138428	NP_612437	Coding	chr1:34859816 minus strand	2069

【０１９８】

SMPDL3B	NM_001009568	NP_001009568	Coding	chr1:27934992 plus strand	2070
SMPDL3B	NM_014474	NP_055289	Coding	chr1:27934992 plus strand	2070
SMYD2	NM_020197	NP_064582	Coding	chr1:214281221 plus strand	2071
SMYD3	NM_001167740	NP_001161212	Coding	chr1:246507342 minus strand	2072
SMYD3	NM_022743	NP_073580	Coding	chr1:246417412 minus strand	2073
SNAP47	NM_053052	NP_444280	Coding	chr1:227734995 plus strand	2074
SNAPIN	NM_012437	NP_036569	Coding	chr1:153658653 plus strand	2075
SNIP1	NM_024700	NP_078976	Coding	chr1:37554344 minus strand	2076
SNRNP40	NM_004814	NP_004805	Coding	chr1:31296797 minus strand	2077
SNRPE	NM_003094	NP_003085	Coding	chr1:203861611 plus strand	2078
SNX27	NM_030918	NP_112180	Coding	chr1:151612185 plus strand	2079
SNX7	NM_015976	NP_057060	Coding	chr1:98661679 plus strand	2080
SNX7	NM_152238	NP_689424	Coding	chr1:98661679 plus strand	2080
SOAT1	NM_001252511	NP_001239440	Coding	chr1:179293713 plus strand	2081
SOAT1	NM_001252512	NP_001239441	Coding	chr1:179293713 plus strand	2081
SOAT1	NM_003101	NP_003092	Coding	chr1:179293713 plus strand	2081
SORT1	NM_001205228	NP_001192157	Coding	chr1:109393357 minus strand	2082
SORT1	NM_002959	NP_002950	Coding	chr1:109397941 minus strand	2083
SOX13	NM_005686	NP_005677	Coding	chr1:204073117 plus strand	2084
SPAG17	NM_206996	NP_996879	Coding	chr1:118185225 minus strand	2085
SPATA17	NM_138796	NP_620151	Coding	chr1:217631352 plus strand	2086
SPATA21	NM_198546	NP_940948	Coding	chr1:16437424 minus strand	2087
SPATA45	NM_001024601	NP_001019772	Coding	chr1:212847649 minus strand	2088
SPATA6	NM_001286238	NP_001273167	Coding	chr1:48472208 minus strand	2089
SPATA6	NM_001286239	NP_001273168	Coding	chr1:48472208 minus strand	2089
SPATA6	NM_019073	NP_061946	Coding	chr1:48472208 minus strand	2089
SPEN	NM_015001	NP_055816	Coding	chr1:15847863 plus strand	2090
SPHAR	NM_006542	NP_006533	Coding	chr1:229304381 plus strand	2091
SPOCD1	NM_001281987	NP_001268916	Coding	chr1:31816051 minus strand	2092

【０１９９】

SPOCD1	NM_001281988	NP_001268917	Coding	chr1:31816051 minus strand	2092
SPOCD1	NM_144569	NP_653170	Coding	chr1:31816051 minus strand	2092
SPRR1A	NM_001199828	NP_001186757	Coding	chr1:152984087 plus strand	2093
SPRR1A	NM_005987	NP_005978	Coding	chr1:152984087 plus strand	2093
SPRR1B	NM_003125	NP_003116	Coding	chr1:153031202 plus strand	2094
SPRR2A	NM_005988	NP_005979	Coding	chr1:153057512 minus strand	2095
SPRR2B	NM_001017418	NP_001017418	Coding	chr1:153071608 minus strand	2096
SPRR2D	NM_006945	NP_008876	Coding	chr1:153041118 minus strand	2097
SPRR2E	NM_001024209	NP_001019380	Coding	chr1:153094528 minus strand	2098
SPRR2F	NM_001014450	NP_001014450	Coding	chr1:153113513 minus strand	2099
SPRR2G	NM_001014291	NP_001014313	Coding	chr1:153150951 minus strand	2100
SPRR3	NM_001097589	NP_001091058	Coding	chr1:153001746 plus strand	2101
SPRR3	NM_005416	NP_005407	Coding	chr1:153001746 plus strand	2101
SPRR4	NM_173080	NP_775103	Coding	chr1:152970651 plus strand	2102
SPRTN	NM_001010984	NP_001010984	Coding	chr1:231337935 plus strand	2103
SPRTN	NM_001261462	NP_001248391	Coding	chr1:231337935 plus strand	2103
SPRTN	NM_032018	NP_114407	Coding	chr1:231337935 plus strand	2103
SPSB1	NM_025106	NP_079382	Coding	chr1:9292881 plus strand	2104
SPTA1	NM_003126	NP_003117	Coding	chr1:158686716 minus strand	2105
SRGAP2	NM_001170637	NP_001164108	Coding	chr1:206205428 plus strand	2106
SRGAP2	NM_001300952	NP_001287881	Coding	chr1:206205428 plus strand	2106
SRGAP2	NM_015326	NP_056141	Coding	chr1:206205428 plus strand	2106
SRGAP2B	NM_001271870	NP_001258799	Coding	chr1:145093246 minus strand	2107
SRGAP2C	NM_001271872	NP_001258801	Coding	chr1:121185061 plus strand	2108
SRM	NM_003132	NP_003123	Coding	chr1:11060034 minus strand	2109
SRP9	NM_001130440	NP_001123912	Coding	chr1:225777812 plus strand	2110
SRP9	NM_003133	NP_003124	Coding	chr1:225777812 plus strand	2110
SRRM1	NM_005839	NP_005830	Coding	chr1:24643102 plus strand	2111

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SRSF10	NM_001191005	NP_001177934	Coding	chr1:23980463 minus strand	2112
SRSF10	NM_001191006	NP_001177935	Coding	chr1:23980463 minus strand	2112
SRSF10	NM_001191007	NP_001177936	Coding	chr1:23980463 minus strand	2112
SRSF10	NM_001191009	NP_001177938	Coding	chr1:23980463 minus strand	2112
SRSF10	NM_001300936	NP_001287865	Coding	chr1:23980463 minus strand	2112
SRSF10	NM_001300937	NP_001287866	Coding	chr1:23980463 minus strand	2112
SRSF10	NM_006625	NP_006616	Coding	chr1:23980463 minus strand	2112
SRSF10	NM_054016	NP_473357	Coding	chr1:23980463 minus strand	2112
SRSF11	NM_001190987	NP_001177916	Coding	chr1:70205681 plus strand	2113
SRSF11	NM_004768	NP_004759	Coding	chr1:70205681 plus strand	2113
SRSF4	NM_005626	NP_005617	Coding	chr1:29182125 minus strand	2114
SSBP3	NM_001009955	NP_001009955	Coding	chr1:54406395 minus strand	2115
SSBP3	NM_018070	NP_060540	Coding	chr1:54406395 minus strand	2115
SSBP3	NM_145716	NP_663768	Coding	chr1:54406395 minus strand	2115
SSR2	NM_003145	NP_003136	Coding	chr1:156020967 minus strand	2116
SSU72	NM_014188	NP_054907	Coding	chr1:1574882 minus strand	2117
SSX2IP	NM_001166295	NP_001159767	Coding	chr1:84690468 minus strand	2118
SSX2IP	NM_001166417	NP_001159889	Coding	chr1:84690468 minus strand	2118
SSX2IP	NM_001166293	NP_001159765	Coding	chr1:84690557 minus strand	2119
SSX2IP	NM_001166294	NP_001159766	Coding	chr1:84690557 minus strand	2119
SSX2IP	NM_014021	NP_054740	Coding	chr1:84690557 minus strand	2119
ST3GAL3	NM_001270459	NP_001257388	Coding	chr1:43707532 plus strand	2120
ST3GAL3	NM_001270460	NP_001257389	Coding	chr1:43707532 plus strand	2120
ST3GAL3	NM_001270461	NP_001257390	Coding	chr1:43707532 plus strand	2120
ST3GAL3	NM_001270462	NP_001257391	Coding	chr1:43707532 plus strand	2120
ST3GAL3	NM_001270463	NP_001257392	Coding	chr1:43707532 plus strand	2120
ST3GAL3	NM_001270464	NP_001257393	Coding	chr1:43707532 plus strand	2120
ST3GAL3	NM_001270465	NP_001257394	Coding	chr1:43707532 plus strand	2120
ST3GAL3	NM_001270466	NP_001257395	Coding	chr1:43707532 plus strand	2120
ST3GAL3	NM_006279	NP_006270	Coding	chr1:43707532 plus strand	2120
ST3GAL3	NM_174963	NP_777623	Coding	chr1:43707532 plus strand	2120
ST3GAL3	NM_174964	NP_777624	Coding	chr1:43707532 plus strand	2120

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ST3GAL3	NM_174965	NP_777625	Coding	chr1:43707532 plus strand	2120
ST3GAL3	NM_174966	NP_777626	Coding	chr1:43707532 plus strand	2120
ST3GAL3	NM_174967	NP_777627	Coding	chr1:43707532 plus strand	2120
ST3GAL3	NM_174968	NP_777628	Coding	chr1:43707532 plus strand	2120
ST3GAL3	NM_174969	NP_777629	Coding	chr1:43707532 plus strand	2120
ST3GAL3	NM_174970	NP_777630	Coding	chr1:43707532 plus strand	2120
ST3GAL3	NM_174971	NP_777631	Coding	chr1:43707532 plus strand	2120
ST6GALNAC3	NM_001160011	NP_001153483	Coding	chr1:76074703 plus strand	2121
ST6GALNAC3	NM_152996	NP_694541	Coding	chr1:76074703 plus strand	2121
ST6GALNAC5	NM_030965	NP_112227	Coding	chr1:76867500 plus strand	2122
ST7L	NM_017744	NP_060214	Coding	chr1:112619418 minus strand	2123
ST7L	NM_138727	NP_620055	Coding	chr1:112619418 minus strand	2123
ST7L	NM_138728	NP_620056	Coding	chr1:112619418 minus strand	2123
ST7L	NM_138729	NP_620057	Coding	chr1:112619418 minus strand	2123
STIL	NM_001048166	NP_001041631	Coding	chr1:47314147 minus strand	2124
STIL	NM_001282936	NP_001269865	Coding	chr1:47314147 minus strand	2124
STIL	NM_001282937	NP_001269866	Coding	chr1:47314147 minus strand	2124
STIL	NM_001282938	NP_001269867	Coding	chr1:47314147 minus strand	2124
STIL	NM_001282939	NP_001269868	Coding	chr1:47314147 minus strand	2124
STIL	NM_003035	NP_003026	Coding	chr1:47314147 minus strand	2124
STK40	NM_001282546	NP_001269475	Coding	chr1:36385927 minus strand	2125
STK40	NM_001282547	NP_001269476	Coding	chr1:36385927 minus strand	2125
STK40	NM_032017	NP_114406	Coding	chr1:36385927 minus strand	2125
STMN1	NM_203401	NP_981946	Coding	chr1:25906153 minus strand	2126
STMN1	NM_203399	NP_981944	Coding	chr1:25906877 minus strand	2127
STMN1	NM_001145454	NP_001138926	Coding	chr1:25906502 minus strand	2128
STMN1	NM_005563	NP_005554	Coding	chr1:25906502 minus strand	2128
STPG1	NM_001199013	NP_001185942	Coding	chr1:24413772 minus strand	2129
STPG1	NM_001199014	NP_001185943	Coding	chr1:24413772 minus strand	2129
STPG1	NM_178122	NP_835223	Coding	chr1:24413772 minus strand	2129
STPG1	NM_001199012	NP_001185941	Coding	chr1:24415097 minus	2130

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				strand	
STRIP1	NM_033088	NP_149079	Coding	chr1:110034600 plus strand	2131
STRIP1	NM_001270768	NP_001257697	Coding	chr1:110031576 plus strand	2132
STX12	NM_177424	NP_803173	Coding	chr1:27773182 plus strand	2133
STX6	NM_001286210	NP_001273139	Coding	chr1:181023121 minus strand	2134
STX6	NM_005819	NP_005810	Coding	chr1:181023121 minus strand	2134
STXBP3	NM_007269	NP_009200	Coding	chr1:108746662 plus strand	2135
SUCO	NM_016227	NP_057311	Coding	chr1:172532348 plus strand	2136
SUCO	NM_001282750	NP_001269679	Coding	chr1:172533117 plus strand	2137
SUCO	NM_001282751	NP_001269680	Coding	chr1:172533117 plus strand	2137
SUCO	NM_014283	NP_055098	Coding	chr1:172533117 plus strand	2137
SUSD4	NM_001037175	NP_001032252	Coding	chr1:223364202 minus strand	2138
SUSD4	NM_017982	NP_060452	Coding	chr1:223364202 minus strand	2138
SV2A	NM_014849	NP_055664	Coding	chr1:149917882 minus strand	2139
SV2A	NM_001278719	NP_001265648	Coding	chr1:149906991 minus strand	2140
SWT1	NM_001105518	NP_001098988	Coding	chr1:185157059 plus strand	2141
SWT1	NM_017673	NP_060143	Coding	chr1:185157158 plus strand	2142
SYCP1	NM_001282541	NP_001269470	Coding	chr1:114854802 plus strand	2143
SYCP1	NM_001282542	NP_001269471	Coding	chr1:114854802 plus strand	2143
SYCP1	NM_003176	NP_003167	Coding	chr1:114854802 plus strand	2143
SYDE2	NM_032184	NP_115560	Coding	chr1:85201045 minus strand	2144
SYF2	NM_015484	NP_056299	Coding	chr1:25232522 minus strand	2145
SYF2	NM_207170	NP_997053	Coding	chr1:25232522 minus strand	2145
SYNC	NM_001161708	NP_001155180	Coding	chr1:32702760 minus strand	2146
SYNC	NM_030786	NP_110413	Coding	chr1:32702760 minus strand	2146
SYPL2	NM_001040709	NP_001035799	Coding	chr1:109466477 plus strand	2147
SYT11	NM_152280	NP_689493	Coding	chr1:155859468 plus strand	2148
SYT14	NM_001146261	NP_001139733	Coding	chr1:209938173 plus strand	2149

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SYT14	NM_001146262	NP_001139734	Coding	chr1:209938173 plus strand	2149
SYT14	NM_001146264	NP_001139736	Coding	chr1:209938173 plus strand	2149
SYT14	NM_001256006	NP_001242935	Coding	chr1:209938173 plus strand	2149
SYT14	NM_153262	NP_694994	Coding	chr1:209938173 plus strand	2149
SYT2	NM_177402	NP_796376	Coding	chr1:202710423 minus strand	2150
SYT2	NM_001136504	NP_001129976	Coding	chr1:202643453 minus strand	2151
SYT6	NM_001270805	NP_001257734	Coding	chr1:114153850 minus strand	2152
SYT6	NM_205848	NP_995320	Coding	chr1:114152440 minus strand	2153
SYTL1	NM_001193308	NP_001180237	Coding	chr1:27341991 plus strand	2154
SYTL1	NM_032872	NP_116261	Coding	chr1:27341991 plus strand	2154
SZRD1	NM_001114600	NP_001108072	Coding	chr1:16367029 plus strand	2155
SZRD1	NM_001271869	NP_001258798	Coding	chr1:16367029 plus strand	2155
SZT2	NM_015284	NP_056099	Coding	chr1:43389884 plus strand	2156
TACSTD2	NM_002353	NP_002344	Coding	chr1:58577494 minus strand	2157
TADA1	NM_053053	NP_444281	Coding	chr1:166876417 minus strand	2158
TAF12	NM_001135218	NP_001128690	Coding	chr1:28643092 minus strand	2159
TAF12	NM_005644	NP_005635	Coding	chr1:28643092 minus strand	2159
TAF13	NM_005645	NP_005636	Coding	chr1:109076002 minus strand	2160
TAF1A	NM_001201536	NP_001188465	Coding	chr1:222589933 minus strand	2161
TAF1A	NM_005681	NP_005672	Coding	chr1:222589933 minus strand	2161
TAF1A	NM_139352	NP_647603	Coding	chr1:222589933 minus strand	2161
TAF5L	NM_001025247	NP_001020418	Coding	chr1:229626047 minus strand	2162
TAF5L	NM_014409	NP_055224	Coding	chr1:229626047 minus strand	2162
TAGLN2	NM_003564	NP_003555	Coding	chr1:159925542 minus strand	2163
TAGLN2	NM_001277223	NP_001264152	Coding	chr1:159924551 minus strand	2164
TAGLN2	NM_001277224	NP_001264153	Coding	chr1:159923717 minus strand	2165
TAL1	NM_001290404	NP_001277333	Coding	chr1:47231889 minus strand	2166
TAL1	NM_001290405	NP_001277334	Coding	chr1:47231889 minus strand	2166
TAL1	NM_001290403	NP_001277332	Coding	chr1:47232335 minus strand	2167

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TAL1	NM_001290406	NP_001277335	Coding	chr1:47232335 minus strand	2167
TAL1	NM_003189	NP_003180	Coding	chr1:47232335 minus strand	2167
TAL1	NM_001287347	NP_001274276	Coding	chr1:47231715 minus strand	2168
TARBP1	NM_005646	NP_005637	Coding	chr1:234479103 minus strand	2169
TARDBP	NM_007375	NP_031401	Coding	chr1:11012621 plus strand	2170
TARS2	NM_001271895	NP_001258824	Coding	chr1:150487363 plus strand	2171
TARS2	NM_001271896	NP_001258825	Coding	chr1:150487363 plus strand	2171
TARS2	NM_025150	NP_079426	Coding	chr1:150487363 plus strand	2171
TAS1R1	NM_138697	NP_619642	Coding	chr1:6555277 plus strand	2172
TAS1R1	NM_177540	NP_803884	Coding	chr1:6555277 plus strand	2172
TAS1R2	NM_152232	NP_689418	Coding	chr1:18859661 minus strand	2173
TAS1R3	NM_152228	NP_689414	Coding	chr1:1331345 plus strand	2174
TATDN3	NM_001042552	NP_001036017	Coding	chr1:212791827 plus strand	2175
TATDN3	NM_001042553	NP_001036018	Coding	chr1:212791827 plus strand	2175
TATDN3	NM_001146169	NP_001139641	Coding	chr1:212791827 plus strand	2175
TATDN3	NM_001146170	NP_001139642	Coding	chr1:212791827 plus strand	2175
TATDN3	NM_001146171	NP_001139643	Coding	chr1:212791827 plus strand	2175
TBCE	NM_001079515	NP_001072983	Coding	chr1:235367359 plus strand	2176
TBCE	NM_001287801	NP_001274730	Coding	chr1:235367359 plus strand	2176
TBCE	NM_001287802	NP_001274731	Coding	chr1:235367359 plus strand	2176
TBCE	NM_003193	NP_003184	Coding	chr1:235367359 plus strand	2176
TBX15	NM_152380	NP_689593	Coding	chr1:118989556 minus strand	2177
TBX19	NM_005149	NP_005140	Coding	chr1:168281039 plus strand	2178
TCEA3	NM_003196	NP_003187	Coding	chr1:23424768 minus strand	2179
TCEANC2	NM_153035	NP_694580	Coding	chr1:54053600 plus strand	2180
TCEB3	NM_003198	NP_003189	Coding	chr1:23743365 plus strand	2181
TCHH	NM_007113	NP_009044	Coding	chr1:152115454 minus strand	2182
TCHHL1	NM_001008536	NP_001008536	Coding	chr1:152089064 minus strand	2183
TCTEX1D1	NM_152665	NP_689878	Coding	chr1:66752456 plus strand	2184
TCTEX1D4	NM_001013632	NP_001013654	Coding	chr1:44807285 minus	2185

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				strand	
TDRD10	NM_001098475	NP_001091945	Coding	chr1:154502218 plus strand	2186
TDRD10	NM_182499	NP_872305	Coding	chr1:154502218 plus strand	2186
TDRD5	NM_001199092	NP_001186021	Coding	chr1:179606226 plus strand	2187
TDRD5	NM_001199085	NP_001186014	Coding	chr1:179591621 plus strand	2188
TDRD5	NM_173533	NP_775804	Coding	chr1:179591621 plus strand	2188
TDRD5	NM_001199091	NP_001186020	Coding	chr1:179591612 plus strand	2189
TDRD5	NM_001199089	NP_001186018	Coding	chr1:179591853 plus strand	2190
TDRKH	NM_001083963	NP_001077432	Coding	chr1:151790534 minus strand	2191
TDRKH	NM_001083964	NP_001077433	Coding	chr1:151790534 minus strand	2191
TDRKH	NM_001083965	NP_001077434	Coding	chr1:151790534 minus strand	2191
TDRKH	NM_006862	NP_006853	Coding	chr1:151790534 minus strand	2191
TEDDM1	NM_172000	NP_741997	Coding	chr1:182400616 minus strand	2192
TEKT2	NM_014466	NP_055281	Coding	chr1:36084074 plus strand	2193
TESK2	NM_007170	NP_009101	Coding	chr1:45491168 minus strand	2194
TEX35	NM_001170722	NP_001164193	Coding	chr1:178513076 plus strand	2195
TEX35	NM_001170723	NP_001164194	Coding	chr1:178513076 plus strand	2195
TEX35	NM_001170724	NP_001164195	Coding	chr1:178513076 plus strand	2195
TEX35	NM_032126	NP_115502	Coding	chr1:178513076 plus strand	2195
TEX38	NM_001145474	NP_001138946	Coding	chr1:46671832 plus strand	2196
TEX38	NM_001300863	NP_001287792	Coding	chr1:46671832 plus strand	2196
TEX38	NM_001300864	NP_001287793	Coding	chr1:46671832 plus strand	2196
TFAP2E	NM_178548	NP_848643	Coding	chr1:35573369 plus strand	2197
TFB2M	NM_022366	NP_071761	Coding	chr1:246566263 minus strand	2198
TGFB2	NM_001135599	NP_001129071	Coding	chr1:218345333 plus strand	2199
TGFB2	NM_003238	NP_003229	Coding	chr1:218345333 plus strand	2199
TGFBR3	NM_001195683	NP_001182612	Coding	chr1:91886279 minus strand	2200
TGFBR3	NM_003243	NP_003234	Coding	chr1:91886279 minus strand	2200
TGFBR3	NM_001195684	NP_001182613	Coding	chr1:91906002 minus strand	2201

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THAP3	NM_001195752	NP_001182681	Coding	chr1:6625149 plus strand	2202
THAP3	NM_138350	NP_612359	Coding	chr1:6625149 plus strand	2202
THAP3	NM_001195753	NP_001182682	Coding	chr1:6624864 plus strand	2203
THBS3	NM_001252607	NP_001239536	Coding	chr1:155207981 minus strand	2204
THBS3	NM_001252608	NP_001239537	Coding	chr1:155207981 minus strand	2204
THBS3	NM_007112	NP_009043	Coding	chr1:155207981 minus strand	2204
THEM4	NM_053055	NP_444283	Coding	chr1:151909885 minus strand	2205
THEM5	NM_182578	NP_872384	Coding	chr1:151853697 minus strand	2206
THEMIS2	NM_001039477	NP_001034566	Coding	chr1:27872542 plus strand	2207
THEMIS2	NM_001105556	NP_001099026	Coding	chr1:27872542 plus strand	2207
THEMIS2	NM_001286113	NP_001273042	Coding	chr1:27872542 plus strand	2207
THEMIS2	NM_001286115	NP_001273044	Coding	chr1:27872542 plus strand	2207
THEMIS2	NM_004848	NP_004839	Coding	chr1:27872542 plus strand	2207
THRAP3	NM_005119	NP_005110	Coding	chr1:36224415 plus strand	2208
TIE1	NM_001253357	NP_001240286	Coding	chr1:43300894 plus strand	2209
TIE1	NM_005424	NP_005415	Coding	chr1:43300894 plus strand	2209
TIMM17A	NM_006335	NP_006326	Coding	chr1:201955490 plus strand	2210
TINAGL1	NM_001204415	NP_001191344	Coding	chr1:31578144 plus strand	2211
TINAGL1	NM_001204414	NP_001191343	Coding	chr1:31576484 plus strand	2212
TINAGL1	NM_022164	NP_071447	Coding	chr1:31576484 plus strand	2212
TIPRL	NM_001031800	NP_001026970	Coding	chr1:168178844 plus strand	2213
TIPRL	NM_152902	NP_690866	Coding	chr1:168178844 plus strand	2213
TLR5	NM_003268	NP_003259	Coding	chr1:223143282 minus strand	2214
TM2D1	NM_032027	NP_114416	Coding	chr1:61725423 minus strand	2215
TMCC2	NM_001242925	NP_001229854	Coding	chr1:205228930 plus strand	2216
TMCC2	NM_001297611	NP_001284540	Coding	chr1:205246495 plus strand	2217
TMCC2	NM_014858	NP_055673	Coding	chr1:205227909 plus strand	2218
TMCC2	NM_001297613	NP_001284542	Coding	chr1:205256200 plus strand	2219
TMCO1	NM_001256164	NP_001243093	Coding	chr1:165768922 minus strand	2220
TMCO1	NM_001256165	NP_001243094	Coding	chr1:165768922 minus strand	2220
TMCO1	NM_019026	NP_061899	Coding	chr1:165768922 minus strand	2220
TMCO2	NM_001008740	NP_001008740	Coding	chr1:40247900 plus strand	2221
TMCO4	NM_181719	NP_859070	Coding	chr1:19799917 minus	2222

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				strand	
TMED5	NM_001167830	NP_001161302	Coding	chr1:93180689 minus strand	2223
TMED5	NM_016040	NP_057124	Coding	chr1:93180689 minus strand	2223
TMEM125	NM_144626	NP_653227	Coding	chr1:43269993 plus strand	2224
TMEM167B	NM_020141	NP_064526	Coding	chr1:109090780 plus strand	2225
TMEM183A	NM_138391	NP_612400	Coding	chr1:203007405 plus strand	2226
TMEM200B	NM_001003682	NP_001003682	Coding	chr1:29123909 minus strand	2227
TMEM200B	NM_001171868	NP_001165339	Coding	chr1:29122501 minus strand	2228
TMEM201	NM_001010866	NP_001010866	Coding	chr1:9588873 plus strand	2229
TMEM201	NM_001130924	NP_001124396	Coding	chr1:9588873 plus strand	2229
TMEM206	NM_018252	NP_060722	Coding	chr1:212414925 minus strand	2230
TMEM206	NM_001198862	NP_001185791	Coding	chr1:212414901 minus strand	2231
TMEM222	NM_032125	NP_115501	Coding	chr1:27322144 plus strand	2232
TMEM234	NM_019118	NP_061991	Coding	chr1:32222325 minus strand	2233
TMEM240	NM_001114748	NP_001108220	Coding	chr1:1540360 minus strand	2234
TMEM39B	NM_018056	NP_060526	Coding	chr1:32072901 plus strand	2235
TMEM50A	NM_014313	NP_055128	Coding	chr1:25338297 plus strand	2236
TMEM51	NM_001136218	NP_001129690	Coding	chr1:15153732 plus strand	2237
TMEM51	NM_018022	NP_060492	Coding	chr1:15153732 plus strand	2237
TMEM51	NM_001136216	NP_001129688	Coding	chr1:15152531 plus strand	2238
TMEM51	NM_001136217	NP_001129689	Coding	chr1:15152531 plus strand	2238
TMEM52	NM_178545	NP_848640	Coding	chr1:1919301 minus strand	2239
TMEM53	NM_001300746	NP_001287675	Coding	chr1:44674608 minus strand	2240
TMEM53	NM_001300747	NP_001287676	Coding	chr1:44674608 minus strand	2240
TMEM53	NM_001300748	NP_001287677	Coding	chr1:44674608 minus strand	2240
TMEM53	NM_024587	NP_078863	Coding	chr1:44674608 minus strand	2240
TMEM54	NM_033504	NP_277039	Coding	chr1:32901352 minus strand	2241
TMEM56	NM_152487	NP_689700	Coding	chr1:95117337 plus strand	2242
TMEM56	NM_001199679	NP_001186608	Coding	chr1:95092516 plus strand	2243
TMEM56-RWDD3	NM_001199691	NP_001186620	Coding	chr1:95117922 plus strand	2244
TMEM57	NM_001282564	NP_001269493	Coding	chr1:25430857 plus strand	2245
TMEM57	NM_018202	NP_060672	Coding	chr1:25430857 plus strand	2245
TMEM59	NM_004872	NP_004863	Coding	chr1:54053438 minus strand	2246

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TMEM61	NM_182532	NP_872338	Coding	chr1:54980791 plus strand	2247
TMEM63A	NM_014698	NP_055513	Coding	chr1:225882720 minus strand	2248
TMEM69	NM_016486	NP_057570	Coding	chr1:45688174 plus strand	2249
TMEM79	NM_032323	NP_115699	Coding	chr1:156284278 plus strand	2250
TMEM81	NM_203376	NP_976310	Coding	chr1:205084460 minus strand	2251
TMEM82	NM_001013641	NP_001013663	Coding	chr1:15742491 plus strand	2252
TMEM88B	NM_001146685	NP_001140157	Coding	chr1:1426127 plus strand	2253
TMEM9	NM_001288564	NP_001275493	Coding	chr1:201171582 minus strand	2254
TMEM9	NM_001288565	NP_001275494	Coding	chr1:201154555 minus strand	2255
TMEM9	NM_001288566	NP_001275495	Coding	chr1:201154555 minus strand	2255
TMEM9	NM_001288567	NP_001275496	Coding	chr1:201154555 minus strand	2255
TMEM9	NM_001288568	NP_001275497	Coding	chr1:201154555 minus strand	2255
TMEM9	NM_001288569	NP_001275498	Coding	chr1:201154555 minus strand	2255
TMEM9	NM_001288570	NP_001275499	Coding	chr1:201154555 minus strand	2255
TMEM9	NM_001288571	NP_001275500	Coding	chr1:201154555 minus strand	2255
TMEM9	NM_016456	NP_057540	Coding	chr1:201154555 minus strand	2255
TMIGD3	NM_020683	NP_065734	Coding	chr1:111504121 minus strand	38
TMIGD3	NM_001081976	NP_001075445	Coding	chr1:111564003 minus strand	2256
TMIGD3	NM_001302680	NP_001289609	Coding	chr1:111564003 minus strand	2256
TMOD4	NM_013353	NP_037485	Coding	chr1:151176071 minus strand	2257
TNFAIP8L2	NM_024575	NP_078851	Coding	chr1:151156628 plus strand	2258
TNFAIP8L2-SCNM1	NM_001204848	NP_001191777	Coding	chr1:151156628 plus strand	2258
TNFRSF14	NM_001297605	NP_001284534	Coding	chr1:2556364 plus strand	2259
TNFRSF14	NM_003820	NP_003811	Coding	chr1:2556364 plus strand	2259
TNFRSF18	NM_004195	NP_004186	Coding	chr1:1206709 minus strand	2260
TNFRSF18	NM_148901	NP_683699	Coding	chr1:1206709 minus strand	2260
TNFRSF18	NM_148902	NP_683700	Coding	chr1:1206709 minus strand	2260
TNFRSF1B	NM_001066	NP_001057	Coding	chr1:12167002 plus strand	2261
TNFRSF25	NM_001039664	NP_001034753	Coding	chr1:6466195 minus strand	2262
TNFRSF25	NM_003790	NP_003781	Coding	chr1:6466195 minus strand	2262
TNFRSF25	NM_148965	NP_683866	Coding	chr1:6466195 minus strand	2262
TNFRSF25	NM_148966	NP_683867	Coding	chr1:6466195 minus strand	2262

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TNFRSF25	NM_148967	NP_683868	Coding	chr1:6466195 minus strand	2262
TNFRSF25	NM_148970	NP_683871	Coding	chr1:6466195 minus strand	2262
TNFRSF4	NM_003327	NP_003318	Coding	chr1:1214168 minus strand	2263
TNFRSF8	NM_001243	NP_001234	Coding	chr1:12063376 plus strand	2264
TNFRSF8	NM_001281430	NP_001268359	Coding	chr1:12063376 plus strand	2264
TNFRSF9	NM_001561	NP_001552	Coding	chr1:7943165 minus strand	2265
TNFSF18	NM_005092	NP_005083	Coding	chr1:173050963 minus strand	2266
TNFSF4	NM_003326	NP_003317	Coding	chr1:173207313 minus strand	2267
TNFSF4	NM_001297562	NP_001284491	Coding	chr1:173205558 minus strand	2268
TNN	NM_022093	NP_071376	Coding	chr1:175067857 plus strand	2269
TNNI1	NM_003281	NP_003272	Coding	chr1:201421746 minus strand	2270
TNNI3K	NM_015978	NP_057062	Coding	chr1:74235386 plus strand	2271
TNNT2	NM_000364	NP_000355	Coding	chr1:201377700 minus strand	2272
TNNT2	NM_001001430	NP_001001430	Coding	chr1:201377700 minus strand	2272
TNNT2	NM_001001431	NP_001001431	Coding	chr1:201377700 minus strand	2272
TNNT2	NM_001001432	NP_001001432	Coding	chr1:201377700 minus strand	2272
TNNT2	NM_001276345	NP_001263274	Coding	chr1:201377700 minus strand	2272
TNNT2	NM_001276346	NP_001263275	Coding	chr1:201377700 minus strand	2272
TNNT2	NM_001276347	NP_001263276	Coding	chr1:201377700 minus strand	2272
TNR	NM_003285	NP_003276	Coding	chr1:175743616 minus strand	2273
TOE1	NM_025077	NP_079353	Coding	chr1:45339669 plus strand	2274
TOMM20	NM_014765	NP_055580	Coding	chr1:235128941 minus strand	2275
TOMM40L	NM_001286373	NP_001273302	Coding	chr1:161225938 plus strand	2276
TOMM40L	NM_001286374	NP_001273303	Coding	chr1:161225938 plus strand	2276
TOMM40L	NM_032174	NP_115550	Coding	chr1:161225938 plus strand	2276
TOR1AIP1	NM_001267578	NP_001254507	Coding	chr1:179882041 plus strand	2277
TOR1AIP1	NM_015602	NP_056417	Coding	chr1:179882041 plus strand	2277
TOR1AIP2	NM_001199260	NP_001186189	Coding	chr1:179877806 minus strand	2278
TOR1AIP2	NM_022347	NP_071742	Coding	chr1:179877806 minus strand	2278
TOR1AIP2	NM_145034	NP_659471	Coding	chr1:179877806 minus strand	2278

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TOR3A	NM_022371	NP_071766	Coding	chr1:179081976 plus strand	2279
TP53BP2	NM_001031685	NP_001026855	Coding	chr1:223845972 minus strand	2280
TP53BP2	NM_005426	NP_005417	Coding	chr1:223845972 minus strand	2280
TP73	NM_001204184	NP_001191113	Coding	chr1:3652564 plus strand	2281
TP73	NM_001204185	NP_001191114	Coding	chr1:3652564 plus strand	2281
TP73	NM_001204186	NP_001191115	Coding	chr1:3652564 plus strand	2281
TP73	NM_001204187	NP_001191116	Coding	chr1:3652564 plus strand	2281
TP73	NM_001204188	NP_001191117	Coding	chr1:3652564 plus strand	2281
TP73	NM_005427	NP_005418	Coding	chr1:3652564 plus strand	2281
TP73	NM_001126240	NP_001119712	Coding	chr1:3690671 plus strand	2282
TP73	NM_001126241	NP_001119713	Coding	chr1:3690671 plus strand	2282
TP73	NM_001126242	NP_001119714	Coding	chr1:3690671 plus strand	2282
TP73	NM_001204189	NP_001191118	Coding	chr1:3690671 plus strand	2282
TP73	NM_001204190	NP_001191119	Coding	chr1:3690671 plus strand	2282
TP73	NM_001204191	NP_001191120	Coding	chr1:3690671 plus strand	2282
TP73	NM_001204192	NP_001191121	Coding	chr1:3698045 plus strand	2283
TPM3	NM_001043351	NP_001036816	Coding	chr1:154183249 minus strand	2284
TPM3	NM_001043352	NP_001036817	Coding	chr1:154183249 minus strand	2284
TPM3	NM_001043353	NP_001036818	Coding	chr1:154183249 minus strand	2284
TPM3	NM_001278188	NP_001265117	Coding	chr1:154183249 minus strand	2284
TPM3	NM_001278189	NP_001265118	Coding	chr1:154183249 minus strand	2284
TPM3	NM_001278190	NP_001265119	Coding	chr1:154183249 minus strand	2284
TPM3	NM_153649	NP_705935	Coding	chr1:154183249 minus strand	2284
TPM3	NM_001278191	NP_001265120	Coding	chr1:154178221 minus strand	2285
TPM3	NM_152263	NP_689476	Coding	chr1:154192135 minus strand	2286
TPR	NM_003292	NP_003283	Coding	chr1:186375325 minus strand	2287
TPRG1L	NM_182752	NP_877429	Coding	chr1:3624991 plus strand	2288
TRABD2B	NM_001194986	NP_001181915	Coding	chr1:47996890 minus strand	2289
TRAF3IP3	NM_025228	NP_079504	Coding	chr1:209756031 plus strand	2290
TRAF3IP3	NM_001287754	NP_001274683	Coding	chr1:209768487 plus strand	2291
TRAF5	NM_001033910	NP_001029082	Coding	chr1:211326805 plus strand	2292
TRAF5	NM_145759	NP_665702	Coding	chr1:211346363 plus strand	2293

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TRAF5	NM_004619	NP_004610	Coding	chr1:211326614 plus strand	2294
TRAPPC3	NM_001270895	NP_001257824	Coding	chr1:36156053 minus strand	2295
TRAPPC3	NM_001270894	NP_001257823	Coding	chr1:36149514 minus strand	2296
TRAPPC3	NM_001270896	NP_001257825	Coding	chr1:36149514 minus strand	2296
TRAPPC3	NM_001270897	NP_001257826	Coding	chr1:36149514 minus strand	2296
TRAPPC3	NM_014408	NP_055223	Coding	chr1:36149514 minus strand	2296
TRIM11	NM_145214	NP_660215	Coding	chr1:228406816 minus strand	2297
TRIM17	NM_001024940	NP_001020111	Coding	chr1:228416882 minus strand	2298
TRIM17	NM_001134855	NP_001128327	Coding	chr1:228416882 minus strand	2298
TRIM17	NM_016102	NP_057186	Coding	chr1:228416882 minus strand	2298
TRIM33	NM_015906	NP_056990	Coding	chr1:114511160 minus strand	2299
TRIM33	NM_033020	NP_148980	Coding	chr1:114511160 minus strand	2299
TRIM45	NM_001145635	NP_001139107	Coding	chr1:117121789 minus strand	2300
TRIM45	NM_025188	NP_079464	Coding	chr1:117121789 minus strand	2300
TRIM46	NM_001256599	NP_001243528	Coding	chr1:155173786 plus strand	2301
TRIM46	NM_001256600	NP_001243529	Coding	chr1:155173786 plus strand	2301
TRIM46	NM_001282378	NP_001269307	Coding	chr1:155173786 plus strand	2301
TRIM46	NM_001282379	NP_001269308	Coding	chr1:155173786 plus strand	2301
TRIM46	NM_025058	NP_079334	Coding	chr1:155173786 plus strand	2301
TRIM46	NM_001256601	NP_001243530	Coding	chr1:155174753 plus strand	2302
TRIM58	NM_015431	NP_056246	Coding	chr1:247857198 plus strand	2303
TRIM62	NM_018207	NP_060677	Coding	chr1:33182070 minus strand	2304
TRIM63	NM_032588	NP_115977	Coding	chr1:26067634 minus strand	2305
TRIM67	NM_001004342	NP_001004342	Coding	chr1:231162927 plus strand	2306
TRIM67	NM_001300889	NP_001287818	Coding	chr1:231162927 plus strand	2306
TRIT1	NM_017646	NP_060116	Coding	chr1:39883505 minus strand	2307
TRMT13	NM_019083	NP_061956	Coding	chr1:100133149 plus strand	2308

【０２１２】

TRMT1L	NM_001202423	NP_001189352	Coding	chr1:185157098 minus strand	2309
TRMT1L	NM_030934	NP_112196	Coding	chr1:185156984 minus strand	2310
TRNAU1AP	NM_017846	NP_060316	Coding	chr1:28553016 plus strand	2311
TRNP1	NM_001013642	NP_001013664	Coding	chr1:26993703 plus strand	2312
TROVE2	NM_001173524	NP_001166995	Coding	chr1:193059421 plus strand	2313
TROVE2	NM_001042369	NP_001035828	Coding	chr1:193059873 plus strand	2314
TROVE2	NM_001042370	NP_001035829	Coding	chr1:193059873 plus strand	2314
TROVE2	NM_001173525	NP_001166996	Coding	chr1:193059873 plus strand	2314
TROVE2	NM_004600	NP_004591	Coding	chr1:193059873 plus strand	2314
TSACC	NM_144627	NP_653228	Coding	chr1:156337313 plus strand	2315
TSEN15	NM_001127394	NP_001120866	Coding	chr1:184051650 plus strand	2316
TSEN15	NM_001300764	NP_001287693	Coding	chr1:184051650 plus strand	2316
TSEN15	NM_001300766	NP_001287695	Coding	chr1:184051650 plus strand	2316
TSEN15	NM_052965	NP_443197	Coding	chr1:184051650 plus strand	2316
TSHB	NM_001277991	NP_001264920	Coding	chr1:115033945 plus strand	2317
TSHB	NM_000549	NP_000540	Coding	chr1:115029823 plus strand	2318
TSNAX	NM_005999	NP_005990	Coding	chr1:231528652 plus strand	2319
TSPAN1	NM_005727	NP_005718	Coding	chr1:46175076 plus strand	2320
TSPAN2	NM_005725	NP_005716	Coding	chr1:115089500 minus strand	2321
TSSK3	NM_052841	NP_443073	Coding	chr1:32362260 plus strand	2322
TSTD1	NM_001113205	NP_001106676	Coding	chr1:161038984 minus strand	2323
TSTD1	NM_001113206	NP_001106677	Coding	chr1:161038984 minus strand	2323
TSTD1	NM_001113207	NP_001106678	Coding	chr1:161038984 minus strand	2323
TTC13	NM_001122835	NP_001116307	Coding	chr1:230978872 minus strand	2324
TTC13	NM_024525	NP_078801	Coding	chr1:230978872 minus strand	2324
TTC22	NM_001114108	NP_001107580	Coding	chr1:54801268 minus strand	2325
TTC22	NM_017904	NP_060374	Coding	chr1:54801268 minus strand	2325
TTC24	NM_001105669	NP_001099139	Coding	chr1:156579726 plus strand	2326
TTC34	NM_001242672	NP_001229601	Coding	chr1:2789665 minus strand	2327

【０２１３】

TTC39A	NM_001297662	NP_001284591	Coding	chr1:51330564 minus strand	2328
TTC39A	NM_001297663	NP_001284592	Coding	chr1:51330564 minus strand	2328
TTC39A	NM_001297666	NP_001284595	Coding	chr1:51297961 minus strand	2329
TTC39A	NM_001297667	NP_001284596	Coding	chr1:51297961 minus strand	2329
TTC39A	NM_001297664	NP_001284593	Coding	chr1:51330202 minus strand	2330
TTC39A	NM_001080494	NP_001073963	Coding	chr1:51322268 minus strand	2331
TTC39A	NM_001297665	NP_001284594	Coding	chr1:51322268 minus strand	2331
TTC39A	NM_001144832	NP_001138304	Coding	chr1:51345116 minus strand	2332
TTC4	NM_001291333	NP_001278262	Coding	chr1:54715821 plus strand	2333
TTC4	NM_004623	NP_004614	Coding	chr1:54715821 plus strand	2333
TTF2	NM_003594	NP_003585	Coding	chr1:117060326 plus strand	2334
TTLL10	NM_153254	NP_694986	Coding	chr1:1179696 plus strand	2335
TTLL10	NM_001130045	NP_001123517	Coding	chr1:1173905 plus strand	2336
TTLL7	NM_024686	NP_078962	Coding	chr1:83999150 minus strand	2337
TUFT1	NM_001126337	NP_001119809	Coding	chr1:151540304 plus strand	2338
TUFT1	NM_020127	NP_064512	Coding	chr1:151540304 plus strand	2338
TUFT1	NM_001301317	NP_001288246	Coding	chr1:151540308 plus strand	2339
TXLNA	NM_175852	NP_787048	Coding	chr1:32179743 plus strand	2340
TXNDC12	NM_015913	NP_056997	Coding	chr1:52056171 minus strand	2341
TXNIP	NM_006472	NP_006463	Coding	chr1:145996631 minus strand	2342
TYW3	NM_001162916	NP_001156388	Coding	chr1:74733151 plus strand	2343
TYW3	NM_138467	NP_612476	Coding	chr1:74733155 plus strand	2344
UAP1	NM_003115	NP_003106	Coding	chr1:162561505 plus strand	2345
UBAP2L	NM_001287815	NP_001274744	Coding	chr1:154220848 plus strand	2346
UBAP2L	NM_001287816	NP_001274745	Coding	chr1:154220848 plus strand	2346
UBAP2L	NM_014847	NP_055662	Coding	chr1:154220848 plus strand	2346
UBAP2L	NM_001127320	NP_001120792	Coding	chr1:154220171 plus strand	2347
UBE2J2	NM_058167	NP_477515	Coding	chr1:1273854 minus strand	2348
UBE2J2	NM_194315	NP_919296	Coding	chr1:1273854 minus strand	2348
UBE2J2	NM_194457	NP_919439	Coding	chr1:1273854 minus strand	2348
UBE2J2	NM_194458	NP_919440	Coding	chr1:1273854 minus strand	2348

【０２１４】

UBE2Q1	NM_017582	NP_060052	Coding	chr1:154558644 minus strand	2349
UBE2T	NM_014176	NP_054895	Coding	chr1:202341966 minus strand	2350
UBE2U	NM_152489	NP_689702	Coding	chr1:64203806 plus strand	2351
UBE4B	NM_001105562	NP_001099032	Coding	chr1:10032982 plus strand	2352
UBE4B	NM_006048	NP_006039	Coding	chr1:10032982 plus strand	2352
UBIAD1	NM_013319	NP_037451	Coding	chr1:11273197 plus strand	2353
UBL4B	NM_203412	NP_981957	Coding	chr1:110112439 plus strand	2354
UBQLN4	NM_020131	NP_064516	Coding	chr1:156053725 minus strand	2355
UBR4	NM_020765	NP_065816	Coding	chr1:19210252 minus strand	2356
UBXN10	NM_152376	NP_689589	Coding	chr1:20186084 plus strand	2357
UBXN11	NM_001077262	NP_001070730	Coding	chr1:26306704 minus strand	2358
UBXN11	NM_183008	NP_892120	Coding	chr1:26306704 minus strand	2358
UBXN11	NM_145345	NP_663320	Coding	chr1:26318265 minus strand	2359
UCHL5	NM_001199261	NP_001186190	Coding	chr1:193059393 minus strand	2360
UCHL5	NM_001199262	NP_001186191	Coding	chr1:193059393 minus strand	2360
UCHL5	NM_001199263	NP_001186192	Coding	chr1:193059393 minus strand	2360
UCHL5	NM_015984	NP_057068	Coding	chr1:193059393 minus strand	2360
UCK2	NM_012474	NP_036606	Coding	chr1:165827494 plus strand	2361
UFC1	NM_016406	NP_057490	Coding	chr1:161153743 plus strand	2362
UHMK1	NM_001184763	NP_001171692	Coding	chr1:162497173 plus strand	2363
UHMK1	NM_144624	NP_653225	Coding	chr1:162497804 plus strand	2364
UHMK1	NM_175866	NP_787062	Coding	chr1:162497804 plus strand	2364
UQCRH	NM_001297565	NP_001284494	Coding	chr1:46303612 plus strand	2365
UQCRH	NM_001297566	NP_001284495	Coding	chr1:46303612 plus strand	2365
UQCRH	NM_006004	NP_005995	Coding	chr1:46303612 plus strand	2365
UQCRHL	NM_001089591	NP_001083060	Coding	chr1:15807699 minus strand	2366
URB2	NM_014777	NP_055592	Coding	chr1:229626233 plus strand	2367
UROD	NM_000374	NP_000365	Coding	chr1:45012132 plus strand	2368
USF1	NM_001276373	NP_001263302	Coding	chr1:161044937 minus strand	2369
USF1	NM_007122	NP_009053	Coding	chr1:161045979 minus strand	2370

【０２１５】

USF1	NM_207005	NP_996888	Coding	chr1:161045979 minus strand	2370
USH2A	NM_007123	NP_009054	Coding	chr1:216423396 minus strand	2371
USH2A	NM_206933	NP_996816	Coding	chr1:216423396 minus strand	2371
USP1	NM_003368	NP_003359	Coding	chr1:62436711 plus strand	2372
USP1	NM_001017415	NP_001017415	Coding	chr1:62436303 plus strand	2373
USP1	NM_001017416	NP_001017416	Coding	chr1:62436303 plus strand	2373
USP21	NM_001014443	NP_001014443	Coding	chr1:161159463 plus strand	2374
USP21	NM_012475	NP_036607	Coding	chr1:161159463 plus strand	2374
USP24	NM_015306	NP_056121	Coding	chr1:55215366 minus strand	2375
USP33	NM_015017	NP_055832	Coding	chr1:77759879 minus strand	2376
USP33	NM_201624	NP_963918	Coding	chr1:77759879 minus strand	2376
USP33	NM_201626	NP_963920	Coding	chr1:77759879 minus strand	2376
USP48	NM_001032730	NP_001027902	Coding	chr1:21783195 minus strand	2377
USP48	NM_032236	NP_115612	Coding	chr1:21783195 minus strand	2377
UTP11L	NM_016037	NP_057121	Coding	chr1:38012711 plus strand	2378
UTS2	NM_006786	NP_006777	Coding	chr1:7853044 minus strand	2379
UTS2	NM_021995	NP_068835	Coding	chr1:7853491 minus strand	2380
VAMP3	NM_004781	NP_004772	Coding	chr1:7771268 plus strand	2381
VAMP4	NM_001185127	NP_001172056	Coding	chr1:171742239 minus strand	2382
VAMP4	NM_003762	NP_003753	Coding	chr1:171742239 minus strand	2382
VANGL1	NM_001172411	NP_001165882	Coding	chr1:115641952 plus strand	2383
VANGL1	NM_138959	NP_620409	Coding	chr1:115641952 plus strand	2383
VANGL1	NM_001172412	NP_001165883	Coding	chr1:115642628 plus strand	2384
VANGL2	NM_020335	NP_065068	Coding	chr1:160400573 plus strand	2385
VASH2	NM_001136474	NP_001129946	Coding	chr1:212950519 plus strand	2386
VASH2	NM_001136475	NP_001129947	Coding	chr1:212950519 plus strand	2386
VASH2	NM_001301056	NP_001287985	Coding	chr1:212950519 plus strand	2386
VASH2	NM_024749	NP_079025	Coding	chr1:212950519 plus strand	2386
VAV3	NM_001079874	NP_001073343	Coding	chr1:107688504 minus strand	2387
VAV3	NM_006113	NP_006104	Coding	chr1:107964923 minus	2388

【０２１６】

				strand	
VCAM1	NM_001078	NP_001069	Coding	chr1:100719639 plus strand	2389
VCAM1	NM_001199834	NP_001186763	Coding	chr1:100719639 plus strand	2389
VCAM1	NM_080682	NP_542413	Coding	chr1:100719639 plus strand	2389
VHLL	NM_001004319	NP_001004319	Coding	chr1:156299637 minus strand	2390
VN1R5	NM_173858	NP_776257	Coding	chr1:247256071 plus strand	2391
VPS13D	NM_015378	NP_056193	Coding	chr1:12230055 plus strand	2392
VPS13D	NM_018156	NP_060626	Coding	chr1:12230055 plus strand	2392
VPS45	NM_001279354	NP_001266283	Coding	chr1:150067667 plus strand	2393
VPS45	NM_001279355	NP_001266284	Coding	chr1:150067667 plus strand	2393
VPS45	NM_001279353	NP_001266282	Coding	chr1:150067292 plus strand	2394
VPS45	NM_007259	NP_009190	Coding	chr1:150067292 plus strand	2394
VPS72	NM_001271087	NP_001258016	Coding	chr1:151190213 minus strand	2395
VPS72	NM_001271088	NP_001258017	Coding	chr1:151190213 minus strand	2395
VPS72	NM_005997	NP_005988	Coding	chr1:151190213 minus strand	2395
VSIG8	NM_001013661	NP_001013683	Coding	chr1:159862657 minus strand	2396
VTCN1	NM_001253849	NP_001240778	Coding	chr1:117203836 minus strand	2397
VTCN1	NM_001253850	NP_001240779	Coding	chr1:117210960 minus strand	2398
VTCN1	NM_024626	NP_078902	Coding	chr1:117210960 minus strand	2398
VWA1	NM_022834	NP_073745	Coding	chr1:1435522 plus strand	2399
VWA1	NM_199121	NP_954572	Coding	chr1:1435522 plus strand	2399
VWA5B1	NM_001039500	NP_001034589	Coding	chr1:20290918 plus strand	2400
WARS2	NM_015836	NP_056651	Coding	chr1:119140672 minus strand	2401
WARS2	NM_201263	NP_957715	Coding	chr1:119140672 minus strand	2401
WASF2	NM_001201404	NP_001188333	Coding	chr1:27490167 minus strand	2402
WASF2	NM_006990	NP_008921	Coding	chr1:27490167 minus strand	2402
WDR26	NM_001115113	NP_001108585	Coding	chr1:224434299 minus strand	2403
WDR26	NM_025160	NP_079436	Coding	chr1:224434299 minus strand	2403
WDR3	NM_006784	NP_006775	Coding	chr1:117929748 plus strand	2404

【０２１７】

WDR47	NM_001142550	NP_001136022	Coding	chr1:109042228 minus strand	2405
WDR47	NM_001142551	NP_001136023	Coding	chr1:109042228 minus strand	2405
WDR47	NM_014969	NP_055784	Coding	chr1:109042228 minus strand	2405
WDR63	NM_001288563	NP_001275492	Coding	chr1:85062297 plus strand	2406
WDR63	NM_145172	NP_660155	Coding	chr1:85062297 plus strand	2406
WDR64	NM_144625	NP_653226	Coding	chr1:241652277 plus strand	2407
WDR77	NM_024102	NP_077007	Coding	chr1:11449208 minus strand	2408
WDR78	NM_024763	NP_079039	Coding	chr1:66924887 minus strand	2409
WDR78	NM_207014	NP_996897	Coding	chr1:66924887 minus strand	2409
WDTC1	NM_001276252	NP_001263181	Coding	chr1:27234515 plus strand	2410
WDTC1	NM_015023	NP_055838	Coding	chr1:27234515 plus strand	2410
WLS	NM_001002292	NP_001002292	Coding	chr1:68232546 minus strand	2411
WLS	NM_001193334	NP_001180263	Coding	chr1:68232546 minus strand	2411
WLS	NM_024911	NP_079187	Coding	chr1:68232601 minus strand	2412
WNT2B	NM_001291880	NP_001278809	Coding	chr1:112466540 plus strand	2413
WNT2B	NM_004185	NP_004176	Coding	chr1:112466540 plus strand	2413
WNT2B	NM_024494	NP_078613	Coding	chr1:112508747 plus strand	2414
WNT3A	NM_033131	NP_149122	Coding	chr1:228007021 plus strand	2415
WNT4	NM_030761	NP_110388	Coding	chr1:22143026 minus strand	2416
WNT9A	NM_003395	NP_003386	Coding	chr1:227947975 minus strand	2417
WRAP73	NM_017818	NP_060288	Coding	chr1:3650107 minus strand	2418
XCL1	NM_002995	NP_002986	Coding	chr1:168576472 plus strand	2419
XCL2	NM_003175	NP_003166	Coding	chr1:168543997 minus strand	2420
XKR8	NM_018053	NP_060523	Coding	chr1:27959992 plus strand	2421
XPR1	NM_001135669	NP_001129141	Coding	chr1:180632009 plus strand	2422
XPR1	NM_004736	NP_004727	Coding	chr1:180632009 plus strand	2422
YARS	NM_003680	NP_003671	Coding	chr1:32818032 minus strand	2423
YBX1	NM_004559	NP_004550	Coding	chr1:42682394 plus strand	2424
YIPF1	NM_018982	NP_061855	Coding	chr1:53889814 minus strand	2425
YOD1	NM_001276320	NP_001263249	Coding	chr1:207052980 minus	2426

【０２１８】

				strand	
YOD1	NM_018566	NP_061036	Coding	chr1:207051077 minus strand	2427
YRDC	NM_024640	NP_078916	Coding	chr1:37808193 minus strand	2428
YTHDF2	NM_016258	NP_057342	Coding	chr1:28736623 plus strand	2429
YTHDF2	NM_001173128	NP_001166599	Coding	chr1:28736620 plus strand	2430
YTHDF2	NM_001172828	NP_001166299	Coding	chr1:28736939 plus strand	2431
YY1AP1	NM_001198902	NP_001185831	Coding	chr1:155688724 minus strand	2432
YY1AP1	NM_001198903	NP_001185832	Coding	chr1:155688656 minus strand	2433
YY1AP1	NM_001198904	NP_001185833	Coding	chr1:155688656 minus strand	2433
YY1AP1	NM_001198906	NP_001185835	Coding	chr1:155689032 minus strand	2434
YY1AP1	NM_139118	NP_620829	Coding	chr1:155689032 minus strand	2434
YY1AP1	NM_001198899	NP_001185828	Coding	chr1:155679829 minus strand	2435
YY1AP1	NM_139119	NP_620830	Coding	chr1:155688774 minus strand	2436
YY1AP1	NM_139121	NP_620832	Coding	chr1:155688973 minus strand	2437
YY1AP1	NM_001198901	NP_001185830	Coding	chr1:155689028 minus strand	2438
YY1AP1	NM_001198900	NP_001185829	Coding	chr1:155688777 minus strand	2439
YY1AP1	NM_001198905	NP_001185834	Coding	chr1:155688777 minus strand	2439
YY1AP1	NM_018253	NP_060723	Coding	chr1:155688777 minus strand	2439
ZBED6	NM_001174108	NP_001167579	Coding	chr1:203797522 plus strand	2440
ZBTB17	NM_001242884	NP_001229813	Coding	chr1:15976132 minus strand	2441
ZBTB17	NM_001287603	NP_001274532	Coding	chr1:15976132 minus strand	2441
ZBTB17	NM_001287604	NP_001274533	Coding	chr1:15976132 minus strand	2441
ZBTB17	NM_003443	NP_003434	Coding	chr1:15976132 minus strand	2441
ZBTB18	NM_001278196	NP_001265125	Coding	chr1:244048938 plus strand	2442
ZBTB18	NM_006352	NP_006343	Coding	chr1:244053204 plus strand	2443
ZBTB18	NM_205768	NP_991331	Coding	chr1:244051258 plus strand	2444
ZBTB37	NM_001122770	NP_001116242	Coding	chr1:173868354 plus strand	2445
ZBTB37	NM_032522	NP_115911	Coding	chr1:173868354 plus strand	2445
ZBTB40	NM_001083621	NP_001077090	Coding	chr1:22451850 plus strand	2446

【０２１９】

ZBTB40	NM_014870	NP_055685	Coding	chr1:22451850 plus strand	2446
ZBTB41	NM_194314	NP_919290	Coding	chr1:197200542 minus strand	2447
ZBTB48	NM_001278647	NP_001265576	Coding	chr1:6579990 plus strand	2448
ZBTB48	NM_001278648	NP_001265577	Coding	chr1:6579990 plus strand	2448
ZBTB48	NM_005341	NP_005332	Coding	chr1:6579990 plus strand	2448
ZBTB7B	NM_001252406	NP_001239335	Coding	chr1:155002629 plus strand	2449
ZBTB7B	NM_001256455	NP_001243384	Coding	chr1:155002629 plus strand	2449
ZBTB8A	NM_001040441	NP_001035531	Coding	chr1:32539144 plus strand	2450
ZBTB8A	NM_001291496	NP_001278425	Coding	chr1:32539144 plus strand	2450
ZBTB8B	NM_001145720	NP_001139192	Coding	chr1:32465056 plus strand	2451
ZBTB8OS	NM_178547	NP_848642	Coding	chr1:32650584 minus strand	2452
ZC3H11A	NM_014827	NP_055642	Coding	chr1:203795622 plus strand	2453
ZC3H12A	NM_025079	NP_079355	Coding	chr1:37474517 plus strand	2454
ZCCHC11	NM_001009881	NP_001009881	Coding	chr1:52553090 minus strand	2455
ZCCHC11	NM_015269	NP_056084	Coding	chr1:52553090 minus strand	2455
ZCCHC17	NM_001282566	NP_001269495	Coding	chr1:31296981 plus strand	2456
ZCCHC17	NM_001282567	NP_001269496	Coding	chr1:31296981 plus strand	2456
ZCCHC17	NM_001282568	NP_001269497	Coding	chr1:31296981 plus strand	2456
ZCCHC17	NM_001282569	NP_001269498	Coding	chr1:31296981 plus strand	2456
ZCCHC17	NM_001282570	NP_001269499	Coding	chr1:31296981 plus strand	2456
ZCCHC17	NM_001282571	NP_001269500	Coding	chr1:31296981 plus strand	2456
ZCCHC17	NM_001282572	NP_001269501	Coding	chr1:31296981 plus strand	2456
ZCCHC17	NM_001282573	NP_001269502	Coding	chr1:31296981 plus strand	2456
ZCCHC17	NM_001282574	NP_001269503	Coding	chr1:31296981 plus strand	2456
ZCCHC17	NM_016505	NP_057589	Coding	chr1:31296981 plus strand	2456
ZDHHC18	NM_032283	NP_115659	Coding	chr1:26826709 plus strand	2457
ZFP69	NM_198494	NP_940896	Coding	chr1:40477629 plus strand	2458
ZFP69B	NM_023070	NP_075558	Coding	chr1:40450664 plus strand	2459
ZFYVE9	NM_004799	NP_004790	Coding	chr1:52142093 plus strand	2460
ZFYVE9	NM_007324	NP_015563	Coding	chr1:52142093 plus strand	2460
ZMPSTE24	NM_005857	NP_005848	Coding	chr1:40258049 plus strand	2461
ZMYM1	NM_001289089	NP_001276018	Coding	chr1:35079362 plus strand	2462
ZMYM1	NM_001289090	NP_001276019	Coding	chr1:35079362 plus strand	2462
ZMYM1	NM_001289091	NP_001276020	Coding	chr1:35079362 plus strand	2462
ZMYM1	NM_024772	NP_079048	Coding	chr1:35079362 plus strand	2462
ZMYM1	NM_001289088	NP_001276017	Coding	chr1:35059785 plus strand	2463
ZMYM4	NM_005095	NP_005086	Coding	chr1:35268966 plus strand	2464
ZMYM6	NM_007167	NP_009098	Coding	chr1:35031968 minus	2465

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				strand	
ZMYM6NB	NM_001195156	NP_001182085	Coding	chr1:34985347 minus strand	2466
ZMYND12	NM_001146192	NP_001139664	Coding	chr1:42456267 minus strand	2467
ZMYND12	NM_032257	NP_115633	Coding	chr1:42456267 minus strand	2467
ZNF124	NM_001243740	NP_001230669	Coding	chr1:247172017 minus strand	2468
ZNF124	NM_001297567	NP_001284496	Coding	chr1:247172017 minus strand	2468
ZNF124	NM_001297568	NP_001284497	Coding	chr1:247172017 minus strand	2468
ZNF124	NM_001297569	NP_001284498	Coding	chr1:247172017 minus strand	2468
ZNF124	NM_003431	NP_003422	Coding	chr1:247172017 minus strand	2468
ZNF281	NM_001281293	NP_001268222	Coding	chr1:200410058 minus strand	2469
ZNF281	NM_001281294	NP_001268223	Coding	chr1:200410058 minus strand	2469
ZNF281	NM_012482	NP_036614	Coding	chr1:200410058 minus strand	2469
ZNF326	NM_182975	NP_892020	Coding	chr1:89995118 plus strand	2470
ZNF326	NM_182976	NP_892021	Coding	chr1:89995118 plus strand	2470
ZNF362	NM_152493	NP_689706	Coding	chr1:33256572 plus strand	2471
ZNF436	NM_001077195	NP_001070663	Coding	chr1:23369864 minus strand	2472
ZNF436	NM_030634	NP_085137	Coding	chr1:23368386 minus strand	2473
ZNF496	NM_032752	NP_116141	Coding	chr1:247331743 minus strand	2474
ZNF593	NM_015871	NP_056955	Coding	chr1:26169896 plus strand	2475
ZNF644	NM_032186	NP_115562	Coding	chr1:91022255 minus strand	2476
ZNF644	NM_201269	NP_958357	Coding	chr1:91022255 minus strand	2476
ZNF644	NM_016620	NP_057704	Coding	chr1:91021508 minus strand	2477
ZNF648	NM_001009992	NP_001009992	Coding	chr1:182061712 minus strand	2478
ZNF669	NM_001142572	NP_001136044	Coding	chr1:247104372 minus strand	2479
ZNF669	NM_024804	NP_079080	Coding	chr1:247104372 minus strand	2479
ZNF670	NM_001204220	NP_001191149	Coding	chr1:247078813 minus strand	2480
ZNF670	NM_033213	NP_149990	Coding	chr1:247078813 minus strand	2480
ZNF672	NM_024836	NP_079112	Coding	chr1:248838330 plus strand	2481
ZNF678	NM_178549	NP_848644	Coding	chr1:227563518 plus strand	2482

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ZNF683	NM_001114759	NP_001108231	Coding	chr1:26372775 minus strand	2483
ZNF683	NM_173574	NP_775845	Coding	chr1:26372775 minus strand	2483
ZNF684	NM_152373	NP_689586	Coding	chr1:40531560 plus strand	2484
ZNF687	NM_020832	NP_065883	Coding	chr1:151282314 plus strand	2485
ZNF691	NM_001242739	NP_001229668	Coding	chr1:42846572 plus strand	2486
ZNF691	NM_015911	NP_056995	Coding	chr1:42846572 plus strand	2486
ZNF692	NM_001193328	NP_001180257	Coding	chr1:248859116 minus strand	2487
ZNF692	NM_017865	NP_060335	Coding	chr1:248859116 minus strand	2487
ZNF692	NM_001136036	NP_001129508	Coding	chr1:248858926 minus strand	2488
ZNF695	NM_001204221	NP_001191150	Coding	chr1:247008093 minus strand	2489
ZNF695	NM_020394	NP_065127	Coding	chr1:247008093 minus strand	2489
ZNF697	NM_001080470	NP_001073939	Coding	chr1:119647767 minus strand	2490
ZNHIT6	NM_001170670	NP_001164141	Coding	chr1:85708433 minus strand	2491
ZNHIT6	NM_017953	NP_060423	Coding	chr1:85708433 minus strand	2491
ZP4	NM_021186	NP_067009	Coding	chr1:237890922 minus strand	2492
ZRANB2	NM_005455	NP_005446	Coding	chr1:71081289 minus strand	2493
ZRANB2	NM_203350	NP_976225	Coding	chr1:71081289 minus strand	2493
ZSCAN20	NM_145238	NP_660281	Coding	chr1:33472630 plus strand	2494
ZSWIM5	NM_020883	NP_065934	Coding	chr1:45206578 minus strand	2495
ZYG11A	NM_001004339	NP_001004339	Coding	chr1:52842510 plus strand	2496
ZYG11B	NM_024646	NP_078922	Coding	chr1:52726458 plus strand	2497
ZZZ3	NM_015534	NP_056349	Coding	chr1:77682658 minus strand	2498
AAK1	NM_014911	NP_055726	Coding	chr2:69643845 minus strand	2499
AAMP	NM_001087	NP_001078	Coding	chr2:218270209 minus strand	2500
AAMP	NM_001302545	NP_001289474	Coding	chr2:218270209 minus strand	2500
ABCA12	NM_015657	NP_056472	Coding	chr2:215032086 minus strand	2501
ABCA12	NM_173076	NP_775099	Coding	chr2:215138428 minus strand	2502
ABCB11	NM_003742	NP_003733	Coding	chr2:169031323 minus strand	2503
ABCB6	NM_005689	NP_005680	Coding	chr2:219218990 minus strand	2504

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ABCG5	NM_022436	NP_071881	Coding	chr2:43838819 minus strand	2505
ABCG8	NM_022437	NP_071882	Coding	chr2:43838963 plus strand	2506
ABHD1	NM_032604	NP_115993	Coding	chr2:27123788 plus strand	2507
ABI2	NM_001282925	NP_001269854	Coding	chr2:203328238 plus strand	2508
ABI2	NM_001282926	NP_001269855	Coding	chr2:203328238 plus strand	2508
ABI2	NM_001282927	NP_001269856	Coding	chr2:203366883 plus strand	2509
ABI2	NM_001282932	NP_001269861	Coding	chr2:203328238 plus strand	2508
ABI2	NM_005759	NP_005750	Coding	chr2:203328238 plus strand	2508
ACADL	NM_001608	NP_001599	Coding	chr2:210225491 minus strand	2510
ACKR3	NM_020311	NP_064707	Coding	chr2:236569736 plus strand	2511
ACMSD	NM_138326	NP_612199	Coding	chr2:134838615 plus strand	2512
ACOXL	NM_001142807	NP_001136279	Coding	chr2:110732572 plus strand	2513
ACP1	NM_001040649	NP_001035739	Coding	chr2:264868 plus strand	2514
ACP1	NM_004300	NP_004291	Coding	chr2:264868 plus strand	2514
ACP1	NM_007099	NP_009030	Coding	chr2:264868 plus strand	2514
ACSL3	NM_004457	NP_004448	Coding	chr2:222861013 plus strand	2515
ACSL3	NM_203372	NP_976251	Coding	chr2:222861013 plus strand	2515
ACTG2	NM_001199893	NP_001186822	Coding	chr2:73892965 plus strand	2516
ACTG2	NM_001615	NP_001606	Coding	chr2:73892965 plus strand	2516
ACTR1B	NM_005735	NP_005726	Coding	chr2:97664098 minus strand	2517
ACTR2	NM_001005386	NP_001005386	Coding	chr2:65227694 plus strand	2518
ACTR2	NM_005722	NP_005713	Coding	chr2:65227694 plus strand	2518
ACTR3	NM_001277140	NP_001264069	Coding	chr2:113890597 plus strand	2519
ACTR3	NM_005721	NP_005712	Coding	chr2:113889933 plus strand	2520
ACVR1	NM_001105	NP_001096	Coding	chr2:157875111 minus strand	2521
ACVR1	NM_001111067	NP_001104537	Coding	chr2:157875862 minus strand	2522
ACVR1C	NM_001111031	NP_001104501	Coding	chr2:157597560 minus strand	2523
ACVR1C	NM_001111032	NP_001104502	Coding	chr2:157628887 minus strand	2524
ACVR1C	NM_001111033	NP_001104503	Coding	chr2:157628887 minus strand	2524
ACVR1C	NM_145259	NP_660302	Coding	chr2:157628887 minus strand	2524

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ACVR2A	NM_001278579	NP_001265508	Coding	chr2:147844516 plus strand	2525
ACVR2A	NM_001278580	NP_001265509	Coding	chr2:147844516 plus strand	2525
ACVR2A	NM_001616	NP_001607	Coding	chr2:147844994 plus strand	2526
ACYP2	NM_138448	NP_612457	Coding	chr2:54115272 plus strand	2527
ADAM17	NM_003183	NP_003174	Coding	chr2:9555788 minus strand	2528
ADAM23	NM_003812	NP_003803	Coding	chr2:206443643 plus strand	2529
ADCY3	NM_004036	NP_004027	Coding	chr2:24919186 minus strand	2530
ADD2	NM_001185054	NP_001171983	Coding	chr2:70767715 minus strand	2531
ADD2	NM_001185055	NP_001171984	Coding	chr2:70768243 minus strand	2532
ADD2	NM_001617	NP_001608	Coding	chr2:70768243 minus strand	2532
ADD2	NM_017482	NP_059516	Coding	chr2:70768243 minus strand	2532
ADD2	NM_017488	NP_059522	Coding	chr2:70768243 minus strand	2532
ADI1	NM_018269	NP_060739	Coding	chr2:3519579 minus strand	2533
ADRA2B	NM_000682	NP_000673	Coding	chr2:96116245 minus strand	2534
AFF3	NM_001025108	NP_001020279	Coding	chr2:100105583 minus strand	2535
AFF3	NM_002285	NP_002276	Coding	chr2:100142575 minus strand	2536
AFTPH	NM_001002243	NP_001002243	Coding	chr2:64524304 plus strand	2537
AFTPH	NM_017657	NP_060127	Coding	chr2:64524304 plus strand	2537
AFTPH	NM_203437	NP_982261	Coding	chr2:64524304 plus strand	2537
AGAP1	NM_001037131	NP_001032208	Coding	chr2:235494088 plus strand	2538
AGAP1	NM_001244888	NP_001231817	Coding	chr2:235494088 plus strand	2538
AGAP1	NM_014914	NP_055729	Coding	chr2:235494088 plus strand	2538
AGBL5	NM_001035507	NP_001030584	Coding	chr2:27051622 plus strand	2539
AGBL5	NM_021831	NP_068603	Coding	chr2:27051622 plus strand	2539
AGFG1	NM_001135187	NP_001128659	Coding	chr2:227472171 plus strand	2540
AGFG1	NM_001135188	NP_001128660	Coding	chr2:227472171 plus strand	2540
AGFG1	NM_001135189	NP_001128661	Coding	chr2:227472171 plus strand	2540
AGFG1	NM_004504	NP_004495	Coding	chr2:227472171 plus strand	2540
AGPS	NM_003659	NP_003650	Coding	chr2:177392742 plus strand	2541
AGXT	NM_000030	NP_000021	Coding	chr2:240868744 plus strand	2542

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AHSA2	NM_152392	NP_689605	Coding	chr2:61177419 plus strand	2543
ALK	NM_004304	NP_004295	Coding	chr2:29921611 minus strand	2544
ALLC	NM_018436	NP_060906	Coding	chr2:3658195 plus strand	2545
ALMS1	NM_015120	NP_055935	Coding	chr2:73385757 plus strand	2546
ALPI	NM_001631	NP_001622	Coding	chr2:232456122 plus strand	2547
ALPP	NM_001632	NP_001623	Coding	chr2:232378637 plus strand	2548
ALPPL2	NM_031313	NP_112603	Coding	chr2:232406841 plus strand	2549
ALS2	NM_001135745	NP_001129217	Coding	chr2:201781172 minus strand	2550
ALS2	NM_020919	NP_065970	Coding	chr2:201781172 minus strand	2550
ALS2CR11	NM_001168216	NP_001161688	Coding	chr2:201619182 minus strand	2551
ALS2CR11	NM_001168217	NP_001161689	Coding	chr2:201619182 minus strand	2551
ALS2CR11	NM_001168221	NP_001161693	Coding	chr2:201619182 minus strand	2551
ALS2CR11	NM_152525	NP_689738	Coding	chr2:201619182 minus strand	2551
ALS2CR12	NM_001127391	NP_001120863	Coding	chr2:201357398 minus strand	2552
ALS2CR12	NM_001289993	NP_001276922	Coding	chr2:201357398 minus strand	2552
ALS2CR12	NM_139163	NP_631902	Coding	chr2:201357398 minus strand	2552
AMER3	NM_001105193	NP_001098663	Coding	chr2:130755650 plus strand	2553
AMER3	NM_001105194	NP_001098664	Coding	chr2:130756290 plus strand	2554
AMER3	NM_001105195	NP_001098665	Coding	chr2:130756290 plus strand	2554
AMER3	NM_152698	NP_689911	Coding	chr2:130755503 plus strand	2555
AMMECR1L	NM_001199140	NP_001186069	Coding	chr2:127885940 minus strand	2556
AMMECR1L	NM_031445	NP_113633	Coding	chr2:127884860 minus strand	2557
ANAPC1	NM_022662	NP_073153	Coding	chr2:111884164 minus strand	2558
ANKAR	NM_144708	NP_653309	Coding	chr2:189675984 plus strand	2559
ANKMY1	NM_001282771	NP_001269700	Coding	chr2:240558021 minus strand	2560
ANKMY1	NM_001282780	NP_001269709	Coding	chr2:240558021 minus strand	2560
ANKMY1	NM_001282781	NP_001269710	Coding	chr2:240558021 minus strand	2560
ANKMY1	NM_016552	NP_057636	Coding	chr2:240558021 minus strand	2560

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ANKMY1	NM_017844	NP_060314	Coding	chr2:240558021 minus strand	2560
ANKRD23	NM_144994	NP_659431	Coding	chr2:96844021 minus strand	2561
ANKRD36	NM_001164315	NP_001157787	Coding	chr2:97113495 plus strand	2562
ANKRD36B	NM_025190	NP_079466	Coding	chr2:97589965 minus strand	2563
ANKRD39	NM_016466	NP_057550	Coding	chr2:96858019 minus strand	2564
ANKRD44	NM_001195144	NP_001182073	Coding	chr2:197310797 minus strand	2565
ANKRD44	NM_153697	NP_710181	Coding	chr2:197310797 minus strand	2565
ANKRD53	NM_001115116	NP_001108588	Coding	chr2:70978444 plus strand	2566
ANKRD53	NM_024933	NP_079209	Coding	chr2:70978444 plus strand	2566
ANKZF1	NM_001042410	NP_001035869	Coding	chr2:219229887 plus strand	2567
ANKZF1	NM_001282792	NP_001269721	Coding	chr2:219229756 plus strand	2568
ANKZF1	NM_018089	NP_060559	Coding	chr2:219229756 plus strand	2568
ANO7	NM_001001666	NP_001001666	Coding	chr2:241188508 plus strand	2569
ANO7	NM_001001891	NP_001001891	Coding	chr2:241188508 plus strand	2569
ANTXR1	NM_018153	NP_060623	Coding	chr2:69013143 plus strand	2570
ANTXR1	NM_032208	NP_115584	Coding	chr2:69013143 plus strand	2570
ANTXR1	NM_053034	NP_444262	Coding	chr2:69013143 plus strand	2570
ANXA4	NM_001153	NP_001144	Coding	chr2:69741994 plus strand	2571
AOX1	NM_001159	NP_001150	Coding	chr2:200586007 plus strand	2572
AP1S3	NM_001039569	NP_001034658	Coding	chr2:223837602 minus strand	2573
APLF	NM_173545	NP_775816	Coding	chr2:68467558 plus strand	2574
APOB	NM_000384	NP_000375	Coding	chr2:21044073 minus strand	2575
AQP12A	NM_198998	NP_945349	Coding	chr2:240691844 plus strand	2576
AQP12B	NM_001102467	NP_001095937	Coding	chr2:240682900 minus strand	2577
ARHGAP15	NM_018460	NP_060930	Coding	chr2:143129329 plus strand	2578
ARHGAP25	NM_001007231	NP_001007232	Coding	chr2:68734780 plus strand	2579
ARHGAP25	NM_001166276	NP_001159748	Coding	chr2:68774800 plus strand	2580
ARHGAP25	NM_001166277	NP_001159749	Coding	chr2:68734780 plus strand	2579
ARHGAP25	NM_014882	NP_055697	Coding	chr2:68774800 plus strand	2580
ARHGEF33	NM_001145451	NP_001138923	Coding	chr2:38919362 plus strand	2581
ARHGEF4	NM_015320	NP_056135	Coding	chr2:130916650 plus strand	2582
ARHGEF4	NM_032995	NP_127462	Coding	chr2:130917396 plus	2583

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				strand	
ARID5A	NM_212481	NP_997646	Coding	chr2:96536726 plus strand	2584
ARL4C	NM_001282431	NP_001269360	Coding	chr2:234497053 minus strand	2585
ARL4C	NM_005737	NP_005728	Coding	chr2:234497049 minus strand	2586
ARL5A	NM_001037174	NP_001032251	Coding	chr2:151828495 minus strand	2587
ARL5A	NM_012097	NP_036229	Coding	chr2:151828495 minus strand	2587
ARL5A	NM_177985	NP_817114	Coding	chr2:151828495 minus strand	2587
ARL6IP6	NM_152522	NP_689735	Coding	chr2:152717892 plus strand	2588
ARMC9	NM_001271466	NP_001258395	Coding	chr2:231206199 plus strand	2589
ARMC9	NM_001291656	NP_001278585	Coding	chr2:231198545 plus strand	2590
ARMC9	NM_025139	NP_079415	Coding	chr2:231198545 plus strand	2590
ARPC2	NM_005731	NP_005722	Coding	chr2:218217396 plus strand	2591
ARPC2	NM_152862	NP_690601	Coding	chr2:218217093 plus strand	2592
ASAP2	NM_001135191	NP_001128663	Coding	chr2:9206764 plus strand	2593
ASAP2	NM_003887	NP_003878	Coding	chr2:9206764 plus strand	2593
ASB1	NM_001040445	NP_001035535	Coding	chr2:238426984 plus strand	2594
ASB18	NM_212556	NP_997721	Coding	chr2:236264345 minus strand	2595
ASB3	NM_001201965	NP_001188894	Coding	chr2:53786848 minus strand	2596
ASB3	NM_016115	NP_057199	Coding	chr2:53787009 minus strand	2597
ASB3	NM_145863	NP_665862	Coding	chr2:53787009 minus strand	2597
ASIC4	NM_182847	NP_878267	Coding	chr2:219514169 plus strand	2598
ASNSD1	NM_019048	NP_061921	Coding	chr2:189661398 plus strand	2599
ASPRV1	NM_152792	NP_690005	Coding	chr2:69962265 minus strand	2600
ASTL	NM_001002036	NP_001002036	Coding	chr2:96138436 minus strand	2601
ASXL2	NM_018263	NP_060733	Coding	chr2:25878443 minus strand	2602
ATAD2B	NM_001242338	NP_001229267	Coding	chr2:23927114 minus strand	2603
ATAD2B	NM_017552	NP_060022	Coding	chr2:23927114 minus strand	2603
ATF2	NM_001256090	NP_001243019	Coding	chr2:175168206 minus strand	2604
ATF2	NM_001256091	NP_001243020	Coding	chr2:175168206 minus	2604

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				strand	
ATF2	NM_001256092	NP_001243021	Coding	chr2:175168206 minus strand	2604
ATF2	NM_001256093	NP_001243022	Coding	chr2:175168206 minus strand	2604
ATF2	NM_001256094	NP_001243023	Coding	chr2:175168206 minus strand	2604
ATF2	NM_001880	NP_001871	Coding	chr2:175168206 minus strand	2604
ATG16L1	NM_001190266	NP_001177195	Coding	chr2:233251570 plus strand	2605
ATG16L1	NM_001190267	NP_001177196	Coding	chr2:233251570 plus strand	2605
ATG16L1	NM_017974	NP_060444	Coding	chr2:233251570 plus strand	2605
ATG16L1	NM_030803	NP_110430	Coding	chr2:233251570 plus strand	2605
ATG16L1	NM_198890	NP_942593	Coding	chr2:233251570 plus strand	2605
ATG4B	NM_013325	NP_037457	Coding	chr2:241637611 plus strand	2606
ATG4B	NM_178326	NP_847896	Coding	chr2:241637611 plus strand	2606
ATG9A	NM_001077198	NP_001070666	Coding	chr2:219229688 minus strand	2607
ATG9A	NM_024085	NP_076990	Coding	chr2:219229688 minus strand	2607
ATIC	NM_004044	NP_004035	Coding	chr2:215311955 plus strand	2608
ATL2	NM_001135673	NP_001129145	Coding	chr2:38377290 minus strand	2609
ATL2	NM_022374	NP_071769	Coding	chr2:38377290 minus strand	2609
ATOH8	NM_032827	NP_116216	Coding	chr2:85753785 plus strand	2610
ATP5G3	NM_001002258	NP_001002258	Coding	chr2:175181663 minus strand	2611
ATP5G3	NM_001190329	NP_001177258	Coding	chr2:175181762 minus strand	2612
ATP5G3	NM_001689	NP_001680	Coding	chr2:175181762 minus strand	2612
ATP6V1B1	NM_001692	NP_001683	Coding	chr2:70935867 plus strand	2613
ATP6V1C2	NM_001039362	NP_001034451	Coding	chr2:10721648 plus strand	2614
ATP6V1C2	NM_144583	NP_653184	Coding	chr2:10721648 plus strand	2614
ATP6V1E2	NM_080653	NP_542384	Coding	chr2:46519957 minus strand	2615
ATRAID	NM_001170795	NP_001164266	Coding	chr2:27212350 plus strand	2616
ATRAID	NM_016085	NP_057169	Coding	chr2:27212350 plus strand	2616
ATRAID	NM_080592	NP_542159	Coding	chr2:27212030 plus strand	2617
AUP1	NM_181575	NP_853553	Coding	chr2:74529897 minus strand	2618
B3GALT1	NM_020981	NP_066191	Coding	chr2:167818671 plus strand	2619

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B3GNT2	NM_006577	NP_006568	Coding	chr2:62196126 plus strand	2620
B3GNT7	NM_145236	NP_660279	Coding	chr2:231395623 plus strand	2621
BARD1	NM_000465	NP_000456	Coding	chr2:214809711 minus strand	2622
BARD1	NM_001282543	NP_001269472	Coding	chr2:214809711 minus strand	2622
BARD1	NM_001282545	NP_001269474	Coding	chr2:214809711 minus strand	2622
BARD1	NM_001282548	NP_001269477	Coding	chr2:214809711 minus strand	2622
BARD1	NM_001282549	NP_001269478	Coding	chr2:214809711 minus strand	2622
BAZ2B	NM_001289975	NP_001276904	Coding	chr2:159616601 minus strand	2623
BAZ2B	NM_013450	NP_038478	Coding	chr2:159616601 minus strand	2623
BBS5	NM_152384	NP_689597	Coding	chr2:169479495 plus strand	2624
BCL11A	NM_018014	NP_060484	Coding	chr2:60553498 minus strand	2625
BCL11A	NM_022893	NP_075044	Coding	chr2:60553498 minus strand	2625
BCL11A	NM_138559	NP_612569	Coding	chr2:60553498 minus strand	2625
BCL2L11	NM_001204106	NP_001191035	Coding	chr2:111120913 plus strand	2626
BCL2L11	NM_001204107	NP_001191036	Coding	chr2:111120913 plus strand	2626
BCL2L11	NM_001204108	NP_001191037	Coding	chr2:111120913 plus strand	2626
BCL2L11	NM_001204109	NP_001191038	Coding	chr2:111120913 plus strand	2626
BCL2L11	NM_001204110	NP_001191039	Coding	chr2:111120913 plus strand	2626
BCL2L11	NM_001204111	NP_001191040	Coding	chr2:111120913 plus strand	2626
BCL2L11	NM_001204112	NP_001191041	Coding	chr2:111120913 plus strand	2626
BCL2L11	NM_001204113	NP_001191042	Coding	chr2:111120913 plus strand	2626
BCL2L11	NM_006538	NP_006529	Coding	chr2:111120913 plus strand	2626
BCL2L11	NM_138621	NP_619527	Coding	chr2:111120913 plus strand	2626
BCL2L11	NM_138622	NP_619528	Coding	chr2:111120913 plus strand	2626
BCL2L11	NM_138623	NP_619529	Coding	chr2:111120913 plus strand	2626
BCL2L11	NM_138624	NP_619530	Coding	chr2:111120913 plus strand	2626
BCL2L11	NM_138625	NP_619531	Coding	chr2:111120913 plus strand	2626
BCL2L11	NM_138626	NP_619532	Coding	chr2:111120913 plus	2626

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				strand	
BCL2L11	NM_138627	NP_619533	Coding	chr2:111120913 plus strand	2626
BCL2L11	NM_207002	NP_996885	Coding	chr2:111120913 plus strand	2626
BCL2L11	NM_207003	NP_996886	Coding	chr2:111120913 plus strand	2626
BCS1L	NM_001079866	NP_001073335	Coding	chr2:218659655 plus strand	2627
BCS1L	NM_001257342	NP_001244271	Coding	chr2:218659655 plus strand	2627
BCS1L	NM_001257343	NP_001244272	Coding	chr2:218659655 plus strand	2627
BCS1L	NM_001257344	NP_001244273	Coding	chr2:218659655 plus strand	2627
BCS1L	NM_004328	NP_004319	Coding	chr2:218659655 plus strand	2627
BIN1	NM_004305	NP_004296	Coding	chr2:127107327 minus strand	2628
BIN1	NM_139343	NP_647593	Coding	chr2:127107327 minus strand	2628
BIN1	NM_139344	NP_647594	Coding	chr2:127107327 minus strand	2628
BIN1	NM_139345	NP_647595	Coding	chr2:127107327 minus strand	2628
BIN1	NM_139346	NP_647596	Coding	chr2:127107327 minus strand	2628
BIN1	NM_139347	NP_647597	Coding	chr2:127107327 minus strand	2628
BIN1	NM_139348	NP_647598	Coding	chr2:127107327 minus strand	2628
BIN1	NM_139349	NP_647599	Coding	chr2:127107327 minus strand	2628
BIN1	NM_139350	NP_647600	Coding	chr2:127107327 minus strand	2628
BIN1	NM_139351	NP_647601	Coding	chr2:127107327 minus strand	2628
BIRC6	NM_016252	NP_057336	Coding	chr2:32357027 plus strand	2629
BMP10	NM_014482	NP_055297	Coding	chr2:68871517 minus strand	2630
BMPR2	NM_001204	NP_001195	Coding	chr2:202376326 plus strand	2631
BOK	NM_032515	NP_115904	Coding	chr2:241558730 plus strand	2632
BOLA3	NM_001035505	NP_001030582	Coding	chr2:74147912 minus strand	2633
BOLA3	NM_212552	NP_997717	Coding	chr2:74147912 minus strand	2633
BOLL	NM_001284358	NP_001271287	Coding	chr2:197786312 minus strand	2634
BOLL	NM_001284361	NP_001271290	Coding	chr2:197785010 minus strand	2635
BOLL	NM_001284362	NP_001271291	Coding	chr2:197785010 minus strand	2635

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BOLL	NM_033030	NP_149019	Coding	chr2:197785350 minus strand	2636
BOLL	NM_197970	NP_932074	Coding	chr2:197786214 minus strand	2637
BRE	NM_001261840	NP_001248769	Coding	chr2:27890614 plus strand	2638
BRE	NM_004899	NP_004890	Coding	chr2:27890614 plus strand	2638
BRE	NM_199191	NP_954661	Coding	chr2:27890614 plus strand	2638
BRE	NM_199192	NP_954662	Coding	chr2:27890614 plus strand	2638
BRE	NM_199193	NP_954663	Coding	chr2:27890614 plus strand	2638
BRE	NM_199194	NP_954664	Coding	chr2:27890614 plus strand	2638
BUB1	NM_001278616	NP_001265545	Coding	chr2:110678107 minus strand	2639
BUB1	NM_001278617	NP_001265546	Coding	chr2:110678107 minus strand	2639
BUB1	NM_004336	NP_004327	Coding	chr2:110678107 minus strand	2639
BZW1	NM_001207067	NP_001193996	Coding	chr2:200811545 plus strand	2640
BZW1	NM_001207068	NP_001193997	Coding	chr2:200812332 plus strand	2641
BZW1	NM_001207069	NP_001193998	Coding	chr2:200812184 plus strand	2642
BZW1	NM_014670	NP_055485	Coding	chr2:200811545 plus strand	2640
C1D	NM_001190263	NP_001177192	Coding	chr2:68063027 minus strand	2643
C1D	NM_001190265	NP_001177194	Coding	chr2:68063027 minus strand	2643
C1D	NM_006333	NP_006324	Coding	chr2:68063027 minus strand	2643
C1D	NM_173177	NP_775269	Coding	chr2:68063027 minus strand	2643
C1QL2	NM_182528	NP_872334	Coding	chr2:119158895 minus strand	2644
C2orf15	NM_144706	NP_653307	Coding	chr2:99141721 plus strand	2645
C2orf16	NM_032266	NP_115642	Coding	chr2:27576521 plus strand	2646
C2orf27A	NM_013310	NP_037442	Coding	chr2:131722490 plus strand	2647
C2orf27B	NM_214461	NP_999626	Coding	chr2:131801661 minus strand	2648
C2orf40	NM_032411	NP_115787	Coding	chr2:106065656 plus strand	2649
C2orf42	NM_017880	NP_060350	Coding	chr2:70191019 minus strand	2650
C2orf43	NM_001282719	NP_001269648	Coding	chr2:20823130 minus strand	2651
C2orf43	NM_001282720	NP_001269649	Coding	chr2:20823130 minus strand	2651
C2orf43	NM_001282721	NP_001269650	Coding	chr2:20823130 minus strand	2651
C2orf43	NM_001282722	NP_001269651	Coding	chr2:20823130 minus strand	2651

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C2orf43	NM_001282723	NP_001269652	Coding	chr2:20823130 minus strand	2651
C2orf43	NM_001282724	NP_001269653	Coding	chr2:20823130 minus strand	2651
C2orf43	NM_021925	NP_068744	Coding	chr2:20823130 minus strand	2651
C2orf44	NM_001142319	NP_001135791	Coding	chr2:24047426 minus strand	2652
C2orf44	NM_025203	NP_079479	Coding	chr2:24047426 minus strand	2652
C2orf47	NM_024520	NP_078796	Coding	chr2:199955316 plus strand	2653
C2orf48	NM_182626	NP_872432	Coding	chr2:10141381 plus strand	2654
C2orf49	NM_001286537	NP_001273466	Coding	chr2:105337358 plus strand	2655
C2orf49	NM_024093	NP_076998	Coding	chr2:105337358 plus strand	2655
C2orf50	NM_182500	NP_872306	Coding	chr2:11133052 plus strand	2656
C2orf54	NM_001085437	NP_001078906	Coding	chr2:240896156 minus strand	2657
C2orf54	NM_001282921	NP_001269850	Coding	chr2:240892038 minus strand	2658
C2orf54	NM_024861	NP_079137	Coding	chr2:240892038 minus strand	2658
C2orf57	NM_152614	NP_689827	Coding	chr2:231592863 plus strand	2659
C2orf61	NM_001163561	NP_001157033	Coding	chr2:47155378 minus strand	2660
C2orf61	NM_173649	NP_775920	Coding	chr2:47155378 minus strand	2660
C2orf66	NM_213608	NP_998773	Coding	chr2:196810276 minus strand	2661
C2orf68	NM_001013649	NP_001013671	Coding	chr2:85612056 minus strand	2662
C2orf69	NM_153689	NP_710156	Coding	chr2:199911255 plus strand	2663
C2orf70	NM_001105519	NP_001098989	Coding	chr2:26562612 plus strand	2664
C2orf71	NM_001029883	NP_001025054	Coding	chr2:29074261 minus strand	2665
C2orf72	NM_001144994	NP_001138466	Coding	chr2:231037565 plus strand	2666
C2orf73	NM_001100396	NP_001093866	Coding	chr2:54330933 plus strand	2667
C2orf74	NM_001143959	NP_001137431	Coding	chr2:61162493 plus strand	2668
C2orf74	NM_001143960	NP_001137432	Coding	chr2:61145107 plus strand	2669
C2orf76	NM_001017927	NP_001017927	Coding	chr2:119366682 minus strand	2670
C2orf78	NM_001080474	NP_001073943	Coding	chr2:73784188 plus strand	2671
C2orf80	NM_001099334	NP_001092804	Coding	chr2:208190049 minus strand	2672
C2orf81	NM_001145054	NP_001138526	Coding	chr2:74417717 minus strand	2673
C2orf82	NM_206895	NP_996778	Coding	chr2:232870283 plus	2674

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				strand	
C2orf83	NM_001162483	NP_001155955	Coding	chr2:227633320 minus strand	2675
C2orf83	NM_020161	NP_064546	Coding	chr2:227633320 minus strand	2675
C2orf88	NM_001042519	NP_001035984	Coding	chr2:190180862 plus strand	2676
C2orf88	NM_001042520	NP_001035985	Coding	chr2:190150245 plus strand	2677
C2orf88	NM_001042521	NP_001035986	Coding	chr2:190137759 plus strand	2678
C2orf88	NM_032321	NP_115697	Coding	chr2:190180954 plus strand	2679
C2orf91	NM_001242815	NP_001229744	Coding	chr2:41953803 minus strand	2680
CAB39	NM_001130849	NP_001124321	Coding	chr2:230713547 plus strand	2681
CAB39	NM_001130850	NP_001124322	Coding	chr2:230713547 plus strand	2681
CAB39	NM_016289	NP_057373	Coding	chr2:230712841 plus strand	2682
CACNB4	NM_000726	NP_000717	Coding	chr2:152099079 minus strand	2683
CACNB4	NM_001005746	NP_001005746	Coding	chr2:152098721 minus strand	2684
CACNB4	NM_001005747	NP_001005747	Coding	chr2:151973971 minus strand	2685
CACNB4	NM_001145798	NP_001139270	Coding	chr2:152099079 minus strand	2683
CAD	NM_004341	NP_004332	Coding	chr2:27217389 plus strand	2686
CALCRL	NM_001271751	NP_001258680	Coding	chr2:187448294 minus strand	2687
CALCRL	NM_005795	NP_005786	Coding	chr2:187448294 minus strand	2687
CALM2	NM_001743	NP_001734	Coding	chr2:47176601 minus strand	2688
CAMKMT	NM_024766	NP_079042	Coding	chr2:44361903 plus strand	2689
CAPG	NM_001256139	NP_001243068	Coding	chr2:85414074 minus strand	2690
CAPG	NM_001256140	NP_001243069	Coding	chr2:85410697 minus strand	2691
CAPG	NM_001747	NP_001738	Coding	chr2:85410697 minus strand	2691
CAPN10	NM_023083	NP_075571	Coding	chr2:240586715 plus strand	2692
CAPN10	NM_023085	NP_075573	Coding	chr2:240586715 plus strand	2692
CAPN13	NM_144575	NP_653176	Coding	chr2:30807445 minus strand	2693
CAPN14	NM_001145122	NP_001138594	Coding	chr2:31217545 minus strand	2694
CARF	NM_001104586	NP_001098056	Coding	chr2:202912217 plus strand	2695

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CARF	NM_001282910	NP_001269839	Coding	chr2:202912217 plus strand	2695
CARF	NM_001282911	NP_001269840	Coding	chr2:202912217 plus strand	2695
CARF	NM_001282912	NP_001269841	Coding	chr2:202912217 plus strand	2695
CARF	NM_024744	NP_079020	Coding	chr2:202912217 plus strand	2695
CASP10	NM_001206524	NP_001193453	Coding	chr2:201182897 plus strand	2696
CASP10	NM_001206542	NP_001193471	Coding	chr2:201182897 plus strand	2696
CASP10	NM_001230	NP_001221	Coding	chr2:201182897 plus strand	2696
CASP10	NM_032974	NP_116756	Coding	chr2:201182897 plus strand	2696
CASP10	NM_032976	NP_116758	Coding	chr2:201182897 plus strand	2696
CASP10	NM_032977	NP_116759	Coding	chr2:201182897 plus strand	2696
CASP8	NM_001080124	NP_001073593	Coding	chr2:201233442 plus strand	2697
CASP8	NM_001080125	NP_001073594	Coding	chr2:201258030 plus strand	2698
CASP8	NM_001228	NP_001219	Coding	chr2:201233442 plus strand	2697
CASP8	NM_033355	NP_203519	Coding	chr2:201233442 plus strand	2697
CASP8	NM_033356	NP_203520	Coding	chr2:201260499 plus strand	2699
CASP8	NM_033358	NP_203522	Coding	chr2:201233442 plus strand	2697
CATIP	NM_198559	NP_940961	Coding	chr2:218356855 plus strand	2700
CBWD2	NM_172003	NP_742000	Coding	chr2:113437690 plus strand	2701
CCDC108	NM_001278295	NP_001265224	Coding	chr2:219041551 minus strand	2702
CCDC108	NM_001278296	NP_001265225	Coding	chr2:219041551 minus strand	2702
CCDC108	NM_152389	NP_689602	Coding	chr2:219041551 minus strand	2702
CCDC108	NM_194302	NP_919278	Coding	chr2:219041551 minus strand	2702
CCDC115	NM_032357	NP_115733	Coding	chr2:130342383 minus strand	2703
CCDC121	NM_001142683	NP_001136155	Coding	chr2:27628878 minus strand	2704
CCDC121	NM_024584	NP_078860	Coding	chr2:27629031 minus strand	2705
CCDC138	NM_144978	NP_659415	Coding	chr2:108786762 plus strand	2706
CCDC140	NM_153038	NP_694583	Coding	chr2:222298146 plus strand	2707

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CCDC141	NM_173648	NP_775919	Coding	chr2:179050059 minus strand	2708
CCDC142	NM_032779	NP_116168	Coding	chr2:74483230 minus strand	2709
CCDC148	NM_001301684	NP_001288613	Coding	chr2:158456753 minus strand	2710
CCDC148	NM_001301685	NP_001288614	Coding	chr2:158456753 minus strand	2710
CCDC148	NM_138803	NP_620158	Coding	chr2:158456753 minus strand	2710
CCDC150	NM_001080539	NP_001074008	Coding	chr2:196639631 plus strand	2711
CCDC173	NM_001085447	NP_001078916	Coding	chr2:169694421 minus strand	2712
CCDC74A	NM_001258304	NP_001245233	Coding	chr2:131527833 plus strand	2713
CCDC74A	NM_001258305	NP_001245234	Coding	chr2:131527833 plus strand	2713
CCDC74A	NM_001258306	NP_001245235	Coding	chr2:131527833 plus strand	2713
CCDC74A	NM_138770	NP_620125	Coding	chr2:131527833 plus strand	2713
CCDC74B	NM_001258307	NP_001245236	Coding	chr2:130145134 minus strand	2714
CCDC74B	NM_207310	NP_997193	Coding	chr2:130145134 minus strand	2714
CCDC85A	NM_001080433	NP_001073902	Coding	chr2:56184122 plus strand	2715
CCDC88A	NM_001135597	NP_001129069	Coding	chr2:55419921 minus strand	2716
CCDC88A	NM_001254943	NP_001241872	Coding	chr2:55419921 minus strand	2716
CCDC88A	NM_018084	NP_060554	Coding	chr2:55419921 minus strand	2716
CCDC93	NM_019044	NP_061917	Coding	chr2:118014163 minus strand	2717
CCL20	NM_001130046	NP_001123518	Coding	chr2:227813841 plus strand	2718
CCL20	NM_004591	NP_004582	Coding	chr2:227813841 plus strand	2718
CCNT2	NM_001241	NP_001232	Coding	chr2:134918821 plus strand	2719
CCNT2	NM_058241	NP_490595	Coding	chr2:134918821 plus strand	2719
CCNYL1	NM_001142300	NP_001135772	Coding	chr2:207711539 plus strand	2720
CCNYL1	NM_152523	NP_689736	Coding	chr2:207711539 plus strand	2720
CCT4	NM_001256721	NP_001243650	Coding	chr2:61888671 minus strand	2721
CCT4	NM_006430	NP_006421	Coding	chr2:61888671 minus strand	2721
CCT7	NM_001009570	NP_001009570	Coding	chr2:73234235 plus strand	2722
CCT7	NM_001166284	NP_001159756	Coding	chr2:73234235 plus strand	2722

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CCT7	NM_001166285	NP_001159757	Coding	chr2:73234235 plus strand	2722
CCT7	NM_006429	NP_006420	Coding	chr2:73234235 plus strand	2722
CD207	NM_015717	NP_056532	Coding	chr2:70835823 minus strand	2723
CD28	NM_001243077	NP_001230006	Coding	chr2:203706474 plus strand	2724
CD28	NM_001243078	NP_001230007	Coding	chr2:203706474 plus strand	2724
CD28	NM_006139	NP_006130	Coding	chr2:203706474 plus strand	2724
CD302	NM_001198763	NP_001185692	Coding	chr2:159798255 minus strand	2725
CD302	NM_001198764	NP_001185693	Coding	chr2:159798255 minus strand	2725
CD302	NM_014880	NP_055695	Coding	chr2:159798255 minus strand	2725
CD8A	NM_001145873	NP_001139345	Coding	chr2:86808396 minus strand	2726
CD8A	NM_001768	NP_001759	Coding	chr2:86791714 minus strand	2727
CD8A	NM_171827	NP_741969	Coding	chr2:86791714 minus strand	2727
CD8B	NM_001178100	NP_001171571	Coding	chr2:86861924 minus strand	2728
CD8B	NM_004931	NP_004922	Coding	chr2:86861924 minus strand	2728
CD8B	NM_172101	NP_742099	Coding	chr2:86861924 minus strand	2728
CD8B	NM_172102	NP_742100	Coding	chr2:86861924 minus strand	2728
CD8B	NM_172213	NP_757362	Coding	chr2:86861924 minus strand	2728
CDC42EP3	NM_001270436	NP_001257365	Coding	chr2:37672535 minus strand	2729
CDC42EP3	NM_001270437	NP_001257366	Coding	chr2:37672199 minus strand	2730
CDC42EP3	NM_001270438	NP_001257367	Coding	chr2:37672199 minus strand	2730
CDC42EP3	NM_006449	NP_006440	Coding	chr2:37672199 minus strand	2730
CDCA7	NM_031942	NP_114148	Coding	chr2:173354832 plus strand	2731
CDCA7	NM_145810	NP_665809	Coding	chr2:173354832 plus strand	2731
CDK15	NM_001261435	NP_001248364	Coding	chr2:201806578 plus strand	2732
CDK15	NM_001261436	NP_001248365	Coding	chr2:201806578 plus strand	2732
CDK15	NM_139158	NP_631897	Coding	chr2:201806428 plus strand	2733
CDK5R2	NM_003936	NP_003927	Coding	chr2:218959627 plus strand	2734
CDKL4	NM_001009565	NP_001009565	Coding	chr2:39229532 minus strand	2735

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CEBPZ	NM_005760	NP_005751	Coding	chr2:37231597 minus strand	2736
CENPA	NM_001042426	NP_001035891	Coding	chr2:26786014 plus strand	2737
CENPA	NM_001809	NP_001800	Coding	chr2:26786013 plus strand	2738
CENPO	NM_001199803	NP_001186732	Coding	chr2:24793305 plus strand	2739
CENPO	NM_024322	NP_077298	Coding	chr2:24793461 plus strand	2740
CEP68	NM_015147	NP_055962	Coding	chr2:65056360 plus strand	2741
CERKL	NM_001030311	NP_001025482	Coding	chr2:181657107 minus strand	2742
CERKL	NM_001030312	NP_001025483	Coding	chr2:181657107 minus strand	2742
CERKL	NM_001030313	NP_001025484	Coding	chr2:181657107 minus strand	2742
CERKL	NM_001160277	NP_001153749	Coding	chr2:181657107 minus strand	2742
CERKL	NM_201548	NP_963842	Coding	chr2:181657107 minus strand	2742
CERS6	NM_001256126	NP_001243055	Coding	chr2:168456248 plus strand	2743
CERS6	NM_203463	NP_982288	Coding	chr2:168456248 plus strand	2743
CFAP221	NM_001271049	NP_001257978	Coding	chr2:119544431 plus strand	2744
CFAP36	NM_001282761	NP_001269690	Coding	chr2:55519594 plus strand	2745
CFAP36	NM_080667	NP_542398	Coding	chr2:55519594 plus strand	2745
CFC1	NM_001270420	NP_001257349	Coding	chr2:130599575 minus strand	2746
CFC1	NM_001270421	NP_001257350	Coding	chr2:130599575 minus strand	2746
CFC1	NM_032545	NP_115934	Coding	chr2:130599575 minus strand	2746
CFC1B	NM_001079530	NP_001072998	Coding	chr2:130521093 plus strand	2747
CFC1B	NM_001079530	NP_001072998	Coding	chr2:130599678 minus strand	2748
CFLAR	NM_001127183	NP_001120655	Coding	chr2:201118545 plus strand	2749
CFLAR	NM_001127184	NP_001120656	Coding	chr2:201116153 plus strand	2750
CFLAR	NM_001202515	NP_001189444	Coding	chr2:201140274 plus strand	2751
CFLAR	NM_001202516	NP_001189445	Coding	chr2:201116153 plus strand	2750
CFLAR	NM_001202517	NP_001189446	Coding	chr2:201116153 plus strand	2750
CFLAR	NM_001202518	NP_001189447	Coding	chr2:201132964 plus strand	2752
CFLAR	NM_001202519	NP_001189448	Coding	chr2:201116153 plus strand	2750
CFLAR	NM_003879	NP_003870	Coding	chr2:201116153 plus strand	2750
CGREF1	NM_001166239	NP_001159711	Coding	chr2:27118905 minus	2753

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				strand	
CGREF1	NM_001166240	NP_001159712	Coding	chr2:27119127 minus strand	2754
CGREF1	NM_001301324	NP_001288253	Coding	chr2:27119127 minus strand	2754
CGREF1	NM_006569	NP_006560	Coding	chr2:27119127 minus strand	2754
CHAC2	NM_001008708	NP_001008708	Coding	chr2:53767791 plus strand	2755
CHCHD5	NM_032309	NP_115685	Coding	chr2:112584458 plus strand	2756
CHMP3	NM_001005753	NP_001005753	Coding	chr2:86563497 minus strand	2757
CHMP3	NM_001193517	NP_001180446	Coding	chr2:86563497 minus strand	2757
CHMP3	NM_016079	NP_057163	Coding	chr2:86563497 minus strand	2757
CHN1	NM_001025201	NP_001020372	Coding	chr2:175005379 minus strand	2758
CHN1	NM_001206602	NP_001193531	Coding	chr2:174847618 minus strand	2759
CHN1	NM_001822	NP_001813	Coding	chr2:175005253 minus strand	2760
CHPF	NM_001195731	NP_001182660	Coding	chr2:219543097 minus strand	2761
CHPF	NM_024536	NP_078812	Coding	chr2:219543765 minus strand	2762
CHRNA1	NM_000079	NP_000070	Coding	chr2:174764472 minus strand	2763
CHRNA1	NM_001039523	NP_001034612	Coding	chr2:174764472 minus strand	2763
CHRND	NM_000751	NP_000742	Coding	chr2:232526159 plus strand	2764
CHRND	NM_001256657	NP_001243586	Coding	chr2:232526159 plus strand	2764
CHRNG	NM_005199	NP_005190	Coding	chr2:232539726 plus strand	2765
CHST10	NM_004854	NP_004845	Coding	chr2:100417668 minus strand	2766
CIAO1	NM_004804	NP_004795	Coding	chr2:96266145 plus strand	2767
CIB4	NM_001029881	NP_001025052	Coding	chr2:26641343 minus strand	2768
CIR1	NM_004882	NP_004873	Coding	chr2:174395715 minus strand	2769
CKAP2L	NM_152515	NP_689728	Coding	chr2:112764677 minus strand	2770
CLASP1	NM_001142273	NP_001135745	Coding	chr2:121649476 minus strand	2771
CLASP1	NM_001142274	NP_001135746	Coding	chr2:121649476 minus strand	2771
CLASP1	NM_001207051	NP_001193980	Coding	chr2:121649476 minus strand	2771
CLASP1	NM_015282	NP_056097	Coding	chr2:121649476 minus strand	2771

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CLEC4F	NM_001258027	NP_001244956	Coding	chr2:70820600 minus strand	2772
CLEC4F	NM_173535	NP_775806	Coding	chr2:70820600 minus strand	2772
CLHC1	NM_001135598	NP_001129070	Coding	chr2:55232563 minus strand	2773
CLHC1	NM_152385	NP_689598	Coding	chr2:55232313 minus strand	2774
CLIP4	NM_001287527	NP_001274456	Coding	chr2:29115425 plus strand	2775
CLIP4	NM_001287528	NP_001274457	Coding	chr2:29097675 plus strand	2776
CLIP4	NM_024692	NP_078968	Coding	chr2:29115425 plus strand	2775
CLK1	NM_001162407	NP_001155879	Coding	chr2:200864561 minus strand	2777
CLK1	NM_004071	NP_004062	Coding	chr2:200864744 minus strand	2778
CMPK2	NM_001256477	NP_001243406	Coding	chr2:6865819 minus strand	2779
CMPK2	NM_001256478	NP_001243407	Coding	chr2:6865819 minus strand	2779
CMPK2	NM_207315	NP_997198	Coding	chr2:6865819 minus strand	2779
CNGA3	NM_001079878	NP_001073347	Coding	chr2:98346154 plus strand	2780
CNGA3	NM_001298	NP_001289	Coding	chr2:98346154 plus strand	2780
CNNM3	NM_017623	NP_060093	Coding	chr2:96816253 plus strand	2781
CNNM3	NM_199078	NP_951060	Coding	chr2:96816253 plus strand	2781
CNNM4	NM_020184	NP_064569	Coding	chr2:96760901 plus strand	2782
CNOT11	NM_017546	NP_060016	Coding	chr2:101252882 plus strand	2783
CNPPD1	NM_015680	NP_056495	Coding	chr2:219176980 minus strand	2784
CNRIP1	NM_001111101	NP_001104571	Coding	chr2:68320051 minus strand	2785
CNRIP1	NM_015463	NP_056278	Coding	chr2:68320051 minus strand	2785
CNTNAP5	NM_130773	NP_570129	Coding	chr2:124025286 plus strand	2786
COA5	NM_001008215	NP_001008216	Coding	chr2:98608518 minus strand	2787
COBLL1	NM_001278458	NP_001265387	Coding	chr2:164842168 minus strand	2788
COBLL1	NM_001278460	NP_001265389	Coding	chr2:164842168 minus strand	2788
COBLL1	NM_001278461	NP_001265390	Coding	chr2:164841418 minus strand	2789
COBLL1	NM_014900	NP_055715	Coding	chr2:164841418 minus strand	2789
COL3A1	NM_000090	NP_000081	Coding	chr2:188974372 plus strand	2790
COL4A3	NM_000091	NP_000082	Coding	chr2:227164564 plus strand	2791
COL4A4	NM_000092	NP_000083	Coding	chr2:227164559 minus strand	2792
COL5A2	NM_000393	NP_000384	Coding	chr2:189179879 minus strand	2793

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COL6A3	NM_004369	NP_004360	Coding	chr2:237414207 minus strand	2794
COL6A3	NM_057164	NP_476505	Coding	chr2:237414207 minus strand	2794
COL6A3	NM_057165	NP_476506	Coding	chr2:237414207 minus strand	2794
COL6A3	NM_057166	NP_476507	Coding	chr2:237414207 minus strand	2794
COL6A3	NM_057167	NP_476508	Coding	chr2:237414207 minus strand	2794
COLEC11	NM_001255982	NP_001242911	Coding	chr2:3594831 plus strand	2795
COLEC11	NM_001255983	NP_001242912	Coding	chr2:3594831 plus strand	2795
COLEC11	NM_001255984	NP_001242913	Coding	chr2:3594831 plus strand	2795
COLEC11	NM_001255985	NP_001242914	Coding	chr2:3601905 plus strand	2796
COLEC11	NM_001255986	NP_001242915	Coding	chr2:3606051 plus strand	2797
COLEC11	NM_001255987	NP_001242916	Coding	chr2:3606051 plus strand	2797
COLEC11	NM_001255988	NP_001242917	Coding	chr2:3606051 plus strand	2797
COLEC11	NM_001255989	NP_001242918	Coding	chr2:3606051 plus strand	2797
COLEC11	NM_024027	NP_076932	Coding	chr2:3594831 plus strand	2795
COLEC11	NM_199235	NP_954705	Coding	chr2:3594831 plus strand	2795
COMMD1	NM_152516	NP_689729	Coding	chr2:61905667 plus strand	2798
COPS7B	NM_001282949	NP_001269878	Coding	chr2:231781670 plus strand	2799
COPS7B	NM_001282950	NP_001269879	Coding	chr2:231786382 plus strand	2800
COPS7B	NM_001282951	NP_001269880	Coding	chr2:231781670 plus strand	2799
COPS7B	NM_001282952	NP_001269881	Coding	chr2:231786382 plus strand	2800
COPS7B	NM_022730	NP_073567	Coding	chr2:231786382 plus strand	2800
COPS8	NM_006710	NP_006701	Coding	chr2:237085440 plus strand	2801
COPS8	NM_198189	NP_937832	Coding	chr2:237085440 plus strand	2801
COQ10B	NM_025147	NP_079423	Coding	chr2:197453506 plus strand	2802
COX5B	NM_001862	NP_001853	Coding	chr2:97646057 plus strand	2803
COX7A2L	NM_004718	NP_004709	Coding	chr2:42361216 minus strand	2804
CPO	NM_173077	NP_775100	Coding	chr2:206939553 plus strand	2805
CPS1	NM_001122633	NP_001116105	Coding	chr2:210477681 plus strand	2806
CPS1	NM_001122634	NP_001116106	Coding	chr2:210593354 plus strand	2807
CPS1	NM_001875	NP_001866	Coding	chr2:210556598 plus strand	2808
CPSF3	NM_016207	NP_057291	Coding	chr2:9423536 plus strand	2809
CREB1	NM_004379	NP_004370	Coding	chr2:207529891 plus	2810

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				strand	
CREB1	NM_134442	NP_604391	Coding	chr2:207529891 plus strand	2810
CREG2	NM_153836	NP_722578	Coding	chr2:101387503 minus strand	2811
CRIM1	NM_016441	NP_057525	Coding	chr2:36356226 plus strand	2812
CRIPT	NM_014171	NP_054890	Coding	chr2:46617171 plus strand	2813
CRYBA2	NM_057093	NP_476434	Coding	chr2:218993405 minus strand	2814
CRYBA2	NM_057094	NP_476435	Coding	chr2:218993405 minus strand	2814
CRYGA	NM_014617	NP_055432	Coding	chr2:208163573 minus strand	2815
CRYGB	NM_005210	NP_005201	Coding	chr2:208146153 minus strand	2816
CRYGC	NM_020989	NP_066269	Coding	chr2:208129830 minus strand	2817
CRYGD	NM_006891	NP_008822	Coding	chr2:208124589 minus strand	2818
CSRNP3	NM_001172173	NP_001165644	Coding	chr2:165469646 plus strand	2819
CSRNP3	NM_024969	NP_079245	Coding	chr2:165572335 plus strand	2820
CTDSP1	NM_001206878	NP_001193807	Coding	chr2:218398337 plus strand	2821
CTDSP1	NM_021198	NP_067021	Coding	chr2:218399754 plus strand	2822
CTDSP1	NM_182642	NP_872580	Coding	chr2:218399754 plus strand	2822
CTLA4	NM_001037631	NP_001032720	Coding	chr2:203867787 plus strand	2823
CTLA4	NM_005214	NP_005205	Coding	chr2:203867787 plus strand	2823
CTNNA2	NM_001164883	NP_001158355	Coding	chr2:79512933 plus strand	2824
CTNNA2	NM_001282597	NP_001269526	Coding	chr2:79512933 plus strand	2824
CTNNA2	NM_001282598	NP_001269527	Coding	chr2:79523182 plus strand	2825
CTNNA2	NM_001282599	NP_001269528	Coding	chr2:80313378 plus strand	2826
CTNNA2	NM_001282600	NP_001269529	Coding	chr2:80305104 plus strand	2827
CTNNA2	NM_004389	NP_004380	Coding	chr2:79512933 plus strand	2824
CUL3	NM_001257197	NP_001244126	Coding	chr2:224585397 minus strand	2828
CUL3	NM_001257198	NP_001244127	Coding	chr2:224569825 minus strand	2829
CUL3	NM_003590	NP_003581	Coding	chr2:224585397 minus strand	2828
CWC22	NM_020943	NP_065994	Coding	chr2:180007053 minus strand	2830
CXCR1	NM_000634	NP_000625	Coding	chr2:218166993 minus strand	2831
CXCR2	NM_001168298	NP_001161770	Coding	chr2:218125289 plus strand	2832

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CXCR2	NM_001557	NP_001548	Coding	chr2:218126012 plus strand	2833
CXCR4	NM_001008540	NP_001008540	Coding	chr2:136116243 minus strand	2834
CXCR4	NM_003467	NP_003458	Coding	chr2:136118155 minus strand	2835
CYBRD1	NM_001127383	NP_001120855	Coding	chr2:171522355 plus strand	2836
CYBRD1	NM_001256909	NP_001243838	Coding	chr2:171522246 plus strand	2837
CYBRD1	NM_024843	NP_079119	Coding	chr2:171522355 plus strand	2836
CYP1B1	NM_000104	NP_000095	Coding	chr2:38076181 minus strand	2838
CYP20A1	NM_177538	NP_803882	Coding	chr2:203238440 plus strand	2839
CYP26B1	NM_001277742	NP_001264671	Coding	chr2:72147862 minus strand	2840
CYP26B1	NM_019885	NP_063938	Coding	chr2:72147862 minus strand	2840
CYP27A1	NM_000784	NP_000775	Coding	chr2:218781748 plus strand	2841
CYP27C1	NM_001001665	NP_001001665	Coding	chr2:127205767 minus strand	2842
CYS1	NM_001037160	NP_001032237	Coding	chr2:10080411 minus strand	2843
CYTIP	NM_004288	NP_004279	Coding	chr2:157444092 minus strand	2844
D2HGDH	NM_001287249	NP_001274178	Coding	chr2:241734578 plus strand	2845
D2HGDH	NM_152783	NP_689996	Coding	chr2:241734578 plus strand	2845
DAPL1	NM_001017920	NP_001017920	Coding	chr2:158795316 plus strand	2846
DARS	NM_001293312	NP_001280241	Coding	chr2:135985684 minus strand	2847
DARS	NM_001349	NP_001340	Coding	chr2:135985684 minus strand	2847
DAW1	NM_178821	NP_849143	Coding	chr2:227871610 plus strand	2848
DBI	NM_001079862	NP_001073331	Coding	chr2:119366923 plus strand	2849
DBI	NM_001079863	NP_001073332	Coding	chr2:119367674 plus strand	2850
DBI	NM_001178017	NP_001171488	Coding	chr2:119367252 plus strand	2851
DBI	NM_001178041	NP_001171512	Coding	chr2:119366923 plus strand	2849
DBI	NM_001178042	NP_001171513	Coding	chr2:119366923 plus strand	2849
DBI	NM_001178043	NP_001171514	Coding	chr2:119366923 plus strand	2849
DBI	NM_001282633	NP_001269562	Coding	chr2:119366923 plus strand	2849

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DBI	NM_001282634	NP_001269563	Coding	chr2:119366923 plus strand	2849
DBI	NM_001282635	NP_001269564	Coding	chr2:119367047 plus strand	2852
DBI	NM_001282636	NP_001269565	Coding	chr2:119367047 plus strand	2852
DBI	NM_020548	NP_065438	Coding	chr2:119366923 plus strand	2849
DCAF17	NM_001164821	NP_001158293	Coding	chr2:171434250 plus strand	2853
DCAF17	NM_025000	NP_079276	Coding	chr2:171434250 plus strand	2853
DCDC2C	NM_001287444	NP_001274373	Coding	chr2:3703591 plus strand	2854
DCTN1	NM_001135040	NP_001128512	Coding	chr2:74380355 minus strand	2855
DCTN1	NM_001135041	NP_001128513	Coding	chr2:74374735 minus strand	2856
DCTN1	NM_001190836	NP_001177765	Coding	chr2:74392087 minus strand	2857
DCTN1	NM_001190837	NP_001177766	Coding	chr2:74380355 minus strand	2855
DCTN1	NM_004082	NP_004073	Coding	chr2:74380355 minus strand	2855
DCTN1	NM_023019	NP_075408	Coding	chr2:74374735 minus strand	2856
DDX1	NM_004939	NP_004930	Coding	chr2:15591620 plus strand	2858
DDX18	NM_006773	NP_006764	Coding	chr2:117814678 plus strand	2859
DES	NM_001927	NP_001918	Coding	chr2:219418376 plus strand	2860
DFNB59	NM_001042702	NP_001036167	Coding	chr2:178451435 plus strand	2861
DGKD	NM_003648	NP_003639	Coding	chr2:233388153 plus strand	2862
DGKD	NM_152879	NP_690618	Coding	chr2:233354506 plus strand	2863
DGUOK	NM_080916	NP_550438	Coding	chr2:73926825 plus strand	2864
DGUOK	NM_080918	NP_550440	Coding	chr2:73926825 plus strand	2864
DHRS9	NM_001142270	NP_001135742	Coding	chr2:169072574 plus strand	2865
DHRS9	NM_001142271	NP_001135743	Coding	chr2:169081106 plus strand	2866
DHRS9	NM_001289763	NP_001276692	Coding	chr2:169067034 plus strand	2867
DHRS9	NM_199204	NP_954674	Coding	chr2:169067034 plus strand	2867
DHX57	NM_198963	NP_945314	Coding	chr2:38875879 minus strand	2868
DIRC1	NM_052952	NP_443184	Coding	chr2:188790104 minus strand	2869
DIS3L2	NM_001257281	NP_001244210	Coding	chr2:231961582 plus strand	2870
DIS3L2	NM_001257282	NP_001244211	Coding	chr2:231961582 plus	2870

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				strand	
DIS3L2	NM_152383	NP_689596	Coding	chr2:231961582 plus strand	2870
DLX1	NM_001038493	NP_001033582	Coding	chr2:172085479 plus strand	2871
DLX1	NM_178120	NP_835221	Coding	chr2:172085479 plus strand	2871
DLX2	NM_004405	NP_004396	Coding	chr2:172102750 minus strand	2872
DNAH6	NM_001370	NP_001361	Coding	chr2:84516454 plus strand	2873
DNAH7	NM_018897	NP_061720	Coding	chr2:196068812 minus strand	2874
DNAJB2	NM_001039550	NP_001034639	Coding	chr2:219279317 plus strand	2875
DNAJB2	NM_006736	NP_006727	Coding	chr2:219279317 plus strand	2875
DNAJB3	NM_001001394	NP_001001394	Coding	chr2:233744015 minus strand	2876
DNAJC10	NM_001271581	NP_001258510	Coding	chr2:182716040 plus strand	2877
DNAJC10	NM_018981	NP_061854	Coding	chr2:182716040 plus strand	2877
DNAJC27	NM_001198559	NP_001185488	Coding	chr2:24972094 minus strand	2878
DNAJC27	NM_016544	NP_057628	Coding	chr2:24972094 minus strand	2878
DNAJC5G	NM_173650	NP_775921	Coding	chr2:27275420 plus strand	2879
DNER	NM_139072	NP_620711	Coding	chr2:229714570 minus strand	2880
DNMT3A	NM_022552	NP_072046	Coding	chr2:25341915 minus strand	2881
DNMT3A	NM_153759	NP_715640	Coding	chr2:25252315 minus strand	2882
DNMT3A	NM_175629	NP_783328	Coding	chr2:25342590 minus strand	2883
DNMT3A	NM_175630	NP_783329	Coding	chr2:25342590 minus strand	2883
DNPEP	NM_012100	NP_036232	Coding	chr2:219387940 minus strand	2884
DOCK10	NM_001290263	NP_001277192	Coding	chr2:224947065 minus strand	2885
DOCK10	NM_014689	NP_055504	Coding	chr2:225042613 minus strand	2886
DOK1	NM_001197260	NP_001184189	Coding	chr2:74549019 plus strand	2887
DOK1	NM_001381	NP_001372	Coding	chr2:74554384 plus strand	2888
DPP10	NM_001004360	NP_001004360	Coding	chr2:115162106 plus strand	2889
DPP10	NM_001178034	NP_001171505	Coding	chr2:115161935 plus strand	2890
DPP10	NM_001178036	NP_001171507	Coding	chr2:114461602 plus strand	2891
DPP10	NM_001178037	NP_001171508	Coding	chr2:115064669 plus strand	2892

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DPP10	NM_020868	NP_065919	Coding	chr2:114442321 plus strand	2893
DPP4	NM_001935	NP_001926	Coding	chr2:162074542 minus strand	2894
DPY30	NM_032574	NP_115963	Coding	chr2:32039775 minus strand	2895
DPYSL5	NM_001253723	NP_001240652	Coding	chr2:26848288 plus strand	2896
DPYSL5	NM_001253724	NP_001240653	Coding	chr2:26848423 plus strand	2897
DPYSL5	NM_020134	NP_064519	Coding	chr2:26848100 plus strand	2898
DQX1	NM_133637	NP_598376	Coding	chr2:74526281 minus strand	2899
DRC1	NM_145038	NP_659475	Coding	chr2:26401915 plus strand	2900
DTNB	NM_001256303	NP_001243232	Coding	chr2:25673647 minus strand	2901
DTNB	NM_001256304	NP_001243233	Coding	chr2:25652660 minus strand	2902
DTNB	NM_001256308	NP_001243237	Coding	chr2:25650222 minus strand	2903
DTNB	NM_021907	NP_068707	Coding	chr2:25673647 minus strand	2901
DTNB	NM_033147	NP_149159	Coding	chr2:25673647 minus strand	2901
DTNB	NM_033148	NP_149160	Coding	chr2:25673647 minus strand	2901
DTNB	NM_183360	NP_899204	Coding	chr2:25673647 minus strand	2901
DTNB	NM_183361	NP_899205	Coding	chr2:25673647 minus strand	2901
DTYMK	NM_001165031	NP_001158503	Coding	chr2:241686968 minus strand	2904
DTYMK	NM_012145	NP_036277	Coding	chr2:241686968 minus strand	2904
DUSP11	NM_003584	NP_003575	Coding	chr2:73780157 minus strand	2905
DUSP19	NM_001142314	NP_001135786	Coding	chr2:183078558 plus strand	2906
DUSP19	NM_080876	NP_543152	Coding	chr2:183078558 plus strand	2906
DUSP2	NM_004418	NP_004409	Coding	chr2:96145440 minus strand	2907
DUSP28	NM_001033575	NP_001028747	Coding	chr2:240560053 plus strand	2908
DYNC1I2	NM_001271785	NP_001258714	Coding	chr2:171687671 plus strand	2909
DYNC1I2	NM_001271786	NP_001258715	Coding	chr2:171687408 plus strand	2910
DYNC1I2	NM_001271787	NP_001258716	Coding	chr2:171687671 plus strand	2909
DYNC1I2	NM_001271788	NP_001258717	Coding	chr2:171687408 plus strand	2910
DYNC1I2	NM_001271789	NP_001258718	Coding	chr2:171687671 plus strand	2909
DYNC1I2	NM_001271790	NP_001258719	Coding	chr2:171687408 plus	2910

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				strand	
DYNC1I2	NM_001378	NP_001369	Coding	chr2:171687408 plus strand	2910
DYNC2LI1	NM_001193464	NP_001180393	Coding	chr2:43774038 plus strand	2911
DYNC2LI1	NM_015522	NP_056337	Coding	chr2:43774038 plus strand	2911
DYNC2LI1	NM_016008	NP_057092	Coding	chr2:43774038 plus strand	2911
DYSF	NM_001130455	NP_001123927	Coding	chr2:71466701 plus strand	2912
DYSF	NM_001130976	NP_001124448	Coding	chr2:71453622 plus strand	2913
DYSF	NM_001130977	NP_001124449	Coding	chr2:71453622 plus strand	2913
DYSF	NM_001130978	NP_001124450	Coding	chr2:71453622 plus strand	2913
DYSF	NM_001130979	NP_001124451	Coding	chr2:71453622 plus strand	2913
DYSF	NM_001130980	NP_001124452	Coding	chr2:71453622 plus strand	2913
DYSF	NM_001130981	NP_001124453	Coding	chr2:71453622 plus strand	2913
DYSF	NM_001130982	NP_001124454	Coding	chr2:71466701 plus strand	2912
DYSF	NM_001130983	NP_001124455	Coding	chr2:71466701 plus strand	2912
DYSF	NM_001130984	NP_001124456	Coding	chr2:71466701 plus strand	2912
DYSF	NM_001130985	NP_001124457	Coding	chr2:71466701 plus strand	2912
DYSF	NM_001130986	NP_001124458	Coding	chr2:71466701 plus strand	2912
DYSF	NM_001130987	NP_001124459	Coding	chr2:71466701 plus strand	2912
DYSF	NM_003494	NP_003485	Coding	chr2:71453622 plus strand	2913
DYTN	NM_001093730	NP_001087199	Coding	chr2:206718396 minus strand	2914
E2F6	NM_001278275	NP_001265204	Coding	chr2:11466177 minus strand	2915
E2F6	NM_001278276	NP_001265205	Coding	chr2:11466177 minus strand	2915
E2F6	NM_001278277	NP_001265206	Coding	chr2:11466177 minus strand	2915
E2F6	NM_001278278	NP_001265207	Coding	chr2:11466177 minus strand	2915
E2F6	NM_198256	NP_937987	Coding	chr2:11466177 minus strand	2915
E2F6	NM_212540	NP_997705	Coding	chr2:11466177 minus strand	2915
ECEL1	NM_001290787	NP_001277716	Coding	chr2:232487859 minus strand	2916
ECEL1	NM_004826	NP_004817	Coding	chr2:232487859 minus strand	2916
EDAR	NM_022336	NP_071731	Coding	chr2:108989372 minus strand	2917
EEF1B2	NM_001037663	NP_001032752	Coding	chr2:206159593 plus strand	2918
EEF1B2	NM_001959	NP_001950	Coding	chr2:206159593 plus strand	2918
EEF1B2	NM_021121	NP_066944	Coding	chr2:206159593 plus strand	2918
EFEMP1	NM_001039348	NP_001034437	Coding	chr2:55924163 minus strand	2919
EFEMP1	NM_001039349	NP_001034438	Coding	chr2:55924163 minus	2919

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				strand	
EFHD1	NM_001243252	NP_001230181	Coding	chr2:232606056 plus strand	2920
EFHD1	NM_025202	NP_079478	Coding	chr2:232633496 plus strand	2921
EFR3B	NM_014971	NP_055786	Coding	chr2:25042103 plus strand	2922
EGR4	NM_001965	NP_001956	Coding	chr2:73293701 minus strand	2923
EHBP1	NM_001142614	NP_001136086	Coding	chr2:62706896 plus strand	2924
EHBP1	NM_001142615	NP_001136087	Coding	chr2:62673850 plus strand	2925
EHBP1	NM_001142616	NP_001136088	Coding	chr2:62705865 plus strand	2926
EHBP1	NM_015252	NP_056067	Coding	chr2:62705865 plus strand	2926
EHD3	NM_014600	NP_055415	Coding	chr2:31234013 plus strand	2927
EIF2AK2	NM_001135651	NP_001129123	Coding	chr2:37157047 minus strand	2928
EIF2AK2	NM_001135652	NP_001129124	Coding	chr2:37147822 minus strand	2929
EIF2AK2	NM_002759	NP_002750	Coding	chr2:37157047 minus strand	2928
EIF2AK3	NM_004836	NP_004827	Coding	chr2:88627576 minus strand	2930
EIF2B4	NM_001034116	NP_001029288	Coding	chr2:27370457 minus strand	2931
EIF2B4	NM_015636	NP_056451	Coding	chr2:27370457 minus strand	2931
EIF2B4	NM_172195	NP_751945	Coding	chr2:27370052 minus strand	2932
EIF4E2	NM_001276336	NP_001263265	Coding	chr2:232550586 plus strand	2933
EIF4E2	NM_001276337	NP_001263266	Coding	chr2:232550586 plus strand	2933
EIF4E2	NM_001282958	NP_001269887	Coding	chr2:232550586 plus strand	2933
EIF4E2	NM_004846	NP_004837	Coding	chr2:232550586 plus strand	2933
EIF5B	NM_015904	NP_056988	Coding	chr2:99337370 plus strand	2934
ELMOD3	NM_001135021	NP_001128493	Coding	chr2:85354719 plus strand	2935
ELMOD3	NM_001135022	NP_001128494	Coding	chr2:85354719 plus strand	2935
ELMOD3	NM_001135023	NP_001128495	Coding	chr2:85354719 plus strand	2935
ELMOD3	NM_032213	NP_115589	Coding	chr2:85354719 plus strand	2935
EMILIN1	NM_007046	NP_008977	Coding	chr2:27078566 plus strand	2936
EML4	NM_001145076	NP_001138548	Coding	chr2:42169349 plus strand	2937
EML4	NM_019063	NP_061936	Coding	chr2:42169349 plus strand	2937
EML6	NM_001039753	NP_001034842	Coding	chr2:54725011 plus strand	2938
EMX1	NM_004097	NP_004088	Coding	chr2:72917474 plus strand	2939
EN1	NM_001426	NP_001417	Coding	chr2:118848183 minus strand	2940
EPAS1	NM_001430	NP_001421	Coding	chr2:46297401 plus strand	2941
EPB41L5	NM_001184937	NP_001171866	Coding	chr2:120013027 plus	2942

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				strand	
EPB41L5	NM_001184938	NP_001171867	Coding	chr2:120013208 plus strand	2943
EPB41L5	NM_001184939	NP_001171868	Coding	chr2:120013027 plus strand	2942
EPB41L5	NM_020909	NP_065960	Coding	chr2:120013027 plus strand	2942
EPC2	NM_015630	NP_056445	Coding	chr2:148644990 plus strand	2944
EPCAM	NM_002354	NP_002345	Coding	chr2:47369147 plus strand	2945
EPHA4	NM_004438	NP_004429	Coding	chr2:221572290 minus strand	2946
EPT1	NM_033505	NP_277040	Coding	chr2:26346085 plus strand	2947
ERBB4	NM_001042599	NP_001036064	Coding	chr2:212538628 minus strand	2948
ERBB4	NM_005235	NP_005226	Coding	chr2:212538628 minus strand	2948
ERCC3	NM_000122	NP_000113	Coding	chr2:127294176 minus strand	2949
ERICH2	NM_001289947	NP_001276876	Coding	chr2:170783785 plus strand	2950
ERICH2	NM_001290030	NP_001276959	Coding	chr2:170770681 plus strand	2951
ERICH2	NM_001290031	NP_001276960	Coding	chr2:170770681 plus strand	2951
ERLEC1	NM_001127397	NP_001120869	Coding	chr2:53786930 plus strand	2952
ERLEC1	NM_001127398	NP_001120870	Coding	chr2:53786930 plus strand	2952
ERLEC1	NM_015701	NP_056516	Coding	chr2:53786930 plus strand	2952
ERMN	NM_001009959	NP_001009959	Coding	chr2:157327634 minus strand	2953
ERMN	NM_020711	NP_065762	Coding	chr2:157325904 minus strand	2954
ESPNL	NM_194312	NP_919288	Coding	chr2:238100309 plus strand	2955
ETAA1	NM_019002	NP_061875	Coding	chr2:67397309 plus strand	2956
EVA1A	NM_001135032	NP_001128504	Coding	chr2:75560966 minus strand	2957
EVA1A	NM_032181	NP_115557	Coding	chr2:75569722 minus strand	2958
EVX2	NM_001080458	NP_001073927	Coding	chr2:176083962 minus strand	2959
EXOC6B	NM_015189	NP_056004	Coding	chr2:72826048 minus strand	2960
FABP1	NM_001443	NP_001434	Coding	chr2:88128131 minus strand	2961
FAHD2A	NM_016044	NP_057128	Coding	chr2:95402699 plus strand	2962
FAHD2B	NM_199336	NP_955368	Coding	chr2:97094845 minus strand	2963
FAM110C	NM_001077710	NP_001071178	Coding	chr2:46588 minus strand	2964
FAM117B	NM_173511	NP_775782	Coding	chr2:202635177 plus strand	2965

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FAM124B	NM_001122779	NP_001116251	Coding	chr2:224401994 minus strand	2966
FAM124B	NM_024785	NP_079061	Coding	chr2:224401994 minus strand	2966
FAM126B	NM_173822	NP_776183	Coding	chr2:201071669 minus strand	2967
FAM132B	NM_001291832	NP_001278761	Coding	chr2:238159007 plus strand	2968
FAM134A	NM_024293	NP_077269	Coding	chr2:219178216 plus strand	2969
FAM136A	NM_032822	NP_116211	Coding	chr2:70302088 minus strand	2970
FAM150B	NM_001002919	NP_001002919	Coding	chr2:288308 minus strand	2971
FAM161A	NM_001201543	NP_001188472	Coding	chr2:61854143 minus strand	2972
FAM161A	NM_032180	NP_115556	Coding	chr2:61854143 minus strand	2972
FAM168B	NM_001009993	NP_001009993	Coding	chr2:131093431 minus strand	2973
FAM171B	NM_177454	NP_803237	Coding	chr2:186694061 plus strand	2974
FAM178B	NM_001122646	NP_001116118	Coding	chr2:96986564 minus strand	2975
FAM178B	NM_001172667	NP_001166138	Coding	chr2:96895162 minus strand	2976
FAM178B	NM_016490	NP_057574	Coding	chr2:96898133 minus strand	2977
FAM179A	NM_199280	NP_954974	Coding	chr2:28981297 plus strand	2978
FAM228A	NM_001040710	NP_001035800	Coding	chr2:24175102 plus strand	2979
FAM228B	NM_001145710	NP_001139182	Coding	chr2:24123479 plus strand	2980
FAM228B	NM_001291328	NP_001278257	Coding	chr2:24076873 plus strand	2981
FAM49A	NM_030797	NP_110424	Coding	chr2:16665866 minus strand	2982
FAM84A	NM_145175	NP_660158	Coding	chr2:14632685 plus strand	2983
FAM98A	NM_015475	NP_056290	Coding	chr2:33599295 minus strand	2984
FANCL	NM_001114636	NP_001108108	Coding	chr2:58241380 minus strand	2985
FANCL	NM_018062	NP_060532	Coding	chr2:58241380 minus strand	2985
FAP	NM_001291807	NP_001278736	Coding	chr2:162243535 minus strand	2986
FAP	NM_004460	NP_004451	Coding	chr2:162243535 minus strand	2986
FARP2	NM_001282983	NP_001269912	Coding	chr2:241356248 plus strand	2987
FARP2	NM_001282984	NP_001269913	Coding	chr2:241356248 plus strand	2987
FARP2	NM_014808	NP_055623	Coding	chr2:241356248 plus strand	2987
FARSB	NM_005687	NP_005678	Coding	chr2:222656108 minus strand	2988

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FASTKD1	NM_001281476	NP_001268405	Coding	chr2:169573921 minus strand	2989
FASTKD1	NM_024622	NP_078898	Coding	chr2:169573921 minus strand	2989
FASTKD2	NM_001136193	NP_001129665	Coding	chr2:206765387 plus strand	2990
FASTKD2	NM_001136194	NP_001129666	Coding	chr2:206765387 plus strand	2990
FASTKD2	NM_014929	NP_055744	Coding	chr2:206765387 plus strand	2990
FBLN7	NM_001128165	NP_001121637	Coding	chr2:112138384 plus strand	2991
FBLN7	NM_153214	NP_694946	Coding	chr2:112138384 plus strand	2991
FBXO11	NM_001190274	NP_001177203	Coding	chr2:47905793 minus strand	2992
FBXO11	NM_025133	NP_079409	Coding	chr2:47888719 minus strand	2993
FBXO36	NM_174899	NP_777559	Coding	chr2:229922490 plus strand	2994
FBXO41	NM_001080410	NP_001073879	Coding	chr2:73269630 minus strand	2995
FBXO48	NM_001024680	NP_001019851	Coding	chr2:68467258 minus strand	2996
FER1L5	NM_001293083	NP_001280012	Coding	chr2:96642736 plus strand	2997
FEV	NM_017521	NP_059991	Coding	chr2:218985657 minus strand	2998
FEZ2	NM_001042548	NP_001036013	Coding	chr2:36598189 minus strand	2999
FEZ2	NM_005102	NP_005093	Coding	chr2:36598189 minus strand	2999
FHL2	NM_001039492	NP_001034581	Coding	chr2:105399118 minus strand	3000
FHL2	NM_001450	NP_001441	Coding	chr2:105399224 minus strand	3001
FHL2	NM_201555	NP_963849	Coding	chr2:105399224 minus strand	3001
FHL2	NM_201557	NP_963851	Coding	chr2:105438773 minus strand	3002
FIGLA	NM_001004311	NP_001004311	Coding	chr2:70790643 minus strand	3003
FIGN	NM_018086	NP_060556	Coding	chr2:163736003 minus strand	3004
FKBP1B	NM_004116	NP_004107	Coding	chr2:24049713 plus strand	3005
FKBP1B	NM_054033	NP_473374	Coding	chr2:24049713 plus strand	3005
FKBP7	NM_001135212	NP_001128684	Coding	chr2:178478628 minus strand	3006
FKBP7	NM_181342	NP_851939	Coding	chr2:178478628 minus strand	3006
FMNL2	NM_052905	NP_443137	Coding	chr2:152335236 plus strand	3007
FN1	NM_002026	NP_002017	Coding	chr2:215436068 minus strand	3008

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FN1	NM_054034	NP_473375	Coding	chr2:215436068 minus strand	3008
FN1	NM_212474	NP_997639	Coding	chr2:215436068 minus strand	3008
FN1	NM_212476	NP_997641	Coding	chr2:215436068 minus strand	3008
FN1	NM_212478	NP_997643	Coding	chr2:215436068 minus strand	3008
FN1	NM_212482	NP_997647	Coding	chr2:215436068 minus strand	3008
FNDC4	NM_022823	NP_073734	Coding	chr2:27495259 minus strand	3009
FOSL2	NM_005253	NP_005244	Coding	chr2:28392911 plus strand	3010
FOXD4L1	NM_012184	NP_036316	Coding	chr2:113499083 plus strand	3011
FOXI3	NM_001135649	NP_001129121	Coding	chr2:88452535 minus strand	3012
FOXN2	NM_002158	NP_002149	Coding	chr2:48314655 plus strand	3013
FRZB	NM_001463	NP_001454	Coding	chr2:182866770 minus strand	3014
FSHR	NM_000145	NP_000136	Coding	chr2:49154527 minus strand	3015
FSHR	NM_181446	NP_852111	Coding	chr2:49154527 minus strand	3015
FSIP2	NM_173651	NP_775922	Coding	chr2:185738627 plus strand	3016
FZD5	NM_003468	NP_003459	Coding	chr2:207769419 minus strand	3017
FZD7	NM_003507	NP_003498	Coding	chr2:202034586 plus strand	3018
G6PC2	NM_001081686	NP_001075155	Coding	chr2:168901239 plus strand	3019
G6PC2	NM_021176	NP_066999	Coding	chr2:168901239 plus strand	3019
GAD1	NM_000817	NP_000808	Coding	chr2:170816689 plus strand	3020
GAD1	NM_013445	NP_038473	Coding	chr2:170816689 plus strand	3020
GAL3ST2	NM_022134	NP_071417	Coding	chr2:241776824 plus strand	3021
GALM	NM_138801	NP_620156	Coding	chr2:38665909 plus strand	3022
GALNT13	NM_001301627	NP_001288556	Coding	chr2:153944393 plus strand	3023
GALNT13	NM_052917	NP_443149	Coding	chr2:153871897 plus strand	3024
GALNT14	NM_001253826	NP_001240755	Coding	chr2:31138726 minus strand	3025
GALNT14	NM_001253827	NP_001240756	Coding	chr2:31129640 minus strand	3026
GALNT14	NM_024572	NP_078848	Coding	chr2:31138726 minus strand	3025
GALNT3	NM_004482	NP_004473	Coding	chr2:165794293 minus strand	3027

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GALNT5	NM_014568	NP_055383	Coding	chr2:157257827 plus strand	3028
GAREML	NM_001168241	NP_001161713	Coding	chr2:26173090 plus strand	3029
GAREML	NM_001191033	NP_001177962	Coding	chr2:26180715 plus strand	3030
GBX2	NM_001301687	NP_001288616	Coding	chr2:236168009 minus strand	3031
GBX2	NM_001485	NP_001476	Coding	chr2:236168009 minus strand	3031
GCA	NM_012198	NP_036330	Coding	chr2:162344072 plus strand	3032
GCC2	NM_181453	NP_852118	Coding	chr2:108449120 plus strand	3033
GCFC2	NM_001201334	NP_001188263	Coding	chr2:75710606 minus strand	3034
GCFC2	NM_001201335	NP_001188264	Coding	chr2:75710985 minus strand	3035
GCFC2	NM_003203	NP_003194	Coding	chr2:75710985 minus strand	3035
GCG	NM_002054	NP_002045	Coding	chr2:162152404 minus strand	3036
GCKR	NM_001486	NP_001477	Coding	chr2:27496838 plus strand	3037
GDF7	NM_182828	NP_878248	Coding	chr2:20666663 plus strand	3038
GEMIN6	NM_024775	NP_079051	Coding	chr2:38778184 plus strand	3039
GEN1	NM_001130009	NP_001123481	Coding	chr2:17754146 plus strand	3040
GEN1	NM_182625	NP_872431	Coding	chr2:17753909 plus strand	3041
GFPT1	NM_001244710	NP_001231639	Coding	chr2:69387254 minus strand	3042
GFPT1	NM_002056	NP_002047	Coding	chr2:69387254 minus strand	3042
GGCX	NM_000821	NP_000812	Coding	chr2:85561534 minus strand	3043
GGCX	NM_001142269	NP_001135741	Coding	chr2:85561534 minus strand	3043
GIGYF2	NM_001103146	NP_001096616	Coding	chr2:232697304 plus strand	3044
GIGYF2	NM_001103147	NP_001096617	Coding	chr2:232697304 plus strand	3044
GIGYF2	NM_001103148	NP_001096618	Coding	chr2:232697304 plus strand	3044
GIGYF2	NM_015575	NP_056390	Coding	chr2:232697304 plus strand	3044
GKN1	NM_019617	NP_062563	Coding	chr2:68974572 plus strand	3045
GKN2	NM_182536	NP_872342	Coding	chr2:68952970 minus strand	3046
GLB1L	NM_001286423	NP_001273352	Coding	chr2:219245429 minus strand	3047
GLB1L	NM_001286427	NP_001273356	Coding	chr2:219243631 minus strand	3048
GLB1L	NM_024506	NP_078782	Coding	chr2:219245429 minus strand	3047
GLI2	NM_005270	NP_005261	Coding	chr2:120797290 plus strand	3049

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GLS	NM_001256310	NP_001243239	Coding	chr2:190880820 plus strand	3050
GLS	NM_014905	NP_055720	Coding	chr2:190880820 plus strand	3050
GMCL1	NM_178439	NP_848526	Coding	chr2:69829685 plus strand	3051
GMPPA	NM_013335	NP_037467	Coding	chr2:219498864 plus strand	3052
GMPPA	NM_205847	NP_995319	Coding	chr2:219498894 plus strand	3053
GNLY	NM_001302758	NP_001289687	Coding	chr2:85694290 plus strand	3054
GNLY	NM_006433	NP_006424	Coding	chr2:85694290 plus strand	3054
GNLY	NM_012483	NP_036615	Coding	chr2:85694290 plus strand	3054
GORASP2	NM_001201428	NP_001188357	Coding	chr2:170928437 plus strand	3055
GORASP2	NM_015530	NP_056345	Coding	chr2:170928525 plus strand	3056
GPAT2	NM_207328	NP_997211	Coding	chr2:96034979 minus strand	3057
GPATCH11	NM_001278505	NP_001265434	Coding	chr2:37084450 plus strand	3058
GPATCH11	NM_174931	NP_777591	Coding	chr2:37084450 plus strand	3058
GPBAR1	NM_001077191	NP_001070659	Coding	chr2:218261014 plus strand	3059
GPBAR1	NM_001077194	NP_001070662	Coding	chr2:218261014 plus strand	3059
GPBAR1	NM_170699	NP_733800	Coding	chr2:218261014 plus strand	3059
GPC1	NM_002081	NP_002072	Coding	chr2:240435697 plus strand	3060
GPD2	NM_000408	NP_000399	Coding	chr2:156436387 plus strand	3061
GPD2	NM_001083112	NP_001076581	Coding	chr2:156435452 plus strand	3062
GPN1	NM_001145047	NP_001138519	Coding	chr2:27628647 plus strand	3063
GPN1	NM_001145048	NP_001138520	Coding	chr2:27628647 plus strand	3063
GPN1	NM_001145049	NP_001138521	Coding	chr2:27628647 plus strand	3063
GPN1	NM_007266	NP_009197	Coding	chr2:27628995 plus strand	3064
GPR1	NM_001098199	NP_001091669	Coding	chr2:206218047 minus strand	3065
GPR1	NM_001261452	NP_001248381	Coding	chr2:206218047 minus strand	3065
GPR1	NM_001261453	NP_001248382	Coding	chr2:206218047 minus strand	3065
GPR1	NM_001261454	NP_001248383	Coding	chr2:206213628 minus strand	3066
GPR1	NM_001261455	NP_001248384	Coding	chr2:206213628 minus strand	3066
GPR1	NM_005279	NP_005270	Coding	chr2:206218047 minus strand	3065
GPR113	NM_001145168	NP_001138640	Coding	chr2:26319049 minus strand	3067
GPR113	NM_001145169	NP_001138641	Coding	chr2:26319102 minus	3068

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				strand	
GPR113	NM_153835	NP_722577	Coding	chr2:26346817 minus strand	3069
GPR148	NM_207364	NP_997247	Coding	chr2:130729069 plus strand	3070
GPR155	NM_001033045	NP_001028217	Coding	chr2:174487088 minus strand	3071
GPR155	NM_001267050	NP_001253979	Coding	chr2:174487088 minus strand	3071
GPR155	NM_001267051	NP_001253980	Coding	chr2:174487088 minus strand	3071
GPR155	NM_152529	NP_689742	Coding	chr2:174487088 minus strand	3071
GPR17	NM_001161415	NP_001154887	Coding	chr2:127645863 plus strand	3072
GPR17	NM_001161416	NP_001154888	Coding	chr2:127645863 plus strand	3072
GPR17	NM_001161417	NP_001154889	Coding	chr2:127645863 plus strand	3072
GPR17	NM_005291	NP_005282	Coding	chr2:127645863 plus strand	3072
GPR35	NM_001195381	NP_001182310	Coding	chr2:240605407 plus strand	3073
GPR35	NM_001195382	NP_001182311	Coding	chr2:240605407 plus strand	3073
GPR35	NM_005301	NP_005292	Coding	chr2:240625244 plus strand	3074
GPR39	NM_001508	NP_001499	Coding	chr2:132416573 plus strand	3075
GPR45	NM_007227	NP_009158	Coding	chr2:105241742 plus strand	3076
GPR55	NM_005683	NP_005674	Coding	chr2:230925226 minus strand	3077
GPR75	NM_006794	NP_006785	Coding	chr2:53860033 minus strand	3078
GPR75-ASB3	NM_001164165	NP_001157637	Coding	chr2:53860033 minus strand	3078
GRB14	NM_004490	NP_004481	Coding	chr2:164621850 minus strand	3079
GREB1	NM_014668	NP_055483	Coding	chr2:11534115 plus strand	3080
GREB1	NM_033090	NP_149081	Coding	chr2:11542724 plus strand	3081
GREB1	NM_148903	NP_683701	Coding	chr2:11539953 plus strand	3082
GRHL1	NM_198182	NP_937825	Coding	chr2:9951662 plus strand	3083
GTDC1	NM_001006636	NP_001006637	Coding	chr2:144294493 minus strand	3084
GTDC1	NM_001164629	NP_001158101	Coding	chr2:144332534 minus strand	3085
GTDC1	NM_001284233	NP_001271162	Coding	chr2:144211579 minus strand	3086
GTDC1	NM_001284234	NP_001271163	Coding	chr2:144332534 minus strand	3085
GTDC1	NM_001284235	NP_001271164	Coding	chr2:144332534 minus strand	3085

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GTDC1	NM_001284238	NP_001271167	Coding	chr2:144332534 minus strand	3085
GTDC1	NM_024659	NP_078935	Coding	chr2:144237339 minus strand	3087
GTF2A1L	NM_001193487	NP_001180416	Coding	chr2:48617779 plus strand	3088
GTF2A1L	NM_006872	NP_006863	Coding	chr2:48617779 plus strand	3088
GTF3C2	NM_001035521	NP_001030598	Coding	chr2:27357034 minus strand	3089
GTF3C2	NM_001521	NP_001512	Coding	chr2:27357034 minus strand	3089
GTF3C3	NM_001206774	NP_001193703	Coding	chr2:196799768 minus strand	3090
GTF3C3	NM_012086	NP_036218	Coding	chr2:196799768 minus strand	3090
GULP1	NM_001252668	NP_001239597	Coding	chr2:188291668 plus strand	3091
GULP1	NM_001252669	NP_001239598	Coding	chr2:188291668 plus strand	3091
GULP1	NM_016315	NP_057399	Coding	chr2:188291668 plus strand	3091
GYPC	NM_001256584	NP_001243513	Coding	chr2:126655934 plus strand	3092
GYPC	NM_002101	NP_002092	Coding	chr2:126655934 plus strand	3092
GYPC	NM_016815	NP_058131	Coding	chr2:126655934 plus strand	3092
HAAO	NM_012205	NP_036337	Coding	chr2:42792611 minus strand	3093
HADHA	NM_000182	NP_000173	Coding	chr2:26244726 minus strand	3094
HADHB	NM_000183	NP_000174	Coding	chr2:26244747 plus strand	3095
HADHB	NM_001281512	NP_001268441	Coding	chr2:26244747 plus strand	3095
HADHB	NM_001281513	NP_001268442	Coding	chr2:26244747 plus strand	3095
HAT1	NM_003642	NP_003633	Coding	chr2:171922424 plus strand	3096
HDAC4	NM_006037	NP_006028	Coding	chr2:239400949 minus strand	3097
HDLBP	NM_001243900	NP_001230829	Coding	chr2:241272831 minus strand	3098
HDLBP	NM_005336	NP_005327	Coding	chr2:241315700 minus strand	3099
HDLBP	NM_203346	NP_976221	Coding	chr2:241272831 minus strand	3098
HEATR5B	NM_019024	NP_061897	Coding	chr2:37084342 minus strand	3100
HECW2	NM_020760	NP_065811	Coding	chr2:196592611 minus strand	3101
HES6	NM_001142853	NP_001136325	Coding	chr2:238240124 minus strand	3102
HES6	NM_001282434	NP_001269363	Coding	chr2:238240124 minus strand	3102
HES6	NM_018645	NP_061115	Coding	chr2:238240124 minus strand	3102

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HIBCH	NM_014362	NP_055177	Coding	chr2:190320045 minus strand	3103
HIBCH	NM_198047	NP_932164	Coding	chr2:190320045 minus strand	3103
HJURP	NM_001282962	NP_001269891	Coding	chr2:233854566 minus strand	3104
HJURP	NM_001282963	NP_001269892	Coding	chr2:233854566 minus strand	3104
HJURP	NM_018410	NP_060880	Coding	chr2:233854566 minus strand	3104
HK2	NM_000189	NP_000180	Coding	chr2:74832654 plus strand	3105
HNMT	NM_001024074	NP_001019245	Coding	chr2:137964237 plus strand	3106
HNMT	NM_001024075	NP_001019246	Coding	chr2:137964237 plus strand	3106
HNMT	NM_006895	NP_008826	Coding	chr2:137964237 plus strand	3106
HNRNPA3	NM_194247	NP_919223	Coding	chr2:177212693 plus strand	3107
HNRNPLL	NM_001142650	NP_001136122	Coding	chr2:38603036 minus strand	3108
HNRNPLL	NM_138394	NP_612403	Coding	chr2:38603036 minus strand	3108
HOXD1	NM_024501	NP_078777	Coding	chr2:176188578 plus strand	3109
HOXD10	NM_002148	NP_002139	Coding	chr2:176116763 plus strand	3110
HOXD11	NM_021192	NP_067015	Coding	chr2:176107355 plus strand	3111
HOXD12	NM_021193	NP_067016	Coding	chr2:176099801 plus strand	3112
HOXD13	NM_000523	NP_000514	Coding	chr2:176092803 plus strand	3113
HOXD3	NM_006898	NP_008829	Coding	chr2:176164076 plus strand	3114
HOXD4	NM_014621	NP_055436	Coding	chr2:176151384 plus strand	3115
HOXD8	NM_001199746	NP_001186675	Coding	chr2:176129739 plus strand	3116
HOXD8	NM_001199747	NP_001186676	Coding	chr2:176129693 plus strand	3117
HOXD8	NM_019558	NP_062458	Coding	chr2:176129739 plus strand	3116
HOXD9	NM_014213	NP_055028	Coding	chr2:176122684 plus strand	3118
HPCAL1	NM_001258357	NP_001245286	Coding	chr2:10330162 plus strand	3119
HPCAL1	NM_001258358	NP_001245287	Coding	chr2:10368677 plus strand	3120
HPCAL1	NM_001258359	NP_001245288	Coding	chr2:10368763 plus strand	3121
HPCAL1	NM_002149	NP_002140	Coding	chr2:10302903 plus strand	3122
HPCAL1	NM_134421	NP_602293	Coding	chr2:10303699 plus strand	3123
HS1BP3	NM_022460	NP_071905	Coding	chr2:20651104 minus strand	3124

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HS6ST1	NM_004807	NP_004798	Coding	chr2:128318597 minus strand	3125
HSPD1	NM_002156	NP_002147	Coding	chr2:197499916 minus strand	3126
HSPD1	NM_199440	NP_955472	Coding	chr2:197500274 minus strand	3127
HSPE1	NM_002157	NP_002148	Coding	chr2:197499996 plus strand	3128
HSPE1-MOB4	NM_001202485	NP_001189414	Coding	chr2:197499996 plus strand	3128
HTR2B	NM_000867	NP_000858	Coding	chr2:231125110 minus strand	3129
HTRA2	NM_013247	NP_037379	Coding	chr2:74529404 plus strand	3130
HTRA2	NM_145074	NP_659540	Coding	chr2:74529404 plus strand	3130
IAH1	NM_001039613	NP_001034702	Coding	chr2:9474540 plus strand	3131
ICA1L	NM_001288622	NP_001275551	Coding	chr2:202871985 minus strand	3132
ICA1L	NM_001288623	NP_001275552	Coding	chr2:202871472 minus strand	3133
ICA1L	NM_001288624	NP_001275553	Coding	chr2:202829234 minus strand	3134
ICA1L	NM_138468	NP_612477	Coding	chr2:202871985 minus strand	3132
ICOS	NM_012092	NP_036224	Coding	chr2:203936747 plus strand	3135
ID2	NM_002166	NP_002157	Coding	chr2:8681982 plus strand	3136
IDH1	NM_001282386	NP_001269315	Coding	chr2:208254458 minus strand	3137
IDH1	NM_001282387	NP_001269316	Coding	chr2:208254303 minus strand	3138
IDH1	NM_005896	NP_005887	Coding	chr2:208255143 minus strand	3139
IFIH1	NM_022168	NP_071451	Coding	chr2:162318708 minus strand	3140
IFT172	NM_015662	NP_056477	Coding	chr2:27489811 minus strand	3141
IGFBP2	NM_000597	NP_000588	Coding	chr2:216633403 plus strand	3142
IGFBP5	NM_000599	NP_000590	Coding	chr2:216695549 minus strand	3143
IHH	NM_002181	NP_002172	Coding	chr2:219060516 minus strand	3144
IKZF2	NM_001079526	NP_001072994	Coding	chr2:213151609 minus strand	3145
IKZF2	NM_016260	NP_057344	Coding	chr2:213150334 minus strand	3146
IL18R1	NM_001282399	NP_001269328	Coding	chr2:102356282 plus strand	3147
IL18R1	NM_003855	NP_003846	Coding	chr2:102356282 plus strand	3147
IL18RAP	NM_003853	NP_003844	Coding	chr2:102418789 plus strand	3148
IL1A	NM_000575	NP_000566	Coding	chr2:112785394 minus	3149

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				strand	
IL1B	NM_000576	NP_000567	Coding	chr2:112836779 minus strand	3150
IL1F10	NM_032556	NP_115945	Coding	chr2:113072317 plus strand	3151
IL1F10	NM_173161	NP_775184	Coding	chr2:113067969 plus strand	3152
IL1R1	NM_000877	NP_000868	Coding	chr2:102142775 plus strand	3153
IL1R1	NM_001288706	NP_001275635	Coding	chr2:102070375 plus strand	3154
IL1R2	NM_001261419	NP_001248348	Coding	chr2:101991843 plus strand	3155
IL1R2	NM_004633	NP_004624	Coding	chr2:101991843 plus strand	3155
IL1RL1	NM_001282408	NP_001269337	Coding	chr2:102311501 plus strand	3156
IL1RL1	NM_003856	NP_003847	Coding	chr2:102337249 plus strand	3157
IL1RL1	NM_016232	NP_057316	Coding	chr2:102311501 plus strand	3156
IL1RL2	NM_003854	NP_003845	Coding	chr2:102186972 plus strand	3158
IL1RN	NM_000577	NP_000568	Coding	chr2:113117892 plus strand	3159
IL1RN	NM_173841	NP_776213	Coding	chr2:113117892 plus strand	3159
IL1RN	NM_173842	NP_776214	Coding	chr2:113127560 plus strand	3160
IL1RN	NM_173843	NP_776215	Coding	chr2:113117892 plus strand	3159
IL36A	NM_014440	NP_055255	Coding	chr2:113005871 plus strand	3161
IL36B	NM_014438	NP_055253	Coding	chr2:113052867 minus strand	3162
IL36B	NM_173178	NP_775270	Coding	chr2:113052867 minus strand	3162
IL36G	NM_001278568	NP_001265497	Coding	chr2:112978018 plus strand	3163
IL36G	NM_019618	NP_062564	Coding	chr2:112978018 plus strand	3163
IL36RN	NM_012275	NP_036407	Coding	chr2:113059107 plus strand	3164
IL36RN	NM_173170	NP_775262	Coding	chr2:113058637 plus strand	3165
IL37	NM_014439	NP_055254	Coding	chr2:112912970 plus strand	3166
IL37	NM_173202	NP_775294	Coding	chr2:112912970 plus strand	3166
IL37	NM_173203	NP_775295	Coding	chr2:112912970 plus strand	3166
IL37	NM_173204	NP_775296	Coding	chr2:112912970 plus strand	3166
IL37	NM_173205	NP_775297	Coding	chr2:112915192 plus	3167

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				strand	
ILKAP	NM_030768	NP_110395	Coding	chr2:238203683 minus strand	3168
IMMT	NM_001100169	NP_001093639	Coding	chr2:86195770 minus strand	3169
IMMT	NM_001100170	NP_001093640	Coding	chr2:86195770 minus strand	3169
IMMT	NM_006839	NP_006830	Coding	chr2:86195770 minus strand	3169
IMP4	NM_033416	NP_219484	Coding	chr2:130342915 plus strand	3170
ING5	NM_032329	NP_115705	Coding	chr2:241702040 plus strand	3171
INHA	NM_002191	NP_002182	Coding	chr2:219572231 plus strand	3172
INHBB	NM_002193	NP_002184	Coding	chr2:120346142 plus strand	3173
INO80B	NM_031288	NP_112578	Coding	chr2:74455022 plus strand	3174
INO80D	NM_017759	NP_060229	Coding	chr2:206086182 minus strand	3175
INPP1	NM_001128928	NP_001122400	Coding	chr2:190343469 plus strand	3176
INPP1	NM_002194	NP_002185	Coding	chr2:190343469 plus strand	3176
INPP4A	NM_001134224	NP_001127696	Coding	chr2:98444857 plus strand	3177
INPP4A	NM_001134225	NP_001127697	Coding	chr2:98444857 plus strand	3177
INPP4A	NM_001566	NP_001557	Coding	chr2:98444857 plus strand	3177
INPP4A	NM_004027	NP_004018	Coding	chr2:98444857 plus strand	3177
INPP5D	NM_001017915	NP_001017915	Coding	chr2:233059966 plus strand	3178
INPP5D	NM_005541	NP_005532	Coding	chr2:233059966 plus strand	3178
INSIG2	NM_016133	NP_057217	Coding	chr2:118088473 plus strand	3179
IQCA1	NM_001270584	NP_001257513	Coding	chr2:236507535 minus strand	3180
IQCA1	NM_001270585	NP_001257514	Coding	chr2:236503697 minus strand	3181
IQCA1	NM_024726	NP_079002	Coding	chr2:236507535 minus strand	3180
IRS1	NM_005544	NP_005535	Coding	chr2:226798790 minus strand	3182
ITGA4	NM_000885	NP_000876	Coding	chr2:181456891 plus strand	3183
ITGA6	NM_000210	NP_000201	Coding	chr2:172427585 plus strand	3184
ITGA6	NM_001079818	NP_001073286	Coding	chr2:172427585 plus strand	3184
ITGAV	NM_001144999	NP_001138471	Coding	chr2:186600204 plus strand	3185
ITGAV	NM_001145000	NP_001138472	Coding	chr2:186590062 plus strand	3186

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ITGAV	NM_002210	NP_002201	Coding	chr2:186590062 plus strand	3186
ITGB1BP1	NM_004763	NP_004754	Coding	chr2:9423514 minus strand	3187
ITGB1BP1	NM_022334	NP_071729	Coding	chr2:9423514 minus strand	3187
ITGB6	NM_000888	NP_000879	Coding	chr2:160200313 minus strand	3188
ITGB6	NM_001282353	NP_001269282	Coding	chr2:160200313 minus strand	3188
ITGB6	NM_001282354	NP_001269283	Coding	chr2:160200313 minus strand	3188
ITGB6	NM_001282355	NP_001269284	Coding	chr2:160200313 minus strand	3188
ITGB6	NM_001282388	NP_001269317	Coding	chr2:160200313 minus strand	3188
ITGB6	NM_001282389	NP_001269318	Coding	chr2:160200313 minus strand	3188
ITGB6	NM_001282390	NP_001269319	Coding	chr2:160200313 minus strand	3188
ITM2C	NM_001012514	NP_001012532	Coding	chr2:230864894 plus strand	3189
ITM2C	NM_001012516	NP_001012534	Coding	chr2:230864949 plus strand	3190
ITM2C	NM_001287240	NP_001274169	Coding	chr2:230864597 plus strand	3191
ITM2C	NM_001287241	NP_001274170	Coding	chr2:230864597 plus strand	3191
ITM2C	NM_030926	NP_112188	Coding	chr2:230864894 plus strand	3189
ITPRIPL1	NM_001008949	NP_001008949	Coding	chr2:96325323 plus strand	3192
ITPRIPL1	NM_001163523	NP_001156995	Coding	chr2:96325330 plus strand	3193
ITPRIPL1	NM_001163524	NP_001156996	Coding	chr2:96326206 plus strand	3194
ITPRIPL1	NM_178495	NP_848590	Coding	chr2:96326196 plus strand	3195
ITSN2	NM_006277	NP_006268	Coding	chr2:24360528 minus strand	3196
ITSN2	NM_019595	NP_062541	Coding	chr2:24360528 minus strand	3196
ITSN2	NM_147152	NP_671494	Coding	chr2:24360528 minus strand	3196
IWS1	NM_017969	NP_060439	Coding	chr2:127526511 minus strand	3197
KANSL1L	NM_152519	NP_689732	Coding	chr2:210171327 minus strand	3198
KANSL3	NM_001115016	NP_001108488	Coding	chr2:96638379 minus strand	3199
KCMF1	NM_020122	NP_064507	Coding	chr2:84971107 plus strand	3200
KCNE4	NM_080671	NP_542402	Coding	chr2:223051929 plus strand	3201
KCNF1	NM_002236	NP_002227	Coding	chr2:10911936 plus strand	3202
KCNG3	NM_133329	NP_579875	Coding	chr2:42494097 minus strand	3203
KCNG3	NM_172344	NP_758847	Coding	chr2:42494097 minus strand	3203

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KCNH7	NM_033272	NP_150375	Coding	chr2:162838747 minus strand	3204
KCNH7	NM_173162	NP_775185	Coding	chr2:162838747 minus strand	3204
KCNIP3	NM_001034914	NP_001030086	Coding	chr2:95347019 plus strand	3205
KCNIP3	NM_013434	NP_038462	Coding	chr2:95297323 plus strand	3206
KCNJ13	NM_001172416	NP_001165887	Coding	chr2:232776565 minus strand	3207
KCNJ13	NM_001172417	NP_001165888	Coding	chr2:232776565 minus strand	3207
KCNJ13	NM_002242	NP_002233	Coding	chr2:232776565 minus strand	3207
KCNJ3	NM_001260508	NP_001247437	Coding	chr2:154698580 plus strand	3208
KCNJ3	NM_001260509	NP_001247438	Coding	chr2:154698580 plus strand	3208
KCNJ3	NM_001260510	NP_001247439	Coding	chr2:154698580 plus strand	3208
KCNJ3	NM_002239	NP_002230	Coding	chr2:154698580 plus strand	3208
KCNK12	NM_022055	NP_071338	Coding	chr2:47570331 minus strand	3209
KCNK3	NM_002246	NP_002237	Coding	chr2:26692712 plus strand	3210
KCNS3	NM_001282428	NP_001269357	Coding	chr2:17877846 plus strand	3211
KCNS3	NM_002252	NP_002243	Coding	chr2:17878656 plus strand	3212
KCTD18	NM_152387	NP_689600	Coding	chr2:200510069 minus strand	3213
KDM3A	NM_001146688	NP_001140160	Coding	chr2:86441460 plus strand	3214
KDM3A	NM_018433	NP_060903	Coding	chr2:86441147 plus strand	3215
KHK	NM_000221	NP_000212	Coding	chr2:27086742 plus strand	3216
KHK	NM_006488	NP_006479	Coding	chr2:27086742 plus strand	3216
KIAA1211L	NM_207362	NP_997245	Coding	chr2:98936221 minus strand	3217
KIAA1715	NM_030650	NP_085153	Coding	chr2:176002290 minus strand	3218
KIAA1841	NM_001129993	NP_001123465	Coding	chr2:61065870 plus strand	3219
KIAA1841	NM_032506	NP_115895	Coding	chr2:61066227 plus strand	3220
KIAA2012	NM_001277372	NP_001264301	Coding	chr2:202073254 plus strand	3221
KIDINS220	NM_020738	NP_065789	Coding	chr2:8837625 minus strand	3222
KIF1A	NM_001244008	NP_001230937	Coding	chr2:240820308 minus strand	3223
KIF1A	NM_004321	NP_004312	Coding	chr2:240797812 minus strand	3224
KIF3C	NM_002254	NP_002245	Coding	chr2:25982574 minus strand	3225
KIF5C	NM_004522	NP_004513	Coding	chr2:148875222 plus strand	3226
KLF11	NM_001177716	NP_001171187	Coding	chr2:10043828 plus strand	3227
KLF11	NM_001177718	NP_001171189	Coding	chr2:10044244 plus strand	3228

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KLF11	NM_003597	NP_003588	Coding	chr2:10043554 plus strand	3229
KLF7	NM_001270942	NP_001257871	Coding	chr2:207166856 minus strand	3230
KLF7	NM_001270943	NP_001257872	Coding	chr2:207167246 minus strand	3231
KLF7	NM_001270944	NP_001257873	Coding	chr2:207134137 minus strand	3232
KLF7	NM_003709	NP_003700	Coding	chr2:207166016 minus strand	3233
KLHL23	NM_144711	NP_653312	Coding	chr2:169733845 plus strand	3234
KLHL29	NM_052920	NP_443152	Coding	chr2:23385426 plus strand	3235
KLHL30	NM_198582	NP_940984	Coding	chr2:238138721 plus strand	3236
KLHL41	NM_006063	NP_006054	Coding	chr2:169509701 plus strand	3237
KRCC1	NM_016618	NP_057702	Coding	chr2:88055729 minus strand	3238
KRTCAP3	NM_001168364	NP_001161836	Coding	chr2:27442365 plus strand	3239
KRTCAP3	NM_173853	NP_776252	Coding	chr2:27442365 plus strand	3239
KYNU	NM_001032998	NP_001028170	Coding	chr2:142877625 plus strand	3240
KYNU	NM_001199241	NP_001186170	Coding	chr2:142877625 plus strand	3240
KYNU	NM_003937	NP_003928	Coding	chr2:142877625 plus strand	3240
LANCL1	NM_001136574	NP_001130046	Coding	chr2:210476705 minus strand	3241
LANCL1	NM_001136575	NP_001130047	Coding	chr2:210476775 minus strand	3242
LANCL1	NM_006055	NP_006046	Coding	chr2:210476767 minus strand	3243
LAPTM4A	NM_014713	NP_055528	Coding	chr2:20052028 minus strand	3244
LBH	NM_030915	NP_112177	Coding	chr2:30231530 plus strand	3245
LBX2	NM_001009812	NP_001009812	Coding	chr2:74503316 minus strand	3246
LBX2	NM_001282430	NP_001269359	Coding	chr2:74499558 minus strand	3247
LCLAT1	NM_001002257	NP_001002257	Coding	chr2:30447270 plus strand	3248
LCLAT1	NM_182551	NP_872357	Coding	chr2:30447256 plus strand	3249
LCT	NM_002299	NP_002290	Coding	chr2:135837180 minus strand	3250
LGALSL	NM_014181	NP_054900	Coding	chr2:64454192 plus strand	3251
LHCGR	NM_000233	NP_000224	Coding	chr2:48755741 minus strand	3252
LIMS1	NM_001193482	NP_001180411	Coding	chr2:108607160 plus strand	3253
LIMS1	NM_001193483	NP_001180412	Coding	chr2:108534354 plus strand	3254
LIMS1	NM_001193484	NP_001180413	Coding	chr2:108621245 plus strand	3255

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LIMS1	NM_001193485	NP_001180414	Coding	chr2:108654811 plus strand	3256
LIMS1	NM_001193488	NP_001180417	Coding	chr2:108588465 plus strand	3257
LIMS1	NM_004987	NP_004978	Coding	chr2:108588300 plus strand	3258
LIMS2	NM_001136037	NP_001129509	Coding	chr2:127675190 minus strand	3259
LIMS2	NM_001161403	NP_001154875	Coding	chr2:127675190 minus strand	3259
LIMS2	NM_001161404	NP_001154876	Coding	chr2:127681786 minus strand	3260
LIMS2	NM_001256542	NP_001243471	Coding	chr2:127648253 minus strand	3261
LIMS2	NM_017980	NP_060450	Coding	chr2:127664593 minus strand	3262
LIMS3	NM_033514	NP_277049	Coding	chr2:109898431 plus strand	3263
LIMS3	NM_033514	NP_277049	Coding	chr2:110473075 minus strand	3264
LIMS3L	NM_001205288	NP_001192217	Coding	chr2:109898431 plus strand	3263
LIMS3L	NM_001205288	NP_001192217	Coding	chr2:110473075 minus strand	3264
LIPT1	NM_001204830	NP_001191759	Coding	chr2:99155073 plus strand	3265
LIPT1	NM_015929	NP_057013	Coding	chr2:99154954 plus strand	3266
LIPT1	NM_145197	NP_660198	Coding	chr2:99154954 plus strand	3266
LIPT1	NM_145198	NP_660199	Coding	chr2:99154954 plus strand	3266
LIPT1	NM_145199	NP_660200	Coding	chr2:99154954 plus strand	3266
LMAN2L	NM_001142292	NP_001135764	Coding	chr2:96740076 minus strand	3267
LMAN2L	NM_030805	NP_110432	Coding	chr2:96740076 minus strand	3267
LOC100130451	NM_001242575	NP_001229504	Coding	chr2:213284205 minus strand	3268
LOC100144595	NM_001256368	NP_001243297	Coding	chr2:154457438 minus strand	3269
LOC100996693	NM_001286811	NP_001273740	Coding	chr2:219496354 plus strand	3270
LOC200726	NM_001102659	NP_001096129	Coding	chr2:206642417 plus strand	3271
LOC653602	NM_001291410	NP_001278339	Coding	chr2:14635090 plus strand	3272
LOC728819	NM_001101330	NP_001094800	Coding	chr2:43676322 minus strand	3273
LONRF2	NM_198461	NP_940863	Coding	chr2:100322733 minus strand	3274
LOXL3	NM_001289164	NP_001276093	Coding	chr2:74553964 minus strand	3275
LOXL3	NM_001289165	NP_001276094	Coding	chr2:74549663 minus strand	3276
LOXL3	NM_032603	NP_115992	Coding	chr2:74553964 minus strand	3275

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LPIN1	NM_001261427	NP_001248356	Coding	chr2:11724333 plus strand	3277
LPIN1	NM_001261428	NP_001248357	Coding	chr2:11677578 plus strand	3278
LPIN1	NM_001261429	NP_001248358	Coding	chr2:11724333 plus strand	3277
LPIN1	NM_145693	NP_663731	Coding	chr2:11746595 plus strand	3279
LRP1B	NM_018557	NP_061027	Coding	chr2:142131701 minus strand	3280
LRP2	NM_004525	NP_004516	Coding	chr2:169362612 minus strand	3281
LRPPRC	NM_133259	NP_573566	Coding	chr2:43996005 minus strand	3282
LRRFIP1	NM_001137550	NP_001131022	Coding	chr2:237627580 plus strand	3283
LRRFIP1	NM_001137551	NP_001131023	Coding	chr2:237692163 plus strand	3284
LRRFIP1	NM_001137552	NP_001131024	Coding	chr2:237692163 plus strand	3284
LRRFIP1	NM_001137553	NP_001131025	Coding	chr2:237692163 plus strand	3284
LRRFIP1	NM_004735	NP_004726	Coding	chr2:237692163 plus strand	3284
LRRTM1	NM_178839	NP_849161	Coding	chr2:80304362 minus strand	3285
LRRTM4	NM_001134745	NP_001128217	Coding	chr2:77522376 minus strand	3286
LRRTM4	NM_001282924	NP_001269853	Coding	chr2:77522376 minus strand	3286
LRRTM4	NM_001282928	NP_001269857	Coding	chr2:77522368 minus strand	3287
LRRTM4	NM_024993	NP_079269	Coding	chr2:77522376 minus strand	3286
LTBP1	NM_000627	NP_000618	Coding	chr2:33134596 plus strand	3288
LTBP1	NM_001166264	NP_001159736	Coding	chr2:33134596 plus strand	3288
LTBP1	NM_001166265	NP_001159737	Coding	chr2:33134596 plus strand	3288
LTBP1	NM_001166266	NP_001159738	Coding	chr2:33134596 plus strand	3288
LTBP1	NM_206943	NP_996826	Coding	chr2:32947301 plus strand	3289
LY75	NM_002349	NP_002340	Coding	chr2:159904756 minus strand	3290
LY75-CD302	NM_001198759	NP_001185688	Coding	chr2:159904756 minus strand	3290
LY75-CD302	NM_001198760	NP_001185689	Coding	chr2:159904756 minus strand	3290
LYG1	NM_174898	NP_777558	Coding	chr2:99301176 minus strand	3291
LYG2	NM_175735	NP_783862	Coding	chr2:99255107 minus strand	3292
LYPD1	NM_001077427	NP_001070895	Coding	chr2:132671497 minus strand	3293
LYPD1	NM_144586	NP_653187	Coding	chr2:132670908 minus strand	3294
LYPD6	NM_001195685	NP_001182614	Coding	chr2:149329984 plus strand	3295

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LYPD6	NM_194317	NP_919298	Coding	chr2:149330514 plus strand	3296
LYPD6B	NM_177964	NP_808879	Coding	chr2:149038466 plus strand	3297
M1AP	NM_001281295	NP_001268224	Coding	chr2:74648338 minus strand	3298
M1AP	NM_001281296	NP_001268225	Coding	chr2:74648338 minus strand	3298
M1AP	NM_138804	NP_620159	Coding	chr2:74648037 minus strand	3299
MAL	NM_002371	NP_002362	Coding	chr2:95025654 plus strand	3300
MAL	NM_022438	NP_071883	Coding	chr2:95025654 plus strand	3300
MAL	NM_022439	NP_071884	Coding	chr2:95025654 plus strand	3300
MAL	NM_022440	NP_071885	Coding	chr2:95025654 plus strand	3300
MALL	NM_005434	NP_005425	Coding	chr2:110116566 minus strand	3301
MAP2	NM_001039538	NP_001034627	Coding	chr2:209424046 plus strand	3302
MAP2	NM_002374	NP_002365	Coding	chr2:209579678 plus strand	3303
MAP2	NM_031845	NP_114033	Coding	chr2:209579678 plus strand	3303
MAP2	NM_031847	NP_114035	Coding	chr2:209579678 plus strand	3303
MAP3K19	NM_001018044	NP_001018054	Coding	chr2:135024678 minus strand	3304
MAP3K19	NM_001018046	NP_001018056	Coding	chr2:135024678 minus strand	3304
MAP3K19	NM_001018047	NP_001018057	Coding	chr2:135024678 minus strand	3304
MAP3K19	NM_001282883	NP_001269812	Coding	chr2:135024678 minus strand	3304
MAP3K19	NM_025052	NP_079328	Coding	chr2:135024678 minus strand	3304
MAP3K2	NM_006609	NP_006600	Coding	chr2:127343229 minus strand	3305
MAP4K3	NM_001270425	NP_001257354	Coding	chr2:39437312 minus strand	3306
MAP4K3	NM_003618	NP_003609	Coding	chr2:39437312 minus strand	3306
MAP4K4	NM_001242559	NP_001229488	Coding	chr2:101698075 plus strand	3307
MAP4K4	NM_001242560	NP_001229489	Coding	chr2:101697702 plus strand	3308
MAP4K4	NM_004834	NP_004825	Coding	chr2:101697702 plus strand	3308
MAP4K4	NM_145686	NP_663719	Coding	chr2:101697702 plus strand	3308
MAP4K4	NM_145687	NP_663720	Coding	chr2:101698075 plus strand	3307
MAPRE3	NM_012326	NP_036458	Coding	chr2:26970656 plus strand	3309
MARCH4	NM_020814	NP_065865	Coding	chr2:216372027 minus strand	3310

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MARCH7	NM_001282805	NP_001269734	Coding	chr2:159712456 plus strand	3311
MARCH7	NM_001282806	NP_001269735	Coding	chr2:159712456 plus strand	3311
MARCH7	NM_001282807	NP_001269736	Coding	chr2:159733890 plus strand	3312
MARCH7	NM_022826	NP_073737	Coding	chr2:159712456 plus strand	3311
MARCO	NM_006770	NP_006761	Coding	chr2:118942168 plus strand	3313
MARS2	NM_138395	NP_612404	Coding	chr2:197705303 plus strand	3314
MAT2A	NM_005911	NP_005902	Coding	chr2:85538977 plus strand	3315
MATN3	NM_002381	NP_002372	Coding	chr2:20012694 minus strand	3316
MBD5	NM_018328	NP_060798	Coding	chr2:148021010 plus strand	3317
MBOAT2	NM_138799	NP_620154	Coding	chr2:9003747 minus strand	3318
MCEE	NM_032601	NP_115990	Coding	chr2:71130264 minus strand	3319
MCFD2	NM_001171506	NP_001164977	Coding	chr2:46915868 minus strand	3320
MCFD2	NM_001171507	NP_001164978	Coding	chr2:46916112 minus strand	3321
MCFD2	NM_001171508	NP_001164979	Coding	chr2:46941855 minus strand	3322
MCFD2	NM_001171509	NP_001164980	Coding	chr2:46915868 minus strand	3320
MCFD2	NM_001171510	NP_001164981	Coding	chr2:46916112 minus strand	3321
MCFD2	NM_001171511	NP_001164982	Coding	chr2:46941855 minus strand	3322
MCFD2	NM_139279	NP_644808	Coding	chr2:46915868 minus strand	3320
MCM6	NM_005915	NP_005906	Coding	chr2:135876477 minus strand	3323
MDH1	NM_001199111	NP_001186040	Coding	chr2:63589150 plus strand	3324
MDH1	NM_001199112	NP_001186041	Coding	chr2:63589150 plus strand	3324
MDH1	NM_005917	NP_005908	Coding	chr2:63588608 plus strand	3325
MDH1B	NM_001039845	NP_001034934	Coding	chr2:206765549 minus strand	3326
MDH1B	NM_001282940	NP_001269869	Coding	chr2:206765549 minus strand	3326
MEIS1	NM_002398	NP_002389	Coding	chr2:66435399 plus strand	3327
MEMO1	NM_001137602	NP_001131074	Coding	chr2:32010664 minus strand	3328
MEMO1	NM_001301833	NP_001288762	Coding	chr2:32011052 minus strand	3329
MEMO1	NM_001301852	NP_001288781	Coding	chr2:32011052 minus strand	3329
MEMO1	NM_015955	NP_057039	Coding	chr2:32010664 minus strand	3328

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MERTK	NM_006343	NP_006334	Coding	chr2:111898613 plus strand	3330
METAP1D	NM_199227	NP_954697	Coding	chr2:171999896 plus strand	3331
METTL21A	NM_001127395	NP_001120867	Coding	chr2:207625249 minus strand	3332
METTL21A	NM_145280	NP_660323	Coding	chr2:207624972 minus strand	3333
METTL5	NM_001293186	NP_001280115	Coding	chr2:169824931 minus strand	3334
METTL5	NM_001293187	NP_001280116	Coding	chr2:169824931 minus strand	3334
METTL5	NM_014168	NP_054887	Coding	chr2:169824931 minus strand	3334
METTL8	NM_024770	NP_079046	Coding	chr2:171434802 minus strand	3335
MFF	NM_001277061	NP_001263990	Coding	chr2:227325150 plus strand	3336
MFF	NM_001277062	NP_001263991	Coding	chr2:227325150 plus strand	3336
MFF	NM_001277063	NP_001263992	Coding	chr2:227325150 plus strand	3336
MFF	NM_001277064	NP_001263993	Coding	chr2:227325150 plus strand	3336
MFF	NM_001277065	NP_001263994	Coding	chr2:227325150 plus strand	3336
MFF	NM_001277066	NP_001263995	Coding	chr2:227325150 plus strand	3336
MFF	NM_001277067	NP_001263996	Coding	chr2:227328677 plus strand	3337
MFF	NM_001277068	NP_001263997	Coding	chr2:227328677 plus strand	3337
MFF	NM_020194	NP_064579	Coding	chr2:227327511 plus strand	3338
MFSD2B	NM_001080473	NP_001073942	Coding	chr2:24010082 plus strand	3339
MFSD6	NM_017694	NP_060164	Coding	chr2:190408354 plus strand	3340
MFSD9	NM_032718	NP_116107	Coding	chr2:102736878 minus strand	3341
MGAT4A	NM_001160154	NP_001153626	Coding	chr2:98663473 minus strand	3342
MGAT4A	NM_012214	NP_036346	Coding	chr2:98731126 minus strand	3343
MGAT5	NM_002410	NP_002401	Coding	chr2:134254258 plus strand	3344
MITD1	NM_138798	NP_620153	Coding	chr2:99181029 minus strand	3345
MLPH	NM_001042467	NP_001035932	Coding	chr2:237487218 plus strand	3346
MLPH	NM_001281473	NP_001268402	Coding	chr2:237487218 plus strand	3346
MLPH	NM_001281474	NP_001268403	Coding	chr2:237486409 plus strand	3347
MLPH	NM_024101	NP_077006	Coding	chr2:237487218 plus	3346

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				strand	
MMADHC	NM_015702	NP_056517	Coding	chr2:149587816 minus strand	3348
MOB1A	NM_018221	NP_060691	Coding	chr2:74178868 minus strand	3349
MOB4	NM_001100819	NP_001094289	Coding	chr2:197516042 plus strand	3350
MOB4	NM_001204094	NP_001191023	Coding	chr2:197516297 plus strand	3351
MOB4	NM_015387	NP_056202	Coding	chr2:197516042 plus strand	3350
MOB4	NM_199482	NP_955776	Coding	chr2:197515570 plus strand	3352
MOGAT1	NM_058165	NP_477513	Coding	chr2:222671737 plus strand	3353
MOGS	NM_001146158	NP_001139630	Coding	chr2:74465410 minus strand	3354
MOGS	NM_006302	NP_006293	Coding	chr2:74465410 minus strand	3354
MORN2	NM_001145450	NP_001138922	Coding	chr2:38875961 plus strand	3355
MPHOSPH10	NM_005791	NP_005782	Coding	chr2:71130313 plus strand	3356
MPP4	NM_033066	NP_149055	Coding	chr2:201698694 minus strand	3357
MPV17	NM_002437	NP_002428	Coding	chr2:27323102 minus strand	3358
MREG	NM_018000	NP_060470	Coding	chr2:216013623 minus strand	3359
MROH2A	NM_001287395	NP_001274324	Coding	chr2:233775678 plus strand	3360
MRPL19	NM_014763	NP_055578	Coding	chr2:75646782 plus strand	3361
MRPL30	NM_145212	NP_660213	Coding	chr2:99181078 plus strand	3362
MRPL33	NM_004891	NP_004882	Coding	chr2:27771716 plus strand	3363
MRPL33	NM_145330	NP_663303	Coding	chr2:27771716 plus strand	3363
MRPL35	NM_016622	NP_057706	Coding	chr2:86199432 plus strand	3364
MRPL35	NM_145644	NP_663619	Coding	chr2:86199432 plus strand	3364
MRPL44	NM_022915	NP_075066	Coding	chr2:223957403 plus strand	3365
MRPL53	NM_053050	NP_444278	Coding	chr2:74472815 minus strand	3366
MRPS5	NM_031902	NP_114108	Coding	chr2:95122009 minus strand	3367
MRPS9	NM_182640	NP_872578	Coding	chr2:105038024 plus strand	3368
MSGN1	NM_001105569	NP_001099039	Coding	chr2:17816518 plus strand	3369
MSH2	NM_000251	NP_000242	Coding	chr2:47403066 plus strand	3370
MSH2	NM_001258281	NP_001245210	Coding	chr2:47403066 plus strand	3370
MSH6	NM_000179	NP_000170	Coding	chr2:47783081 plus strand	3371
MSH6	NM_001281492	NP_001268421	Coding	chr2:47783081 plus strand	3371
MSH6	NM_001281493	NP_001268422	Coding	chr2:47783081 plus strand	3371
MSH6	NM_001281494	NP_001268423	Coding	chr2:47783954 plus strand	3372

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MSTN	NM_005259	NP_005250	Coding	chr2:190062729 minus strand	3373
MTA3	NM_001282755	NP_001269684	Coding	chr2:42494568 plus strand	3374
MTA3	NM_001282756	NP_001269685	Coding	chr2:42568044 plus strand	3375
MTA3	NM_020744	NP_065795	Coding	chr2:42568516 plus strand	3376
MTERF4	NM_182501	NP_872307	Coding	chr2:241102332 minus strand	3377
MTHFD2	NM_006636	NP_006627	Coding	chr2:74198562 plus strand	3378
MTIF2	NM_001005369	NP_001005369	Coding	chr2:55269179 minus strand	3379
MTIF2	NM_002453	NP_002444	Coding	chr2:55269248 minus strand	3380
MTX2	NM_006554	NP_006545	Coding	chr2:176269394 plus strand	3381
MXD1	NM_001202513	NP_001189442	Coding	chr2:69915040 plus strand	3382
MXD1	NM_001202514	NP_001189443	Coding	chr2:69915040 plus strand	3382
MXD1	NM_002357	NP_002348	Coding	chr2:69915040 plus strand	3382
MYCN	NM_001293228	NP_001280157	Coding	chr2:15940437 plus strand	3383
MYCN	NM_001293231	NP_001280160	Coding	chr2:15940437 plus strand	3383
MYCN	NM_001293233	NP_001280162	Coding	chr2:15940437 plus strand	3383
MYCN	NM_005378	NP_005369	Coding	chr2:15940437 plus strand	3383
MYEOV2	NM_001163424	NP_001156896	Coding	chr2:240136330 minus strand	3384
MYEOV2	NM_138336	NP_612209	Coding	chr2:240136347 minus strand	3385
MYL1	NM_079420	NP_524144	Coding	chr2:210315171 minus strand	3386
MYL1	NM_079422	NP_524146	Coding	chr2:210303615 minus strand	3387
MYO1B	NM_001130158	NP_001123630	Coding	chr2:191245380 plus strand	3388
MYO1B	NM_001161819	NP_001155291	Coding	chr2:191245527 plus strand	3389
MYO1B	NM_012223	NP_036355	Coding	chr2:191245380 plus strand	3388
MYO3B	NM_001083615	NP_001077084	Coding	chr2:170178144 plus strand	3390
MYO3B	NM_138995	NP_620482	Coding	chr2:170178144 plus strand	3390
MYO7B	NM_001080527	NP_001073996	Coding	chr2:127535801 plus strand	3391
MYT1L	NM_015025	NP_055840	Coding	chr2:2331273 minus strand	3392
MZT2A	NM_001085365	NP_001078834	Coding	chr2:131492491 minus strand	3393
MZT2B	NM_025029	NP_079305	Coding	chr2:130181927 plus strand	3394
NAB1	NM_005966	NP_005957	Coding	chr2:190649121 plus strand	3395
NABP1	NM_001031716	NP_001026886	Coding	chr2:191678134 plus strand	3396

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NABP1	NM_001254736	NP_001241665	Coding	chr2:191678071 plus strand	3397
NAGK	NM_017567	NP_060037	Coding	chr2:71068277 plus strand	3398
NAT8	NM_003960	NP_003951	Coding	chr2:73642410 minus strand	3399
NAT8B	NM_016347	NP_057431	Coding	chr2:73701340 minus strand	3400
NBAS	NM_015909	NP_056993	Coding	chr2:15561348 minus strand	3401
NBEAL1	NM_001114132	NP_001107604	Coding	chr2:203014878 plus strand	3402
NCAPH	NM_001281710	NP_001268639	Coding	chr2:96335740 plus strand	3403
NCAPH	NM_001281711	NP_001268640	Coding	chr2:96335740 plus strand	3403
NCAPH	NM_001281712	NP_001268641	Coding	chr2:96335740 plus strand	3403
NCAPH	NM_015341	NP_056156	Coding	chr2:96335740 plus strand	3403
NCK2	NM_001004720	NP_001004720	Coding	chr2:105851747 plus strand	3404
NCK2	NM_001004722	NP_001004722	Coding	chr2:105745062 plus strand	3405
NCK2	NM_003581	NP_003572	Coding	chr2:105745062 plus strand	3405
NCKAP1	NM_013436	NP_038464	Coding	chr2:183038858 minus strand	3406
NCKAP1	NM_205842	NP_995314	Coding	chr2:183038858 minus strand	3406
NCKAP5	NM_207363	NP_997246	Coding	chr2:133568460 minus strand	3407
NCKAP5	NM_207481	NP_997364	Coding	chr2:133568460 minus strand	3407
NCL	NM_005381	NP_005372	Coding	chr2:231464494 minus strand	3408
NCOA1	NM_003743	NP_003734	Coding	chr2:24584476 plus strand	3409
NCOA1	NM_147223	NP_671756	Coding	chr2:24584476 plus strand	3409
NCOA1	NM_147233	NP_671766	Coding	chr2:24584476 plus strand	3409
NDUFA10	NM_004544	NP_004535	Coding	chr2:240025402 minus strand	3410
NDUFAF7	NM_001083946	NP_001077415	Coding	chr2:37231630 plus strand	3411
NDUFAF7	NM_144736	NP_653337	Coding	chr2:37231630 plus strand	3411
NDUFB3	NM_001257102	NP_001244031	Coding	chr2:201071738 plus strand	3412
NDUFB3	NM_002491	NP_002482	Coding	chr2:201071738 plus strand	3412
NDUFS1	NM_001199981	NP_001186910	Coding	chr2:206159519 minus strand	3413
NDUFS1	NM_001199982	NP_001186911	Coding	chr2:206159519 minus strand	3413
NDUFS1	NM_001199983	NP_001186912	Coding	chr2:206159519 minus strand	3413
NDUFS1	NM_001199984	NP_001186913	Coding	chr2:206159194 minus strand	3414
NDUFS1	NM_005006	NP_004997	Coding	chr2:206159519 minus	3413

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				strand	
NEB	NM_001164507	NP_001157979	Coding	chr2:151734487 minus strand	3415
NEB	NM_001164508	NP_001157980	Coding	chr2:151734487 minus strand	3415
NEB	NM_001271208	NP_001258137	Coding	chr2:151734487 minus strand	3415
NEB	NM_004543	NP_004534	Coding	chr2:151734487 minus strand	3415
NEU2	NM_005383	NP_005374	Coding	chr2:233032671 plus strand	3416
NEU4	NM_001167599	NP_001161071	Coding	chr2:241810931 plus strand	3417
NEU4	NM_001167600	NP_001161072	Coding	chr2:241809064 plus strand	3418
NEU4	NM_001167601	NP_001161073	Coding	chr2:241809064 plus strand	3418
NEU4	NM_001167602	NP_001161074	Coding	chr2:241810931 plus strand	3417
NEU4	NM_080741	NP_542779	Coding	chr2:241810931 plus strand	3417
NEURL3	NM_001285485	NP_001272414	Coding	chr2:96505385 minus strand	3419
NEURL3	NM_001285486	NP_001272415	Coding	chr2:96505385 minus strand	3419
NEUROD1	NM_002500	NP_002491	Coding	chr2:181680665 minus strand	3420
NFE2L2	NM_001145412	NP_001138884	Coding	chr2:177263889 minus strand	3421
NFE2L2	NM_001145413	NP_001138885	Coding	chr2:177263889 minus strand	3421
NFE2L2	NM_006164	NP_006155	Coding	chr2:177265131 minus strand	3422
NFU1	NM_001002755	NP_001002755	Coding	chr2:69437628 minus strand	3423
NFU1	NM_001002756	NP_001002756	Coding	chr2:69437628 minus strand	3423
NFU1	NM_015700	NP_056515	Coding	chr2:69437628 minus strand	3423
NGEF	NM_001114090	NP_001107562	Coding	chr2:232928151 minus strand	3424
NGEF	NM_019850	NP_062824	Coding	chr2:233013241 minus strand	3425
NHEJ1	NM_024782	NP_079058	Coding	chr2:219160865 minus strand	3426
NIF3L1	NM_001136039	NP_001129511	Coding	chr2:200889326 plus strand	3427
NIF3L1	NM_001142355	NP_001135827	Coding	chr2:200889326 plus strand	3427
NIF3L1	NM_001142356	NP_001135828	Coding	chr2:200891917 plus strand	3428
NIF3L1	NM_021824	NP_068596	Coding	chr2:200889384 plus strand	3429
NIFK	NM_032390	NP_115766	Coding	chr2:121736927 minus	3430

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				strand	
NLRC4	NM_001199138	NP_001186067	Coding	chr2:32264880 minus strand	3431
NLRC4	NM_001199139	NP_001186068	Coding	chr2:32265620 minus strand	3432
NLRC4	NM_001302504	NP_001289433	Coding	chr2:32265743 minus strand	3433
NLRC4	NM_021209	NP_067032	Coding	chr2:32265743 minus strand	3433
NMI	NM_004688	NP_004679	Coding	chr2:151289916 minus strand	3434
NMS	NM_001011717	NP_001011717	Coding	chr2:100470481 plus strand	3435
NMUR1	NM_006056	NP_006047	Coding	chr2:231530471 minus strand	3436
NOL10	NM_001261392	NP_001248321	Coding	chr2:10689987 minus strand	3437
NOL10	NM_001261394	NP_001248323	Coding	chr2:10689987 minus strand	3437
NOL10	NM_024894	NP_079170	Coding	chr2:10689987 minus strand	3437
NOP58	NM_015934	NP_057018	Coding	chr2:202265791 plus strand	3438
NOSTRIN	NM_001039724	NP_001034813	Coding	chr2:168802589 plus strand	3439
NOSTRIN	NM_001171631	NP_001165102	Coding	chr2:168786538 plus strand	3440
NOSTRIN	NM_001171632	NP_001165103	Coding	chr2:168802589 plus strand	3439
NOSTRIN	NM_052946	NP_443178	Coding	chr2:168802596 plus strand	3441
NOTO	NM_001134462	NP_001127934	Coding	chr2:73202257 plus strand	3442
NPAS2	NM_002518	NP_002509	Coding	chr2:100820150 plus strand	3443
NPHP1	NM_000272	NP_000263	Coding	chr2:110205062 minus strand	3444
NPHP1	NM_001128178	NP_001121650	Coding	chr2:110205062 minus strand	3444
NPHP1	NM_001128179	NP_001121651	Coding	chr2:110205062 minus strand	3444
NPHP1	NM_207181	NP_997064	Coding	chr2:110205062 minus strand	3444
NPPC	NM_024409	NP_077720	Coding	chr2:231926328 minus strand	3445
NR4A2	NM_006186	NP_006177	Coding	chr2:156332775 minus strand	3446
NRBP1	NM_013392	NP_037524	Coding	chr2:27428605 plus strand	3447
NRP2	NM_003872	NP_003863	Coding	chr2:205682499 plus strand	3448
NRP2	NM_018534	NP_061004	Coding	chr2:205682499 plus strand	3448
NRP2	NM_201264	NP_957716	Coding	chr2:205682499 plus strand	3448

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NRP2	NM_201266	NP_957718	Coding	chr2:205682499 plus strand	3448
NRP2	NM_201267	NP_957719	Coding	chr2:205682499 plus strand	3448
NRP2	NM_201279	NP_958436	Coding	chr2:205682499 plus strand	3448
NRXN1	NM_001135659	NP_001129131	Coding	chr2:51032536 minus strand	3449
NRXN1	NM_004801	NP_004792	Coding	chr2:51032536 minus strand	3449
NRXN1	NM_138735	NP_620072	Coding	chr2:50347756 minus strand	3450
NT5C1B	NM_001002006	NP_001002006	Coding	chr2:18589580 minus strand	3451
NT5C1B	NM_001199086	NP_001186015	Coding	chr2:18589580 minus strand	3451
NT5C1B	NM_001199087	NP_001186016	Coding	chr2:18589580 minus strand	3451
NT5C1B	NM_001199088	NP_001186017	Coding	chr2:18589580 minus strand	3451
NT5C1B	NM_033253	NP_150278	Coding	chr2:18589580 minus strand	3451
NT5C1B-RDH14	NM_001199103	NP_001186032	Coding	chr2:18589580 minus strand	3451
NT5C1B-RDH14	NM_001199104	NP_001186033	Coding	chr2:18589580 minus strand	3451
NTSR2	NM_012344	NP_036476	Coding	chr2:11670203 minus strand	3452
NUP35	NM_001287584	NP_001274513	Coding	chr2:183117489 plus strand	3453
NUP35	NM_001287585	NP_001274514	Coding	chr2:183124354 plus strand	3454
NUP35	NM_138285	NP_612142	Coding	chr2:183124354 plus strand	3454
NXPH2	NM_007226	NP_009157	Coding	chr2:138780241 minus strand	3455
NYAP2	NM_020864	NP_065915	Coding	chr2:225400885 plus strand	3456
OBSL1	NM_001173408	NP_001166879	Coding	chr2:219571546 minus strand	3457
OBSL1	NM_001173431	NP_001166902	Coding	chr2:219571546 minus strand	3457
OBSL1	NM_015311	NP_056126	Coding	chr2:219571546 minus strand	3457
ODC1	NM_001287188	NP_001274117	Coding	chr2:10448554 minus strand	3458
ODC1	NM_001287189	NP_001274118	Coding	chr2:10447799 minus strand	3459
ODC1	NM_001287190	NP_001274119	Coding	chr2:10447799 minus strand	3459
ODC1	NM_002539	NP_002530	Coding	chr2:10448554 minus strand	3458
OLA1	NM_001011708	NP_001011708	Coding	chr2:174248637 minus strand	3460

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OLA1	NM_013341	NP_037473	Coding	chr2:174248637 minus strand	3460
OR6B2	NM_001005853	NP_001005853	Coding	chr2:240030429 minus strand	3461
OR6B3	NM_173351	NP_775486	Coding	chr2:240046072 minus strand	3462
ORC2	NM_006190	NP_006181	Coding	chr2:200963701 minus strand	3463
ORC4	NM_001190879	NP_001177808	Coding	chr2:148020747 minus strand	3464
ORC4	NM_001190881	NP_001177810	Coding	chr2:148020761 minus strand	3465
ORC4	NM_001190882	NP_001177811	Coding	chr2:148020737 minus strand	3466
ORC4	NM_002552	NP_002543	Coding	chr2:148020760 minus strand	3467
ORC4	NM_181741	NP_859525	Coding	chr2:148020894 minus strand	3468
ORC4	NM_181742	NP_859526	Coding	chr2:148021604 minus strand	3469
ORMDL1	NM_001128150	NP_001121622	Coding	chr2:189784371 minus strand	3470
ORMDL1	NM_016467	NP_057551	Coding	chr2:189784371 minus strand	3470
OSBPL6	NM_001201480	NP_001188409	Coding	chr2:178194480 plus strand	3471
OSBPL6	NM_001201481	NP_001188410	Coding	chr2:178194480 plus strand	3471
OSBPL6	NM_001201482	NP_001188411	Coding	chr2:178194480 plus strand	3471
OSBPL6	NM_032523	NP_115912	Coding	chr2:178194480 plus strand	3471
OSBPL6	NM_145739	NP_665682	Coding	chr2:178320243 plus strand	3472
OSGEPL1	NM_022353	NP_071748	Coding	chr2:189763198 minus strand	3473
OSR1	NM_145260	NP_660303	Coding	chr2:19358611 minus strand	3474
OST4	NM_001134693	NP_001128165	Coding	chr2:27071699 minus strand	3475
OTOF	NM_001287489	NP_001274418	Coding	chr2:26558698 minus strand	3476
OTOF	NM_004802	NP_004793	Coding	chr2:26478042 minus strand	3477
OTOF	NM_194248	NP_919224	Coding	chr2:26558698 minus strand	3476
OTOF	NM_194322	NP_919303	Coding	chr2:26478042 minus strand	3477
OTOF	NM_194323	NP_919304	Coding	chr2:26478042 minus strand	3477
OTOS	NM_148961	NP_683764	Coding	chr2:240140656 minus strand	3478
OTX1	NM_001199770	NP_001186699	Coding	chr2:63050056 plus strand	3479
OTX1	NM_014562	NP_055377	Coding	chr2:63050801 plus strand	3480

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OXER1	NM_148962	NP_683765	Coding	chr2:42764261 minus strand	3481
PAIP2B	NM_020459	NP_065192	Coding	chr2:71227103 minus strand	3482
PAPOLG	NM_022894	NP_075045	Coding	chr2:60756229 plus strand	3483
PARD3B	NM_001302769	NP_001289698	Coding	chr2:204545792 plus strand	3484
PARD3B	NM_057177	NP_476518	Coding	chr2:204545792 plus strand	3484
PARD3B	NM_152526	NP_689739	Coding	chr2:204545792 plus strand	3484
PARD3B	NM_205863	NP_995585	Coding	chr2:204545792 plus strand	3484
PASK	NM_001252119	NP_001239048	Coding	chr2:241149504 minus strand	3485
PASK	NM_001252120	NP_001239049	Coding	chr2:241149979 minus strand	3486
PASK	NM_001252122	NP_001239051	Coding	chr2:241149504 minus strand	3485
PASK	NM_001252124	NP_001239053	Coding	chr2:241149504 minus strand	3485
PASK	NM_015148	NP_055963	Coding	chr2:241149504 minus strand	3485
PAX3	NM_000438	NP_000429	Coding	chr2:222298996 minus strand	3487
PAX3	NM_001127366	NP_001120838	Coding	chr2:222298996 minus strand	3487
PAX3	NM_013942	NP_039230	Coding	chr2:222298996 minus strand	3487
PAX3	NM_181457	NP_852122	Coding	chr2:222298996 minus strand	3487
PAX3	NM_181458	NP_852123	Coding	chr2:222298996 minus strand	3487
PAX3	NM_181459	NP_852124	Coding	chr2:222298996 minus strand	3487
PAX3	NM_181460	NP_852125	Coding	chr2:222298996 minus strand	3487
PAX3	NM_181461	NP_852126	Coding	chr2:222298996 minus strand	3487
PAX8	NM_003466	NP_003457	Coding	chr2:113278921 minus strand	3488
PAX8	NM_013952	NP_039246	Coding	chr2:113278921 minus strand	3488
PAX8	NM_013953	NP_039247	Coding	chr2:113278921 minus strand	3488
PAX8	NM_013992	NP_054698	Coding	chr2:113278921 minus strand	3488
PCBP1	NM_006196	NP_006187	Coding	chr2:70087452 plus strand	3489
PCGF1	NM_032673	NP_116062	Coding	chr2:74507694 minus strand	3490
PCYOX1	NM_016297	NP_057381	Coding	chr2:70258098 plus strand	3491
PDCD1	NM_005018	NP_005009	Coding	chr2:241858906 minus strand	3492

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PDCL3	NM_024065	NP_076970	Coding	chr2:100562955 plus strand	3493
PDE11A	NM_001077196	NP_001070664	Coding	chr2:177888739 minus strand	3494
PDE11A	NM_001077197	NP_001070665	Coding	chr2:178108339 minus strand	3495
PDE11A	NM_001077358	NP_001070826	Coding	chr2:177922837 minus strand	3496
PDE11A	NM_016953	NP_058649	Coding	chr2:178072755 minus strand	3497
PDE1A	NM_001003683	NP_001003683	Coding	chr2:182522845 minus strand	3498
PDE1A	NM_001258312	NP_001245241	Coding	chr2:182522845 minus strand	3498
PDE1A	NM_001258313	NP_001245242	Coding	chr2:182427048 minus strand	3499
PDE1A	NM_001258314	NP_001245243	Coding	chr2:182242063 minus strand	3500
PDE1A	NM_005019	NP_005010	Coding	chr2:182522609 minus strand	3501
PDE6D	NM_001291018	NP_001277947	Coding	chr2:231781327 minus strand	3502
PDE6D	NM_002601	NP_002592	Coding	chr2:231781327 minus strand	3502
PDIA6	NM_001282704	NP_001269633	Coding	chr2:10832485 minus strand	3503
PDIA6	NM_001282705	NP_001269634	Coding	chr2:10837977 minus strand	3504
PDIA6	NM_001282706	NP_001269635	Coding	chr2:10832485 minus strand	3503
PDIA6	NM_001282707	NP_001269636	Coding	chr2:10812839 minus strand	3505
PDIA6	NM_005742	NP_005733	Coding	chr2:10812839 minus strand	3505
PDK1	NM_001278549	NP_001265478	Coding	chr2:172555968 plus strand	3506
PDK1	NM_002610	NP_002601	Coding	chr2:172555968 plus strand	3506
PECR	NM_018441	NP_060911	Coding	chr2:216081816 minus strand	3507
PELI1	NM_020651	NP_065702	Coding	chr2:64144471 minus strand	3508
PER2	NM_022817	NP_073728	Coding	chr2:238288566 minus strand	3509
PEX13	NM_002618	NP_002609	Coding	chr2:61017676 plus strand	3510
PFN4	NM_199346	NP_955378	Coding	chr2:24123281 minus strand	3511
PGAP1	NM_024989	NP_079265	Coding	chr2:196926730 minus strand	3512
PHOSPHO2	NM_001008489	NP_001008489	Coding	chr2:169694453 plus strand	3513
PHOSPHO2	NM_001199285	NP_001186214	Coding	chr2:169694453 plus strand	3513
PHOSPHO2	NM_001199286	NP_001186215	Coding	chr2:169694453 plus	3513

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				strand	
PHOSPHO2	NM_001199287	NP_001186216	Coding	chr2:169694453 plus strand	3513
PHOSPHO2	NM_001199288	NP_001186217	Coding	chr2:169694453 plus strand	3513
PHOSPHO2-KLHL23	NM_001199290	NP_001186219	Coding	chr2:169694453 plus strand	3513
PID1	NM_001100818	NP_001094288	Coding	chr2:229271341 minus strand	3514
PID1	NM_017933	NP_060403	Coding	chr2:229271341 minus strand	3514
PIGF	NM_002643	NP_002634	Coding	chr2:46617112 minus strand	3515
PIGF	NM_173074	NP_775097	Coding	chr2:46617112 minus strand	3515
PIKFYVE	NM_001178000	NP_001171471	Coding	chr2:208266266 plus strand	3516
PIKFYVE	NM_015040	NP_055855	Coding	chr2:208266266 plus strand	3516
PIKFYVE	NM_152671	NP_689884	Coding	chr2:208266266 plus strand	3516
PKDCC	NM_138370	NP_612379	Coding	chr2:42048020 plus strand	3517
PKP4	NM_001005476	NP_001005476	Coding	chr2:158456963 plus strand	3518
PKP4	NM_003628	NP_003619	Coding	chr2:158456963 plus strand	3518
PLA2R1	NM_001007267	NP_001007268	Coding	chr2:160062615 minus strand	3519
PLA2R1	NM_001195641	NP_001182570	Coding	chr2:160062615 minus strand	3519
PLA2R1	NM_007366	NP_031392	Coding	chr2:160062615 minus strand	3519
PLB1	NM_001170585	NP_001164056	Coding	chr2:28496070 plus strand	3520
PLB1	NM_153021	NP_694566	Coding	chr2:28496070 plus strand	3520
PLCD4	NM_032726	NP_116115	Coding	chr2:218607764 plus strand	3521
PLCL1	NM_006226	NP_006217	Coding	chr2:197804701 plus strand	3522
PLEK	NM_002664	NP_002655	Coding	chr2:68365189 plus strand	3523
PLEKHA3	NM_019091	NP_061964	Coding	chr2:178480471 plus strand	3524
PLEKHB2	NM_001100623	NP_001094093	Coding	chr2:131104846 plus strand	3525
PLEKHB2	NM_001267062	NP_001253991	Coding	chr2:131104846 plus strand	3525
PLEKHB2	NM_001267063	NP_001253992	Coding	chr2:131104846 plus strand	3525
PLEKHB2	NM_001267064	NP_001253993	Coding	chr2:131104846 plus strand	3525
PLEKHB2	NM_001267065	NP_001253994	Coding	chr2:131104846 plus strand	3525
PLEKHB2	NM_001267066	NP_001253995	Coding	chr2:131104846 plus strand	3525

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PLEKHB2	NM_001267067	NP_001253996	Coding	chr2:131104846 plus strand	3525
PLEKHB2	NM_001267068	NP_001253997	Coding	chr2:131104846 plus strand	3525
PLEKHB2	NM_017958	NP_060428	Coding	chr2:131104846 plus strand	3525
PLEKHH2	NM_172069	NP_742066	Coding	chr2:43637299 plus strand	3526
PLEKHM3	NM_001080475	NP_001073944	Coding	chr2:208025560 minus strand	3527
PLGLB1	NM_001032392	NP_001027564	Coding	chr2:87021846 minus strand	3528
PLGLB1	NM_001032392	NP_001027564	Coding	chr2:87748090 plus strand	3529
PLGLB2	NM_002665	NP_002656	Coding	chr2:87021850 minus strand	3530
PLGLB2	NM_002665	NP_002656	Coding	chr2:87748086 plus strand	3531
PMS1	NM_000534	NP_000525	Coding	chr2:189784084 plus strand	3532
PMS1	NM_001128143	NP_001121615	Coding	chr2:189784084 plus strand	3532
PMS1	NM_001128144	NP_001121616	Coding	chr2:189784084 plus strand	3532
PMS1	NM_001289408	NP_001276337	Coding	chr2:189784084 plus strand	3532
PMS1	NM_001289409	NP_001276338	Coding	chr2:189784084 plus strand	3532
PNKD	NM_001077399	NP_001070867	Coding	chr2:218270391 plus strand	3533
PNKD	NM_015488	NP_056303	Coding	chr2:218270391 plus strand	3533
PNKD	NM_022572	NP_072094	Coding	chr2:218323178 plus strand	3534
PNO1	NM_020143	NP_064528	Coding	chr2:68157872 plus strand	3535
PNPT1	NM_033109	NP_149100	Coding	chr2:55693910 minus strand	3536
POLE4	NM_019896	NP_063949	Coding	chr2:74958647 plus strand	3537
POLR1A	NM_015425	NP_056240	Coding	chr2:86106155 minus strand	3538
POLR1B	NM_001137604	NP_001131076	Coding	chr2:112541914 plus strand	3539
POLR1B	NM_001282772	NP_001269701	Coding	chr2:112542035 plus strand	3540
POLR1B	NM_001282774	NP_001269703	Coding	chr2:112541914 plus strand	3539
POLR1B	NM_001282776	NP_001269705	Coding	chr2:112541914 plus strand	3539
POLR1B	NM_001282777	NP_001269706	Coding	chr2:112541914 plus strand	3539
POLR1B	NM_001282779	NP_001269708	Coding	chr2:112541914 plus strand	3539
POLR1B	NM_019014	NP_061887	Coding	chr2:112541914 plus strand	3539
POLR2D	NM_004805	NP_004796	Coding	chr2:127858155 minus strand	3541

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POMC	NM_000939	NP_000930	Coding	chr2:25168690 minus strand	3542
POMC	NM_001035256	NP_001030333	Coding	chr2:25168690 minus strand	3542
POTEE	NM_001083538	NP_001077007	Coding	chr2:131218350 plus strand	3543
POTEF	NM_001099771	NP_001093241	Coding	chr2:130129222 minus strand	3544
POTEI	NM_001277406	NP_001264335	Coding	chr2:130509235 minus strand	3545
POTEJ	NM_001277083	NP_001264012	Coding	chr2:130611532 plus strand	3546
POU3F3	NM_006236	NP_006227	Coding	chr2:104855510 plus strand	3547
PPIG	NM_004792	NP_004783	Coding	chr2:169584339 plus strand	3548
PPIL3	NM_032472	NP_115861	Coding	chr2:200889126 minus strand	3549
PPIL3	NM_130906	NP_570981	Coding	chr2:200889126 minus strand	3549
PPM1B	NM_001033557	NP_001028729	Coding	chr2:44168802 plus strand	3550
PPM1B	NM_002706	NP_002697	Coding	chr2:44168802 plus strand	3550
PPM1B	NM_177968	NP_808907	Coding	chr2:44168802 plus strand	3550
PPM1B	NM_177969	NP_808908	Coding	chr2:44168802 plus strand	3550
PPM1G	NM_177983	NP_817092	Coding	chr2:27409683 minus strand	3551
PPP1CB	NM_002709	NP_002700	Coding	chr2:28751759 plus strand	3552
PPP1CB	NM_206876	NP_996759	Coding	chr2:28751747 plus strand	3553
PPP1R1C	NM_001080545	NP_001074014	Coding	chr2:181985823 plus strand	3554
PPP1R1C	NM_001261424	NP_001248353	Coding	chr2:181985823 plus strand	3554
PPP1R1C	NM_001261425	NP_001248354	Coding	chr2:181985823 plus strand	3554
PPP1R21	NM_001135629	NP_001129101	Coding	chr2:48440768 plus strand	3555
PPP1R21	NM_001193475	NP_001180404	Coding	chr2:48440768 plus strand	3555
PPP1R21	NM_152994	NP_694539	Coding	chr2:48440768 plus strand	3555
PPP1R7	NM_001282409	NP_001269338	Coding	chr2:241149657 plus strand	3556
PPP1R7	NM_001282410	NP_001269339	Coding	chr2:241149657 plus strand	3556
PPP1R7	NM_001282411	NP_001269340	Coding	chr2:241149657 plus strand	3556
PPP1R7	NM_001282412	NP_001269341	Coding	chr2:241149572 plus strand	3557
PPP1R7	NM_001282413	NP_001269342	Coding	chr2:241149572 plus strand	3557
PPP1R7	NM_001282414	NP_001269343	Coding	chr2:241149572 plus strand	3557
PPP1R7	NM_002712	NP_002703	Coding	chr2:241149657 plus strand	3556

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PPP3R1	NM_000945	NP_000936	Coding	chr2:68252519 minus strand	3558
PQLC3	NM_001282710	NP_001269639	Coding	chr2:11155371 plus strand	3559
PQLC3	NM_001282711	NP_001269640	Coding	chr2:11155371 plus strand	3559
PQLC3	NM_001282712	NP_001269641	Coding	chr2:11155371 plus strand	3559
PQLC3	NM_152391	NP_689604	Coding	chr2:11155371 plus strand	3559
PRADC1	NM_032319	NP_115695	Coding	chr2:73233228 minus strand	3560
PREB	NM_013388	NP_037520	Coding	chr2:27134674 minus strand	3561
PREPL	NM_001042385	NP_001035844	Coding	chr2:44359749 minus strand	3562
PREPL	NM_001042386	NP_001035845	Coding	chr2:44359749 minus strand	3562
PREPL	NM_001171603	NP_001165074	Coding	chr2:44361862 minus strand	3563
PREPL	NM_001171606	NP_001165077	Coding	chr2:44361561 minus strand	3564
PREPL	NM_001171613	NP_001165084	Coding	chr2:44361561 minus strand	3564
PREPL	NM_001171617	NP_001165088	Coding	chr2:44361862 minus strand	3563
PREPL	NM_006036	NP_006027	Coding	chr2:44360674 minus strand	3565
PRKAG3	NM_017431	NP_059127	Coding	chr2:218831789 minus strand	3566
PRKCE	NM_005400	NP_005391	Coding	chr2:45651903 plus strand	3567
PRKD3	NM_005813	NP_005804	Coding	chr2:37317079 minus strand	3568
PRKRA	NM_001139517	NP_001132989	Coding	chr2:178450757 minus strand	3569
PRKRA	NM_001139518	NP_001132990	Coding	chr2:178450628 minus strand	3570
PRKRA	NM_003690	NP_003681	Coding	chr2:178451231 minus strand	3571
PRLH	NM_015893	NP_056977	Coding	chr2:237566573 plus strand	3572
PROC	NM_000312	NP_000303	Coding	chr2:127418419 plus strand	3573
PROKR1	NM_138964	NP_620414	Coding	chr2:68645821 plus strand	3574
PROM2	NM_001165977	NP_001159449	Coding	chr2:95274452 plus strand	3575
PROM2	NM_001165978	NP_001159450	Coding	chr2:95274452 plus strand	3575
PROM2	NM_144707	NP_653308	Coding	chr2:95274452 plus strand	3575
PRPF40A	NM_017892	NP_060362	Coding	chr2:152717461 minus strand	3576
PRR21	NM_001080835	NP_001074304	Coding	chr2:240042982 minus strand	3577
PRR30	NM_178553	NP_848648	Coding	chr2:27139464 minus strand	3578
PRSS56	NM_001195129	NP_001182058	Coding	chr2:232520462 plus strand	3579

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PSD4	NM_012455	NP_036587	Coding	chr2:113173982 plus strand	3580
PSMD1	NM_001191037	NP_001177966	Coding	chr2:231056863 plus strand	3581
PSMD1	NM_002807	NP_002798	Coding	chr2:231056863 plus strand	3581
PSMD14	NM_005805	NP_005796	Coding	chr2:161308274 plus strand	3582
PSME4	NM_014614	NP_055429	Coding	chr2:53970840 minus strand	3583
PTCD3	NM_017952	NP_060422	Coding	chr2:86106181 plus strand	3584
PTH2R	NM_005048	NP_005039	Coding	chr2:208406829 plus strand	3585
PTMA	NM_001099285	NP_001092755	Coding	chr2:231708524 plus strand	3586
PTMA	NM_002823	NP_002814	Coding	chr2:231708524 plus strand	3586
PTPN18	NM_001142370	NP_001135842	Coding	chr2:130356006 plus strand	3587
PTPN18	NM_014369	NP_055184	Coding	chr2:130356006 plus strand	3587
PTPN4	NM_002830	NP_002821	Coding	chr2:119759630 plus strand	3588
PTPRN	NM_001199763	NP_001186692	Coding	chr2:219309573 minus strand	3589
PTPRN	NM_001199764	NP_001186693	Coding	chr2:219309007 minus strand	3590
PTPRN	NM_002846	NP_002837	Coding	chr2:219309573 minus strand	3589
PTRHD1	NM_001013663	NP_001013685	Coding	chr2:24793382 minus strand	3591
PUM2	NM_001282752	NP_001269681	Coding	chr2:20350850 minus strand	3592
PUM2	NM_001282790	NP_001269719	Coding	chr2:20327386 minus strand	3593
PUM2	NM_001282791	NP_001269720	Coding	chr2:20327386 minus strand	3593
PUM2	NM_015317	NP_056132	Coding	chr2:20350850 minus strand	3592
PUS10	NM_144709	NP_653310	Coding	chr2:61018230 minus strand	3594
PXDN	NM_012293	NP_036425	Coding	chr2:1744547 minus strand	3595
QPCT	NM_012413	NP_036545	Coding	chr2:37344609 plus strand	3596
R3HDM1	NM_001282798	NP_001269727	Coding	chr2:135586322 plus strand	3597
R3HDM1	NM_001282799	NP_001269728	Coding	chr2:135531454 plus strand	3598
R3HDM1	NM_001282800	NP_001269729	Coding	chr2:135586322 plus strand	3597
R3HDM1	NM_015361	NP_056176	Coding	chr2:135531454 plus strand	3598
RAB10	NM_016131	NP_057215	Coding	chr2:26033859 plus strand	3599
RAB11FIP5	NM_015470	NP_056285	Coding	chr2:73113018 minus	3600

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				strand	
RAB17	NM_022449	NP_071894	Coding	chr2:237591126 minus strand	3601
RAB1A	NM_004161	NP_004152	Coding	chr2:65130301 minus strand	3602
RAB1A	NM_015543	NP_056358	Coding	chr2:65130301 minus strand	3602
RAB3GAP1	NM_001172435	NP_001165906	Coding	chr2:135052264 plus strand	3603
RAB3GAP1	NM_012233	NP_036365	Coding	chr2:135052264 plus strand	3603
RAB6C	NM_032144	NP_115520	Coding	chr2:129979661 plus strand	3604
RABL2A	NM_007082	NP_009013	Coding	chr2:113627239 plus strand	3605
RABL2A	NM_013412	NP_038198	Coding	chr2:113627239 plus strand	3605
RAD51AP2	NM_001099218	NP_001092688	Coding	chr2:17518439 minus strand	3606
RALB	NM_002881	NP_002872	Coding	chr2:120252837 plus strand	3607
RAMP1	NM_005855	NP_005846	Coding	chr2:237859543 plus strand	3608
RANBP2	NM_006267	NP_006258	Coding	chr2:108719480 plus strand	3609
RAPGEF4	NM_001100397	NP_001093867	Coding	chr2:172821586 plus strand	3610
RAPGEF4	NM_001282899	NP_001269828	Coding	chr2:172860037 plus strand	3611
RAPGEF4	NM_001282900	NP_001269829	Coding	chr2:172860037 plus strand	3611
RAPGEF4	NM_001282901	NP_001269830	Coding	chr2:172928204 plus strand	3612
RAPGEF4	NM_007023	NP_008954	Coding	chr2:172735796 plus strand	3613
RAPH1	NM_203365	NP_976241	Coding	chr2:203535335 minus strand	3614
RAPH1	NM_213589	NP_998754	Coding	chr2:203535335 minus strand	3614
RASGRP3	NM_001139488	NP_001132960	Coding	chr2:33476253 plus strand	3615
RASGRP3	NM_015376	NP_056191	Coding	chr2:33513874 plus strand	3616
RASGRP3	NM_170672	NP_733772	Coding	chr2:33436348 plus strand	3617
RBKS	NM_001287580	NP_001274509	Coding	chr2:27890396 minus strand	3618
RBKS	NM_022128	NP_071411	Coding	chr2:27890396 minus strand	3618
RBM43	NM_198557	NP_940959	Coding	chr2:151261875 minus strand	3619
RBM44	NM_001080504	NP_001073973	Coding	chr2:237798744 plus strand	3620
RBM45	NM_152945	NP_694453	Coding	chr2:178112454 plus strand	3621
RBMS1	NM_002897	NP_002888	Coding	chr2:160493807 minus	3622

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				strand	
RBMS1	NM_016836	NP_058520	Coding	chr2:160493807 minus strand	3622
RDH14	NM_020905	NP_065956	Coding	chr2:18560693 minus strand	3623
REEP1	NM_001164730	NP_001158202	Coding	chr2:86338083 minus strand	3624
REEP1	NM_001164731	NP_001158203	Coding	chr2:86337654 minus strand	3625
REEP1	NM_001164732	NP_001158204	Coding	chr2:86337654 minus strand	3625
REEP1	NM_022912	NP_075063	Coding	chr2:86337654 minus strand	3625
REG1A	NM_002909	NP_002900	Coding	chr2:79120457 plus strand	3626
REG1B	NM_006507	NP_006498	Coding	chr2:79088024 minus strand	3627
REG3A	NM_002580	NP_002571	Coding	chr2:79159754 minus strand	3628
REG3A	NM_138937	NP_620354	Coding	chr2:79159754 minus strand	3628
REG3A	NM_138938	NP_620355	Coding	chr2:79159753 minus strand	3629
REG3G	NM_001008387	NP_001008388	Coding	chr2:79025685 plus strand	3630
REG3G	NM_001270040	NP_001256969	Coding	chr2:79025685 plus strand	3630
REG3G	NM_198448	NP_940850	Coding	chr2:79025685 plus strand	3630
REL	NM_001291746	NP_001278675	Coding	chr2:60881494 plus strand	3631
REL	NM_002908	NP_002899	Coding	chr2:60881494 plus strand	3631
RESP18	NM_001007089	NP_001007090	Coding	chr2:219333177 minus strand	3632
RETSAT	NM_017750	NP_060220	Coding	chr2:85354698 minus strand	3633
REV1	NM_001037872	NP_001032961	Coding	chr2:99490018 minus strand	3634
REV1	NM_016316	NP_057400	Coding	chr2:99490018 minus strand	3634
RFTN2	NM_144629	NP_653230	Coding	chr2:197675860 minus strand	3635
RFX8	NM_001145664	NP_001139136	Coding	chr2:101474703 minus strand	3636
RGPD1	NM_001024457	NP_001019628	Coding	chr2:86917614 plus strand	3637
RGPD1	NM_001024457	NP_001019628	Coding	chr2:87985790 minus strand	3638
RGPD2	NM_001078170	NP_001071638	Coding	chr2:86913811 plus strand	3639
RGPD2	NM_001078170	NP_001071638	Coding	chr2:87825767 minus strand	3640
RGPD3	NM_001144013	NP_001137485	Coding	chr2:106468345 minus strand	3641
RGPD4	NM_182588	NP_872394	Coding	chr2:107826931 plus strand	3642
RGPD5	NM_005054	NP_005045	Coding	chr2:109794388 plus strand	3643

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RGPD5	NM_005054	NP_005045	Coding	chr2:110577101 minus strand	3644
RGPD5	NM_005054	NP_005045	Coding	chr2:112433530 minus strand	3645
RGPD5	NM_032260	NP_115636	Coding	chr2:109792757 plus strand	3646
RGPD5	NM_032260	NP_115636	Coding	chr2:110578732 minus strand	3647
RGPD6	NM_001037866	NP_001032955	Coding	chr2:109792757 plus strand	3646
RGPD6	NM_001037866	NP_001032955	Coding	chr2:110578732 minus strand	3647
RGPD6	NM_001123363	NP_001116835	Coding	chr2:109792757 plus strand	3646
RGPD6	NM_001123363	NP_001116835	Coding	chr2:110578732 minus strand	3647
RGPD8	NM_001164463	NP_001157935	Coding	chr2:109794273 plus strand	3648
RGPD8	NM_001164463	NP_001157935	Coding	chr2:110577216 minus strand	3649
RGPD8	NM_001164463	NP_001157935	Coding	chr2:112433645 minus strand	3650
RHBDD1	NM_001167608	NP_001161080	Coding	chr2:226835954 plus strand	3651
RHBDD1	NM_032276	NP_115652	Coding	chr2:226835954 plus strand	3651
RHOB	NM_004040	NP_004031	Coding	chr2:20447073 plus strand	3652
RHOQ	NM_012249	NP_036381	Coding	chr2:46542727 plus strand	3653
RIF1	NM_001177663	NP_001171134	Coding	chr2:151409882 plus strand	3654
RIF1	NM_001177664	NP_001171135	Coding	chr2:151409885 plus strand	3655
RIF1	NM_001177665	NP_001171136	Coding	chr2:151410089 plus strand	3656
RIF1	NM_018151	NP_060621	Coding	chr2:151409882 plus strand	3654
RMDN2	NM_001170791	NP_001164262	Coding	chr2:37925318 plus strand	3657
RMDN2	NM_001170792	NP_001164263	Coding	chr2:37928758 plus strand	3658
RMDN2	NM_001170793	NP_001164264	Coding	chr2:37950443 plus strand	3659
RMDN2	NM_144713	NP_653314	Coding	chr2:37950443 plus strand	3659
RMND5A	NM_022780	NP_073617	Coding	chr2:86720290 plus strand	3660
RNASEH1	NM_001286834	NP_001273763	Coding	chr2:3558371 minus strand	3661
RNASEH1	NM_001286837	NP_001273766	Coding	chr2:3558371 minus strand	3661
RNASEH1	NM_002936	NP_002927	Coding	chr2:3558371 minus strand	3661
RND3	NM_001254738	NP_001241667	Coding	chr2:150487695 minus strand	3662
RND3	NM_005168	NP_005159	Coding	chr2:150487695 minus strand	3662
RNF103	NM_001198951	NP_001185880	Coding	chr2:86623877 minus strand	3663
RNF103	NM_001198952	NP_001185881	Coding	chr2:86623877 minus	3663

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				strand	
RNF103	NM_005667	NP_005658	Coding	chr2:86623877 minus strand	3663
RNF103-CHMP3	NM_001198954	NP_001185883	Coding	chr2:86721122 minus strand	3664
RNF144A	NM_014746	NP_055561	Coding	chr2:6917391 plus strand	3665
RNF149	NM_173647	NP_775918	Coding	chr2:101308716 minus strand	3666
RNF181	NM_016494	NP_057578	Coding	chr2:85595713 plus strand	3667
RNF25	NM_022453	NP_071898	Coding	chr2:218672058 minus strand	3668
RNPEPL1	NM_018226	NP_060696	Coding	chr2:240568586 plus strand	3669
ROCK2	NM_004850	NP_004841	Coding	chr2:11344585 minus strand	3670
RPE	NM_001278282	NP_001265211	Coding	chr2:210002564 plus strand	3671
RPE	NM_001278283	NP_001265212	Coding	chr2:210002564 plus strand	3671
RPE	NM_001278285	NP_001265214	Coding	chr2:210002564 plus strand	3671
RPE	NM_001278286	NP_001265215	Coding	chr2:210002564 plus strand	3671
RPE	NM_001278288	NP_001265217	Coding	chr2:210002564 plus strand	3671
RPE	NM_001278289	NP_001265218	Coding	chr2:210002564 plus strand	3671
RPE	NM_006916	NP_008847	Coding	chr2:210002564 plus strand	3671
RPE	NM_199229	NP_954699	Coding	chr2:210002564 plus strand	3671
RPIA	NM_144563	NP_653164	Coding	chr2:88691657 plus strand	3672
RPL31	NM_000993	NP_000984	Coding	chr2:101002228 plus strand	3673
RPL31	NM_001098577	NP_001092047	Coding	chr2:101002228 plus strand	3673
RPL31	NM_001099693	NP_001093163	Coding	chr2:101002228 plus strand	3673
RPL37A	NM_000998	NP_000989	Coding	chr2:216498796 plus strand	3674
RPRM	NM_019845	NP_062819	Coding	chr2:153478808 minus strand	3675
RPS27A	NM_001135592	NP_001129064	Coding	chr2:55231902 plus strand	3676
RPS27A	NM_001177413	NP_001170884	Coding	chr2:55232677 plus strand	3677
RPS27A	NM_002954	NP_002945	Coding	chr2:55232404 plus strand	3678
RPS7	NM_001011	NP_001002	Coding	chr2:3575262 plus strand	3679
RQCD1	NM_001271634	NP_001258563	Coding	chr2:218568579 plus strand	3680
RQCD1	NM_001271635	NP_001258564	Coding	chr2:218568579 plus strand	3680
RQCD1	NM_005444	NP_005435	Coding	chr2:218568579 plus strand	3680

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RRM2	NM_001034	NP_001025	Coding	chr2:10122735 plus strand	3681
RRM2	NM_001165931	NP_001159403	Coding	chr2:10122567 plus strand	3682
RSAD2	NM_080657	NP_542388	Coding	chr2:6877664 plus strand	3683
RTKN	NM_001015055	NP_001015055	Coding	chr2:74441933 minus strand	3684
RTKN	NM_001015056	NP_001015056	Coding	chr2:74440583 minus strand	3685
RTKN	NM_033046	NP_149035	Coding	chr2:74440583 minus strand	3685
RTN4	NM_007008	NP_008939	Coding	chr2:55010334 minus strand	3686
RTN4	NM_020532	NP_065393	Coding	chr2:55050598 minus strand	3687
RTN4	NM_153828	NP_722550	Coding	chr2:55050598 minus strand	3687
RTN4	NM_207520	NP_997403	Coding	chr2:55050598 minus strand	3687
RTN4	NM_207521	NP_997404	Coding	chr2:55049190 minus strand	3688
RTP5	NM_173821	NP_776182	Coding	chr2:241869733 plus strand	3689
RUFY4	NM_198483	NP_940885	Coding	chr2:218069014 plus strand	3690
SAG	NM_000541	NP_000532	Coding	chr2:233307662 plus strand	3691
SAP130	NM_001145928	NP_001139400	Coding	chr2:128027295 minus strand	3692
SAP130	NM_024545	NP_078821	Coding	chr2:128027295 minus strand	3692
SATB2	NM_001172509	NP_001165980	Coding	chr2:199458096 minus strand	3693
SATB2	NM_001172517	NP_001165988	Coding	chr2:199465108 minus strand	3694
SATB2	NM_015265	NP_056080	Coding	chr2:199471266 minus strand	3695
SCG2	NM_003469	NP_003460	Coding	chr2:223602499 minus strand	3696
SCLY	NM_016510	NP_057594	Coding	chr2:238060923 plus strand	3697
SCN1A	NM_001165963	NP_001159435	Coding	chr2:166073639 minus strand	3698
SCN1A	NM_001165964	NP_001159436	Coding	chr2:166073639 minus strand	3698
SCN1A	NM_001202435	NP_001189364	Coding	chr2:166149132 minus strand	3699
SCN1A	NM_006920	NP_008851	Coding	chr2:166073639 minus strand	3698
SCN2A	NM_001040142	NP_001035232	Coding	chr2:165239401 plus strand	3700
SCN2A	NM_001040143	NP_001035233	Coding	chr2:165295772 plus strand	3701
SCN2A	NM_021007	NP_066287	Coding	chr2:165293830 plus strand	3702

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SCN3A	NM_001081676	NP_001075145	Coding	chr2:165204067 minus strand	3703
SCN3A	NM_001081677	NP_001075146	Coding	chr2:165204067 minus strand	3703
SCN3A	NM_006922	NP_008853	Coding	chr2:165204067 minus strand	3703
SCN7A	NM_002976	NP_002967	Coding	chr2:166486971 minus strand	3704
SCN9A	NM_002977	NP_002968	Coding	chr2:166375987 minus strand	3705
SCRN3	NM_001193528	NP_001180457	Coding	chr2:174395728 plus strand	3706
SCRN3	NM_024583	NP_078859	Coding	chr2:174395728 plus strand	3706
SCTR	NM_002980	NP_002971	Coding	chr2:119524452 minus strand	3707
SDC1	NM_001006946	NP_001006947	Coding	chr2:20225433 minus strand	3708
SDC1	NM_002997	NP_002988	Coding	chr2:20225166 minus strand	3709
SDPR	NM_004657	NP_004648	Coding	chr2:191847280 minus strand	3710
SEMA4C	NM_017789	NP_060259	Coding	chr2:96869998 minus strand	3711
SEMA4F	NM_001271661	NP_001258590	Coding	chr2:74654227 plus strand	3712
SEMA4F	NM_001271662	NP_001258591	Coding	chr2:74654227 plus strand	3712
SEMA4F	NM_004263	NP_004254	Coding	chr2:74654227 plus strand	3712
SEPT10	NM_144710	NP_653311	Coding	chr2:109614206 minus strand	3713
SEPT10	NM_178584	NP_848699	Coding	chr2:109614206 minus strand	3713
SEPT2	NM_001008491	NP_001008491	Coding	chr2:241315186 plus strand	3714
SEPT2	NM_001008492	NP_001008492	Coding	chr2:241315860 plus strand	3715
SEPT2	NM_001282972	NP_001269901	Coding	chr2:241315860 plus strand	3715
SEPT2	NM_001282973	NP_001269902	Coding	chr2:241315860 plus strand	3715
SEPT2	NM_004404	NP_004395	Coding	chr2:241315860 plus strand	3715
SEPT2	NM_006155	NP_006146	Coding	chr2:241315186 plus strand	3714
SERPINE2	NM_001136528	NP_001130000	Coding	chr2:224039319 minus strand	3716
SERPINE2	NM_001136530	NP_001130002	Coding	chr2:224038640 minus strand	3717
SERPINE2	NM_006216	NP_006207	Coding	chr2:224039319 minus strand	3716
SERTAD2	NM_014755	NP_055570	Coding	chr2:64653912 minus strand	3718
SESTD1	NM_178123	NP_835224	Coding	chr2:179264623 minus strand	3719

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SF3B1	NM_001005526	NP_001005526	Coding	chr2:197435047 minus strand	3720
SF3B1	NM_012433	NP_036565	Coding	chr2:197435047 minus strand	3720
SF3B6	NM_016047	NP_057131	Coding	chr2:24076444 minus strand	3721
SFT2D3	NM_032740	NP_116129	Coding	chr2:127701022 plus strand	3722
SFTPB	NM_000542	NP_000533	Coding	chr2:85668741 minus strand	3723
SFTPB	NM_198843	NP_942140	Coding	chr2:85668741 minus strand	3723
SFXN5	NM_144579	NP_653180	Coding	chr2:73071836 minus strand	3724
SGOL2	NM_001160033	NP_001153505	Coding	chr2:200526141 plus strand	3725
SGOL2	NM_001160046	NP_001153518	Coding	chr2:200526141 plus strand	3725
SGOL2	NM_152524	NP_689737	Coding	chr2:200526141 plus strand	3725
SGPP2	NM_152386	NP_689599	Coding	chr2:222424602 plus strand	3726
SH2D6	NM_198482	NP_940884	Coding	chr2:85434794 plus strand	3727
SH3BP4	NM_014521	NP_055336	Coding	chr2:234951983 plus strand	3728
SH3RF3	NM_001099289	NP_001092759	Coding	chr2:109129540 plus strand	3729
SH3YL1	NM_001159597	NP_001153069	Coding	chr2:264097 minus strand	3730
SH3YL1	NM_001282682	NP_001269611	Coding	chr2:264866 minus strand	3731
SH3YL1	NM_001282687	NP_001269616	Coding	chr2:256340 minus strand	3732
SH3YL1	NM_015677	NP_056492	Coding	chr2:264097 minus strand	3730
SIX2	NM_016932	NP_058628	Coding	chr2:45009403 minus strand	3733
SIX3	NM_005413	NP_005404	Coding	chr2:44941897 plus strand	3734
SLC11A1	NM_000578	NP_000569	Coding	chr2:218382028 plus strand	3735
SLC16A14	NM_152527	NP_689740	Coding	chr2:230068999 minus strand	3736
SLC19A3	NM_025243	NP_079519	Coding	chr2:227718029 minus strand	3737
SLC1A4	NM_001193493	NP_001180422	Coding	chr2:64988444 plus strand	3738
SLC1A4	NM_003038	NP_003029	Coding	chr2:64989360 plus strand	3739
SLC20A1	NM_005415	NP_005406	Coding	chr2:112645856 plus strand	3740
SLC23A3	NM_001144889	NP_001138361	Coding	chr2:219170095 minus strand	3741
SLC23A3	NM_001144890	NP_001138362	Coding	chr2:219170095 minus strand	3741
SLC23A3	NM_144712	NP_653313	Coding	chr2:219170095 minus strand	3741
SLC25A12	NM_003705	NP_003696	Coding	chr2:171894306 minus strand	3742

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SLC30A3	NM_003459	NP_003450	Coding	chr2:27263092 minus strand	3743
SLC30A6	NM_001193513	NP_001180442	Coding	chr2:32165840 plus strand	3744
SLC30A6	NM_001193514	NP_001180443	Coding	chr2:32165840 plus strand	3744
SLC30A6	NM_001193515	NP_001180444	Coding	chr2:32165840 plus strand	3744
SLC30A6	NM_017964	NP_060434	Coding	chr2:32165840 plus strand	3744
SLC35F5	NM_025181	NP_079457	Coding	chr2:113756823 minus strand	3745
SLC35F6	NM_017877	NP_060347	Coding	chr2:26764273 plus strand	3746
SLC38A11	NM_001199148	NP_001186077	Coding	chr2:164955525 minus strand	3747
SLC38A11	NM_173512	NP_775783	Coding	chr2:164955525 minus strand	3747
SLC39A10	NM_001127257	NP_001120729	Coding	chr2:195656807 plus strand	3748
SLC39A10	NM_020342	NP_065075	Coding	chr2:195657127 plus strand	3749
SLC3A1	NM_000341	NP_000332	Coding	chr2:44275457 plus strand	3750
SLC40A1	NM_014585	NP_055400	Coding	chr2:189580811 minus strand	3751
SLC4A10	NM_001178015	NP_001171486	Coding	chr2:161624334 plus strand	3752
SLC4A10	NM_001178016	NP_001171487	Coding	chr2:161624334 plus strand	3752
SLC4A10	NM_022058	NP_071341	Coding	chr2:161624334 plus strand	3752
SLC4A1AP	NM_018158	NP_060628	Coding	chr2:27663470 plus strand	3753
SLC4A3	NM_005070	NP_005061	Coding	chr2:219627569 plus strand	3754
SLC4A3	NM_201574	NP_963868	Coding	chr2:219627569 plus strand	3754
SLC4A5	NM_021196	NP_067019	Coding	chr2:74315025 minus strand	3755
SLC4A5	NM_133478	NP_597812	Coding	chr2:74343407 minus strand	3756
SLC5A6	NM_021095	NP_066918	Coding	chr2:27212307 minus strand	3757
SLC5A7	NM_021815	NP_068587	Coding	chr2:107986538 plus strand	3758
SLC8A1	NM_001112800	NP_001106271	Coding	chr2:40430304 minus strand	3759
SLC8A1	NM_001112801	NP_001106272	Coding	chr2:40430304 minus strand	3759
SLC8A1	NM_001112802	NP_001106273	Coding	chr2:40512435 minus strand	3760
SLC8A1	NM_001252624	NP_001239553	Coding	chr2:40430304 minus strand	3759
SLC8A1	NM_021097	NP_066920	Coding	chr2:40430304 minus strand	3759
SLC9A2	NM_003048	NP_003039	Coding	chr2:102619706 plus strand	3761
SLC9A4	NM_001011552	NP_001011552	Coding	chr2:102473302 plus	3762

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				strand	
SMARCAL1	NM_001127207	NP_001120679	Coding	chr2:216412749 plus strand	3763
SMARCAL1	NM_014140	NP_054859	Coding	chr2:216412413 plus strand	3764
SMC6	NM_001142286	NP_001135758	Coding	chr2:17753829 minus strand	3765
SMC6	NM_024624	NP_078900	Coding	chr2:17753829 minus strand	3765
SMEK2	NM_001122964	NP_001116436	Coding	chr2:55617725 minus strand	3766
SMEK2	NM_001282850	NP_001269779	Coding	chr2:55617725 minus strand	3766
SMEK2	NM_020463	NP_065196	Coding	chr2:55617725 minus strand	3766
SMPD4	NM_001171083	NP_001164554	Coding	chr2:130181757 minus strand	3767
SMPD4	NM_017751	NP_060221	Coding	chr2:130181757 minus strand	3767
SMPD4	NM_017951	NP_060421	Coding	chr2:130181757 minus strand	3767
SMYD1	NM_198274	NP_938015	Coding	chr2:88067779 plus strand	3768
SMYD5	NM_006062	NP_006053	Coding	chr2:73214237 plus strand	3769
SNED1	NM_001080437	NP_001073906	Coding	chr2:240998837 plus strand	3770
SNRNP200	NM_014014	NP_054733	Coding	chr2:96305569 minus strand	3771
SNRNP27	NM_006857	NP_006848	Coding	chr2:69893942 plus strand	3772
SNRPG	NM_003096	NP_003087	Coding	chr2:70293737 minus strand	3773
SNTG2	NM_018968	NP_061841	Coding	chr2:950867 plus strand	3774
SNX17	NM_001267059	NP_001253988	Coding	chr2:27370495 plus strand	3775
SNX17	NM_001267060	NP_001253989	Coding	chr2:27370495 plus strand	3775
SNX17	NM_001267061	NP_001253990	Coding	chr2:27370495 plus strand	3775
SNX17	NM_014748	NP_055563	Coding	chr2:27370495 plus strand	3775
SOCS5	NM_014011	NP_054730	Coding	chr2:46698959 plus strand	3776
SOCS5	NM_144949	NP_659198	Coding	chr2:46699209 plus strand	3777
SOS1	NM_005633	NP_005624	Coding	chr2:39120463 minus strand	3778
SOWAHC	NM_023016	NP_075392	Coding	chr2:109614333 plus strand	3779
SOX11	NM_003108	NP_003099	Coding	chr2:5692666 plus strand	3780
SP100	NM_001080391	NP_001073860	Coding	chr2:230416155 plus strand	3781
SP100	NM_001206701	NP_001193630	Coding	chr2:230416155 plus strand	3781
SP100	NM_001206702	NP_001193631	Coding	chr2:230416155 plus strand	3781
SP100	NM_001206703	NP_001193632	Coding	chr2:230416155 plus strand	3781

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SP100	NM_001206704	NP_001193633	Coding	chr2:230416755 plus strand	3782
SP100	NM_003113	NP_003104	Coding	chr2:230416155 plus strand	3781
SP110	NM_001185015	NP_001171944	Coding	chr2:230225729 minus strand	3783
SP110	NM_004509	NP_004500	Coding	chr2:230220112 minus strand	3784
SP110	NM_004510	NP_004501	Coding	chr2:230220112 minus strand	3784
SP110	NM_080424	NP_536349	Coding	chr2:230220112 minus strand	3784
SP140	NM_001005176	NP_001005176	Coding	chr2:230225729 plus strand	3785
SP140	NM_001278451	NP_001265380	Coding	chr2:230225729 plus strand	3785
SP140	NM_001278452	NP_001265381	Coding	chr2:230225729 plus strand	3785
SP140	NM_001278453	NP_001265382	Coding	chr2:230225729 plus strand	3785
SP140	NM_007237	NP_009168	Coding	chr2:230225729 plus strand	3785
SP140L	NM_138402	NP_612411	Coding	chr2:230327178 plus strand	3786
SP3	NM_001017371	NP_001017371	Coding	chr2:173964219 minus strand	3787
SP3	NM_001172712	NP_001166183	Coding	chr2:173965702 minus strand	3788
SP3	NM_003111	NP_003102	Coding	chr2:173965702 minus strand	3788
SP5	NM_001003845	NP_001003845	Coding	chr2:170715346 plus strand	3789
SP9	NM_001145250	NP_001138722	Coding	chr2:174335092 plus strand	3790
SPAG16	NM_001025436	NP_001020607	Coding	chr2:213284378 plus strand	3791
SPAG16	NM_024532	NP_078808	Coding	chr2:213284378 plus strand	3791
SPAST	NM_014946	NP_055761	Coding	chr2:32063610 plus strand	3792
SPAST	NM_199436	NP_955468	Coding	chr2:32063610 plus strand	3792
SPATA3	NM_139073	NP_620712	Coding	chr2:230996123 plus strand	3793
SPATS2L	NM_001100422	NP_001093892	Coding	chr2:200306261 plus strand	3794
SPATS2L	NM_001100423	NP_001093893	Coding	chr2:200306632 plus strand	3795
SPATS2L	NM_001100424	NP_001093894	Coding	chr2:200306261 plus strand	3794
SPATS2L	NM_001282735	NP_001269664	Coding	chr2:200305880 plus strand	3796
SPATS2L	NM_001282743	NP_001269672	Coding	chr2:200305880 plus strand	3796
SPATS2L	NM_001282744	NP_001269673	Coding	chr2:200308949 plus strand	3797

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SPATS2L	NM_015535	NP_056350	Coding	chr2:200305880 plus strand	3796
SPC25	NM_020675	NP_065726	Coding	chr2:168890434 minus strand	3798
SPDYA	NM_001008779	NP_001008779	Coding	chr2:28815996 plus strand	3799
SPDYA	NM_001142634	NP_001136106	Coding	chr2:28810833 plus strand	3800
SPDYA	NM_182756	NP_877433	Coding	chr2:28810833 plus strand	3800
SPEG	NM_001173476	NP_001166947	Coding	chr2:219460811 plus strand	3801
SPEG	NM_005876	NP_005867	Coding	chr2:219434977 plus strand	3802
SPHKAP	NM_001142644	NP_001136116	Coding	chr2:228181645 minus strand	3803
SPHKAP	NM_030623	NP_085126	Coding	chr2:228181645 minus strand	3803
SPOPL	NM_001001664	NP_001001664	Coding	chr2:138501779 plus strand	3804
SPP2	NM_006944	NP_008875	Coding	chr2:234050701 plus strand	3805
SPR	NM_003124	NP_003115	Coding	chr2:72887382 plus strand	3806
SPRED2	NM_001128210	NP_001121682	Coding	chr2:65366797 minus strand	3807
SPRED2	NM_181784	NP_861449	Coding	chr2:65432522 minus strand	3808
SPTBN1	NM_003128	NP_003119	Coding	chr2:54456316 plus strand	3809
SPTBN1	NM_178313	NP_842565	Coding	chr2:54558393 plus strand	3810
SRBD1	NM_018079	NP_060549	Coding	chr2:45611294 minus strand	3811
SRD5A2	NM_000348	NP_000339	Coding	chr2:31580971 minus strand	3812
SRSF7	NM_001031684	NP_001026854	Coding	chr2:38751494 minus strand	3813
SRSF7	NM_001195446	NP_001182375	Coding	chr2:38751494 minus strand	3813
SSB	NM_001294145	NP_001281074	Coding	chr2:169799027 plus strand	3814
SSB	NM_003142	NP_003133	Coding	chr2:169798811 plus strand	3815
SSFA2	NM_001130445	NP_001123917	Coding	chr2:181891715 plus strand	3816
SSFA2	NM_001287503	NP_001274432	Coding	chr2:181891715 plus strand	3816
SSFA2	NM_001287504	NP_001274433	Coding	chr2:181891715 plus strand	3816
SSFA2	NM_001287505	NP_001274434	Coding	chr2:181891715 plus strand	3816
SSFA2	NM_006751	NP_006742	Coding	chr2:181891715 plus strand	3816
ST3GAL5	NM_001042437	NP_001035902	Coding	chr2:85867670 minus strand	3817
ST3GAL5	NM_003896	NP_003887	Coding	chr2:85889034 minus strand	3818

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ST6GAL2	NM_001142351	NP_001135823	Coding	chr2:106886154 minus strand	3819
ST6GAL2	NM_001142352	NP_001135824	Coding	chr2:106887107 minus strand	3820
ST6GAL2	NM_032528	NP_115917	Coding	chr2:106887107 minus strand	3820
STAM2	NM_005843	NP_005834	Coding	chr2:152175992 minus strand	3821
STAMBP	NM_006463	NP_006454	Coding	chr2:73828986 plus strand	3822
STAMBP	NM_201647	NP_964010	Coding	chr2:73828915 plus strand	3823
STAMBP	NM_213622	NP_998787	Coding	chr2:73828997 plus strand	3824
STARD7	NM_020151	NP_064536	Coding	chr2:96208835 minus strand	3825
STAT1	NM_007315	NP_009330	Coding	chr2:191014250 minus strand	3826
STAT1	NM_139266	NP_644671	Coding	chr2:191014250 minus strand	3826
STAT4	NM_001243835	NP_001230764	Coding	chr2:191151596 minus strand	3827
STAT4	NM_003151	NP_003142	Coding	chr2:191151260 minus strand	3828
STEAP3	NM_001008410	NP_001008410	Coding	chr2:119223807 plus strand	3829
STEAP3	NM_018234	NP_060704	Coding	chr2:119223807 plus strand	3829
STEAP3	NM_182915	NP_878919	Coding	chr2:119223807 plus strand	3829
STK11IP	NM_052902	NP_443134	Coding	chr2:219597873 plus strand	3830
STK16	NM_001008910	NP_001008910	Coding	chr2:219245469 plus strand	3831
STK17B	NM_004226	NP_004217	Coding	chr2:196171612 minus strand	3832
STK25	NM_001271977	NP_001258906	Coding	chr2:241508695 minus strand	3833
STK25	NM_001271978	NP_001258907	Coding	chr2:241508360 minus strand	3834
STK25	NM_001271979	NP_001258908	Coding	chr2:241508695 minus strand	3833
STK25	NM_001271980	NP_001258909	Coding	chr2:241508695 minus strand	3833
STK25	NM_001282305	NP_001269234	Coding	chr2:241509572 minus strand	3835
STK25	NM_001282306	NP_001269235	Coding	chr2:241508695 minus strand	3833
STK25	NM_001282307	NP_001269236	Coding	chr2:241508695 minus strand	3833
STK25	NM_001282308	NP_001269237	Coding	chr2:241508695 minus strand	3833
STK25	NM_006374	NP_006365	Coding	chr2:241508695 minus strand	3833
STK36	NM_001243313	NP_001230242	Coding	chr2:218672025 plus strand	3836

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STK36	NM_015690	NP_056505	Coding	chr2:218672025 plus strand	3836
STK39	NM_013233	NP_037365	Coding	chr2:168247595 minus strand	3837
STON1	NM_001198595	NP_001185524	Coding	chr2:48530168 plus strand	3838
STON1	NM_006873	NP_006864	Coding	chr2:48530168 plus strand	3838
STON1-GTF2A1L	NM_001198593	NP_001185522	Coding	chr2:48529924 plus strand	3839
STON1-GTF2A1L	NM_001198594	NP_001185523	Coding	chr2:48580586 plus strand	3840
STON1-GTF2A1L	NM_172311	NP_758515	Coding	chr2:48569019 plus strand	3841
STRADB	NM_001206864	NP_001193793	Coding	chr2:201451668 plus strand	3842
STRADB	NM_018571	NP_061041	Coding	chr2:201451668 plus strand	3842
STRN	NM_003162	NP_003153	Coding	chr2:36966472 minus strand	3843
SUCLG1	NM_003849	NP_003840	Coding	chr2:84459462 minus strand	3844
SULT1C2	NM_001056	NP_001047	Coding	chr2:108288638 plus strand	3845
SULT1C2	NM_176825	NP_789795	Coding	chr2:108288638 plus strand	3845
SULT1C3	NM_001008743	NP_001008743	Coding	chr2:108247194 plus strand	3846
SULT1C4	NM_006588	NP_006579	Coding	chr2:108377964 plus strand	3847
SULT6B1	NM_001032377	NP_001027549	Coding	chr2:37188547 minus strand	3848
SUMO1	NM_001005781	NP_001005781	Coding	chr2:202238599 minus strand	3849
SUMO1	NM_001005782	NP_001005782	Coding	chr2:202238599 minus strand	3849
SUMO1	NM_003352	NP_003343	Coding	chr2:202238599 minus strand	3849
SUPT7L	NM_001282729	NP_001269658	Coding	chr2:27663840 minus strand	3850
SUPT7L	NM_001282730	NP_001269659	Coding	chr2:27663840 minus strand	3850
SUPT7L	NM_001282731	NP_001269660	Coding	chr2:27663840 minus strand	3850
SUPT7L	NM_001282732	NP_001269661	Coding	chr2:27663840 minus strand	3850
SUPT7L	NM_014860	NP_055675	Coding	chr2:27663840 minus strand	3850
TACR1	NM_001058	NP_001049	Coding	chr2:75199519 minus strand	3851
TACR1	NM_015727	NP_056542	Coding	chr2:75199519 minus strand	3851
TAF1B	NM_005680	NP_005671	Coding	chr2:9843441 plus strand	3852
TANC1	NM_001145909	NP_001139381	Coding	chr2:158968633 plus strand	3853

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TANC1	NM_033394	NP_203752	Coding	chr2:158968633 plus strand	3853
TANK	NM_001199135	NP_001186064	Coding	chr2:161160427 plus strand	3854
TANK	NM_004180	NP_004171	Coding	chr2:161136954 plus strand	3855
TANK	NM_133484	NP_597841	Coding	chr2:161136954 plus strand	3855
TBC1D8	NM_001102426	NP_001095896	Coding	chr2:101151384 minus strand	3856
TBR1	NM_006593	NP_006584	Coding	chr2:161416108 plus strand	3857
TCF23	NM_175769	NP_786951	Coding	chr2:27149076 plus strand	3858
TCF7L1	NM_031283	NP_112573	Coding	chr2:85133459 plus strand	3859
TEKT4	NM_001286559	NP_001273488	Coding	chr2:94871432 plus strand	3860
TEKT4	NM_144705	NP_653306	Coding	chr2:94871432 plus strand	3860
TET3	NM_001287491	NP_001274420	Coding	chr2:73986403 plus strand	3861
TEX261	NM_144582	NP_653183	Coding	chr2:70994871 minus strand	3862
TEX37	NM_152670	NP_689883	Coding	chr2:88524650 plus strand	3863
TFCP2L1	NM_014553	NP_055368	Coding	chr2:121285202 minus strand	3864
TFPI	NM_001032281	NP_001027452	Coding	chr2:187554492 minus strand	3865
TFPI	NM_006287	NP_006278	Coding	chr2:187554492 minus strand	3865
TGFA	NM_001099691	NP_001093161	Coding	chr2:70554015 minus strand	3866
TGFA	NM_003236	NP_003227	Coding	chr2:70554015 minus strand	3866
TGFBRAP1	NM_001142621	NP_001136093	Coding	chr2:105329714 minus strand	3867
TGFBRAP1	NM_004257	NP_004248	Coding	chr2:105329714 minus strand	3867
TGOLN2	NM_001206840	NP_001193769	Coding	chr2:85328296 minus strand	3868
TGOLN2	NM_001206841	NP_001193770	Coding	chr2:85328296 minus strand	3868
TGOLN2	NM_001206844	NP_001193773	Coding	chr2:85328296 minus strand	3868
TGOLN2	NM_006464	NP_006455	Coding	chr2:85328296 minus strand	3868
THADA	NM_001083953	NP_001077422	Coding	chr2:43595974 minus strand	3869
THADA	NM_001271643	NP_001258572	Coding	chr2:43595974 minus strand	3869
THADA	NM_001271644	NP_001258573	Coding	chr2:43596046 minus strand	3870
THADA	NM_022065	NP_071348	Coding	chr2:43596046 minus strand	3870
THAP4	NM_001164356	NP_001157828	Coding	chr2:241617501 minus strand	3871

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THAP4	NM_015963	NP_057047	Coding	chr2:241637310 minus strand	3872
THNSL2	NM_001244676	NP_001231605	Coding	chr2:88170294 plus strand	3873
THNSL2	NM_001244678	NP_001231607	Coding	chr2:88170294 plus strand	3873
THNSL2	NM_018271	NP_060741	Coding	chr2:88173138 plus strand	3874
THSD7B	NM_001080427	NP_001073896	Coding	chr2:136990891 plus strand	3875
THUMPD2	NM_025264	NP_079540	Coding	chr2:39779276 minus strand	3876
TIA1	NM_022037	NP_071320	Coding	chr2:70248647 minus strand	3877
TIA1	NM_022173	NP_071505	Coding	chr2:70248647 minus strand	3877
TIGD1	NM_145702	NP_663748	Coding	chr2:232550516 minus strand	3878
TLK1	NM_001136554	NP_001130026	Coding	chr2:171231314 minus strand	3879
TLK1	NM_001136555	NP_001130027	Coding	chr2:171066973 minus strand	3880
TLK1	NM_012290	NP_036422	Coding	chr2:171160900 minus strand	3881
TLX2	NM_016170	NP_057254	Coding	chr2:74514468 plus strand	3882
TM4SF20	NM_024795	NP_079071	Coding	chr2:227379306 minus strand	3883
TMBIM1	NM_022152	NP_071435	Coding	chr2:218292557 minus strand	3884
TMEFF2	NM_016192	NP_057276	Coding	chr2:192194918 minus strand	3885
TMEM127	NM_001193304	NP_001180233	Coding	chr2:96266013 minus strand	3886
TMEM127	NM_017849	NP_060319	Coding	chr2:96266013 minus strand	3886
TMEM131	NM_015348	NP_056163	Coding	chr2:97995891 minus strand	3887
TMEM150A	NM_001031738	NP_001026908	Coding	chr2:85602699 minus strand	3888
TMEM163	NM_030923	NP_112185	Coding	chr2:134719001 minus strand	3889
TMEM169	NM_001142310	NP_001135782	Coding	chr2:216081865 plus strand	3890
TMEM169	NM_001142311	NP_001135783	Coding	chr2:216081865 plus strand	3890
TMEM169	NM_001142312	NP_001135784	Coding	chr2:216081865 plus strand	3890
TMEM169	NM_138390	NP_612399	Coding	chr2:216081865 plus strand	3890
TMEM17	NM_198276	NP_938017	Coding	chr2:62506469 minus strand	3891
TMEM177	NM_001105198	NP_001098668	Coding	chr2:119679166 plus strand	3892
TMEM177	NM_001105199	NP_001098669	Coding	chr2:119679166 plus strand	3892
TMEM177	NM_030577	NP_085054	Coding	chr2:119679166 plus	3892

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				strand	
TMEM178A	NM_001167959	NP_001161431	Coding	chr2:39665497 plus strand	3893
TMEM178A	NM_152390	NP_689603	Coding	chr2:39665894 plus strand	3894
TMEM18	NM_152834	NP_690047	Coding	chr2:677439 minus strand	3895
TMEM182	NM_144632	NP_653233	Coding	chr2:102762030 plus strand	3896
TMEM185B	NM_024121	NP_077026	Coding	chr2:120223408 minus strand	3897
TMEM194B	NM_001142645	NP_001136117	Coding	chr2:190534742 minus strand	3898
TMEM198	NM_001005209	NP_001005209	Coding	chr2:219544022 plus strand	3899
TMEM214	NM_001083590	NP_001077059	Coding	chr2:27032905 plus strand	3900
TMEM214	NM_017727	NP_060197	Coding	chr2:27032905 plus strand	3900
TMEM237	NM_001044385	NP_001037850	Coding	chr2:201643529 minus strand	3901
TMEM237	NM_152388	NP_689601	Coding	chr2:201642944 minus strand	3902
TMEM247	NM_001145051	NP_001138523	Coding	chr2:46479564 plus strand	3903
TMEM37	NM_183240	NP_899063	Coding	chr2:119431869 plus strand	3904
TMEM87B	NM_032824	NP_116213	Coding	chr2:112055222 plus strand	3905
TMSB10	NM_021103	NP_066926	Coding	chr2:84905638 plus strand	3906
TNFAIP6	NM_007115	NP_009046	Coding	chr2:151357591 plus strand	3907
TNP1	NM_003284	NP_003275	Coding	chr2:216860059 minus strand	3908
TNS1	NM_022648	NP_072174	Coding	chr2:217944073 minus strand	3909
TP53I3	NM_001206802	NP_001193731	Coding	chr2:24084331 minus strand	3910
TP53I3	NM_004881	NP_004872	Coding	chr2:24085215 minus strand	3911
TP53I3	NM_147184	NP_671713	Coding	chr2:24085215 minus strand	3911
TPO	NM_000547	NP_000538	Coding	chr2:1413460 plus strand	3912
TPO	NM_001206744	NP_001193673	Coding	chr2:1413460 plus strand	3912
TPO	NM_001206745	NP_001193674	Coding	chr2:1413460 plus strand	3912
TPO	NM_175719	NP_783650	Coding	chr2:1413460 plus strand	3912
TPO	NM_175721	NP_783652	Coding	chr2:1414407 plus strand	3913
TPO	NM_175722	NP_783653	Coding	chr2:1414407 plus strand	3913
TPRKB	NM_016058	NP_057142	Coding	chr2:73737390 minus strand	3914
TRABD2A	NM_001080824	NP_001074293	Coding	chr2:84881245 minus strand	3915
TRABD2A	NM_001277053	NP_001263982	Coding	chr2:84881245 minus strand	3915
TRAF3IP1	NM_001139490	NP_001132962	Coding	chr2:238320543 plus strand	3916

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TRAF3IP1	NM_015650	NP_056465	Coding	chr2:238320543 plus strand	3916
TRAK2	NM_015049	NP_055864	Coding	chr2:201451596 minus strand	3917
TRAPPC12	NM_016030	NP_057114	Coding	chr2:3379674 plus strand	3918
TRIB2	NM_021643	NP_067675	Coding	chr2:12716871 plus strand	3919
TRIM43	NM_138800	NP_620155	Coding	chr2:95592017 plus strand	3920
TRIM43B	NM_001164464	NP_001157936	Coding	chr2:95484731 minus strand	3921
TRIM54	NM_032546	NP_115935	Coding	chr2:27282428 plus strand	3922
TRIM54	NM_187841	NP_912730	Coding	chr2:27282428 plus strand	3922
TRIP12	NM_001284214	NP_001271143	Coding	chr2:229922009 minus strand	3923
TRIP12	NM_001284215	NP_001271144	Coding	chr2:229880128 minus strand	3924
TRIP12	NM_001284216	NP_001271145	Coding	chr2:229922009 minus strand	3923
TRIP12	NM_004238	NP_004229	Coding	chr2:229922009 minus strand	3923
TRMT61B	NM_017910	NP_060380	Coding	chr2:28870309 minus strand	3925
TRPM8	NM_024080	NP_076985	Coding	chr2:233917397 plus strand	3926
TSGA10	NM_025244	NP_079520	Coding	chr2:99154724 minus strand	3927
TSGA10	NM_182911	NP_878915	Coding	chr2:99141574 minus strand	3928
TSN	NM_001261401	NP_001248330	Coding	chr2:121755544 plus strand	3929
TSN	NM_004622	NP_004613	Coding	chr2:121755544 plus strand	3929
TSPYL6	NM_001003937	NP_001003937	Coding	chr2:54256272 minus strand	3930
TSSC1	NM_003310	NP_003301	Coding	chr2:3377882 minus strand	3931
TTC21B	NM_024753	NP_079029	Coding	chr2:165953838 minus strand	3932
TTC27	NM_001193509	NP_001180438	Coding	chr2:32628019 plus strand	3933
TTC27	NM_017735	NP_060205	Coding	chr2:32628019 plus strand	3933
TTC30A	NM_152275	NP_689488	Coding	chr2:177618966 minus strand	3934
TTC30B	NM_152517	NP_689730	Coding	chr2:177552796 minus strand	3935
TTC31	NM_022492	NP_071937	Coding	chr2:74483072 plus strand	3936
TTC32	NM_001008237	NP_001008238	Coding	chr2:19901983 minus strand	3937
TTC7A	NM_001288951	NP_001275880	Coding	chr2:46941173 plus strand	3938
TTC7A	NM_001288953	NP_001275882	Coding	chr2:46916128 plus strand	3939
TTC7A	NM_001288955	NP_001275884	Coding	chr2:46941173 plus strand	3938
TTC7A	NM_020458	NP_065191	Coding	chr2:46941173 plus strand	3938
TTL	NM_153712	NP_714923	Coding	chr2:112482165 plus	3940

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				strand	
TTLL4	NM_014640	NP_055455	Coding	chr2:218710844 plus strand	3941
TTN	NM_001256850	NP_001243779	Coding	chr2:178807423 minus strand	3942
TTN	NM_001267550	NP_001254479	Coding	chr2:178807423 minus strand	3942
TTN	NM_003319	NP_003310	Coding	chr2:178807423 minus strand	3942
TTN	NM_133378	NP_596869	Coding	chr2:178807423 minus strand	3942
TTN	NM_133379	NP_596870	Coding	chr2:178807423 minus strand	3942
TTN	NM_133432	NP_597676	Coding	chr2:178807423 minus strand	3942
TTN	NM_133437	NP_597681	Coding	chr2:178807423 minus strand	3942
TUBA3D	NM_080386	NP_525125	Coding	chr2:131476006 plus strand	3943
TUBA3E	NM_207312	NP_997195	Coding	chr2:130198461 minus strand	3944
TUBA4A	NM_001278552	NP_001265481	Coding	chr2:219254608 minus strand	3945
TUBA4A	NM_006000	NP_005991	Coding	chr2:219253946 minus strand	3946
TWIST2	NM_001271893	NP_001258822	Coding	chr2:238848031 plus strand	3947
TWIST2	NM_057179	NP_476527	Coding	chr2:238848031 plus strand	3947
TXNDC9	NM_005783	NP_005774	Coding	chr2:99336397 minus strand	3948
TYW5	NM_001039693	NP_001034782	Coding	chr2:199955736 minus strand	3949
UBE2E3	NM_001278554	NP_001265483	Coding	chr2:180981123 plus strand	3950
UBE2E3	NM_001278555	NP_001265484	Coding	chr2:180980384 plus strand	3951
UBE2E3	NM_006357	NP_006348	Coding	chr2:180980580 plus strand	3952
UBE2E3	NM_182678	NP_872619	Coding	chr2:180980384 plus strand	3951
UBE2F	NM_001278305	NP_001265234	Coding	chr2:237968792 plus strand	3953
UBE2F	NM_001278306	NP_001265235	Coding	chr2:237966944 plus strand	3954
UBE2F	NM_001278307	NP_001265236	Coding	chr2:237966944 plus strand	3954
UBE2F	NM_001278308	NP_001265237	Coding	chr2:237966944 plus strand	3954
UBE2F	NM_080678	NP_542409	Coding	chr2:237966944 plus strand	3954
UBR3	NM_172070	NP_742067	Coding	chr2:169827507 plus strand	3955
UBXN2A	NM_181713	NP_859064	Coding	chr2:23940505 plus strand	3956

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UBXN4	NM_014607	NP_055422	Coding	chr2:135741618 plus strand	3957
UCN	NM_003353	NP_003344	Coding	chr2:27308262 minus strand	3958
UGGT1	NM_020120	NP_064505	Coding	chr2:128091179 plus strand	3959
UGP2	NM_001001521	NP_001001521	Coding	chr2:63840963 plus strand	3960
UGP2	NM_006759	NP_006750	Coding	chr2:63841879 plus strand	3961
UGT1A1	NM_000463	NP_000454	Coding	chr2:233760272 plus strand	3962
UGT1A10	NM_019075	NP_061948	Coding	chr2:233636476 plus strand	3963
UGT1A3	NM_019093	NP_061966	Coding	chr2:233729126 plus strand	3964
UGT1A4	NM_007120	NP_009051	Coding	chr2:233718791 plus strand	3965
UGT1A5	NM_019078	NP_061951	Coding	chr2:233712991 plus strand	3966
UGT1A6	NM_001072	NP_001063	Coding	chr2:233692865 plus strand	3967
UGT1A6	NM_205862	NP_995584	Coding	chr2:233691674 plus strand	3968
UGT1A7	NM_019077	NP_061950	Coding	chr2:233681937 plus strand	3969
UGT1A8	NM_019076	NP_061949	Coding	chr2:233617644 plus strand	3970
UGT1A9	NM_021027	NP_066307	Coding	chr2:233671897 plus strand	3971
UNC50	NM_014044	NP_054763	Coding	chr2:98608578 plus strand	3972
UNC80	NM_032504	NP_115893	Coding	chr2:209771992 plus strand	3973
UNC80	NM_182587	NP_872393	Coding	chr2:209771992 plus strand	3973
UPP2	NM_001135098	NP_001128570	Coding	chr2:157995178 plus strand	3974
UPP2	NM_173355	NP_775491	Coding	chr2:158101869 plus strand	3975
USP34	NM_014709	NP_055524	Coding	chr2:61470714 minus strand	3976
USP37	NM_020935	NP_065986	Coding	chr2:218568361 minus strand	3977
USP39	NM_001256725	NP_001243654	Coding	chr2:85616091 plus strand	3978
USP39	NM_001256726	NP_001243655	Coding	chr2:85616091 plus strand	3978
USP39	NM_001256727	NP_001243656	Coding	chr2:85612102 plus strand	3979
USP39	NM_001256728	NP_001243657	Coding	chr2:85612102 plus strand	3979
USP39	NM_006590	NP_006581	Coding	chr2:85616091 plus strand	3978
USP40	NM_018218	NP_060688	Coding	chr2:233565590 minus strand	3980
UXS1	NM_001253875	NP_001240804	Coding	chr2:106194339 minus strand	3981
UXS1	NM_001253876	NP_001240805	Coding	chr2:106138881 minus strand	3982

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UXS1	NM_025076	NP_079352	Coding	chr2:106194339 minus strand	3981
VAMP5	NM_006634	NP_006625	Coding	chr2:85584407 plus strand	3983
VAMP8	NM_003761	NP_003752	Coding	chr2:85577490 plus strand	3984
VAX2	NM_012476	NP_036608	Coding	chr2:70900589 plus strand	3985
VIL1	NM_007127	NP_009058	Coding	chr2:218419114 plus strand	3986
VIT	NM_001177969	NP_001171440	Coding	chr2:36696689 plus strand	3987
VIT	NM_001177970	NP_001171441	Coding	chr2:36696689 plus strand	3987
VIT	NM_001177971	NP_001171442	Coding	chr2:36696689 plus strand	3987
VIT	NM_001177972	NP_001171443	Coding	chr2:36696689 plus strand	3987
VIT	NM_053276	NP_444506	Coding	chr2:36696689 plus strand	3987
VPS54	NM_001005739	NP_001005739	Coding	chr2:64019080 minus strand	3988
VPS54	NM_016516	NP_057600	Coding	chr2:64019080 minus strand	3988
VRK2	NM_001130480	NP_001123952	Coding	chr2:58046641 plus strand	3989
VRK2	NM_001130481	NP_001123953	Coding	chr2:58046711 plus strand	3990
VRK2	NM_001130482	NP_001123954	Coding	chr2:58046641 plus strand	3989
VRK2	NM_001130483	NP_001123955	Coding	chr2:58046641 plus strand	3989
VRK2	NM_001288836	NP_001275765	Coding	chr2:58046641 plus strand	3989
VRK2	NM_001288837	NP_001275766	Coding	chr2:57907650 plus strand	3991
VRK2	NM_001288838	NP_001275767	Coding	chr2:57907650 plus strand	3991
VRK2	NM_001288839	NP_001275768	Coding	chr2:58046641 plus strand	3989
VRK2	NM_006296	NP_006287	Coding	chr2:58046641 plus strand	3989
VSNL1	NM_003385	NP_003376	Coding	chr2:17540539 plus strand	3992
VWA3B	NM_144992	NP_659429	Coding	chr2:98087131 plus strand	3993
VWC2L	NM_001080500	NP_001073969	Coding	chr2:214411736 plus strand	3994
WBP1	NM_012477	NP_036609	Coding	chr2:74458399 plus strand	3995
WDFY1	NM_020830	NP_065881	Coding	chr2:223945335 minus strand	3996
WDPCP	NM_001042692	NP_001036157	Coding	chr2:63438007 minus strand	3997
WDPCP	NM_015910	NP_056994	Coding	chr2:63588733 minus strand	3998
WDR12	NM_018256	NP_060726	Coding	chr2:202912226 minus strand	3999
WDR33	NM_001006622	NP_001006623	Coding	chr2:127811187 minus strand	4000
WDR33	NM_001006623	NP_001006624	Coding	chr2:127811187 minus strand	4000
WDR33	NM_018383	NP_060853	Coding	chr2:127811187 minus strand	4000
WDR35	NM_001006657	NP_001006658	Coding	chr2:19990123 minus strand	4001
WDR35	NM_020779	NP_065830	Coding	chr2:19990123 minus strand	4001

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WDR43	NM_015131	NP_055946	Coding	chr2:28894642 plus strand	4002
WDR54	NM_032118	NP_115494	Coding	chr2:74421757 plus strand	4003
WDR75	NM_032168	NP_115544	Coding	chr2:189441432 plus strand	4004
WDR92	NM_001256476	NP_001243405	Coding	chr2:68157560 minus strand	4005
WDR92	NM_138458	NP_612467	Coding	chr2:68157560 minus strand	4005
WDSUB1	NM_001128212	NP_001121684	Coding	chr2:159286725 minus strand	4006
WDSUB1	NM_001128213	NP_001121685	Coding	chr2:159286592 minus strand	4007
WDSUB1	NM_152528	NP_689741	Coding	chr2:159286552 minus strand	4008
WIPF1	NM_001077269	NP_001070737	Coding	chr2:174682899 minus strand	4009
WIPF1	NM_003387	NP_003378	Coding	chr2:174634579 minus strand	4010
WNT10A	NM_025216	NP_079492	Coding	chr2:218880532 plus strand	4011
WNT6	NM_006522	NP_006513	Coding	chr2:218859822 plus strand	4012
WTH3DI	NM_001077637	NP_001071105	Coding	chr2:131364158 minus strand	4013
XDH	NM_000379	NP_000370	Coding	chr2:31414745 minus strand	4014
XIRP2	NM_001079810	NP_001073278	Coding	chr2:166888486 plus strand	4015
XIRP2	NM_001199143	NP_001186072	Coding	chr2:166888486 plus strand	4015
XIRP2	NM_001199144	NP_001186073	Coding	chr2:167187282 plus strand	4016
XIRP2	NM_001199145	NP_001186074	Coding	chr2:167187282 plus strand	4016
XIRP2	NM_152381	NP_689594	Coding	chr2:166888486 plus strand	4015
XPO1	NM_003400	NP_003391	Coding	chr2:61538283 minus strand	4017
XRCC5	NM_021141	NP_066964	Coding	chr2:216109296 plus strand	4018
YIPF4	NM_032312	NP_115688	Coding	chr2:32277888 plus strand	4019
YPEL5	NM_001127399	NP_001120871	Coding	chr2:30146883 plus strand	4020
YPEL5	NM_001127400	NP_001120872	Coding	chr2:30146883 plus strand	4020
YPEL5	NM_001127401	NP_001120873	Coding	chr2:30146883 plus strand	4020
YPEL5	NM_016061	NP_057145	Coding	chr2:30146883 plus strand	4020
YWHAQ	NM_006826	NP_006817	Coding	chr2:9631055 minus strand	4021
ZAK	NM_016653	NP_057737	Coding	chr2:173075836 plus strand	4022
ZAK	NM_133646	NP_598407	Coding	chr2:173075836 plus strand	4022
ZAP70	NM_001079	NP_001070	Coding	chr2:97713567 plus strand	4023

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ZAP70	NM_207519	NP_997402	Coding	chr2:97734405 plus strand	4024
ZC3H15	NM_018471	NP_060941	Coding	chr2:186486157 plus strand	4025
ZC3H6	NM_198581	NP_940983	Coding	chr2:112275600 plus strand	4026
ZC3H8	NM_032494	NP_115883	Coding	chr2:112255087 minus strand	4027
ZDBF2	NM_001285549	NP_001272478	Coding	chr2:206275027 plus strand	4028
ZDBF2	NM_020923	NP_065974	Coding	chr2:206274640 plus strand	4029
ZEB2	NM_001171653	NP_001165124	Coding	chr2:144520391 minus strand	4030
ZEB2	NM_014795	NP_055610	Coding	chr2:144520391 minus strand	4030
ZFAND2B	NM_001270998	NP_001257927	Coding	chr2:219206783 plus strand	4031
ZFAND2B	NM_001270999	NP_001257928	Coding	chr2:219206783 plus strand	4031
ZFAND2B	NM_138802	NP_620157	Coding	chr2:219206783 plus strand	4031
ZFP36L2	NM_006887	NP_008818	Coding	chr2:43226606 minus strand	4032
ZNF142	NM_001105537	NP_001099007	Coding	chr2:218659540 minus strand	4033
ZNF2	NM_001017396	NP_001017396	Coding	chr2:95165416 plus strand	4034
ZNF2	NM_001282398	NP_001269327	Coding	chr2:95165416 plus strand	4034
ZNF2	NM_001291604	NP_001278533	Coding	chr2:95165416 plus strand	4034
ZNF2	NM_001291605	NP_001278534	Coding	chr2:95165416 plus strand	4034
ZNF2	NM_021088	NP_066574	Coding	chr2:95165416 plus strand	4034
ZNF385B	NM_001113397	NP_001106868	Coding	chr2:179746042 minus strand	4035
ZNF385B	NM_001113398	NP_001106869	Coding	chr2:179562588 minus strand	4036
ZNF385B	NM_001282725	NP_001269654	Coding	chr2:179585906 minus strand	4037
ZNF385B	NM_152520	NP_689733	Coding	chr2:179861505 minus strand	4038
ZNF512	NM_001271286	NP_001258215	Coding	chr2:27582968 plus strand	4039
ZNF512	NM_001271287	NP_001258216	Coding	chr2:27582968 plus strand	4039
ZNF512	NM_001271288	NP_001258217	Coding	chr2:27582968 plus strand	4039
ZNF512	NM_001271289	NP_001258218	Coding	chr2:27582968 plus strand	4039
ZNF512	NM_001271318	NP_001258247	Coding	chr2:27582968 plus strand	4039
ZNF512	NM_032434	NP_115810	Coding	chr2:27582968 plus strand	4039
ZNF513	NM_001201459	NP_001188388	Coding	chr2:27380444 minus strand	4040
ZNF513	NM_144631	NP_653232	Coding	chr2:27380744 minus strand	4041
ZNF514	NM_032788	NP_116177	Coding	chr2:95159518 minus strand	4042

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ZNF638	NM_001014972	NP_001014972	Coding	chr2:71331754 plus strand	4043
ZNF638	NM_001252612	NP_001239541	Coding	chr2:71331754 plus strand	4043
ZNF638	NM_001252613	NP_001239542	Coding	chr2:71331754 plus strand	4043
ZNF638	NM_014497	NP_055312	Coding	chr2:71331754 plus strand	4043
ZNF804A	NM_194250	NP_919226	Coding	chr2:184598365 plus strand	4044
ZRANB3	NM_001286568	NP_001273497	Coding	chr2:135530730 minus strand	4045
ZRANB3	NM_001286569	NP_001273498	Coding	chr2:135530730 minus strand	4045
ZRANB3	NM_032143	NP_115519	Coding	chr2:135531236 minus strand	4046
ZSWIM2	NM_182521	NP_872327	Coding	chr2:186849170 minus strand	4047
A4GNT	NM_016161	NP_057245	Coding	chr3:138132387 minus strand	315236
AADAC	NM_001086	NP_001077	Coding	chr3:151814072 plus strand	315237
AADACL2	NM_207365	NP_997248	Coding	chr3:151733915 plus strand	315238
ABCC5	NM_001023587	NP_001018881	Coding	chr3:184017939 minus strand	315239
ABCC5	NM_005688	NP_005679	Coding	chr3:184017939 minus strand	315239
ABCF3	NM_018358	NP_060828	Coding	chr3:184186074 plus strand	315240
ABHD10	NM_001272069	NP_001258998	Coding	chr3:111978875 plus strand	315241
ABHD10	NM_018394	NP_060864	Coding	chr3:111978875 plus strand	315241
ABHD14A	NM_015407	NP_056222	Coding	chr3:51975025 plus strand	315242
ABHD14B	NM_001146314	NP_001139786	Coding	chr3:51974630 minus strand	315243
ABHD14B	NM_001254753	NP_001241682	Coding	chr3:51974630 minus strand	315243
ABHD14B	NM_032750	NP_116139	Coding	chr3:51974630 minus strand	315243
ABHD5	NM_016006	NP_057090	Coding	chr3:43690882 plus strand	315244
ABHD6	NM_020676	NP_065727	Coding	chr3:58237531 plus strand	315245
ABI3BP	NM_015429	NP_056244	Coding	chr3:100993490 minus strand	315246
ABTB1	NM_032548	NP_115937	Coding	chr3:127672937 plus strand	315247
ABTB1	NM_172027	NP_742024	Coding	chr3:127672937 plus strand	315247
ACAA1	NM_001130410	NP_001123882	Coding	chr3:38137242 minus strand	315248
ACAA1	NM_001607	NP_001598	Coding	chr3:38137242 minus strand	315248
ACAD11	NM_032169	NP_115545	Coding	chr3:132660131 minus strand	315249
ACAD9	NM_014049	NP_054768	Coding	chr3:128879489 plus	315250

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				strand	
ACAP2	NM_012287	NP_036419	Coding	chr3:195443088 minus strand	315251
ACKR2	NM_001296	NP_001287	Coding	chr3:42809471 plus strand	315252
ACKR4	NM_016557	NP_057641	Coding	chr3:132597236 plus strand	315253
ACKR4	NM_178445	NP_848540	Coding	chr3:132600136 plus strand	315254
ACOX2	NM_003500	NP_003491	Coding	chr3:58537202 minus strand	315255
ACPP	NM_001099	NP_001090	Coding	chr3:132317366 plus strand	315256
ACPP	NM_001134194	NP_001127666	Coding	chr3:132317366 plus strand	315256
ACPP	NM_001292037	NP_001278966	Coding	chr3:132317366 plus strand	315256
ACTL6A	NM_004301	NP_004292	Coding	chr3:179562919 plus strand	315257
ACTL6A	NM_177989	NP_817126	Coding	chr3:179562919 plus strand	315257
ACTL6A	NM_178042	NP_829888	Coding	chr3:179562919 plus strand	315257
ACTR8	NM_022899	NP_075050	Coding	chr3:53882202 minus strand	315258
ACTRT3	NM_032487	NP_115876	Coding	chr3:169769895 minus strand	315259
ACVR2B	NM_001106	NP_001097	Coding	chr3:38454298 plus strand	315260
ACY1	NM_000666	NP_000657	Coding	chr3:51983283 plus strand	315261
ACY1	NM_001198895	NP_001185824	Coding	chr3:51983283 plus strand	315261
ACY1	NM_001198896	NP_001185825	Coding	chr3:51983283 plus strand	315261
ACY1	NM_001198897	NP_001185826	Coding	chr3:51983283 plus strand	315261
ACY1	NM_001198898	NP_001185827	Coding	chr3:51983283 plus strand	315261
ADAMTS9	NM_182920	NP_891550	Coding	chr3:64687689 minus strand	315262
ADCY5	NM_001199642	NP_001186571	Coding	chr3:123416342 minus strand	315263
ADCY5	NM_183357	NP_899200	Coding	chr3:123448545 minus strand	315264
ADIPOQ	NM_001177800	NP_001171271	Coding	chr3:186842673 plus strand	315265
ADIPOQ	NM_004797	NP_004788	Coding	chr3:186842673 plus strand	315265
ADPRH	NM_001125	NP_001116	Coding	chr3:119579432 plus strand	315266
ADPRH	NM_001291949	NP_001278878	Coding	chr3:119579432 plus strand	315266
ADPRH	NM_001291950	NP_001278879	Coding	chr3:119579432 plus strand	315266
AGTR1	NM_000685	NP_000676	Coding	chr3:148697870 plus strand	315267
AGTR1	NM_004835	NP_004826	Coding	chr3:148697870 plus strand	315267

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AGTR1	NM_009585	NP_033611	Coding	chr3:148697870 plus strand	315267
AGTR1	NM_031850	NP_114038	Coding	chr3:148697870 plus strand	315267
AGTR1	NM_032049	NP_114438	Coding	chr3:148730179 plus strand	315268
AHSG	NM_001622	NP_001613	Coding	chr3:186613060 plus strand	315269
ALAS1	NM_000688	NP_000679	Coding	chr3:52198082 plus strand	315270
ALAS1	NM_199166	NP_954635	Coding	chr3:52198082 plus strand	315270
ALCAM	NM_001243280	NP_001230209	Coding	chr3:105366712 plus strand	315271
ALCAM	NM_001243281	NP_001230210	Coding	chr3:105366712 plus strand	315271
ALCAM	NM_001243283	NP_001230212	Coding	chr3:105366712 plus strand	315271
ALCAM	NM_001627	NP_001618	Coding	chr3:105366712 plus strand	315271
ALDH1L1	NM_001270364	NP_001257293	Coding	chr3:126181186 minus strand	315272
ALDH1L1	NM_001270365	NP_001257294	Coding	chr3:126180802 minus strand	315273
ALDH1L1	NM_012190	NP_036322	Coding	chr3:126180802 minus strand	315273
ALG1L	NM_001015050	NP_001015050	Coding	chr3:125937044 minus strand	315274
ALG1L	NM_001195223	NP_001182152	Coding	chr3:125937044 minus strand	315274
ALG1L2	NM_001136152	NP_001129624	Coding	chr3:130081830 plus strand	315275
ALG3	NM_001006941	NP_001006942	Coding	chr3:184249525 minus strand	315276
ALG3	NM_005787	NP_005778	Coding	chr3:184248971 minus strand	315277
ALS2CL	NM_001190707	NP_001177636	Coding	chr3:46693656 minus strand	315278
ALS2CL	NM_147129	NP_667340	Coding	chr3:46693704 minus strand	315279
ALS2CL	NM_182775	NP_877576	Coding	chr3:46677409 minus strand	315280
AMIGO3	NM_198722	NP_942015	Coding	chr3:49719805 minus strand	315281
AMOTL2	NM_001278683	NP_001265612	Coding	chr3:134375417 minus strand	315282
AMOTL2	NM_001278685	NP_001265614	Coding	chr3:134374585 minus strand	315283
AMOTL2	NM_016201	NP_057285	Coding	chr3:134374585 minus strand	315283
AMT	NM_000481	NP_000472	Coding	chr3:49422678 minus strand	315284
AMT	NM_001164710	NP_001158182	Coding	chr3:49422678 minus strand	315284
AMT	NM_001164711	NP_001158183	Coding	chr3:49422678 minus strand	315284

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AMT	NM_001164712	NP_001158184	Coding	chr3:49422678 minus strand	315284
ANAPC13	NM_001242374	NP_001229303	Coding	chr3:134486023 minus strand	315285
ANAPC13	NM_001242375	NP_001229304	Coding	chr3:134485989 minus strand	315286
ANAPC13	NM_015391	NP_056206	Coding	chr3:134486021 minus strand	315287
ANKRD28	NM_001195098	NP_001182027	Coding	chr3:15798184 minus strand	315288
ANKRD28	NM_001195099	NP_001182028	Coding	chr3:15756551 minus strand	315289
ANKRD28	NM_015199	NP_056014	Coding	chr3:15859546 minus strand	315290
ANKUB1	NM_001144960	NP_001138432	Coding	chr3:149792823 minus strand	315291
ANO10	NM_001204831	NP_001191760	Coding	chr3:43622068 minus strand	315292
ANO10	NM_001204832	NP_001191761	Coding	chr3:43622068 minus strand	315292
ANO10	NM_001204833	NP_001191762	Coding	chr3:43622068 minus strand	315292
ANO10	NM_001204834	NP_001191763	Coding	chr3:43622068 minus strand	315292
ANO10	NM_018075	NP_060545	Coding	chr3:43622068 minus strand	315292
AP2M1	NM_001025205	NP_001020376	Coding	chr3:184174845 plus strand	315293
AP2M1	NM_004068	NP_004059	Coding	chr3:184174845 plus strand	315293
APEH	NM_001640	NP_001631	Coding	chr3:49674001 plus strand	315294
APOD	NM_001647	NP_001638	Coding	chr3:195584205 minus strand	315295
APPL1	NM_012096	NP_036228	Coding	chr3:57227736 plus strand	315296
ARF4	NM_001660	NP_001651	Coding	chr3:57597488 minus strand	315297
ARGFX	NM_001012659	NP_001012677	Coding	chr3:121567930 plus strand	315298
ARHGAP31	NM_020754	NP_065805	Coding	chr3:119294372 plus strand	315299
ARHGEF26	NM_001251962	NP_001238891	Coding	chr3:154121002 plus strand	315300
ARHGEF26	NM_001251963	NP_001238892	Coding	chr3:154121359 plus strand	315301
ARHGEF26	NM_015595	NP_056410	Coding	chr3:154121359 plus strand	315301
ARHGEF3	NM_001128615	NP_001122087	Coding	chr3:57079308 minus strand	315302
ARHGEF3	NM_001128616	NP_001122088	Coding	chr3:56775717 minus strand	315303
ARHGEF3	NM_001289698	NP_001276627	Coding	chr3:56916471 minus strand	315304
ARHGEF3	NM_019555	NP_062455	Coding	chr3:56801967 minus strand	315305

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ARIH2	NM_006321	NP_006312	Coding	chr3:48918847 plus strand	315306
ARIH2OS	NM_001123040	NP_001116512	Coding	chr3:48919385 minus strand	315307
ARL13B	NM_001174150	NP_001167621	Coding	chr3:93980138 plus strand	315308
ARL13B	NM_001174151	NP_001167622	Coding	chr3:93980138 plus strand	315308
ARL13B	NM_144996	NP_659433	Coding	chr3:93980138 plus strand	315308
ARL13B	NM_182896	NP_878899	Coding	chr3:93980138 plus strand	315308
ARL14	NM_025047	NP_079323	Coding	chr3:160677159 plus strand	315309
ARL6	NM_001278293	NP_001265222	Coding	chr3:97764520 plus strand	315310
ARL6	NM_032146	NP_115522	Coding	chr3:97764520 plus strand	315310
ARL6	NM_177976	NP_816931	Coding	chr3:97764520 plus strand	315310
ARL6IP5	NM_006407	NP_006398	Coding	chr3:69084938 plus strand	315311
ARL8B	NM_018184	NP_060654	Coding	chr3:5122244 plus strand	315312
ARMC8	NM_001267041	NP_001253970	Coding	chr3:138187247 plus strand	315313
ARMC8	NM_001267042	NP_001253971	Coding	chr3:138187247 plus strand	315313
ARMC8	NM_001282342	NP_001269271	Coding	chr3:138187247 plus strand	315313
ARMC8	NM_014154	NP_054873	Coding	chr3:138187247 plus strand	315313
ARMC8	NM_015396	NP_056211	Coding	chr3:138187247 plus strand	315313
ARMC8	NM_213654	NP_998819	Coding	chr3:138187247 plus strand	315313
ARPC4	NM_001024959	NP_001020130	Coding	chr3:9792494 plus strand	315314
ARPC4	NM_001024960	NP_001020131	Coding	chr3:9792494 plus strand	315314
ARPC4	NM_001198780	NP_001185709	Coding	chr3:9793116 plus strand	315315
ARPC4	NM_005718	NP_005709	Coding	chr3:9792547 plus strand	315316
ARPC4-TTLL3	NM_001198793	NP_001185722	Coding	chr3:9792547 plus strand	315316
ARPP21	NM_001025068	NP_001020239	Coding	chr3:35679623 plus strand	315318
ARPP21	NM_001025069	NP_001020240	Coding	chr3:35679623 plus strand	315318
ARPP21	NM_001267616	NP_001254545	Coding	chr3:35639173 plus strand	315319
ARPP21	NM_001267617	NP_001254546	Coding	chr3:35641017 plus strand	315320
ARPP21	NM_001267618	NP_001254547	Coding	chr3:35679620 plus strand	315321
ARPP21	NM_001267619	NP_001254548	Coding	chr3:35679786 plus strand	315322
ARPP21	NM_016300	NP_057384	Coding	chr3:35642356 plus strand	315323
ARPP21	NM_198399	NP_938409	Coding	chr3:35680936 plus strand	315324
ASB14	NM_001142733	NP_001136205	Coding	chr3:57292682 minus strand	315325
ASB14	NM_130387	NP_569058	Coding	chr3:57278952 minus strand	315326
ASTE1	NM_001288950	NP_001275879	Coding	chr3:131026854 minus strand	315327
ASTE1	NM_014065	NP_054784	Coding	chr3:131026854 minus strand	315327

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ATG3	NM_001278712	NP_001265641	Coding	chr3:112561963 minus strand	315328
ATG3	NM_022488	NP_071933	Coding	chr3:112561963 minus strand	315328
ATG7	NM_001136031	NP_001129503	Coding	chr3:11272323 plus strand	315329
ATG7	NM_001144912	NP_001138384	Coding	chr3:11272323 plus strand	315329
ATG7	NM_006395	NP_006386	Coding	chr3:11272323 plus strand	315329
ATP11B	NM_014616	NP_055431	Coding	chr3:182793502 plus strand	315330
ATP13A3	NM_024524	NP_078800	Coding	chr3:194468239 minus strand	315331
ATP13A4	NM_032279	NP_115655	Coding	chr3:193554907 minus strand	315332
ATP13A5	NM_198505	NP_940907	Coding	chr3:193378725 minus strand	315333
ATP1B3	NM_001679	NP_001670	Coding	chr3:141876627 plus strand	315334
ATP2B2	NM_001001331	NP_001001331	Coding	chr3:10505584 minus strand	315335
ATP2B2	NM_001683	NP_001674	Coding	chr3:10505584 minus strand	315335
ATP2C1	NM_001001485	NP_001001485	Coding	chr3:130894014 plus strand	315336
ATP2C1	NM_001001486	NP_001001486	Coding	chr3:130894589 plus strand	315337
ATP2C1	NM_001001487	NP_001001487	Coding	chr3:130894589 plus strand	315337
ATP2C1	NM_001199179	NP_001186108	Coding	chr3:130893990 plus strand	315338
ATP2C1	NM_001199180	NP_001186109	Coding	chr3:130850524 plus strand	315339
ATP2C1	NM_001199181	NP_001186110	Coding	chr3:130850524 plus strand	315339
ATP2C1	NM_001199182	NP_001186111	Coding	chr3:130850524 plus strand	315339
ATP2C1	NM_001199183	NP_001186112	Coding	chr3:130894060 plus strand	315340
ATP2C1	NM_001199184	NP_001186113	Coding	chr3:130894060 plus strand	315340
ATP2C1	NM_001199185	NP_001186114	Coding	chr3:130894447 plus strand	315341
ATP2C1	NM_014382	NP_055197	Coding	chr3:130894447 plus strand	315341
ATP6V1A	NM_001690	NP_001681	Coding	chr3:113747018 plus strand	315342
ATR	NM_001184	NP_001175	Coding	chr3:142578826 minus strand	315343
ATRIP	NM_001271022	NP_001257951	Coding	chr3:48446709 plus strand	315344
ATRIP	NM_001271023	NP_001257952	Coding	chr3:48447092 plus strand	315345
ATRIP	NM_032166	NP_115542	Coding	chr3:48446709 plus strand	315344
ATRIP	NM_130384	NP_569055	Coding	chr3:48446709 plus strand	315344
ATXN7	NM_000333	NP_000324	Coding	chr3:63864556 plus strand	315346

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ATXN7	NM_001128149	NP_001121621	Coding	chr3:63967743 plus strand	315347
ATXN7	NM_001177387	NP_001170858	Coding	chr3:63898398 plus strand	315348
AZI2	NM_001134432	NP_001127904	Coding	chr3:28349127 minus strand	315349
AZI2	NM_001134433	NP_001127905	Coding	chr3:28349127 minus strand	315349
AZI2	NM_001271650	NP_001258579	Coding	chr3:28349127 minus strand	315349
AZI2	NM_022461	NP_071906	Coding	chr3:28349127 minus strand	315349
B3GALNT1	NM_001038628	NP_001033717	Coding	chr3:161105372 minus strand	315350
B3GALNT1	NM_003781	NP_003772	Coding	chr3:161105372 minus strand	315350
B3GALNT1	NM_033167	NP_149357	Coding	chr3:161105372 minus strand	315350
B3GALNT1	NM_033168	NP_149358	Coding	chr3:161105372 minus strand	315350
B3GALNT1	NM_033169	NP_149359	Coding	chr3:161104895 minus strand	315351
B3GNT5	NM_032047	NP_114436	Coding	chr3:183253243 plus strand	315352
B4GALT4	NM_003778	NP_003769	Coding	chr3:119240905 minus strand	315353
B4GALT4	NM_212543	NP_997708	Coding	chr3:119240905 minus strand	315353
BAP1	NM_004656	NP_004647	Coding	chr3:52410105 minus strand	315354
BBX	NM_001142568	NP_001136040	Coding	chr3:107522935 plus strand	315355
BBX	NM_001276286	NP_001263215	Coding	chr3:107522935 plus strand	315355
BBX	NM_020235	NP_064620	Coding	chr3:107522935 plus strand	315355
BCHE	NM_000055	NP_000046	Coding	chr3:165837465 minus strand	315356
BCL6	NM_001130845	NP_001124317	Coding	chr3:187736497 minus strand	315357
BCL6	NM_001134738	NP_001128210	Coding	chr3:187734907 minus strand	315358
BCL6	NM_001706	NP_001697	Coding	chr3:187745725 minus strand	315359
BDH1	NM_004051	NP_004042	Coding	chr3:197555987 minus strand	315360
BDH1	NM_203314	NP_976059	Coding	chr3:197555987 minus strand	315360
BDH1	NM_203315	NP_976060	Coding	chr3:197573323 minus strand	315361
BFSP2	NM_003571	NP_003562	Coding	chr3:133399994 plus strand	315362
BHLHE40	NM_003670	NP_003661	Coding	chr3:4979411 plus strand	315363
BOC	NM_001301861	NP_001288790	Coding	chr3:113212496 plus strand	315364

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BOC	NM_001301867	NP_001288796	Coding	chr3:113211464 plus strand	315365
BOC	NM_033254	NP_150279	Coding	chr3:113211464 plus strand	315365
BRK1	NM_018462	NP_060932	Coding	chr3:10115648 plus strand	315366
BRPF1	NM_001003694	NP_001003694	Coding	chr3:9731749 plus strand	315367
BRPF1	NM_004634	NP_004625	Coding	chr3:9731749 plus strand	315367
BSN	NM_003458	NP_003449	Coding	chr3:49554488 plus strand	315368
BTD	NM_000060	NP_000051	Coding	chr3:15601744 plus strand	315369
BTD	NM_001281723	NP_001268652	Coding	chr3:15601351 plus strand	315370
BTD	NM_001281724	NP_001268653	Coding	chr3:15601744 plus strand	315369
BTD	NM_001281725	NP_001268654	Coding	chr3:15601968 plus strand	315371
BTD	NM_001281726	NP_001268655	Coding	chr3:15601744 plus strand	315369
BTLA	NM_001085357	NP_001078826	Coding	chr3:112499561 minus strand	315372
BTLA	NM_181780	NP_861445	Coding	chr3:112499561 minus strand	315372
C3orf14	NM_001291941	NP_001278870	Coding	chr3:62318972 plus strand	315373
C3orf14	NM_001291942	NP_001278871	Coding	chr3:62318972 plus strand	315373
C3orf14	NM_001291943	NP_001278872	Coding	chr3:62318972 plus strand	315373
C3orf14	NM_020685	NP_065736	Coding	chr3:62319042 plus strand	315374
C3orf17	NM_015412	NP_056227	Coding	chr3:113019708 minus strand	315375
C3orf18	NM_001171740	NP_001165211	Coding	chr3:50567792 minus strand	315376
C3orf18	NM_001171741	NP_001165212	Coding	chr3:50571027 minus strand	315377
C3orf18	NM_001171743	NP_001165214	Coding	chr3:50567792 minus strand	315376
C3orf18	NM_016210	NP_057294	Coding	chr3:50567792 minus strand	315376
C3orf20	NM_001184957	NP_001171886	Coding	chr3:14675098 plus strand	315378
C3orf20	NM_001184958	NP_001171887	Coding	chr3:14675098 plus strand	315378
C3orf20	NM_032137	NP_115513	Coding	chr3:14675098 plus strand	315378
C3orf22	NM_152533	NP_689746	Coding	chr3:126558915 minus strand	315379
C3orf30	NM_152539	NP_689752	Coding	chr3:119146149 plus strand	315380
C3orf33	NM_173657	NP_775928	Coding	chr3:155806266 minus strand	315381
C3orf35	NM_001302831	NP_001289760	Coding	chr3:37411137 plus strand	315382
C3orf35	NM_001302832	NP_001289761	Coding	chr3:37411137 plus strand	315382
C3orf35	NM_178339	NP_848029	Coding	chr3:37399476 plus strand	315383
C3orf35	NM_178342	NP_848032	Coding	chr3:37399476 plus strand	315383
C3orf35	NM_178344	NP_848034	Coding	chr3:37386268 plus strand	315384
C3orf36	NM_025041	NP_079317	Coding	chr3:133929812 minus strand	315385
C3orf38	NM_173824	NP_776185	Coding	chr3:88149742 plus strand	315386

【０３１１】

C3orf52	NM_001171747	NP_001165218	Coding	chr3:112086334 plus strand	315387
C3orf52	NM_024616	NP_078892	Coding	chr3:112086334 plus strand	315387
C3orf56	NM_001007534	NP_001007535	Coding	chr3:127193130 plus strand	315388
C3orf58	NM_001134470	NP_001127942	Coding	chr3:143973324 plus strand	315389
C3orf58	NM_173552	NP_775823	Coding	chr3:143971797 plus strand	315390
C3orf62	NM_198562	NP_940964	Coding	chr3:49277075 minus strand	315391
C3orf67	NM_198463	NP_940865	Coding	chr3:59049989 minus strand	315392
C3orf70	NM_001025266	NP_001020437	Coding	chr3:185153014 minus strand	315393
C3orf79	NM_001101337	NP_001094807	Coding	chr3:153484494 plus strand	315394
C3orf80	NM_001168214	NP_001161686	Coding	chr3:160225635 plus strand	315395
C3orf84	NM_001080528	NP_001073997	Coding	chr3:49191858 minus strand	315396
CACNA1D	NM_000720	NP_000711	Coding	chr3:53495048 plus strand	315397
CACNA1D	NM_001128839	NP_001122311	Coding	chr3:53495048 plus strand	315397
CACNA1D	NM_001128840	NP_001122312	Coding	chr3:53495048 plus strand	315397
CACNA2D2	NM_001005505	NP_001005505	Coding	chr3:50503597 minus strand	315398
CACNA2D2	NM_001174051	NP_001167522	Coding	chr3:50503597 minus strand	315398
CACNA2D2	NM_001291101	NP_001278030	Coding	chr3:50504244 minus strand	315399
CACNA2D2	NM_006030	NP_006021	Coding	chr3:50503597 minus strand	315398
CACNA2D3	NM_018398	NP_060868	Coding	chr3:54122665 plus strand	315400
CADM2	NM_001167674	NP_001161146	Coding	chr3:84958981 plus strand	315401
CADM2	NM_001167675	NP_001161147	Coding	chr3:84958981 plus strand	315401
CADM2	NM_001256502	NP_001243431	Coding	chr3:85505058 plus strand	315402
CADM2	NM_001256503	NP_001243432	Coding	chr3:85505058 plus strand	315402
CADM2	NM_001256504	NP_001243433	Coding	chr3:85505058 plus strand	315402
CADM2	NM_001256505	NP_001243434	Coding	chr3:85505058 plus strand	315402
CADM2	NM_153184	NP_694854	Coding	chr3:85726481 plus strand	315403
CADPS	NM_003716	NP_003707	Coding	chr3:62875389 minus strand	315404
CADPS	NM_183393	NP_899630	Coding	chr3:62875389 minus strand	315404
CADPS	NM_183394	NP_899631	Coding	chr3:62875389 minus strand	315404
CAMK1	NM_003656	NP_003647	Coding	chr3:9769984 minus strand	315405
CAMK2N2	NM_033259	NP_150284	Coding	chr3:184261463 minus strand	315406

【０３１２】

CAMKV	NM_024046	NP_076951	Coding	chr3:49869936 minus strand	315407
CAMP	NM_004345	NP_004336	Coding	chr3:48223346 plus strand	315408
CAND2	NM_001162499	NP_001155971	Coding	chr3:12796671 plus strand	315409
CAND2	NM_012298	NP_036430	Coding	chr3:12796671 plus strand	315409
CAPN7	NM_014296	NP_055111	Coding	chr3:15206225 plus strand	315410
CASR	NM_000388	NP_000379	Coding	chr3:122183682 plus strand	315411
CASR	NM_001178065	NP_001171536	Coding	chr3:122184333 plus strand	315412
CAV3	NM_001234	NP_001225	Coding	chr3:8733799 plus strand	315413
CAV3	NM_033337	NP_203123	Coding	chr3:8733799 plus strand	315413
CBLB	NM_170662	NP_733762	Coding	chr3:105869043 minus strand	315414
CCDC12	NM_001277074	NP_001264003	Coding	chr3:46976767 minus strand	315415
CCDC12	NM_144716	NP_653317	Coding	chr3:46982010 minus strand	315416
CCDC13	NM_144719	NP_653320	Coding	chr3:42773253 minus strand	315417
CCDC14	NM_022757	NP_073594	Coding	chr3:123961408 minus strand	315418
CCDC174	NM_016474	NP_057558	Coding	chr3:14651745 plus strand	315419
CCDC36	NM_001135197	NP_001128669	Coding	chr3:49199499 plus strand	315420
CCDC36	NM_178173	NP_835467	Coding	chr3:49198427 plus strand	315421
CCDC37	NM_182628	NP_872434	Coding	chr3:126394938 plus strand	315422
CCDC39	NM_181426	NP_852091	Coding	chr3:180679495 minus strand	315423
CCDC50	NM_174908	NP_777568	Coding	chr3:191329084 plus strand	315424
CCDC50	NM_178335	NP_848018	Coding	chr3:191329084 plus strand	315424
CCDC51	NM_001256964	NP_001243893	Coding	chr3:48440119 minus strand	315425
CCDC51	NM_001256965	NP_001243894	Coding	chr3:48440119 minus strand	315425
CCDC51	NM_001256966	NP_001243895	Coding	chr3:48440119 minus strand	315425
CCDC51	NM_001256967	NP_001243896	Coding	chr3:48440119 minus strand	315425
CCDC51	NM_001256968	NP_001243897	Coding	chr3:48440119 minus strand	315425
CCDC51	NM_001256969	NP_001243898	Coding	chr3:48440119 minus strand	315425
CCDC51	NM_024661	NP_078937	Coding	chr3:48440119 minus strand	315425
CCDC54	NM_032600	NP_115989	Coding	chr3:107377340 plus strand	315426
CCDC58	NM_001017928	NP_001017928	Coding	chr3:122383227 minus strand	315427

【０３１３】

CCDC66	NM_001012506	NP_001012524	Coding	chr3:56557155 plus strand	315428
CCDC66	NM_001141947	NP_001135419	Coding	chr3:56557155 plus strand	315428
CCDC71	NM_022903	NP_075054	Coding	chr3:49166352 minus strand	315429
CCDC80	NM_199511	NP_955805	Coding	chr3:112641143 minus strand	315430
CCDC80	NM_199512	NP_955806	Coding	chr3:112641143 minus strand	315430
CCK	NM_000729	NP_000720	Coding	chr3:42266170 minus strand	315431
CCK	NM_001174138	NP_001167609	Coding	chr3:42263947 minus strand	315432
CCNL1	NM_020307	NP_064703	Coding	chr3:157160693 minus strand	315433
CCR1	NM_001295	NP_001286	Coding	chr3:46208341 minus strand	315434
CCR2	NM_001123041	NP_001116513	Coding	chr3:46353743 plus strand	315435
CCR2	NM_001123396	NP_001116868	Coding	chr3:46353743 plus strand	315435
CCR3	NM_001164680	NP_001158152	Coding	chr3:46242380 plus strand	315436
CCR3	NM_001837	NP_001828	Coding	chr3:46242380 plus strand	315436
CCR3	NM_178328	NP_847898	Coding	chr3:46242380 plus strand	315436
CCR3	NM_178329	NP_847899	Coding	chr3:46242380 plus strand	315436
CCR4	NM_005508	NP_005499	Coding	chr3:32951573 plus strand	315437
CCR5	NM_000579	NP_000570	Coding	chr3:46370141 plus strand	315438
CCR5	NM_001100168	NP_001093638	Coding	chr3:46370141 plus strand	315438
CCR8	NM_005201	NP_005192	Coding	chr3:39329705 plus strand	315439
CCR9	NM_001256369	NP_001243298	Coding	chr3:45886503 plus strand	315440
CCR9	NM_006641	NP_006632	Coding	chr3:45886503 plus strand	315440
CCR9	NM_031200	NP_112477	Coding	chr3:45886503 plus strand	315440
CCRL2	NM_001130910	NP_001124382	Coding	chr3:46407557 plus strand	315441
CCRL2	NM_003965	NP_003956	Coding	chr3:46407229 plus strand	315442
CD200	NM_001004196	NP_001004196	Coding	chr3:112333068 plus strand	315443
CD200	NM_005944	NP_005935	Coding	chr3:112333068 plus strand	315443
CD200R1	NM_138806	NP_620161	Coding	chr3:112975090 minus strand	315444
CD200R1	NM_138939	NP_620385	Coding	chr3:112975090 minus strand	315444
CD200R1	NM_138940	NP_620386	Coding	chr3:112975090 minus strand	315444
CD200R1	NM_170780	NP_740750	Coding	chr3:112975090 minus strand	315444
CD200R1L	NM_001008784	NP_001008784	Coding	chr3:112845950 minus strand	315445
CD200R1L	NM_001199215	NP_001186144	Coding	chr3:112845950 minus strand	315445
CD47	NM_001777	NP_001768	Coding	chr3:108091088 minus strand	315446

【０３１４】

CD47	NM_198793	NP_942088	Coding	chr3:108091088 minus strand	315446
CD80	NM_005191	NP_005182	Coding	chr3:119559634 minus strand	315447
CD86	NM_001206924	NP_001193853	Coding	chr3:122055361 plus strand	315448
CD86	NM_001206925	NP_001193854	Coding	chr3:122055361 plus strand	315448
CD86	NM_006889	NP_008820	Coding	chr3:122077848 plus strand	315449
CD86	NM_175862	NP_787058	Coding	chr3:122055361 plus strand	315448
CD86	NM_176892	NP_795711	Coding	chr3:122077848 plus strand	315449
CD96	NM_005816	NP_005807	Coding	chr3:111542078 plus strand	315450
CD96	NM_198196	NP_937839	Coding	chr3:111542078 plus strand	315450
CDC25A	NM_001789	NP_001780	Coding	chr3:48188311 minus strand	315451
CDC25A	NM_201567	NP_963861	Coding	chr3:48188311 minus strand	315451
CDCP1	NM_022842	NP_073753	Coding	chr3:45146422 minus strand	315452
CDCP1	NM_178181	NP_835488	Coding	chr3:45146422 minus strand	315452
CDHR4	NM_001007540	NP_001007541	Coding	chr3:49799821 minus strand	315453
CDV3	NM_001134422	NP_001127894	Coding	chr3:133573589 plus strand	315454
CDV3	NM_001134423	NP_001127895	Coding	chr3:133574433 plus strand	315455
CDV3	NM_001282762	NP_001269691	Coding	chr3:133573589 plus strand	315454
CDV3	NM_001282763	NP_001269692	Coding	chr3:133574433 plus strand	315455
CDV3	NM_001282764	NP_001269693	Coding	chr3:133574433 plus strand	315455
CDV3	NM_001282765	NP_001269694	Coding	chr3:133574433 plus strand	315455
CDV3	NM_017548	NP_060018	Coding	chr3:133573589 plus strand	315454
CELSR3	NM_001407	NP_001398	Coding	chr3:48662915 minus strand	315456
CEP19	NM_032898	NP_116287	Coding	chr3:196712294 minus strand	315457
CEP63	NM_001042383	NP_001035842	Coding	chr3:134485732 plus strand	315458
CEP63	NM_001042384	NP_001035843	Coding	chr3:134485732 plus strand	315458
CEP63	NM_001042400	NP_001035859	Coding	chr3:134486054 plus strand	315459
CEP63	NM_025180	NP_079456	Coding	chr3:134486204 plus strand	315460

【０３１５】

CEP70	NM_001288964	NP_001275893	Coding	chr3:138594383 minus strand	315461
CEP70	NM_001288965	NP_001275894	Coding	chr3:138594383 minus strand	315461
CEP70	NM_001288966	NP_001275895	Coding	chr3:138594383 minus strand	315461
CEP70	NM_001288967	NP_001275896	Coding	chr3:138594383 minus strand	315461
CEP70	NM_024491	NP_077817	Coding	chr3:138594383 minus strand	315461
CEP97	NM_024548	NP_078824	Coding	chr3:101724649 plus strand	315462
CFAP44	NM_001164496	NP_001157968	Coding	chr3:113441514 minus strand	315463
CFAP44	NM_018338	NP_060808	Coding	chr3:113441514 minus strand	315463
CGGBP1	NM_001008390	NP_001008391	Coding	chr3:88058996 minus strand	315464
CGGBP1	NM_001195308	NP_001182237	Coding	chr3:88149866 minus strand	315465
CGGBP1	NM_003663	NP_003654	Coding	chr3:88058996 minus strand	315464
CHCHD4	NM_001098502	NP_001091972	Coding	chr3:14124871 minus strand	315466
CHCHD4	NM_144636	NP_653237	Coding	chr3:14124871 minus strand	315466
CHCHD6	NM_032343	NP_115719	Coding	chr3:126704219 plus strand	315467
CHDH	NM_018397	NP_060867	Coding	chr3:53846393 minus strand	315468
CHL1	NM_001253387	NP_001240316	Coding	chr3:196595 plus strand	315469
CHL1	NM_001253388	NP_001240317	Coding	chr3:319682 plus strand	315470
CHL1	NM_006614	NP_006605	Coding	chr3:196595 plus strand	315469
CHMP2B	NM_001244644	NP_001231573	Coding	chr3:87227262 plus strand	315471
CHMP2B	NM_014043	NP_054762	Coding	chr3:87227262 plus strand	315471
CHRD	NM_003741	NP_003732	Coding	chr3:184380072 plus strand	315472
CHST13	NM_152889	NP_690849	Coding	chr3:126524287 plus strand	315473
CHST2	NM_004267	NP_004258	Coding	chr3:143119775 plus strand	315474
CIDEC	NM_001199551	NP_001186480	Coding	chr3:9880254 minus strand	315475
CIDEC	NM_001199552	NP_001186481	Coding	chr3:9880254 minus strand	315475
CIDEC	NM_001199623	NP_001186552	Coding	chr3:9878812 minus strand	315476
CIDEC	NM_022094	NP_071377	Coding	chr3:9879056 minus strand	315477
CISH	NM_013324	NP_037456	Coding	chr3:50611831 minus strand	315478
CISH	NM_145071	NP_659508	Coding	chr3:50611831 minus strand	315478
CLASP2	NM_001207044	NP_001193973	Coding	chr3:33659441 minus strand	315479

【０３１６】

CLASP2	NM_015097	NP_055912	Coding	chr3:33718213 minus strand	315480
CLCN2	NM_001171087	NP_001164558	Coding	chr3:184361651 minus strand	315481
CLCN2	NM_001171088	NP_001164559	Coding	chr3:184361651 minus strand	315481
CLCN2	NM_001171089	NP_001164560	Coding	chr3:184361651 minus strand	315481
CLCN2	NM_004366	NP_004357	Coding	chr3:184361651 minus strand	315481
CLDN1	NM_021101	NP_066924	Coding	chr3:190322446 minus strand	315482
CLDN11	NM_001185056	NP_001171985	Coding	chr3:170421239 plus strand	315483
CLDN11	NM_005602	NP_005593	Coding	chr3:170418864 plus strand	315484
CLDN16	NM_006580	NP_006571	Coding	chr3:190387871 plus strand	315485
CLDN18	NM_001002026	NP_001002026	Coding	chr3:137998815 plus strand	315486
CLDN18	NM_016369	NP_057453	Coding	chr3:138010163 plus strand	315487
CLDND1	NM_001040181	NP_001035271	Coding	chr3:98523066 minus strand	315488
CLDND1	NM_001040182	NP_001035272	Coding	chr3:98523066 minus strand	315488
CLDND1	NM_001040183	NP_001035273	Coding	chr3:98523066 minus strand	315488
CLDND1	NM_001040199	NP_001035289	Coding	chr3:98523066 minus strand	315488
CLDND1	NM_001040200	NP_001035290	Coding	chr3:98523066 minus strand	315488
CLDND1	NM_019895	NP_063948	Coding	chr3:98523066 minus strand	315488
CLEC3B	NM_003278	NP_003269	Coding	chr3:45026266 plus strand	315489
CLRN1	NM_001195794	NP_001182723	Coding	chr3:150972999 minus strand	315490
CLRN1	NM_001256819	NP_001243748	Coding	chr3:150972999 minus strand	315490
CLRN1	NM_052995	NP_443721	Coding	chr3:150944236 minus strand	315491
CLRN1	NM_174878	NP_777367	Coding	chr3:150972999 minus strand	315490
CLSTN2	NM_022131	NP_071414	Coding	chr3:139935184 plus strand	315492
CMC1	NM_182523	NP_872329	Coding	chr3:28241632 plus strand	315493
CMSS1	NM_001167924	NP_001161396	Coding	chr3:100114929 plus strand	315494
CMSS1	NM_032359	NP_115735	Coding	chr3:99817833 plus strand	315495
CMTM6	NM_017801	NP_060271	Coding	chr3:32502911 minus strand	315496
CMTM7	NM_138410	NP_612419	Coding	chr3:32391670 plus strand	315497
CMTM7	NM_181472	NP_852137	Coding	chr3:32391670 plus strand	315497

【０３１７】

CMTM8	NM_178868	NP_849199	Coding	chr3:32238678 plus strand	315498
CNBP	NM_001127192	NP_001120664	Coding	chr3:129183967 minus strand	315499
CNBP	NM_001127193	NP_001120665	Coding	chr3:129183967 minus strand	315499
CNBP	NM_001127194	NP_001120666	Coding	chr3:129183967 minus strand	315499
CNBP	NM_001127195	NP_001120667	Coding	chr3:129183967 minus strand	315499
CNBP	NM_001127196	NP_001120668	Coding	chr3:129183967 minus strand	315499
CNBP	NM_003418	NP_003409	Coding	chr3:129183967 minus strand	315499
CNOT10	NM_001256741	NP_001243670	Coding	chr3:32685144 plus strand	315500
CNOT10	NM_001256742	NP_001243671	Coding	chr3:32695540 plus strand	315501
CNOT10	NM_015442	NP_056257	Coding	chr3:32685144 plus strand	315500
CNTN3	NM_020872	NP_065923	Coding	chr3:74521192 minus strand	315502
CNTN4	NM_001206955	NP_001193884	Coding	chr3:2238828 plus strand	315503
CNTN4	NM_001206956	NP_001193885	Coding	chr3:2892214 plus strand	315504
CNTN4	NM_175607	NP_783200	Coding	chr3:2098865 plus strand	315505
CNTN4	NM_175613	NP_783302	Coding	chr3:2892214 plus strand	315504
CNTN6	NM_001289080	NP_001276009	Coding	chr3:1092657 plus strand	315506
CNTN6	NM_001289081	NP_001276010	Coding	chr3:1092657 plus strand	315506
CNTN6	NM_014461	NP_055276	Coding	chr3:1092657 plus strand	315506
COL6A5	NM_001278298	NP_001265227	Coding	chr3:130345515 plus strand	315507
COL6A5	NM_153264	NP_694996	Coding	chr3:130345515 plus strand	315507
COL6A6	NM_001102608	NP_001096078	Coding	chr3:130560333 plus strand	315508
COL7A1	NM_000094	NP_000085	Coding	chr3:48595160 minus strand	315509
COL8A1	NM_001850	NP_001841	Coding	chr3:99638595 plus strand	315510
COL8A1	NM_020351	NP_065084	Coding	chr3:99638595 plus strand	315510
COLQ	NM_005677	NP_005668	Coding	chr3:15521751 minus strand	315511
COLQ	NM_080538	NP_536799	Coding	chr3:15498872 minus strand	315512
COLQ	NM_080539	NP_536800	Coding	chr3:15521751 minus strand	315511
COMMD2	NM_016094	NP_057178	Coding	chr3:149752499 minus strand	315513
COPB2	NM_004766	NP_004757	Coding	chr3:139389680 minus strand	315514
COPG1	NM_016128	NP_057212	Coding	chr3:129249609 plus strand	315515
COX17	NM_005694	NP_005685	Coding	chr3:119677396 minus strand	315516
CP	NM_000096	NP_000087	Coding	chr3:149222045 minus	315517

【０３１８】

				strand	
CPA3	NM_001870	NP_001861	Coding	chr3:148865255 plus strand	315518
CPB1	NM_001871	NP_001862	Coding	chr3:148827800 plus strand	315519
CPN2	NM_001080513	NP_001073982	Coding	chr3:194351328 minus strand	315520
CPN2	NM_001291988	NP_001278917	Coding	chr3:194351328 minus strand	315520
CPNE4	NM_001289112	NP_001276041	Coding	chr3:132037804 minus strand	315521
CPNE4	NM_130808	NP_570720	Coding	chr3:132035442 minus strand	315522
CPNE4	NM_153429	NP_702907	Coding	chr3:132039606 minus strand	315523
CPNE9	NM_153635	NP_705899	Coding	chr3:9703825 plus strand	315524
CPOX	NM_000097	NP_000088	Coding	chr3:98593611 minus strand	315525
CRBN	NM_001173482	NP_001166953	Coding	chr3:3179717 minus strand	315526
CRBN	NM_016302	NP_057386	Coding	chr3:3179717 minus strand	315526
CRELD1	NM_001031717	NP_001026887	Coding	chr3:9933840 plus strand	315527
CRELD1	NM_001077415	NP_001070883	Coding	chr3:9933840 plus strand	315527
CRELD1	NM_015513	NP_056328	Coding	chr3:9933839 plus strand	315528
CRTAP	NM_006371	NP_006362	Coding	chr3:33113957 plus strand	315529
CRYBG3	NM_153605	NP_705833	Coding	chr3:97822039 plus strand	315530
CRYGS	NM_017541	NP_060011	Coding	chr3:186544378 minus strand	315531
CSPG5	NM_001206942	NP_001193871	Coding	chr3:47580240 minus strand	315532
CSPG5	NM_001206943	NP_001193872	Coding	chr3:47578869 minus strand	315533
CSPG5	NM_001206944	NP_001193873	Coding	chr3:47578869 minus strand	315533
CSPG5	NM_001206945	NP_001193874	Coding	chr3:47580240 minus strand	315532
CSPG5	NM_006574	NP_006565	Coding	chr3:47578869 minus strand	315533
CSRNP1	NM_033027	NP_149016	Coding	chr3:39153611 minus strand	315534
CSTA	NM_005213	NP_005204	Coding	chr3:122325163 plus strand	315535
CTDSPL	NM_001008392	NP_001008393	Coding	chr3:37862177 plus strand	315536
CTDSPL	NM_005808	NP_005799	Coding	chr3:37862177 plus strand	315536
CTNNB1	NM_001098209	NP_001091679	Coding	chr3:41199450 plus strand	315537
CTNNB1	NM_001098210	NP_001091680	Coding	chr3:41199450 plus strand	315537
CTNNB1	NM_001904	NP_001895	Coding	chr3:41199450 plus strand	315537
CX3CR1	NM_001171171	NP_001164642	Coding	chr3:39281273 minus strand	315538
CX3CR1	NM_001171172	NP_001164643	Coding	chr3:39280439 minus strand	315539

【０３１９】

CX3CR1	NM_001171174	NP_001164645	Coding	chr3:39281735 minus strand	315540
CX3CR1	NM_001337	NP_001328	Coding	chr3:39280036 minus strand	315541
CXCR6	NM_006564	NP_006555	Coding	chr3:45943480 plus strand	315542
CYB561D2	NM_001291284	NP_001278213	Coding	chr3:50350694 plus strand	315543
CYB561D2	NM_007022	NP_008953	Coding	chr3:50350694 plus strand	315543
CYP8B1	NM_004391	NP_004382	Coding	chr3:42876141 minus strand	315544
DAG1	NM_001165928	NP_001159400	Coding	chr3:49470131 plus strand	315545
DAG1	NM_001177634	NP_001171105	Coding	chr3:49470131 plus strand	315545
DAG1	NM_001177635	NP_001171106	Coding	chr3:49470131 plus strand	315545
DAG1	NM_001177636	NP_001171107	Coding	chr3:49470131 plus strand	315545
DAG1	NM_001177637	NP_001171108	Coding	chr3:49470131 plus strand	315545
DAG1	NM_001177638	NP_001171109	Coding	chr3:49470131 plus strand	315545
DAG1	NM_001177639	NP_001171110	Coding	chr3:49470131 plus strand	315545
DAG1	NM_001177640	NP_001171111	Coding	chr3:49470131 plus strand	315545
DAG1	NM_001177641	NP_001171112	Coding	chr3:49470131 plus strand	315545
DAG1	NM_001177642	NP_001171113	Coding	chr3:49470131 plus strand	315545
DAG1	NM_001177643	NP_001171114	Coding	chr3:49468702 plus strand	315546
DAG1	NM_001177644	NP_001171115	Coding	chr3:49470131 plus strand	315545
DAG1	NM_004393	NP_004384	Coding	chr3:49470131 plus strand	315545
DALRD3	NM_001009996	NP_001009996	Coding	chr3:49018608 minus strand	315547
DALRD3	NM_001276405	NP_001263334	Coding	chr3:49018608 minus strand	315547
DALRD3	NM_018114	NP_060584	Coding	chr3:49021071 minus strand	315548
DAZL	NM_001190811	NP_001177740	Coding	chr3:16604790 minus strand	315549
DAZL	NM_001351	NP_001342	Coding	chr3:16605499 minus strand	315550
DBR1	NM_016216	NP_057300	Coding	chr3:138174949 minus strand	315551
DCBLD2	NM_080927	NP_563615	Coding	chr3:98901689 minus strand	315552
DCLK3	NM_033403	NP_208382	Coding	chr3:36739861 minus strand	315553
DCP1A	NM_001290204	NP_001277133	Coding	chr3:53347627 minus strand	315554
DCP1A	NM_001290205	NP_001277134	Coding	chr3:53347627 minus strand	315554
DCP1A	NM_001290206	NP_001277135	Coding	chr3:53347627 minus strand	315554
DCP1A	NM_001290207	NP_001277136	Coding	chr3:53347627 minus strand	315554
DCP1A	NM_018403	NP_060873	Coding	chr3:53347627 minus strand	315554
DCUN1D1	NM_020640	NP_065691	Coding	chr3:182980538 minus strand	315555

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DENND6A	NM_152678	NP_689891	Coding	chr3:57693089 minus strand	315556
DGKG	NM_001080744	NP_001074213	Coding	chr3:186362234 minus strand	315557
DGKG	NM_001080745	NP_001074214	Coding	chr3:186362234 minus strand	315557
DGKG	NM_001346	NP_001337	Coding	chr3:186362234 minus strand	315557
DHFRL1	NM_001195643	NP_001182572	Coding	chr3:94063223 minus strand	315558
DHFRL1	NM_176815	NP_789785	Coding	chr3:94062987 minus strand	315559
DHX30	NM_014966	NP_055781	Coding	chr3:47802908 plus strand	315560
DHX30	NM_138615	NP_619520	Coding	chr3:47802908 plus strand	315560
DHX36	NM_001114397	NP_001107869	Coding	chr3:154324497 minus strand	315561
DHX36	NM_020865	NP_065916	Coding	chr3:154324497 minus strand	315561
DIRC2	NM_032839	NP_116228	Coding	chr3:122795053 plus strand	315562
DLEC1	NM_007335	NP_031361	Coding	chr3:38039204 plus strand	315563
DLEC1	NM_007337	NP_031363	Coding	chr3:38039204 plus strand	315563
DLG1	NM_001098424	NP_001091894	Coding	chr3:197298576 minus strand	315564
DLG1	NM_001204386	NP_001191315	Coding	chr3:197298576 minus strand	315564
DLG1	NM_001204387	NP_001191316	Coding	chr3:197184131 minus strand	315565
DLG1	NM_001204388	NP_001191317	Coding	chr3:197184131 minus strand	315565
DLG1	NM_001290983	NP_001277912	Coding	chr3:197299272 minus strand	315566
DLG1	NM_004087	NP_004078	Coding	chr3:197298576 minus strand	315564
DNAH1	NM_015512	NP_056327	Coding	chr3:52316318 plus strand	315567
DNAH12	NM_001291661	NP_001278590	Coding	chr3:57544344 minus strand	315568
DNAH12	NM_198564	NP_940966	Coding	chr3:57544344 minus strand	315568
DNAJB11	NM_016306	NP_057390	Coding	chr3:186570675 plus strand	315569
DNAJB8	NM_153330	NP_699161	Coding	chr3:128467248 minus strand	315570
DNAJC13	NM_015268	NP_056083	Coding	chr3:132417708 plus strand	315571
DNAJC19	NM_001190233	NP_001177162	Coding	chr3:180989518 minus strand	315572
DNAJC19	NM_145261	NP_660304	Coding	chr3:180989774 minus strand	315573
DNASE1L3	NM_001256560	NP_001243489	Coding	chr3:58211003 minus strand	315574
DNASE1L3	NM_004944	NP_004935	Coding	chr3:58211003 minus strand	315574

【０３２１】

DOCK3	NM_004947	NP_004938	Coding	chr3:50675240 plus strand	315575
DPH3	NM_001047434	NP_001040899	Coding	chr3:16264989 minus strand	315576
DPH3	NM_206831	NP_996662	Coding	chr3:16264989 minus strand	315576
DPPA2	NM_138815	NP_620170	Coding	chr3:109316517 minus strand	315577
DPPA4	NM_018189	NP_060659	Coding	chr3:109337572 minus strand	315578
DRD3	NM_000796	NP_000787	Coding	chr3:114179052 minus strand	315579
DRD3	NM_001282563	NP_001269492	Coding	chr3:114199407 minus strand	315580
DRD3	NM_001290809	NP_001277738	Coding	chr3:114178776 minus strand	315581
DRD3	NM_033663	NP_387512	Coding	chr3:114179052 minus strand	315579
DTX3L	NM_138287	NP_612144	Coding	chr3:122564337 plus strand	315582
DUSP7	NM_001947	NP_001938	Coding	chr3:52056445 minus strand	315583
DVL3	NM_004423	NP_004414	Coding	chr3:184155495 plus strand	315584
DYNC1LI1	NM_016141	NP_057225	Coding	chr3:32570874 minus strand	315585
DZIP1L	NM_001170538	NP_001164009	Coding	chr3:138113480 minus strand	315586
DZIP1L	NM_173543	NP_775814	Coding	chr3:138115609 minus strand	315587
DZIP3	NM_014648	NP_055463	Coding	chr3:108589489 plus strand	315588
EAF1	NM_033083	NP_149074	Coding	chr3:15427556 plus strand	315589
EAF2	NM_018456	NP_060926	Coding	chr3:121835186 plus strand	315590
EBLN2	NM_018029	NP_060499	Coding	chr3:73061658 plus strand	315591
ECE2	NM_001037324	NP_001032401	Coding	chr3:184276010 plus strand	315592
ECE2	NM_001100120	NP_001093590	Coding	chr3:184276010 plus strand	315592
ECE2	NM_001100121	NP_001093591	Coding	chr3:184276010 plus strand	315592
ECE2	NM_014693	NP_055508	Coding	chr3:184249656 plus strand	315593
ECE2	NM_032331	NP_115707	Coding	chr3:184249656 plus strand	315593
ECT2	NM_001258315	NP_001245244	Coding	chr3:172750684 plus strand	315594
ECT2	NM_001258316	NP_001245245	Coding	chr3:172750684 plus strand	315594
ECT2	NM_018098	NP_060568	Coding	chr3:172750684 plus strand	315594
EDEM1	NM_014674	NP_055489	Coding	chr3:5187673 plus strand	315595
EEFSEC	NM_021937	NP_068756	Coding	chr3:128153469 plus	315596

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				strand	
EFCAB12	NM_207307	NP_997190	Coding	chr3:129428651 minus strand	315597
EFCC1	NM_024768	NP_079044	Coding	chr3:129001628 plus strand	315598
EFHB	NM_144715	NP_653316	Coding	chr3:19934214 minus strand	315599
EHHADH	NM_001166415	NP_001159887	Coding	chr3:185254098 minus strand	315600
EHHADH	NM_001966	NP_001957	Coding	chr3:185254098 minus strand	315600
EIF1B	NM_005875	NP_005866	Coding	chr3:40309681 plus strand	315601
EIF2A	NM_032025	NP_114414	Coding	chr3:150546786 plus strand	315602
EIF2B5	NM_003907	NP_003898	Coding	chr3:184135021 plus strand	315603
EIF4A2	NM_001967	NP_001958	Coding	chr3:186783571 plus strand	315604
EIF4E3	NM_001134649	NP_001128121	Coding	chr3:71754383 minus strand	315605
EIF4E3	NM_001134650	NP_001128122	Coding	chr3:71729118 minus strand	315606
EIF4E3	NM_001134651	NP_001128123	Coding	chr3:71725375 minus strand	315607
EIF4E3	NM_001282886	NP_001269815	Coding	chr3:71753624 minus strand	315608
EIF4E3	NM_173359	NP_775495	Coding	chr3:71754773 minus strand	315609
EIF4G1	NM_001194946	NP_001181875	Coding	chr3:184314494 plus strand	315610
EIF4G1	NM_001194947	NP_001181876	Coding	chr3:184314494 plus strand	315610
EIF4G1	NM_001291157	NP_001278086	Coding	chr3:184314501 plus strand	315611
EIF4G1	NM_004953	NP_004944	Coding	chr3:184320312 plus strand	315612
EIF4G1	NM_182917	NP_886553	Coding	chr3:184315163 plus strand	315613
EIF4G1	NM_198241	NP_937884	Coding	chr3:184314494 plus strand	315610
EIF4G1	NM_198242	NP_937885	Coding	chr3:184314494 plus strand	315610
EIF4G1	NM_198244	NP_937887	Coding	chr3:184314494 plus strand	315610
EIF5A2	NM_020390	NP_065123	Coding	chr3:170908637 minus strand	315614
ELP6	NM_001031703	NP_001026873	Coding	chr3:47513709 minus strand	315615
EMC3	NM_018447	NP_060917	Coding	chr3:9986838 minus strand	315616
ENTPD3	NM_001248	NP_001239	Coding	chr3:40387155 plus strand	315617
ENTPD3	NM_001291960	NP_001278889	Coding	chr3:40387244 plus strand	315618
ENTPD3	NM_001291961	NP_001278890	Coding	chr3:40387155 plus strand	315617

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EOGT	NM_001278689	NP_001265618	Coding	chr3:69013894 minus strand	315619
EOGT	NM_173654	NP_775925	Coding	chr3:69013894 minus strand	315619
EOMES	NM_001278182	NP_001265111	Coding	chr3:27722715 minus strand	315620
EOMES	NM_001278183	NP_001265112	Coding	chr3:27722715 minus strand	315620
EOMES	NM_005442	NP_005433	Coding	chr3:27722715 minus strand	315620
EPHA3	NM_005233	NP_005224	Coding	chr3:89107523 plus strand	315621
EPHA3	NM_182644	NP_872585	Coding	chr3:89107523 plus strand	315621
EPHA6	NM_001080448	NP_001073917	Coding	chr3:96814580 plus strand	315622
EPHA6	NM_001278300	NP_001265229	Coding	chr3:97439592 plus strand	315623
EPHA6	NM_001278301	NP_001265230	Coding	chr3:96814580 plus strand	315622
EPHA6	NM_173655	NP_775926	Coding	chr3:97439592 plus strand	315623
EPHB1	NM_004441	NP_004432	Coding	chr3:134795256 plus strand	315624
EPHB3	NM_004443	NP_004434	Coding	chr3:184561798 plus strand	315625
EPM2AIP1	NM_014805	NP_055620	Coding	chr3:36993304 minus strand	315626
ERC2	NM_015576	NP_056391	Coding	chr3:56468363 minus strand	315627
ERICH6	NM_152394	NP_689607	Coding	chr3:150703955 minus strand	315628
ESYT3	NM_031913	NP_114119	Coding	chr3:138434572 plus strand	315629
ETV5	NM_004454	NP_004445	Coding	chr3:186109112 minus strand	315630
EXOG	NM_001145464	NP_001138936	Coding	chr3:38496271 plus strand	315631
EXOG	NM_005107	NP_005098	Coding	chr3:38496271 plus strand	315631
EXOSC7	NM_015004	NP_055819	Coding	chr3:44976248 plus strand	315632
FAIM	NM_001033030	NP_001028202	Coding	chr3:138608699 plus strand	315633
FAIM	NM_001033031	NP_001028203	Coding	chr3:138608699 plus strand	315633
FAIM	NM_001033032	NP_001028204	Coding	chr3:138608699 plus strand	315633
FAIM	NM_018147	NP_060617	Coding	chr3:138609076 plus strand	315634
FAM107A	NM_001076778	NP_001070246	Coding	chr3:58577764 minus strand	315635
FAM107A	NM_001282713	NP_001269642	Coding	chr3:58587113 minus strand	315636
FAM107A	NM_001282714	NP_001269643	Coding	chr3:58627610 minus strand	315637
FAM107A	NM_007177	NP_009108	Coding	chr3:58577764 minus strand	315635
FAM131A	NM_001171093	NP_001164564	Coding	chr3:184335928 plus strand	315638

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FAM131A	NM_144635	NP_653236	Coding	chr3:184337487 plus strand	315639
FAM157A	NM_001145248	NP_001138720	Coding	chr3:198152365 plus strand	315640
FAM162A	NM_014367	NP_055182	Coding	chr3:122384175 plus strand	315641
FAM198A	NM_001129908	NP_001123380	Coding	chr3:42979266 plus strand	315642
FAM19A1	NM_001252216	NP_001239145	Coding	chr3:67991591 plus strand	315643
FAM19A1	NM_213609	NP_998774	Coding	chr3:68004215 plus strand	315644
FAM19A4	NM_001005527	NP_001005527	Coding	chr3:68932610 minus strand	315645
FAM19A4	NM_182522	NP_872328	Coding	chr3:68932610 minus strand	315645
FAM208A	NM_001112736	NP_001106207	Coding	chr3:56683107 minus strand	315646
FAM208A	NM_015224	NP_056039	Coding	chr3:56664046 minus strand	315647
FAM212A	NM_203370	NP_976248	Coding	chr3:49803253 plus strand	315648
FAM3D	NM_138805	NP_620160	Coding	chr3:58666834 minus strand	315649
FAM43A	NM_153690	NP_710157	Coding	chr3:194685892 plus strand	315650
FANCD2	NM_001018115	NP_001018125	Coding	chr3:10026428 plus strand	315651
FANCD2	NM_033084	NP_149075	Coding	chr3:10026428 plus strand	315651
FANCD2OS	NM_001164839	NP_001158311	Coding	chr3:10108231 minus strand	315652
FANCD2OS	NM_173472	NP_775743	Coding	chr3:10108231 minus strand	315652
FBLN2	NM_001004019	NP_001004019	Coding	chr3:13549124 plus strand	315653
FBLN2	NM_001165035	NP_001158507	Coding	chr3:13568739 plus strand	315654
FBLN2	NM_001998	NP_001989	Coding	chr3:13549124 plus strand	315653
FBXL2	NM_001171713	NP_001165184	Coding	chr3:33277444 plus strand	315655
FBXL2	NM_012157	NP_036289	Coding	chr3:33277441 plus strand	315656
FBXO40	NM_016298	NP_057382	Coding	chr3:121593322 plus strand	315657
FBXO45	NM_001105573	NP_001099043	Coding	chr3:196568853 plus strand	315658
FBXW12	NM_001159927	NP_001153399	Coding	chr3:48372218 plus strand	315659
FBXW12	NM_001159929	NP_001153401	Coding	chr3:48372218 plus strand	315659
FBXW12	NM_207102	NP_996985	Coding	chr3:48372218 plus strand	315659
FETUB	NM_014375	NP_055190	Coding	chr3:186640359 plus strand	315660
FEZF2	NM_018008	NP_060478	Coding	chr3:62373515 minus strand	315661
FGD5	NM_152536	NP_689749	Coding	chr3:14818961 plus strand	315662
FGF12	NM_004113	NP_004104	Coding	chr3:192727599 minus strand	315663
FGF12	NM_021032	NP_066360	Coding	chr3:192409049 minus strand	315664
FHIT	NM_001166243	NP_001159715	Coding	chr3:61251459 minus	315665

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				strand	
FHIT	NM_002012	NP_002003	Coding	chr3:61251459 minus strand	315665
FILIP1L	NM_001042459	NP_001035924	Coding	chr3:100114513 minus strand	315666
FILIP1L	NM_001282793	NP_001269722	Coding	chr3:99876203 minus strand	315667
FILIP1L	NM_001282794	NP_001269723	Coding	chr3:99876203 minus strand	315667
FILIP1L	NM_014890	NP_055705	Coding	chr3:99876203 minus strand	315667
FILIP1L	NM_182909	NP_878913	Coding	chr3:100114513 minus strand	315666
FLNB	NM_001164317	NP_001157789	Coding	chr3:58008399 plus strand	315668
FLNB	NM_001164318	NP_001157790	Coding	chr3:58008399 plus strand	315668
FLNB	NM_001164319	NP_001157791	Coding	chr3:58008399 plus strand	315668
FLNB	NM_001457	NP_001448	Coding	chr3:58008399 plus strand	315668
FNDC3B	NM_001135095	NP_001128567	Coding	chr3:172040553 plus strand	315669
FNDC3B	NM_022763	NP_073600	Coding	chr3:172039627 plus strand	315670
FOXL2	NM_023067	NP_075555	Coding	chr3:138947140 minus strand	315671
FOXL2NB	NM_001040061	NP_001035150	Coding	chr3:138947233 plus strand	315672
FOXP1	NM_001012505	NP_001012523	Coding	chr3:71583989 minus strand	315673
FOXP1	NM_001244808	NP_001231737	Coding	chr3:71583753 minus strand	315674
FOXP1	NM_001244810	NP_001231739	Coding	chr3:71583989 minus strand	315673
FOXP1	NM_001244812	NP_001231741	Coding	chr3:71304760 minus strand	315675
FOXP1	NM_001244813	NP_001231742	Coding	chr3:71064923 minus strand	315676
FOXP1	NM_001244814	NP_001231743	Coding	chr3:71245165 minus strand	315677
FOXP1	NM_001244815	NP_001231744	Coding	chr3:71130941 minus strand	315678
FOXP1	NM_001244816	NP_001231745	Coding	chr3:71543557 minus strand	315679
FOXP1	NM_032682	NP_116071	Coding	chr3:71583989 minus strand	315673
FRG2C	NM_001124759	NP_001118231	Coding	chr3:75664335 plus strand	315680
FRMD4B	NM_015123	NP_055938	Coding	chr3:69386304 minus strand	315681
FSTL1	NM_007085	NP_009016	Coding	chr3:120451071 minus strand	315682
FXR1	NM_001013438	NP_001013456	Coding	chr3:180912445 plus strand	315683
FXR1	NM_001013439	NP_001013457	Coding	chr3:180912445 plus strand	315683

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FXR1	NM_005087	NP_005078	Coding	chr3:180912445 plus strand	315683
FYCO1	NM_024513	NP_078789	Coding	chr3:45995824 minus strand	315684
FYTTD1	NM_001011537	NP_001011537	Coding	chr3:197749552 plus strand	315685
FYTTD1	NM_032288	NP_115664	Coding	chr3:197749752 plus strand	315686
GABRR3	NM_001105580	NP_001099050	Coding	chr3:98035304 minus strand	315687
GADL1	NM_207359	NP_997242	Coding	chr3:30894661 minus strand	315688
GALNT15	NM_054110	NP_473451	Coding	chr3:16174676 plus strand	315689
GAP43	NM_001130064	NP_001123536	Coding	chr3:115623303 plus strand	315690
GAP43	NM_002045	NP_002036	Coding	chr3:115623303 plus strand	315690
GATA2	NM_001145661	NP_001139133	Coding	chr3:128488530 minus strand	315691
GATA2	NM_001145662	NP_001139134	Coding	chr3:128487921 minus strand	315692
GATA2	NM_032638	NP_116027	Coding	chr3:128493187 minus strand	315693
GBE1	NM_000158	NP_000149	Coding	chr3:81761799 minus strand	315694
GCSAM	NM_001190259	NP_001177188	Coding	chr3:112133305 minus strand	315695
GCSAM	NM_001190260	NP_001177189	Coding	chr3:112133305 minus strand	315695
GCSAM	NM_152785	NP_689998	Coding	chr3:112133305 minus strand	315695
GFM1	NM_024996	NP_079272	Coding	chr3:158644527 plus strand	315696
GHRL	NM_001134941	NP_001128413	Coding	chr3:10292947 minus strand	315697
GHRL	NM_001134944	NP_001128416	Coding	chr3:10292947 minus strand	315697
GHRL	NM_001134945	NP_001128417	Coding	chr3:10292947 minus strand	315697
GHRL	NM_001134946	NP_001128418	Coding	chr3:10292947 minus strand	315697
GHRL	NM_001302821	NP_001289750	Coding	chr3:10292947 minus strand	315697
GHRL	NM_001302822	NP_001289751	Coding	chr3:10292947 minus strand	315697
GHRL	NM_001302823	NP_001289752	Coding	chr3:10292947 minus strand	315697
GHRL	NM_001302824	NP_001289753	Coding	chr3:10292947 minus strand	315697
GHRL	NM_001302825	NP_001289754	Coding	chr3:10292947 minus strand	315697
GHRL	NM_016362	NP_057446	Coding	chr3:10292947 minus strand	315697
GHSR	NM_004122	NP_004113	Coding	chr3:172448456 minus	315698

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				strand	
GHSR	NM_198407	NP_940799	Coding	chr3:172448456 minus strand	315698
GK5	NM_001039547	NP_001034636	Coding	chr3:142225607 minus strand	315699
GLB1	NM_000404	NP_000395	Coding	chr3:33097202 minus strand	315700
GLB1	NM_001079811	NP_001073279	Coding	chr3:33096822 minus strand	315701
GLB1	NM_001135602	NP_001129074	Coding	chr3:33097202 minus strand	315700
GLT8D1	NM_001010983	NP_001010983	Coding	chr3:52706083 minus strand	315702
GLT8D1	NM_001278280	NP_001265209	Coding	chr3:52706083 minus strand	315702
GLT8D1	NM_001278281	NP_001265210	Coding	chr3:52706083 minus strand	315702
GLT8D1	NM_018446	NP_060916	Coding	chr3:52706083 minus strand	315702
GLT8D1	NM_152932	NP_690909	Coding	chr3:52703698 minus strand	315703
GLYCTK	NM_001144951	NP_001138423	Coding	chr3:52287819 plus strand	315704
GLYCTK	NM_145262	NP_660305	Coding	chr3:52287819 plus strand	315704
GMNC	NM_001146686	NP_001140158	Coding	chr3:190862676 minus strand	315705
GMPPB	NM_013334	NP_037466	Coding	chr3:49723974 minus strand	315706
GMPPB	NM_021971	NP_068806	Coding	chr3:49723974 minus strand	315706
GMPS	NM_003875	NP_003866	Coding	chr3:155870535 plus strand	315707
GNAI2	NM_001166425	NP_001159897	Coding	chr3:50246893 plus strand	315708
GNAI2	NM_001282617	NP_001269546	Coding	chr3:50230775 plus strand	315709
GNAI2	NM_001282618	NP_001269547	Coding	chr3:50236156 plus strand	315710
GNAI2	NM_001282619	NP_001269548	Coding	chr3:50226687 plus strand	315711
GNAI2	NM_001282620	NP_001269549	Coding	chr3:50226687 plus strand	315711
GNAI2	NM_002070	NP_002061	Coding	chr3:50236156 plus strand	315710
GNAT1	NM_000172	NP_000163	Coding	chr3:50191609 plus strand	315712
GNAT1	NM_144499	NP_653082	Coding	chr3:50191609 plus strand	315712
GNB4	NM_021629	NP_067642	Coding	chr3:179451583 minus strand	315713
GNL3	NM_014366	NP_055181	Coding	chr3:52685919 plus strand	315714
GNL3	NM_206825	NP_996561	Coding	chr3:52685919 plus strand	315714
GNL3	NM_206826	NP_996562	Coding	chr3:52685919 plus strand	315714
GOLGA4	NM_001172713	NP_001166184	Coding	chr3:37243190 plus strand	315715
GOLGA4	NM_002078	NP_002069	Coding	chr3:37243190 plus strand	315715
GOLGB1	NM_001256486	NP_001243415	Coding	chr3:121749767 minus strand	315716
GOLGB1	NM_001256487	NP_001243416	Coding	chr3:121749767 minus strand	315716

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GOLGB1	NM_001256488	NP_001243417	Coding	chr3:121749767 minus strand	315716
GOLGB1	NM_004487	NP_004478	Coding	chr3:121749767 minus strand	315716
GOLIM4	NM_014498	NP_055313	Coding	chr3:168095629 minus strand	315717
GORASP1	NM_001278789	NP_001265718	Coding	chr3:39107900 minus strand	315718
GORASP1	NM_001278790	NP_001265719	Coding	chr3:39107900 minus strand	315718
GORASP1	NM_031899	NP_114105	Coding	chr3:39108363 minus strand	315719
GP5	NM_004488	NP_004479	Coding	chr3:194399266 minus strand	315720
GP9	NM_000174	NP_000165	Coding	chr3:129060766 plus strand	315721
GPD1L	NM_015141	NP_055956	Coding	chr3:32106510 plus strand	315722
GPR128	NM_032787	NP_116176	Coding	chr3:100609588 plus strand	315723
GPR149	NM_001038705	NP_001033794	Coding	chr3:154429715 minus strand	315724
GPR15	NM_005290	NP_005281	Coding	chr3:98531898 plus strand	315725
GPR156	NM_001168271	NP_001161743	Coding	chr3:120244295 minus strand	315726
GPR156	NM_153002	NP_694547	Coding	chr3:120244295 minus strand	315726
GPR160	NM_014373	NP_055188	Coding	chr3:170037946 plus strand	315727
GPR171	NM_013308	NP_037440	Coding	chr3:151203201 minus strand	315728
GPR27	NM_018971	NP_061844	Coding	chr3:71754049 plus strand	315729
GPR62	NM_080865	NP_543141	Coding	chr3:51955313 plus strand	315730
GPR87	NM_023915	NP_076404	Coding	chr3:151316848 minus strand	315731
GPX1	NM_000581	NP_000572	Coding	chr3:49358358 minus strand	315732
GPX1	NM_201397	NP_958799	Coding	chr3:49358358 minus strand	315732
GRAMD1C	NM_001172105	NP_001165576	Coding	chr3:113897470 plus strand	315733
GRAMD1C	NM_017577	NP_060047	Coding	chr3:113838833 plus strand	315734
GRIP2	NM_001080423	NP_001073892	Coding	chr3:14540343 minus strand	315735
GRK7	NM_139209	NP_631948	Coding	chr3:141778200 plus strand	315736
GRM2	NM_000839	NP_000830	Coding	chr3:51707064 plus strand	315737
GRM2	NM_001130063	NP_001123535	Coding	chr3:51707064 plus strand	315737
GRM7	NM_000844	NP_000835	Coding	chr3:6861114 plus strand	315738
GRM7	NM_181874	NP_870989	Coding	chr3:6861114 plus strand	315738
GSK3B	NM_001146156	NP_001139628	Coding	chr3:120094417 minus strand	315739

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GSK3B	NM_002093	NP_002084	Coding	chr3:120094417 minus strand	315739
GTF2E1	NM_005513	NP_005504	Coding	chr3:120742710 plus strand	315740
GTPBP8	NM_014170	NP_054889	Coding	chr3:112990952 plus strand	315741
GTPBP8	NM_138485	NP_612494	Coding	chr3:112990952 plus strand	315741
GUCA1C	NM_005459	NP_005450	Coding	chr3:108953830 minus strand	315742
GXYLT2	NM_001080393	NP_001073862	Coding	chr3:72888233 plus strand	315743
GYG1	NM_001184720	NP_001171649	Coding	chr3:148991407 plus strand	315744
GYG1	NM_001184721	NP_001171650	Coding	chr3:148991407 plus strand	315744
GYG1	NM_004130	NP_004121	Coding	chr3:148991407 plus strand	315744
H1FOO	NM_153833	NP_722575	Coding	chr3:129543213 plus strand	315745
H1FX	NM_006026	NP_006017	Coding	chr3:129316277 minus strand	315746
HACL1	NM_001284413	NP_001271342	Coding	chr3:15601852 minus strand	315747
HACL1	NM_001284415	NP_001271344	Coding	chr3:15601852 minus strand	315747
HACL1	NM_001284416	NP_001271345	Coding	chr3:15601852 minus strand	315747
HACL1	NM_012260	NP_036392	Coding	chr3:15601852 minus strand	315747
HCLS1	NM_001292041	NP_001278970	Coding	chr3:121660948 minus strand	315748
HCLS1	NM_005335	NP_005326	Coding	chr3:121660948 minus strand	315748
HDAC11	NM_001136041	NP_001129513	Coding	chr3:13480343 plus strand	315749
HDAC11	NM_024827	NP_079103	Coding	chr3:13480214 plus strand	315750
HEG1	NM_020733	NP_065784	Coding	chr3:125055958 minus strand	315751
HEMK1	NM_016173	NP_057257	Coding	chr3:50569477 plus strand	315752
HES1	NM_005524	NP_005515	Coding	chr3:194136141 plus strand	315753
HESX1	NM_003865	NP_003856	Coding	chr3:57200252 minus strand	315754
HGD	NM_000187	NP_000178	Coding	chr3:120682571 minus strand	315755
HHATL	NM_020707	NP_065758	Coding	chr3:42702827 minus strand	315756
HHLA2	NM_001282556	NP_001269485	Coding	chr3:108296489 plus strand	315757
HHLA2	NM_001282557	NP_001269486	Coding	chr3:108311784 plus strand	315758
HHLA2	NM_001282558	NP_001269487	Coding	chr3:108296489 plus strand	315757
HHLA2	NM_001282559	NP_001269488	Coding	chr3:108296489 plus	315757

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				strand	
HHLA2	NM_007072	NP_009003	Coding	chr3:108302484 plus strand	315759
HIGD1A	NM_001099668	NP_001093138	Coding	chr3:42804442 minus strand	315760
HIGD1A	NM_001099669	NP_001093139	Coding	chr3:42804535 minus strand	315761
HIGD1A	NM_014056	NP_054775	Coding	chr3:42804535 minus strand	315761
HLTF	NM_003071	NP_003062	Coding	chr3:149086554 minus strand	315762
HLTF	NM_139048	NP_620636	Coding	chr3:149086554 minus strand	315762
HMCES	NM_001006109	NP_001006109	Coding	chr3:129278973 plus strand	315763
HMCES	NM_020187	NP_064572	Coding	chr3:129278840 plus strand	315764
HPS3	NM_032383	NP_115759	Coding	chr3:149129583 plus strand	315765
HRASLS	NM_020386	NP_065119	Coding	chr3:193241127 plus strand	315766
HRG	NM_000412	NP_000403	Coding	chr3:186665957 plus strand	315767
HRH1	NM_000861	NP_000852	Coding	chr3:11252698 plus strand	315768
HRH1	NM_001098211	NP_001091681	Coding	chr3:11225982 plus strand	315769
HRH1	NM_001098212	NP_001091682	Coding	chr3:11154527 plus strand	315770
HRH1	NM_001098213	NP_001091683	Coding	chr3:11137092 plus strand	315771
HSPBAP1	NM_024610	NP_078886	Coding	chr3:122793819 minus strand	315772
HTR1F	NM_000866	NP_000857	Coding	chr3:87982575 plus strand	315773
HTR3C	NM_130770	NP_570126	Coding	chr3:184053046 plus strand	315774
HTR3D	NM_001145143	NP_001138615	Coding	chr3:184031741 plus strand	315775
HTR3D	NM_001163646	NP_001157118	Coding	chr3:184032830 plus strand	315776
HTR3D	NM_182537	NP_872343	Coding	chr3:184031543 plus strand	315777
HTR3E	NM_001256613	NP_001243542	Coding	chr3:184097063 plus strand	315778
HTR3E	NM_001256614	NP_001243543	Coding	chr3:184100178 plus strand	315779
HTR3E	NM_182589	NP_872395	Coding	chr3:184100178 plus strand	315779
HTR3E	NM_198313	NP_938055	Coding	chr3:184097063 plus strand	315778
HTR3E	NM_198314	NP_938056	Coding	chr3:184100178 plus strand	315779
HYAL1	NM_033159	NP_149349	Coding	chr3:50303601 minus strand	315780
HYAL1	NM_153281	NP_695013	Coding	chr3:50312381 minus strand	315781

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HYAL1	NM_153282	NP_695014	Coding	chr3:50303601 minus strand	315780
HYAL1	NM_153283	NP_695015	Coding	chr3:50303601 minus strand	315780
HYAL1	NM_153285	NP_695017	Coding	chr3:50303601 minus strand	315780
HYAL2	NM_003773	NP_003764	Coding	chr3:50322850 minus strand	315782
HYAL2	NM_033158	NP_149348	Coding	chr3:50322850 minus strand	315782
HYAL3	NM_001200029	NP_001186958	Coding	chr3:50298862 minus strand	315783
HYAL3	NM_001200030	NP_001186959	Coding	chr3:50299468 minus strand	315784
HYAL3	NM_001200031	NP_001186960	Coding	chr3:50299468 minus strand	315784
HYAL3	NM_001200032	NP_001186961	Coding	chr3:50299468 minus strand	315784
HYAL3	NM_003549	NP_003540	Coding	chr3:50299468 minus strand	315784
IFRD2	NM_006764	NP_006755	Coding	chr3:50292595 minus strand	315785
IFT122	NM_001280541	NP_001267470	Coding	chr3:129440035 plus strand	315786
IFT122	NM_001280545	NP_001267474	Coding	chr3:129440035 plus strand	315786
IFT122	NM_001280546	NP_001267475	Coding	chr3:129440035 plus strand	315786
IFT122	NM_018262	NP_060732	Coding	chr3:129440035 plus strand	315786
IFT122	NM_052985	NP_443711	Coding	chr3:129440035 plus strand	315786
IFT122	NM_052989	NP_443715	Coding	chr3:129440035 plus strand	315786
IFT122	NM_052990	NP_443716	Coding	chr3:129440035 plus strand	315786
IFT57	NM_018010	NP_060480	Coding	chr3:108222570 minus strand	315787
IFT80	NM_001190241	NP_001177170	Coding	chr3:160399532 minus strand	315788
IFT80	NM_001190242	NP_001177171	Coding	chr3:160383766 minus strand	315789
IFT80	NM_020800	NP_065851	Coding	chr3:160399532 minus strand	315788
IGF2BP2	NM_001007225	NP_001007226	Coding	chr3:185825039 minus strand	315790
IGF2BP2	NM_001291869	NP_001278798	Coding	chr3:185825039 minus strand	315790
IGF2BP2	NM_001291872	NP_001278801	Coding	chr3:185821131 minus strand	315791
IGF2BP2	NM_001291873	NP_001278802	Coding	chr3:185821131 minus strand	315791
IGF2BP2	NM_001291874	NP_001278803	Coding	chr3:185821131 minus strand	315791

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IGF2BP2	NM_001291875	NP_001278804	Coding	chr3:185821131 minus strand	315791
IGF2BP2	NM_006548	NP_006539	Coding	chr3:185825039 minus strand	315790
IGSF10	NM_001178145	NP_001171616	Coding	chr3:151440790 minus strand	315792
IGSF10	NM_001178146	NP_001171617	Coding	chr3:151440790 minus strand	315792
IGSF10	NM_178822	NP_849144	Coding	chr3:151458709 minus strand	315793
IGSF11	NM_001015887	NP_001015887	Coding	chr3:119034829 minus strand	315794
IGSF11	NM_152538	NP_689751	Coding	chr3:119146051 minus strand	315795
IL12A	NM_000882	NP_000873	Coding	chr3:159988835 plus strand	315796
IL17RB	NM_018725	NP_061195	Coding	chr3:53846549 plus strand	315797
IL17RC	NM_001203263	NP_001190192	Coding	chr3:9917073 plus strand	315798
IL17RC	NM_001203264	NP_001190193	Coding	chr3:9917073 plus strand	315798
IL17RC	NM_001203265	NP_001190194	Coding	chr3:9917073 plus strand	315798
IL17RC	NM_032732	NP_116121	Coding	chr3:9917073 plus strand	315798
IL17RC	NM_153460	NP_703190	Coding	chr3:9917073 plus strand	315798
IL17RC	NM_153461	NP_703191	Coding	chr3:9917097 plus strand	315799
IL17RD	NM_017563	NP_060033	Coding	chr3:57165375 minus strand	315800
IL17RE	NM_001193380	NP_001180309	Coding	chr3:9902827 plus strand	315801
IL17RE	NM_153480	NP_705613	Coding	chr3:9902827 plus strand	315801
IL17RE	NM_153481	NP_705614	Coding	chr3:9902827 plus strand	315801
IL17RE	NM_153483	NP_705616	Coding	chr3:9902611 plus strand	315802
IL1RAP	NM_001167928	NP_001161400	Coding	chr3:190514050 plus strand	315803
IL1RAP	NM_001167929	NP_001161401	Coding	chr3:190514050 plus strand	315803
IL1RAP	NM_001167930	NP_001161402	Coding	chr3:190514050 plus strand	315803
IL1RAP	NM_001167931	NP_001161403	Coding	chr3:190514050 plus strand	315803
IL1RAP	NM_002182	NP_002173	Coding	chr3:190514050 plus strand	315803
IL1RAP	NM_134470	NP_608273	Coding	chr3:190514050 plus strand	315803
IL20RB	NM_144717	NP_653318	Coding	chr3:136957864 plus strand	315804
IL5RA	NM_000564	NP_000555	Coding	chr3:3110374 minus strand	315805
IL5RA	NM_001243099	NP_001230028	Coding	chr3:3110374 minus strand	315805
IL5RA	NM_175724	NP_783851	Coding	chr3:3110374 minus strand	315805
IL5RA	NM_175725	NP_783852	Coding	chr3:3110374 minus strand	315805
IL5RA	NM_175726	NP_783853	Coding	chr3:3110374 minus strand	315805
IL5RA	NM_175727	NP_783854	Coding	chr3:3110374 minus strand	315805

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IL5RA	NM_175728	NP_783855	Coding	chr3:3110374 minus strand	315805
ILDR1	NM_001199799	NP_001186728	Coding	chr3:122022280 minus strand	315806
ILDR1	NM_001199800	NP_001186729	Coding	chr3:122022280 minus strand	315806
ILDR1	NM_175924	NP_787120	Coding	chr3:122022280 minus strand	315806
IMPDH2	NM_000884	NP_000875	Coding	chr3:49029442 minus strand	315807
IMPG2	NM_016247	NP_057331	Coding	chr3:101320575 minus strand	315808
IP6K1	NM_001006115	NP_001006115	Coding	chr3:49786540 minus strand	315809
IP6K1	NM_001242829	NP_001229758	Coding	chr3:49786194 minus strand	315810
IP6K1	NM_153273	NP_695005	Coding	chr3:49786540 minus strand	315809
IP6K2	NM_001005909	NP_001005909	Coding	chr3:48717278 minus strand	315811
IP6K2	NM_001005910	NP_001005910	Coding	chr3:48717278 minus strand	315811
IP6K2	NM_001005911	NP_001005911	Coding	chr3:48717278 minus strand	315811
IP6K2	NM_001146178	NP_001139650	Coding	chr3:48717278 minus strand	315811
IP6K2	NM_001146179	NP_001139651	Coding	chr3:48717278 minus strand	315811
IP6K2	NM_001190316	NP_001177245	Coding	chr3:48717278 minus strand	315811
IP6K2	NM_001190317	NP_001177246	Coding	chr3:48717278 minus strand	315811
IP6K2	NM_016291	NP_057375	Coding	chr3:48717278 minus strand	315811
IQCB1	NM_001023570	NP_001018864	Coding	chr3:121835079 minus strand	315812
IQCB1	NM_001023571	NP_001018865	Coding	chr3:121835079 minus strand	315812
IQCF1	NM_152397	NP_689610	Coding	chr3:51903370 minus strand	315813
IQCF2	NM_203424	NP_982248	Coding	chr3:51861628 plus strand	315814
IQCF3	NM_001085479	NP_001078948	Coding	chr3:51826882 plus strand	315815
IQCF3	NM_001207023	NP_001193952	Coding	chr3:51826882 plus strand	315815
IQCF5	NM_001145059	NP_001138531	Coding	chr3:51875584 minus strand	315816
IQCF6	NM_001143833	NP_001137305	Coding	chr3:51779187 minus strand	315817
IQCG	NM_001134435	NP_001127907	Coding	chr3:197949925 minus strand	315818
IQCG	NM_032263	NP_115639	Coding	chr3:197960015 minus strand	315819
IQCJ	NM_001042705	NP_001036170	Coding	chr3:159069251 plus strand	315820
IQCJ	NM_001042706	NP_001036171	Coding	chr3:159069251 plus	315820

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				strand	
IQCJ	NM_001197100	NP_001184029	Coding	chr3:159069251 plus strand	315820
IQCJ-SCHIP1	NM_001197113	NP_001184042	Coding	chr3:159069251 plus strand	315820
IQCJ-SCHIP1	NM_001197114	NP_001184043	Coding	chr3:159069251 plus strand	315820
IQSEC1	NM_001134382	NP_001127854	Coding	chr3:13073117 minus strand	315822
IQSEC1	NM_014869	NP_055684	Coding	chr3:12967698 minus strand	315823
IRAK2	NM_001570	NP_001561	Coding	chr3:10164878 plus strand	315824
ISY1	NM_001199469	NP_001186398	Coding	chr3:129161230 minus strand	315825
ISY1	NM_020701	NP_065752	Coding	chr3:129161230 minus strand	315825
ISY1-RAB43	NM_001204890	NP_001191819	Coding	chr3:129161230 minus strand	315825
ITGA9	NM_002207	NP_002198	Coding	chr3:37452321 plus strand	315827
ITGB5	NM_002213	NP_002204	Coding	chr3:124887297 minus strand	315828
ITIH1	NM_001166434	NP_001159906	Coding	chr3:52778492 plus strand	315829
ITIH1	NM_001166435	NP_001159907	Coding	chr3:52779920 plus strand	315830
ITIH1	NM_001166436	NP_001159908	Coding	chr3:52779925 plus strand	315831
ITIH1	NM_002215	NP_002206	Coding	chr3:52777585 plus strand	315832
ITIH3	NM_002217	NP_002208	Coding	chr3:52794767 plus strand	315833
ITIH4	NM_001166449	NP_001159921	Coding	chr3:52830701 minus strand	315834
ITIH4	NM_002218	NP_002209	Coding	chr3:52830701 minus strand	315834
ITPR1	NM_001099952	NP_001093422	Coding	chr3:4493347 plus strand	315835
ITPR1	NM_001168272	NP_001161744	Coding	chr3:4493347 plus strand	315835
ITPR1	NM_002222	NP_002213	Coding	chr3:4493347 plus strand	315835
JAGN1	NM_032492	NP_115881	Coding	chr3:9890586 plus strand	315836
KALRN	NM_001024660	NP_001019831	Coding	chr3:124094710 plus strand	315837
KALRN	NM_003947	NP_003938	Coding	chr3:124094710 plus strand	315837
KALRN	NM_007064	NP_008995	Coding	chr3:124584658 plus strand	315838
KAT2B	NM_003884	NP_003875	Coding	chr3:20040031 plus strand	315839
KBTBD12	NM_207335	NP_997218	Coding	chr3:127923058 plus strand	315840
KBTBD8	NM_032505	NP_115894	Coding	chr3:66998302 plus strand	315841
KCNAB1	NM_003471	NP_003462	Coding	chr3:156142961 plus strand	315842
KCNAB1	NM_172159	NP_751891	Coding	chr3:156290986 plus strand	315843
KCNAB1	NM_172160	NP_751892	Coding	chr3:156120547 plus strand	315844

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KCNH8	NM_144633	NP_653234	Coding	chr3:19148524 plus strand	315845
KCNMB2	NM_001278911	NP_001265840	Coding	chr3:178558699 plus strand	315846
KCNMB2	NM_005832	NP_005823	Coding	chr3:178558699 plus strand	315846
KCNMB2	NM_181361	NP_852006	Coding	chr3:178536297 plus strand	315847
KCNMB3	NM_001163677	NP_001157149	Coding	chr3:179267050 minus strand	315848
KCNMB3	NM_014407	NP_055222	Coding	chr3:179251615 minus strand	315849
KCNMB3	NM_171828	NP_741979	Coding	chr3:179267050 minus strand	315848
KCNMB3	NM_171829	NP_741980	Coding	chr3:179259891 minus strand	315850
KCNMB3	NM_171830	NP_741981	Coding	chr3:179251857 minus strand	315851
KCTD6	NM_001128214	NP_001121686	Coding	chr3:58492095 plus strand	315852
KCTD6	NM_153331	NP_699162	Coding	chr3:58498364 plus strand	315853
KIAA0226	NM_001145642	NP_001139114	Coding	chr3:197749699 minus strand	315854
KIAA0226	NM_014687	NP_055502	Coding	chr3:197736926 minus strand	315855
KIAA1143	NM_020696	NP_065747	Coding	chr3:44761681 minus strand	315856
KIAA1257	NM_020741	NP_065792	Coding	chr3:128994143 minus strand	315857
KIAA1407	NM_020817	NP_065868	Coding	chr3:114056613 minus strand	315858
KIAA1524	NM_020890	NP_065941	Coding	chr3:108589644 minus strand	315859
KIAA2018	NM_001009899	NP_001009899	Coding	chr3:113696646 minus strand	315860
KIF15	NM_020242	NP_064627	Coding	chr3:44761716 plus strand	315861
KIF9	NM_001134878	NP_001128350	Coding	chr3:47282847 minus strand	315862
KIF9	NM_022342	NP_071737	Coding	chr3:47282847 minus strand	315862
KIF9	NM_182902	NP_878905	Coding	chr3:47282847 minus strand	315862
KLF15	NM_014079	NP_054798	Coding	chr3:126357393 minus strand	315863
KLHDC8B	NM_173546	NP_775817	Coding	chr3:49171584 plus strand	315864
KLHL18	NM_025010	NP_079286	Coding	chr3:47282839 plus strand	315865
KLHL24	NM_017644	NP_060114	Coding	chr3:183635622 plus strand	315866
KLHL40	NM_152393	NP_689606	Coding	chr3:42685518 plus strand	315867
KLHL6	NM_130446	NP_569713	Coding	chr3:183555711 minus strand	315868
KNG1	NM_000893	NP_000884	Coding	chr3:186717308 plus strand	315869
KNG1	NM_001102416	NP_001095886	Coding	chr3:186717308 plus	315869

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				strand	
KNG1	NM_001166451	NP_001159923	Coding	chr3:186717308 plus strand	315869
KPNA1	NM_002264	NP_002255	Coding	chr3:122514939 minus strand	315870
KPNA4	NM_002268	NP_002259	Coding	chr3:160565588 minus strand	315871
KRBOX1	NM_001205272	NP_001192201	Coding	chr3:42936341 plus strand	315872
KY	NM_178554	NP_848649	Coding	chr3:134651022 minus strand	315873
LAMB2	NM_002292	NP_002283	Coding	chr3:49133166 minus strand	315874
LAMP3	NM_014398	NP_055213	Coding	chr3:183162879 minus strand	315875
LARS2	NM_015340	NP_056155	Coding	chr3:45388582 plus strand	315876
LEKR1	NM_001004316	NP_001004316	Coding	chr3:156826306 plus strand	315877
LEKR1	NM_001193283	NP_001180212	Coding	chr3:156826358 plus strand	315878
LEPREL1	NM_001134418	NP_001127890	Coding	chr3:190122437 minus strand	315879
LEPREL1	NM_018192	NP_060662	Coding	chr3:190121119 minus strand	315880
LHFPL4	NM_198560	NP_940962	Coding	chr3:9553802 minus strand	315881
LIMD1	NM_014240	NP_055055	Coding	chr3:45594830 plus strand	315882
LIPH	NM_139248	NP_640341	Coding	chr3:185552581 minus strand	315883
LMCD1	NM_001278233	NP_001265162	Coding	chr3:8501806 plus strand	315884
LMCD1	NM_001278234	NP_001265163	Coding	chr3:8501806 plus strand	315884
LMCD1	NM_001278235	NP_001265164	Coding	chr3:8501806 plus strand	315884
LMCD1	NM_014583	NP_055398	Coding	chr3:8501806 plus strand	315884
LMLN	NM_001136049	NP_001129521	Coding	chr3:197960199 plus strand	315885
LMLN	NM_033029	NP_149018	Coding	chr3:197960199 plus strand	315885
LMOD3	NM_198271	NP_938012	Coding	chr3:69122595 minus strand	315886
LNP1	NM_001085451	NP_001078920	Coding	chr3:100401192 plus strand	315887
LOC100132146	NM_001195442	NP_001182371	Coding	chr3:46612434 plus strand	315888
LOC339862	NM_001257177	NP_001244106	Coding	chr3:17962571 plus strand	315889
LOC401052	NM_001008737	NP_001008737	Coding	chr3:10011095 minus strand	315890
LPP	NM_001167671	NP_001161143	Coding	chr3:188225404 plus strand	315891
LPP	NM_001167672	NP_001161144	Coding	chr3:188153872 plus strand	315892
LPP	NM_005578	NP_005569	Coding	chr3:188212932 plus strand	315893
LRCH3	NM_032773	NP_116162	Coding	chr3:197791273 plus strand	315894

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LRIG1	NM_015541	NP_056356	Coding	chr3:66500421 minus strand	315895
LRRC15	NM_001135057	NP_001128529	Coding	chr3:194369743 minus strand	315896
LRRC15	NM_130830	NP_570843	Coding	chr3:194369743 minus strand	315896
LRRC2	NM_024512	NP_078788	Coding	chr3:46566550 minus strand	315897
LRRC31	NM_001277127	NP_001264056	Coding	chr3:169869935 minus strand	315898
LRRC31	NM_001277128	NP_001264057	Coding	chr3:169869935 minus strand	315898
LRRC31	NM_024727	NP_079003	Coding	chr3:169869935 minus strand	315898
LRRC34	NM_001172779	NP_001166250	Coding	chr3:169812786 minus strand	315899
LRRC34	NM_001172780	NP_001166251	Coding	chr3:169812786 minus strand	315899
LRRC34	NM_153353	NP_699184	Coding	chr3:169812786 minus strand	315899
LRRC3B	NM_052953	NP_443185	Coding	chr3:26622808 plus strand	315900
LRRC58	NM_001099678	NP_001093148	Coding	chr3:120349339 minus strand	315901
LRRFIP2	NM_001134369	NP_001127841	Coding	chr3:37176360 minus strand	315902
LRRFIP2	NM_001282691	NP_001269620	Coding	chr3:37175215 minus strand	315903
LRRFIP2	NM_006309	NP_006300	Coding	chr3:37174605 minus strand	315904
LRRFIP2	NM_017724	NP_060194	Coding	chr3:37176360 minus strand	315902
LRRIQ4	NM_001080460	NP_001073929	Coding	chr3:169821921 plus strand	315905
LRRN1	NM_020873	NP_065924	Coding	chr3:3799436 plus strand	315906
LRTM1	NM_020678	NP_065729	Coding	chr3:54928045 minus strand	315907
LSAMP	NM_002338	NP_002329	Coding	chr3:116445538 minus strand	315908
LSG1	NM_018385	NP_060855	Coding	chr3:194672477 minus strand	315909
LSM3	NM_014463	NP_055278	Coding	chr3:14178727 plus strand	315910
LSMEM2	NM_153215	NP_694947	Coding	chr3:50279086 plus strand	315911
LTF	NM_001199149	NP_001186078	Coding	chr3:46463671 minus strand	315912
LTF	NM_002343	NP_002334	Coding	chr3:46465142 minus strand	315913
LXN	NM_020169	NP_064554	Coding	chr3:158672693 minus strand	315914
LYZL4	NM_144634	NP_653235	Coding	chr3:42410573 minus strand	315915
LZTFL1	NM_001276378	NP_001263307	Coding	chr3:45915724 minus strand	315916
LZTFL1	NM_001276379	NP_001263308	Coding	chr3:45915724 minus	315916

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				strand	
LZTFL1	NM_020347	NP_065080	Coding	chr3:45842158 minus strand	315917
MAATS1	NM_033364	NP_203528	Coding	chr3:119703021 plus strand	315918
MAGEF1	NM_022149	NP_071432	Coding	chr3:184712048 minus strand	315919
MAGI1	NM_001033057	NP_001028229	Coding	chr3:66038834 minus strand	315920
MAGI1	NM_004742	NP_004733	Coding	chr3:66038834 minus strand	315920
MAGI1	NM_015520	NP_056335	Coding	chr3:66038834 minus strand	315920
MANF	NM_006010	NP_006001	Coding	chr3:51385236 plus strand	315921
MAP3K13	NM_001242314	NP_001229243	Coding	chr3:185282940 plus strand	315922
MAP3K13	NM_001242317	NP_001229246	Coding	chr3:185282940 plus strand	315922
MAP3K13	NM_004721	NP_004712	Coding	chr3:185363047 plus strand	315923
MAP4	NM_001134364	NP_001127836	Coding	chr3:48089279 minus strand	315924
MAP4	NM_002375	NP_002366	Coding	chr3:48089279 minus strand	315924
MAP4	NM_030885	NP_112147	Coding	chr3:48089279 minus strand	315924
MAP6D1	NM_024871	NP_079147	Coding	chr3:183825605 minus strand	315925
MAPKAPK3	NM_001243925	NP_001230854	Coding	chr3:50617130 plus strand	315926
MAPKAPK3	NM_001243926	NP_001230855	Coding	chr3:50611861 plus strand	315927
MAPKAPK3	NM_004635	NP_004626	Coding	chr3:50617130 plus strand	315926
MASP1	NM_001031849	NP_001027019	Coding	chr3:187292022 minus strand	315928
MASP1	NM_001879	NP_001870	Coding	chr3:187292022 minus strand	315928
MASP1	NM_139125	NP_624302	Coding	chr3:187292022 minus strand	315928
MB21D2	NM_178496	NP_848591	Coding	chr3:192918161 minus strand	315929
MBD4	NM_001276270	NP_001263199	Coding	chr3:129440179 minus strand	315930
MBD4	NM_001276271	NP_001263200	Coding	chr3:129440179 minus strand	315930
MBD4	NM_001276272	NP_001263201	Coding	chr3:129440179 minus strand	315930
MBD4	NM_001276273	NP_001263202	Coding	chr3:129440179 minus strand	315930
MBD4	NM_003925	NP_003916	Coding	chr3:129440179 minus strand	315930
MBNL1	NM_021038	NP_066368	Coding	chr3:152268039 plus strand	315931
MBNL1	NM_207292	NP_997175	Coding	chr3:152268039 plus strand	315931

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MBNL1	NM_207293	NP_997176	Coding	chr3:152299404 plus strand	315932
MBNL1	NM_207294	NP_997177	Coding	chr3:152299404 plus strand	315932
MBNL1	NM_207295	NP_997178	Coding	chr3:152299404 plus strand	315932
MBNL1	NM_207296	NP_997179	Coding	chr3:152299404 plus strand	315932
MBNL1	NM_207297	NP_997180	Coding	chr3:152299404 plus strand	315932
MCCC1	NM_001293273	NP_001280202	Coding	chr3:183099587 minus strand	315933
MCCC1	NM_020166	NP_064551	Coding	chr3:183099587 minus strand	315933
MCF2L2	NM_015078	NP_055893	Coding	chr3:183428269 minus strand	315934
MCM2	NM_004526	NP_004517	Coding	chr3:127598356 plus strand	315935
MECOM	NM_001105077	NP_001098547	Coding	chr3:169146305 minus strand	315936
MECOM	NM_001105078	NP_001098548	Coding	chr3:169146612 minus strand	315937
MECOM	NM_001163999	NP_001157471	Coding	chr3:169146305 minus strand	315936
MECOM	NM_001164000	NP_001157472	Coding	chr3:169147734 minus strand	315938
MECOM	NM_001205194	NP_001192123	Coding	chr3:169663775 minus strand	315939
MECOM	NM_004991	NP_004982	Coding	chr3:169663775 minus strand	315939
MECOM	NM_005241	NP_005232	Coding	chr3:169146305 minus strand	315936
MED12L	NM_053002	NP_443728	Coding	chr3:151086797 plus strand	315940
METTL6	NM_001301790	NP_001288719	Coding	chr3:15427547 minus strand	315941
METTL6	NM_001301791	NP_001288720	Coding	chr3:15427547 minus strand	315941
METTL6	NM_001301792	NP_001288721	Coding	chr3:15427547 minus strand	315941
METTL6	NM_152396	NP_689609	Coding	chr3:15427547 minus strand	315941
MFI2	NM_005929	NP_005920	Coding	chr3:197029816 minus strand	315942
MFI2	NM_033316	NP_201573	Coding	chr3:197029815 minus strand	315943
MFN1	NM_033540	NP_284941	Coding	chr3:179347691 plus strand	315944
MFSD1	NM_001167903	NP_001161375	Coding	chr3:158801925 plus strand	315945
MFSD1	NM_001289406	NP_001276335	Coding	chr3:158801925 plus strand	315945
MFSD1	NM_001289407	NP_001276336	Coding	chr3:158801925 plus strand	315945

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MFSD1	NM_022736	NP_073573	Coding	chr3:158801925 plus strand	315945
MGLL	NM_001003794	NP_001003794	Coding	chr3:127823250 minus strand	315946
MGLL	NM_001256585	NP_001243514	Coding	chr3:127822882 minus strand	315947
MGLL	NM_007283	NP_009214	Coding	chr3:127822882 minus strand	315947
MINA	NM_001042533	NP_001035998	Coding	chr3:97972451 minus strand	315948
MINA	NM_001261829	NP_001248758	Coding	chr3:97972451 minus strand	315948
MINA	NM_032778	NP_116167	Coding	chr3:97972451 minus strand	315948
MINA	NM_153182	NP_694822	Coding	chr3:97972451 minus strand	315948
MITF	NM_000248	NP_000239	Coding	chr3:69936599 plus strand	315949
MITF	NM_001184967	NP_001171896	Coding	chr3:69763555 plus strand	315950
MITF	NM_001184968	NP_001171897	Coding	chr3:69936599 plus strand	315949
MITF	NM_006722	NP_006713	Coding	chr3:69763810 plus strand	315951
MITF	NM_198158	NP_937801	Coding	chr3:69936599 plus strand	315949
MITF	NM_198159	NP_937802	Coding	chr3:69739434 plus strand	315952
MITF	NM_198177	NP_937820	Coding	chr3:69866223 plus strand	315953
MITF	NM_198178	NP_937821	Coding	chr3:69936599 plus strand	315949
MKRN2	NM_001271707	NP_001258636	Coding	chr3:12557013 plus strand	315954
MKRN2	NM_014160	NP_054879	Coding	chr3:12557013 plus strand	315954
MKRN2OS	NM_001195279	NP_001182208	Coding	chr3:12545464 minus strand	315955
MLF1	NM_001130156	NP_001123628	Coding	chr3:158571163 plus strand	315956
MLF1	NM_001130157	NP_001123629	Coding	chr3:158571163 plus strand	315956
MLF1	NM_001195432	NP_001182361	Coding	chr3:158571163 plus strand	315956
MLF1	NM_001195433	NP_001182362	Coding	chr3:158571163 plus strand	315956
MLF1	NM_001195434	NP_001182363	Coding	chr3:158571163 plus strand	315956
MLF1	NM_022443	NP_071888	Coding	chr3:158571163 plus strand	315956
MLH1	NM_000249	NP_000240	Coding	chr3:36993349 plus strand	315957
MLH1	NM_001167617	NP_001161089	Coding	chr3:36993776 plus strand	315958
MLH1	NM_001167618	NP_001161090	Coding	chr3:36993776 plus strand	315958
MLH1	NM_001167619	NP_001161091	Coding	chr3:36993776 plus strand	315958
MLH1	NM_001258271	NP_001245200	Coding	chr3:36993349 plus strand	315957
MLH1	NM_001258273	NP_001245202	Coding	chr3:36993349 plus strand	315957
MLH1	NM_001258274	NP_001245203	Coding	chr3:36993776 plus strand	315958
MME	NM_000902	NP_000893	Coding	chr3:155079646 plus strand	315959

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MME	NM_007287	NP_009218	Coding	chr3:155079915 plus strand	315960
MME	NM_007288	NP_009219	Coding	chr3:155080163 plus strand	315961
MME	NM_007289	NP_009220	Coding	chr3:155080289 plus strand	315962
MOBP	NM_001278322	NP_001265251	Coding	chr3:39467572 plus strand	315963
MOBP	NM_001278323	NP_001265252	Coding	chr3:39502065 plus strand	315964
MOBP	NM_182935	NP_891980	Coding	chr3:39467572 plus strand	315963
MON1A	NM_001142501	NP_001135973	Coding	chr3:49930012 minus strand	315965
MON1A	NM_032355	NP_115731	Coding	chr3:49930012 minus strand	315965
MORC1	NM_014429	NP_055244	Coding	chr3:109118146 minus strand	315966
MRAS	NM_001085049	NP_001078518	Coding	chr3:138348665 plus strand	315967
MRAS	NM_001252090	NP_001239019	Coding	chr3:138349127 plus strand	315968
MRAS	NM_001252091	NP_001239020	Coding	chr3:138347647 plus strand	315969
MRAS	NM_001252092	NP_001239021	Coding	chr3:138348849 plus strand	315970
MRAS	NM_001252093	NP_001239022	Coding	chr3:138348665 plus strand	315967
MRAS	NM_012219	NP_036351	Coding	chr3:138347647 plus strand	315969
MRPL3	NM_007208	NP_009139	Coding	chr3:131503016 minus strand	315971
MRPL47	NM_020409	NP_065142	Coding	chr3:179604646 minus strand	315972
MRPL47	NM_177988	NP_817125	Coding	chr3:179604646 minus strand	315972
MRPS22	NM_020191	NP_064576	Coding	chr3:139344018 plus strand	315973
MRPS25	NM_022497	NP_071942	Coding	chr3:15065309 minus strand	315974
MSL2	NM_001145417	NP_001138889	Coding	chr3:136194468 minus strand	315975
MSL2	NM_018133	NP_060603	Coding	chr3:136195846 minus strand	315976
MST1	NM_020998	NP_066278	Coding	chr3:49688763 minus strand	315977
MST1R	NM_001244937	NP_001231866	Coding	chr3:49903873 minus strand	315978
MST1R	NM_002447	NP_002438	Coding	chr3:49903873 minus strand	315978
MTMR14	NM_001077525	NP_001070993	Coding	chr3:9649432 plus strand	315979
MTMR14	NM_001077526	NP_001070994	Coding	chr3:9649432 plus strand	315979
MTMR14	NM_022485	NP_071930	Coding	chr3:9649432 plus strand	315979
MUC13	NM_033049	NP_149038	Coding	chr3:124934751 minus strand	315980

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MUC20	NM_001282506	NP_001269435	Coding	chr3:195720881 plus strand	315981
MUC20	NM_001291833	NP_001278762	Coding	chr3:195720881 plus strand	315981
MUC20	NM_020790	NP_065841	Coding	chr3:195720881 plus strand	315981
MUC20	NM_152673	NP_689886	Coding	chr3:195720881 plus strand	315981
MUC4	NM_004532	NP_004523	Coding	chr3:195811973 minus strand	315982
MUC4	NM_018406	NP_060876	Coding	chr3:195811973 minus strand	315982
MUC4	NM_138297	NP_612154	Coding	chr3:195811973 minus strand	315982
MUSTN1	NM_205853	NP_995325	Coding	chr3:52835219 minus strand	315983
MYD88	NM_001172566	NP_001166037	Coding	chr3:38138477 plus strand	315984
MYD88	NM_001172567	NP_001166038	Coding	chr3:38138477 plus strand	315984
MYD88	NM_001172568	NP_001166039	Coding	chr3:38138477 plus strand	315984
MYD88	NM_001172569	NP_001166040	Coding	chr3:38138477 plus strand	315984
MYD88	NM_002468	NP_002459	Coding	chr3:38138477 plus strand	315984
MYH15	NM_014981	NP_055796	Coding	chr3:108529322 minus strand	315985
MYL3	NM_000258	NP_000249	Coding	chr3:46863483 minus strand	315986
MYLK	NM_053025	NP_444253	Coding	chr3:123884302 minus strand	315987
MYLK	NM_053026	NP_444254	Coding	chr3:123884302 minus strand	315987
MYLK	NM_053027	NP_444255	Coding	chr3:123884302 minus strand	315987
MYLK	NM_053028	NP_444256	Coding	chr3:123884302 minus strand	315987
MYLK	NM_053031	NP_444259	Coding	chr3:123620683 minus strand	315988
MYLK	NM_053032	NP_444260	Coding	chr3:123620683 minus strand	315988
MYNN	NM_001185118	NP_001172047	Coding	chr3:169773064 plus strand	315989
MYNN	NM_001185119	NP_001172048	Coding	chr3:169774264 plus strand	315990
MYNN	NM_018657	NP_061127	Coding	chr3:169773064 plus strand	315989
MYRIP	NM_001284423	NP_001271352	Coding	chr3:39808913 plus strand	315991
MYRIP	NM_001284424	NP_001271353	Coding	chr3:39809659 plus strand	315992
MYRIP	NM_001284425	NP_001271354	Coding	chr3:39809659 plus strand	315992
MYRIP	NM_001284426	NP_001271355	Coding	chr3:40100010 plus strand	315993
MYRIP	NM_015460	NP_056275	Coding	chr3:39809659 plus strand	315992
NAA50	NM_025146	NP_079422	Coding	chr3:113746273 minus strand	315994
NAALADL2	NM_207015	NP_996898	Coding	chr3:174859320 plus	315995

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				strand	
NAT6	NM_001200016	NP_001186945	Coding	chr3:50299421 minus strand	315996
NAT6	NM_001200018	NP_001186947	Coding	chr3:50298889 minus strand	315997
NAT6	NM_012191	NP_036323	Coding	chr3:50299421 minus strand	315996
NBEAL2	NM_015175	NP_055990	Coding	chr3:46979682 plus strand	315998
NCBP2	NM_001042540	NP_001036005	Coding	chr3:196942593 minus strand	315999
NCBP2	NM_007362	NP_031388	Coding	chr3:196942593 minus strand	315999
NCEH1	NM_001146276	NP_001139748	Coding	chr3:172711218 minus strand	316000
NCEH1	NM_001146277	NP_001139749	Coding	chr3:172711218 minus strand	316000
NCEH1	NM_001146278	NP_001139750	Coding	chr3:172711218 minus strand	316000
NCEH1	NM_020792	NP_065843	Coding	chr3:172711218 minus strand	316000
NCK1	NM_001190796	NP_001177725	Coding	chr3:136930474 plus strand	316001
NCK1	NM_001291999	NP_001278928	Coding	chr3:136862207 plus strand	316002
NCK1	NM_006153	NP_006144	Coding	chr3:136862207 plus strand	316002
NCKIPSD	NM_016453	NP_057537	Coding	chr3:48685933 minus strand	316003
NCKIPSD	NM_184231	NP_909119	Coding	chr3:48685933 minus strand	316003
NDUFAF3	NM_199069	NP_951032	Coding	chr3:49021640 plus strand	316004
NDUFAF3	NM_199070	NP_951033	Coding	chr3:49021640 plus strand	316004
NDUFAF3	NM_199073	NP_951047	Coding	chr3:49021184 plus strand	316005
NDUFAF3	NM_199074	NP_951056	Coding	chr3:49020474 plus strand	316006
NDUFB4	NM_001168331	NP_001161803	Coding	chr3:120596280 plus strand	316007
NDUFB4	NM_004547	NP_004538	Coding	chr3:120596280 plus strand	316007
NDUFB5	NM_001199957	NP_001186886	Coding	chr3:179604786 plus strand	316008
NDUFB5	NM_001199958	NP_001186887	Coding	chr3:179604786 plus strand	316008
NDUFB5	NM_002492	NP_002483	Coding	chr3:179604786 plus strand	316008
NEK10	NM_199347	NP_955379	Coding	chr3:27369421 minus strand	316009
NEK11	NM_001146003	NP_001139475	Coding	chr3:131026849 plus strand	316010
NEK11	NM_024800	NP_079076	Coding	chr3:131026849 plus strand	316010
NEK11	NM_145910	NP_665917	Coding	chr3:131026849 plus strand	316010

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NEK4	NM_001193533	NP_001180462	Coding	chr3:52770949 minus strand	316011
NEK4	NM_003157	NP_003148	Coding	chr3:52770949 minus strand	316011
NFKBIZ	NM_001005474	NP_001005474	Coding	chr3:101827989 plus strand	316012
NFKBIZ	NM_031419	NP_113607	Coding	chr3:101849513 plus strand	316013
NGLY1	NM_001145293	NP_001138765	Coding	chr3:25783498 minus strand	316014
NGLY1	NM_001145294	NP_001138766	Coding	chr3:25790039 minus strand	316015
NGLY1	NM_001145295	NP_001138767	Coding	chr3:25783498 minus strand	316014
NGLY1	NM_018297	NP_060767	Coding	chr3:25783498 minus strand	316014
NICN1	NM_032316	NP_115692	Coding	chr3:49429324 minus strand	316016
NISCH	NM_001276293	NP_001263222	Coding	chr3:52455507 plus strand	316017
NISCH	NM_001276294	NP_001263223	Coding	chr3:52455507 plus strand	316017
NISCH	NM_007184	NP_009115	Coding	chr3:52455507 plus strand	316017
NIT2	NM_020202	NP_064587	Coding	chr3:100334717 plus strand	316018
NKIRAS1	NM_020345	NP_065078	Coding	chr3:23917046 minus strand	316019
NKTR	NM_005385	NP_005376	Coding	chr3:42600654 plus strand	316020
NLGN1	NM_014932	NP_055747	Coding	chr3:173398447 plus strand	316021
NMD3	NM_015938	NP_057022	Coding	chr3:161221310 plus strand	316022
NME6	NM_005793	NP_005784	Coding	chr3:48301358 minus strand	316023
NME9	NM_178130	NP_835231	Coding	chr3:138329886 minus strand	316024
NMNAT3	NM_001200047	NP_001186976	Coding	chr3:139678043 minus strand	316025
NMNAT3	NM_178177	NP_835471	Coding	chr3:139678043 minus strand	316025
NPHP3	NM_153240	NP_694972	Coding	chr3:132722459 minus strand	316026
NPRL2	NM_006545	NP_006536	Coding	chr3:50351055 minus strand	316027
NR1D2	NM_001145425	NP_001138897	Coding	chr3:23946120 plus strand	316028
NR1D2	NM_005126	NP_005117	Coding	chr3:23945259 plus strand	316029
NR1I2	NM_003889	NP_003880	Coding	chr3:119780483 plus strand	316030
NR1I2	NM_022002	NP_071285	Coding	chr3:119782709 plus strand	316031
NR1I2	NM_033013	NP_148934	Coding	chr3:119780483 plus strand	316030
NR2C2	NM_001291694	NP_001278623	Coding	chr3:14947583 plus strand	316032
NR2C2	NM_003298	NP_003289	Coding	chr3:14947583 plus strand	316032

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NRROS	NM_198565	NP_940967	Coding	chr3:196639784 plus strand	316033
NSUN3	NM_022072	NP_071355	Coding	chr3:94063010 plus strand	316034
NT5DC2	NM_001134231	NP_001127703	Coding	chr3:52533777 minus strand	316035
NT5DC2	NM_022908	NP_075059	Coding	chr3:52535077 minus strand	316036
NUDT16	NM_001171905	NP_001165376	Coding	chr3:131381670 plus strand	316037
NUDT16	NM_001171906	NP_001165377	Coding	chr3:131381764 plus strand	316038
NUDT16	NM_152395	NP_689608	Coding	chr3:131381764 plus strand	316038
NUP210	NM_024923	NP_079199	Coding	chr3:13420319 minus strand	316039
NXPE3	NM_001134456	NP_001127928	Coding	chr3:101779441 plus strand	316040
NXPE3	NM_145037	NP_659474	Coding	chr3:101779184 plus strand	316041
OGG1	NM_002542	NP_002533	Coding	chr3:9749943 plus strand	316042
OGG1	NM_016819	NP_058212	Coding	chr3:9749943 plus strand	316042
OGG1	NM_016820	NP_058213	Coding	chr3:9749943 plus strand	316042
OGG1	NM_016821	NP_058214	Coding	chr3:9749943 plus strand	316042
OGG1	NM_016826	NP_058434	Coding	chr3:9749943 plus strand	316042
OGG1	NM_016827	NP_058436	Coding	chr3:9749943 plus strand	316042
OGG1	NM_016828	NP_058437	Coding	chr3:9749943 plus strand	316042
OGG1	NM_016829	NP_058438	Coding	chr3:9749943 plus strand	316042
OPA1	NM_015560	NP_056375	Coding	chr3:193593143 plus strand	316043
OPA1	NM_130831	NP_570844	Coding	chr3:193593143 plus strand	316043
OPA1	NM_130832	NP_570845	Coding	chr3:193593143 plus strand	316043
OPA1	NM_130833	NP_570846	Coding	chr3:193593143 plus strand	316043
OPA1	NM_130834	NP_570847	Coding	chr3:193593143 plus strand	316043
OPA1	NM_130835	NP_570848	Coding	chr3:193593143 plus strand	316043
OPA1	NM_130836	NP_570849	Coding	chr3:193593143 plus strand	316043
OPA1	NM_130837	NP_570850	Coding	chr3:193593143 plus strand	316043
OR5AC2	NM_054106	NP_473447	Coding	chr3:98087172 plus strand	316044
OR5H1	NM_001005338	NP_001005338	Coding	chr3:98132697 plus strand	316045
OR5H14	NM_001005514	NP_001005514	Coding	chr3:98149385 plus strand	316046
OR5H15	NM_001005515	NP_001005515	Coding	chr3:98168699 plus strand	316047
OR5H2	NM_001005482	NP_001005482	Coding	chr3:98282887 plus strand	316048
OR5H6	NM_001005479	NP_001005479	Coding	chr3:98264284 plus strand	316049
OR5K1	NM_001004736	NP_001004736	Coding	chr3:98469576 plus strand	316050

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OR5K2	NM_001004737	NP_001004737	Coding	chr3:98497680 plus strand	316051
OR5K3	NM_001005516	NP_001005516	Coding	chr3:98390665 plus strand	316052
OR5K4	NM_001005517	NP_001005517	Coding	chr3:98353853 plus strand	316053
OSBPL10	NM_001174060	NP_001167531	Coding	chr3:31981850 minus strand	316054
OSBPL10	NM_017784	NP_060254	Coding	chr3:31981850 minus strand	316054
OSBPL11	NM_022776	NP_073613	Coding	chr3:125595537 minus strand	316055
OSTN	NM_198184	NP_937827	Coding	chr3:191212532 plus strand	316056
OTOL1	NM_001080440	NP_001073909	Coding	chr3:161496807 plus strand	316057
OXNAD1	NM_138381	NP_612390	Coding	chr3:16265159 plus strand	316058
OXSM	NM_001145391	NP_001138863	Coding	chr3:25790071 plus strand	316059
OXSM	NM_017897	NP_060367	Coding	chr3:25790071 plus strand	316059
OXSR1	NM_005109	NP_005100	Coding	chr3:38165534 plus strand	316060
OXTR	NM_000916	NP_000907	Coding	chr3:8769614 minus strand	316061
P2RY1	NM_002563	NP_002554	Coding	chr3:152834946 plus strand	316062
P2RY12	NM_022788	NP_073625	Coding	chr3:151384812 minus strand	316063
P2RY12	NM_176876	NP_795345	Coding	chr3:151340855 minus strand	316064
P2RY13	NM_176894	NP_795713	Coding	chr3:151329549 minus strand	316065
P2RY14	NM_001081455	NP_001074924	Coding	chr3:151249210 minus strand	316066
P2RY14	NM_014879	NP_055694	Coding	chr3:151278442 minus strand	316067
P4HTM	NM_177938	NP_808807	Coding	chr3:48989907 plus strand	316068
P4HTM	NM_177939	NP_808808	Coding	chr3:48989907 plus strand	316068
PAK2	NM_002577	NP_002568	Coding	chr3:196739856 plus strand	316069
PAQR9	NM_198504	NP_940906	Coding	chr3:142963336 minus strand	316070
PARL	NM_001037639	NP_001032728	Coding	chr3:183884905 minus strand	316071
PARL	NM_018622	NP_061092	Coding	chr3:183884905 minus strand	316071
PARP14	NM_017554	NP_060024	Coding	chr3:122680824 plus strand	316072
PARP15	NM_001113523	NP_001106995	Coding	chr3:122577601 plus strand	316073
PARP15	NM_152615	NP_689828	Coding	chr3:122615677 plus strand	316074
PARP3	NM_001003931	NP_001003931	Coding	chr3:51942304 plus strand	316075
PARP3	NM_005485	NP_005476	Coding	chr3:51942304 plus strand	316075
PARP9	NM_001146102	NP_001139574	Coding	chr3:122564300 minus strand	316076

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PARP9	NM_001146103	NP_001139575	Coding	chr3:122564676 minus strand	316077
PARP9	NM_001146104	NP_001139576	Coding	chr3:122564347 minus strand	316078
PARP9	NM_001146105	NP_001139577	Coding	chr3:122564300 minus strand	316076
PARP9	NM_001146106	NP_001139578	Coding	chr3:122564347 minus strand	316078
PARP9	NM_031458	NP_113646	Coding	chr3:122564676 minus strand	316077
PBRM1	NM_018313	NP_060783	Coding	chr3:52685850 minus strand	316079
PCBP4	NM_001174100	NP_001167571	Coding	chr3:51967466 minus strand	316080
PCBP4	NM_020418	NP_065151	Coding	chr3:51967434 minus strand	316081
PCBP4	NM_033008	NP_127501	Coding	chr3:51967466 minus strand	316080
PCBP4	NM_033010	NP_127503	Coding	chr3:51962892 minus strand	316082
PCCB	NM_000532	NP_000523	Coding	chr3:136250324 plus strand	316083
PCCB	NM_001178014	NP_001171485	Coding	chr3:136250324 plus strand	316083
PCNP	NM_020357	NP_065090	Coding	chr3:101574197 plus strand	316084
PCOLCE2	NM_013363	NP_037495	Coding	chr3:142889203 minus strand	316085
PCYT1A	NM_005017	NP_005008	Coding	chr3:196287713 minus strand	316086
PDCD10	NM_007217	NP_009148	Coding	chr3:167734806 minus strand	316087
PDCD10	NM_145859	NP_665858	Coding	chr3:167734863 minus strand	316088
PDCD10	NM_145860	NP_665859	Coding	chr3:167734842 minus strand	316089
PDCD6IP	NM_001162429	NP_001155901	Coding	chr3:33798570 plus strand	316090
PDCD6IP	NM_001256192	NP_001243121	Coding	chr3:33798570 plus strand	316090
PDCD6IP	NM_013374	NP_037506	Coding	chr3:33798570 plus strand	316090
PDE12	NM_177966	NP_808881	Coding	chr3:57556253 plus strand	316091
PDHB	NM_000925	NP_000916	Coding	chr3:58433852 minus strand	316092
PDHB	NM_001173468	NP_001166939	Coding	chr3:58433852 minus strand	316092
PDIA5	NM_006810	NP_006801	Coding	chr3:123067008 plus strand	316093
PDZRN3	NM_015009	NP_055824	Coding	chr3:73624921 minus strand	316094
PEX5L	NM_001256750	NP_001243679	Coding	chr3:180037053 minus strand	316095
PEX5L	NM_001256751	NP_001243680	Coding	chr3:180037053 minus strand	316095
PEX5L	NM_001256752	NP_001243681	Coding	chr3:180037053 minus	316095

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				strand	
PEX5L	NM_001256753	NP_001243682	Coding	chr3:180037053 minus strand	316095
PEX5L	NM_001256754	NP_001243683	Coding	chr3:179974220 minus strand	316096
PEX5L	NM_001256755	NP_001243684	Coding	chr3:179974220 minus strand	316096
PEX5L	NM_001256756	NP_001243685	Coding	chr3:179974220 minus strand	316096
PEX5L	NM_016559	NP_057643	Coding	chr3:180037053 minus strand	316095
PFKFB4	NM_004567	NP_004558	Coding	chr3:48556794 minus strand	316097
PFN2	NM_002628	NP_002619	Coding	chr3:149970954 minus strand	316098
PFN2	NM_053024	NP_444252	Coding	chr3:149970954 minus strand	316098
PHC3	NM_024947	NP_079223	Coding	chr3:170181749 minus strand	316099
PHF7	NM_001278221	NP_001265150	Coding	chr3:52412810 plus strand	316100
PHF7	NM_016483	NP_057567	Coding	chr3:52410560 plus strand	316101
PHLDB2	NM_001134437	NP_001127909	Coding	chr3:111732479 plus strand	316102
PHLDB2	NM_001134438	NP_001127910	Coding	chr3:111859179 plus strand	316103
PHLDB2	NM_001134439	NP_001127911	Coding	chr3:111859720 plus strand	316104
PHLDB2	NM_145753	NP_665696	Coding	chr3:111859179 plus strand	316103
PIGX	NM_001166304	NP_001159776	Coding	chr3:196712373 plus strand	316105
PIGX	NM_017861	NP_060331	Coding	chr3:196712373 plus strand	316105
PIGZ	NM_025163	NP_079439	Coding	chr3:196968871 minus strand	316106
PIK3CA	NM_006218	NP_006209	Coding	chr3:179148522 plus strand	316107
PIK3CB	NM_001256045	NP_001242974	Coding	chr3:138707621 minus strand	316108
PIK3CB	NM_006219	NP_006210	Coding	chr3:138759359 minus strand	316109
PIK3R4	NM_014602	NP_055417	Coding	chr3:130746852 minus strand	316110
PLA1A	NM_001206960	NP_001193889	Coding	chr3:119597847 plus strand	316111
PLA1A	NM_001206961	NP_001193890	Coding	chr3:119597847 plus strand	316111
PLA1A	NM_001293225	NP_001280154	Coding	chr3:119600270 plus strand	316112
PLA1A	NM_015900	NP_056984	Coding	chr3:119597847 plus strand	316111
PLCD1	NM_001130964	NP_001124436	Coding	chr3:38024787 minus strand	316113

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PLCD1	NM_006225	NP_006216	Coding	chr3:38029663 minus strand	316114
PLCH1	NM_001130960	NP_001124432	Coding	chr3:155676316 minus strand	316115
PLCH1	NM_001130961	NP_001124433	Coding	chr3:155676316 minus strand	316115
PLCH1	NM_014996	NP_055811	Coding	chr3:155704208 minus strand	316116
PLCL2	NM_001144382	NP_001137854	Coding	chr3:16884958 plus strand	316117
PLCL2	NM_015184	NP_055999	Coding	chr3:16933089 plus strand	316118
PLCXD2	NM_001185106	NP_001172035	Coding	chr3:111674675 plus strand	316119
PLCXD2	NM_153268	NP_695000	Coding	chr3:111674675 plus strand	316119
PLD1	NM_001130081	NP_001123553	Coding	chr3:171810494 minus strand	316120
PLD1	NM_002662	NP_002653	Coding	chr3:171810494 minus strand	316120
PLOD2	NM_000935	NP_000926	Coding	chr3:146161495 minus strand	316121
PLOD2	NM_182943	NP_891988	Coding	chr3:146161495 minus strand	316121
PLS1	NM_001145319	NP_001138791	Coding	chr3:142596386 plus strand	316122
PLS1	NM_001172312	NP_001165783	Coding	chr3:142656896 plus strand	316123
PLS1	NM_002670	NP_002661	Coding	chr3:142623423 plus strand	316124
PLSCR1	NM_021105	NP_066928	Coding	chr3:146544841 minus strand	316125
PLSCR2	NM_001199978	NP_001186907	Coding	chr3:146469301 minus strand	316126
PLSCR2	NM_001199979	NP_001186908	Coding	chr3:146495991 minus strand	316127
PLSCR2	NM_020359	NP_065092	Coding	chr3:146495991 minus strand	316127
PLSCR4	NM_001128304	NP_001121776	Coding	chr3:146251179 minus strand	316128
PLSCR4	NM_001128305	NP_001121777	Coding	chr3:146250864 minus strand	316129
PLSCR4	NM_001128306	NP_001121778	Coding	chr3:146251179 minus strand	316128
PLSCR4	NM_001177304	NP_001170775	Coding	chr3:146251179 minus strand	316128
PLSCR4	NM_020353	NP_065086	Coding	chr3:146251179 minus strand	316128
PLSCR5	NM_001085420	NP_001078889	Coding	chr3:146606216 minus strand	316130
PLXNA1	NM_032242	NP_115618	Coding	chr3:126988593 plus strand	316131
PLXNB1	NM_001130082	NP_001123554	Coding	chr3:48430051 minus strand	316132
PLXNB1	NM_002673	NP_002664	Coding	chr3:48429463 minus strand	316133

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PLXND1	NM_015103	NP_055918	Coding	chr3:129606739 minus strand	316134
POC1A	NM_001161580	NP_001155052	Coding	chr3:52154690 minus strand	316135
POC1A	NM_001161581	NP_001155053	Coding	chr3:52154690 minus strand	316135
POC1A	NM_015426	NP_056241	Coding	chr3:52154690 minus strand	316135
PODXL2	NM_015720	NP_056535	Coding	chr3:127629158 plus strand	316136
POGLUT1	NM_152305	NP_689518	Coding	chr3:119468937 plus strand	316137
POLQ	NM_199420	NP_955452	Coding	chr3:121546006 minus strand	316138
POLR2H	NM_001278698	NP_001265627	Coding	chr3:184362982 plus strand	316139
POLR2H	NM_001278699	NP_001265628	Coding	chr3:184362982 plus strand	316139
POLR2H	NM_001278700	NP_001265629	Coding	chr3:184361713 plus strand	316140
POLR2H	NM_001278714	NP_001265643	Coding	chr3:184362982 plus strand	316139
POLR2H	NM_001278715	NP_001265644	Coding	chr3:184362982 plus strand	316139
POLR2H	NM_006232	NP_006223	Coding	chr3:184362982 plus strand	316139
POMGNT2	NM_032806	NP_116195	Coding	chr3:43106083 minus strand	316141
POPDC2	NM_022135	NP_071418	Coding	chr3:119660557 minus strand	316142
POU1F1	NM_000306	NP_000297	Coding	chr3:87276587 minus strand	316143
POU1F1	NM_001122757	NP_001116229	Coding	chr3:87276587 minus strand	316143
PP2D1	NM_001252657	NP_001239586	Coding	chr3:20012273 minus strand	316144
PPARG	NM_005037	NP_005028	Coding	chr3:12287849 plus strand	316145
PPARG	NM_015869	NP_056953	Coding	chr3:12351501 plus strand	316146
PPARG	NM_138711	NP_619725	Coding	chr3:12288936 plus strand	316147
PPARG	NM_138712	NP_619726	Coding	chr3:12287849 plus strand	316145
PPM1L	NM_139245	NP_640338	Coding	chr3:160756207 plus strand	316148
PPM1M	NM_001122870	NP_001116342	Coding	chr3:52246169 plus strand	316149
PPM1M	NM_144641	NP_653242	Coding	chr3:52245792 plus strand	316150
PPP1R2	NM_001291504	NP_001278433	Coding	chr3:195543401 minus strand	316151
PPP1R2	NM_001291505	NP_001278434	Coding	chr3:195543401 minus strand	316151
PPP1R2	NM_006241	NP_006232	Coding	chr3:195543401 minus strand	316151
PPP2R3A	NM_001190447	NP_001177376	Coding	chr3:135965672 plus strand	316152

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PPP2R3A	NM_002718	NP_002709	Coding	chr3:135965672 plus strand	316152
PPP2R3A	NM_181897	NP_871626	Coding	chr3:136022734 plus strand	316153
PPP4R2	NM_174907	NP_777567	Coding	chr3:72996967 plus strand	316154
PQLC2L	NM_001099777	NP_001093247	Coding	chr3:157543343 plus strand	316155
PQLC2L	NM_001130001	NP_001123473	Coding	chr3:157543343 plus strand	316155
PQLC2L	NM_001130002	NP_001123474	Coding	chr3:157543343 plus strand	316155
PQLC2L	NM_001243729	NP_001230658	Coding	chr3:157543343 plus strand	316155
PRICKLE2	NM_198859	NP_942559	Coding	chr3:64225455 minus strand	316156
PRKAR2A	NM_004157	NP_004148	Coding	chr3:48847837 minus strand	316157
PRKCD	NM_006254	NP_006245	Coding	chr3:53161206 plus strand	316158
PRKCD	NM_212539	NP_997704	Coding	chr3:53161206 plus strand	316158
PRKCI	NM_002740	NP_002731	Coding	chr3:170222431 plus strand	316159
PROK2	NM_001126128	NP_001119600	Coding	chr3:71785206 minus strand	316160
PROK2	NM_021935	NP_068754	Coding	chr3:71785206 minus strand	316160
PROS1	NM_000313	NP_000304	Coding	chr3:93974090 minus strand	316161
PRR23A	NM_001134659	NP_001128131	Coding	chr3:139006268 minus strand	316162
PRR23B	NM_001013650	NP_001013672	Coding	chr3:139020926 minus strand	316163
PRR23C	NM_001134657	NP_001128129	Coding	chr3:139044892 minus strand	316164
PRRT3	NM_207351	NP_997234	Coding	chr3:9952394 minus strand	316165
PRSS42	NM_182702	NP_874361	Coding	chr3:46834095 minus strand	316166
PRSS45	NM_199183	NP_954652	Coding	chr3:46744755 minus strand	316167
PRSS46	NM_001205271	NP_001192200	Coding	chr3:46736431 minus strand	316168
PRSS50	NM_013270	NP_037402	Coding	chr3:46717883 minus strand	316169
PSMD2	NM_001278708	NP_001265637	Coding	chr3:184300580 plus strand	316170
PSMD2	NM_001278709	NP_001265638	Coding	chr3:184300580 plus strand	316170
PSMD2	NM_002808	NP_002799	Coding	chr3:184299097 plus strand	316171
PSMD6	NM_001271779	NP_001258708	Coding	chr3:64023606 minus strand	316172
PSMD6	NM_001271780	NP_001258709	Coding	chr3:64024010 minus strand	316173
PSMD6	NM_001271781	NP_001258710	Coding	chr3:64023472 minus	316174

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				strand	
PSMD6	NM_014814	NP_055629	Coding	chr3:64023606 minus strand	316172
PTH1R	NM_000316	NP_000307	Coding	chr3:46877745 plus strand	316175
PTH1R	NM_001184744	NP_001171673	Coding	chr3:46882248 plus strand	316176
PTPLB	NM_198402	NP_940684	Coding	chr3:123585077 minus strand	316177
PTPN23	NM_015466	NP_056281	Coding	chr3:47381000 plus strand	316178
PTPRG	NM_002841	NP_002832	Coding	chr3:61561568 plus strand	316179
PTX3	NM_002852	NP_002843	Coding	chr3:157436790 plus strand	316180
PVRL3	NM_001243286	NP_001230215	Coding	chr3:111071758 plus strand	316181
PVRL3	NM_001243288	NP_001230217	Coding	chr3:111072167 plus strand	316182
PVRL3	NM_015480	NP_056295	Coding	chr3:111071758 plus strand	316181
PXK	NM_001289095	NP_001276024	Coding	chr3:58332889 plus strand	316183
PXK	NM_001289096	NP_001276025	Coding	chr3:58332889 plus strand	316183
PXK	NM_001289098	NP_001276027	Coding	chr3:58332889 plus strand	316183
PXK	NM_001289099	NP_001276028	Coding	chr3:58332889 plus strand	316183
PXK	NM_001289100	NP_001276029	Coding	chr3:58332889 plus strand	316183
PXK	NM_001289101	NP_001276030	Coding	chr3:58332889 plus strand	316183
PXK	NM_017771	NP_060241	Coding	chr3:58332889 plus strand	316183
PXYLP1	NM_001037172	NP_001032249	Coding	chr3:141231824 plus strand	316184
PXYLP1	NM_001282728	NP_001269657	Coding	chr3:141231824 plus strand	316184
PXYLP1	NM_152282	NP_689495	Coding	chr3:141231824 plus strand	316184
PYDC2	NM_001083308	NP_001076777	Coding	chr3:191461162 plus strand	316185
QARS	NM_001272073	NP_001259002	Coding	chr3:49105129 minus strand	316186
QARS	NM_005051	NP_005042	Coding	chr3:49105129 minus strand	316186
QRICH1	NM_017730	NP_060200	Coding	chr3:49094071 minus strand	316187
QRICH1	NM_198880	NP_942581	Coding	chr3:49094071 minus strand	316187
QTRTD1	NM_001256835	NP_001243764	Coding	chr3:114056734 plus strand	316188
QTRTD1	NM_001256836	NP_001243765	Coding	chr3:114056734 plus strand	316188
QTRTD1	NM_001256837	NP_001243766	Coding	chr3:114056734 plus strand	316188
QTRTD1	NM_024638	NP_078914	Coding	chr3:114056734 plus strand	316188
RAB43	NM_001204883	NP_001191812	Coding	chr3:129122150 minus strand	316189

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RAB43	NM_001204884	NP_001191813	Coding	chr3:129122014 minus strand	316190
RAB43	NM_001204885	NP_001191814	Coding	chr3:129121922 minus strand	316191
RAB43	NM_001204886	NP_001191815	Coding	chr3:129121804 minus strand	316192
RAB43	NM_001204887	NP_001191816	Coding	chr3:129121804 minus strand	316192
RAB43	NM_001204888	NP_001191817	Coding	chr3:129121804 minus strand	316192
RAB43	NM_198490	NP_940892	Coding	chr3:129121804 minus strand	316192
RAB5A	NM_001292048	NP_001278977	Coding	chr3:19947079 plus strand	316193
RAB5A	NM_004162	NP_004153	Coding	chr3:19947079 plus strand	316193
RAB6B	NM_016577	NP_057661	Coding	chr3:133895847 minus strand	316194
RAB7A	NM_004637	NP_004628	Coding	chr3:128726135 plus strand	316195
RABL3	NM_173825	NP_776186	Coding	chr3:120742537 minus strand	316196
RAD18	NM_020165	NP_064550	Coding	chr3:8963475 minus strand	316197
RAD54L2	NM_015106	NP_055921	Coding	chr3:51541579 plus strand	316198
RAF1	NM_002880	NP_002871	Coding	chr3:12664201 minus strand	316199
RAP2B	NM_002886	NP_002877	Coding	chr3:153162211 plus strand	316200
RARB	NM_000965	NP_000956	Coding	chr3:25428262 plus strand	316201
RARB	NM_001290216	NP_001277145	Coding	chr3:25174331 plus strand	316202
RARB	NM_001290217	NP_001277146	Coding	chr3:25458309 plus strand	316203
RARB	NM_001290266	NP_001277195	Coding	chr3:25428262 plus strand	316201
RARB	NM_001290276	NP_001277205	Coding	chr3:25428262 plus strand	316201
RARB	NM_001290277	NP_001277206	Coding	chr3:25428262 plus strand	316201
RARB	NM_001290300	NP_001277229	Coding	chr3:25340801 plus strand	316204
RARB	NM_016152	NP_057236	Coding	chr3:25428262 plus strand	316201
RARRES1	NM_002888	NP_002879	Coding	chr3:158732486 minus strand	316205
RARRES1	NM_206963	NP_996846	Coding	chr3:158732486 minus strand	316205
RASA2	NM_006506	NP_006497	Coding	chr3:141487083 plus strand	316206
RASSF1	NM_001206957	NP_001193886	Coding	chr3:50340936 minus strand	316207
RASSF1	NM_007182	NP_009113	Coding	chr3:50340936 minus strand	316207
RASSF1	NM_170712	NP_733830	Coding	chr3:50338233 minus strand	316208
RASSF1	NM_170713	NP_733831	Coding	chr3:50337464 minus strand	316209
RASSF1	NM_170714	NP_733832	Coding	chr3:50340936 minus strand	316207

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RBM15B	NM_013286	NP_037418	Coding	chr3:51391267 plus strand	316210
RBM5	NM_005778	NP_005769	Coding	chr3:50088907 plus strand	316211
RBM6	NM_001167582	NP_001161054	Coding	chr3:49940043 plus strand	316212
RBM6	NM_005777	NP_005768	Coding	chr3:49940043 plus strand	316212
RBMS3	NM_001003792	NP_001003792	Coding	chr3:29281311 plus strand	316213
RBMS3	NM_001003793	NP_001003793	Coding	chr3:29281311 plus strand	316213
RBMS3	NM_001177711	NP_001171182	Coding	chr3:29281311 plus strand	316213
RBMS3	NM_001177712	NP_001171183	Coding	chr3:29281311 plus strand	316213
RBMS3	NM_014483	NP_055298	Coding	chr3:29281311 plus strand	316213
RBP1	NM_001130992	NP_001124464	Coding	chr3:139539829 minus strand	316214
RBP1	NM_001130993	NP_001124465	Coding	chr3:139539829 minus strand	316214
RBP1	NM_002899	NP_002890	Coding	chr3:139539829 minus strand	316214
RBP2	NM_004164	NP_004155	Coding	chr3:139476510 minus strand	316215
RBSN	NM_001302378	NP_001289307	Coding	chr3:15099157 minus strand	316216
RBSN	NM_022340	NP_071735	Coding	chr3:15099157 minus strand	316216
RETNLB	NM_032579	NP_115968	Coding	chr3:108757283 minus strand	316217
RFC4	NM_002916	NP_002907	Coding	chr3:186806501 minus strand	316218
RFC4	NM_181573	NP_853551	Coding	chr3:186806695 minus strand	316219
RFT1	NM_052859	NP_443091	Coding	chr3:53130454 minus strand	316220
RFTN1	NM_015150	NP_055965	Coding	chr3:16513715 minus strand	316221
RHO	NM_000539	NP_000530	Coding	chr3:129528638 plus strand	316222
RHOA	NM_001664	NP_001655	Coding	chr3:49412093 minus strand	316223
RNF123	NM_022064	NP_071347	Coding	chr3:49689516 plus strand	316224
RNF13	NM_007282	NP_009213	Coding	chr3:149812687 plus strand	316225
RNF13	NM_183381	NP_899237	Coding	chr3:149812687 plus strand	316225
RNF168	NM_152617	NP_689830	Coding	chr3:196503768 minus strand	316226
RNF7	NM_001201370	NP_001188299	Coding	chr3:141738208 plus strand	316227
RNF7	NM_014245	NP_055060	Coding	chr3:141738208 plus strand	316227
RNF7	NM_183237	NP_899060	Coding	chr3:141738208 plus strand	316227
ROBO1	NM_001145845	NP_001139317	Coding	chr3:79019459 minus strand	316228
ROBO1	NM_002941	NP_002932	Coding	chr3:79767909 minus	316229

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				strand	
ROBO1	NM_133631	NP_598334	Coding	chr3:79019459 minus strand	316228
ROBO2	NM_001128929	NP_001122401	Coding	chr3:77098011 plus strand	316230
ROBO2	NM_001290039	NP_001276968	Coding	chr3:77040142 plus strand	316231
ROBO2	NM_001290040	NP_001276969	Coding	chr3:77040142 plus strand	316231
ROBO2	NM_001290065	NP_001276994	Coding	chr3:77040142 plus strand	316231
ROBO2	NM_002942	NP_002933	Coding	chr3:77040142 plus strand	316231
ROPN1	NM_017578	NP_060048	Coding	chr3:123991352 minus strand	316232
ROPN1B	NM_001012337	NP_001012337	Coding	chr3:125969184 plus strand	316233
RPL14	NM_001034996	NP_001030168	Coding	chr3:40457338 plus strand	316234
RPL14	NM_003973	NP_003964	Coding	chr3:40457291 plus strand	316235
RPL15	NM_001253379	NP_001240308	Coding	chr3:23916803 plus strand	316236
RPL15	NM_001253380	NP_001240309	Coding	chr3:23917704 plus strand	316237
RPL15	NM_001253382	NP_001240311	Coding	chr3:23917161 plus strand	316238
RPL15	NM_001253383	NP_001240312	Coding	chr3:23917126 plus strand	316239
RPL15	NM_001253384	NP_001240313	Coding	chr3:23916803 plus strand	316236
RPL15	NM_002948	NP_002939	Coding	chr3:23916803 plus strand	316236
RPL22L1	NM_001099645	NP_001093115	Coding	chr3:170870256 minus strand	316240
RPL24	NM_000986	NP_000977	Coding	chr3:101686719 minus strand	316241
RPL29	NM_000992	NP_000983	Coding	chr3:51995942 minus strand	316242
RPL32	NM_000994	NP_000985	Coding	chr3:12841582 minus strand	316243
RPL32	NM_001007073	NP_001007074	Coding	chr3:12841582 minus strand	316243
RPL32	NM_001007074	NP_001007075	Coding	chr3:12840450 minus strand	316244
RPL35A	NM_000996	NP_000987	Coding	chr3:197950180 plus strand	316245
RPL39L	NM_052969	NP_443201	Coding	chr3:187139475 minus strand	316246
RPN1	NM_002950	NP_002941	Coding	chr3:128650876 minus strand	316247
RPP14	NM_001098783	NP_001092253	Coding	chr3:58306244 plus strand	316248
RPP14	NM_007042	NP_008973	Coding	chr3:58306244 plus strand	316248
RPSA	NM_001012321	NP_001012321	Coding	chr3:39407619 plus strand	316249
RPSA	NM_002295	NP_002286	Coding	chr3:39406712 plus strand	316250
RPUSD3	NM_001142547	NP_001136019	Coding	chr3:9844018 minus strand	316251
RPUSD3	NM_173659	NP_775930	Coding	chr3:9844018 minus strand	316251
RRP9	NM_004704	NP_004695	Coding	chr3:51941941 minus strand	316252
RSRC1	NM_001271834	NP_001258763	Coding	chr3:158110051 plus strand	316253

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RSRC1	NM_001271838	NP_001258767	Coding	chr3:158110051 plus strand	316253
RSRC1	NM_016625	NP_057709	Coding	chr3:158110051 plus strand	316253
RTP1	NM_153708	NP_714919	Coding	chr3:187197485 plus strand	316254
RTP2	NM_001004312	NP_001004312	Coding	chr3:187702557 minus strand	316255
RTP3	NM_031440	NP_113628	Coding	chr3:46497994 plus strand	316256
RTP4	NM_022147	NP_071430	Coding	chr3:187368379 plus strand	316257
RUVBL1	NM_003707	NP_003698	Coding	chr3:128123828 minus strand	316258
RYBP	NM_012234	NP_036366	Coding	chr3:72446623 minus strand	316259
RYK	NM_001005861	NP_001005861	Coding	chr3:134250744 minus strand	316260
RYK	NM_002958	NP_002949	Coding	chr3:134250744 minus strand	316260
SACM1L	NM_014016	NP_054735	Coding	chr3:45689261 plus strand	316261
SAMD7	NM_182610	NP_872416	Coding	chr3:169911693 plus strand	316262
SATB1	NM_001131010	NP_001124482	Coding	chr3:18438773 minus strand	316263
SATB1	NM_001195470	NP_001182399	Coding	chr3:18425337 minus strand	316264
SATB1	NM_002971	NP_002962	Coding	chr3:18425337 minus strand	316264
SCAP	NM_012235	NP_036367	Coding	chr3:47475955 minus strand	316265
SCHIP1	NM_001197107	NP_001184036	Coding	chr3:159273246 plus strand	316266
SCHIP1	NM_001197108	NP_001184037	Coding	chr3:159273246 plus strand	316266
SCHIP1	NM_001197109	NP_001184038	Coding	chr3:159839860 plus strand	316267
SCHIP1	NM_014575	NP_055390	Coding	chr3:159273246 plus strand	316266
SCN10A	NM_001293306	NP_001280235	Coding	chr3:38794010 minus strand	316268
SCN10A	NM_001293307	NP_001280236	Coding	chr3:38794010 minus strand	316268
SCN10A	NM_006514	NP_006505	Coding	chr3:38794010 minus strand	316268
SCN11A	NM_001287223	NP_001274152	Coding	chr3:38953651 minus strand	316269
SCN11A	NM_014139	NP_054858	Coding	chr3:38950561 minus strand	316270
SCN5A	NM_000335	NP_000326	Coding	chr3:38649672 minus strand	316271
SCN5A	NM_001099404	NP_001092874	Coding	chr3:38649672 minus strand	316271
SCN5A	NM_001099405	NP_001092875	Coding	chr3:38649672 minus strand	316271

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SCN5A	NM_001160160	NP_001153632	Coding	chr3:38649673 minus strand	316272
SCN5A	NM_001160161	NP_001153633	Coding	chr3:38649673 minus strand	316272
SCN5A	NM_198056	NP_932173	Coding	chr3:38649672 minus strand	316271
SEC13	NM_001136026	NP_001129498	Coding	chr3:10321188 minus strand	316273
SEC13	NM_001136232	NP_001129704	Coding	chr3:10321041 minus strand	316274
SEC13	NM_001278946	NP_001265875	Coding	chr3:10321188 minus strand	316273
SEC13	NM_030673	NP_109598	Coding	chr3:10321188 minus strand	316273
SEC13	NM_183352	NP_899195	Coding	chr3:10321188 minus strand	316273
SEC22A	NM_012430	NP_036562	Coding	chr3:123201926 plus strand	316275
SEC22C	NM_001201572	NP_001188501	Coding	chr3:42601080 minus strand	316276
SEC22C	NM_001201584	NP_001188513	Coding	chr3:42582028 minus strand	316277
SEC22C	NM_004206	NP_004197	Coding	chr3:42582028 minus strand	316277
SEC22C	NM_032970	NP_116752	Coding	chr3:42582028 minus strand	316277
SEC61A1	NM_013336	NP_037468	Coding	chr3:128052368 plus strand	316278
SEC62	NM_003262	NP_003253	Coding	chr3:169966791 plus strand	316279
SELK	NM_021237	NP_067060	Coding	chr3:53891962 minus strand	316280
SELT	NM_016275	NP_057359	Coding	chr3:150603278 plus strand	316281
SEMA3B	NM_001005914	NP_001005914	Coding	chr3:50267557 plus strand	316282
SEMA3B	NM_001290060	NP_001276989	Coding	chr3:50268994 plus strand	316283
SEMA3B	NM_001290061	NP_001276990	Coding	chr3:50269160 plus strand	316284
SEMA3B	NM_001290062	NP_001276991	Coding	chr3:50273118 plus strand	316285
SEMA3B	NM_001290063	NP_001276992	Coding	chr3:50273118 plus strand	316285
SEMA3B	NM_004636	NP_004627	Coding	chr3:50267557 plus strand	316282
SEMA3F	NM_004186	NP_004177	Coding	chr3:50155414 plus strand	316286
SEMA3G	NM_020163	NP_064548	Coding	chr3:52445027 minus strand	316287
SEMA5B	NM_001031702	NP_001026872	Coding	chr3:123027812 minus strand	316288
SEMA5B	NM_001256346	NP_001243275	Coding	chr3:122993273 minus strand	316289
SEMA5B	NM_001256347	NP_001243276	Coding	chr3:122976134 minus strand	316290
SEMA5B	NM_001256348	NP_001243277	Coding	chr3:123027812 minus strand	316288
SENP2	NM_021627	NP_067640	Coding	chr3:185586242 plus	316291

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				strand	
SENP5	NM_152699	NP_689912	Coding	chr3:196867855 plus strand	316292
SENP7	NM_001077203	NP_001070671	Coding	chr3:101513241 minus strand	316293
SENP7	NM_001282801	NP_001269730	Coding	chr3:101513241 minus strand	316293
SENP7	NM_001282802	NP_001269731	Coding	chr3:101513241 minus strand	316293
SENP7	NM_001282803	NP_001269732	Coding	chr3:101513241 minus strand	316293
SENP7	NM_001282804	NP_001269733	Coding	chr3:101513241 minus strand	316293
SENP7	NM_020654	NP_065705	Coding	chr3:101513241 minus strand	316293
SERP1	NM_014445	NP_055260	Coding	chr3:150546641 minus strand	316294
SERPINI1	NM_001122752	NP_001116224	Coding	chr3:167735643 plus strand	316295
SERPINI1	NM_005025	NP_005016	Coding	chr3:167735722 plus strand	316296
SERPINI2	NM_001012303	NP_001012303	Coding	chr3:167474132 minus strand	316297
SERPINI2	NM_006217	NP_006208	Coding	chr3:167474132 minus strand	316297
SETD2	NM_014159	NP_054878	Coding	chr3:47163977 minus strand	316298
SETD5	NM_001080517	NP_001073986	Coding	chr3:9397699 plus strand	316299
SETD5	NM_001292043	NP_001278972	Coding	chr3:9397699 plus strand	316299
SETMAR	NM_001243723	NP_001230652	Coding	chr3:4303303 plus strand	316300
SETMAR	NM_001276325	NP_001263254	Coding	chr3:4303303 plus strand	316300
SETMAR	NM_006515	NP_006506	Coding	chr3:4303303 plus strand	316300
SFMBT1	NM_016329	NP_057413	Coding	chr3:53046073 minus strand	316301
SGOL1	NM_001012409	NP_001012409	Coding	chr3:20186206 minus strand	316302
SGOL1	NM_001012410	NP_001012410	Coding	chr3:20186206 minus strand	316302
SGOL1	NM_001012411	NP_001012411	Coding	chr3:20186206 minus strand	316302
SGOL1	NM_001012412	NP_001012412	Coding	chr3:20186206 minus strand	316302
SGOL1	NM_001012413	NP_001012413	Coding	chr3:20186206 minus strand	316302
SGOL1	NM_001199251	NP_001186180	Coding	chr3:20186232 minus strand	316303
SGOL1	NM_001199252	NP_001186181	Coding	chr3:20186232 minus strand	316303
SGOL1	NM_001199253	NP_001186182	Coding	chr3:20186232 minus strand	316303
SGOL1	NM_001199254	NP_001186183	Coding	chr3:20186232 minus strand	316303

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SGOL1	NM_001199255	NP_001186184	Coding	chr3:20186232 minus strand	316303
SGOL1	NM_001199256	NP_001186185	Coding	chr3:20186232 minus strand	316303
SGOL1	NM_001199257	NP_001186186	Coding	chr3:20186232 minus strand	316303
SGOL1	NM_138484	NP_612493	Coding	chr3:20186206 minus strand	316302
SH3BP5	NM_001018009	NP_001018009	Coding	chr3:15341394 minus strand	316304
SH3BP5	NM_004844	NP_004835	Coding	chr3:15332629 minus strand	316305
SHISA5	NM_001272065	NP_001258994	Coding	chr3:48504249 minus strand	316306
SHISA5	NM_001272066	NP_001258995	Coding	chr3:48504826 minus strand	316307
SHISA5	NM_001272067	NP_001258996	Coding	chr3:48504814 minus strand	316308
SHISA5	NM_001272068	NP_001258997	Coding	chr3:48504050 minus strand	316309
SHISA5	NM_001272082	NP_001259011	Coding	chr3:48473333 minus strand	316310
SHISA5	NM_001272083	NP_001259012	Coding	chr3:48473333 minus strand	316310
SHISA5	NM_016479	NP_057563	Coding	chr3:48504249 minus strand	316306
SHOX2	NM_001163678	NP_001157150	Coding	chr3:158106163 minus strand	316311
SHOX2	NM_003030	NP_003021	Coding	chr3:158106163 minus strand	316311
SHOX2	NM_006884	NP_006875	Coding	chr3:158106163 minus strand	316311
SHQ1	NM_018130	NP_060600	Coding	chr3:72848447 minus strand	316312
SI	NM_001041	NP_001032	Coding	chr3:165078495 minus strand	316313
SIAH2	NM_005067	NP_005058	Coding	chr3:150763476 minus strand	316314
SIDT1	NM_017699	NP_060169	Coding	chr3:113532370 plus strand	316315
SKIL	NM_001145097	NP_001138569	Coding	chr3:170359622 plus strand	316316
SKIL	NM_001145098	NP_001138570	Coding	chr3:170357684 plus strand	316317
SKIL	NM_001248008	NP_001234937	Coding	chr3:170359622 plus strand	316316
SKIL	NM_005414	NP_005405	Coding	chr3:170357684 plus strand	316317
SLC12A8	NM_001195483	NP_001182412	Coding	chr3:125211399 minus strand	316318
SLC12A8	NM_024628	NP_078904	Coding	chr3:125212765 minus strand	316319
SLC15A2	NM_001145998	NP_001139470	Coding	chr3:121894323 plus strand	316320

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SLC15A2	NM_021082	NP_066568	Coding	chr3:121894323 plus strand	316320
SLC22A13	NM_004256	NP_004247	Coding	chr3:38265806 plus strand	316321
SLC22A14	NM_004803	NP_004794	Coding	chr3:38305953 plus strand	316322
SLC25A20	NM_000387	NP_000378	Coding	chr3:48898993 minus strand	316323
SLC25A26	NM_001164796	NP_001158268	Coding	chr3:66220741 plus strand	316324
SLC25A26	NM_173471	NP_775742	Coding	chr3:66133609 plus strand	316325
SLC25A36	NM_001104647	NP_001098117	Coding	chr3:140941819 plus strand	316326
SLC25A36	NM_018155	NP_060625	Coding	chr3:140941819 plus strand	316326
SLC25A38	NM_017875	NP_060345	Coding	chr3:39383323 plus strand	316327
SLC26A6	NM_001040454	NP_001035544	Coding	chr3:48633846 minus strand	316328
SLC26A6	NM_001281732	NP_001268661	Coding	chr3:48635493 minus strand	316329
SLC26A6	NM_001281733	NP_001268662	Coding	chr3:48635493 minus strand	316329
SLC26A6	NM_022911	NP_075062	Coding	chr3:48635493 minus strand	316329
SLC26A6	NM_134263	NP_599025	Coding	chr3:48635493 minus strand	316329
SLC26A6	NM_134426	NP_602298	Coding	chr3:48635493 minus strand	316329
SLC2A2	NM_000340	NP_000331	Coding	chr3:171026979 minus strand	316330
SLC2A2	NM_001278658	NP_001265587	Coding	chr3:171026979 minus strand	316330
SLC2A2	NM_001278659	NP_001265588	Coding	chr3:171026979 minus strand	316330
SLC33A1	NM_001190992	NP_001177921	Coding	chr3:155854459 minus strand	316331
SLC33A1	NM_004733	NP_004724	Coding	chr3:155854459 minus strand	316331
SLC35A5	NM_017945	NP_060415	Coding	chr3:112562009 plus strand	316332
SLC35G2	NM_001097599	NP_001091068	Coding	chr3:136819018 plus strand	316333
SLC35G2	NM_001097600	NP_001091069	Coding	chr3:136819018 plus strand	316333
SLC35G2	NM_025246	NP_079522	Coding	chr3:136819018 plus strand	316333
SLC38A3	NM_006841	NP_006832	Coding	chr3:50205245 plus strand	316334
SLC41A3	NM_001008485	NP_001008485	Coding	chr3:126084291 minus strand	316335
SLC41A3	NM_001008486	NP_001008486	Coding	chr3:126084291 minus strand	316335
SLC41A3	NM_001008487	NP_001008487	Coding	chr3:126056775 minus strand	316336
SLC41A3	NM_001164475	NP_001157947	Coding	chr3:126101548 minus strand	316337

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SLC41A3	NM_017836	NP_060306	Coding	chr3:126084291 minus strand	316335
SLC4A7	NM_001258379	NP_001245308	Coding	chr3:27484420 minus strand	316338
SLC4A7	NM_001258380	NP_001245309	Coding	chr3:27456754 minus strand	316339
SLC4A7	NM_003615	NP_003606	Coding	chr3:27456754 minus strand	316339
SLC51A	NM_152672	NP_689885	Coding	chr3:196216511 plus strand	316340
SLC6A1	NM_003042	NP_003033	Coding	chr3:10992733 plus strand	316341
SLC6A11	NM_014229	NP_055044	Coding	chr3:10816231 plus strand	316342
SLC6A20	NM_020208	NP_064593	Coding	chr3:45796543 minus strand	316343
SLC6A20	NM_022405	NP_071800	Coding	chr3:45796543 minus strand	316343
SLC6A6	NM_001134367	NP_001127839	Coding	chr3:14402575 plus strand	316344
SLC6A6	NM_001134368	NP_001127840	Coding	chr3:14402575 plus strand	316344
SLC6A6	NM_003043	NP_003034	Coding	chr3:14402575 plus strand	316344
SLC7A14	NM_020949	NP_066000	Coding	chr3:170586074 minus strand	316345
SLC9A9	NM_173653	NP_775924	Coding	chr3:143848531 minus strand	316346
SLC9C1	NM_183061	NP_898884	Coding	chr3:112294227 minus strand	316347
SLCO2A1	NM_005630	NP_005621	Coding	chr3:134030076 minus strand	316348
SLITRK3	NM_014926	NP_055741	Coding	chr3:165196681 minus strand	316349
SLMAP	NM_007159	NP_009090	Coding	chr3:57757446 plus strand	316350
SMARCC1	NM_003074	NP_003065	Coding	chr3:47781915 minus strand	316351
SMC4	NM_001002800	NP_001002800	Coding	chr3:160399303 plus strand	316352
SMC4	NM_001288753	NP_001275682	Coding	chr3:160399303 plus strand	316352
SMC4	NM_005496	NP_005487	Coding	chr3:160400558 plus strand	316353
SMCO1	NM_001077657	NP_001071125	Coding	chr3:196515366 minus strand	316354
SMIM4	NM_001124767	NP_001118239	Coding	chr3:52536604 plus strand	316355
SNRK	NM_001100594	NP_001094064	Coding	chr3:43286511 plus strand	316356
SNRK	NM_017719	NP_060189	Coding	chr3:43286511 plus strand	316356
SNTN	NM_001080537	NP_001074006	Coding	chr3:63652667 plus strand	316357
SNX4	NM_003794	NP_003785	Coding	chr3:125520214 minus strand	316358
SOX14	NM_004189	NP_004180	Coding	chr3:137764291 plus strand	316359
SOX2	NM_003106	NP_003097	Coding	chr3:181711923 plus strand	316360
SPATA12	NM_181727	NP_859078	Coding	chr3:57060440 plus strand	316361

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SPATA16	NM_031955	NP_114161	Coding	chr3:173141268 minus strand	316362
SPCS1	NM_014041	NP_054760	Coding	chr3:52705840 plus strand	316363
SPICE1	NM_144718	NP_653319	Coding	chr3:113515187 minus strand	316364
SPINK8	NM_001080525	NP_001073994	Coding	chr3:48328341 minus strand	316365
SPSB4	NM_080862	NP_543138	Coding	chr3:141051900 plus strand	316366
SPTSSB	NM_001040100	NP_001035189	Coding	chr3:161372083 minus strand	316367
SRGAP3	NM_001033117	NP_001028289	Coding	chr3:9249685 minus strand	316368
SRGAP3	NM_014850	NP_055665	Coding	chr3:9249685 minus strand	316368
SRPRB	NM_021203	NP_067026	Coding	chr3:133784032 plus strand	316369
SS18L2	NM_016305	NP_057389	Coding	chr3:42590805 plus strand	316370
SSR3	NM_007107	NP_009038	Coding	chr3:156555184 minus strand	316371
SST	NM_001048	NP_001039	Coding	chr3:187670413 minus strand	316372
SSUH2	NM_001256748	NP_001243677	Coding	chr3:8644798 minus strand	316373
SSUH2	NM_001256749	NP_001243678	Coding	chr3:8652078 minus strand	316374
SSUH2	NM_015931	NP_057015	Coding	chr3:8652078 minus strand	316374
ST3GAL6	NM_001271142	NP_001258071	Coding	chr3:98732235 plus strand	316375
ST3GAL6	NM_001271145	NP_001258074	Coding	chr3:98732703 plus strand	316376
ST3GAL6	NM_001271146	NP_001258075	Coding	chr3:98732235 plus strand	316375
ST3GAL6	NM_001271147	NP_001258076	Coding	chr3:98732235 plus strand	316375
ST3GAL6	NM_001271148	NP_001258077	Coding	chr3:98732235 plus strand	316375
ST3GAL6	NM_006100	NP_006091	Coding	chr3:98732703 plus strand	316376
ST6GAL1	NM_003032	NP_003023	Coding	chr3:187021876 plus strand	316377
ST6GAL1	NM_173216	NP_775323	Coding	chr3:186930525 plus strand	316378
ST6GAL1	NM_173217	NP_775324	Coding	chr3:186930525 plus strand	316378
STAB1	NM_015136	NP_055951	Coding	chr3:52495339 plus strand	316379
STAC	NM_001292049	NP_001278978	Coding	chr3:36380486 plus strand	316380
STAC	NM_003149	NP_003140	Coding	chr3:36380486 plus strand	316380
STAG1	NM_005862	NP_005853	Coding	chr3:136752403 minus strand	316381
STT3B	NM_178862	NP_849193	Coding	chr3:31532500 plus strand	316382
STX19	NM_001001850	NP_001001850	Coding	chr3:94028610 minus strand	316383
STXBP5L	NM_014980	NP_055795	Coding	chr3:120908202 plus strand	316384
SUCLG2	NM_001177599	NP_001171070	Coding	chr3:67654614 minus strand	316385
SUCLG2	NM_003848	NP_003839	Coding	chr3:67654614 minus strand	316385

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SUCNR1	NM_033050	NP_149039	Coding	chr3:151873642 plus strand	316386
SUMF1	NM_001164674	NP_001158146	Coding	chr3:4467282 minus strand	316387
SUMF1	NM_001164675	NP_001158147	Coding	chr3:4467282 minus strand	316387
SUMF1	NM_182760	NP_877437	Coding	chr3:4467282 minus strand	316387
SUSD5	NM_015551	NP_056366	Coding	chr3:33219215 minus strand	316388
SYN2	NM_003178	NP_003169	Coding	chr3:12004359 plus strand	316389
SYN2	NM_133625	NP_598328	Coding	chr3:12004359 plus strand	316389
SYNPR	NM_001130003	NP_001123475	Coding	chr3:63278237 plus strand	316390
SYNPR	NM_144642	NP_653243	Coding	chr3:63443076 plus strand	316391
TADA3	NM_001278270	NP_001265199	Coding	chr3:9793011 minus strand	316392
TADA3	NM_006354	NP_006345	Coding	chr3:9793011 minus strand	316392
TADA3	NM_133480	NP_597814	Coding	chr3:9793011 minus strand	316392
TAGLN3	NM_001008272	NP_001008273	Coding	chr3:111998738 plus strand	316393
TAGLN3	NM_001008273	NP_001008274	Coding	chr3:111999159 plus strand	316394
TAGLN3	NM_013259	NP_037391	Coding	chr3:111998738 plus strand	316393
TAMM41	NM_001284401	NP_001271330	Coding	chr3:11846919 minus strand	316395
TAMM41	NM_138807	NP_620162	Coding	chr3:11846919 minus strand	316395
TATDN2	NM_014760	NP_055575	Coding	chr3:10248492 plus strand	316396
TBC1D23	NM_001199198	NP_001186127	Coding	chr3:100260816 plus strand	316397
TBC1D23	NM_018309	NP_060779	Coding	chr3:100260816 plus strand	316397
TBC1D5	NM_001134381	NP_001127853	Coding	chr3:17700020 minus strand	316398
TBC1D5	NM_014744	NP_055559	Coding	chr3:17740907 minus strand	316399
TBCCD1	NM_001134415	NP_001127887	Coding	chr3:186570543 minus strand	316400
TBCCD1	NM_001286749	NP_001273678	Coding	chr3:186570543 minus strand	316400
TBCCD1	NM_018138	NP_060608	Coding	chr3:186567354 minus strand	316401
TBL1XR1	NM_024665	NP_078941	Coding	chr3:177197260 minus strand	316402
TCAIM	NM_001029839	NP_001025010	Coding	chr3:44338451 plus strand	316403
TCAIM	NM_001029840	NP_001025011	Coding	chr3:44338118 plus strand	316404
TCAIM	NM_001282913	NP_001269842	Coding	chr3:44338118 plus strand	316404
TCAIM	NM_001282914	NP_001269843	Coding	chr3:44338451 plus strand	316403
TCAIM	NM_001282915	NP_001269844	Coding	chr3:44338118 plus strand	316404
TCAIM	NM_173826	NP_776187	Coding	chr3:44338451 plus strand	316403
TCTA	NM_022171	NP_071503	Coding	chr3:49412205 plus strand	316405
TCTEX1D2	NM_152773	NP_689986	Coding	chr3:196318294 minus	316406

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				strand	
TDGF1	NM_001174136	NP_001167607	Coding	chr3:46574554 plus strand	316407
TDGF1	NM_003212	NP_003203	Coding	chr3:46577585 plus strand	316408
TEX264	NM_001129884	NP_001123356	Coding	chr3:51671174 plus strand	316409
TEX264	NM_001243725	NP_001230654	Coding	chr3:51671273 plus strand	316410
TEX264	NM_001243726	NP_001230655	Coding	chr3:51671273 plus strand	316410
TEX264	NM_001243727	NP_001230656	Coding	chr3:51671174 plus strand	316409
TEX264	NM_001278195	NP_001265124	Coding	chr3:51671174 plus strand	316409
TEX264	NM_015926	NP_057010	Coding	chr3:51671174 plus strand	316409
TF	NM_001063	NP_001054	Coding	chr3:133746132 plus strand	316411
TFDP2	NM_001178138	NP_001171609	Coding	chr3:142149544 minus strand	316412
TFDP2	NM_001178139	NP_001171610	Coding	chr3:142149544 minus strand	316412
TFDP2	NM_001178140	NP_001171611	Coding	chr3:142000387 minus strand	316413
TFDP2	NM_001178141	NP_001171612	Coding	chr3:142028665 minus strand	316414
TFDP2	NM_001178142	NP_001171613	Coding	chr3:142028665 minus strand	316414
TFDP2	NM_006286	NP_006277	Coding	chr3:142028665 minus strand	316414
TFG	NM_001007565	NP_001007566	Coding	chr3:100709289 plus strand	316415
TFG	NM_001195478	NP_001182407	Coding	chr3:100709541 plus strand	316416
TFG	NM_001195479	NP_001182408	Coding	chr3:100709330 plus strand	316417
TFG	NM_006070	NP_006061	Coding	chr3:100709330 plus strand	316417
TFRC	NM_001128148	NP_001121620	Coding	chr3:196082161 minus strand	316418
TFRC	NM_003234	NP_003225	Coding	chr3:196082090 minus strand	316419
TGFBR2	NM_001024847	NP_001020018	Coding	chr3:30606501 plus strand	316420
TGFBR2	NM_003242	NP_003233	Coding	chr3:30606501 plus strand	316420
TGM4	NM_003241	NP_003232	Coding	chr3:44874605 plus strand	316421
THOC7	NM_001285387	NP_001272316	Coding	chr3:63863923 minus strand	316422
THOC7	NM_001285404	NP_001272333	Coding	chr3:63863786 minus strand	316423
THOC7	NM_025075	NP_079351	Coding	chr3:63863923 minus strand	316422
THPO	NM_000460	NP_000451	Coding	chr3:184378208 minus strand	316424
THPO	NM_001177597	NP_001171068	Coding	chr3:184378208 minus strand	316424
THPO	NM_001177598	NP_001171069	Coding	chr3:184378208 minus strand	316424

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THPO	NM_001289997	NP_001276926	Coding	chr3:184378208 minus strand	316424
THPO	NM_001289998	NP_001276927	Coding	chr3:184379688 minus strand	316425
THPO	NM_001290003	NP_001276932	Coding	chr3:184379688 minus strand	316425
THPO	NM_001290022	NP_001276951	Coding	chr3:184379688 minus strand	316425
THPO	NM_001290026	NP_001276955	Coding	chr3:184379688 minus strand	316425
THPO	NM_001290027	NP_001276956	Coding	chr3:184379688 minus strand	316425
THPO	NM_001290028	NP_001276957	Coding	chr3:184379688 minus strand	316425
THRB	NM_000461	NP_000452	Coding	chr3:24494822 minus strand	316426
THRB	NM_001128176	NP_001121648	Coding	chr3:24494822 minus strand	316426
THRB	NM_001128177	NP_001121649	Coding	chr3:24494822 minus strand	316426
THRB	NM_001252634	NP_001239563	Coding	chr3:24494822 minus strand	316426
THUMPD3	NM_001114092	NP_001107564	Coding	chr3:9363032 plus strand	316427
THUMPD3	NM_015453	NP_056268	Coding	chr3:9363032 plus strand	316427
TIGIT	NM_173799	NP_776160	Coding	chr3:114293985 plus strand	316428
TIMMDC1	NM_016589	NP_057673	Coding	chr3:119498520 plus strand	316429
TIMP4	NM_003256	NP_003247	Coding	chr3:12159351 minus strand	316430
TIPARP	NM_001184717	NP_001171646	Coding	chr3:156674925 plus strand	316431
TIPARP	NM_001184718	NP_001171647	Coding	chr3:156676663 plus strand	316432
TIPARP	NM_015508	NP_056323	Coding	chr3:156674415 plus strand	316433
TKT	NM_001064	NP_001055	Coding	chr3:53256114 minus strand	316434
TKT	NM_001135055	NP_001128527	Coding	chr3:53256114 minus strand	316434
TKT	NM_001258028	NP_001244957	Coding	chr3:53256114 minus strand	316434
TLR9	NM_017442	NP_059138	Coding	chr3:52226163 minus strand	316435
TM4SF1	NM_014220	NP_055035	Coding	chr3:149377781 minus strand	316436
TM4SF18	NM_001184723	NP_001171652	Coding	chr3:149333472 minus strand	316437
TM4SF18	NM_138786	NP_620141	Coding	chr3:149333761 minus strand	316438
TM4SF19	NM_001204897	NP_001191826	Coding	chr3:196338420 minus strand	316439
TM4SF19	NM_001204898	NP_001191827	Coding	chr3:196338420 minus strand	316439

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TM4SF19	NM_138461	NP_612470	Coding	chr3:196338420 minus strand	316439
TM4SF4	NM_004617	NP_004608	Coding	chr3:149474580 plus strand	316440
TMA7	NM_015933	NP_057017	Coding	chr3:48440275 plus strand	316441
TMCC1	NM_001017395	NP_001017395	Coding	chr3:129880559 minus strand	316442
TMCC1	NM_001128224	NP_001121696	Coding	chr3:129893576 minus strand	316443
TMEM108	NM_001136469	NP_001129941	Coding	chr3:133038287 plus strand	316444
TMEM108	NM_001282865	NP_001269794	Coding	chr3:133124820 plus strand	316445
TMEM108	NM_023943	NP_076432	Coding	chr3:133038287 plus strand	316444
TMEM110	NM_198563	NP_940965	Coding	chr3:52897581 minus strand	316446
TMEM110-MUSTN1	NM_001198974	NP_001185903	Coding	chr3:52897581 minus strand	316446
TMEM115	NM_007024	NP_008955	Coding	chr3:50359508 minus strand	316448
TMEM14E	NM_001123228	NP_001116700	Coding	chr3:152340990 minus strand	316449
TMEM158	NM_015444	NP_056259	Coding	chr3:45226322 minus strand	316450
TMEM183B	NM_001079809	NP_001073277	Coding	chr3:149983366 minus strand	316451
TMEM207	NM_207316	NP_997199	Coding	chr3:190449876 minus strand	316452
TMEM212	NM_001164436	NP_001157908	Coding	chr3:171843348 plus strand	316453
TMEM39A	NM_018266	NP_060736	Coding	chr3:119463682 minus strand	316454
TMEM40	NM_001284406	NP_001271335	Coding	chr3:12769457 minus strand	316455
TMEM40	NM_001284407	NP_001271336	Coding	chr3:12759309 minus strand	316456
TMEM40	NM_001284408	NP_001271337	Coding	chr3:12759309 minus strand	316456
TMEM40	NM_018306	NP_060776	Coding	chr3:12759309 minus strand	316456
TMEM41A	NM_080652	NP_542383	Coding	chr3:185499057 minus strand	316457
TMEM42	NM_144638	NP_653239	Coding	chr3:44861915 plus strand	316458
TMEM43	NM_024334	NP_077310	Coding	chr3:14124939 plus strand	316459
TMEM44	NM_001011655	NP_001011655	Coding	chr3:194633421 minus strand	316460
TMEM44	NM_001166305	NP_001159777	Coding	chr3:194633421 minus strand	316460
TMEM44	NM_001166306	NP_001159778	Coding	chr3:194633421 minus strand	316460
TMEM44	NM_138399	NP_612408	Coding	chr3:194633421 minus strand	316460

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TMEM45A	NM_018004	NP_060474	Coding	chr3:100492618 plus strand	316461
TMEM89	NM_001008269	NP_001008270	Coding	chr3:48621756 minus strand	316462
TMF1	NM_007114	NP_009045	Coding	chr3:69052333 minus strand	316463
TMIE	NM_147196	NP_671729	Coding	chr3:46701332 plus strand	316464
TMPPE	NM_001039770	NP_001034859	Coding	chr3:33096801 minus strand	316465
TMPPE	NM_001136238	NP_001129710	Coding	chr3:33096801 minus strand	316465
TMPRSS7	NM_001042575	NP_001036040	Coding	chr3:112039617 plus strand	316466
TNFSF10	NM_001190942	NP_001177871	Coding	chr3:172523507 minus strand	316467
TNFSF10	NM_001190943	NP_001177872	Coding	chr3:172523475 minus strand	316468
TNFSF10	NM_003810	NP_003801	Coding	chr3:172523507 minus strand	316467
TNIK	NM_001161560	NP_001155032	Coding	chr3:171460408 minus strand	316469
TNIK	NM_001161561	NP_001155033	Coding	chr3:171460408 minus strand	316469
TNIK	NM_001161562	NP_001155034	Coding	chr3:171460408 minus strand	316469
TNIK	NM_001161563	NP_001155035	Coding	chr3:171460408 minus strand	316469
TNIK	NM_001161564	NP_001155036	Coding	chr3:171460408 minus strand	316469
TNIK	NM_001161565	NP_001155037	Coding	chr3:171460408 minus strand	316469
TNIK	NM_001161566	NP_001155038	Coding	chr3:171460408 minus strand	316469
TNIK	NM_015028	NP_055843	Coding	chr3:171460408 minus strand	316469
TNK2	NM_001010938	NP_001010938	Coding	chr3:195895561 minus strand	316470
TNK2	NM_005781	NP_005772	Coding	chr3:195909009 minus strand	316471
TNNC1	NM_003280	NP_003271	Coding	chr3:52454041 minus strand	316472
TOMM70A	NM_014820	NP_055635	Coding	chr3:100401398 minus strand	316473
TOP2B	NM_001068	NP_001059	Coding	chr3:25664372 minus strand	316474
TOPAZ1	NM_001145030	NP_001138502	Coding	chr3:44241885 plus strand	316475
TOPBP1	NM_007027	NP_008958	Coding	chr3:133661893 minus strand	316476
TP63	NM_001114978	NP_001108450	Coding	chr3:189631426 plus strand	316477
TP63	NM_001114979	NP_001108451	Coding	chr3:189631426 plus strand	316477
TP63	NM_001114980	NP_001108452	Coding	chr3:189789659 plus strand	316478

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TP63	NM_001114981	NP_001108453	Coding	chr3:189789659 plus strand	316478
TP63	NM_001114982	NP_001108454	Coding	chr3:189789659 plus strand	316478
TP63	NM_003722	NP_003713	Coding	chr3:189631426 plus strand	316477
TPRA1	NM_001136053	NP_001129525	Coding	chr3:127590759 minus strand	316479
TPRA1	NM_001142646	NP_001136118	Coding	chr3:127590759 minus strand	316479
TPRG1	NM_198485	NP_940887	Coding	chr3:189171973 plus strand	316480
TRA2B	NM_001243879	NP_001230808	Coding	chr3:185938136 minus strand	316481
TRA2B	NM_004593	NP_004584	Coding	chr3:185938136 minus strand	316481
TRAIP	NM_005879	NP_005870	Coding	chr3:49856559 minus strand	316482
TRAK1	NM_001042646	NP_001036111	Coding	chr3:42091253 plus strand	316483
TRAK1	NM_001265608	NP_001252537	Coding	chr3:42091253 plus strand	316483
TRAK1	NM_001265609	NP_001252538	Coding	chr3:42149234 plus strand	316484
TRAK1	NM_001265610	NP_001252539	Coding	chr3:42149234 plus strand	316484
TRAK1	NM_014965	NP_055780	Coding	chr3:42160168 plus strand	316485
TRANK1	NM_014831	NP_055646	Coding	chr3:36945057 minus strand	316486
TRAT1	NM_016388	NP_057472	Coding	chr3:108822783 plus strand	316487
TREX1	NM_007248	NP_009179	Coding	chr3:48465519 plus strand	316488
TREX1	NM_016381	NP_057465	Coding	chr3:48465519 plus strand	316488
TREX1	NM_033629	NP_338599	Coding	chr3:48465519 plus strand	316488
TRH	NM_007117	NP_009048	Coding	chr3:129974392 plus strand	316489
TRIM42	NM_152616	NP_689829	Coding	chr3:140678023 plus strand	316490
TRIM59	NM_173084	NP_775107	Coding	chr3:160449838 minus strand	316491
TRIM71	NM_001039111	NP_001034200	Coding	chr3:32818017 plus strand	316492
TRMT10C	NM_017819	NP_060289	Coding	chr3:101561835 plus strand	316493
TRNT1	NM_001302946	NP_001289875	Coding	chr3:3126915 plus strand	316494
TRNT1	NM_182916	NP_886552	Coding	chr3:3126915 plus strand	316494
TRPC1	NM_001251845	NP_001238774	Coding	chr3:142724423 plus strand	316495
TRPC1	NM_003304	NP_003295	Coding	chr3:142724423 plus strand	316495
TSC22D2	NM_014779	NP_055594	Coding	chr3:150409000 plus strand	316496
TSEN2	NM_001145392	NP_001138864	Coding	chr3:12484510 plus strand	316497
TSEN2	NM_001145393	NP_001138865	Coding	chr3:12484431 plus strand	316498
TSEN2	NM_001145394	NP_001138866	Coding	chr3:12484431 plus strand	316498

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TSEN2	NM_001145395	NP_001138867	Coding	chr3:12484510 plus strand	316497
TSEN2	NM_025265	NP_079541	Coding	chr3:12484510 plus strand	316497
TTC14	NM_001042601	NP_001036066	Coding	chr3:180602129 plus strand	316499
TTC14	NM_001288582	NP_001275511	Coding	chr3:180602129 plus strand	316499
TTC14	NM_133462	NP_597719	Coding	chr3:180602129 plus strand	316499
TTC21A	NM_001105513	NP_001098983	Coding	chr3:39107660 plus strand	316500
TTC21A	NM_145755	NP_665698	Coding	chr3:39107660 plus strand	316500
TTLL3	NM_001025930	NP_001021100	Coding	chr3:9809959 plus strand	316501
TUSC2	NM_007275	NP_009206	Coding	chr3:50328238 minus strand	316502
TWF2	NM_007284	NP_009215	Coding	chr3:52239167 minus strand	316503
TXNRD3	NM_001173513	NP_001166984	Coding	chr3:126655124 minus strand	316504
TXNRD3	NM_052883	NP_443115	Coding	chr3:126655124 minus strand	316504
TXNRD3NB	NM_001039783	NP_001034872	Coding	chr3:126608555 minus strand	316505
U2SURP	NM_001080415	NP_001073884	Coding	chr3:143001529 plus strand	316506
UBA3	NM_003968	NP_003959	Coding	chr3:69080373 minus strand	316507
UBA3	NM_198195	NP_937838	Coding	chr3:69080373 minus strand	316507
UBA5	NM_024818	NP_079094	Coding	chr3:132660295 plus strand	316508
UBA5	NM_198329	NP_938143	Coding	chr3:132654445 plus strand	316509
UBA7	NM_003335	NP_003326	Coding	chr3:49813958 minus strand	316510
UBE2E1	NM_001202476	NP_001189405	Coding	chr3:23810442 plus strand	316511
UBE2E1	NM_003341	NP_003332	Coding	chr3:23805892 plus strand	316512
UBE2E1	NM_182666	NP_872607	Coding	chr3:23805892 plus strand	316512
UBE2E2	NM_152653	NP_689866	Coding	chr3:23203292 plus strand	316513
UBP1	NM_001128160	NP_001121632	Coding	chr3:33440378 minus strand	316514
UBP1	NM_001128161	NP_001121633	Coding	chr3:33440405 minus strand	316515
UBP1	NM_014517	NP_055332	Coding	chr3:33440378 minus strand	316514
UBXN7	NM_015562	NP_056377	Coding	chr3:196432474 minus strand	316516
UCN2	NM_033199	NP_149976	Coding	chr3:48563768 minus strand	316517
ULK4	NM_017886	NP_060356	Coding	chr3:41962168 minus strand	316518
UMPS	NM_000373	NP_000364	Coding	chr3:124730365 plus strand	316519

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UPK1B	NM_006952	NP_008883	Coding	chr3:119173577 plus strand	316520
UQCRC1	NM_003365	NP_003356	Coding	chr3:48609665 minus strand	316521
UROC1	NM_001165974	NP_001159446	Coding	chr3:126517773 minus strand	316522
UROC1	NM_144639	NP_653240	Coding	chr3:126517773 minus strand	316522
USP13	NM_003940	NP_003931	Coding	chr3:179653144 plus strand	316523
USP19	NM_001199160	NP_001186089	Coding	chr3:49120938 minus strand	316524
USP19	NM_001199161	NP_001186090	Coding	chr3:49120938 minus strand	316524
USP19	NM_001199162	NP_001186091	Coding	chr3:49120938 minus strand	316524
USP19	NM_006677	NP_006668	Coding	chr3:49120938 minus strand	316524
USP4	NM_001251877	NP_001238806	Coding	chr3:49340103 minus strand	316525
USP4	NM_003363	NP_003354	Coding	chr3:49340103 minus strand	316525
USP4	NM_199443	NP_955475	Coding	chr3:49340103 minus strand	316525
UTS2B	NM_198152	NP_937795	Coding	chr3:191330536 minus strand	316526
VEPH1	NM_001167911	NP_001161383	Coding	chr3:157503347 minus strand	316527
VEPH1	NM_001167912	NP_001161384	Coding	chr3:157503347 minus strand	316527
VEPH1	NM_001167915	NP_001161387	Coding	chr3:157503626 minus strand	316528
VEPH1	NM_001167916	NP_001161388	Coding	chr3:157503626 minus strand	316528
VEPH1	NM_001167917	NP_001161389	Coding	chr3:157495506 minus strand	316529
VEPH1	NM_024621	NP_078897	Coding	chr3:157499656 minus strand	316530
VGLL3	NM_016206	NP_057290	Coding	chr3:86991107 minus strand	316531
VGLL4	NM_001128219	NP_001121691	Coding	chr3:11643977 minus strand	316532
VGLL4	NM_001128220	NP_001121692	Coding	chr3:11582391 minus strand	316533
VGLL4	NM_001128221	NP_001121693	Coding	chr3:11568924 minus strand	316534
VGLL4	NM_001284390	NP_001271319	Coding	chr3:11720768 minus strand	316535
VGLL4	NM_001284391	NP_001271320	Coding	chr3:11604581 minus strand	316536
VGLL4	NM_014667	NP_055482	Coding	chr3:11720768 minus strand	316535
VHL	NM_000551	NP_000542	Coding	chr3:10141634 plus strand	316537
VHL	NM_198156	NP_937799	Coding	chr3:10141634 plus strand	316537

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VILL	NM_015873	NP_056957	Coding	chr3:37993586 plus strand	316538
VIPR1	NM_001251882	NP_001238811	Coding	chr3:42489298 plus strand	316539
VIPR1	NM_001251883	NP_001238812	Coding	chr3:42502611 plus strand	316540
VIPR1	NM_001251884	NP_001238813	Coding	chr3:42502611 plus strand	316540
VIPR1	NM_001251885	NP_001238814	Coding	chr3:42502611 plus strand	316540
VIPR1	NM_004624	NP_004615	Coding	chr3:42502611 plus strand	316540
VPRBP	NM_001171904	NP_001165375	Coding	chr3:51500002 minus strand	316541
VPRBP	NM_014703	NP_055518	Coding	chr3:51500002 minus strand	316541
VPS8	NM_001009921	NP_001009921	Coding	chr3:184812142 plus strand	316542
VPS8	NM_015303	NP_056118	Coding	chr3:184812142 plus strand	316542
VWA5B2	NM_138345	NP_612354	Coding	chr3:184230528 plus strand	316543
WDR48	NM_020839	NP_065890	Coding	chr3:39052015 plus strand	316544
WDR49	NM_178824	NP_849146	Coding	chr3:167653501 minus strand	316545
WDR53	NM_182627	NP_872433	Coding	chr3:196568542 minus strand	316546
WDR5B	NM_019069	NP_061942	Coding	chr3:122416035 minus strand	316547
WDR6	NM_018031	NP_060501	Coding	chr3:49007203 plus strand	316548
WDR82	NM_025222	NP_079498	Coding	chr3:52278643 minus strand	316549
WNT5A	NM_001256105	NP_001243034	Coding	chr3:55481398 minus strand	316550
WNT5A	NM_003392	NP_003383	Coding	chr3:55487642 minus strand	316551
WNT7A	NM_004625	NP_004616	Coding	chr3:13880121 minus strand	316552
WWTR1	NM_001168278	NP_001161750	Coding	chr3:149703273 minus strand	316553
WWTR1	NM_001168280	NP_001161752	Coding	chr3:149658025 minus strand	316554
WWTR1	NM_015472	NP_056287	Coding	chr3:149658101 minus strand	316555
XCR1	NM_001024644	NP_001019815	Coding	chr3:46027487 minus strand	316556
XCR1	NM_005283	NP_005274	Coding	chr3:46027487 minus strand	316556
XIRP1	NM_001198621	NP_001185550	Coding	chr3:39192594 minus strand	316557
XIRP1	NM_194293	NP_919269	Coding	chr3:39192586 minus strand	316558
XPC	NM_004628	NP_004619	Coding	chr3:14178672 minus strand	316559
XRN1	NM_001282857	NP_001269786	Coding	chr3:142448062 minus strand	316560
XRN1	NM_001282859	NP_001269788	Coding	chr3:142448062 minus strand	316560

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XRN1	NM_019001	NP_061874	Coding	chr3:142448062 minus strand	316560
XXYLT1	NM_152531	NP_689744	Coding	chr3:195271166 minus strand	316561
XYLB	NM_005108	NP_005099	Coding	chr3:38346759 plus strand	316562
YEATS2	NM_018023	NP_060493	Coding	chr3:183697817 plus strand	316563
ZBBX	NM_001199201	NP_001186130	Coding	chr3:167380297 minus strand	316564
ZBBX	NM_001199202	NP_001186131	Coding	chr3:167380283 minus strand	316565
ZBBX	NM_024687	NP_078963	Coding	chr3:167380297 minus strand	316564
ZBED2	NM_024508	NP_078784	Coding	chr3:111595335 minus strand	316566
ZBTB11	NM_014415	NP_055230	Coding	chr3:101677144 minus strand	316567
ZBTB20	NM_001164342	NP_001157814	Coding	chr3:114383642 minus strand	316568
ZBTB20	NM_001164343	NP_001157815	Coding	chr3:115071414 minus strand	316569
ZBTB20	NM_001164344	NP_001157816	Coding	chr3:114759277 minus strand	316570
ZBTB20	NM_001164345	NP_001157817	Coding	chr3:114759277 minus strand	316570
ZBTB20	NM_001164346	NP_001157818	Coding	chr3:114624945 minus strand	316571
ZBTB20	NM_001164347	NP_001157819	Coding	chr3:114624206 minus strand	316572
ZBTB20	NM_015642	NP_056457	Coding	chr3:115147280 minus strand	316573
ZBTB38	NM_001080412	NP_001073881	Coding	chr3:141324212 plus strand	316574
ZBTB47	NM_145166	NP_660149	Coding	chr3:42653683 plus strand	316575
ZCWPW2	NM_001040432	NP_001035522	Coding	chr3:28390495 plus strand	316576
ZDHHC19	NM_001039617	NP_001034706	Coding	chr3:196211429 minus strand	316577
ZDHHC23	NM_173570	NP_775841	Coding	chr3:113947900 plus strand	316578
ZDHHC3	NM_001135179	NP_001128651	Coding	chr3:44976182 minus strand	316579
ZDHHC3	NM_016598	NP_057682	Coding	chr3:44976182 minus strand	316579
ZIC1	NM_003412	NP_003403	Coding	chr3:147409393 plus strand	316580
ZIC4	NM_001168378	NP_001161850	Coding	chr3:147404284 minus strand	316581
ZIC4	NM_001168379	NP_001161851	Coding	chr3:147405520 minus strand	316582
ZIC4	NM_001243256	NP_001230185	Coding	chr3:147406809 minus strand	316583
ZIC4	NM_032153	NP_115529	Coding	chr3:147406809 minus strand	316583

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ZKSCAN7	NM_001288590	NP_001275519	Coding	chr3:44555174 plus strand	316584
ZKSCAN7	NM_001288591	NP_001275520	Coding	chr3:44555174 plus strand	316584
ZKSCAN7	NM_001288592	NP_001275521	Coding	chr3:44555174 plus strand	316584
ZKSCAN7	NM_018651	NP_061121	Coding	chr3:44555174 plus strand	316584
ZKSCAN7	NM_025169	NP_079445	Coding	chr3:44555174 plus strand	316584
ZMAT3	NM_022470	NP_071915	Coding	chr3:179071868 minus strand	316585
ZMAT3	NM_152240	NP_689426	Coding	chr3:179071868 minus strand	316585
ZMYND10	NM_015896	NP_056980	Coding	chr3:50345725 minus strand	316586
ZNF148	NM_021964	NP_068799	Coding	chr3:125375354 minus strand	316587
ZNF197	NM_001024855	NP_001020026	Coding	chr3:44625018 plus strand	316588
ZNF197	NM_006991	NP_008922	Coding	chr3:44625018 plus strand	316588
ZNF35	NM_003420	NP_003411	Coding	chr3:44648740 plus strand	316589
ZNF385D	NM_024697	NP_078973	Coding	chr3:21751324 minus strand	316590
ZNF445	NM_181489	NP_852466	Coding	chr3:44477670 minus strand	316591
ZNF501	NM_001258280	NP_001245209	Coding	chr3:44729605 plus strand	316592
ZNF501	NM_145044	NP_659481	Coding	chr3:44729605 plus strand	316592
ZNF502	NM_001134440	NP_001127912	Coding	chr3:44712642 plus strand	316593
ZNF502	NM_001134441	NP_001127913	Coding	chr3:44712642 plus strand	316593
ZNF502	NM_001134442	NP_001127914	Coding	chr3:44712642 plus strand	316593
ZNF502	NM_001282880	NP_001269809	Coding	chr3:44712642 plus strand	316593
ZNF502	NM_033210	NP_149987	Coding	chr3:44712642 plus strand	316593
ZNF589	NM_016089	NP_057173	Coding	chr3:48241105 plus strand	316594
ZNF619	NM_001145082	NP_001138554	Coding	chr3:40477112 plus strand	316595
ZNF619	NM_001145083	NP_001138555	Coding	chr3:40477141 plus strand	316596
ZNF619	NM_001145093	NP_001138565	Coding	chr3:40477112 plus strand	316595
ZNF620	NM_001256167	NP_001243096	Coding	chr3:40506038 plus strand	316597
ZNF620	NM_001256168	NP_001243097	Coding	chr3:40506110 plus strand	316598
ZNF620	NM_175888	NP_787084	Coding	chr3:40506038 plus strand	316597
ZNF621	NM_001098414	NP_001091884	Coding	chr3:40524877 plus strand	316599
ZNF621	NM_001287245	NP_001274174	Coding	chr3:40524877 plus strand	316599
ZNF621	NM_198484	NP_940886	Coding	chr3:40524877 plus strand	316599
ZNF639	NM_016331	NP_057415	Coding	chr3:179323762 plus strand	316600
ZNF654	NM_018293	NP_060763	Coding	chr3:88139111 plus strand	316601
ZNF660	NM_173658	NP_775929	Coding	chr3:44584963 plus strand	316602
ZNF662	NM_001134656	NP_001128128	Coding	chr3:42906165 plus strand	316603
ZNF662	NM_207404	NP_997287	Coding	chr3:42905909 plus strand	316604
ZNF717	NM_001128223	NP_001121695	Coding	chr3:75785104 minus strand	316605

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ZNF717	NM_001290208	NP_001277137	Coding	chr3:75785583 minus strand	316606
ZNF717	NM_001290209	NP_001277138	Coding	chr3:75785583 minus strand	316606
ZNF717	NM_001290210	NP_001277139	Coding	chr3:75785583 minus strand	316606
ZNF80	NM_007136	NP_009067	Coding	chr3:114237578 minus strand	316607
ZNF852	NM_001287349	NP_001274278	Coding	chr3:44510640 minus strand	316608
ZNF860	NM_001137674	NP_001131146	Coding	chr3:31981773 plus strand	316609
ZPLD1	NM_175056	NP_778226	Coding	chr3:102435014 plus strand	316610
ZXDC	NM_001040653	NP_001035743	Coding	chr3:126475919 minus strand	316611
ZXDC	NM_025112	NP_079388	Coding	chr3:126475919 minus strand	316611
AADAT	NM_001286682	NP_001273611	Coding	chr4:170090221 minus strand	316612
AADAT	NM_001286683	NP_001273612	Coding	chr4:170090387 minus strand	316613
AADAT	NM_016228	NP_057312	Coding	chr4:170090032 minus strand	316614
AADAT	NM_182662	NP_872603	Coding	chr4:170090221 minus strand	316612
AASDH	NM_001286668	NP_001273597	Coding	chr4:56387508 minus strand	316615
AASDH	NM_001286669	NP_001273598	Coding	chr4:56387508 minus strand	316615
AASDH	NM_001286670	NP_001273599	Coding	chr4:56387508 minus strand	316615
AASDH	NM_001286671	NP_001273600	Coding	chr4:56387508 minus strand	316615
AASDH	NM_001286672	NP_001273601	Coding	chr4:56387508 minus strand	316615
AASDH	NM_181806	NP_861522	Coding	chr4:56387508 minus strand	316615
ABCE1	NM_001040876	NP_001035809	Coding	chr4:145098003 plus strand	316616
ABCE1	NM_002940	NP_002931	Coding	chr4:145098003 plus strand	316616
ABCG2	NM_001257386	NP_001244315	Coding	chr4:88231322 minus strand	316617
ABCG2	NM_004827	NP_004818	Coding	chr4:88158859 minus strand	316618
ABLIM2	NM_001130083	NP_001123555	Coding	chr4:8158832 minus strand	316619
ABLIM2	NM_001130084	NP_001123556	Coding	chr4:8158832 minus strand	316619
ABLIM2	NM_001130085	NP_001123557	Coding	chr4:8158832 minus strand	316619
ABLIM2	NM_001130086	NP_001123558	Coding	chr4:8158832 minus strand	316619
ABLIM2	NM_001130087	NP_001123559	Coding	chr4:8158832 minus strand	316619
ABLIM2	NM_001130088	NP_001123560	Coding	chr4:8158832 minus strand	316619
ABLIM2	NM_001286688	NP_001273617	Coding	chr4:8072016 minus strand	316620

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ABLIM2	NM_032432	NP_115808	Coding	chr4:8158832 minus strand	316619
ACOX3	NM_001101667	NP_001095137	Coding	chr4:8440725 minus strand	316621
ACOX3	NM_003501	NP_003492	Coding	chr4:8440725 minus strand	316621
ACSL1	NM_001286708	NP_001273637	Coding	chr4:184812259 minus strand	316622
ACSL1	NM_001286710	NP_001273639	Coding	chr4:184805788 minus strand	316623
ACSL1	NM_001286711	NP_001273640	Coding	chr4:184826114 minus strand	316624
ACSL1	NM_001286712	NP_001273641	Coding	chr4:184808601 minus strand	316625
ACSL1	NM_001995	NP_001986	Coding	chr4:184826114 minus strand	316624
ADAD1	NM_001159285	NP_001152757	Coding	chr4:122379439 plus strand	316626
ADAD1	NM_001159295	NP_001152767	Coding	chr4:122379439 plus strand	316626
ADAD1	NM_139243	NP_640336	Coding	chr4:122378965 plus strand	316627
ADAM29	NM_001130703	NP_001124175	Coding	chr4:174918357 plus strand	316628
ADAM29	NM_001130704	NP_001124176	Coding	chr4:174918357 plus strand	316628
ADAM29	NM_001130705	NP_001124177	Coding	chr4:174918357 plus strand	316628
ADAM29	NM_001278125	NP_001265054	Coding	chr4:174918357 plus strand	316628
ADAM29	NM_001278126	NP_001265055	Coding	chr4:174918357 plus strand	316628
ADAM29	NM_001278127	NP_001265056	Coding	chr4:174918357 plus strand	316628
ADAM29	NM_014269	NP_055084	Coding	chr4:174918357 plus strand	316628
ADAMTS3	NM_014243	NP_055058	Coding	chr4:72568799 minus strand	316629
ADD1	NM_001119	NP_001110	Coding	chr4:2843856 plus strand	316630
ADD1	NM_001286645	NP_001273574	Coding	chr4:2844149 plus strand	316631
ADD1	NM_014189	NP_054908	Coding	chr4:2843856 plus strand	316630
ADD1	NM_014190	NP_054909	Coding	chr4:2843856 plus strand	316630
ADD1	NM_176801	NP_789771	Coding	chr4:2843856 plus strand	316630
ADH1A	NM_000667	NP_000658	Coding	chr4:99291028 minus strand	316632
ADH1B	NM_000668	NP_000659	Coding	chr4:99321442 minus strand	316633
ADH1B	NM_001286650	NP_001273579	Coding	chr4:99321442 minus strand	316633
ADH1C	NM_000669	NP_000660	Coding	chr4:99353045 minus strand	316634
ADH4	NM_000670	NP_000661	Coding	chr4:99144298 minus strand	316635
ADH5	NM_000671	NP_000662	Coding	chr4:99088788 minus strand	316636

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ADH6	NM_000672	NP_000663	Coding	chr4:99219246 minus strand	316637
ADH6	NM_001102470	NP_001095940	Coding	chr4:99219246 minus strand	316637
ADH7	NM_000673	NP_000664	Coding	chr4:99435510 minus strand	316638
ADH7	NM_001166504	NP_001159976	Coding	chr4:99435134 minus strand	316639
ADRA2C	NM_000683	NP_000674	Coding	chr4:3766568 plus strand	316640
AFAP1	NM_001134647	NP_001128119	Coding	chr4:7939926 minus strand	316641
AFAP1	NM_198595	NP_940997	Coding	chr4:7939926 minus strand	316641
AFF1	NM_001166693	NP_001160165	Coding	chr4:86935001 plus strand	316642
AFF1	NM_005935	NP_005926	Coding	chr4:87007000 plus strand	316643
AFM	NM_001133	NP_001124	Coding	chr4:73481744 plus strand	316644
AFP	NM_001134	NP_001125	Coding	chr4:73436218 plus strand	316645
AGA	NM_000027	NP_000018	Coding	chr4:177442503 minus strand	316646
AGA	NM_001171988	NP_001165459	Coding	chr4:177442503 minus strand	316646
AGPAT9	NM_001256421	NP_001243350	Coding	chr4:83536106 plus strand	316647
AGPAT9	NM_001256422	NP_001243351	Coding	chr4:83535913 plus strand	316648
AGPAT9	NM_032717	NP_116106	Coding	chr4:83536316 plus strand	316649
AIMP1	NM_001142415	NP_001135887	Coding	chr4:106315609 plus strand	316650
AIMP1	NM_001142416	NP_001135888	Coding	chr4:106316506 plus strand	316651
AIMP1	NM_004757	NP_004748	Coding	chr4:106315695 plus strand	316652
ALB	NM_000477	NP_000468	Coding	chr4:73404254 plus strand	316653
ALPK1	NM_001102406	NP_001095876	Coding	chr4:112297342 plus strand	316654
ALPK1	NM_001253884	NP_001240813	Coding	chr4:112297342 plus strand	316654
ALPK1	NM_025144	NP_079420	Coding	chr4:112297342 plus strand	316654
AMBN	NM_016519	NP_057603	Coding	chr4:70592257 plus strand	316655
AMTN	NM_001286731	NP_001273660	Coding	chr4:70518571 plus strand	316656
AMTN	NM_212557	NP_997722	Coding	chr4:70518571 plus strand	316656
ANAPC10	NM_001256706	NP_001243635	Coding	chr4:145098219 minus strand	316657
ANAPC10	NM_001256707	NP_001243636	Coding	chr4:145098219 minus strand	316657
ANAPC10	NM_001256708	NP_001243637	Coding	chr4:145098541 minus strand	316658
ANAPC10	NM_001256709	NP_001243638	Coding	chr4:145098219 minus strand	316657
ANAPC10	NM_001256710	NP_001243639	Coding	chr4:145098219 minus strand	316657
ANAPC10	NM_001256711	NP_001243640	Coding	chr4:145098219 minus strand	316657

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ANAPC10	NM_001256712	NP_001243641	Coding	chr4:145098219 minus strand	316657
ANAPC10	NM_014885	NP_055700	Coding	chr4:145098219 minus strand	316657
ANAPC4	NM_001286756	NP_001273685	Coding	chr4:25377225 plus strand	316659
ANAPC4	NM_013367	NP_037499	Coding	chr4:25377225 plus strand	316659
ANK2	NM_001127493	NP_001120965	Coding	chr4:112818082 plus strand	316660
ANK2	NM_001148	NP_001139	Coding	chr4:113049628 plus strand	316661
ANK2	NM_020977	NP_066187	Coding	chr4:113049628 plus strand	316661
ANKRD17	NM_001286771	NP_001273700	Coding	chr4:73223114 minus strand	316662
ANKRD17	NM_032217	NP_115593	Coding	chr4:73258785 minus strand	316663
ANKRD17	NM_198889	NP_942592	Coding	chr4:73258785 minus strand	316663
ANKRD37	NM_181726	NP_859077	Coding	chr4:185396685 plus strand	316664
ANKRD50	NM_001167882	NP_001161354	Coding	chr4:124712732 minus strand	316665
ANKRD50	NM_020337	NP_065070	Coding	chr4:124712732 minus strand	316665
ANP32C	NM_012403	NP_036535	Coding	chr4:164197711 minus strand	316666
ANTXR2	NM_001145794	NP_001139266	Coding	chr4:80073323 minus strand	316667
ANTXR2	NM_001286780	NP_001273709	Coding	chr4:80073472 minus strand	316668
ANTXR2	NM_001286781	NP_001273710	Coding	chr4:80073323 minus strand	316667
ANTXR2	NM_058172	NP_477520	Coding	chr4:80073323 minus strand	316667
ANXA10	NM_007193	NP_009124	Coding	chr4:168092536 plus strand	316669
ANXA3	NM_005139	NP_005130	Coding	chr4:78551587 plus strand	316670
ANXA5	NM_001154	NP_001145	Coding	chr4:121696992 minus strand	316671
AP1AR	NM_001128426	NP_001121898	Coding	chr4:112231738 plus strand	316672
AP1AR	NM_018569	NP_061039	Coding	chr4:112231738 plus strand	316672
APBB2	NM_001166050	NP_001159522	Coding	chr4:41214618 minus strand	316673
APBB2	NM_001166051	NP_001159523	Coding	chr4:40857155 minus strand	316674
APBB2	NM_001166052	NP_001159524	Coding	chr4:40857155 minus strand	316674
APBB2	NM_001166053	NP_001159525	Coding	chr4:40857192 minus strand	316675
APBB2	NM_001166054	NP_001159526	Coding	chr4:40857192 minus strand	316675

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APBB2	NM_004307	NP_004298	Coding	chr4:41214618 minus strand	316673
APBB2	NM_173075	NP_775098	Coding	chr4:41214618 minus strand	316673
APELA	NM_001297550	NP_001284479	Coding	chr4:164876987 plus strand	316676
ARAP2	NM_015230	NP_056045	Coding	chr4:36244357 minus strand	316677
AREG	NM_001657	NP_001648	Coding	chr4:74445097 plus strand	316678
ARFIP1	NM_001025593	NP_001020764	Coding	chr4:152779936 plus strand	316679
ARFIP1	NM_001025595	NP_001020766	Coding	chr4:152779936 plus strand	316679
ARFIP1	NM_001287431	NP_001274360	Coding	chr4:152779936 plus strand	316679
ARFIP1	NM_001287432	NP_001274361	Coding	chr4:152779936 plus strand	316679
ARFIP1	NM_001287433	NP_001274362	Coding	chr4:152779936 plus strand	316679
ARFIP1	NM_014447	NP_055262	Coding	chr4:152779936 plus strand	316679
ARHGAP10	NM_024605	NP_078881	Coding	chr4:147732301 plus strand	316680
ARHGAP24	NM_001025616	NP_001020787	Coding	chr4:85475130 plus strand	316681
ARHGAP24	NM_001042669	NP_001036134	Coding	chr4:85778697 plus strand	316682
ARHGAP24	NM_001287805	NP_001274734	Coding	chr4:85827892 plus strand	316683
ARHGAP24	NM_031305	NP_112595	Coding	chr4:85930272 plus strand	316684
ARHGEF38	NM_001242729	NP_001229658	Coding	chr4:105552619 plus strand	316685
ARHGEF38	NM_017700	NP_060170	Coding	chr4:105552619 plus strand	316685
ARL9	NM_206919	NP_996802	Coding	chr4:56505208 plus strand	316686
ARSJ	NM_024590	NP_078866	Coding	chr4:113979722 minus strand	316687
ART3	NM_001130016	NP_001123488	Coding	chr4:76074694 plus strand	316688
ART3	NM_001130017	NP_001123489	Coding	chr4:76011179 plus strand	316689
ART3	NM_001179	NP_001170	Coding	chr4:76074694 plus strand	316688
ASB5	NM_080874	NP_543150	Coding	chr4:176269222 minus strand	316690
ASIC5	NM_017419	NP_059115	Coding	chr4:155866273 minus strand	316691
ATOH1	NM_005172	NP_005163	Coding	chr4:93828926 plus strand	316692
ATP10D	NM_020453	NP_065186	Coding	chr4:47485392 plus strand	316693
ATP5I	NM_007100	NP_009031	Coding	chr4:674338 minus strand	316694
ATP8A1	NM_001105529	NP_001098999	Coding	chr4:42657105 minus strand	316695
ATP8A1	NM_006095	NP_006086	Coding	chr4:42657105 minus strand	316695
BANK1	NM_001083907	NP_001077376	Coding	chr4:101813825 plus strand	316696

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BANK1	NM_001127507	NP_001120979	Coding	chr4:101790606 plus strand	316697
BANK1	NM_017935	NP_060405	Coding	chr4:101790606 plus strand	316697
BBS12	NM_001178007	NP_001171478	Coding	chr4:122732701 plus strand	316698
BBS12	NM_152618	NP_689831	Coding	chr4:122732701 plus strand	316698
BBS7	NM_018190	NP_060660	Coding	chr4:121870497 minus strand	316699
BBS7	NM_176824	NP_789794	Coding	chr4:121870497 minus strand	316699
BDH2	NM_020139	NP_064524	Coding	chr4:103099867 minus strand	316700
BEND4	NM_001159547	NP_001153019	Coding	chr4:42152878 minus strand	316701
BEND4	NM_207406	NP_997289	Coding	chr4:42152878 minus strand	316701
BLOC1S4	NM_018366	NP_060836	Coding	chr4:6716114 plus strand	316702
BMP2K	NM_017593	NP_060063	Coding	chr4:78776377 plus strand	316703
BMP2K	NM_198892	NP_942595	Coding	chr4:78776377 plus strand	316703
BMP3	NM_001201	NP_001192	Coding	chr4:81030964 plus strand	316704
BMPR1B	NM_001203	NP_001194	Coding	chr4:94757976 plus strand	316705
BMPR1B	NM_001256792	NP_001243721	Coding	chr4:94996231 plus strand	316706
BMPR1B	NM_001256793	NP_001243722	Coding	chr4:95051678 plus strand	316707
BMPR1B	NM_001256794	NP_001243723	Coding	chr4:95091490 plus strand	316708
BOD1L1	NM_148894	NP_683692	Coding	chr4:13627704 minus strand	316709
BST1	NM_004334	NP_004325	Coding	chr4:15702949 plus strand	316710
BTC	NM_001729	NP_001720	Coding	chr4:74794672 minus strand	316711
C1QTNF7	NM_001135170	NP_001128642	Coding	chr4:15339935 plus strand	316712
C1QTNF7	NM_001135171	NP_001128643	Coding	chr4:15374550 plus strand	316713
C1QTNF7	NM_031911	NP_114117	Coding	chr4:15428004 plus strand	316714
C4orf17	NM_032149	NP_115525	Coding	chr4:99511003 plus strand	316715
C4orf19	NM_001104629	NP_001098099	Coding	chr4:37453929 plus strand	316716
C4orf19	NM_018302	NP_060772	Coding	chr4:37584232 plus strand	316717
C4orf22	NM_001206997	NP_001193926	Coding	chr4:80335719 plus strand	316718
C4orf22	NM_152770	NP_689983	Coding	chr4:80335719 plus strand	316718
C4orf26	NM_001206981	NP_001193910	Coding	chr4:75556047 plus strand	316719
C4orf26	NM_001257072	NP_001244001	Coding	chr4:75556047 plus strand	316719
C4orf26	NM_178497	NP_848592	Coding	chr4:75556047 plus strand	316719
C4orf27	NM_017867	NP_060337	Coding	chr4:169757942 minus strand	316720
C4orf29	NM_001039717	NP_001034806	Coding	chr4:127965305 plus strand	316721
C4orf3	NM_001001701	NP_001001701	Coding	chr4:119300813 minus strand	316722

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C4orf3	NM_001170330	NP_001163801	Coding	chr4:119304445 minus strand	316723
C4orf32	NM_152400	NP_689613	Coding	chr4:112145396 plus strand	316724
C4orf33	NM_001099783	NP_001093253	Coding	chr4:129096126 plus strand	316725
C4orf33	NM_173487	NP_775758	Coding	chr4:129093673 plus strand	316726
C4orf36	NM_144645	NP_653246	Coding	chr4:86892422 minus strand	316727
C4orf45	NM_152543	NP_689756	Coding	chr4:159035181 minus strand	316728
C4orf46	NM_001008393	NP_001008394	Coding	chr4:158672050 minus strand	316729
C4orf47	NM_001114357	NP_001107829	Coding	chr4:185429390 plus strand	316730
C4orf48	NM_001141936	NP_001135408	Coding	chr4:2042049 plus strand	316731
C4orf48	NM_001168243	NP_001161715	Coding	chr4:2041992 plus strand	316732
C4orf51	NM_001080531	NP_001074000	Coding	chr4:145680203 plus strand	316733
C4orf6	NM_005750	NP_005741	Coding	chr4:5525155 plus strand	316734
CABS1	NM_033122	NP_149113	Coding	chr4:70334953 plus strand	316735
CAMK2D	NM_001221	NP_001212	Coding	chr4:113761927 minus strand	316736
CAMK2D	NM_172114	NP_742112	Coding	chr4:113761927 minus strand	316736
CAMK2D	NM_172115	NP_742113	Coding	chr4:113761927 minus strand	316736
CAMK2D	NM_172127	NP_742125	Coding	chr4:113761927 minus strand	316736
CAMK2D	NM_172128	NP_742126	Coding	chr4:113761927 minus strand	316736
CAMK2D	NM_172129	NP_742127	Coding	chr4:113761927 minus strand	316736
CASP3	NM_004346	NP_004337	Coding	chr4:184649475 minus strand	316737
CASP3	NM_032991	NP_116786	Coding	chr4:184649475 minus strand	316737
CASP6	NM_001226	NP_001217	Coding	chr4:109703473 minus strand	316738
CASP6	NM_032992	NP_116787	Coding	chr4:109703473 minus strand	316738
CBR4	NM_032783	NP_116172	Coding	chr4:169010317 minus strand	316739
CC2D2A	NM_001080522	NP_001073991	Coding	chr4:15469864 plus strand	316740
CC2D2A	NM_001164720	NP_001158192	Coding	chr4:15469864 plus strand	316740
CC2D2A	NM_020785	NP_065836	Coding	chr4:15469864 plus strand	316740
CCDC109B	NM_017918	NP_060388	Coding	chr4:109560198 plus strand	316741
CCDC110	NM_001145411	NP_001138883	Coding	chr4:185471759 minus strand	316742
CCDC110	NM_152775	NP_689988	Coding	chr4:185471759 minus	316742

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				strand	
CCDC149	NM_001130726	NP_001124198	Coding	chr4:24912978 minus strand	316743
CCDC149	NM_173463	NP_775734	Coding	chr4:24980204 minus strand	316744
CCDC158	NM_001042784	NP_001036249	Coding	chr4:76407305 minus strand	316745
CCDC96	NM_153376	NP_699207	Coding	chr4:7043001 minus strand	316746
CCKAR	NM_000730	NP_000721	Coding	chr4:26490420 minus strand	316747
CCNA2	NM_001237	NP_001228	Coding	chr4:121823933 minus strand	316748
CCNG2	NM_004354	NP_004345	Coding	chr4:77157203 plus strand	316749
CCNI	NM_006835	NP_006826	Coding	chr4:77075972 minus strand	316750
CCRN4L	NM_012118	NP_036250	Coding	chr4:139015758 plus strand	316751
CCSER1	NM_001145065	NP_001138537	Coding	chr4:90127532 plus strand	316752
CCSER1	NM_207491	NP_997374	Coding	chr4:90235030 plus strand	316753
CD38	NM_001775	NP_001766	Coding	chr4:15778307 plus strand	316754
CDKL2	NM_003948	NP_003939	Coding	chr4:75630537 minus strand	316755
CDKN2AIP	NM_017632	NP_060102	Coding	chr4:183444635 plus strand	316756
CDS1	NM_001263	NP_001254	Coding	chr4:84582903 plus strand	316757
CENPC	NM_001812	NP_001803	Coding	chr4:67545538 minus strand	316758
CENPE	NM_001286734	NP_001273663	Coding	chr4:103198409 minus strand	316759
CENPE	NM_001813	NP_001804	Coding	chr4:103198409 minus strand	316759
CENPU	NM_024629	NP_078905	Coding	chr4:184734132 minus strand	316760
CEP135	NM_025009	NP_079285	Coding	chr4:55948807 plus strand	316761
CEP44	NM_001040157	NP_001035247	Coding	chr4:174283676 plus strand	316762
CEP44	NM_001145314	NP_001138786	Coding	chr4:174283903 plus strand	316763
CFAP97	NM_001292033	NP_001278962	Coding	chr4:185204028 minus strand	316764
CFAP97	NM_020827	NP_065878	Coding	chr4:185204028 minus strand	316764
CFAP99	NM_001193282	NP_001180211	Coding	chr4:2418944 plus strand	316765
CFI	NM_000204	NP_000195	Coding	chr4:109802179 minus strand	316766
CHIC2	NM_012110	NP_036242	Coding	chr4:54064648 minus strand	316767
CHRNA9	NM_017581	NP_060051	Coding	chr4:40335328 plus strand	316768
CISD2	NM_001008388	NP_001008389	Coding	chr4:102868977 plus strand	316769
CLCN3	NM_001243372	NP_001230301	Coding	chr4:169620520 plus	316770

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				strand	
CLCN3	NM_001243374	NP_001230303	Coding	chr4:169660061 plus strand	316771
CLCN3	NM_001829	NP_001820	Coding	chr4:169620520 plus strand	316770
CLCN3	NM_173872	NP_776297	Coding	chr4:169620520 plus strand	316770
CLDN22	NM_001111319	NP_001104789	Coding	chr4:183320774 minus strand	316772
CLDN24	NM_001185149	NP_001172078	Coding	chr4:183322426 minus strand	316773
CLGN	NM_001130675	NP_001124147	Coding	chr4:140427661 minus strand	316774
CLGN	NM_004362	NP_004353	Coding	chr4:140427661 minus strand	316774
CLNK	NM_052964	NP_443196	Coding	chr4:10684762 minus strand	316775
CLOCK	NM_001267843	NP_001254772	Coding	chr4:55545932 minus strand	316776
CLOCK	NM_004898	NP_004889	Coding	chr4:55546909 minus strand	316777
CLRN2	NM_001079827	NP_001073296	Coding	chr4:17515164 plus strand	316778
CNGA1	NM_000087	NP_000078	Coding	chr4:48012944 minus strand	316779
CNGA1	NM_001142564	NP_001136036	Coding	chr4:47981533 minus strand	316780
CNOT6L	NM_001286790	NP_001273719	Coding	chr4:77819390 minus strand	316781
CNOT6L	NM_144571	NP_653172	Coding	chr4:77819390 minus strand	316781
COL25A1	NM_001256074	NP_001243003	Coding	chr4:109302367 minus strand	316782
COL25A1	NM_032518	NP_115907	Coding	chr4:109302643 minus strand	316783
COL25A1	NM_198721	NP_942014	Coding	chr4:109302643 minus strand	316783
COMMD8	NM_017845	NP_060315	Coding	chr4:47463659 minus strand	316784
COPS4	NM_001258006	NP_001244935	Coding	chr4:83035085 plus strand	316785
COPS4	NM_016129	NP_057213	Coding	chr4:83035085 plus strand	316785
COQ2	NM_015697	NP_056512	Coding	chr4:83284914 minus strand	316786
CORIN	NM_001278585	NP_001265514	Coding	chr4:47838106 minus strand	316787
CORIN	NM_001278586	NP_001265515	Coding	chr4:47838106 minus strand	316787
CORIN	NM_006587	NP_006578	Coding	chr4:47838106 minus strand	316787
COX18	NM_001297732	NP_001284661	Coding	chr4:73069759 minus strand	316788
COX18	NM_001297733	NP_001284662	Coding	chr4:73069759 minus strand	316788
COX18	NM_001300729	NP_001287658	Coding	chr4:73069759 minus	316788

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				strand	
COX18	NM_173827	NP_776188	Coding	chr4:73069759 minus strand	316788
COX7B2	NM_130902	NP_570972	Coding	chr4:46909235 minus strand	316789
CPE	NM_001873	NP_001864	Coding	chr4:165378944 plus strand	316790
CPEB2	NM_001177381	NP_001170852	Coding	chr4:15002673 plus strand	316791
CPEB2	NM_001177382	NP_001170853	Coding	chr4:15002673 plus strand	316791
CPEB2	NM_001177383	NP_001170854	Coding	chr4:15002673 plus strand	316791
CPEB2	NM_001177384	NP_001170855	Coding	chr4:15002673 plus strand	316791
CPEB2	NM_182485	NP_872291	Coding	chr4:15002673 plus strand	316791
CPEB2	NM_182646	NP_872587	Coding	chr4:15002673 plus strand	316791
CPLX1	NM_006651	NP_006642	Coding	chr4:826157 minus strand	316792
CPZ	NM_001014447	NP_001014447	Coding	chr4:8592659 plus strand	316793
CPZ	NM_001014448	NP_001014448	Coding	chr4:8592659 plus strand	316793
CPZ	NM_003652	NP_003643	Coding	chr4:8592659 plus strand	316793
CRIPAK	NM_175918	NP_787114	Coding	chr4:1391551 plus strand	316794
CRMP1	NM_001014809	NP_001014809	Coding	chr4:5893083 minus strand	316795
CRMP1	NM_001288661	NP_001275590	Coding	chr4:5890226 minus strand	316796
CRMP1	NM_001288662	NP_001275591	Coding	chr4:5887813 minus strand	316797
CRMP1	NM_001313	NP_001304	Coding	chr4:5888616 minus strand	316798
CSN1S1	NM_001025104	NP_001020275	Coding	chr4:69931080 plus strand	316799
CSN1S1	NM_001890	NP_001881	Coding	chr4:69931080 plus strand	316799
CSN2	NM_001302770	NP_001289699	Coding	chr4:69961011 minus strand	316800
CSN2	NM_001891	NP_001882	Coding	chr4:69961011 minus strand	316800
CSN3	NM_005212	NP_005203	Coding	chr4:70242615 plus strand	316801
CTBP1	NM_001012614	NP_001012632	Coding	chr4:1249120 minus strand	316802
CTBP1	NM_001328	NP_001319	Coding	chr4:1249120 minus strand	316802
CTSO	NM_001334	NP_001325	Coding	chr4:155953896 minus strand	316803
CWH43	NM_001286791	NP_001273720	Coding	chr4:48986641 plus strand	316804
CWH43	NM_025087	NP_079363	Coding	chr4:48986247 plus strand	316805
CXCL1	NM_001511	NP_001502	Coding	chr4:73869391 plus strand	316806
CXCL10	NM_001565	NP_001556	Coding	chr4:76023536 minus strand	316807
CXCL11	NM_001302123	NP_001289052	Coding	chr4:76036197 minus strand	316808
CXCL11	NM_005409	NP_005400	Coding	chr4:76036197 minus strand	316808
CXCL13	NM_006419	NP_006410	Coding	chr4:77511752 plus strand	316809
CXCL2	NM_002089	NP_002080	Coding	chr4:74099280 minus strand	316810
CXCL3	NM_002090	NP_002081	Coding	chr4:74038773 minus strand	316811

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CXCL5	NM_002994	NP_002985	Coding	chr4:73998729 minus strand	316812
CXCL6	NM_002993	NP_002984	Coding	chr4:73836555 plus strand	316813
CXCL8	NM_000584	NP_000575	Coding	chr4:73740505 plus strand	316814
CXCL9	NM_002416	NP_002407	Coding	chr4:76007523 minus strand	316815
CXXC4	NM_025212	NP_079488	Coding	chr4:104494901 minus strand	316816
CYP2U1	NM_183075	NP_898898	Coding	chr4:107931560 plus strand	316817
CYP4V2	NM_207352	NP_997235	Coding	chr4:186191519 plus strand	316818
CYTL1	NM_018659	NP_061129	Coding	chr4:5019470 minus strand	316819
DAPP1	NM_014395	NP_055210	Coding	chr4:99816823 plus strand	316820
DCAF16	NM_017741	NP_060211	Coding	chr4:17810758 minus strand	316821
DCAF4L1	NM_001029955	NP_001025126	Coding	chr4:41981695 plus strand	316822
DCHS2	NM_001142552	NP_001136024	Coding	chr4:154491725 minus strand	316823
DCHS2	NM_017639	NP_060109	Coding	chr4:154391297 minus strand	316824
DCK	NM_000788	NP_000779	Coding	chr4:70993547 plus strand	316825
DCLK2	NM_001040260	NP_001035350	Coding	chr4:150078273 plus strand	316826
DCLK2	NM_001040261	NP_001035351	Coding	chr4:150078273 plus strand	316826
DCTD	NM_001012732	NP_001012750	Coding	chr4:182917477 minus strand	316827
DCTD	NM_001921	NP_001912	Coding	chr4:182917477 minus strand	316827
DCUN1D4	NM_001040402	NP_001035492	Coding	chr4:51842999 plus strand	316828
DCUN1D4	NM_001287755	NP_001274684	Coding	chr4:51843578 plus strand	316829
DCUN1D4	NM_001287757	NP_001274686	Coding	chr4:51842999 plus strand	316828
DCUN1D4	NM_015115	NP_055930	Coding	chr4:51842999 plus strand	316828
DDIT4L	NM_145244	NP_660287	Coding	chr4:100190498 minus strand	316830
DDX60	NM_017631	NP_060101	Coding	chr4:168318807 minus strand	316831
DDX60L	NM_001012967	NP_001012985	Coding	chr4:168480514 minus strand	316832
DDX60L	NM_001291510	NP_001278439	Coding	chr4:168480514 minus strand	316832
DEFB131	NM_001040448	NP_001035538	Coding	chr4:9444533 plus strand	316833
DGKQ	NM_001347	NP_001338	Coding	chr4:973560 minus strand	316834
DHX15	NM_001358	NP_001349	Coding	chr4:24584561 minus strand	316835
DKK2	NM_014421	NP_055236	Coding	chr4:107036296 minus strand	316836
DMP1	NM_001079911	NP_001073380	Coding	chr4:87650301 plus strand	316837
DMP1	NM_004407	NP_004398	Coding	chr4:87650301 plus strand	316837

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DNAJB14	NM_001031723	NP_001026893	Coding	chr4:99946726 minus strand	316838
DNAJB14	NM_001278310	NP_001265239	Coding	chr4:99946726 minus strand	316838
DNAJB14	NM_001278311	NP_001265240	Coding	chr4:99946726 minus strand	316838
DOK7	NM_001164673	NP_001158145	Coding	chr4:3463305 plus strand	316839
DOK7	NM_001256896	NP_001243825	Coding	chr4:3484543 plus strand	316840
DOK7	NM_001301071	NP_001288000	Coding	chr4:3463305 plus strand	316839
DOK7	NM_173660	NP_775931	Coding	chr4:3463305 plus strand	316839
DRD5	NM_000798	NP_000789	Coding	chr4:9781633 plus strand	316841
DSPP	NM_014208	NP_055023	Coding	chr4:87608528 plus strand	316842
DTHD1	NM_001136536	NP_001130008	Coding	chr4:36281614 plus strand	316843
DTHD1	NM_001170700	NP_001164171	Coding	chr4:36284021 plus strand	316844
DUX4	NM_001293798	NP_001280727	Coding	chr4:190173773 plus strand	316845
EDNRA	NM_001166055	NP_001159527	Coding	chr4:147480916 plus strand	316846
EDNRA	NM_001256283	NP_001243212	Coding	chr4:147480916 plus strand	316846
EDNRA	NM_001957	NP_001948	Coding	chr4:147480916 plus strand	316846
EGF	NM_001178130	NP_001171601	Coding	chr4:109912883 plus strand	316847
EGF	NM_001178131	NP_001171602	Coding	chr4:109912883 plus strand	316847
EGF	NM_001963	NP_001954	Coding	chr4:109912883 plus strand	316847
EIF4E	NM_001130678	NP_001124150	Coding	chr4:98929092 minus strand	316848
EIF4E	NM_001130679	NP_001124151	Coding	chr4:98930635 minus strand	316849
EIF4E	NM_001968	NP_001959	Coding	chr4:98930635 minus strand	316849
ELF2	NM_001276457	NP_001263386	Coding	chr4:139084414 minus strand	316850
ELF2	NM_001276458	NP_001263387	Coding	chr4:139084414 minus strand	316850
ELF2	NM_001276459	NP_001263388	Coding	chr4:139084414 minus strand	316850
ELF2	NM_006874	NP_006865	Coding	chr4:139084414 minus strand	316850
ELF2	NM_201999	NP_973728	Coding	chr4:139139476 minus strand	316851
ELMOD2	NM_153702	NP_714913	Coding	chr4:140524157 plus strand	316852
ELOVL6	NM_001130721	NP_001124193	Coding	chr4:110198615 minus strand	316853
ELOVL6	NM_024090	NP_076995	Coding	chr4:110198664 minus strand	316854
EMCN	NM_001159694	NP_001153166	Coding	chr4:100518093 minus strand	316855

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EMCN	NM_016242	NP_057326	Coding	chr4:100518093 minus strand	316855
ENAM	NM_031889	NP_114095	Coding	chr4:70628743 plus strand	316856
ENOPH1	NM_001292017	NP_001278946	Coding	chr4:82430479 plus strand	316857
ENOPH1	NM_021204	NP_067027	Coding	chr4:82430479 plus strand	316857
ENPEP	NM_001977	NP_001968	Coding	chr4:110476072 plus strand	316858
ENPP6	NM_153343	NP_699174	Coding	chr4:184217961 minus strand	316859
EPGN	NM_001270989	NP_001257918	Coding	chr4:74308469 plus strand	316860
EPGN	NM_001270990	NP_001257919	Coding	chr4:74308469 plus strand	316860
EPGN	NM_001270991	NP_001257920	Coding	chr4:74308469 plus strand	316860
EPGN	NM_001270992	NP_001257921	Coding	chr4:74308469 plus strand	316860
EPGN	NM_001270993	NP_001257922	Coding	chr4:74308469 plus strand	316860
EPHA5	NM_001281765	NP_001268694	Coding	chr4:65670495 minus strand	316861
EPHA5	NM_001281766	NP_001268695	Coding	chr4:65670495 minus strand	316861
EPHA5	NM_001281767	NP_001268696	Coding	chr4:65670495 minus strand	316861
EPHA5	NM_004439	NP_004430	Coding	chr4:65670495 minus strand	316861
EPHA5	NM_182472	NP_872272	Coding	chr4:65670495 minus strand	316861
EREG	NM_001432	NP_001423	Coding	chr4:74365142 plus strand	316862
ERVMER34-1	NM_001242690	NP_001229619	Coding	chr4:52751640 minus strand	316863
ERVMER34-1	NM_024534	NP_078810	Coding	chr4:52751640 minus strand	316863
ETFDH	NM_001281737	NP_001268666	Coding	chr4:158672100 plus strand	316864
ETFDH	NM_001281738	NP_001268667	Coding	chr4:158682107 plus strand	316865
ETFDH	NM_004453	NP_004444	Coding	chr4:158672100 plus strand	316864
ETNPPL	NM_001146590	NP_001140062	Coding	chr4:108763079 minus strand	316866
ETNPPL	NM_001146627	NP_001140099	Coding	chr4:108763079 minus strand	316866
ETNPPL	NM_031279	NP_112569	Coding	chr4:108763079 minus strand	316866
EVC	NM_153717	NP_714928	Coding	chr4:5711196 plus strand	316867
EVC2	NM_001166136	NP_001159608	Coding	chr4:5709548 minus strand	316868
EVC2	NM_147127	NP_667338	Coding	chr4:5708567 minus strand	316869
EXOC1	NM_001024924	NP_001020095	Coding	chr4:55853649 plus strand	316870
EXOC1	NM_018261	NP_060731	Coding	chr4:55853649 plus strand	316870
EXOC1	NM_178237	NP_839955	Coding	chr4:55853649 plus strand	316870
EXOSC9	NM_001034194	NP_001029366	Coding	chr4:121801316 plus strand	316871
EXOSC9	NM_005033	NP_005024	Coding	chr4:121801316 plus	316871

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				strand	
F11	NM_000128	NP_000119	Coding	chr4:186265963 plus strand	316872
FABP2	NM_000134	NP_000125	Coding	chr4:119322161 minus strand	316873
FAM114A1	NM_138389	NP_612398	Coding	chr4:38867732 plus strand	316874
FAM13A	NM_001015045	NP_001015045	Coding	chr4:88823361 minus strand	316875
FAM13A	NM_001265578	NP_001252507	Coding	chr4:88823361 minus strand	316875
FAM13A	NM_001265579	NP_001252508	Coding	chr4:88823361 minus strand	316875
FAM13A	NM_001265580	NP_001252509	Coding	chr4:88823361 minus strand	316875
FAM13A	NM_014883	NP_055698	Coding	chr4:89057195 minus strand	316876
FAM149A	NM_001006655	NP_001006656	Coding	chr4:186149172 plus strand	316877
FAM149A	NM_015398	NP_056213	Coding	chr4:186144840 plus strand	316878
FAM160A1	NM_001109977	NP_001103447	Coding	chr4:151409245 plus strand	316879
FAM175A	NM_139076	NP_620775	Coding	chr4:83485137 minus strand	316880
FAM184B	NM_015688	NP_056503	Coding	chr4:17781512 minus strand	316881
FAM193A	NM_001256666	NP_001243595	Coding	chr4:2625431 plus strand	316882
FAM193A	NM_001256667	NP_001243596	Coding	chr4:2625431 plus strand	316882
FAM193A	NM_001256668	NP_001243597	Coding	chr4:2625431 plus strand	316882
FAM193A	NM_003704	NP_003695	Coding	chr4:2625431 plus strand	316882
FAM198B	NM_001031700	NP_001026870	Coding	chr4:158173050 minus strand	316883
FAM198B	NM_001128424	NP_001121896	Coding	chr4:158173050 minus strand	316883
FAM198B	NM_016613	NP_057697	Coding	chr4:158172566 minus strand	316884
FAM200B	NM_001145191	NP_001138663	Coding	chr4:15681728 plus strand	316885
FAM218A	NM_153027	NP_694572	Coding	chr4:164956947 plus strand	316886
FAM47E	NM_001136570	NP_001130042	Coding	chr4:76251699 plus strand	316887
FAM47E	NM_001242936	NP_001229865	Coding	chr4:76214039 plus strand	316888
FAM47E-STBD1	NM_001242939	NP_001229868	Coding	chr4:76251699 plus strand	316889
FAM53A	NM_001013622	NP_001013644	Coding	chr4:1683991 minus strand	316890
FAM53A	NM_001174070	NP_001167541	Coding	chr4:1684313 minus strand	316891
FAM53A	NM_001297435	NP_001284364	Coding	chr4:1684127 minus strand	316892
FAT1	NM_005245	NP_005236	Coding	chr4:186723833 minus strand	316893
FAT4	NM_001291285	NP_001278214	Coding	chr4:125316411 plus strand	316894

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FAT4	NM_001291303	NP_001278232	Coding	chr4:125316411 plus strand	316894
FAT4	NM_024582	NP_078858	Coding	chr4:125316411 plus strand	316894
FBXL5	NM_001193534	NP_001180463	Coding	chr4:15655412 minus strand	316895
FBXL5	NM_001193535	NP_001180464	Coding	chr4:15655412 minus strand	316895
FBXL5	NM_012161	NP_036293	Coding	chr4:15655412 minus strand	316895
FBXO8	NM_012180	NP_036312	Coding	chr4:174284251 minus strand	316896
FBXW7	NM_001013415	NP_001013433	Coding	chr4:152382512 minus strand	316897
FBXW7	NM_001257069	NP_001243998	Coding	chr4:152535241 minus strand	316898
FBXW7	NM_018315	NP_060785	Coding	chr4:152352958 minus strand	316899
FBXW7	NM_033632	NP_361014	Coding	chr4:152535033 minus strand	316900
FDCSP	NM_152997	NP_694542	Coding	chr4:70226070 plus strand	316901
FGA	NM_000508	NP_000499	Coding	chr4:154590745 minus strand	316902
FGA	NM_021871	NP_068657	Coding	chr4:154590745 minus strand	316902
FGB	NM_001184741	NP_001171670	Coding	chr4:154562979 plus strand	316903
FGB	NM_005141	NP_005132	Coding	chr4:154562979 plus strand	316903
FGF2	NM_002006	NP_001997	Coding	chr4:122826707 plus strand	316904
FGF5	NM_001291812	NP_001278741	Coding	chr4:80268264 plus strand	316905
FGF5	NM_004464	NP_004455	Coding	chr4:80266587 plus strand	316906
FGF5	NM_033143	NP_149134	Coding	chr4:80266587 plus strand	316906
FGFBP1	NM_005130	NP_005121	Coding	chr4:15938740 minus strand	316907
FGFBP2	NM_031950	NP_114156	Coding	chr4:15963236 minus strand	316908
FGFR3	NM_000142	NP_000133	Coding	chr4:1793311 plus strand	316909
FGFR3	NM_001163213	NP_001156685	Coding	chr4:1793311 plus strand	316909
FGFR3	NM_022965	NP_075254	Coding	chr4:1793311 plus strand	316909
FGFRL1	NM_001004356	NP_001004356	Coding	chr4:1011821 plus strand	316910
FGFRL1	NM_001004358	NP_001004358	Coding	chr4:1011971 plus strand	316911
FGFRL1	NM_021923	NP_068742	Coding	chr4:1012463 plus strand	316912
FGG	NM_000509	NP_000500	Coding	chr4:154612750 minus strand	316913
FGG	NM_021870	NP_068656	Coding	chr4:154612750 minus strand	316913
FHDC1	NM_033393	NP_203751	Coding	chr4:152942982 plus strand	316914
FIP1L1	NM_001134937	NP_001128409	Coding	chr4:53377652 plus strand	316915

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FIP1L1	NM_001134938	NP_001128410	Coding	chr4:53377652 plus strand	316915
FIP1L1	NM_030917	NP_112179	Coding	chr4:53377652 plus strand	316915
FNIP2	NM_020840	NP_065891	Coding	chr4:158769029 plus strand	316916
FRAS1	NM_001166133	NP_001159605	Coding	chr4:78057569 plus strand	316917
FRAS1	NM_025074	NP_079350	Coding	chr4:78057569 plus strand	316917
FREM3	NM_001168235	NP_001161707	Coding	chr4:143700675 minus strand	316918
FRG1	NM_004477	NP_004468	Coding	chr4:189940818 plus strand	316919
FRG2	NM_001005217	NP_001005217	Coding	chr4:190027257 minus strand	316920
FRG2	NM_001286820	NP_001273749	Coding	chr4:190027257 minus strand	316920
FRYL	NM_015030	NP_055845	Coding	chr4:48780299 minus strand	316921
FSTL5	NM_001128427	NP_001121899	Coding	chr4:162164034 minus strand	316922
FSTL5	NM_001128428	NP_001121900	Coding	chr4:162164034 minus strand	316922
FSTL5	NM_020116	NP_064501	Coding	chr4:162164034 minus strand	316922
G3BP2	NM_012297	NP_036429	Coding	chr4:75673159 minus strand	316923
G3BP2	NM_203504	NP_987100	Coding	chr4:75673483 minus strand	316924
G3BP2	NM_203505	NP_987101	Coding	chr4:75673483 minus strand	316924
GAB1	NM_002039	NP_002030	Coding	chr4:143336829 plus strand	316925
GAB1	NM_207123	NP_997006	Coding	chr4:143336829 plus strand	316925
GABRA2	NM_000807	NP_000798	Coding	chr4:46390039 minus strand	316926
GABRA2	NM_001114175	NP_001107647	Coding	chr4:46389379 minus strand	316927
GABRA2	NM_001286827	NP_001273756	Coding	chr4:46390039 minus strand	316926
GABRA4	NM_000809	NP_000800	Coding	chr4:46994407 minus strand	316928
GABRA4	NM_001204266	NP_001191195	Coding	chr4:46993505 minus strand	316929
GABRA4	NM_001204267	NP_001191196	Coding	chr4:46993505 minus strand	316929
GABRB1	NM_000812	NP_000803	Coding	chr4:47031277 plus strand	316930
GABRG1	NM_173536	NP_775807	Coding	chr4:46124065 minus strand	316931
GAK	NM_001286833	NP_001273762	Coding	chr4:932390 minus strand	316932
GAK	NM_005255	NP_005246	Coding	chr4:932386 minus strand	316933
GALNT7	NM_017423	NP_059119	Coding	chr4:173168752 plus strand	316934
GALNTL6	NM_001034845	NP_001030017	Coding	chr4:171813423 plus	316935

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				strand	
GAR1	NM_018983	NP_061856	Coding	chr4:109815509 plus strand	316936
GAR1	NM_032993	NP_127460	Coding	chr4:109815509 plus strand	316936
GATB	NM_004564	NP_004555	Coding	chr4:151761023 minus strand	316937
GBA3	NM_001128432	NP_001121904	Coding	chr4:22692913 plus strand	316938
GBA3	NM_001277225	NP_001264154	Coding	chr4:22714088 plus strand	316939
GBA3	NM_020973	NP_066024	Coding	chr4:22692913 plus strand	316938
GC	NM_000583	NP_000574	Coding	chr4:71784362 minus strand	316940
GC	NM_001204306	NP_001191235	Coding	chr4:71805520 minus strand	316941
GC	NM_001204307	NP_001191236	Coding	chr4:71804041 minus strand	316942
GIMD1	NM_001195138	NP_001182067	Coding	chr4:106367435 minus strand	316943
GK2	NM_033214	NP_149991	Coding	chr4:79408218 minus strand	316944
GLRA3	NM_001042543	NP_001036008	Coding	chr4:174829315 minus strand	316945
GLRA3	NM_006529	NP_006520	Coding	chr4:174829315 minus strand	316945
GLRB	NM_000824	NP_000815	Coding	chr4:157076124 plus strand	316946
GLRB	NM_001166060	NP_001159532	Coding	chr4:157076402 plus strand	316947
GLRB	NM_001166061	NP_001159533	Coding	chr4:157076124 plus strand	316946
GNPDA2	NM_001270880	NP_001257809	Coding	chr4:44726634 minus strand	316948
GNPDA2	NM_001270881	NP_001257810	Coding	chr4:44726634 minus strand	316948
GNPDA2	NM_138335	NP_612208	Coding	chr4:44726634 minus strand	316948
GNRHR	NM_000406	NP_000397	Coding	chr4:67756086 minus strand	316949
GNRHR	NM_001012763	NP_001012781	Coding	chr4:67756086 minus strand	316949
GPM6A	NM_001261447	NP_001248376	Coding	chr4:176002691 minus strand	316950
GPM6A	NM_001261448	NP_001248377	Coding	chr4:175787676 minus strand	316951
GPM6A	NM_005277	NP_005268	Coding	chr4:176002691 minus strand	316950
GPM6A	NM_201591	NP_963885	Coding	chr4:175813114 minus strand	316952
GPM6A	NM_201592	NP_963886	Coding	chr4:176002691 minus strand	316950
GPR125	NM_145290	NP_660333	Coding	chr4:22516054 minus strand	316953
GPR78	NM_080819	NP_543009	Coding	chr4:8580489 plus strand	316954

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GPRIN3	NM_198281	NP_938022	Coding	chr4:89308010 minus strand	316955
GRIA2	NM_000826	NP_000817	Coding	chr4:157220583 plus strand	316956
GRIA2	NM_001083619	NP_001077088	Coding	chr4:157220583 plus strand	316956
GRIA2	NM_001083620	NP_001077089	Coding	chr4:157220667 plus strand	316957
GRID2	NM_001286838	NP_001273767	Coding	chr4:92304398 plus strand	316958
GRID2	NM_001510	NP_001501	Coding	chr4:92304398 plus strand	316958
GRK4	NM_001004056	NP_001004056	Coding	chr4:2963615 plus strand	316959
GRK4	NM_001004057	NP_001004057	Coding	chr4:2963615 plus strand	316959
GRK4	NM_005307	NP_005298	Coding	chr4:2963615 plus strand	316959
GRK4	NM_182982	NP_892027	Coding	chr4:2963615 plus strand	316959
GRPEL1	NM_025196	NP_079472	Coding	chr4:7068073 minus strand	316960
GRSF1	NM_001098477	NP_001091947	Coding	chr4:70839503 minus strand	316961
GRSF1	NM_002092	NP_002083	Coding	chr4:70839910 minus strand	316962
GRXCR1	NM_001080476	NP_001073945	Coding	chr4:42893265 plus strand	316963
GSTCD	NM_001031720	NP_001026890	Coding	chr4:105710812 plus strand	316964
GSTCD	NM_024751	NP_079027	Coding	chr4:105708783 plus strand	316965
GSX2	NM_133267	NP_573574	Coding	chr4:54100080 plus strand	316966
GUCY1A3	NM_000856	NP_000847	Coding	chr4:155666709 plus strand	316967
GUCY1A3	NM_001130682	NP_001124154	Coding	chr4:155666709 plus strand	316967
GUCY1A3	NM_001130683	NP_001124155	Coding	chr4:155666996 plus strand	316968
GUCY1A3	NM_001130684	NP_001124156	Coding	chr4:155667662 plus strand	316969
GUCY1A3	NM_001130685	NP_001124157	Coding	chr4:155666996 plus strand	316968
GUCY1A3	NM_001130687	NP_001124159	Coding	chr4:155666709 plus strand	316967
GUCY1A3	NM_001256449	NP_001243378	Coding	chr4:155666962 plus strand	316970
GUCY1B3	NM_000857	NP_000848	Coding	chr4:155758972 plus strand	316971
GUCY1B3	NM_001291951	NP_001278880	Coding	chr4:155758972 plus strand	316971
GUCY1B3	NM_001291952	NP_001278881	Coding	chr4:155758972 plus strand	316971
GUCY1B3	NM_001291953	NP_001278882	Coding	chr4:155758972 plus strand	316971
GUCY1B3	NM_001291954	NP_001278883	Coding	chr4:155758972 plus strand	316971
GUCY1B3	NM_001291955	NP_001278884	Coding	chr4:155758972 plus strand	316971

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GUF1	NM_021927	NP_068746	Coding	chr4:44678415 plus strand	316972
GYPA	NM_002099	NP_002090	Coding	chr4:144140751 minus strand	316973
GYPB	NM_002100	NP_002091	Coding	chr4:144019343 minus strand	316974
GYPE	NM_002102	NP_002093	Coding	chr4:143905563 minus strand	316975
GYPE	NM_198682	NP_941391	Coding	chr4:143905563 minus strand	316975
H2AFZ	NM_002106	NP_002097	Coding	chr4:99950355 minus strand	316976
HADH	NM_001184705	NP_001171634	Coding	chr4:107989713 plus strand	316977
HADH	NM_005327	NP_005318	Coding	chr4:107989713 plus strand	316977
HAND2	NM_021973	NP_068808	Coding	chr4:173530227 minus strand	316978
HAUS3	NM_024511	NP_078787	Coding	chr4:2242133 minus strand	316979
HELQ	NM_001297755	NP_001284684	Coding	chr4:83455883 minus strand	316980
HELQ	NM_001297756	NP_001284685	Coding	chr4:83455883 minus strand	316980
HELQ	NM_001297757	NP_001284686	Coding	chr4:83455883 minus strand	316980
HELQ	NM_001297758	NP_001284687	Coding	chr4:83455883 minus strand	316980
HELQ	NM_001297759	NP_001284688	Coding	chr4:83455883 minus strand	316980
HELQ	NM_133636	NP_598375	Coding	chr4:83455883 minus strand	316980
HELT	NM_001300781	NP_001287710	Coding	chr4:185018840 plus strand	316981
HELT	NM_001300782	NP_001287711	Coding	chr4:185018840 plus strand	316981
HERC3	NM_001271602	NP_001258531	Coding	chr4:88592422 plus strand	316982
HERC3	NM_014606	NP_055421	Coding	chr4:88592422 plus strand	316982
HERC5	NM_016323	NP_057407	Coding	chr4:88457116 plus strand	316983
HERC6	NM_001165136	NP_001158608	Coding	chr4:88378738 plus strand	316984
HERC6	NM_017912	NP_060382	Coding	chr4:88378738 plus strand	316984
HGFAC	NM_001297439	NP_001284368	Coding	chr4:3441932 plus strand	316985
HGFAC	NM_001528	NP_001519	Coding	chr4:3441932 plus strand	316985
HHIP	NM_022475	NP_071920	Coding	chr4:144645995 plus strand	316986
HMGB2	NM_001130688	NP_001124160	Coding	chr4:173334358 minus strand	316987
HMGB2	NM_001130689	NP_001124161	Coding	chr4:173333769 minus strand	316988
HMGB2	NM_002129	NP_002120	Coding	chr4:173334444 minus strand	316989
HMX1	NM_018942	NP_061815	Coding	chr4:8871817 minus strand	316990
HNRNPD	NM_001003810	NP_001003810	Coding	chr4:82373996 minus	316991

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				strand	
HNRNPD	NM_002138	NP_002129	Coding	chr4:82373996 minus strand	316991
HNRNPD	NM_031369	NP_112737	Coding	chr4:82373996 minus strand	316991
HNRNPD	NM_031370	NP_112738	Coding	chr4:82373996 minus strand	316991
HNRNPDL	NM_001207000	NP_001193929	Coding	chr4:82430225 minus strand	316992
HNRNPDL	NM_031372	NP_112740	Coding	chr4:82430225 minus strand	316992
HOPX	NM_001145459	NP_001138931	Coding	chr4:56656522 minus strand	316993
HOPX	NM_001145460	NP_001138932	Coding	chr4:56681706 minus strand	316994
HOPX	NM_032495	NP_115884	Coding	chr4:56681706 minus strand	316994
HOPX	NM_139211	NP_631957	Coding	chr4:56656522 minus strand	316993
HOPX	NM_139212	NP_631958	Coding	chr4:56681706 minus strand	316994
HPGD	NM_000860	NP_000851	Coding	chr4:174522898 minus strand	316995
HPGD	NM_001145816	NP_001139288	Coding	chr4:174522898 minus strand	316995
HPGD	NM_001256301	NP_001243230	Coding	chr4:174522893 minus strand	316996
HPGD	NM_001256305	NP_001243234	Coding	chr4:174522898 minus strand	316995
HPGD	NM_001256306	NP_001243235	Coding	chr4:174522898 minus strand	316995
HPGD	NM_001256307	NP_001243236	Coding	chr4:174522898 minus strand	316995
HPGDS	NM_014485	NP_055300	Coding	chr4:94342876 minus strand	316997
HPSE	NM_001098540	NP_001092010	Coding	chr4:83334881 minus strand	316998
HPSE	NM_001166498	NP_001159970	Coding	chr4:83335153 minus strand	316999
HPSE	NM_001199830	NP_001186759	Coding	chr4:83334813 minus strand	317000
HPSE	NM_006665	NP_006656	Coding	chr4:83335153 minus strand	316999
HS3ST1	NM_005114	NP_005105	Coding	chr4:11428913 minus strand	317001
HSD17B11	NM_016245	NP_057329	Coding	chr4:87391303 minus strand	317002
HSD17B13	NM_001136230	NP_001129702	Coding	chr4:87322906 minus strand	317003
HSD17B13	NM_178135	NP_835236	Coding	chr4:87322906 minus strand	317003
HSPA4L	NM_014278	NP_055093	Coding	chr4:127782297 plus strand	317004
HTN1	NM_002159	NP_002150	Coding	chr4:70050414 plus strand	317005

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HTN3	NM_000200	NP_000191	Coding	chr4:70028412 plus strand	317006
HTRA3	NM_001297559	NP_001284488	Coding	chr4:8269764 plus strand	317007
HTRA3	NM_053044	NP_444272	Coding	chr4:8269764 plus strand	317007
HTT	NM_002111	NP_002102	Coding	chr4:3074509 plus strand	317008
IBSP	NM_004967	NP_004958	Coding	chr4:87799549 plus strand	317009
IDUA	NM_000203	NP_000194	Coding	chr4:986996 plus strand	317010
IGFBP7	NM_001253835	NP_001240764	Coding	chr4:57110385 minus strand	317011
IGFBP7	NM_001553	NP_001544	Coding	chr4:57110385 minus strand	317011
IGJ	NM_144646	NP_653247	Coding	chr4:70666631 minus strand	317012
IL15	NM_000585	NP_000576	Coding	chr4:141636595 plus strand	317013
IL15	NM_172175	NP_751915	Coding	chr4:141636595 plus strand	317013
IL2	NM_000586	NP_000577	Coding	chr4:122456495 minus strand	317014
IL21	NM_001207006	NP_001193935	Coding	chr4:122621057 minus strand	317015
IL21	NM_021803	NP_068575	Coding	chr4:122621057 minus strand	317015
ING2	NM_001291959	NP_001278888	Coding	chr4:183506081 plus strand	317016
ING2	NM_001564	NP_001555	Coding	chr4:183505049 plus strand	317017
INPP4B	NM_001101669	NP_001095139	Coding	chr4:142846451 minus strand	317018
INPP4B	NM_003866	NP_003857	Coding	chr4:142846451 minus strand	317018
INTS12	NM_001142471	NP_001135943	Coding	chr4:105708724 minus strand	317019
INTS12	NM_020395	NP_065128	Coding	chr4:105708724 minus strand	317019
INTU	NM_015693	NP_056508	Coding	chr4:127632931 plus strand	317020
IRF2	NM_002199	NP_002190	Coding	chr4:184474572 minus strand	317021
JADE1	NM_001287437	NP_001274366	Coding	chr4:128809622 plus strand	317022
JADE1	NM_001287439	NP_001274368	Coding	chr4:128809918 plus strand	317023
JADE1	NM_001287440	NP_001274369	Coding	chr4:128809918 plus strand	317023
JADE1	NM_001287441	NP_001274370	Coding	chr4:128811269 plus strand	317024
JADE1	NM_001287442	NP_001274371	Coding	chr4:128811269 plus strand	317024
JADE1	NM_001287443	NP_001274372	Coding	chr4:128811843 plus strand	317025
JADE1	NM_024900	NP_079176	Coding	chr4:128809622 plus strand	317022

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JADE1	NM_199320	NP_955352	Coding	chr4:128809622 plus strand	317022
JAKMIP1	NM_001099433	NP_001092903	Coding	chr4:6200591 minus strand	317026
JAKMIP1	NM_144720	NP_653321	Coding	chr4:6200591 minus strand	317026
KCNIP4	NM_001035003	NP_001030175	Coding	chr4:21697695 minus strand	317027
KCNIP4	NM_001035004	NP_001030176	Coding	chr4:21544656 minus strand	317028
KCNIP4	NM_025221	NP_079497	Coding	chr4:20882710 minus strand	317029
KCNIP4	NM_147181	NP_671710	Coding	chr4:20850668 minus strand	317030
KCNIP4	NM_147182	NP_671711	Coding	chr4:21948751 minus strand	317031
KCNIP4	NM_147183	NP_671712	Coding	chr4:21303906 minus strand	317032
KCTD8	NM_198353	NP_938167	Coding	chr4:44448807 minus strand	317033
KDR	NM_002253	NP_002244	Coding	chr4:55125595 minus strand	317034
KIAA0232	NM_001100590	NP_001094060	Coding	chr4:6782731 plus strand	317035
KIAA0232	NM_014743	NP_055558	Coding	chr4:6782731 plus strand	317035
KIAA0922	NM_001131007	NP_001124479	Coding	chr4:153466345 plus strand	317036
KIAA0922	NM_015196	NP_056011	Coding	chr4:153466345 plus strand	317036
KIAA1109	NM_015312	NP_056127	Coding	chr4:122170602 plus strand	317037
KIAA1211	NM_020722	NP_065773	Coding	chr4:56170194 plus strand	317038
KIT	NM_000222	NP_000213	Coding	chr4:54657927 plus strand	317039
KIT	NM_001093772	NP_001087241	Coding	chr4:54657927 plus strand	317039
KLB	NM_175737	NP_783864	Coding	chr4:39406852 plus strand	317040
KLF3	NM_016531	NP_057615	Coding	chr4:38664168 plus strand	317041
KLHL2	NM_001161521	NP_001154993	Coding	chr4:165210018 plus strand	317042
KLHL2	NM_001161522	NP_001154994	Coding	chr4:165210018 plus strand	317042
KLHL2	NM_007246	NP_009177	Coding	chr4:165207617 plus strand	317043
KLHL5	NM_001007075	NP_001007076	Coding	chr4:39044830 plus strand	317044
KLHL5	NM_001171654	NP_001165125	Coding	chr4:39044830 plus strand	317044
KLHL5	NM_015990	NP_057074	Coding	chr4:39062231 plus strand	317045
KLHL5	NM_199039	NP_950240	Coding	chr4:39062231 plus strand	317045
KLHL8	NM_001292003	NP_001278932	Coding	chr4:87220268 minus strand	317046
KLHL8	NM_001292006	NP_001278935	Coding	chr4:87220608 minus strand	317047
KLHL8	NM_001292007	NP_001278936	Coding	chr4:87220608 minus strand	317047
KLHL8	NM_020803	NP_065854	Coding	chr4:87220608 minus	317047

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				strand	
KLKB1	NM_000892	NP_000883	Coding	chr4:186227517 plus strand	317048
LAMTOR3	NM_001243736	NP_001230665	Coding	chr4:99894546 minus strand	317049
LAMTOR3	NM_021970	NP_068805	Coding	chr4:99894546 minus strand	317049
LAP3	NM_015907	NP_056991	Coding	chr4:17577303 plus strand	317050
LARP1B	NM_001278604	NP_001265533	Coding	chr4:128061265 plus strand	317051
LARP1B	NM_018078	NP_060548	Coding	chr4:128061265 plus strand	317051
LARP1B	NM_032239	NP_115615	Coding	chr4:128061265 plus strand	317051
LARP1B	NM_178043	NP_835144	Coding	chr4:128061265 plus strand	317051
LARP7	NM_001267039	NP_001253968	Coding	chr4:112636963 plus strand	317052
LARP7	NM_015454	NP_056269	Coding	chr4:112637455 plus strand	317053
LARP7	NM_016648	NP_057732	Coding	chr4:112636963 plus strand	317052
LCORL	NM_001166139	NP_001159611	Coding	chr4:18021860 minus strand	317054
LCORL	NM_153686	NP_710153	Coding	chr4:18021860 minus strand	317054
LDB2	NM_001130834	NP_001124306	Coding	chr4:16898801 minus strand	317055
LDB2	NM_001290	NP_001281	Coding	chr4:16898801 minus strand	317055
LEF1	NM_001130713	NP_001124185	Coding	chr4:108168956 minus strand	317056
LEF1	NM_001130714	NP_001124186	Coding	chr4:108168956 minus strand	317056
LEF1	NM_001166119	NP_001159591	Coding	chr4:108166797 minus strand	317057
LEF1	NM_016269	NP_057353	Coding	chr4:108168956 minus strand	317056
LETM1	NM_012318	NP_036450	Coding	chr4:1856247 minus strand	317058
LGI2	NM_018176	NP_060646	Coding	chr4:25030792 minus strand	317059
LIAS	NM_001278590	NP_001265519	Coding	chr4:39459023 plus strand	317060
LIAS	NM_001278591	NP_001265520	Coding	chr4:39459023 plus strand	317060
LIAS	NM_001278592	NP_001265521	Coding	chr4:39459023 plus strand	317060
LIAS	NM_006859	NP_006850	Coding	chr4:39459023 plus strand	317060
LIAS	NM_194451	NP_919433	Coding	chr4:39459023 plus strand	317060
LIMCH1	NM_001112717	NP_001106188	Coding	chr4:41360784 plus strand	317061
LIMCH1	NM_001112718	NP_001106189	Coding	chr4:41360784 plus strand	317061
LIMCH1	NM_001112719	NP_001106190	Coding	chr4:41612771 plus strand	317062
LIMCH1	NM_001112720	NP_001106191	Coding	chr4:41612771 plus strand	317062

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LIMCH1	NM_001289122	NP_001276051	Coding	chr4:41360784 plus strand	317061
LIMCH1	NM_001289124	NP_001276053	Coding	chr4:41359606 plus strand	317063
LIMCH1	NM_014988	NP_055803	Coding	chr4:41360784 plus strand	317061
LIN54	NM_001115007	NP_001108479	Coding	chr4:83012941 minus strand	317064
LIN54	NM_001115008	NP_001108480	Coding	chr4:83010834 minus strand	317065
LIN54	NM_001288996	NP_001275925	Coding	chr4:83010834 minus strand	317065
LIN54	NM_001288997	NP_001275926	Coding	chr4:83010834 minus strand	317065
LIN54	NM_194282	NP_919258	Coding	chr4:83010834 minus strand	317065
LNX1	NM_001126328	NP_001119800	Coding	chr4:53591586 minus strand	317066
LNX1	NM_032622	NP_116011	Coding	chr4:53558269 minus strand	317067
LOC650293	NM_001040071	NP_001035160	Coding	chr4:8949750 plus strand	317068
LPHN3	NM_015236	NP_056051	Coding	chr4:61497120 plus strand	317069
LRAT	NM_001301645	NP_001288574	Coding	chr4:154740840 plus strand	317070
LRAT	NM_004744	NP_004735	Coding	chr4:154743970 plus strand	317071
LRBA	NM_001199282	NP_001186211	Coding	chr4:151015267 minus strand	317072
LRBA	NM_006726	NP_006717	Coding	chr4:151015497 minus strand	317073
LRIT3	NM_198506	NP_940908	Coding	chr4:109848183 plus strand	317074
LRP2BP	NM_018409	NP_060879	Coding	chr4:185378998 minus strand	317075
LRPAP1	NM_002337	NP_002328	Coding	chr4:3532497 minus strand	317076
LRRC66	NM_001024611	NP_001019782	Coding	chr4:52017620 minus strand	317077
LSM6	NM_007080	NP_009011	Coding	chr4:146175682 plus strand	317078
LYAR	NM_001145725	NP_001139197	Coding	chr4:4290021 minus strand	317079
LYAR	NM_017816	NP_060286	Coding	chr4:4290169 minus strand	317080
MAB21L2	NM_006439	NP_006430	Coding	chr4:150581924 plus strand	317081
MAD2L1	NM_002358	NP_002349	Coding	chr4:120066858 minus strand	317082
MAEA	NM_001017405	NP_001017405	Coding	chr4:1289850 plus strand	317083
MAEA	NM_001297430	NP_001284359	Coding	chr4:1289850 plus strand	317083
MAEA	NM_001297431	NP_001284360	Coding	chr4:1289850 plus strand	317083
MAEA	NM_001297432	NP_001284361	Coding	chr4:1309442 plus strand	317084
MAEA	NM_001297433	NP_001284362	Coding	chr4:1309790 plus strand	317085
MAEA	NM_005882	NP_005873	Coding	chr4:1289850 plus strand	317083
MAML3	NM_018717	NP_061187	Coding	chr4:140154079 minus strand	317086

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MAN2B2	NM_001292038	NP_001278967	Coding	chr4:6575173 plus strand	317087
MAN2B2	NM_015274	NP_056089	Coding	chr4:6575173 plus strand	317087
MANBA	NM_005908	NP_005899	Coding	chr4:102760994 minus strand	317088
MAP9	NM_001039580	NP_001034669	Coding	chr4:155376970 minus strand	317089
MAPK10	NM_002753	NP_002744	Coding	chr4:86453130 minus strand	317090
MAPK10	NM_138980	NP_620446	Coding	chr4:86360222 minus strand	317091
MAPK10	NM_138981	NP_620447	Coding	chr4:86107653 minus strand	317092
MAPK10	NM_138982	NP_620448	Coding	chr4:86360222 minus strand	317091
MARCH1	NM_001166373	NP_001159845	Coding	chr4:164383255 minus strand	317093
MARCH1	NM_017923	NP_060393	Coding	chr4:163613624 minus strand	317094
MED28	NM_025205	NP_079481	Coding	chr4:17614649 plus strand	317095
MEPE	NM_001184694	NP_001171623	Coding	chr4:87821397 plus strand	317096
MEPE	NM_001184695	NP_001171624	Coding	chr4:87832968 plus strand	317097
MEPE	NM_001184696	NP_001171625	Coding	chr4:87832968 plus strand	317097
MEPE	NM_001184697	NP_001171626	Coding	chr4:87832968 plus strand	317097
MEPE	NM_001291183	NP_001278112	Coding	chr4:87834702 plus strand	317098
MEPE	NM_020203	NP_064588	Coding	chr4:87832968 plus strand	317097
METAP1	NM_015143	NP_055958	Coding	chr4:98995636 plus strand	317099
METTL14	NM_020961	NP_066012	Coding	chr4:118685418 plus strand	317100
MFAP3L	NM_001009554	NP_001009554	Coding	chr4:170003792 minus strand	317101
MFAP3L	NM_001301647	NP_001288576	Coding	chr4:170026430 minus strand	317102
MFAP3L	NM_001301648	NP_001288577	Coding	chr4:170003792 minus strand	317101
MFAP3L	NM_021647	NP_067679	Coding	chr4:170026430 minus strand	317102
MFSD10	NM_001120	NP_001111	Coding	chr4:2934237 minus strand	317103
MFSD10	NM_001146069	NP_001139541	Coding	chr4:2934859 minus strand	317104
MFSD7	NM_001294341	NP_001281270	Coding	chr4:689441 minus strand	317105
MFSD7	NM_001294342	NP_001281271	Coding	chr4:689441 minus strand	317105
MFSD7	NM_032219	NP_115595	Coding	chr4:689441 minus strand	317105
MFSD8	NM_152778	NP_689991	Coding	chr4:127965984 minus strand	317106
MGARP	NM_032623	NP_116012	Coding	chr4:139280338 minus strand	317107
MGAT4D	NM_001277353	NP_001264282	Coding	chr4:140498377 minus strand	317108
MGST2	NM_001204366	NP_001191295	Coding	chr4:139665767 plus strand	317109
MGST2	NM_001204367	NP_001191296	Coding	chr4:139665767 plus	317109

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				strand	
MGST2	NM_001204368	NP_001191297	Coding	chr4:139665767 plus strand	317109
MGST2	NM_002413	NP_002404	Coding	chr4:139665767 plus strand	317109
MMAA	NM_172250	NP_758454	Coding	chr4:145619387 plus strand	317110
MMRN1	NM_007351	NP_031377	Coding	chr4:89894900 plus strand	317111
MND1	NM_001253861	NP_001240790	Coding	chr4:153344648 plus strand	317112
MND1	NM_032117	NP_115493	Coding	chr4:153344648 plus strand	317112
MOB1B	NM_001244766	NP_001231695	Coding	chr4:70902339 plus strand	317113
MOB1B	NM_001244767	NP_001231696	Coding	chr4:70902339 plus strand	317113
MOB1B	NM_173468	NP_775739	Coding	chr4:70902339 plus strand	317113
MRFAP1	NM_001272053	NP_001258982	Coding	chr4:6640090 plus strand	317114
MRFAP1	NM_001272054	NP_001258983	Coding	chr4:6640090 plus strand	317114
MRFAP1	NM_033296	NP_150638	Coding	chr4:6640090 plus strand	317114
MRFAP1L1	NM_203462	NP_982287	Coding	chr4:6709879 minus strand	317115
MRPL1	NM_020236	NP_064621	Coding	chr4:77862650 plus strand	317116
MRPS18C	NM_001297767	NP_001284696	Coding	chr4:83455931 plus strand	317117
MRPS18C	NM_001297769	NP_001284698	Coding	chr4:83455931 plus strand	317117
MRPS18C	NM_001297770	NP_001284699	Coding	chr4:83455931 plus strand	317117
MRPS18C	NM_016067	NP_057151	Coding	chr4:83455931 plus strand	317117
MSANTD1	NM_001042690	NP_001036155	Coding	chr4:3249039 plus strand	317118
MSMO1	NM_001017369	NP_001017369	Coding	chr4:165327665 plus strand	317119
MSMO1	NM_006745	NP_006736	Coding	chr4:165327665 plus strand	317119
MSX1	NM_002448	NP_002439	Coding	chr4:4859664 plus strand	317120
MTHFD2L	NM_001144978	NP_001138450	Coding	chr4:74158111 plus strand	317121
MTNR1A	NM_005958	NP_005949	Coding	chr4:186555383 minus strand	317122
MTTP	NM_000253	NP_000244	Coding	chr4:99564077 plus strand	317123
MTTP	NM_001300785	NP_001287714	Coding	chr4:99564077 plus strand	317123
MUC7	NM_001145006	NP_001138478	Coding	chr4:70430491 plus strand	317124
MUC7	NM_001145007	NP_001138479	Coding	chr4:70471957 plus strand	317125
MUC7	NM_152291	NP_689504	Coding	chr4:70472116 plus strand	317126
MXD4	NM_006454	NP_006445	Coding	chr4:2262012 minus strand	317127
MYL5	NM_002477	NP_002468	Coding	chr4:677921 plus strand	317128
MYOZ2	NM_016599	NP_057683	Coding	chr4:119135783 plus strand	317129
N4BP2	NM_018177	NP_060647	Coding	chr4:40056903 plus strand	317130
NAA11	NM_032693	NP_116082	Coding	chr4:79326017 minus strand	317131
NAA15	NM_057175	NP_476516	Coding	chr4:139301521 plus strand	317132

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NAAA	NM_001042402	NP_001035861	Coding	chr4:75941013 minus strand	317133
NAAA	NM_014435	NP_055250	Coding	chr4:75941013 minus strand	317133
NAF1	NM_001128931	NP_001122403	Coding	chr4:163166921 minus strand	317134
NAF1	NM_138386	NP_612395	Coding	chr4:163166921 minus strand	317134
NAP1L5	NM_153757	NP_715638	Coding	chr4:88697872 minus strand	317135
NAT8L	NM_178557	NP_848652	Coding	chr4:2059511 plus strand	317136
NCAPG	NM_022346	NP_071741	Coding	chr4:17810812 plus strand	317137
NDNF	NM_024574	NP_078850	Coding	chr4:121072518 minus strand	317138
NDST3	NM_004784	NP_004775	Coding	chr4:118034344 plus strand	317139
NDST4	NM_022569	NP_072091	Coding	chr4:115113876 minus strand	317140
NDUFC1	NM_001184986	NP_001171915	Coding	chr4:139301210 minus strand	317141
NDUFC1	NM_001184987	NP_001171916	Coding	chr4:139302551 minus strand	317142
NDUFC1	NM_001184988	NP_001171917	Coding	chr4:139302551 minus strand	317142
NDUFC1	NM_001184989	NP_001171918	Coding	chr4:139302551 minus strand	317142
NDUFC1	NM_001184990	NP_001171919	Coding	chr4:139302551 minus strand	317142
NDUFC1	NM_001184991	NP_001171920	Coding	chr4:139301210 minus strand	317141
NDUFC1	NM_002494	NP_002485	Coding	chr4:139301234 minus strand	317143
NEIL3	NM_018248	NP_060718	Coding	chr4:177309836 plus strand	317144
NEK1	NM_001199397	NP_001186326	Coding	chr4:169612627 minus strand	317145
NEK1	NM_001199398	NP_001186327	Coding	chr4:169612627 minus strand	317145
NEK1	NM_001199399	NP_001186328	Coding	chr4:169612627 minus strand	317145
NEK1	NM_001199400	NP_001186329	Coding	chr4:169612627 minus strand	317145
NEK1	NM_012224	NP_036356	Coding	chr4:169612627 minus strand	317145
NELFA	NM_005663	NP_005654	Coding	chr4:2009235 minus strand	317146
NEUROG2	NM_024019	NP_076924	Coding	chr4:112516172 minus strand	317147
NFKB1	NM_001165412	NP_001158884	Coding	chr4:102501328 plus strand	317148
NFKB1	NM_003998	NP_003989	Coding	chr4:102501328 plus strand	317148
NFXL1	NM_001278623	NP_001265552	Coding	chr4:47914667 minus strand	317149

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NFXL1	NM_001278624	NP_001265553	Coding	chr4:47914557 minus strand	317150
NFXL1	NM_152995	NP_694540	Coding	chr4:47914644 minus strand	317151
NIPAL1	NM_207330	NP_997213	Coding	chr4:48016773 plus strand	317152
NKX1-1	NM_001290079	NP_001277008	Coding	chr4:1406442 minus strand	317153
NKX3-2	NM_001189	NP_001180	Coding	chr4:13544490 minus strand	317154
NKX6-1	NM_006168	NP_006159	Coding	chr4:84498234 minus strand	317155
NMU	NM_001292045	NP_001278974	Coding	chr4:55636298 minus strand	317156
NMU	NM_001292046	NP_001278975	Coding	chr4:55636298 minus strand	317156
NMU	NM_006681	NP_006672	Coding	chr4:55636298 minus strand	317156
NOA1	NM_032313	NP_115689	Coding	chr4:56977660 minus strand	317157
NOP14	NM_001291978	NP_001278907	Coding	chr4:2963506 minus strand	317158
NOP14	NM_001291979	NP_001278908	Coding	chr4:2963506 minus strand	317158
NOP14	NM_003703	NP_003694	Coding	chr4:2963506 minus strand	317158
NPFFR2	NM_001144756	NP_001138228	Coding	chr4:72039131 plus strand	317159
NPFFR2	NM_004885	NP_004876	Coding	chr4:72031803 plus strand	317160
NPFFR2	NM_053036	NP_444264	Coding	chr4:72039131 plus strand	317159
NPNT	NM_001033047	NP_001028219	Coding	chr4:105895439 plus strand	317161
NPNT	NM_001184690	NP_001171619	Coding	chr4:105895439 plus strand	317161
NPNT	NM_001184691	NP_001171620	Coding	chr4:105895439 plus strand	317161
NPNT	NM_001184692	NP_001171621	Coding	chr4:105895439 plus strand	317161
NPNT	NM_001184693	NP_001171622	Coding	chr4:105895439 plus strand	317161
NPY1R	NM_000909	NP_000900	Coding	chr4:163332795 minus strand	317162
NPY2R	NM_000910	NP_000901	Coding	chr4:155208628 plus strand	317163
NPY5R	NM_006174	NP_006165	Coding	chr4:163343938 plus strand	317164
NR3C2	NM_000901	NP_000892	Coding	chr4:148442520 minus strand	317165
NR3C2	NM_001166104	NP_001159576	Coding	chr4:148442520 minus strand	317165
NSG1	NM_001040101	NP_001035190	Coding	chr4:4386255 plus strand	317166
NSG1	NM_001287763	NP_001274692	Coding	chr4:4386255 plus strand	317166
NSG1	NM_001287764	NP_001274693	Coding	chr4:4386255 plus strand	317166
NSG1	NM_014392	NP_055207	Coding	chr4:4386962 plus strand	317167
NSUN7	NM_024677	NP_078953	Coding	chr4:40749896 plus strand	317168
NUDT6	NM_007083	NP_009014	Coding	chr4:122922606 minus	317169

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				strand	
NUDT6	NM_198041	NP_932158	Coding	chr4:122923004 minus strand	317170
NUDT9	NM_001248011	NP_001234940	Coding	chr4:87422575 plus strand	317171
NUDT9	NM_024047	NP_076952	Coding	chr4:87422575 plus strand	317171
NUDT9	NM_198038	NP_932155	Coding	chr4:87422596 plus strand	317172
NUP54	NM_001278603	NP_001265532	Coding	chr4:76148515 minus strand	317173
NUP54	NM_017426	NP_059122	Coding	chr4:76148515 minus strand	317173
NWD2	NM_001144990	NP_001138462	Coding	chr4:37245067 plus strand	317174
OCIAD1	NM_001079839	NP_001073308	Coding	chr4:48831226 plus strand	317175
OCIAD1	NM_001079840	NP_001073309	Coding	chr4:48831042 plus strand	317176
OCIAD1	NM_001079841	NP_001073310	Coding	chr4:48831042 plus strand	317176
OCIAD1	NM_001079842	NP_001073311	Coding	chr4:48831226 plus strand	317175
OCIAD1	NM_001168254	NP_001161726	Coding	chr4:48831305 plus strand	317177
OCIAD1	NM_017830	NP_060300	Coding	chr4:48831042 plus strand	317176
OCIAD2	NM_001014446	NP_001014446	Coding	chr4:48906828 minus strand	317178
OCIAD2	NM_001286773	NP_001273702	Coding	chr4:48906828 minus strand	317178
OCIAD2	NM_001286774	NP_001273703	Coding	chr4:48906828 minus strand	317178
OCIAD2	NM_152398	NP_689611	Coding	chr4:48906828 minus strand	317178
ODAM	NM_017855	NP_060325	Coding	chr4:70196526 plus strand	317179
OSTC	NM_001267817	NP_001254746	Coding	chr4:108650584 plus strand	317180
OSTC	NM_001267818	NP_001254747	Coding	chr4:108650584 plus strand	317180
OSTC	NM_021227	NP_067050	Coding	chr4:108650584 plus strand	317180
OTOP1	NM_177998	NP_819056	Coding	chr4:4226894 minus strand	317181
OTUD4	NM_001102653	NP_001096123	Coding	chr4:145179680 minus strand	317182
OTUD4	NM_017493	NP_059963	Coding	chr4:145174744 minus strand	317183
PABPC4L	NM_001114734	NP_001108206	Coding	chr4:134201748 minus strand	317184
PACRGL	NM_001130727	NP_001124199	Coding	chr4:20700412 plus strand	317185
PACRGL	NM_001258345	NP_001245274	Coding	chr4:20700412 plus strand	317185
PACRGL	NM_001258346	NP_001245275	Coding	chr4:20700412 plus strand	317185
PACRGL	NM_145048	NP_659485	Coding	chr4:20700412 plus strand	317185
PAICS	NM_001079524	NP_001072992	Coding	chr4:56436102 plus strand	317186
PAICS	NM_001079525	NP_001072993	Coding	chr4:56436102 plus strand	317186
PAICS	NM_006452	NP_006443	Coding	chr4:56435748 plus strand	317187
PALLD	NM_001166108	NP_001159580	Coding	chr4:168497065 plus strand	317188

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PALLD	NM_001166109	NP_001159581	Coding	chr4:168631616 plus strand	317189
PALLD	NM_001166110	NP_001159582	Coding	chr4:168832004 plus strand	317190
PALLD	NM_016081	NP_057165	Coding	chr4:168497065 plus strand	317188
PAPSS1	NM_005443	NP_005434	Coding	chr4:107720263 minus strand	317191
PAQR3	NM_001040202	NP_001035292	Coding	chr4:78939428 minus strand	317192
PARM1	NM_015393	NP_056208	Coding	chr4:74933074 plus strand	317193
PCDH10	NM_020815	NP_065866	Coding	chr4:133149314 plus strand	317194
PCDH10	NM_032961	NP_116586	Coding	chr4:133149314 plus strand	317194
PCDH18	NM_001300828	NP_001287757	Coding	chr4:137532498 minus strand	317195
PCDH18	NM_019035	NP_061908	Coding	chr4:137532498 minus strand	317195
PCDH7	NM_001173523	NP_001166994	Coding	chr4:30720414 plus strand	317196
PCDH7	NM_002589	NP_002580	Coding	chr4:30720414 plus strand	317196
PCDH7	NM_032456	NP_115832	Coding	chr4:30720407 plus strand	317197
PCDH7	NM_032457	NP_115833	Coding	chr4:30720414 plus strand	317196
PCGF3	NM_006315	NP_006306	Coding	chr4:705783 plus strand	317198
PDCL2	NM_152401	NP_689614	Coding	chr4:55592212 minus strand	317199
PDE5A	NM_001083	NP_001074	Coding	chr4:119628826 minus strand	317200
PDE5A	NM_033430	NP_236914	Coding	chr4:119627287 minus strand	317201
PDE5A	NM_033437	NP_246273	Coding	chr4:119628084 minus strand	317202
PDE6B	NM_000283	NP_000274	Coding	chr4:625573 plus strand	317203
PDE6B	NM_001145291	NP_001138763	Coding	chr4:625573 plus strand	317203
PDE6B	NM_001145292	NP_001138764	Coding	chr4:653176 plus strand	317204
PDGFC	NM_016205	NP_057289	Coding	chr4:156971394 minus strand	317205
PDGFRA	NM_006206	NP_006197	Coding	chr4:54229096 plus strand	317206
PDHA2	NM_005390	NP_005381	Coding	chr4:95840087 plus strand	317207
PDLIM3	NM_001114107	NP_001107579	Coding	chr4:185535558 minus strand	317208
PDLIM3	NM_001257962	NP_001244891	Coding	chr4:185535558 minus strand	317208
PDLIM3	NM_001257963	NP_001244892	Coding	chr4:185535558 minus strand	317208
PDLIM3	NM_014476	NP_055291	Coding	chr4:185535558 minus strand	317208
PDLIM5	NM_001011513	NP_001011513	Coding	chr4:94451856 plus strand	317209
PDLIM5	NM_001011515	NP_001011515	Coding	chr4:94451856 plus strand	317209
PDLIM5	NM_001011516	NP_001011516	Coding	chr4:94451856 plus strand	317209

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PDLIM5	NM_001256425	NP_001243354	Coding	chr4:94451856 plus strand	317209
PDLIM5	NM_001256426	NP_001243355	Coding	chr4:94451856 plus strand	317209
PDLIM5	NM_001256427	NP_001243356	Coding	chr4:94451856 plus strand	317209
PDLIM5	NM_001256428	NP_001243357	Coding	chr4:94451856 plus strand	317209
PDLIM5	NM_001256429	NP_001243358	Coding	chr4:94451856 plus strand	317209
PDLIM5	NM_006457	NP_006448	Coding	chr4:94451856 plus strand	317209
PDS5A	NM_001100399	NP_001093869	Coding	chr4:39977956 minus strand	317210
PDS5A	NM_001100400	NP_001093870	Coding	chr4:39977956 minus strand	317210
PF4	NM_002619	NP_002610	Coding	chr4:73982124 minus strand	317211
PF4V1	NM_002620	NP_002611	Coding	chr4:73853295 plus strand	317212
PGM2	NM_018290	NP_060760	Coding	chr4:37826659 plus strand	317213
PGRMC2	NM_006320	NP_006311	Coding	chr4:128288829 minus strand	317214
PHOX2B	NM_003924	NP_003915	Coding	chr4:41748970 minus strand	317215
PI4K2B	NM_018323	NP_060793	Coding	chr4:25234030 plus strand	317216
PIGG	NM_001127178	NP_001120650	Coding	chr4:499199 plus strand	317217
PIGG	NM_001289051	NP_001275980	Coding	chr4:499199 plus strand	317217
PIGG	NM_001289052	NP_001275981	Coding	chr4:499199 plus strand	317217
PIGG	NM_001289053	NP_001275982	Coding	chr4:499199 plus strand	317217
PIGG	NM_001289055	NP_001275984	Coding	chr4:499199 plus strand	317217
PIGG	NM_001289057	NP_001275986	Coding	chr4:499199 plus strand	317217
PIGG	NM_017733	NP_060203	Coding	chr4:499199 plus strand	317217
PIGY	NM_001042616	NP_001036081	Coding	chr4:88523801 minus strand	317218
PITX2	NM_000325	NP_000316	Coding	chr4:110623098 minus strand	317219
PITX2	NM_001204397	NP_001191326	Coding	chr4:110642123 minus strand	317220
PITX2	NM_001204398	NP_001191327	Coding	chr4:110642123 minus strand	317220
PITX2	NM_001204399	NP_001191328	Coding	chr4:110642123 minus strand	317220
PITX2	NM_153426	NP_700475	Coding	chr4:110642123 minus strand	317220
PITX2	NM_153427	NP_700476	Coding	chr4:110642123 minus strand	317220
PKD2	NM_000297	NP_000288	Coding	chr4:88007646 plus strand	317221
PLA2G12A	NM_030821	NP_110448	Coding	chr4:109730086 minus strand	317222
PLAC8	NM_001130715	NP_001124187	Coding	chr4:83114758 minus strand	317223
PLAC8	NM_001130716	NP_001124188	Coding	chr4:83109859 minus strand	317224
PLAC8	NM_016619	NP_057703	Coding	chr4:83114758 minus strand	317223

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PLK4	NM_001190799	NP_001177728	Coding	chr4:127880860 plus strand	317225
PLK4	NM_001190801	NP_001177730	Coding	chr4:127881243 plus strand	317226
PLK4	NM_014264	NP_055079	Coding	chr4:127880860 plus strand	317225
PLRG1	NM_001201564	NP_001188493	Coding	chr4:154550433 minus strand	317227
PLRG1	NM_002669	NP_002660	Coding	chr4:154550433 minus strand	317227
POLN	NM_181808	NP_861524	Coding	chr4:2229231 minus strand	317228
POLR2B	NM_000938	NP_000929	Coding	chr4:56978942 plus strand	317229
POU4F2	NM_004575	NP_004566	Coding	chr4:146638892 plus strand	317230
PPA2	NM_006903	NP_008834	Coding	chr4:105474070 minus strand	317231
PPA2	NM_176866	NP_789842	Coding	chr4:105474070 minus strand	317231
PPA2	NM_176867	NP_789843	Coding	chr4:105474070 minus strand	317231
PPA2	NM_176869	NP_789845	Coding	chr4:105474070 minus strand	317231
PPARGC1A	NM_013261	NP_037393	Coding	chr4:23890077 minus strand	317232
PPAT	NM_002703	NP_002694	Coding	chr4:56435636 minus strand	317233
PPBP	NM_002704	NP_002695	Coding	chr4:73988190 minus strand	317234
PPEF2	NM_006239	NP_006230	Coding	chr4:75902528 minus strand	317235
PPID	NM_005038	NP_005029	Coding	chr4:158723400 minus strand	317236
PPM1K	NM_152542	NP_689755	Coding	chr4:88284831 minus strand	317237
PPP2R2C	NM_001206994	NP_001193923	Coding	chr4:6563600 minus strand	317238
PPP2R2C	NM_001206995	NP_001193924	Coding	chr4:6555678 minus strand	317239
PPP2R2C	NM_001206996	NP_001193925	Coding	chr4:6421118 minus strand	317240
PPP2R2C	NM_020416	NP_065149	Coding	chr4:6472599 minus strand	317241
PPP2R2C	NM_181876	NP_870991	Coding	chr4:6381870 minus strand	317242
PPP3CA	NM_000944	NP_000935	Coding	chr4:101347471 minus strand	317243
PPP3CA	NM_001130691	NP_001124163	Coding	chr4:101347471 minus strand	317243
PPP3CA	NM_001130692	NP_001124164	Coding	chr4:101347471 minus strand	317243
PRDM5	NM_001300823	NP_001287752	Coding	chr4:120922866 minus strand	317244
PRDM5	NM_001300824	NP_001287753	Coding	chr4:120922866 minus strand	317244
PRDM5	NM_018699	NP_061169	Coding	chr4:120922866 minus strand	317244
PRDM8	NM_001099403	NP_001092873	Coding	chr4:80197502 plus strand	317245

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PRDM8	NM_020226	NP_064611	Coding	chr4:80185269 plus strand	317246
PRIMPOL	NM_001300767	NP_001287696	Coding	chr4:184649612 plus strand	317247
PRIMPOL	NM_001300768	NP_001287697	Coding	chr4:184649612 plus strand	317247
PRIMPOL	NM_152683	NP_689896	Coding	chr4:184649612 plus strand	317247
PRKG2	NM_001282480	NP_001269409	Coding	chr4:81154157 minus strand	317248
PRKG2	NM_001282481	NP_001269410	Coding	chr4:81154157 minus strand	317248
PRKG2	NM_001282482	NP_001269411	Coding	chr4:81154157 minus strand	317248
PRKG2	NM_001282483	NP_001269412	Coding	chr4:81154157 minus strand	317248
PRKG2	NM_001282485	NP_001269414	Coding	chr4:81215117 minus strand	317249
PRKG2	NM_006259	NP_006250	Coding	chr4:81215117 minus strand	317249
PRMT9	NM_138364	NP_612373	Coding	chr4:147684129 minus strand	317250
PROL1	NM_001302807	NP_001289736	Coding	chr4:70397881 plus strand	317251
PROL1	NM_021225	NP_067048	Coding	chr4:70397881 plus strand	317251
PROM1	NM_001145847	NP_001139319	Coding	chr4:16083971 minus strand	317252
PROM1	NM_001145848	NP_001139320	Coding	chr4:16084000 minus strand	317253
PROM1	NM_001145849	NP_001139321	Coding	chr4:16076118 minus strand	317254
PROM1	NM_001145850	NP_001139322	Coding	chr4:16076118 minus strand	317254
PROM1	NM_001145851	NP_001139323	Coding	chr4:16076118 minus strand	317254
PROM1	NM_001145852	NP_001139324	Coding	chr4:16076118 minus strand	317254
PROM1	NM_006017	NP_006008	Coding	chr4:16076118 minus strand	317254
PRR27	NM_214711	NP_999876	Coding	chr4:70154186 plus strand	317255
PRSS12	NM_003619	NP_003610	Coding	chr4:118352767 minus strand	317256
PRSS48	NM_183375	NP_899231	Coding	chr4:151277172 plus strand	317257
PSAPL1	NM_001085382	NP_001078851	Coding	chr4:7434973 minus strand	317258
PTPN13	NM_006264	NP_006255	Coding	chr4:86594314 plus strand	317259
PTPN13	NM_080683	NP_542414	Coding	chr4:86594314 plus strand	317259
PTPN13	NM_080684	NP_542415	Coding	chr4:86594314 plus strand	317259
PTPN13	NM_080685	NP_542416	Coding	chr4:86594314 plus strand	317259
PTTG2	NM_006607	NP_006598	Coding	chr4:37960434 plus strand	317260
PYURF	NM_032906	NP_116295	Coding	chr4:88523801 minus strand	317261
QDPR	NM_000320	NP_000311	Coding	chr4:17512234 minus	317262

【０４０７】

				strand	
QRFPR	NM_198179	NP_937822	Coding	chr4:121381026 minus strand	317263
RAB28	NM_001017979	NP_001017979	Coding	chr4:13484365 minus strand	317264
RAB28	NM_001159601	NP_001153073	Coding	chr4:13484365 minus strand	317264
RAB28	NM_004249	NP_004240	Coding	chr4:13484365 minus strand	317264
RAB33B	NM_031296	NP_112586	Coding	chr4:139453806 plus strand	317265
RAP1GDS1	NM_001100426	NP_001093896	Coding	chr4:98261375 plus strand	317266
RAP1GDS1	NM_001100427	NP_001093897	Coding	chr4:98261375 plus strand	317266
RAP1GDS1	NM_001100428	NP_001093898	Coding	chr4:98261375 plus strand	317266
RAP1GDS1	NM_001100429	NP_001093899	Coding	chr4:98261375 plus strand	317266
RAP1GDS1	NM_001100430	NP_001093900	Coding	chr4:98261375 plus strand	317266
RAP1GDS1	NM_021159	NP_066982	Coding	chr4:98261375 plus strand	317266
RAPGEF2	NM_014247	NP_055062	Coding	chr4:159267845 plus strand	317267
RASGEF1B	NM_001300735	NP_001287664	Coding	chr4:81471928 minus strand	317268
RASGEF1B	NM_001300736	NP_001287665	Coding	chr4:81471928 minus strand	317268
RASGEF1B	NM_152545	NP_689758	Coding	chr4:81471928 minus strand	317268
RASL11B	NM_023940	NP_076429	Coding	chr4:52862327 plus strand	317269
RASSF6	NM_001270391	NP_001257320	Coding	chr4:73620570 minus strand	317270
RASSF6	NM_001270392	NP_001257321	Coding	chr4:73620631 minus strand	317271
RASSF6	NM_177532	NP_803876	Coding	chr4:73620570 minus strand	317270
RASSF6	NM_201431	NP_958834	Coding	chr4:73620631 minus strand	317271
RBM46	NM_001277171	NP_001264100	Coding	chr4:154781271 plus strand	317272
RBM46	NM_001277173	NP_001264102	Coding	chr4:154781504 plus strand	317273
RBM46	NM_144979	NP_659416	Coding	chr4:154781271 plus strand	317272
RBM47	NM_001098634	NP_001092104	Coding	chr4:40629866 minus strand	317274
RBM47	NM_019027	NP_061900	Coding	chr4:40515973 minus strand	317275
RBPJ	NM_005349	NP_005340	Coding	chr4:26319709 plus strand	317276
RBPJ	NM_015874	NP_056958	Coding	chr4:26320806 plus strand	317277
RBPJ	NM_203283	NP_976028	Coding	chr4:26319709 plus strand	317276
RBPJ	NM_203284	NP_976029	Coding	chr4:26320806 plus strand	317277
RCHY1	NM_001009922	NP_001009922	Coding	chr4:75514430 minus strand	317278

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RCHY1	NM_001278536	NP_001265465	Coding	chr4:75514430 minus strand	317278
RCHY1	NM_001278537	NP_001265466	Coding	chr4:75514430 minus strand	317278
RCHY1	NM_001278538	NP_001265467	Coding	chr4:75514430 minus strand	317278
RCHY1	NM_001278539	NP_001265468	Coding	chr4:75514430 minus strand	317278
RCHY1	NM_015436	NP_056251	Coding	chr4:75514430 minus strand	317278
RELL1	NM_001085399	NP_001078868	Coding	chr4:37686377 minus strand	317279
RELL1	NM_001085400	NP_001078869	Coding	chr4:37686377 minus strand	317279
REST	NM_001193508	NP_001180437	Coding	chr4:56908912 plus strand	317280
REST	NM_005612	NP_005603	Coding	chr4:56907875 plus strand	317281
RFC1	NM_001204747	NP_001191676	Coding	chr4:39366381 minus strand	317282
RFC1	NM_002913	NP_002904	Coding	chr4:39366381 minus strand	317282
RGS12	NM_002926	NP_002917	Coding	chr4:3314146 plus strand	317283
RGS12	NM_198227	NP_937870	Coding	chr4:3369996 plus strand	317284
RGS12	NM_198229	NP_937872	Coding	chr4:3314146 plus strand	317283
RHOH	NM_001278359	NP_001265288	Coding	chr4:40196906 plus strand	317285
RHOH	NM_001278360	NP_001265289	Coding	chr4:40196906 plus strand	317285
RHOH	NM_001278361	NP_001265290	Coding	chr4:40196906 plus strand	317285
RHOH	NM_001278362	NP_001265291	Coding	chr4:40196906 plus strand	317285
RHOH	NM_001278363	NP_001265292	Coding	chr4:40196906 plus strand	317285
RHOH	NM_001278364	NP_001265293	Coding	chr4:40192966 plus strand	317286
RHOH	NM_001278365	NP_001265294	Coding	chr4:40192966 plus strand	317286
RHOH	NM_001278366	NP_001265295	Coding	chr4:40192966 plus strand	317286
RHOH	NM_001278367	NP_001265296	Coding	chr4:40192966 plus strand	317286
RHOH	NM_001278368	NP_001265297	Coding	chr4:40191010 plus strand	317287
RHOH	NM_001278369	NP_001265298	Coding	chr4:40193648 plus strand	317288
RHOH	NM_004310	NP_004301	Coding	chr4:40196906 plus strand	317285
RNF150	NM_020724	NP_065775	Coding	chr4:141133462 minus strand	317289
RNF175	NM_173662	NP_775933	Coding	chr4:153760235 minus strand	317290
RNF212	NM_001131034	NP_001124506	Coding	chr4:1113564 minus strand	317291
RNF212	NM_001193318	NP_001180247	Coding	chr4:1113564 minus strand	317291
RNF212	NM_194439	NP_919420	Coding	chr4:1113564 minus strand	317291
RNF4	NM_001185009	NP_001171938	Coding	chr4:2469452 plus strand	317292
RNF4	NM_001185010	NP_001171939	Coding	chr4:2469067 plus strand	317293
RNF4	NM_002938	NP_002929	Coding	chr4:2469067 plus strand	317293
RPL34	NM_000995	NP_000986	Coding	chr4:108620565 plus strand	317294

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RPL34	NM_033625	NP_296374	Coding	chr4:108620592 plus strand	317295
RPL9	NM_000661	NP_000652	Coding	chr4:39458948 minus strand	317296
RPL9	NM_001024921	NP_001020092	Coding	chr4:39458587 minus strand	317297
RPS3A	NM_001006	NP_000997	Coding	chr4:151099572 plus strand	317298
RPS3A	NM_001267699	NP_001254628	Coding	chr4:151099572 plus strand	317298
RRH	NM_006583	NP_006574	Coding	chr4:109827993 plus strand	317299
RUFY3	NM_001037442	NP_001032519	Coding	chr4:70721841 plus strand	317300
RUFY3	NM_001130709	NP_001124181	Coding	chr4:70704936 plus strand	317301
RUFY3	NM_001291993	NP_001278922	Coding	chr4:70734345 plus strand	317302
RUFY3	NM_001291994	NP_001278923	Coding	chr4:70721841 plus strand	317300
RUFY3	NM_014961	NP_055776	Coding	chr4:70721841 plus strand	317300
RWDD4	NM_152682	NP_689895	Coding	chr4:183659178 minus strand	317303
RXFP1	NM_001253727	NP_001240656	Coding	chr4:158521713 plus strand	317304
RXFP1	NM_001253728	NP_001240657	Coding	chr4:158521713 plus strand	317304
RXFP1	NM_001253729	NP_001240658	Coding	chr4:158521713 plus strand	317304
RXFP1	NM_001253730	NP_001240659	Coding	chr4:158521713 plus strand	317304
RXFP1	NM_001253732	NP_001240661	Coding	chr4:158521713 plus strand	317304
RXFP1	NM_001253733	NP_001240662	Coding	chr4:158521713 plus strand	317304
RXFP1	NM_021634	NP_067647	Coding	chr4:158521713 plus strand	317304
S100P	NM_005980	NP_005971	Coding	chr4:6693838 plus strand	317305
SAP30	NM_003864	NP_003855	Coding	chr4:173370941 plus strand	317306
SCARB2	NM_001204255	NP_001191184	Coding	chr4:76213899 minus strand	317307
SCARB2	NM_005506	NP_005497	Coding	chr4:76213899 minus strand	317307
SCD5	NM_001037582	NP_001032671	Coding	chr4:82798857 minus strand	317308
SCD5	NM_024906	NP_079182	Coding	chr4:82798857 minus strand	317308
SCFD2	NM_152540	NP_689753	Coding	chr4:53366075 minus strand	317309
SCLT1	NM_001300897	NP_001287826	Coding	chr4:129093607 minus strand	317310
SCLT1	NM_001300898	NP_001287827	Coding	chr4:129093607 minus strand	317310
SCLT1	NM_144643	NP_653244	Coding	chr4:129093607 minus strand	317310

【０４１０】

SCOC	NM_001153446	NP_001146918	Coding	chr4:140343442 plus strand	317311
SCOC	NM_001153484	NP_001146956	Coding	chr4:140373509 plus strand	317312
SCOC	NM_001153552	NP_001147024	Coding	chr4:140373509 plus strand	317312
SCOC	NM_001153585	NP_001147057	Coding	chr4:140343460 plus strand	317313
SCOC	NM_001153635	NP_001147107	Coding	chr4:140343442 plus strand	317311
SCOC	NM_001153663	NP_001147135	Coding	chr4:140373509 plus strand	317312
SCOC	NM_001153690	NP_001147162	Coding	chr4:140343460 plus strand	317313
SCOC	NM_032547	NP_115936	Coding	chr4:140257285 plus strand	317314
SCRG1	NM_007281	NP_009212	Coding	chr4:173399466 minus strand	317315
SDAD1	NM_001288983	NP_001275912	Coding	chr4:75990962 minus strand	317316
SDAD1	NM_001288984	NP_001275913	Coding	chr4:75990962 minus strand	317316
SDAD1	NM_018115	NP_060585	Coding	chr4:75990962 minus strand	317316
SEC24B	NM_001042734	NP_001036199	Coding	chr4:109433771 plus strand	317317
SEC24B	NM_001300813	NP_001287742	Coding	chr4:109433771 plus strand	317317
SEC24B	NM_006323	NP_006314	Coding	chr4:109433771 plus strand	317317
SEC24D	NM_014822	NP_055637	Coding	chr4:118836171 minus strand	317318
SEC31A	NM_001077206	NP_001070674	Coding	chr4:82891259 minus strand	317319
SEC31A	NM_001077207	NP_001070675	Coding	chr4:82891259 minus strand	317319
SEC31A	NM_001077208	NP_001070676	Coding	chr4:82891259 minus strand	317319
SEC31A	NM_001191049	NP_001177978	Coding	chr4:82891182 minus strand	317320
SEC31A	NM_001300744	NP_001287673	Coding	chr4:82891280 minus strand	317321
SEC31A	NM_001300745	NP_001287674	Coding	chr4:82891280 minus strand	317321
SEC31A	NM_014933	NP_055748	Coding	chr4:82891266 minus strand	317322
SEC31A	NM_016211	NP_057295	Coding	chr4:82891259 minus strand	317319
SEL1L3	NM_001297592	NP_001284521	Coding	chr4:25863595 minus strand	317323
SEL1L3	NM_001297594	NP_001284523	Coding	chr4:25863595 minus strand	317323
SEL1L3	NM_015187	NP_056002	Coding	chr4:25863031 minus strand	317324

【０４１１】

SEPSECS	NM_016955	NP_058651	Coding	chr4:25160582 minus strand	317325
SEPT11	NM_018243	NP_060713	Coding	chr4:76949741 plus strand	317326
SETD7	NM_030648	NP_085151	Coding	chr4:139556423 minus strand	317327
SFRP2	NM_003013	NP_003004	Coding	chr4:153789076 minus strand	317328
SGCB	NM_000232	NP_000223	Coding	chr4:52038319 minus strand	317329
SGMS2	NM_001136257	NP_001129729	Coding	chr4:107893263 plus strand	317330
SGMS2	NM_001136258	NP_001129730	Coding	chr4:107824564 plus strand	317331
SGMS2	NM_152621	NP_689834	Coding	chr4:107893263 plus strand	317330
SH3BP2	NM_001122681	NP_001116153	Coding	chr4:2793022 plus strand	317332
SH3BP2	NM_001145855	NP_001139327	Coding	chr4:2812218 plus strand	317333
SH3BP2	NM_001145856	NP_001139328	Coding	chr4:2818184 plus strand	317334
SH3BP2	NM_003023	NP_003014	Coding	chr4:2818813 plus strand	317335
SH3D19	NM_001009555	NP_001009555	Coding	chr4:151226508 minus strand	317336
SH3D19	NM_001128923	NP_001122395	Coding	chr4:151226508 minus strand	317336
SH3D19	NM_001128924	NP_001122396	Coding	chr4:151175552 minus strand	317337
SH3D19	NM_001243349	NP_001230278	Coding	chr4:151228030 minus strand	317338
SH3RF1	NM_020870	NP_065921	Coding	chr4:169271098 minus strand	317339
SH3TC1	NM_018986	NP_061859	Coding	chr4:8199332 plus strand	317340
SHISA3	NM_001080505	NP_001073974	Coding	chr4:42397838 plus strand	317341
SHROOM3	NM_020859	NP_065910	Coding	chr4:76435099 plus strand	317342
SLAIN2	NM_020846	NP_065897	Coding	chr4:48341595 plus strand	317343
SLBP	NM_006527	NP_006518	Coding	chr4:1712303 minus strand	317344
SLC10A4	NM_152679	NP_689892	Coding	chr4:48483342 plus strand	317345
SLC10A6	NM_197965	NP_932069	Coding	chr4:86849263 minus strand	317346
SLC10A7	NM_001029998	NP_001025169	Coding	chr4:146521971 minus strand	317347
SLC10A7	NM_001300842	NP_001287771	Coding	chr4:146521971 minus strand	317347
SLC10A7	NM_032128	NP_115504	Coding	chr4:146521971 minus strand	317347
SLC25A31	NM_031291	NP_112581	Coding	chr4:127730399 plus strand	317348
SLC25A4	NM_001151	NP_001142	Coding	chr4:185143262 plus strand	317349
SLC26A1	NM_022042	NP_071325	Coding	chr4:993440 minus strand	317350
SLC26A1	NM_134425	NP_602297	Coding	chr4:993440 minus strand	317350
SLC26A1	NM_213613	NP_998778	Coding	chr4:993440 minus strand	317350

【０４１２】

SLC2A9	NM_001001290	NP_001001290	Coding	chr4:10040248 minus strand	317351
SLC2A9	NM_020041	NP_064425	Coding	chr4:10021490 minus strand	317352
SLC30A9	NM_006345	NP_006336	Coding	chr4:41990505 plus strand	317353
SLC34A2	NM_001177998	NP_001171469	Coding	chr4:25655812 plus strand	317354
SLC34A2	NM_001177999	NP_001171470	Coding	chr4:25656463 plus strand	317355
SLC34A2	NM_006424	NP_006415	Coding	chr4:25655812 plus strand	317354
SLC39A8	NM_001135146	NP_001128618	Coding	chr4:102345498 minus strand	317356
SLC39A8	NM_001135147	NP_001128619	Coding	chr4:102345253 minus strand	317357
SLC39A8	NM_001135148	NP_001128620	Coding	chr4:102324312 minus strand	317358
SLC39A8	NM_022154	NP_071437	Coding	chr4:102345191 minus strand	317359
SLC4A4	NM_001098484	NP_001091954	Coding	chr4:71187285 plus strand	317360
SLC4A4	NM_001134742	NP_001128214	Coding	chr4:71187285 plus strand	317360
SLC4A4	NM_003759	NP_003750	Coding	chr4:71339052 plus strand	317361
SLC7A11	NM_014331	NP_055146	Coding	chr4:138242349 minus strand	317362
SLC9B1	NM_001100874	NP_001094344	Coding	chr4:103019739 minus strand	317363
SLC9B1	NM_139173	NP_631912	Coding	chr4:103019739 minus strand	317363
SLC9B2	NM_001300754	NP_001287683	Coding	chr4:103077371 minus strand	317364
SLC9B2	NM_001300756	NP_001287685	Coding	chr4:103076773 minus strand	317365
SLC9B2	NM_178833	NP_849155	Coding	chr4:103076773 minus strand	317365
SLIT2	NM_001289135	NP_001276064	Coding	chr4:20253563 plus strand	317366
SLIT2	NM_001289136	NP_001276065	Coding	chr4:20253563 plus strand	317366
SLIT2	NM_004787	NP_004778	Coding	chr4:20253563 plus strand	317366
SMAD1	NM_001003688	NP_001003688	Coding	chr4:145482804 plus strand	317367
SMAD1	NM_005900	NP_005891	Coding	chr4:145481798 plus strand	317368
SMARCA5	NM_003601	NP_003592	Coding	chr4:143513462 plus strand	317369
SMARCAD1	NM_001128429	NP_001121901	Coding	chr4:94207844 plus strand	317370
SMARCAD1	NM_001128430	NP_001121902	Coding	chr4:94207607 plus strand	317371
SMARCAD1	NM_001254949	NP_001241878	Coding	chr4:94253293 plus strand	317372
SMARCAD1	NM_020159	NP_064544	Coding	chr4:94207844 plus strand	317370
SMIM14	NM_174921	NP_777581	Coding	chr4:39638861 minus strand	317373
SMIM20	NM_001145432	NP_001138904	Coding	chr4:25914191 plus strand	317374
SMR3A	NM_012390	NP_036522	Coding	chr4:70360775 plus strand	317375
SMR3B	NM_006685	NP_006676	Coding	chr4:70383077 plus strand	317376

【０４１３】

SNCA	NM_000345	NP_000336	Coding	chr4:89837199 minus strand	317377
SNCA	NM_001146054	NP_001139526	Coding	chr4:89836976 minus strand	317378
SNCA	NM_001146055	NP_001139527	Coding	chr4:89838296 minus strand	317379
SNCA	NM_007308	NP_009292	Coding	chr4:89836976 minus strand	317378
SNX25	NM_031953	NP_114159	Coding	chr4:185210129 plus strand	317380
SOD3	NM_003102	NP_003093	Coding	chr4:24795462 plus strand	317381
SORBS2	NM_001145670	NP_001139142	Coding	chr4:185812256 minus strand	317382
SORBS2	NM_001145671	NP_001139143	Coding	chr4:185811104 minus strand	317383
SORBS2	NM_001145672	NP_001139144	Coding	chr4:185810894 minus strand	317384
SORBS2	NM_001145673	NP_001139145	Coding	chr4:185775912 minus strand	317385
SORBS2	NM_001145674	NP_001139146	Coding	chr4:185656969 minus strand	317386
SORBS2	NM_001145675	NP_001139147	Coding	chr4:185656969 minus strand	317386
SORBS2	NM_001270771	NP_001257700	Coding	chr4:185956716 minus strand	317387
SORBS2	NM_003603	NP_003594	Coding	chr4:185812256 minus strand	317382
SORBS2	NM_021069	NP_066547	Coding	chr4:185956716 minus strand	317387
SORCS2	NM_020777	NP_065828	Coding	chr4:7192646 plus strand	317388
SOWAHB	NM_001029870	NP_001025041	Coding	chr4:76897849 minus strand	317389
SPARCL1	NM_001128310	NP_001121782	Coding	chr4:87529503 minus strand	317390
SPARCL1	NM_001291976	NP_001278905	Coding	chr4:87529503 minus strand	317390
SPARCL1	NM_001291977	NP_001278906	Coding	chr4:87529503 minus strand	317390
SPARCL1	NM_004684	NP_004675	Coding	chr4:87529503 minus strand	317390
SPATA18	NM_001297608	NP_001284537	Coding	chr4:52051330 plus strand	317391
SPATA18	NM_145263	NP_660306	Coding	chr4:52051330 plus strand	317391
SPATA4	NM_144644	NP_653245	Coding	chr4:176195671 minus strand	317392
SPATA5	NM_145207	NP_660208	Coding	chr4:122923069 plus strand	317393
SPCS3	NM_021928	NP_068747	Coding	chr4:176319938 plus strand	317394
SPINK2	NM_001271718	NP_001258647	Coding	chr4:56821742 minus strand	317395
SPINK2	NM_001271719	NP_001258648	Coding	chr4:56821742 minus strand	317395
SPINK2	NM_001271720	NP_001258649	Coding	chr4:56821742 minus	317395

【０４１４】

				strand	
SPINK2	NM_001271721	NP_001258650	Coding	chr4:56821742 minus strand	317395
SPINK2	NM_001271722	NP_001258651	Coding	chr4:56821742 minus strand	317395
SPINK2	NM_021114	NP_066937	Coding	chr4:56821869 minus strand	317396
SPOCK3	NM_001040159	NP_001035249	Coding	chr4:167234590 minus strand	317397
SPOCK3	NM_001204352	NP_001191281	Coding	chr4:167234590 minus strand	317397
SPOCK3	NM_001204353	NP_001191282	Coding	chr4:167234426 minus strand	317398
SPOCK3	NM_001204354	NP_001191283	Coding	chr4:167234590 minus strand	317397
SPOCK3	NM_001204355	NP_001191284	Coding	chr4:167234590 minus strand	317397
SPOCK3	NM_001204356	NP_001191285	Coding	chr4:167234590 minus strand	317397
SPOCK3	NM_001204358	NP_001191287	Coding	chr4:167234590 minus strand	317397
SPOCK3	NM_001251967	NP_001238896	Coding	chr4:167234590 minus strand	317397
SPOCK3	NM_016950	NP_058646	Coding	chr4:167234590 minus strand	317397
SPON2	NM_001128325	NP_001121797	Coding	chr4:1173211 minus strand	317399
SPON2	NM_001199021	NP_001185950	Coding	chr4:1208962 minus strand	317400
SPON2	NM_012445	NP_036577	Coding	chr4:1172869 minus strand	317401
SPP1	NM_000582	NP_000573	Coding	chr4:87975649 plus strand	317402
SPP1	NM_001040058	NP_001035147	Coding	chr4:87975649 plus strand	317402
SPP1	NM_001040060	NP_001035149	Coding	chr4:87975649 plus strand	317402
SPP1	NM_001251829	NP_001238758	Coding	chr4:87975649 plus strand	317402
SPP1	NM_001251830	NP_001238759	Coding	chr4:87975649 plus strand	317402
SPRY1	NM_001258038	NP_001244967	Coding	chr4:123396794 plus strand	317403
SPRY1	NM_001258039	NP_001244968	Coding	chr4:123398385 plus strand	317404
SPRY1	NM_005841	NP_005832	Coding	chr4:123399489 plus strand	317405
SPRY1	NM_199327	NP_955359	Coding	chr4:123396794 plus strand	317403
SRD5A3	NM_024592	NP_078868	Coding	chr4:55346220 plus strand	317406
SRP72	NM_001267722	NP_001254651	Coding	chr4:56467595 plus strand	317407
SRP72	NM_006947	NP_008878	Coding	chr4:56467595 plus strand	317407
STAP1	NM_012108	NP_036240	Coding	chr4:67558727 plus strand	317408
STATH	NM_001009181	NP_001009181	Coding	chr4:69995930 plus strand	317409
STATH	NM_003154	NP_003145	Coding	chr4:69995930 plus strand	317409
STBD1	NM_003943	NP_003934	Coding	chr4:76306025 plus strand	317410
STIM2	NM_001169117	NP_001162588	Coding	chr4:26860690 plus strand	317411

【０４１５】

STIM2	NM_001169118	NP_001162589	Coding	chr4:26860690 plus strand	317411
STIM2	NM_020860	NP_065911	Coding	chr4:26860690 plus strand	317411
STK32B	NM_018401	NP_060871	Coding	chr4:5051799 plus strand	317412
STOX2	NM_020225	NP_064610	Coding	chr4:183905355 plus strand	317413
STPG2	NM_174952	NP_777612	Coding	chr4:98143240 minus strand	317414
STX18	NM_016930	NP_058626	Coding	chr4:4542048 minus strand	317415
SULT1B1	NM_014465	NP_055280	Coding	chr4:69760712 minus strand	317416
SULT1E1	NM_005420	NP_005411	Coding	chr4:69860152 minus strand	317417
SYNPO2	NM_001128933	NP_001122405	Coding	chr4:118888840 plus strand	317418
SYNPO2	NM_001128934	NP_001122406	Coding	chr4:118888840 plus strand	317418
SYNPO2	NM_001286754	NP_001273683	Coding	chr4:118850687 plus strand	317419
SYNPO2	NM_001286755	NP_001273684	Coding	chr4:118888840 plus strand	317418
SYNPO2	NM_133477	NP_597734	Coding	chr4:118888840 plus strand	317418
TACC3	NM_006342	NP_006333	Coding	chr4:1721489 plus strand	317420
TACR3	NM_001059	NP_001050	Coding	chr4:103719816 minus strand	317421
TADA2B	NM_152293	NP_689506	Coding	chr4:7043428 plus strand	317422
TAPT1	NM_153365	NP_699196	Coding	chr4:16226538 minus strand	317423
TBC1D1	NM_001253912	NP_001240841	Coding	chr4:37891083 plus strand	317424
TBC1D1	NM_001253913	NP_001240842	Coding	chr4:38110180 plus strand	317425
TBC1D1	NM_001253914	NP_001240843	Coding	chr4:38111901 plus strand	317426
TBC1D1	NM_001253915	NP_001240844	Coding	chr4:38119953 plus strand	317427
TBC1D1	NM_015173	NP_055988	Coding	chr4:37891083 plus strand	317424
TBC1D14	NM_001113361	NP_001106832	Coding	chr4:6909443 plus strand	317428
TBC1D14	NM_001113363	NP_001106834	Coding	chr4:6987161 plus strand	317429
TBC1D14	NM_001286805	NP_001273734	Coding	chr4:6987507 plus strand	317430
TBC1D14	NM_020773	NP_065824	Coding	chr4:6909767 plus strand	317431
TBC1D19	NM_001292054	NP_001278983	Coding	chr4:26583923 plus strand	317432
TBC1D19	NM_018317	NP_060787	Coding	chr4:26583923 plus strand	317432
TBC1D9	NM_015130	NP_055945	Coding	chr4:140756317 minus strand	317433
TBCK	NM_001163435	NP_001156907	Coding	chr4:106316266 minus strand	317434
TBCK	NM_001163436	NP_001156908	Coding	chr4:106316704 minus strand	317435
TBCK	NM_001163437	NP_001156909	Coding	chr4:106316266 minus strand	317434
TBCK	NM_001290768	NP_001277697	Coding	chr4:106316266 minus strand	317434

【０４１６】

TBCK	NM_033115	NP_149106	Coding	chr4:106316266 minus strand	317434
TDO2	NM_005651	NP_005642	Coding	chr4:155903692 plus strand	317436
TEC	NM_003215	NP_003206	Coding	chr4:48269797 minus strand	317437
TECRL	NM_001010874	NP_001010874	Coding	chr4:64409460 minus strand	317438
TENM3	NM_001080477	NP_001073946	Coding	chr4:182323983 plus strand	317439
TET2	NM_001127208	NP_001120680	Coding	chr4:105146684 plus strand	317440
TET2	NM_017628	NP_060098	Coding	chr4:105145874 plus strand	317441
THAP6	NM_144721	NP_653322	Coding	chr4:75514443 plus strand	317442
THAP9	NM_024672	NP_078948	Coding	chr4:82900683 plus strand	317443
THEGL	NM_001256475	NP_001243404	Coding	chr4:56530608 plus strand	317444
TIFA	NM_052864	NP_443096	Coding	chr4:112285903 minus strand	317445
TIGD2	NM_145715	NP_663761	Coding	chr4:89112816 plus strand	317446
TIGD4	NM_145720	NP_663772	Coding	chr4:152779764 minus strand	317447
TKTL2	NM_032136	NP_115512	Coding	chr4:163473895 minus strand	317448
TLL1	NM_001204760	NP_001191689	Coding	chr4:165873257 plus strand	317449
TLL1	NM_012464	NP_036596	Coding	chr4:165873257 plus strand	317449
TLR1	NM_003263	NP_003254	Coding	chr4:38804791 minus strand	317450
TLR10	NM_001017388	NP_001017388	Coding	chr4:38782990 minus strand	317451
TLR10	NM_001195106	NP_001182035	Coding	chr4:38782990 minus strand	317451
TLR10	NM_001195107	NP_001182036	Coding	chr4:38782990 minus strand	317451
TLR10	NM_001195108	NP_001182037	Coding	chr4:38782990 minus strand	317451
TLR10	NM_030956	NP_112218	Coding	chr4:38782990 minus strand	317451
TLR2	NM_003264	NP_003255	Coding	chr4:153684288 plus strand	317452
TLR3	NM_003265	NP_003256	Coding	chr4:186069154 plus strand	317453
TLR6	NM_006068	NP_006059	Coding	chr4:38856817 minus strand	317454
TMA16	NM_018352	NP_060822	Coding	chr4:163494520 plus strand	317455
TMEM128	NM_001297551	NP_001284480	Coding	chr4:4248242 minus strand	317456
TMEM128	NM_001297552	NP_001284481	Coding	chr4:4248242 minus strand	317456
TMEM128	NM_032927	NP_116316	Coding	chr4:4248242 minus strand	317456
TMEM129	NM_001127266	NP_001120738	Coding	chr4:1721357 minus strand	317457

【０４１７】

TMEM129	NM_138385	NP_612394	Coding	chr4:1721357 minus strand	317457
TMEM144	NM_018342	NP_060812	Coding	chr4:158210248 plus strand	317458
TMEM150C	NM_001080506	NP_001073975	Coding	chr4:82561973 minus strand	317459
TMEM154	NM_152680	NP_689893	Coding	chr4:152680165 minus strand	317460
TMEM155	NM_152399	NP_689612	Coding	chr4:121765185 minus strand	317461
TMEM156	NM_024943	NP_079219	Coding	chr4:39032421 minus strand	317462
TMEM165	NM_018475	NP_060945	Coding	chr4:55395912 plus strand	317463
TMEM175	NM_001297423	NP_001284352	Coding	chr4:932386 plus strand	317464
TMEM175	NM_001297424	NP_001284353	Coding	chr4:932386 plus strand	317464
TMEM175	NM_001297425	NP_001284354	Coding	chr4:932386 plus strand	317464
TMEM175	NM_001297426	NP_001284355	Coding	chr4:932386 plus strand	317464
TMEM175	NM_001297427	NP_001284356	Coding	chr4:932386 plus strand	317464
TMEM175	NM_001297428	NP_001284357	Coding	chr4:932386 plus strand	317464
TMEM175	NM_032326	NP_115702	Coding	chr4:932386 plus strand	317464
TMEM184C	NM_018241	NP_060711	Coding	chr4:147617387 plus strand	317465
TMEM192	NM_001100389	NP_001093859	Coding	chr4:165112872 minus strand	317466
TMEM33	NM_018126	NP_060596	Coding	chr4:41935119 plus strand	317467
TMPRSS11A	NM_001114387	NP_001107859	Coding	chr4:67963514 minus strand	317468
TMPRSS11A	NM_182606	NP_872412	Coding	chr4:67963514 minus strand	317468
TMPRSS11B	NM_182502	NP_872308	Coding	chr4:68245694 minus strand	317469
TMPRSS11D	NM_004262	NP_004253	Coding	chr4:67883998 minus strand	317470
TMPRSS11E	NM_014058	NP_054777	Coding	chr4:68447448 plus strand	317471
TMPRSS11F	NM_207407	NP_997290	Coding	chr4:68129869 minus strand	317472
TNIP2	NM_001161527	NP_001154999	Coding	chr4:2756025 minus strand	317473
TNIP2	NM_001292016	NP_001278945	Coding	chr4:2756376 minus strand	317474
TNIP2	NM_024309	NP_077285	Coding	chr4:2756376 minus strand	317474
TNIP3	NM_001128843	NP_001122315	Coding	chr4:121216627 minus strand	317475
TNIP3	NM_001244764	NP_001231693	Coding	chr4:121227466 minus strand	317476
TNIP3	NM_024873	NP_079149	Coding	chr4:121164340 minus strand	317477
TRAM1L1	NM_152402	NP_689615	Coding	chr4:117085580 minus strand	317478
TRAPPC11	NM_021942	NP_068761	Coding	chr4:183659266 plus strand	317479
TRAPPC11	NM_199053	NP_951008	Coding	chr4:183659266 plus strand	317479

【０４１８】

TRIM2	NM_001130067	NP_001123539	Coding	chr4:153153117 plus strand	317480
TRIM2	NM_001302692	NP_001289621	Coding	chr4:153204413 plus strand	317481
TRIM2	NM_001302693	NP_001289622	Coding	chr4:153204413 plus strand	317481
TRIM2	NM_001302694	NP_001289623	Coding	chr4:153257358 plus strand	317482
TRIM2	NM_015271	NP_056086	Coding	chr4:153204413 plus strand	317481
TRIM60	NM_001258025	NP_001244954	Coding	chr4:165031998 plus strand	317483
TRIM60	NM_152620	NP_689833	Coding	chr4:165031998 plus strand	317483
TRIM61	NM_001012414	NP_001012414	Coding	chr4:164977666 minus strand	317484
TRIML1	NM_178556	NP_848651	Coding	chr4:188139443 plus strand	317485
TRIML2	NM_173553	NP_775824	Coding	chr4:188105254 minus strand	317486
TRMT10A	NM_001134665	NP_001128137	Coding	chr4:99564057 minus strand	317487
TRMT10A	NM_001134666	NP_001128138	Coding	chr4:99564057 minus strand	317487
TRMT10A	NM_152292	NP_689505	Coding	chr4:99563668 minus strand	317488
TRMT44	NM_152544	NP_689757	Coding	chr4:8440804 plus strand	317489
TRPC3	NM_001130698	NP_001124170	Coding	chr4:121951754 minus strand	317490
TRPC3	NM_003305	NP_003296	Coding	chr4:121933113 minus strand	317491
TSPAN5	NM_005723	NP_005714	Coding	chr4:98658661 minus strand	317492
TTC29	NM_001300761	NP_001287690	Coding	chr4:146945882 minus strand	317493
TTC29	NM_031956	NP_114162	Coding	chr4:146945882 minus strand	317493
TXK	NM_003328	NP_003319	Coding	chr4:48134256 minus strand	317494
UBA6	NM_018227	NP_060697	Coding	chr4:67701171 minus strand	317495
UBE2D3	NM_001300795	NP_001287724	Coding	chr4:102825860 minus strand	317496
UBE2D3	NM_003340	NP_003331	Coding	chr4:102827948 minus strand	317497
UBE2D3	NM_181886	NP_871615	Coding	chr4:102827948 minus strand	317497
UBE2D3	NM_181887	NP_871616	Coding	chr4:102827553 minus strand	317498
UBE2D3	NM_181888	NP_871617	Coding	chr4:102827948 minus strand	317497
UBE2D3	NM_181889	NP_871618	Coding	chr4:102828180 minus strand	317499
UBE2D3	NM_181890	NP_871619	Coding	chr4:102868893 minus	317500

【０４１９】

				strand	
UBE2D3	NM_181891	NP_871620	Coding	chr4:102827948 minus strand	317497
UBE2D3	NM_181892	NP_871621	Coding	chr4:102827183 minus strand	317501
UBE2D3	NM_181893	NP_871622	Coding	chr4:102868893 minus strand	317500
UBE2K	NM_001111112	NP_001104582	Coding	chr4:39698043 plus strand	317502
UBE2K	NM_001111113	NP_001104583	Coding	chr4:39698043 plus strand	317502
UBE2K	NM_005339	NP_005330	Coding	chr4:39698043 plus strand	317502
UCHL1	NM_004181	NP_004172	Coding	chr4:41256880 plus strand	317503
UCP1	NM_021833	NP_068605	Coding	chr4:140568805 minus strand	317504
UFSP2	NM_018359	NP_060829	Coding	chr4:185425985 minus strand	317505
UGDH	NM_001184700	NP_001171629	Coding	chr4:39527598 minus strand	317506
UGDH	NM_001184701	NP_001171630	Coding	chr4:39527598 minus strand	317506
UGDH	NM_003359	NP_003350	Coding	chr4:39527598 minus strand	317506
UGT2A1	NM_001252274	NP_001239203	Coding	chr4:69653249 minus strand	317507
UGT2A1	NM_001252275	NP_001239204	Coding	chr4:69653249 minus strand	317507
UGT2A1	NM_001301239	NP_001288168	Coding	chr4:69647698 minus strand	317508
UGT2A1	NM_006798	NP_006789	Coding	chr4:69653249 minus strand	317507
UGT2A2	NM_001105677	NP_001099147	Coding	chr4:69639642 minus strand	317509
UGT2A2	NM_001301233	NP_001288162	Coding	chr4:69639642 minus strand	317509
UGT2A3	NM_024743	NP_079019	Coding	chr4:68951791 minus strand	317510
UGT2B10	NM_001075	NP_001066	Coding	chr4:68815992 plus strand	317511
UGT2B10	NM_001075	NP_001066	Coding	chr4:69020397 minus strand	317512
UGT2B10	NM_001144767	NP_001138239	Coding	chr4:68815992 plus strand	317511
UGT2B10	NM_001144767	NP_001138239	Coding	chr4:69020397 minus strand	317512
UGT2B10	NM_001290091	NP_001277020	Coding	chr4:68815992 plus strand	317511
UGT2B10	NM_001290091	NP_001277020	Coding	chr4:69020397 minus strand	317512
UGT2B11	NM_001073	NP_001064	Coding	chr4:69214731 minus strand	317513
UGT2B15	NM_001076	NP_001067	Coding	chr4:68670776 minus strand	317514
UGT2B17	NM_001077	NP_001068	Coding	chr4:68568527 minus strand	317515
UGT2B28	NM_001207004	NP_001193933	Coding	chr4:69280498 plus strand	317516

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UGT2B28	NM_053039	NP_444267	Coding	chr4:69280498 plus strand	317516
UGT2B4	NM_001297615	NP_001284544	Coding	chr4:69495908 minus strand	317517
UGT2B4	NM_001297616	NP_001284545	Coding	chr4:69526014 minus strand	317518
UGT2B4	NM_021139	NP_066962	Coding	chr4:69495908 minus strand	317517
UGT2B7	NM_001074	NP_001065	Coding	chr4:69096474 plus strand	317519
UGT8	NM_001128174	NP_001121646	Coding	chr4:114598454 plus strand	317520
UGT8	NM_003360	NP_003351	Coding	chr4:114622366 plus strand	317521
UNC5C	NM_003728	NP_003719	Coding	chr4:95549210 minus strand	317522
USO1	NM_001290049	NP_001276978	Coding	chr4:75724521 plus strand	317523
USO1	NM_003715	NP_003706	Coding	chr4:75724521 plus strand	317523
USP17L10	NM_001256852	NP_001243781	Coding	chr4:9210656 plus strand	317524
USP17L11	NM_001256854	NP_001243783	Coding	chr4:9215404 plus strand	317525
USP17L11	NM_001256854	NP_001243783	Coding	chr4:9248629 plus strand	317526
USP17L11	NM_001256854	NP_001243783	Coding	chr4:9258123 plus strand	317527
USP17L12	NM_001256853	NP_001243782	Coding	chr4:9220151 plus strand	317528
USP17L12	NM_001256853	NP_001243782	Coding	chr4:9262871 plus strand	317529
USP17L13	NM_001256855	NP_001243784	Coding	chr4:9224895 plus strand	317530
USP17L15	NM_001256894	NP_001243823	Coding	chr4:9234384 plus strand	317531
USP17L17	NM_001256857	NP_001243786	Coding	chr4:9243878 plus strand	317532
USP17L18	NM_001256859	NP_001243788	Coding	chr4:9215404 plus strand	317533
USP17L18	NM_001256859	NP_001243788	Coding	chr4:9248629 plus strand	317534
USP17L19	NM_001256860	NP_001243789	Coding	chr4:9253377 plus strand	317535
USP17L20	NM_001256861	NP_001243790	Coding	chr4:9215404 plus strand	317536
USP17L20	NM_001256861	NP_001243790	Coding	chr4:9258123 plus strand	317537
USP17L20	NM_001256861	NP_001243790	Coding	chr4:9267618 plus strand	317538
USP17L21	NM_001256862	NP_001243791	Coding	chr4:9220151 plus strand	317539
USP17L21	NM_001256862	NP_001243791	Coding	chr4:9262871 plus strand	317540
USP17L22	NM_001256863	NP_001243792	Coding	chr4:9258123 plus strand	317541
USP17L22	NM_001256863	NP_001243792	Coding	chr4:9267618 plus strand	317542
USP17L24	NM_001242327	NP_001229256	Coding	chr4:9325164 plus strand	317543
USP17L24	NM_001242327	NP_001229256	Coding	chr4:9329910 plus strand	317544
USP17L24	NM_001242327	NP_001229256	Coding	chr4:9334657 plus strand	317545
USP17L24	NM_001242327	NP_001229256	Coding	chr4:9339402 plus strand	317546
USP17L24	NM_001242327	NP_001229256	Coding	chr4:9344147 plus strand	317547
USP17L24	NM_001242327	NP_001229256	Coding	chr4:9348892 plus strand	317548
USP17L24	NM_001242327	NP_001229256	Coding	chr4:9353637 plus strand	317549
USP17L24	NM_001242327	NP_001229256	Coding	chr4:9363128 plus strand	317550
USP17L25	NM_001242326	NP_001229255	Coding	chr4:9325164 plus strand	317551

【０４２１】

USP17L25	NM_001242326	NP_001229255	Coding	chr4:9329910 plus strand	317552
USP17L25	NM_001242326	NP_001229255	Coding	chr4:9334657 plus strand	317553
USP17L25	NM_001242326	NP_001229255	Coding	chr4:9339402 plus strand	317554
USP17L25	NM_001242326	NP_001229255	Coding	chr4:9344147 plus strand	317555
USP17L25	NM_001242326	NP_001229255	Coding	chr4:9348892 plus strand	317556
USP17L25	NM_001242326	NP_001229255	Coding	chr4:9353637 plus strand	317557
USP17L25	NM_001242326	NP_001229255	Coding	chr4:9363128 plus strand	317558
USP17L26	NM_001242328	NP_001229257	Coding	chr4:9325164 plus strand	317559
USP17L26	NM_001242328	NP_001229257	Coding	chr4:9329910 plus strand	317560
USP17L26	NM_001242328	NP_001229257	Coding	chr4:9334657 plus strand	317561
USP17L26	NM_001242328	NP_001229257	Coding	chr4:9339402 plus strand	317562
USP17L26	NM_001242328	NP_001229257	Coding	chr4:9344147 plus strand	317563
USP17L26	NM_001242328	NP_001229257	Coding	chr4:9348892 plus strand	317564
USP17L26	NM_001242328	NP_001229257	Coding	chr4:9353637 plus strand	317565
USP17L26	NM_001242328	NP_001229257	Coding	chr4:9363128 plus strand	317566
USP17L27	NM_001242330	NP_001229259	Coding	chr4:9325164 plus strand	317567
USP17L27	NM_001242330	NP_001229259	Coding	chr4:9329910 plus strand	317568
USP17L27	NM_001242330	NP_001229259	Coding	chr4:9334657 plus strand	317569
USP17L27	NM_001242330	NP_001229259	Coding	chr4:9339402 plus strand	317570
USP17L27	NM_001242330	NP_001229259	Coding	chr4:9344147 plus strand	317571
USP17L27	NM_001242330	NP_001229259	Coding	chr4:9348892 plus strand	317572
USP17L27	NM_001242330	NP_001229259	Coding	chr4:9353637 plus strand	317573
USP17L27	NM_001242330	NP_001229259	Coding	chr4:9363128 plus strand	317574
USP17L28	NM_001242331	NP_001229260	Coding	chr4:9325164 plus strand	317575
USP17L28	NM_001242331	NP_001229260	Coding	chr4:9329910 plus strand	317576
USP17L28	NM_001242331	NP_001229260	Coding	chr4:9334657 plus strand	317577
USP17L28	NM_001242331	NP_001229260	Coding	chr4:9339402 plus strand	317578
USP17L28	NM_001242331	NP_001229260	Coding	chr4:9344147 plus strand	317579
USP17L28	NM_001242331	NP_001229260	Coding	chr4:9348892 plus strand	317580
USP17L28	NM_001242331	NP_001229260	Coding	chr4:9353637 plus strand	317581
USP17L28	NM_001242331	NP_001229260	Coding	chr4:9363128 plus strand	317582
USP17L29	NM_001242332	NP_001229261	Coding	chr4:9325164 plus strand	317583
USP17L29	NM_001242332	NP_001229261	Coding	chr4:9329910 plus strand	317584
USP17L29	NM_001242332	NP_001229261	Coding	chr4:9334657 plus strand	317585
USP17L29	NM_001242332	NP_001229261	Coding	chr4:9339402 plus strand	317586
USP17L29	NM_001242332	NP_001229261	Coding	chr4:9344147 plus strand	317587
USP17L29	NM_001242332	NP_001229261	Coding	chr4:9348892 plus strand	317588
USP17L29	NM_001242332	NP_001229261	Coding	chr4:9353637 plus strand	317589
USP17L29	NM_001242332	NP_001229261	Coding	chr4:9363128 plus strand	317590
USP17L30	NM_001256867	NP_001243796	Coding	chr4:9325164 plus strand	317591
USP17L30	NM_001256867	NP_001243796	Coding	chr4:9329910 plus strand	317592

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USP17L30	NM_001256867	NP_001243796	Coding	chr4:9334657 plus strand	317593
USP17L30	NM_001256867	NP_001243796	Coding	chr4:9339402 plus strand	317594
USP17L30	NM_001256867	NP_001243796	Coding	chr4:9344147 plus strand	317595
USP17L30	NM_001256867	NP_001243796	Coding	chr4:9348892 plus strand	317596
USP17L30	NM_001256867	NP_001243796	Coding	chr4:9353637 plus strand	317597
USP17L30	NM_001256867	NP_001243796	Coding	chr4:9363128 plus strand	317598
USP17L5	NM_001242329	NP_001229258	Coding	chr4:9325164 plus strand	317599
USP17L5	NM_001242329	NP_001229258	Coding	chr4:9329910 plus strand	317600
USP17L5	NM_001242329	NP_001229258	Coding	chr4:9334657 plus strand	317601
USP17L5	NM_001242329	NP_001229258	Coding	chr4:9339402 plus strand	317602
USP17L5	NM_001242329	NP_001229258	Coding	chr4:9344147 plus strand	317603
USP17L5	NM_001242329	NP_001229258	Coding	chr4:9348892 plus strand	317604
USP17L5	NM_001242329	NP_001229258	Coding	chr4:9353637 plus strand	317605
USP17L5	NM_001242329	NP_001229258	Coding	chr4:9363128 plus strand	317606
USP38	NM_001290325	NP_001277254	Coding	chr4:143184916 plus strand	317607
USP38	NM_001290326	NP_001277255	Coding	chr4:143184916 plus strand	317607
USP38	NM_032557	NP_115946	Coding	chr4:143184916 plus strand	317607
USP46	NM_001134223	NP_001127695	Coding	chr4:52656592 minus strand	317608
USP46	NM_001286767	NP_001273696	Coding	chr4:52659335 minus strand	317609
USP46	NM_001286768	NP_001273697	Coding	chr4:52659335 minus strand	317609
USP46	NM_022832	NP_073743	Coding	chr4:52659335 minus strand	317609
USP53	NM_019050	NP_061923	Coding	chr4:119212626 plus strand	317610
UTP3	NM_020368	NP_065101	Coding	chr4:70688478 plus strand	317611
UVSSA	NM_020894	NP_065945	Coding	chr4:1347315 plus strand	317612
VEGFC	NM_005429	NP_005420	Coding	chr4:176792745 minus strand	317613
WDFY3	NM_014991	NP_055806	Coding	chr4:84966391 minus strand	317614
WDR1	NM_005112	NP_005103	Coding	chr4:10116949 minus strand	317615
WDR1	NM_017491	NP_059830	Coding	chr4:10116949 minus strand	317615
WDR17	NM_170710	NP_733828	Coding	chr4:176065833 plus strand	317616
WDR17	NM_181265	NP_851782	Coding	chr4:176065833 plus strand	317616
WDR19	NM_025132	NP_079408	Coding	chr4:39182403 plus strand	317617
WFS1	NM_001145853	NP_001139325	Coding	chr4:6269849 plus strand	317618
WFS1	NM_006005	NP_005996	Coding	chr4:6269849 plus strand	317618
WHSC1	NM_001042424	NP_001035889	Coding	chr4:1871395 plus strand	317619

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WHSC1	NM_007331	NP_015627	Coding	chr4:1892781 plus strand	317620
WHSC1	NM_133330	NP_579877	Coding	chr4:1892781 plus strand	317620
WHSC1	NM_133331	NP_579878	Coding	chr4:1892781 plus strand	317620
WHSC1	NM_133334	NP_579889	Coding	chr4:1900625 plus strand	317621
WHSC1	NM_133335	NP_579890	Coding	chr4:1892781 plus strand	317620
WWC2	NM_024949	NP_079225	Coding	chr4:183099309 plus strand	317622
YIPF7	NM_182592	NP_872398	Coding	chr4:44651641 minus strand	317623
YTHDC1	NM_001031732	NP_001026902	Coding	chr4:68350106 minus strand	317624
YTHDC1	NM_133370	NP_588611	Coding	chr4:68350106 minus strand	317624
ZAR1	NM_175619	NP_783318	Coding	chr4:48490251 plus strand	317625
ZBTB49	NM_145291	NP_660334	Coding	chr4:4290196 plus strand	317626
ZCCHC4	NM_024936	NP_079212	Coding	chr4:25312773 plus strand	317627
ZFP42	NM_174900	NP_777560	Coding	chr4:187995770 plus strand	317628
ZFYVE28	NM_001172656	NP_001166127	Coding	chr4:2418643 minus strand	317629
ZFYVE28	NM_001172657	NP_001166128	Coding	chr4:2418643 minus strand	317629
ZFYVE28	NM_001172658	NP_001166129	Coding	chr4:2418643 minus strand	317629
ZFYVE28	NM_001172659	NP_001166130	Coding	chr4:2364877 minus strand	317630
ZFYVE28	NM_001172660	NP_001166131	Coding	chr4:2364877 minus strand	317630
ZFYVE28	NM_020972	NP_066023	Coding	chr4:2418643 minus strand	317629
ZGRF1	NM_018392	NP_060862	Coding	chr4:112636995 minus strand	317631
ZNF141	NM_003441	NP_003432	Coding	chr4:337806 plus strand	317632
ZNF330	NM_001292002	NP_001278931	Coding	chr4:141220886 plus strand	317633
ZNF330	NM_014487	NP_055302	Coding	chr4:141220886 plus strand	317633
ZNF518B	NM_053042	NP_444270	Coding	chr4:10457408 minus strand	317634
ZNF595	NM_001286052	NP_001272981	Coding	chr4:53284 plus strand	317635
ZNF595	NM_001286053	NP_001272982	Coding	chr4:53284 plus strand	317635
ZNF595	NM_001286054	NP_001272983	Coding	chr4:53284 plus strand	317635
ZNF595	NM_182524	NP_872330	Coding	chr4:53284 plus strand	317635
ZNF718	NM_001039127	NP_001034216	Coding	chr4:124475 plus strand	317636
ZNF718	NM_001289930	NP_001276859	Coding	chr4:124475 plus strand	317636
ZNF718	NM_001289931	NP_001276860	Coding	chr4:128120 plus strand	317637
ZNF721	NM_133474	NP_597731	Coding	chr4:499171 minus strand	317638
ZNF732	NM_001137608	NP_001131080	Coding	chr4:296155 minus strand	317639
ZNF827	NM_178835	NP_849157	Coding	chr4:145938455 minus strand	317640
ABLIM3	NM_001301015	NP_001287944	Coding	chr5:149141482 plus strand	317641
ABLIM3	NM_001301018	NP_001287947	Coding	chr5:149142008 plus	317642

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				strand	
ABLIM3	NM_001301027	NP_001287956	Coding	chr5:149141482 plus strand	317641
ABLIM3	NM_001301028	NP_001287957	Coding	chr5:149141482 plus strand	317641
ABLIM3	NM_014945	NP_055760	Coding	chr5:149141482 plus strand	317641
ACOT12	NM_130767	NP_570123	Coding	chr5:81394169 minus strand	317643
ACSL6	NM_001009185	NP_001009185	Coding	chr5:132011662 minus strand	317644
ACSL6	NM_001205247	NP_001192176	Coding	chr5:132011662 minus strand	317644
ACSL6	NM_001205248	NP_001192177	Coding	chr5:132011914 minus strand	317645
ACSL6	NM_001205250	NP_001192179	Coding	chr5:132012068 minus strand	317646
ACSL6	NM_001205251	NP_001192180	Coding	chr5:132011914 minus strand	317645
ACSL6	NM_015256	NP_056071	Coding	chr5:132011662 minus strand	317644
ACTBL2	NM_001017992	NP_001017992	Coding	chr5:57482809 minus strand	317647
ADAM19	NM_033274	NP_150377	Coding	chr5:157575823 minus strand	317648
ADAMTS12	NM_030955	NP_112217	Coding	chr5:33892019 minus strand	317649
ADAMTS16	NM_139056	NP_620687	Coding	chr5:5140329 plus strand	317650
ADAMTS19	NM_133638	NP_598377	Coding	chr5:129460409 plus strand	317651
ADAMTS2	NM_014244	NP_055059	Coding	chr5:179345430 minus strand	317652
ADAMTS2	NM_021599	NP_067610	Coding	chr5:179345430 minus strand	317652
ADAMTS6	NM_197941	NP_922932	Coding	chr5:65481877 minus strand	317653
ADCY2	NM_020546	NP_065433	Coding	chr5:7396229 plus strand	317654
ADRA1B	NM_000679	NP_000670	Coding	chr5:159916732 plus strand	317655
ADRB2	NM_000024	NP_000015	Coding	chr5:148826592 plus strand	317656
AFAP1L1	NM_001146337	NP_001139809	Coding	chr5:149271837 plus strand	317657
AFAP1L1	NM_152406	NP_689619	Coding	chr5:149271837 plus strand	317657
AFF4	NM_014423	NP_055238	Coding	chr5:132963662 minus strand	317658
AGGF1	NM_018046	NP_060516	Coding	chr5:77030384 plus strand	317659
AGXT2	NM_031900	NP_114106	Coding	chr5:35048135 minus strand	317660
AHRR	NM_001242412	NP_001229341	Coding	chr5:304175 plus strand	317661
AHRR	NM_020731	NP_065782	Coding	chr5:304175 plus strand	317661

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AK6	NM_001015891	NP_001015891	Coding	chr5:69370013 minus strand	317662
AK6	NM_016283	NP_057367	Coding	chr5:69369582 minus strand	317663
ALDH7A1	NM_001182	NP_001173	Coding	chr5:126595390 minus strand	317664
ALDH7A1	NM_001201377	NP_001188306	Coding	chr5:126595390 minus strand	317664
ALDH7A1	NM_001202404	NP_001189333	Coding	chr5:126595390 minus strand	317664
AMACR	NM_001167595	NP_001161067	Coding	chr5:34008115 minus strand	317665
AMACR	NM_014324	NP_055139	Coding	chr5:34008115 minus strand	317665
AMACR	NM_203382	NP_976316	Coding	chr5:34008115 minus strand	317665
ANKDD1B	NM_001276713	NP_001263642	Coding	chr5:75611475 plus strand	317666
ANKH	NM_054027	NP_473368	Coding	chr5:14871778 minus strand	317667
ANKHD1	NM_001197030	NP_001183959	Coding	chr5:140401813 plus strand	317668
ANKHD1	NM_017747	NP_060217	Coding	chr5:140401813 plus strand	317668
ANKHD1	NM_017978	NP_060448	Coding	chr5:140401813 plus strand	317668
ANKHD1	NM_024668	NP_078944	Coding	chr5:140401813 plus strand	317668
ANKHD1-EIF4EBP3	NM_020690	NP_065741	Coding	chr5:140401813 plus strand	317669
ANKRA2	NM_023039	NP_075526	Coding	chr5:73565686 minus strand	317670
ANKRD31	NM_001164443	NP_001157915	Coding	chr5:75236878 minus strand	317671
ANKRD32	NM_032290	NP_115666	Coding	chr5:94618685 plus strand	317672
ANKRD33B	NM_001164440	NP_001157912	Coding	chr5:10564322 plus strand	317673
ANKRD34B	NM_001004441	NP_001004441	Coding	chr5:80570485 minus strand	317674
ANKRD55	NM_024669	NP_078945	Coding	chr5:56233359 minus strand	317675
ANXA2R	NM_001014279	NP_001014301	Coding	chr5:43040345 minus strand	317676
ANXA6	NM_001155	NP_001146	Coding	chr5:151157882 minus strand	317677
ANXA6	NM_001193544	NP_001180473	Coding	chr5:151141655 minus strand	317678
AP3B1	NM_001271769	NP_001258698	Coding	chr5:78294755 minus strand	317679
AP3B1	NM_003664	NP_003655	Coding	chr5:78294755 minus strand	317679
AP3S1	NM_001284	NP_001275	Coding	chr5:115841921 plus strand	317680
APBB3	NM_006051	NP_006042	Coding	chr5:140564604 minus strand	317681

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APBB3	NM_133172	NP_573418	Coding	chr5:140564604 minus strand	317681
APBB3	NM_133173	NP_573419	Coding	chr5:140564604 minus strand	317681
APBB3	NM_133174	NP_573420	Coding	chr5:140564604 minus strand	317681
APC	NM_000038	NP_000029	Coding	chr5:112737858 plus strand	317682
APC	NM_001127510	NP_001120982	Coding	chr5:112737858 plus strand	317682
APC	NM_001127511	NP_001120983	Coding	chr5:112707504 plus strand	317683
AQPEP	NM_173800	NP_776161	Coding	chr5:115962453 plus strand	317684
ARAP3	NM_022481	NP_071926	Coding	chr5:141682233 minus strand	317685
ARHGAP26	NM_001135608	NP_001129080	Coding	chr5:142770726 plus strand	317686
ARHGAP26	NM_015071	NP_055886	Coding	chr5:142770726 plus strand	317686
ARHGEF28	NM_001080479	NP_001073948	Coding	chr5:73626157 plus strand	317687
ARHGEF28	NM_001177693	NP_001171164	Coding	chr5:73626157 plus strand	317687
ARHGEF28	NM_001244364	NP_001231293	Coding	chr5:73813517 plus strand	317688
ARHGEF37	NM_001001669	NP_001001669	Coding	chr5:149581571 plus strand	317689
ARL10	NM_173664	NP_775935	Coding	chr5:176365498 plus strand	317690
ARL14EPL	NM_001195581	NP_001182510	Coding	chr5:116051465 plus strand	317691
ARL15	NM_019087	NP_061960	Coding	chr5:54310573 minus strand	317692
ARRDC3	NM_020801	NP_065852	Coding	chr5:91383332 minus strand	317693
ARSB	NM_000046	NP_000037	Coding	chr5:78986534 minus strand	317694
ARSB	NM_198709	NP_942002	Coding	chr5:78985943 minus strand	317695
ARSI	NM_001012301	NP_001012301	Coding	chr5:150302962 minus strand	317696
ARSK	NM_198150	NP_937793	Coding	chr5:95555120 plus strand	317697
ATG10	NM_001131028	NP_001124500	Coding	chr5:81972024 plus strand	317698
ATG10	NM_031482	NP_113670	Coding	chr5:81972024 plus strand	317698
ATG12	NM_001277783	NP_001264712	Coding	chr5:115841851 minus strand	317699
ATG12	NM_004707	NP_004698	Coding	chr5:115841851 minus strand	317699
ATOX1	NM_004045	NP_004036	Coding	chr5:151758649 minus strand	317700
ATP10B	NM_025153	NP_079429	Coding	chr5:160852212 minus strand	317701
ATP6AP1L	NM_001017971	NP_001017971	Coding	chr5:82279461 plus strand	317702
ATP6V0E1	NM_003945	NP_003936	Coding	chr5:172983759 plus	317703

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				strand	
B4GALT7	NM_007255	NP_009186	Coding	chr5:177600117 plus strand	317704
BASP1	NM_001271606	NP_001258535	Coding	chr5:17216822 plus strand	317705
BASP1	NM_006317	NP_006308	Coding	chr5:17217560 plus strand	317706
BDP1	NM_018429	NP_060899	Coding	chr5:71455614 plus strand	317707
BHMT	NM_001713	NP_001704	Coding	chr5:79111780 plus strand	317708
BHMT2	NM_001178005	NP_001171476	Coding	chr5:79069723 plus strand	317709
BHMT2	NM_017614	NP_060084	Coding	chr5:79069723 plus strand	317709
BNIP1	NM_001205	NP_001196	Coding	chr5:173144441 plus strand	317710
BNIP1	NM_013978	NP_053581	Coding	chr5:173144441 plus strand	317710
BNIP1	NM_013979	NP_053582	Coding	chr5:173144441 plus strand	317710
BNIP1	NM_013980	NP_053583	Coding	chr5:173144441 plus strand	317710
BOD1	NM_001159651	NP_001153123	Coding	chr5:173616663 minus strand	317711
BOD1	NM_138369	NP_612378	Coding	chr5:173616663 minus strand	317711
BRD8	NM_001164326	NP_001157798	Coding	chr5:138178669 minus strand	317712
BRD8	NM_001300961	NP_001287890	Coding	chr5:138178669 minus strand	317712
BRD8	NM_001300962	NP_001287891	Coding	chr5:138178669 minus strand	317712
BRD8	NM_001300966	NP_001287895	Coding	chr5:138178669 minus strand	317712
BRD8	NM_006696	NP_006687	Coding	chr5:138178669 minus strand	317712
BRD8	NM_139199	NP_631938	Coding	chr5:138178669 minus strand	317712
BRD9	NM_001009877	NP_001009877	Coding	chr5:892559 minus strand	317713
BRD9	NM_023924	NP_076413	Coding	chr5:892824 minus strand	317714
BRIX1	NM_018321	NP_060791	Coding	chr5:34915714 plus strand	317715
BTF3	NM_001037637	NP_001032726	Coding	chr5:73498424 plus strand	317716
BTF3	NM_001207	NP_001198	Coding	chr5:73498424 plus strand	317716
BTNL3	NM_197975	NP_932079	Coding	chr5:180988844 plus strand	317717
BTNL8	NM_001040462	NP_001035552	Coding	chr5:180899076 plus strand	317718
BTNL8	NM_001159707	NP_001153179	Coding	chr5:180899076 plus strand	317718
BTNL8	NM_001159708	NP_001153180	Coding	chr5:180899076 plus strand	317718
BTNL8	NM_001159709	NP_001153181	Coding	chr5:180899076 plus strand	317718
BTNL8	NM_001159710	NP_001153182	Coding	chr5:180909563 plus strand	317719

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BTNL8	NM_024850	NP_079126	Coding	chr5:180899076 plus strand	317718
BTNL9	NM_152547	NP_689760	Coding	chr5:181040224 plus strand	317720
C1QTNF2	NM_031908	NP_114114	Coding	chr5:160370641 minus strand	317721
C1QTNF3	NM_030945	NP_112207	Coding	chr5:34043266 minus strand	317722
C1QTNF3	NM_181435	NP_852100	Coding	chr5:34043266 minus strand	317722
C5orf15	NM_020199	NP_064584	Coding	chr5:133968715 minus strand	317723
C5orf22	NM_018356	NP_060826	Coding	chr5:31532265 plus strand	317724
C5orf24	NM_001135586	NP_001129058	Coding	chr5:134845967 plus strand	317725
C5orf24	NM_001300894	NP_001287823	Coding	chr5:134845967 plus strand	317725
C5orf24	NM_152409	NP_689622	Coding	chr5:134845679 plus strand	317726
C5orf28	NM_022483	NP_071928	Coding	chr5:43483890 minus strand	317727
C5orf30	NM_033211	NP_149988	Coding	chr5:103258740 plus strand	317728
C5orf34	NM_198566	NP_940968	Coding	chr5:43515171 minus strand	317729
C5orf38	NM_001294337	NP_001281266	Coding	chr5:2752130 plus strand	317730
C5orf38	NM_178569	NP_848664	Coding	chr5:2752130 plus strand	317730
C5orf42	NM_023073	NP_075561	Coding	chr5:37249428 minus strand	317731
C5orf45	NM_001017987	NP_001017987	Coding	chr5:179858840 minus strand	317732
C5orf45	NM_016175	NP_057259	Coding	chr5:179858840 minus strand	317732
C5orf46	NM_206966	NP_996849	Coding	chr5:147906538 minus strand	317733
C5orf47	NM_001144954	NP_001138426	Coding	chr5:173989158 plus strand	317734
C5orf49	NM_001089584	NP_001083053	Coding	chr5:7851490 minus strand	317735
C5orf51	NM_175921	NP_787117	Coding	chr5:41904367 plus strand	317736
C5orf52	NM_001145132	NP_001138604	Coding	chr5:157671552 plus strand	317737
C5orf55	NM_138464	NP_612473	Coding	chr5:443143 minus strand	317738
C5orf58	NM_001102609	NP_001096079	Coding	chr5:170232945 plus strand	317739
C5orf60	NM_001142306	NP_001135778	Coding	chr5:179645046 minus strand	317740
C5orf63	NM_001164478	NP_001157950	Coding	chr5:127073492 minus strand	317741
C5orf63	NM_001164479	NP_001157951	Coding	chr5:127073492 minus strand	317741
C5orf64	NM_173667	NP_775938	Coding	chr5:61637780 plus strand	317742
C5orf66	NM_001277348	NP_001264277	Coding	chr5:135033279 plus	317743

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				strand	
C6	NM_000065	NP_000056	Coding	chr5:41213593 minus strand	317744
C6	NM_001115131	NP_001108603	Coding	chr5:41261438 minus strand	317745
C7	NM_000587	NP_000578	Coding	chr5:40909496 plus strand	317746
C9	NM_001737	NP_001728	Coding	chr5:39364553 minus strand	317747
CAMK2A	NM_015981	NP_057065	Coding	chr5:150289840 minus strand	317748
CAMK2A	NM_171825	NP_741960	Coding	chr5:150289840 minus strand	317748
CAMK4	NM_001744	NP_001735	Coding	chr5:111224248 plus strand	317749
CAMLG	NM_001745	NP_001736	Coding	chr5:134738479 plus strand	317750
CANX	NM_001024649	NP_001019820	Coding	chr5:179698928 plus strand	317751
CANX	NM_001746	NP_001737	Coding	chr5:179698928 plus strand	317751
CAPSL	NM_001042625	NP_001036090	Coding	chr5:35938635 minus strand	317752
CAPSL	NM_144647	NP_653248	Coding	chr5:35938779 minus strand	317753
CARD6	NM_032587	NP_115976	Coding	chr5:40841307 plus strand	317754
CARTPT	NM_004291	NP_004282	Coding	chr5:71719162 plus strand	317755
CAST	NM_001042440	NP_001035905	Coding	chr5:96662156 plus strand	317756
CAST	NM_001190442	NP_001177371	Coding	chr5:96662036 plus strand	317757
CAST	NM_001284212	NP_001271141	Coding	chr5:96702837 plus strand	317758
CAST	NM_001284213	NP_001271142	Coding	chr5:96702805 plus strand	317759
CAST	NM_173060	NP_775083	Coding	chr5:96702788 plus strand	317760
CATSPER3	NM_178019	NP_821138	Coding	chr5:134967905 plus strand	317761
CBY3	NM_001164444	NP_001157916	Coding	chr5:179680974 minus strand	317762
CCDC112	NM_001040440	NP_001035530	Coding	chr5:115296761 minus strand	317763
CCDC112	NM_152549	NP_689762	Coding	chr5:115296290 minus strand	317764
CCDC125	NM_001297696	NP_001284625	Coding	chr5:69332793 minus strand	317765
CCDC125	NM_001297697	NP_001284626	Coding	chr5:69332793 minus strand	317765
CCDC125	NM_176816	NP_789786	Coding	chr5:69332716 minus strand	317766
CCDC127	NM_145265	NP_660308	Coding	chr5:218182 minus strand	317767
CCDC152	NM_001134848	NP_001128320	Coding	chr5:42756817 plus strand	317768
CCDC69	NM_015621	NP_056436	Coding	chr5:151224093 minus strand	317769
CCL28	NM_001301873	NP_001288802	Coding	chr5:43412391 minus strand	317770

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CCL28	NM_001301874	NP_001288803	Coding	chr5:43412391 minus strand	317770
CCL28	NM_001301875	NP_001288804	Coding	chr5:43397264 minus strand	317771
CCL28	NM_148672	NP_683513	Coding	chr5:43412391 minus strand	317770
CCNB1	NM_031966	NP_114172	Coding	chr5:69167009 plus strand	317772
CCNG1	NM_004060	NP_004051	Coding	chr5:163437570 plus strand	317773
CCNG1	NM_199246	NP_954854	Coding	chr5:163437570 plus strand	317773
CCNH	NM_001199189	NP_001186118	Coding	chr5:87412904 minus strand	317774
CCNH	NM_001239	NP_001230	Coding	chr5:87413033 minus strand	317775
CCNI2	NM_001039780	NP_001034869	Coding	chr5:132747444 plus strand	317776
CCNI2	NM_001287252	NP_001274181	Coding	chr5:132747444 plus strand	317776
CCNI2	NM_001287253	NP_001274182	Coding	chr5:132747444 plus strand	317776
CCNJL	NM_024565	NP_078841	Coding	chr5:160312566 minus strand	317777
CCNO	NM_021147	NP_066970	Coding	chr5:55233717 minus strand	317778
CCT5	NM_012073	NP_036205	Coding	chr5:10250169 plus strand	317779
CD14	NM_000591	NP_000582	Coding	chr5:140633450 minus strand	317780
CD14	NM_001040021	NP_001035110	Coding	chr5:140633701 minus strand	317781
CD14	NM_001174104	NP_001167575	Coding	chr5:140633701 minus strand	317781
CD14	NM_001174105	NP_001167576	Coding	chr5:140633701 minus strand	317781
CD180	NM_005582	NP_005573	Coding	chr5:67196789 minus strand	317782
CD74	NM_001025158	NP_001020329	Coding	chr5:150412936 minus strand	317783
CD74	NM_001025159	NP_001020330	Coding	chr5:150412936 minus strand	317783
CD74	NM_004355	NP_004346	Coding	chr5:150412936 minus strand	317783
CDC20B	NM_001145734	NP_001139206	Coding	chr5:55173177 minus strand	317784
CDC20B	NM_001170402	NP_001163873	Coding	chr5:55173177 minus strand	317784
CDC20B	NM_152623	NP_689836	Coding	chr5:55173177 minus strand	317784
CDC23	NM_004661	NP_004652	Coding	chr5:138213343 minus strand	317785
CDC25C	NM_001287582	NP_001274511	Coding	chr5:138331877 minus strand	317786
CDC25C	NM_001287583	NP_001274512	Coding	chr5:138338355 minus strand	317787

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CDC25C	NM_001790	NP_001781	Coding	chr5:138331877 minus strand	317786
CDC25C	NM_022809	NP_073720	Coding	chr5:138331877 minus strand	317786
CDC42SE2	NM_001038702	NP_001033791	Coding	chr5:131264008 plus strand	317788
CDC42SE2	NM_020240	NP_064625	Coding	chr5:131264008 plus strand	317788
CDH10	NM_006727	NP_006718	Coding	chr5:24644976 minus strand	317789
CDH12	NM_004061	NP_004052	Coding	chr5:22853622 minus strand	317790
CDH18	NM_001167667	NP_001161139	Coding	chr5:19988244 minus strand	317791
CDH18	NM_001291956	NP_001278885	Coding	chr5:20575873 minus strand	317792
CDH18	NM_001291957	NP_001278886	Coding	chr5:19886272 minus strand	317793
CDH18	NM_004934	NP_004925	Coding	chr5:19988244 minus strand	317791
CDH6	NM_004932	NP_004923	Coding	chr5:31193654 plus strand	317794
CDH9	NM_016279	NP_057363	Coding	chr5:27038582 minus strand	317795
CDHR2	NM_001171976	NP_001165447	Coding	chr5:176542510 plus strand	317796
CDHR2	NM_017675	NP_060145	Coding	chr5:176549341 plus strand	317797
CDK7	NM_001799	NP_001790	Coding	chr5:69234794 plus strand	317798
CDKL3	NM_001113575	NP_001107047	Coding	chr5:134367074 minus strand	317799
CDKL3	NM_001300853	NP_001287782	Coding	chr5:134371047 minus strand	317800
CDKL3	NM_016508	NP_057592	Coding	chr5:134367074 minus strand	317799
CDKN2AIPNL	NM_080656	NP_542387	Coding	chr5:134411907 minus strand	317801
CDO1	NM_001801	NP_001792	Coding	chr5:115816708 minus strand	317802
CDX1	NM_001804	NP_001795	Coding	chr5:150166780 plus strand	317803
CENPH	NM_022909	NP_075060	Coding	chr5:69189547 plus strand	317804
CENPK	NM_001267038	NP_001253967	Coding	chr5:65563168 minus strand	317805
CENPK	NM_022145	NP_071428	Coding	chr5:65563168 minus strand	317805
CEP120	NM_001166226	NP_001159698	Coding	chr5:123423592 minus strand	317806
CEP120	NM_153223	NP_694955	Coding	chr5:123423592 minus strand	317806
CEP72	NM_018140	NP_060610	Coding	chr5:612289 plus strand	317807
CETN3	NM_001297765	NP_001284694	Coding	chr5:90409786 minus strand	317808
CETN3	NM_001297768	NP_001284697	Coding	chr5:90409786 minus	317808

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				strand	
CETN3	NM_004365	NP_004356	Coding	chr5:90409786 minus strand	317808
CHD1	NM_001270	NP_001261	Coding	chr5:98926534 minus strand	317809
CHSY3	NM_175856	NP_787052	Coding	chr5:129904829 plus strand	317810
CKMT2	NM_001099735	NP_001093205	Coding	chr5:81233319 plus strand	317811
CKMT2	NM_001099736	NP_001093206	Coding	chr5:81233319 plus strand	317811
CKMT2	NM_001825	NP_001816	Coding	chr5:81233319 plus strand	317811
CLINT1	NM_001195555	NP_001182484	Coding	chr5:157859175 minus strand	317812
CLINT1	NM_001195556	NP_001182485	Coding	chr5:157859175 minus strand	317812
CLINT1	NM_014666	NP_055481	Coding	chr5:157859175 minus strand	317812
CLK4	NM_020666	NP_065717	Coding	chr5:178627053 minus strand	317813
CLPTM1L	NM_030782	NP_110409	Coding	chr5:1344887 minus strand	317814
CLTB	NM_001834	NP_001825	Coding	chr5:176416569 minus strand	317815
CLTB	NM_007097	NP_009028	Coding	chr5:176416569 minus strand	317815
CMBL	NM_138809	NP_620164	Coding	chr5:10308056 minus strand	317816
CMYA5	NM_153610	NP_705838	Coding	chr5:79689835 plus strand	317817
CNOT6	NM_015455	NP_056270	Coding	chr5:180494416 plus strand	317818
CNOT8	NM_001301073	NP_001288002	Coding	chr5:154858518 plus strand	317819
CNOT8	NM_001301074	NP_001288003	Coding	chr5:154858518 plus strand	317819
CNOT8	NM_001301075	NP_001288004	Coding	chr5:154858518 plus strand	317819
CNOT8	NM_001301077	NP_001288006	Coding	chr5:154858518 plus strand	317819
CNOT8	NM_001301080	NP_001288009	Coding	chr5:154858518 plus strand	317819
CNOT8	NM_001301082	NP_001288011	Coding	chr5:154858516 plus strand	317820
CNOT8	NM_001301083	NP_001288012	Coding	chr5:154858248 plus strand	317821
CNOT8	NM_001301086	NP_001288015	Coding	chr5:154858518 plus strand	317819
CNOT8	NM_004779	NP_004770	Coding	chr5:154858518 plus strand	317819
COL23A1	NM_173465	NP_775736	Coding	chr5:178590555 minus strand	317822
COL4A3BP	NM_001130105	NP_001123577	Coding	chr5:75511981 minus strand	317823
COL4A3BP	NM_005713	NP_005704	Coding	chr5:75511629 minus strand	317824

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COL4A3BP	NM_031361	NP_112729	Coding	chr5:75511629 minus strand	317824
COMMD10	NM_016144	NP_057228	Coding	chr5:116085029 plus strand	317825
COX7C	NM_001867	NP_001858	Coding	chr5:86617966 plus strand	317826
CPEB4	NM_030627	NP_085130	Coding	chr5:173888327 plus strand	317827
CPLX2	NM_001008220	NP_001008221	Coding	chr5:175871497 plus strand	317828
CPLX2	NM_006650	NP_006641	Coding	chr5:175796606 plus strand	317829
CREBRF	NM_001168393	NP_001161865	Coding	chr5:173056351 plus strand	317830
CREBRF	NM_001168394	NP_001161866	Coding	chr5:173056351 plus strand	317830
CREBRF	NM_153607	NP_705835	Coding	chr5:173056351 plus strand	317830
CRHBP	NM_001882	NP_001873	Coding	chr5:76952854 plus strand	317831
CSF1R	NM_001288705	NP_001275634	Coding	chr5:150086640 minus strand	317832
CSF1R	NM_005211	NP_005202	Coding	chr5:150113372 minus strand	317833
CSF2	NM_000758	NP_000749	Coding	chr5:132073791 plus strand	317834
CSNK1A1	NM_001025105	NP_001020276	Coding	chr5:149551552 minus strand	317835
CSNK1A1	NM_001271741	NP_001258670	Coding	chr5:149551552 minus strand	317835
CSNK1A1	NM_001271742	NP_001258671	Coding	chr5:149550331 minus strand	317836
CSNK1A1	NM_001892	NP_001883	Coding	chr5:149551552 minus strand	317835
CSNK1G3	NM_001031812	NP_001026982	Coding	chr5:123512098 plus strand	317837
CSNK1G3	NM_001044723	NP_001038188	Coding	chr5:123545416 plus strand	317838
CSNK1G3	NM_001270572	NP_001257501	Coding	chr5:123545416 plus strand	317838
CSNK1G3	NM_001270573	NP_001257502	Coding	chr5:123512098 plus strand	317837
CSNK1G3	NM_001270574	NP_001257503	Coding	chr5:123512098 plus strand	317837
CSNK1G3	NM_004384	NP_004375	Coding	chr5:123545416 plus strand	317838
CTNNA1	NM_001290307	NP_001277236	Coding	chr5:138753395 plus strand	317839
CTNNA1	NM_001290309	NP_001277238	Coding	chr5:138753395 plus strand	317839
CTNNA1	NM_001290310	NP_001277239	Coding	chr5:138753395 plus strand	317839
CTNNA1	NM_001290312	NP_001277241	Coding	chr5:138875229 plus strand	317840
CTNNA1	NM_001903	NP_001894	Coding	chr5:138753395 plus strand	317839

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CTNND2	NM_001288715	NP_001275644	Coding	chr5:11588917 minus strand	317841
CTNND2	NM_001288716	NP_001275645	Coding	chr5:11588917 minus strand	317841
CTNND2	NM_001288717	NP_001275646	Coding	chr5:11904043 minus strand	317842
CTNND2	NM_001332	NP_001323	Coding	chr5:11904043 minus strand	317842
CTXN3	NM_001048252	NP_001041717	Coding	chr5:127649020 plus strand	317843
CTXN3	NM_001127385	NP_001120857	Coding	chr5:127653014 plus strand	317844
CWC27	NM_001297644	NP_001284573	Coding	chr5:64768917 plus strand	317845
CWC27	NM_001297645	NP_001284574	Coding	chr5:64768917 plus strand	317845
CWC27	NM_005869	NP_005860	Coding	chr5:64768917 plus strand	317845
CXCL14	NM_004887	NP_004878	Coding	chr5:135579279 minus strand	317846
CXXC5	NM_016463	NP_057547	Coding	chr5:139648715 plus strand	317847
CYFIP2	NM_001037333	NP_001032410	Coding	chr5:157266079 plus strand	317848
CYFIP2	NM_001291721	NP_001278650	Coding	chr5:157266079 plus strand	317848
CYFIP2	NM_001291722	NP_001278651	Coding	chr5:157266079 plus strand	317848
CYFIP2	NM_014376	NP_055191	Coding	chr5:157269341 plus strand	317849
CYSTM1	NM_032412	NP_115788	Coding	chr5:140175067 plus strand	317850
DAB2	NM_001244871	NP_001231800	Coding	chr5:39425233 minus strand	317851
DAB2	NM_001343	NP_001334	Coding	chr5:39425233 minus strand	317851
DAP	NM_001291963	NP_001278892	Coding	chr5:10761275 minus strand	317852
DAP	NM_004394	NP_004385	Coding	chr5:10761275 minus strand	317852
DBN1	NM_004395	NP_004386	Coding	chr5:177473693 minus strand	317853
DBN1	NM_080881	NP_543157	Coding	chr5:177472870 minus strand	317854
DCANP1	NM_130848	NP_570900	Coding	chr5:135447348 minus strand	317855
DCP2	NM_001242377	NP_001229306	Coding	chr5:112976709 plus strand	317856
DCP2	NM_152624	NP_689837	Coding	chr5:112976709 plus strand	317856
DCTN4	NM_001135643	NP_001129115	Coding	chr5:150759095 minus strand	317857
DCTN4	NM_001135644	NP_001129116	Coding	chr5:150758520 minus strand	317858
DCTN4	NM_016221	NP_057305	Coding	chr5:150759095 minus strand	317857

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DDX4	NM_001142549	NP_001136021	Coding	chr5:55738016 plus strand	317859
DDX4	NM_001166533	NP_001160005	Coding	chr5:55738016 plus strand	317859
DDX4	NM_001166534	NP_001160006	Coding	chr5:55766884 plus strand	317860
DDX4	NM_024415	NP_077726	Coding	chr5:55738016 plus strand	317859
DDX41	NM_016222	NP_057306	Coding	chr5:177516966 minus strand	317861
DDX46	NM_001300860	NP_001287789	Coding	chr5:134758733 plus strand	317862
DDX46	NM_014829	NP_055644	Coding	chr5:134758733 plus strand	317862
DEPDC1B	NM_001145208	NP_001138680	Coding	chr5:60700166 minus strand	317863
DEPDC1B	NM_018369	NP_060839	Coding	chr5:60700166 minus strand	317863
DHFR	NM_000791	NP_000782	Coding	chr5:80654981 minus strand	317864
DHFR	NM_001290354	NP_001277283	Coding	chr5:80654981 minus strand	317864
DHFR	NM_001290357	NP_001277286	Coding	chr5:80654981 minus strand	317864
DHX29	NM_019030	NP_061903	Coding	chr5:55307693 minus strand	317865
DIAPH1	NM_001079812	NP_001073280	Coding	chr5:141619055 minus strand	317866
DIAPH1	NM_005219	NP_005210	Coding	chr5:141619055 minus strand	317866
DIMT1	NM_014473	NP_055288	Coding	chr5:62403901 minus strand	317867
DMGDH	NM_013391	NP_037523	Coding	chr5:79069674 minus strand	317868
DMXL1	NM_001290321	NP_001277250	Coding	chr5:119071086 plus strand	317869
DMXL1	NM_001290322	NP_001277251	Coding	chr5:119071086 plus strand	317869
DMXL1	NM_005509	NP_005500	Coding	chr5:119071086 plus strand	317869
DNAH5	NM_001369	NP_001360	Coding	chr5:13944480 minus strand	317870
DNAJC18	NM_152686	NP_689899	Coding	chr5:139439525 minus strand	317871
DNAJC21	NM_001012339	NP_001012339	Coding	chr5:34929592 plus strand	317872
DNAJC21	NM_194283	NP_919259	Coding	chr5:34929592 plus strand	317872
DND1	NM_194249	NP_919225	Coding	chr5:140673586 minus strand	317873
DOCK2	NM_004946	NP_004937	Coding	chr5:169637246 plus strand	317874
DOK3	NM_001144875	NP_001138347	Coding	chr5:177510426 minus strand	317875
DOK3	NM_001144876	NP_001138348	Coding	chr5:177510426 minus strand	317875
DOK3	NM_024872	NP_079148	Coding	chr5:177509857 minus strand	317876

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DPYSL3	NM_001197294	NP_001184223	Coding	chr5:147510056 minus strand	317877
DPYSL3	NM_001387	NP_001378	Coding	chr5:147453697 minus strand	317878
DRD1	NM_000794	NP_000785	Coding	chr5:175444160 minus strand	317879
DROSHA	NM_001100412	NP_001093882	Coding	chr5:31532175 minus strand	317880
DROSHA	NM_013235	NP_037367	Coding	chr5:31532175 minus strand	317880
DTWD2	NM_173666	NP_775937	Coding	chr5:118988545 minus strand	317881
DUSP1	NM_004417	NP_004408	Coding	chr5:172771200 minus strand	317882
EBF1	NM_001290360	NP_001277289	Coding	chr5:159099780 minus strand	317883
EBF1	NM_024007	NP_076870	Coding	chr5:159099780 minus strand	317883
EBF1	NM_182708	NP_874367	Coding	chr5:159099780 minus strand	317883
ECSCR	NM_001077693	NP_001071161	Coding	chr5:139462743 minus strand	317884
ECSCR	NM_001293739	NP_001280668	Coding	chr5:139462743 minus strand	317884
EDIL3	NM_001278642	NP_001265571	Coding	chr5:84384867 minus strand	317885
EDIL3	NM_005711	NP_005702	Coding	chr5:84384867 minus strand	317885
EFCAB9	NM_001171183	NP_001164654	Coding	chr5:172194171 plus strand	317886
EFNA5	NM_001962	NP_001953	Coding	chr5:107670895 minus strand	317887
EGFLAM	NM_001205301	NP_001192230	Coding	chr5:38258408 plus strand	317888
EGFLAM	NM_152403	NP_689616	Coding	chr5:38258408 plus strand	317888
EGFLAM	NM_182798	NP_877950	Coding	chr5:38403531 plus strand	317889
EGFLAM	NM_182801	NP_877953	Coding	chr5:38445475 plus strand	317890
EGR1	NM_001964	NP_001955	Coding	chr5:138465491 plus strand	317891
EIF4E1B	NM_001099408	NP_001092878	Coding	chr5:176630681 plus strand	317892
EIF4EBP3	NM_003732	NP_003723	Coding	chr5:140547665 plus strand	317893
ELL2	NM_012081	NP_036213	Coding	chr5:95962071 minus strand	317894
ELOVL7	NM_001104558	NP_001098028	Coding	chr5:60844274 minus strand	317895
ELOVL7	NM_001297617	NP_001284546	Coding	chr5:60844274 minus strand	317895
ELOVL7	NM_001297618	NP_001284547	Coding	chr5:60844274 minus strand	317895
ELOVL7	NM_024930	NP_079206	Coding	chr5:60844274 minus strand	317895
EMB	NM_198449	NP_940851	Coding	chr5:50441400 minus	317896

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				strand	
ENC1	NM_001256574	NP_001243503	Coding	chr5:74641424 minus strand	317897
ENC1	NM_001256575	NP_001243504	Coding	chr5:74641424 minus strand	317897
ENC1	NM_001256576	NP_001243505	Coding	chr5:74641424 minus strand	317897
ENC1	NM_003633	NP_003624	Coding	chr5:74641424 minus strand	317897
EPB41L4A	NM_022140	NP_071423	Coding	chr5:112419313 minus strand	317898
ERAP1	NM_001040458	NP_001035548	Coding	chr5:96808189 minus strand	317899
ERAP1	NM_001198541	NP_001185470	Coding	chr5:96814145 minus strand	317900
ERAP1	NM_016442	NP_057526	Coding	chr5:96808189 minus strand	317899
ERAP2	NM_001130140	NP_001123612	Coding	chr5:96875939 plus strand	317901
ERAP2	NM_022350	NP_071745	Coding	chr5:96875939 plus strand	317901
ERBB2IP	NM_001006600	NP_001006600	Coding	chr5:65926553 plus strand	317902
ERBB2IP	NM_001253697	NP_001240626	Coding	chr5:65926553 plus strand	317902
ERBB2IP	NM_001253698	NP_001240627	Coding	chr5:65926553 plus strand	317902
ERBB2IP	NM_001253699	NP_001240628	Coding	chr5:65926553 plus strand	317902
ERBB2IP	NM_001253701	NP_001240630	Coding	chr5:65926553 plus strand	317902
ERBB2IP	NM_018695	NP_061165	Coding	chr5:65926553 plus strand	317902
ERCC8	NM_000082	NP_000073	Coding	chr5:60945078 minus strand	317903
ERCC8	NM_001007233	NP_001007234	Coding	chr5:60945078 minus strand	317903
ERCC8	NM_001007234	NP_001007235	Coding	chr5:60945078 minus strand	317903
ERCC8	NM_001290285	NP_001277214	Coding	chr5:60945078 minus strand	317903
ERGIC1	NM_001031711	NP_001026881	Coding	chr5:172834219 plus strand	317904
ESM1	NM_001135604	NP_001129076	Coding	chr5:54985586 minus strand	317905
ESM1	NM_007036	NP_008967	Coding	chr5:54985586 minus strand	317905
ETF1	NM_001256302	NP_001243231	Coding	chr5:138543300 minus strand	317906
ETF1	NM_001282185	NP_001269114	Coding	chr5:138541711 minus strand	317907
ETF1	NM_001291974	NP_001278903	Coding	chr5:138541711 minus strand	317907
ETF1	NM_001291975	NP_001278904	Coding	chr5:138543300 minus strand	317906
ETF1	NM_004730	NP_004721	Coding	chr5:138543300 minus strand	317906
EXOC3	NM_007277	NP_009208	Coding	chr5:443218 plus strand	317908
F12	NM_000505	NP_000496	Coding	chr5:177409576 minus	317909

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				strand	
F2R	NM_001992	NP_001983	Coding	chr5:76716042 plus strand	317910
F2RL1	NM_005242	NP_005233	Coding	chr5:76819007 plus strand	317911
F2RL2	NM_001256566	NP_001243495	Coding	chr5:76623413 minus strand	317912
F2RL2	NM_004101	NP_004092	Coding	chr5:76623434 minus strand	317913
FABP6	NM_001040442	NP_001035532	Coding	chr5:160199040 plus strand	317914
FABP6	NM_001130958	NP_001124430	Coding	chr5:160187366 plus strand	317915
FABP6	NM_001445	NP_001436	Coding	chr5:160229429 plus strand	317916
FAF2	NM_014613	NP_055428	Coding	chr5:176448354 plus strand	317917
FAM105A	NM_019018	NP_061891	Coding	chr5:14581781 plus strand	317918
FAM114A2	NM_018691	NP_061161	Coding	chr5:154038937 minus strand	317919
FAM134B	NM_001034850	NP_001030022	Coding	chr5:16617058 minus strand	317920
FAM134B	NM_019000	NP_061873	Coding	chr5:16508998 minus strand	317921
FAM13B	NM_001101800	NP_001095270	Coding	chr5:138033113 minus strand	317922
FAM13B	NM_001101801	NP_001095271	Coding	chr5:138033113 minus strand	317922
FAM13B	NM_016603	NP_057687	Coding	chr5:138033113 minus strand	317922
FAM151B	NM_205548	NP_991111	Coding	chr5:80487980 plus strand	317923
FAM153A	NM_173663	NP_775934	Coding	chr5:177780504 minus strand	317924
FAM153B	NM_001265615	NP_001252544	Coding	chr5:176063708 plus strand	317925
FAM159B	NM_001164442	NP_001157914	Coding	chr5:64690307 plus strand	317926
FAM169A	NM_015566	NP_056381	Coding	chr5:74866838 minus strand	317927
FAM170A	NM_001163991	NP_001157463	Coding	chr5:119629558 plus strand	317928
FAM170A	NM_182761	NP_877438	Coding	chr5:119629558 plus strand	317928
FAM172A	NM_001163417	NP_001156889	Coding	chr5:94111699 minus strand	317929
FAM172A	NM_001163418	NP_001156890	Coding	chr5:94111699 minus strand	317929
FAM172A	NM_032042	NP_114431	Coding	chr5:94111699 minus strand	317929
FAM173B	NM_001258388	NP_001245317	Coding	chr5:10249909 minus strand	317930
FAM173B	NM_001258389	NP_001245318	Coding	chr5:10249909 minus strand	317930
FAM173B	NM_199133	NP_954584	Coding	chr5:10249909 minus strand	317930

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FAM174A	NM_198507	NP_940909	Coding	chr5:100535419 plus strand	317931
FAM193B	NM_001190946	NP_001177875	Coding	chr5:177554547 minus strand	317932
FAM196B	NM_001129891	NP_001123363	Coding	chr5:169980740 minus strand	317933
FAM53C	NM_001135647	NP_001129119	Coding	chr5:138337534 plus strand	317934
FAM53C	NM_016605	NP_057689	Coding	chr5:138338014 plus strand	317935
FAM71B	NM_130899	NP_570969	Coding	chr5:157166268 minus strand	317936
FAM81B	NM_152548	NP_689761	Coding	chr5:95391343 plus strand	317937
FASTKD3	NM_024091	NP_076996	Coding	chr5:7869037 minus strand	317938
FAT2	NM_001447	NP_001438	Coding	chr5:151568944 minus strand	317939
FAXDC2	NM_032385	NP_115761	Coding	chr5:154850653 minus strand	317940
FBN2	NM_001999	NP_001990	Coding	chr5:128538042 minus strand	317941
FBXL17	NM_001163315	NP_001156787	Coding	chr5:108382098 minus strand	317942
FBXL21	NM_012159	NP_036291	Coding	chr5:135930316 plus strand	317943
FBXL7	NM_001278317	NP_001265246	Coding	chr5:15501437 plus strand	317944
FBXL7	NM_012304	NP_036436	Coding	chr5:15500195 plus strand	317945
FBXO38	NM_001271723	NP_001258652	Coding	chr5:148383934 plus strand	317946
FBXO38	NM_030793	NP_110420	Coding	chr5:148383934 plus strand	317946
FBXO4	NM_001297437	NP_001284366	Coding	chr5:41925251 plus strand	317947
FBXO4	NM_012176	NP_036308	Coding	chr5:41925253 plus strand	317948
FBXO4	NM_033484	NP_277019	Coding	chr5:41925253 plus strand	317948
FBXW11	NM_012300	NP_036432	Coding	chr5:172006873 minus strand	317949
FBXW11	NM_033644	NP_387448	Coding	chr5:172006873 minus strand	317949
FBXW11	NM_033645	NP_387449	Coding	chr5:172006873 minus strand	317949
FCHO2	NM_001146032	NP_001139504	Coding	chr5:72955980 plus strand	317950
FCHO2	NM_138782	NP_620137	Coding	chr5:72955980 plus strand	317950
FCHSD1	NM_033449	NP_258260	Coding	chr5:141651419 minus strand	317951
FEM1C	NM_020177	NP_064562	Coding	chr5:115544894 minus strand	317952
FER	NM_005246	NP_005237	Coding	chr5:108747821 plus strand	317953
FGF1	NM_000800	NP_000791	Coding	chr5:142686495 minus strand	317954
FGF1	NM_001144892	NP_001138364	Coding	chr5:142621355 minus strand	317955

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FGF1	NM_001144934	NP_001138406	Coding	chr5:142698070 minus strand	317956
FGF1	NM_001144935	NP_001138407	Coding	chr5:142698070 minus strand	317956
FGF1	NM_001257205	NP_001244134	Coding	chr5:142698070 minus strand	317956
FGF1	NM_001257206	NP_001244135	Coding	chr5:142698070 minus strand	317956
FGF1	NM_001257207	NP_001244136	Coding	chr5:142686495 minus strand	317954
FGF1	NM_001257208	NP_001244137	Coding	chr5:142685703 minus strand	317957
FGF1	NM_001257209	NP_001244138	Coding	chr5:142685703 minus strand	317957
FGF1	NM_001257210	NP_001244139	Coding	chr5:142644301 minus strand	317958
FGF1	NM_001257211	NP_001244140	Coding	chr5:142685703 minus strand	317957
FGF1	NM_001257212	NP_001244141	Coding	chr5:142621355 minus strand	317955
FGF1	NM_033136	NP_149127	Coding	chr5:142686495 minus strand	317954
FGF1	NM_033137	NP_149128	Coding	chr5:142614161 minus strand	317959
FGF10	NM_004465	NP_004456	Coding	chr5:44388682 minus strand	317960
FGF18	NM_003862	NP_003853	Coding	chr5:171419662 plus strand	317961
FGFR4	NM_001291980	NP_001278909	Coding	chr5:177086871 plus strand	317962
FGFR4	NM_002011	NP_002002	Coding	chr5:177086871 plus strand	317962
FGFR4	NM_022963	NP_075252	Coding	chr5:177089549 plus strand	317963
FGFR4	NM_213647	NP_998812	Coding	chr5:177086871 plus strand	317962
FLT4	NM_002020	NP_002011	Coding	chr5:180649624 minus strand	317964
FLT4	NM_182925	NP_891555	Coding	chr5:180649624 minus strand	317964
FNDC9	NM_001001343	NP_001001343	Coding	chr5:157345721 minus strand	317965
FNIP1	NM_001008738	NP_001008738	Coding	chr5:131797063 minus strand	317966
FNIP1	NM_133372	NP_588613	Coding	chr5:131797063 minus strand	317966
FOXD1	NM_004472	NP_004463	Coding	chr5:73448527 minus strand	317967
FOXI1	NM_012188	NP_036320	Coding	chr5:170105912 plus strand	317968
FOXI1	NM_144769	NP_658982	Coding	chr5:170105912 plus strand	317968
FST	NM_006350	NP_006341	Coding	chr5:53480433 plus strand	317969
FST	NM_013409	NP_037541	Coding	chr5:53480433 plus strand	317969

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FSTL4	NM_015082	NP_055897	Coding	chr5:133612532 minus strand	317970
FTMT	NM_177478	NP_803431	Coding	chr5:121851954 plus strand	317971
FYB	NM_001243093	NP_001230022	Coding	chr5:39270657 minus strand	317972
FYB	NM_001465	NP_001456	Coding	chr5:39219578 minus strand	317973
FYB	NM_199335	NP_955367	Coding	chr5:39219578 minus strand	317973
G3BP1	NM_005754	NP_005745	Coding	chr5:151771914 plus strand	317974
G3BP1	NM_198395	NP_938405	Coding	chr5:151771914 plus strand	317974
GABRA1	NM_000806	NP_000797	Coding	chr5:161847190 plus strand	317975
GABRA1	NM_001127643	NP_001121115	Coding	chr5:161847678 plus strand	317976
GABRA1	NM_001127644	NP_001121116	Coding	chr5:161847933 plus strand	317977
GABRA1	NM_001127645	NP_001121117	Coding	chr5:161848535 plus strand	317978
GABRA1	NM_001127648	NP_001121120	Coding	chr5:161850696 plus strand	317979
GABRA6	NM_000811	NP_000802	Coding	chr5:161685651 plus strand	317980
GABRB2	NM_000813	NP_000804	Coding	chr5:161548124 minus strand	317981
GABRB2	NM_021911	NP_068711	Coding	chr5:161548124 minus strand	317981
GABRG2	NM_000816	NP_000807	Coding	chr5:162067641 plus strand	317982
GABRG2	NM_198903	NP_944493	Coding	chr5:162067641 plus strand	317982
GABRG2	NM_198904	NP_944494	Coding	chr5:162067641 plus strand	317982
GABRP	NM_001291985	NP_001278914	Coding	chr5:170783718 plus strand	317983
GABRP	NM_014211	NP_055026	Coding	chr5:170783718 plus strand	317983
GALNT10	NM_198321	NP_938080	Coding	chr5:154190734 plus strand	317984
GAPT	NM_152687	NP_689900	Coding	chr5:58491502 plus strand	317985
GCNT4	NM_016591	NP_057675	Coding	chr5:75030899 minus strand	317986
GDF9	NM_001288824	NP_001275753	Coding	chr5:132866884 minus strand	317987
GDF9	NM_001288825	NP_001275754	Coding	chr5:132866884 minus strand	317987
GDF9	NM_001288826	NP_001275755	Coding	chr5:132866579 minus strand	317988
GDF9	NM_001288827	NP_001275756	Coding	chr5:132866330 minus strand	317989
GDF9	NM_001288828	NP_001275757	Coding	chr5:132866579 minus	317988

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				strand	
GDF9	NM_005260	NP_005251	Coding	chr5:132864533 minus strand	317990
GDNF	NM_000514	NP_000505	Coding	chr5:37839680 minus strand	317991
GDNF	NM_001190468	NP_001177397	Coding	chr5:37835827 minus strand	317992
GDNF	NM_001190469	NP_001177398	Coding	chr5:37835827 minus strand	317992
GDNF	NM_001278098	NP_001265027	Coding	chr5:37834822 minus strand	317993
GDNF	NM_199231	NP_954701	Coding	chr5:37835491 minus strand	317994
GDNF-AS1	NM_001278094	NP_001265023	Coding	chr5:37873424 plus strand	317995
GEMIN5	NM_001252156	NP_001239085	Coding	chr5:154938216 minus strand	317996
GEMIN5	NM_015465	NP_056280	Coding	chr5:154938216 minus strand	317996
GFM2	NM_001281302	NP_001268231	Coding	chr5:74767371 minus strand	317997
GFM2	NM_032380	NP_115756	Coding	chr5:74767371 minus strand	317997
GFM2	NM_170681	NP_733781	Coding	chr5:74767371 minus strand	317997
GFM2	NM_170691	NP_733792	Coding	chr5:74767371 minus strand	317997
GFPT2	NM_005110	NP_005101	Coding	chr5:180353315 minus strand	317998
GFRA3	NM_001496	NP_001487	Coding	chr5:138274564 minus strand	317999
GHR	NM_000163	NP_000154	Coding	chr5:42423774 plus strand	318000
GHR	NM_001242399	NP_001229328	Coding	chr5:42424451 plus strand	318001
GHR	NM_001242400	NP_001229329	Coding	chr5:42424451 plus strand	318001
GHR	NM_001242401	NP_001229330	Coding	chr5:42424991 plus strand	318002
GHR	NM_001242402	NP_001229331	Coding	chr5:42548042 plus strand	318003
GHR	NM_001242403	NP_001229332	Coding	chr5:42548212 plus strand	318004
GHR	NM_001242404	NP_001229333	Coding	chr5:42549555 plus strand	318005
GHR	NM_001242405	NP_001229334	Coding	chr5:42550079 plus strand	318006
GHR	NM_001242406	NP_001229335	Coding	chr5:42565460 plus strand	318007
GHR	NM_001242460	NP_001229389	Coding	chr5:42565863 plus strand	318008
GHR	NM_001242462	NP_001229391	Coding	chr5:42565863 plus strand	318008
GIN1	NM_017676	NP_060146	Coding	chr5:103120138 minus strand	318009
GLRA1	NM_000171	NP_000162	Coding	chr5:151924836 minus strand	318010
GLRA1	NM_001146040	NP_001139512	Coding	chr5:151924836 minus strand	318010
GLRA1	NM_001292000	NP_001278929	Coding	chr5:151924836 minus strand	318010
GLRX	NM_001118890	NP_001112362	Coding	chr5:95822873 minus	318011

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				strand	
GLRX	NM_001243658	NP_001230587	Coding	chr5:95822873 minus strand	318011
GLRX	NM_001243659	NP_001230588	Coding	chr5:95822873 minus strand	318011
GLRX	NM_002064	NP_002055	Coding	chr5:95822873 minus strand	318011
GM2A	NM_000405	NP_000396	Coding	chr5:151253051 plus strand	318012
GM2A	NM_001167607	NP_001161079	Coding	chr5:151253051 plus strand	318012
GNB2L1	NM_006098	NP_006089	Coding	chr5:181243906 minus strand	318013
GNPDA1	NM_005471	NP_005462	Coding	chr5:142013055 minus strand	318014
GOLPH3	NM_022130	NP_071413	Coding	chr5:32174319 minus strand	318015
GPBP1	NM_001127235	NP_001120707	Coding	chr5:57175447 plus strand	318016
GPBP1	NM_001127236	NP_001120708	Coding	chr5:57214073 plus strand	318017
GPBP1	NM_001203246	NP_001190175	Coding	chr5:57173947 plus strand	318018
GPBP1	NM_022913	NP_075064	Coding	chr5:57173947 plus strand	318018
GPR150	NM_199243	NP_954713	Coding	chr5:95620275 plus strand	318019
GPR151	NM_194251	NP_919227	Coding	chr5:146516113 minus strand	318020
GPR98	NM_032119	NP_115495	Coding	chr5:90558799 plus strand	318021
GPRIN1	NM_052899	NP_443131	Coding	chr5:176610130 minus strand	318022
GPX3	NM_002084	NP_002075	Coding	chr5:151020437 plus strand	318023
GPX8	NM_001008397	NP_001008398	Coding	chr5:55160155 plus strand	318024
GRAMD3	NM_001146319	NP_001139791	Coding	chr5:126360095 plus strand	318025
GRAMD3	NM_001146320	NP_001139792	Coding	chr5:126423176 plus strand	318026
GRAMD3	NM_001146321	NP_001139793	Coding	chr5:126423176 plus strand	318026
GRAMD3	NM_001146322	NP_001139794	Coding	chr5:126465094 plus strand	318027
GRAMD3	NM_023927	NP_076416	Coding	chr5:126423176 plus strand	318026
GRIA1	NM_000827	NP_000818	Coding	chr5:153490523 plus strand	318028
GRIA1	NM_001114183	NP_001107655	Coding	chr5:153490523 plus strand	318028
GRIA1	NM_001258019	NP_001244948	Coding	chr5:153490523 plus strand	318028
GRIA1	NM_001258020	NP_001244949	Coding	chr5:153490523 plus strand	318028
GRIA1	NM_001258021	NP_001244950	Coding	chr5:153492171 plus strand	318029
GRIA1	NM_001258022	NP_001244951	Coding	chr5:153492171 plus strand	318029

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GRIA1	NM_001258023	NP_001244952	Coding	chr5:153491296 plus strand	318030
GRK6	NM_001004105	NP_001004105	Coding	chr5:177426685 plus strand	318031
GRK6	NM_001004106	NP_001004106	Coding	chr5:177426685 plus strand	318031
GRK6	NM_002082	NP_002073	Coding	chr5:177426685 plus strand	318031
GRM6	NM_000843	NP_000834	Coding	chr5:178995123 minus strand	318032
GRPEL2	NM_152407	NP_689620	Coding	chr5:149345413 plus strand	318033
GRXCR2	NM_001080516	NP_001073985	Coding	chr5:145872968 minus strand	318034
GTF2H2	NM_001515	NP_001506	Coding	chr5:70415373 plus strand	318035
GTF2H2	NM_001515	NP_001506	Coding	chr5:71067670 minus strand	318036
GTF2H2C	NM_001098728	NP_001092198	Coding	chr5:69560223 plus strand	318037
GTF2H2C	NM_001098728	NP_001092198	Coding	chr5:71067673 minus strand	318038
GTF2H2C_2	NM_001042490	NP_001035955	Coding	chr5:69560246 plus strand	318039
GTF2H2C_2	NM_001042490	NP_001035955	Coding	chr5:71067650 minus strand	318040
GZMA	NM_006144	NP_006135	Coding	chr5:55102645 plus strand	318041
GZMK	NM_002104	NP_002095	Coding	chr5:55024278 plus strand	318042
H2AFY	NM_001040158	NP_001035248	Coding	chr5:135399238 minus strand	318043
H2AFY	NM_004893	NP_004884	Coding	chr5:135399887 minus strand	318044
H2AFY	NM_138609	NP_613075	Coding	chr5:135399238 minus strand	318043
H2AFY	NM_138610	NP_613258	Coding	chr5:135399238 minus strand	318043
HAND1	NM_004821	NP_004812	Coding	chr5:154478264 minus strand	318045
HAPLN1	NM_001884	NP_001875	Coding	chr5:83721077 minus strand	318046
HARS	NM_001258040	NP_001244969	Coding	chr5:140691727 minus strand	318047
HARS	NM_001258041	NP_001244970	Coding	chr5:140691727 minus strand	318047
HARS	NM_001258042	NP_001244971	Coding	chr5:140691727 minus strand	318047
HARS	NM_001289092	NP_001276021	Coding	chr5:140691727 minus strand	318047
HARS	NM_001289093	NP_001276022	Coding	chr5:140691727 minus strand	318047
HARS	NM_001289094	NP_001276023	Coding	chr5:140691727 minus strand	318047
HARS	NM_002109	NP_002100	Coding	chr5:140691727 minus strand	318047
HARS2	NM_001278731	NP_001265660	Coding	chr5:140691425 plus strand	318048

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HARS2	NM_001278732	NP_001265661	Coding	chr5:140691425 plus strand	318048
HARS2	NM_012208	NP_036340	Coding	chr5:140691425 plus strand	318048
HAVCR1	NM_001099414	NP_001092884	Coding	chr5:157058476 minus strand	318049
HAVCR1	NM_001173393	NP_001166864	Coding	chr5:157058959 minus strand	318050
HAVCR1	NM_012206	NP_036338	Coding	chr5:157058476 minus strand	318049
HAVCR2	NM_032782	NP_116171	Coding	chr5:157109237 minus strand	318051
HBEGF	NM_001945	NP_001936	Coding	chr5:140346603 minus strand	318052
HCN1	NM_021072	NP_066550	Coding	chr5:45696118 minus strand	318053
HDAC3	NM_003883	NP_003874	Coding	chr5:141636856 minus strand	318054
HEXB	NM_000521	NP_000512	Coding	chr5:74685143 plus strand	318055
HEXB	NM_001292004	NP_001278933	Coding	chr5:74640022 plus strand	318056
HIGD2A	NM_138820	NP_620175	Coding	chr5:176388782 plus strand	318057
HINT1	NM_005340	NP_005331	Coding	chr5:131165348 minus strand	318058
HK3	NM_002115	NP_002106	Coding	chr5:176899332 minus strand	318059
HMGCR	NM_000859	NP_000850	Coding	chr5:75337167 plus strand	318060
HMGCR	NM_001130996	NP_001124468	Coding	chr5:75337167 plus strand	318060
HMGCS1	NM_001098272	NP_001091742	Coding	chr5:43313512 minus strand	318061
HMGCS1	NM_002130	NP_002121	Coding	chr5:43313512 minus strand	318061
HMGXB3	NM_014983	NP_055798	Coding	chr5:150000605 plus strand	318062
HMHB1	NM_021182	NP_067005	Coding	chr5:143812160 plus strand	318063
HMMR	NM_001142556	NP_001136028	Coding	chr5:163460510 plus strand	318064
HMMR	NM_001142557	NP_001136029	Coding	chr5:163460510 plus strand	318064
HMMR	NM_012484	NP_036616	Coding	chr5:163460510 plus strand	318064
HMMR	NM_012485	NP_036617	Coding	chr5:163460510 plus strand	318064
HMP19	NM_015980	NP_057064	Coding	chr5:174045603 plus strand	318065
HNRNPA0	NM_006805	NP_006796	Coding	chr5:137754350 minus strand	318066
HNRNPAB	NM_004499	NP_004490	Coding	chr5:178204506 plus strand	318067
HNRNPAB	NM_031266	NP_112556	Coding	chr5:178204506 plus strand	318067
HNRNPH1	NM_001257293	NP_001244222	Coding	chr5:179623710 minus	318068

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				strand	
HNRNPH1	NM_005520	NP_005511	Coding	chr5:179623721 minus strand	318069
HOMER1	NM_001277077	NP_001264006	Coding	chr5:79513836 minus strand	318070
HOMER1	NM_001277078	NP_001264007	Coding	chr5:79513836 minus strand	318070
HOMER1	NM_004272	NP_004263	Coding	chr5:79513836 minus strand	318070
HRH2	NM_001131055	NP_001124527	Coding	chr5:175658036 plus strand	318071
HRH2	NM_022304	NP_071640	Coding	chr5:175681460 plus strand	318072
HSD17B4	NM_000414	NP_000405	Coding	chr5:119452442 plus strand	318073
HSD17B4	NM_001199291	NP_001186220	Coding	chr5:119452496 plus strand	318074
HSD17B4	NM_001199292	NP_001186221	Coding	chr5:119452442 plus strand	318073
HSD17B4	NM_001292027	NP_001278956	Coding	chr5:119452442 plus strand	318073
HSD17B4	NM_001292028	NP_001278957	Coding	chr5:119452496 plus strand	318074
HSPA4	NM_002154	NP_002145	Coding	chr5:133051969 plus strand	318075
HSPA9	NM_004134	NP_004125	Coding	chr5:138575629 minus strand	318076
HSPB3	NM_006308	NP_006299	Coding	chr5:54455600 plus strand	318077
HTR1A	NM_000524	NP_000515	Coding	chr5:63962292 minus strand	318078
HTR4	NM_000870	NP_000861	Coding	chr5:148654527 minus strand	318079
HTR4	NM_001040169	NP_001035259	Coding	chr5:148637061 minus strand	318080
HTR4	NM_001040172	NP_001035262	Coding	chr5:148637061 minus strand	318080
HTR4	NM_001040173	NP_001035263	Coding	chr5:148637061 minus strand	318080
HTR4	NM_001286410	NP_001273339	Coding	chr5:148637061 minus strand	318080
HTR4	NM_199453	NP_955525	Coding	chr5:148637061 minus strand	318080
ICE1	NM_015325	NP_056140	Coding	chr5:5422672 plus strand	318081
IGIP	NM_001007189	NP_001007190	Coding	chr5:140125935 plus strand	318082
IK	NM_006083	NP_006074	Coding	chr5:140647798 plus strand	318083
IL12B	NM_002187	NP_002178	Coding	chr5:159330473 minus strand	318084
IL13	NM_002188	NP_002179	Coding	chr5:132658172 plus strand	318085
IL17B	NM_014443	NP_055258	Coding	chr5:149379275 minus strand	318086

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IL3	NM_000588	NP_000579	Coding	chr5:132060653 plus strand	318087
IL31RA	NM_001242636	NP_001229565	Coding	chr5:55853321 plus strand	318088
IL31RA	NM_001242637	NP_001229566	Coding	chr5:55851378 plus strand	318089
IL31RA	NM_001242638	NP_001229567	Coding	chr5:55851378 plus strand	318089
IL31RA	NM_001242639	NP_001229568	Coding	chr5:55853321 plus strand	318088
IL31RA	NM_001297570	NP_001284499	Coding	chr5:55851378 plus strand	318089
IL31RA	NM_001297572	NP_001284501	Coding	chr5:55851378 plus strand	318089
IL31RA	NM_139017	NP_620586	Coding	chr5:55851378 plus strand	318089
IL4	NM_000589	NP_000580	Coding	chr5:132673985 plus strand	318090
IL4	NM_172348	NP_758858	Coding	chr5:132673985 plus strand	318090
IL5	NM_000879	NP_000870	Coding	chr5:132543522 minus strand	318091
IL6ST	NM_001190981	NP_001177910	Coding	chr5:55994993 minus strand	318092
IL6ST	NM_002184	NP_002175	Coding	chr5:55994993 minus strand	318092
IL6ST	NM_175767	NP_786943	Coding	chr5:55994993 minus strand	318092
IL7R	NM_002185	NP_002176	Coding	chr5:35856874 plus strand	318093
IL9	NM_000590	NP_000581	Coding	chr5:135895827 minus strand	318094
IPO11	NM_001134779	NP_001128251	Coding	chr5:62418883 plus strand	318095
IPO11	NM_016338	NP_057422	Coding	chr5:62412745 plus strand	318096
IQGAP2	NM_001285460	NP_001272389	Coding	chr5:76547408 plus strand	318097
IQGAP2	NM_001285461	NP_001272390	Coding	chr5:76609094 plus strand	318098
IQGAP2	NM_001285462	NP_001272391	Coding	chr5:76609094 plus strand	318098
IQGAP2	NM_006633	NP_006624	Coding	chr5:76403254 plus strand	318099
IRF1	NM_002198	NP_002189	Coding	chr5:132490773 minus strand	318100
IRGM	NM_001145805	NP_001139277	Coding	chr5:150846522 plus strand	318101
IRX1	NM_024337	NP_077313	Coding	chr5:3596053 plus strand	318102
IRX2	NM_001134222	NP_001127694	Coding	chr5:2751655 minus strand	318103
IRX2	NM_033267	NP_150366	Coding	chr5:2751655 minus strand	318103
IRX4	NM_001278632	NP_001265561	Coding	chr5:1887179 minus strand	318104
IRX4	NM_001278633	NP_001265562	Coding	chr5:1887179 minus strand	318104
IRX4	NM_001278634	NP_001265563	Coding	chr5:1886984 minus strand	318105
IRX4	NM_001278635	NP_001265564	Coding	chr5:1886984 minus strand	318105
IRX4	NM_016358	NP_057442	Coding	chr5:1882766 minus strand	318106
ISL1	NM_002202	NP_002193	Coding	chr5:51383123 plus strand	318107
ISOC1	NM_016048	NP_057132	Coding	chr5:129094748 plus strand	318108
ITGA1	NM_181501	NP_852478	Coding	chr5:52788301 plus strand	318109
ITGA2	NM_002203	NP_002194	Coding	chr5:52989325 plus strand	318110

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ITK	NM_005546	NP_005537	Coding	chr5:157180895 plus strand	318111
JADE2	NM_001289984	NP_001276913	Coding	chr5:134525649 plus strand	318112
JADE2	NM_001289985	NP_001276914	Coding	chr5:134525649 plus strand	318112
JADE2	NM_015288	NP_056103	Coding	chr5:134526107 plus strand	318113
JAKMIP2	NM_001270934	NP_001257863	Coding	chr5:147782848 minus strand	318114
JAKMIP2	NM_001270941	NP_001257870	Coding	chr5:147782848 minus strand	318114
JAKMIP2	NM_001282282	NP_001269211	Coding	chr5:147782848 minus strand	318114
JAKMIP2	NM_014790	NP_055605	Coding	chr5:147782848 minus strand	318114
JMY	NM_152405	NP_689618	Coding	chr5:79236101 plus strand	318115
KCNIP1	NM_001034837	NP_001030009	Coding	chr5:170504035 plus strand	318116
KCNIP1	NM_001034838	NP_001030010	Coding	chr5:170353486 plus strand	318117
KCNIP1	NM_001278339	NP_001265268	Coding	chr5:170504035 plus strand	318116
KCNIP1	NM_001278340	NP_001265269	Coding	chr5:170504035 plus strand	318116
KCNIP1	NM_014592	NP_055407	Coding	chr5:170504035 plus strand	318116
KCNMB1	NM_004137	NP_004128	Coding	chr5:170389677 minus strand	318118
KCNN2	NM_001278204	NP_001265133	Coding	chr5:114362318 plus strand	318119
KCNN2	NM_021614	NP_067627	Coding	chr5:114362318 plus strand	318119
KCNN2	NM_170775	NP_740721	Coding	chr5:114433529 plus strand	318120
KCTD16	NM_020768	NP_065819	Coding	chr5:144170872 plus strand	318121
KDM3B	NM_016604	NP_057688	Coding	chr5:138352595 plus strand	318122
KIAA0141	NM_001142603	NP_001136075	Coding	chr5:141923819 plus strand	318123
KIAA0141	NM_014773	NP_055588	Coding	chr5:141923819 plus strand	318123
KIAA0825	NM_001145678	NP_001139150	Coding	chr5:94618604 minus strand	318124
KIAA0825	NM_173665	NP_775936	Coding	chr5:94618604 minus strand	318124
KIAA1024L	NM_001257308	NP_001244237	Coding	chr5:129748190 plus strand	318125
KIAA1191	NM_001079684	NP_001073152	Coding	chr5:176361807 minus strand	318126
KIAA1191	NM_001079685	NP_001073153	Coding	chr5:176361807 minus strand	318126
KIAA1191	NM_001287335	NP_001274264	Coding	chr5:176361807 minus	318126

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				strand	
KIAA1191	NM_001287336	NP_001274265	Coding	chr5:176361807 minus strand	318126
KIAA1191	NM_020444	NP_065177	Coding	chr5:176361807 minus strand	318126
KIF20A	NM_005733	NP_005724	Coding	chr5:138178727 plus strand	318127
KIF2A	NM_001098511	NP_001091981	Coding	chr5:62306161 plus strand	318128
KIF2A	NM_001243952	NP_001230881	Coding	chr5:62306161 plus strand	318128
KIF2A	NM_001243953	NP_001230882	Coding	chr5:62306161 plus strand	318128
KIF2A	NM_004520	NP_004511	Coding	chr5:62306161 plus strand	318128
KIF3A	NM_001300791	NP_001287720	Coding	chr5:132737578 minus strand	318129
KIF3A	NM_001300792	NP_001287721	Coding	chr5:132737578 minus strand	318129
KIF3A	NM_007054	NP_008985	Coding	chr5:132737578 minus strand	318129
KIF4B	NM_001099293	NP_001092763	Coding	chr5:155013699 plus strand	318130
KLHL3	NM_001257194	NP_001244123	Coding	chr5:137721310 minus strand	318131
KLHL3	NM_001257195	NP_001244124	Coding	chr5:137706427 minus strand	318132
KLHL3	NM_017415	NP_059111	Coding	chr5:137736090 minus strand	318133
LARP1	NM_015315	NP_056130	Coding	chr5:154712901 plus strand	318134
LARS	NM_020117	NP_064502	Coding	chr5:146182731 minus strand	318135
LCP2	NM_005565	NP_005556	Coding	chr5:170297818 minus strand	318136
LEAP2	NM_052971	NP_443203	Coding	chr5:132873665 plus strand	318137
LECT2	NM_002302	NP_002293	Coding	chr5:135955034 minus strand	318138
LHFPL2	NM_005779	NP_005770	Coding	chr5:78648825 minus strand	318139
LIFR	NM_001127671	NP_001121143	Coding	chr5:38556646 minus strand	318140
LIFR	NM_002310	NP_002301	Coding	chr5:38595405 minus strand	318141
LIX1	NM_153234	NP_694966	Coding	chr5:97142816 minus strand	318142
LMAN2	NM_006816	NP_006807	Coding	chr5:177351884 minus strand	318143
LMBRD2	NM_001007527	NP_001007528	Coding	chr5:36151913 minus strand	318144
LMNB1	NM_001198557	NP_001185486	Coding	chr5:126777152 plus strand	318145
LMNB1	NM_005573	NP_005564	Coding	chr5:126776622 plus strand	318146
LNPEP	NM_005575	NP_005566	Coding	chr5:96935641 plus strand	318147

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LNPEP	NM_175920	NP_787116	Coding	chr5:96958451 plus strand	318148
LOC100505841	NM_001195535	NP_001182464	Coding	chr5:122160175 plus strand	318149
LOC100652758	NM_001278082	NP_001265011	Coding	chr5:151771508 minus strand	318150
LOC101928093	NM_001287812	NP_001274741	Coding	chr5:172755502 plus strand	318151
LOC101928448	NM_001287053	NP_001273982	Coding	chr5:56606232 minus strand	318152
LOC728637	NM_001278059	NP_001264988	Coding	chr5:131945698 minus strand	318153
LOX	NM_001178102	NP_001171573	Coding	chr5:122077223 minus strand	318154
LOX	NM_002317	NP_002308	Coding	chr5:122078360 minus strand	318155
LPCAT1	NM_024830	NP_079106	Coding	chr5:1523961 minus strand	318156
LRRC14B	NM_001080478	NP_001073947	Coding	chr5:191510 plus strand	318157
LRRC70	NM_181506	NP_852607	Coding	chr5:62578734 plus strand	318158
LRRTM2	NM_015564	NP_056379	Coding	chr5:138875368 minus strand	318159
LSM11	NM_173491	NP_775762	Coding	chr5:157743746 plus strand	318160
LTC4S	NM_145867	NP_665874	Coding	chr5:179793984 plus strand	318161
LYRM7	NM_001293735	NP_001280664	Coding	chr5:131170913 plus strand	318162
LYRM7	NM_181705	NP_859056	Coding	chr5:131170913 plus strand	318162
LYSMD3	NM_001286812	NP_001273741	Coding	chr5:90529584 minus strand	318163
LYSMD3	NM_198273	NP_938014	Coding	chr5:90529584 minus strand	318163
MAML1	NM_014757	NP_055572	Coding	chr5:179732849 plus strand	318164
MAN2A1	NM_002372	NP_002363	Coding	chr5:109689365 plus strand	318165
MAP1B	NM_005909	NP_005900	Coding	chr5:72107290 plus strand	318166
MAP3K1	NM_005921	NP_005912	Coding	chr5:56815072 plus strand	318167
MAPK9	NM_001135044	NP_001128516	Coding	chr5:180292071 minus strand	318168
MAPK9	NM_002752	NP_002743	Coding	chr5:180292071 minus strand	318168
MAPK9	NM_139068	NP_620707	Coding	chr5:180292071 minus strand	318168
MAPK9	NM_139069	NP_620708	Coding	chr5:180292071 minus strand	318168
MAPK9	NM_139070	NP_620709	Coding	chr5:180292071 minus strand	318168
MARCH11	NM_001102562	NP_001096032	Coding	chr5:16179788 minus strand	318169
MARCH3	NM_178450	NP_848545	Coding	chr5:127030808 minus strand	318170

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MARCH6	NM_001270660	NP_001257589	Coding	chr5:10353638 plus strand	318171
MARCH6	NM_001270661	NP_001257590	Coding	chr5:10353638 plus strand	318171
MARCH6	NM_005885	NP_005876	Coding	chr5:10353638 plus strand	318171
MARVELD2	NM_001038603	NP_001033692	Coding	chr5:69415111 plus strand	318172
MARVELD2	NM_001244734	NP_001231663	Coding	chr5:69415111 plus strand	318172
MAST4	NM_001164664	NP_001158136	Coding	chr5:66596347 plus strand	318173
MAST4	NM_001290226	NP_001277155	Coding	chr5:66958869 plus strand	318174
MAST4	NM_001290227	NP_001277156	Coding	chr5:67004619 plus strand	318175
MAST4	NM_001290228	NP_001277157	Coding	chr5:66596347 plus strand	318173
MAST4	NM_001297651	NP_001284580	Coding	chr5:67004619 plus strand	318175
MAST4	NM_015183	NP_055998	Coding	chr5:66828775 plus strand	318176
MAST4	NM_198828	NP_942123	Coding	chr5:66596347 plus strand	318173
MAT2B	NM_013283	NP_037415	Coding	chr5:163505527 plus strand	318177
MAT2B	NM_182796	NP_877725	Coding	chr5:163503063 plus strand	318178
MATR3	NM_001194954	NP_001181883	Coding	chr5:139273751 plus strand	318179
MATR3	NM_001194955	NP_001181884	Coding	chr5:139293749 plus strand	318180
MATR3	NM_001194956	NP_001181885	Coding	chr5:139293749 plus strand	318180
MATR3	NM_001282278	NP_001269207	Coding	chr5:139273751 plus strand	318179
MATR3	NM_018834	NP_061322	Coding	chr5:139293643 plus strand	318181
MATR3	NM_199189	NP_954659	Coding	chr5:139273751 plus strand	318179
MBLAC2	NM_203406	NP_981951	Coding	chr5:90474768 minus strand	318182
MCC	NM_001085377	NP_001078846	Coding	chr5:113488830 minus strand	318183
MCC	NM_002387	NP_002378	Coding	chr5:113294915 minus strand	318184
MCCC2	NM_022132	NP_071415	Coding	chr5:71587287 plus strand	318185
MCIDAS	NM_001190787	NP_001177716	Coding	chr5:55227315 minus strand	318186
MCTP1	NM_001002796	NP_001002796	Coding	chr5:95081866 minus strand	318187
MCTP1	NM_001297777	NP_001284706	Coding	chr5:95081866 minus strand	318187
MCTP1	NM_024717	NP_078993	Coding	chr5:95284575 minus strand	318188
MED10	NM_032286	NP_115662	Coding	chr5:6378526 minus strand	318189
MED7	NM_001100816	NP_001094286	Coding	chr5:157142775 minus strand	318190
MED7	NM_004270	NP_004261	Coding	chr5:157142910 minus strand	318191
MEF2C	NM_001131005	NP_001124477	Coding	chr5:88904105 minus strand	318192

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MEF2C	NM_001193347	NP_001180276	Coding	chr5:88904105 minus strand	318192
MEF2C	NM_001193348	NP_001180277	Coding	chr5:88823927 minus strand	318193
MEF2C	NM_001193349	NP_001180278	Coding	chr5:88823927 minus strand	318193
MEF2C	NM_001193350	NP_001180279	Coding	chr5:88883466 minus strand	318194
MEF2C	NM_002397	NP_002388	Coding	chr5:88883466 minus strand	318194
MEGF10	NM_001256545	NP_001243474	Coding	chr5:127290763 plus strand	318195
MEGF10	NM_032446	NP_115822	Coding	chr5:127290763 plus strand	318195
MFAP3	NM_001135037	NP_001128509	Coding	chr5:154038958 plus strand	318196
MFAP3	NM_001242336	NP_001229265	Coding	chr5:154038958 plus strand	318196
MFAP3	NM_005927	NP_005918	Coding	chr5:154038958 plus strand	318196
MGAT1	NM_001114617	NP_001108089	Coding	chr5:180810137 minus strand	318197
MGAT1	NM_001114618	NP_001108090	Coding	chr5:180809817 minus strand	318198
MGAT1	NM_001114619	NP_001108091	Coding	chr5:180803902 minus strand	318199
MGAT1	NM_001114620	NP_001108092	Coding	chr5:180803902 minus strand	318199
MGAT1	NM_002406	NP_002397	Coding	chr5:180803048 minus strand	318200
MGAT4B	NM_014275	NP_055090	Coding	chr5:179806952 minus strand	318201
MGAT4B	NM_054013	NP_463459	Coding	chr5:179802875 minus strand	318202
MIER3	NM_001297598	NP_001284527	Coding	chr5:56952130 minus strand	318203
MIER3	NM_001297599	NP_001284528	Coding	chr5:56952130 minus strand	318203
MIER3	NM_152622	NP_689835	Coding	chr5:56952130 minus strand	318203
MOCS2	NM_004531	NP_004522	Coding	chr5:53109772 minus strand	318204
MOCS2	NM_176806	NP_789776	Coding	chr5:53109772 minus strand	318204
MROH2B	NM_173489	NP_775760	Coding	chr5:41071342 minus strand	318205
MRPL22	NM_001014990	NP_001014990	Coding	chr5:154941072 plus strand	318206
MRPL22	NM_014180	NP_054899	Coding	chr5:154941072 plus strand	318206
MRPL36	NM_032479	NP_115868	Coding	chr5:1799842 minus strand	318207
MRPS27	NM_001286748	NP_001273677	Coding	chr5:72320257 minus strand	318208
MRPS27	NM_001286751	NP_001273680	Coding	chr5:72320257 minus	318208

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				strand	
MRPS27	NM_015084	NP_055899	Coding	chr5:72320257 minus strand	318208
MRPS30	NM_016640	NP_057724	Coding	chr5:44808924 plus strand	318209
MRPS36	NM_033281	NP_150597	Coding	chr5:69217745 plus strand	318210
MSH3	NM_002439	NP_002430	Coding	chr5:80654647 plus strand	318211
MSX2	NM_002449	NP_002440	Coding	chr5:174724571 plus strand	318212
MTMR12	NM_001040446	NP_001035536	Coding	chr5:32313008 minus strand	318213
MTMR12	NM_001294343	NP_001281272	Coding	chr5:32313008 minus strand	318213
MTMR12	NM_001294344	NP_001281273	Coding	chr5:32313008 minus strand	318213
MTRNR2L2	NM_001190470	NP_001177399	Coding	chr5:80651035 minus strand	318214
MTRR	NM_002454	NP_002445	Coding	chr5:7869103 plus strand	318215
MTRR	NM_024010	NP_076915	Coding	chr5:7869103 plus strand	318215
MTX3	NM_001010891	NP_001010891	Coding	chr5:79991265 minus strand	318216
MTX3	NM_001167741	NP_001161213	Coding	chr5:79991265 minus strand	318216
MXD3	NM_001142935	NP_001136407	Coding	chr5:177312291 minus strand	318217
MXD3	NM_031300	NP_112590	Coding	chr5:177312291 minus strand	318217
MYO10	NM_012334	NP_036466	Coding	chr5:16936276 minus strand	318218
MYOT	NM_001135940	NP_001129412	Coding	chr5:137867855 plus strand	318219
MYOT	NM_001300911	NP_001287840	Coding	chr5:137867855 plus strand	318219
MYOT	NM_006790	NP_006781	Coding	chr5:137867855 plus strand	318219
MYOZ3	NM_001122853	NP_001116325	Coding	chr5:150660840 plus strand	318220
MYOZ3	NM_133371	NP_588612	Coding	chr5:150660840 plus strand	318220
MZB1	NM_016459	NP_057543	Coding	chr5:139389916 minus strand	318221
N4BP3	NM_015111	NP_055926	Coding	chr5:178113554 plus strand	318222
NADK2	NM_001085411	NP_001078880	Coding	chr5:36241798 minus strand	318223
NADK2	NM_001287340	NP_001274269	Coding	chr5:36241391 minus strand	318224
NADK2	NM_001287341	NP_001274270	Coding	chr5:36242279 minus strand	318225
NADK2	NM_153013	NP_694558	Coding	chr5:36242279 minus strand	318225
NAIP	NM_004536	NP_004527	Coding	chr5:71025114 minus strand	318226

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NAIP	NM_004536	NP_004527	Coding	chr5:71128753 minus strand	318227
NAIP	NM_022892	NP_075043	Coding	chr5:71025114 minus strand	318226
NAIP	NM_022892	NP_075043	Coding	chr5:71128756 minus strand	318228
NDFIP1	NM_030571	NP_085048	Coding	chr5:142108758 plus strand	318229
NDST1	NM_001301063	NP_001287992	Coding	chr5:150497777 plus strand	318230
NDST1	NM_001543	NP_001534	Coding	chr5:150508111 plus strand	318231
NDUFA2	NM_001185012	NP_001171941	Coding	chr5:140647785 minus strand	318232
NDUFA2	NM_002488	NP_002479	Coding	chr5:140647785 minus strand	318232
NDUFAF2	NM_174889	NP_777549	Coding	chr5:60945128 plus strand	318233
NDUFS4	NM_002495	NP_002486	Coding	chr5:53560634 plus strand	318234
NDUFS6	NM_004553	NP_004544	Coding	chr5:1801381 plus strand	318235
NEURL1B	NM_001142651	NP_001136123	Coding	chr5:172641272 plus strand	318236
NEUROG1	NM_006161	NP_006152	Coding	chr5:135535949 minus strand	318237
NHP2	NM_001034833	NP_001030005	Coding	chr5:178153960 minus strand	318238
NHP2	NM_017838	NP_060308	Coding	chr5:178153960 minus strand	318238
NIM1K	NM_153361	NP_699192	Coding	chr5:43192067 plus strand	318239
NIPAL4	NM_001099287	NP_001092757	Coding	chr5:157460018 plus strand	318240
NIPAL4	NM_001172292	NP_001165763	Coding	chr5:157460018 plus strand	318240
NIPBL	NM_015384	NP_056199	Coding	chr5:36876758 plus strand	318241
NIPBL	NM_133433	NP_597677	Coding	chr5:36876758 plus strand	318241
NKD2	NM_001271082	NP_001258011	Coding	chr5:1008961 plus strand	318242
NKD2	NM_033120	NP_149111	Coding	chr5:1008961 plus strand	318242
NKX2-5	NM_001166175	NP_001159647	Coding	chr5:173235312 minus strand	318243
NKX2-5	NM_001166176	NP_001159648	Coding	chr5:173235312 minus strand	318243
NKX2-5	NM_004387	NP_004378	Coding	chr5:173235312 minus strand	318243
NLN	NM_020726	NP_065777	Coding	chr5:65722195 plus strand	318244
NME5	NM_003551	NP_003542	Coding	chr5:138139443 minus strand	318245
NMUR2	NM_020167	NP_064552	Coding	chr5:152405279 minus strand	318246
NNT	NM_012343	NP_036475	Coding	chr5:43602688 plus strand	318247
NNT	NM_182977	NP_892022	Coding	chr5:43603126 plus strand	318248
NOP16	NM_001256539	NP_001243468	Coding	chr5:176388762 minus strand	318249

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NOP16	NM_001256540	NP_001243469	Coding	chr5:176388762 minus strand	318249
NOP16	NM_001291305	NP_001278234	Coding	chr5:176388762 minus strand	318249
NOP16	NM_001291306	NP_001278235	Coding	chr5:176388762 minus strand	318249
NOP16	NM_001291307	NP_001278236	Coding	chr5:176388762 minus strand	318249
NOP16	NM_001291308	NP_001278237	Coding	chr5:176388762 minus strand	318249
NOP16	NM_016391	NP_057475	Coding	chr5:176388762 minus strand	318249
NPM1	NM_001037738	NP_001032827	Coding	chr5:171387703 plus strand	318250
NPM1	NM_002520	NP_002511	Coding	chr5:171387703 plus strand	318250
NPM1	NM_199185	NP_954654	Coding	chr5:171387703 plus strand	318250
NPR3	NM_000908	NP_000899	Coding	chr5:32711331 plus strand	318251
NPR3	NM_001204375	NP_001191304	Coding	chr5:32711331 plus strand	318251
NPR3	NM_001204376	NP_001191305	Coding	chr5:32710636 plus strand	318252
NR2F1	NM_005654	NP_005645	Coding	chr5:93583336 plus strand	318253
NR3C1	NM_000176	NP_000167	Coding	chr5:143403689 minus strand	318254
NR3C1	NM_001018074	NP_001018084	Coding	chr5:143435512 minus strand	318255
NR3C1	NM_001018075	NP_001018085	Coding	chr5:143435512 minus strand	318255
NR3C1	NM_001018076	NP_001018086	Coding	chr5:143404480 minus strand	318256
NR3C1	NM_001018077	NP_001018087	Coding	chr5:143435512 minus strand	318255
NR3C1	NM_001020825	NP_001018661	Coding	chr5:143403689 minus strand	318254
NR3C1	NM_001024094	NP_001019265	Coding	chr5:143403689 minus strand	318254
NR3C1	NM_001204258	NP_001191187	Coding	chr5:143403689 minus strand	318254
NR3C1	NM_001204259	NP_001191188	Coding	chr5:143403689 minus strand	318254
NR3C1	NM_001204260	NP_001191189	Coding	chr5:143403689 minus strand	318254
NR3C1	NM_001204261	NP_001191190	Coding	chr5:143403689 minus strand	318254
NR3C1	NM_001204262	NP_001191191	Coding	chr5:143403689 minus strand	318254
NR3C1	NM_001204263	NP_001191192	Coding	chr5:143403689 minus strand	318254
NR3C1	NM_001204264	NP_001191193	Coding	chr5:143403689 minus strand	318254
NR3C1	NM_001204265	NP_001191194	Coding	chr5:143403689 minus strand	318254
NREP	NM_001142474	NP_001135946	Coding	chr5:111976931 minus	318257

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				strand	
NREP	NM_001142475	NP_001135947	Coding	chr5:111976931 minus strand	318257
NREP	NM_001142476	NP_001135948	Coding	chr5:111758218 minus strand	318258
NREP	NM_001142477	NP_001135949	Coding	chr5:111758096 minus strand	318259
NREP	NM_001142478	NP_001135950	Coding	chr5:111757702 minus strand	318260
NREP	NM_001142479	NP_001135951	Coding	chr5:111757555 minus strand	318261
NREP	NM_001142480	NP_001135952	Coding	chr5:111757555 minus strand	318261
NREP	NM_001142481	NP_001135953	Coding	chr5:111757409 minus strand	318262
NREP	NM_001142482	NP_001135954	Coding	chr5:111757407 minus strand	318263
NREP	NM_001142483	NP_001135955	Coding	chr5:111756251 minus strand	318264
NREP	NM_004772	NP_004763	Coding	chr5:111757248 minus strand	318265
NRG2	NM_001184935	NP_001171864	Coding	chr5:140043299 minus strand	318266
NRG2	NM_004883	NP_004874	Coding	chr5:140043299 minus strand	318266
NRG2	NM_013981	NP_053584	Coding	chr5:140043299 minus strand	318266
NRG2	NM_013982	NP_053585	Coding	chr5:140043299 minus strand	318266
NRG2	NM_013983	NP_053586	Coding	chr5:140043299 minus strand	318266
NSA2	NM_001271665	NP_001258594	Coding	chr5:74766990 plus strand	318267
NSA2	NM_014886	NP_055701	Coding	chr5:74766990 plus strand	318267
NSD1	NM_022455	NP_071900	Coding	chr5:177133831 plus strand	318268
NSD1	NM_172349	NP_758859	Coding	chr5:177133078 plus strand	318269
NSUN2	NM_001193455	NP_001180384	Coding	chr5:6633360 minus strand	318270
NSUN2	NM_017755	NP_060225	Coding	chr5:6633360 minus strand	318270
NUDCD2	NM_145266	NP_660309	Coding	chr5:163460137 minus strand	318271
NUDT12	NM_001300741	NP_001287670	Coding	chr5:103562801 minus strand	318272
NUDT12	NM_031438	NP_113626	Coding	chr5:103562801 minus strand	318272
NUP155	NM_001278312	NP_001265241	Coding	chr5:37371126 minus strand	318273
NUP155	NM_004298	NP_004289	Coding	chr5:37371126 minus strand	318273
NUP155	NM_153485	NP_705618	Coding	chr5:37371126 minus strand	318273
OCLN	NM_001205254	NP_001192183	Coding	chr5:69492762 plus strand	318274

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OCLN	NM_001205255	NP_001192184	Coding	chr5:69504176 plus strand	318275
OCLN	NM_002538	NP_002529	Coding	chr5:69492291 plus strand	318276
OR2V1	NM_001258283	NP_001245212	Coding	chr5:181125304 minus strand	318277
OR2V2	NM_206880	NP_996763	Coding	chr5:181154942 plus strand	318278
OR2Y1	NM_001001657	NP_001001657	Coding	chr5:180740058 minus strand	318279
OR4F16	NM_001005277	NP_001005277	Coding	chr5:181367286 plus strand	318280
OR4F29	NM_001005221	NP_001005221	Coding	chr5:181367286 plus strand	318281
OR4F3	NM_001005224	NP_001005224	Coding	chr5:181367286 plus strand	318282
OSMR	NM_001168355	NP_001161827	Coding	chr5:38845857 plus strand	318283
OSMR	NM_003999	NP_003990	Coding	chr5:38845998 plus strand	318284
OTP	NM_032109	NP_115485	Coding	chr5:77638697 minus strand	318285
OTULIN	NM_138348	NP_612357	Coding	chr5:14664673 plus strand	318286
OXCT1	NM_000436	NP_000427	Coding	chr5:41870689 minus strand	318287
P4HA2	NM_001017973	NP_001017973	Coding	chr5:132227242 minus strand	318288
P4HA2	NM_001017974	NP_001017974	Coding	chr5:132227863 minus strand	318289
P4HA2	NM_001142598	NP_001136070	Coding	chr5:132227863 minus strand	318289
P4HA2	NM_001142599	NP_001136071	Coding	chr5:132227863 minus strand	318289
P4HA2	NM_004199	NP_004190	Coding	chr5:132227242 minus strand	318288
PAIP1	NM_006451	NP_006442	Coding	chr5:43557093 minus strand	318290
PAIP1	NM_182789	NP_877590	Coding	chr5:43557093 minus strand	318290
PAIP1	NM_183323	NP_899152	Coding	chr5:43557419 minus strand	318291
PAIP2	NM_001033112	NP_001028284	Coding	chr5:139342433 plus strand	318292
PAIP2	NM_016480	NP_057564	Coding	chr5:139341831 plus strand	318293
PAM	NM_000919	NP_000910	Coding	chr5:102865822 plus strand	318294
PAM	NM_001177306	NP_001170777	Coding	chr5:102865822 plus strand	318294
PAM	NM_138766	NP_620121	Coding	chr5:102865822 plus strand	318294
PAM	NM_138821	NP_620176	Coding	chr5:102865822 plus strand	318294
PAM	NM_138822	NP_620177	Coding	chr5:102865822 plus strand	318294
PANK3	NM_024594	NP_078870	Coding	chr5:168579609 minus strand	318295

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PAPD4	NM_001114393	NP_001107865	Coding	chr5:79612419 plus strand	318296
PAPD4	NM_001114394	NP_001107866	Coding	chr5:79612419 plus strand	318296
PAPD4	NM_001297744	NP_001284673	Coding	chr5:79612419 plus strand	318296
PAPD4	NM_001297745	NP_001284674	Coding	chr5:79612419 plus strand	318296
PAPD4	NM_173797	NP_776158	Coding	chr5:79612419 plus strand	318296
PAPD7	NM_001171805	NP_001165276	Coding	chr5:6714604 plus strand	318297
PAPD7	NM_001171806	NP_001165277	Coding	chr5:6745987 plus strand	318298
PAPD7	NM_006999	NP_008930	Coding	chr5:6714604 plus strand	318297
PARP8	NM_001178055	NP_001171526	Coding	chr5:50665898 plus strand	318299
PARP8	NM_001178056	NP_001171527	Coding	chr5:50666937 plus strand	318300
PARP8	NM_024615	NP_078891	Coding	chr5:50666937 plus strand	318300
PCBD2	NM_032151	NP_115527	Coding	chr5:134905119 plus strand	318301
PCDH1	NM_001278613	NP_001265542	Coding	chr5:141869627 minus strand	318302
PCDH1	NM_001278615	NP_001265544	Coding	chr5:141866202 minus strand	318303
PCDH1	NM_002587	NP_002578	Coding	chr5:141878410 minus strand	318304
PCDH1	NM_032420	NP_115796	Coding	chr5:141878410 minus strand	318304
PCDH12	NM_016580	NP_057664	Coding	chr5:141959062 minus strand	318305
PCDHA1	NM_018900	NP_061723	Coding	chr5:140786135 plus strand	318306
PCDHA1	NM_031410	NP_113598	Coding	chr5:140786135 plus strand	318306
PCDHA1	NM_031411	NP_113599	Coding	chr5:140786135 plus strand	318306
PCDHA10	NM_018901	NP_061724	Coding	chr5:140855882 plus strand	318307
PCDHA10	NM_031859	NP_114065	Coding	chr5:140855882 plus strand	318307
PCDHA10	NM_031860	NP_114066	Coding	chr5:140855882 plus strand	318307
PCDHA11	NM_018902	NP_061725	Coding	chr5:140867512 plus strand	318308
PCDHA11	NM_031861	NP_114067	Coding	chr5:140867512 plus strand	318308
PCDHA12	NM_018903	NP_061726	Coding	chr5:140875301 plus strand	318309
PCDHA12	NM_031864	NP_114070	Coding	chr5:140875301 plus strand	318309
PCDHA13	NM_018904	NP_061727	Coding	chr5:140882268 plus strand	318310
PCDHA13	NM_031865	NP_114071	Coding	chr5:140882268 plus strand	318310
PCDHA2	NM_018905	NP_061728	Coding	chr5:140794858 plus strand	318311
PCDHA2	NM_031495	NP_113683	Coding	chr5:140794858 plus strand	318311

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PCDHA2	NM_031496	NP_113684	Coding	chr5:140794858 plus strand	318311
PCDHA3	NM_018906	NP_061729	Coding	chr5:140801197 plus strand	318312
PCDHA3	NM_031497	NP_113685	Coding	chr5:140801197 plus strand	318312
PCDHA4	NM_018907	NP_061730	Coding	chr5:140807073 plus strand	318313
PCDHA4	NM_031500	NP_113688	Coding	chr5:140807073 plus strand	318313
PCDHA5	NM_018908	NP_061731	Coding	chr5:140821775 plus strand	318314
PCDHA5	NM_031501	NP_113689	Coding	chr5:140821775 plus strand	318314
PCDHA6	NM_018909	NP_061732	Coding	chr5:140827921 plus strand	318315
PCDHA6	NM_031848	NP_114036	Coding	chr5:140827921 plus strand	318315
PCDHA6	NM_031849	NP_114037	Coding	chr5:140827921 plus strand	318315
PCDHA7	NM_018910	NP_061733	Coding	chr5:140834383 plus strand	318316
PCDHA7	NM_031852	NP_114040	Coding	chr5:140834383 plus strand	318316
PCDHA8	NM_018911	NP_061734	Coding	chr5:140841321 plus strand	318317
PCDHA8	NM_031856	NP_114062	Coding	chr5:140841321 plus strand	318317
PCDHA9	NM_014005	NP_054724	Coding	chr5:140847771 plus strand	318318
PCDHA9	NM_031857	NP_114063	Coding	chr5:140847771 plus strand	318318
PCDHAC1	NM_018898	NP_061721	Coding	chr5:140926716 plus strand	318319
PCDHAC1	NM_031882	NP_114088	Coding	chr5:140926716 plus strand	318319
PCDHAC2	NM_018899	NP_061722	Coding	chr5:140966161 plus strand	318320
PCDHAC2	NM_031883	NP_114089	Coding	chr5:140966766 plus strand	318321
PCDHB1	NM_013340	NP_037472	Coding	chr5:141051375 plus strand	318322
PCDHB10	NM_018930	NP_061753	Coding	chr5:141192378 plus strand	318323
PCDHB11	NM_018931	NP_061754	Coding	chr5:141199774 plus strand	318324
PCDHB12	NM_018932	NP_061755	Coding	chr5:141208718 plus strand	318325
PCDHB13	NM_018933	NP_061756	Coding	chr5:141213918 plus strand	318326
PCDHB14	NM_018934	NP_061757	Coding	chr5:141222325 plus strand	318327
PCDHB15	NM_018935	NP_061758	Coding	chr5:141245348 plus strand	318328

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PCDHB16	NM_020957	NP_066008	Coding	chr5:141181689 plus strand	318329
PCDHB2	NM_018936	NP_061759	Coding	chr5:141094606 plus strand	318330
PCDHB3	NM_018937	NP_061760	Coding	chr5:141100241 plus strand	318331
PCDHB4	NM_018938	NP_061761	Coding	chr5:141121749 plus strand	318332
PCDHB5	NM_015669	NP_056484	Coding	chr5:141135205 plus strand	318333
PCDHB6	NM_018939	NP_061762	Coding	chr5:141150257 plus strand	318334
PCDHB7	NM_018940	NP_061763	Coding	chr5:141172620 plus strand	318335
PCDHB8	NM_019120	NP_061993	Coding	chr5:141177789 plus strand	318336
PCDHB9	NM_019119	NP_061992	Coding	chr5:141187126 plus strand	318337
PCDHGA1	NM_018912	NP_061735	Coding	chr5:141330684 plus strand	318338
PCDHGA1	NM_031993	NP_114382	Coding	chr5:141330684 plus strand	318338
PCDHGA10	NM_018913	NP_061736	Coding	chr5:141413175 plus strand	318339
PCDHGA10	NM_032090	NP_114479	Coding	chr5:141413175 plus strand	318339
PCDHGA11	NM_018914	NP_061737	Coding	chr5:141420969 plus strand	318340
PCDHGA11	NM_032091	NP_114480	Coding	chr5:141420969 plus strand	318340
PCDHGA11	NM_032092	NP_114481	Coding	chr5:141420969 plus strand	318340
PCDHGA12	NM_003735	NP_003726	Coding	chr5:141430590 plus strand	318341
PCDHGA12	NM_032094	NP_115265	Coding	chr5:141430590 plus strand	318341
PCDHGA2	NM_018915	NP_061738	Coding	chr5:141338759 plus strand	318342
PCDHGA2	NM_032009	NP_114398	Coding	chr5:141338759 plus strand	318342
PCDHGA3	NM_018916	NP_061739	Coding	chr5:141344033 plus strand	318343
PCDHGA3	NM_032011	NP_114400	Coding	chr5:141344033 plus strand	318343
PCDHGA4	NM_018917	NP_061740	Coding	chr5:141355024 plus strand	318344
PCDHGA4	NM_032053	NP_114442	Coding	chr5:141355024 plus strand	318344
PCDHGA5	NM_018918	NP_061741	Coding	chr5:141364330 plus strand	318345
PCDHGA5	NM_032054	NP_114443	Coding	chr5:141364330 plus strand	318345
PCDHGA6	NM_018919	NP_061742	Coding	chr5:141374083 plus strand	318346

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PCDHGA6	NM_032086	NP_114475	Coding	chr5:141374083 plus strand	318346
PCDHGA7	NM_018920	NP_061743	Coding	chr5:141382738 plus strand	318347
PCDHGA7	NM_032087	NP_114476	Coding	chr5:141382738 plus strand	318347
PCDHGA8	NM_014004	NP_054723	Coding	chr5:141391915 plus strand	318348
PCDHGA8	NM_032088	NP_114477	Coding	chr5:141391915 plus strand	318348
PCDHGA9	NM_018921	NP_061744	Coding	chr5:141402952 plus strand	318349
PCDHGA9	NM_032089	NP_114478	Coding	chr5:141402952 plus strand	318349
PCDHGB1	NM_018922	NP_061745	Coding	chr5:141350260 plus strand	318350
PCDHGB1	NM_032095	NP_115266	Coding	chr5:141350260 plus strand	318350
PCDHGB2	NM_018923	NP_061746	Coding	chr5:141360135 plus strand	318351
PCDHGB2	NM_032096	NP_115267	Coding	chr5:141360135 plus strand	318351
PCDHGB3	NM_018924	NP_061747	Coding	chr5:141370394 plus strand	318352
PCDHGB3	NM_032097	NP_115268	Coding	chr5:141370394 plus strand	318352
PCDHGB4	NM_003736	NP_003727	Coding	chr5:141387884 plus strand	318353
PCDHGB4	NM_032098	NP_115269	Coding	chr5:141387884 plus strand	318353
PCDHGB5	NM_018925	NP_061748	Coding	chr5:141398127 plus strand	318354
PCDHGB5	NM_032099	NP_115270	Coding	chr5:141398127 plus strand	318354
PCDHGB6	NM_018926	NP_061749	Coding	chr5:141408202 plus strand	318355
PCDHGB6	NM_032100	NP_115271	Coding	chr5:141408202 plus strand	318355
PCDHGB7	NM_018927	NP_061750	Coding	chr5:141417692 plus strand	318356
PCDHGB7	NM_032101	NP_115272	Coding	chr5:141417646 plus strand	318357
PCDHGC3	NM_002588	NP_002579	Coding	chr5:141476001 plus strand	318358
PCDHGC3	NM_032402	NP_115778	Coding	chr5:141476001 plus strand	318358
PCDHGC3	NM_032403	NP_115779	Coding	chr5:141476001 plus strand	318358
PCDHGC4	NM_018928	NP_061751	Coding	chr5:141485173 plus strand	318359
PCDHGC4	NM_032406	NP_115782	Coding	chr5:141485173 plus strand	318359
PCDHGC5	NM_018929	NP_061752	Coding	chr5:141489240 plus strand	318360

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PCDHGC5	NM_032407	NP_115783	Coding	chr5:141489240 plus strand	318360
PCSK1	NM_000439	NP_000430	Coding	chr5:96433281 minus strand	318361
PCSK1	NM_001177875	NP_001171346	Coding	chr5:96432159 minus strand	318362
PCYOX1L	NM_001301054	NP_001287983	Coding	chr5:149358006 plus strand	318363
PCYOX1L	NM_001301055	NP_001287984	Coding	chr5:149358006 plus strand	318363
PCYOX1L	NM_001301057	NP_001287986	Coding	chr5:149358006 plus strand	318363
PCYOX1L	NM_024028	NP_076933	Coding	chr5:149358006 plus strand	318363
PDCD6	NM_001267556	NP_001254485	Coding	chr5:271620 plus strand	318364
PDCD6	NM_001267557	NP_001254486	Coding	chr5:271620 plus strand	318364
PDCD6	NM_001267558	NP_001254487	Coding	chr5:271620 plus strand	318364
PDCD6	NM_001267559	NP_001254488	Coding	chr5:271620 plus strand	318364
PDCD6	NM_013232	NP_037364	Coding	chr5:271620 plus strand	318364
PDE4D	NM_001104631	NP_001098101	Coding	chr5:59893794 minus strand	318365
PDE4D	NM_001165899	NP_001159371	Coding	chr5:60488098 minus strand	318366
PDE4D	NM_001197218	NP_001184147	Coding	chr5:59768612 minus strand	318367
PDE4D	NM_001197219	NP_001184148	Coding	chr5:59356901 minus strand	318368
PDE4D	NM_001197220	NP_001184149	Coding	chr5:59276119 minus strand	318369
PDE4D	NM_001197221	NP_001184150	Coding	chr5:59039512 minus strand	318370
PDE4D	NM_001197222	NP_001184151	Coding	chr5:59039512 minus strand	318370
PDE4D	NM_001197223	NP_001184152	Coding	chr5:58999932 minus strand	318371
PDE4D	NM_006203	NP_006194	Coding	chr5:59586498 minus strand	318372
PDE6A	NM_000440	NP_000431	Coding	chr5:149944793 minus strand	318373
PDE8B	NM_001029851	NP_001025022	Coding	chr5:77210880 plus strand	318374
PDE8B	NM_001029852	NP_001025023	Coding	chr5:77210880 plus strand	318374
PDE8B	NM_001029853	NP_001025024	Coding	chr5:77210880 plus strand	318374
PDE8B	NM_001029854	NP_001025025	Coding	chr5:77210880 plus strand	318374
PDE8B	NM_003719	NP_003710	Coding	chr5:77210880 plus strand	318374
PDGFRB	NM_002609	NP_002600	Coding	chr5:150155859 minus strand	318375
PDLIM4	NM_001131027	NP_001124499	Coding	chr5:132257657 plus strand	318376
PDLIM4	NM_003687	NP_003678	Coding	chr5:132257657 plus strand	318376
PDLIM7	NM_005451	NP_005442	Coding	chr5:177497605 minus	318377

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				strand	
PDLIM7	NM_203352	NP_976227	Coding	chr5:177497605 minus strand	318377
PDLIM7	NM_213636	NP_998801	Coding	chr5:177497605 minus strand	318377
PDZD2	NM_178140	NP_835260	Coding	chr5:31798923 plus strand	318378
PELO	NM_015946	NP_057030	Coding	chr5:52787939 plus strand	318379
PFDN1	NM_002622	NP_002613	Coding	chr5:140303104 minus strand	318380
PFN3	NM_001029886	NP_001025057	Coding	chr5:177400636 minus strand	318381
PGGT1B	NM_005023	NP_005014	Coding	chr5:115262872 minus strand	318382
PHAX	NM_032177	NP_115553	Coding	chr5:126600914 plus strand	318383
PHYKPL	NM_001278346	NP_001265275	Coding	chr5:178232822 minus strand	318384
PHYKPL	NM_153373	NP_699204	Coding	chr5:178232822 minus strand	318384
PIK3R1	NM_001242466	NP_001229395	Coding	chr5:68292567 plus strand	318385
PIK3R1	NM_181504	NP_852556	Coding	chr5:68290638 plus strand	318386
PIK3R1	NM_181523	NP_852664	Coding	chr5:68215755 plus strand	318387
PIK3R1	NM_181524	NP_852665	Coding	chr5:68288423 plus strand	318388
PITX1	NM_002653	NP_002644	Coding	chr5:135034274 minus strand	318389
PJA2	NM_014819	NP_055634	Coding	chr5:109409974 minus strand	318390
PKD2L2	NM_001258448	NP_001245377	Coding	chr5:137889435 plus strand	318391
PKD2L2	NM_001258449	NP_001245378	Coding	chr5:137889435 plus strand	318391
PKD2L2	NM_001300921	NP_001287850	Coding	chr5:137889435 plus strand	318391
PKD2L2	NM_014386	NP_055201	Coding	chr5:137889435 plus strand	318391
PLAC8L1	NM_001029869	NP_001025040	Coding	chr5:146104383 minus strand	318392
PLCXD3	NM_001005473	NP_001005473	Coding	chr5:41510628 minus strand	318393
PLEKHG4B	NM_052909	NP_443141	Coding	chr5:140257 plus strand	318394
PLK2	NM_001252226	NP_001239155	Coding	chr5:58460139 minus strand	318395
PLK2	NM_006622	NP_006613	Coding	chr5:58460139 minus strand	318395
POC5	NM_001099271	NP_001092741	Coding	chr5:75717488 minus strand	318396
POC5	NM_152408	NP_689621	Coding	chr5:75712455 minus strand	318397
POLK	NM_016218	NP_057302	Coding	chr5:75511831 plus strand	318398
POLR3G	NM_006467	NP_006458	Coding	chr5:90474863 plus strand	318399
POU4F3	NM_002700	NP_002691	Coding	chr5:146339023 plus	318400

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				strand	
POU5F2	NM_153216	NP_694948	Coding	chr5:93741603 minus strand	318401
PPAP2A	NM_003711	NP_003702	Coding	chr5:55535078 minus strand	318402
PPAP2A	NM_176895	NP_795714	Coding	chr5:55535078 minus strand	318402
PPARGC1B	NM_001172698	NP_001166169	Coding	chr5:149730251 plus strand	318403
PPARGC1B	NM_001172699	NP_001166170	Coding	chr5:149771939 plus strand	318404
PPARGC1B	NM_133263	NP_573570	Coding	chr5:149730251 plus strand	318403
PPIC	NM_000943	NP_000934	Coding	chr5:123036730 minus strand	318405
PPIP5K2	NM_001276277	NP_001263206	Coding	chr5:103120253 plus strand	318406
PPIP5K2	NM_001281471	NP_001268400	Coding	chr5:103120253 plus strand	318406
PPIP5K2	NM_015216	NP_056031	Coding	chr5:103129305 plus strand	318407
PPP2CA	NM_002715	NP_002706	Coding	chr5:134226259 minus strand	318408
PPP2R2B	NM_001271899	NP_001258828	Coding	chr5:147081520 minus strand	318409
PPP2R2B	NM_001271900	NP_001258829	Coding	chr5:147081520 minus strand	318409
PPP2R2B	NM_001271948	NP_001258877	Coding	chr5:146878785 minus strand	318410
PPP2R2B	NM_181674	NP_858060	Coding	chr5:147056137 minus strand	318411
PPP2R2B	NM_181675	NP_858061	Coding	chr5:146878785 minus strand	318410
PPP2R2B	NM_181676	NP_858062	Coding	chr5:147056137 minus strand	318411
PPP2R2B	NM_181677	NP_858063	Coding	chr5:147081470 minus strand	318412
PPP2R2B	NM_181678	NP_858064	Coding	chr5:147081470 minus strand	318412
PPWD1	NM_001278926	NP_001265855	Coding	chr5:65563238 plus strand	318413
PPWD1	NM_001278927	NP_001265856	Coding	chr5:65563238 plus strand	318413
PPWD1	NM_001278929	NP_001265858	Coding	chr5:65563238 plus strand	318413
PPWD1	NM_015342	NP_056157	Coding	chr5:65563235 plus strand	318414
PRDM6	NM_001136239	NP_001129711	Coding	chr5:123089145 plus strand	318415
PRDM9	NM_020227	NP_064612	Coding	chr5:23507614 plus strand	318416
PRELID1	NM_001271828	NP_001258757	Coding	chr5:177303761 plus strand	318417
PRELID1	NM_013237	NP_037369	Coding	chr5:177303761 plus strand	318417
PRELID2	NM_138492	NP_612501	Coding	chr5:145835369 minus strand	318418

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PRELID2	NM_182960	NP_892005	Coding	chr5:145835369 minus strand	318418
PRELID2	NM_205846	NP_995318	Coding	chr5:145835369 minus strand	318418
PRKAA1	NM_006251	NP_006242	Coding	chr5:40798195 minus strand	318419
PRKAA1	NM_206907	NP_996790	Coding	chr5:40798195 minus strand	318419
PRLR	NM_000949	NP_000940	Coding	chr5:35230589 minus strand	318420
PRLR	NM_001204314	NP_001191243	Coding	chr5:35118122 minus strand	318421
PRLR	NM_001204315	NP_001191244	Coding	chr5:35118122 minus strand	318421
PRLR	NM_001204316	NP_001191245	Coding	chr5:35118122 minus strand	318421
PRLR	NM_001204317	NP_001191246	Coding	chr5:35118122 minus strand	318421
PRLR	NM_001204318	NP_001191247	Coding	chr5:35118122 minus strand	318421
PROB1	NM_001161546	NP_001155018	Coding	chr5:139395196 minus strand	318422
PROP1	NM_006261	NP_006252	Coding	chr5:177996242 minus strand	318423
PRR16	NM_001300783	NP_001287712	Coding	chr5:120464277 plus strand	318424
PRR16	NM_016644	NP_057728	Coding	chr5:120464277 plus strand	318424
PRR7	NM_001174101	NP_001167572	Coding	chr5:177446794 plus strand	318425
PRR7	NM_001174102	NP_001167573	Coding	chr5:177448324 plus strand	318426
PRR7	NM_030567	NP_085044	Coding	chr5:177446794 plus strand	318425
PRRC1	NM_001286808	NP_001273737	Coding	chr5:127517608 plus strand	318427
PRRC1	NM_130809	NP_570721	Coding	chr5:127517608 plus strand	318427
PSD2	NM_032289	NP_115665	Coding	chr5:139795820 plus strand	318428
PTCD2	NM_001284403	NP_001271332	Coding	chr5:72320366 plus strand	318429
PTCD2	NM_001284404	NP_001271333	Coding	chr5:72320366 plus strand	318429
PTCD2	NM_001284405	NP_001271334	Coding	chr5:72320366 plus strand	318429
PTCD2	NM_024754	NP_079030	Coding	chr5:72320366 plus strand	318429
PTGER4	NM_000958	NP_000949	Coding	chr5:40679929 plus strand	318430
PTTG1	NM_001282382	NP_001269311	Coding	chr5:160421909 plus strand	318431
PTTG1	NM_001282383	NP_001269312	Coding	chr5:160421909 plus strand	318431
PTTG1	NM_004219	NP_004210	Coding	chr5:160421806 plus strand	318432
PURA	NM_005859	NP_005850	Coding	chr5:140114122 plus strand	318433

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PWWP2A	NM_001130864	NP_001124336	Coding	chr5:160119445 minus strand	318434
PWWP2A	NM_001267035	NP_001253964	Coding	chr5:160119445 minus strand	318434
PWWP2A	NM_052927	NP_443159	Coding	chr5:160119445 minus strand	318434
RAB24	NM_001031677	NP_001026847	Coding	chr5:177303744 minus strand	318435
RAB24	NM_130781	NP_570137	Coding	chr5:177303744 minus strand	318435
RAB3C	NM_138453	NP_612462	Coding	chr5:58583111 plus strand	318436
RAD1	NM_002853	NP_002844	Coding	chr5:34915675 minus strand	318437
RAD17	NM_001278622	NP_001265551	Coding	chr5:69370059 plus strand	318438
RAD17	NM_002873	NP_002864	Coding	chr5:69370704 plus strand	318439
RAD17	NM_133338	NP_579916	Coding	chr5:69369811 plus strand	318440
RAD17	NM_133339	NP_579917	Coding	chr5:69371453 plus strand	318441
RAD17	NM_133340	NP_579918	Coding	chr5:69371034 plus strand	318442
RAD17	NM_133341	NP_579919	Coding	chr5:69371034 plus strand	318442
RAD17	NM_133342	NP_579920	Coding	chr5:69369730 plus strand	318443
RAD17	NM_133343	NP_579921	Coding	chr5:69369296 plus strand	318444
RAD17	NM_133344	NP_579922	Coding	chr5:69369811 plus strand	318440
RAD50	NM_005732	NP_005723	Coding	chr5:132556923 plus strand	318445
RAI14	NM_001145520	NP_001138992	Coding	chr5:34656490 plus strand	318446
RAI14	NM_001145521	NP_001138993	Coding	chr5:34684506 plus strand	318447
RAI14	NM_001145522	NP_001138994	Coding	chr5:34656327 plus strand	318448
RAI14	NM_001145523	NP_001138995	Coding	chr5:34687558 plus strand	318449
RAI14	NM_001145525	NP_001138997	Coding	chr5:34684506 plus strand	318447
RAI14	NM_015577	NP_056392	Coding	chr5:34656327 plus strand	318448
RANBP17	NM_022897	NP_075048	Coding	chr5:170861891 plus strand	318450
RANBP3L	NM_001161429	NP_001154901	Coding	chr5:36301909 minus strand	318451
RANBP3L	NM_145000	NP_659437	Coding	chr5:36301909 minus strand	318451
RAPGEF6	NM_001164386	NP_001157858	Coding	chr5:131635236 minus strand	318452
RAPGEF6	NM_001164387	NP_001157859	Coding	chr5:131635236 minus strand	318452
RAPGEF6	NM_001164388	NP_001157860	Coding	chr5:131635236 minus strand	318452
RAPGEF6	NM_001164389	NP_001157861	Coding	chr5:131635236 minus strand	318452
RAPGEF6	NM_001164390	NP_001157862	Coding	chr5:131635236 minus strand	318452
RAPGEF6	NM_016340	NP_057424	Coding	chr5:131635236 minus strand	318452
RARS	NM_002887	NP_002878	Coding	chr5:168486457 plus strand	318453

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RASA1	NM_002890	NP_002881	Coding	chr5:87268252 plus strand	318454
RASA1	NM_022650	NP_072179	Coding	chr5:87268923 plus strand	318455
RASGEF1C	NM_175062	NP_778232	Coding	chr5:180209130 minus strand	318456
RASGRF2	NM_006909	NP_008840	Coding	chr5:80960688 plus strand	318457
RBM22	NM_018047	NP_060517	Coding	chr5:150701107 minus strand	318458
RBM27	NM_018989	NP_061862	Coding	chr5:146203599 plus strand	318459
REEP2	NM_001271803	NP_001258732	Coding	chr5:138439000 plus strand	318460
REEP2	NM_016606	NP_057690	Coding	chr5:138439000 plus strand	318460
REEP5	NM_005669	NP_005660	Coding	chr5:112922334 minus strand	318461
RELL2	NM_001130029	NP_001123501	Coding	chr5:141636949 plus strand	318462
RELL2	NM_173828	NP_776189	Coding	chr5:141636949 plus strand	318462
RFESD	NM_001131065	NP_001124537	Coding	chr5:95646878 plus strand	318463
RFESD	NM_001131066	NP_001124538	Coding	chr5:95646776 plus strand	318464
RFESD	NM_173362	NP_775498	Coding	chr5:95646878 plus strand	318463
RGMB	NM_001012761	NP_001012779	Coding	chr5:98769294 plus strand	318465
RGS14	NM_006480	NP_006471	Coding	chr5:177357842 plus strand	318466
RGS7BP	NM_001029875	NP_001025046	Coding	chr5:64505946 plus strand	318467
RGS7BP	NM_001271890	NP_001258819	Coding	chr5:64575649 plus strand	318468
RGS7BP	NM_001271891	NP_001258820	Coding	chr5:64575649 plus strand	318468
RHOBTB3	NM_014899	NP_055714	Coding	chr5:95731145 plus strand	318469
RICTOR	NM_001285439	NP_001272368	Coding	chr5:39074408 minus strand	318470
RICTOR	NM_001285440	NP_001272369	Coding	chr5:39074408 minus strand	318470
RICTOR	NM_152756	NP_689969	Coding	chr5:39074408 minus strand	318470
RIOK2	NM_001159749	NP_001153221	Coding	chr5:97183301 minus strand	318471
RIOK2	NM_018343	NP_060813	Coding	chr5:97183301 minus strand	318471
RMND5B	NM_001288794	NP_001275723	Coding	chr5:178130960 plus strand	318472
RMND5B	NM_001288795	NP_001275724	Coding	chr5:178130960 plus strand	318472
RMND5B	NM_022762	NP_073599	Coding	chr5:178130960 plus strand	318472
RNF130	NM_001280801	NP_001267730	Coding	chr5:180072118 minus strand	318473
RNF130	NM_018434	NP_060904	Coding	chr5:180072118 minus strand	318473
RNF14	NM_001201365	NP_001188294	Coding	chr5:141966836 plus strand	318474

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RNF14	NM_004290	NP_004281	Coding	chr5:141968885 plus strand	318475
RNF14	NM_183398	NP_899645	Coding	chr5:141968885 plus strand	318475
RNF14	NM_183399	NP_899646	Coding	chr5:141966836 plus strand	318474
RNF14	NM_183400	NP_899647	Coding	chr5:141968885 plus strand	318475
RNF14	NM_183401	NP_899648	Coding	chr5:141969146 plus strand	318476
RNF145	NM_001199380	NP_001186309	Coding	chr5:159210053 minus strand	318477
RNF145	NM_001199381	NP_001186310	Coding	chr5:159208132 minus strand	318478
RNF145	NM_001199382	NP_001186311	Coding	chr5:159207648 minus strand	318479
RNF145	NM_001199383	NP_001186312	Coding	chr5:159209555 minus strand	318480
RNF145	NM_144726	NP_653327	Coding	chr5:159207826 minus strand	318481
RNF180	NM_001113561	NP_001107033	Coding	chr5:64165843 plus strand	318482
RNF180	NM_178532	NP_848627	Coding	chr5:64165843 plus strand	318482
RNF44	NM_014901	NP_055716	Coding	chr5:176537420 minus strand	318483
ROPN1L	NM_001201466	NP_001188395	Coding	chr5:10441861 plus strand	318484
ROPN1L	NM_031916	NP_114122	Coding	chr5:10441861 plus strand	318484
RPL26L1	NM_016093	NP_057177	Coding	chr5:172959435 plus strand	318485
RPL37	NM_000997	NP_000988	Coding	chr5:40835285 minus strand	318486
RPS14	NM_001025070	NP_001020241	Coding	chr5:150449756 minus strand	318487
RPS14	NM_001025071	NP_001020242	Coding	chr5:150449756 minus strand	318487
RPS14	NM_005617	NP_005608	Coding	chr5:150449756 minus strand	318487
RPS23	NM_001025	NP_001016	Coding	chr5:82278416 minus strand	318488
RUFY1	NM_001040451	NP_001035541	Coding	chr5:179559691 plus strand	318489
RUFY1	NM_001040452	NP_001035542	Coding	chr5:179559691 plus strand	318489
RUFY1	NM_025158	NP_079434	Coding	chr5:179550560 plus strand	318490
RXFP3	NM_016568	NP_057652	Coding	chr5:33936385 plus strand	318491
S100Z	NM_130772	NP_570128	Coding	chr5:76850000 plus strand	318492
SAP30L	NM_001131062	NP_001124534	Coding	chr5:154445956 plus strand	318493
SAP30L	NM_001131063	NP_001124535	Coding	chr5:154445956 plus strand	318493
SAP30L	NM_024632	NP_078908	Coding	chr5:154445956 plus strand	318493

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SAR1B	NM_001033503	NP_001028675	Coding	chr5:134632843 minus strand	318494
SAR1B	NM_016103	NP_057187	Coding	chr5:134632843 minus strand	318494
SCAMP1	NM_001290229	NP_001277158	Coding	chr5:78360502 plus strand	318495
SCAMP1	NM_004866	NP_004857	Coding	chr5:78360502 plus strand	318495
SCGB3A1	NM_052863	NP_443095	Coding	chr5:180591487 minus strand	318496
SCGB3A2	NM_054023	NP_473364	Coding	chr5:147878710 plus strand	318497
SDHA	NM_001294332	NP_001281261	Coding	chr5:218222 plus strand	318498
SDHA	NM_004168	NP_004159	Coding	chr5:218222 plus strand	318498
SEC24A	NM_001252231	NP_001239160	Coding	chr5:134648784 plus strand	318499
SEC24A	NM_021982	NP_068817	Coding	chr5:134648784 plus strand	318499
SEMA5A	NM_003966	NP_003957	Coding	chr5:9546121 minus strand	318500
SEMA6A	NM_001300780	NP_001287709	Coding	chr5:116574926 minus strand	318501
SEMA6A	NM_020796	NP_065847	Coding	chr5:116574926 minus strand	318501
SEPP1	NM_001085486	NP_001078955	Coding	chr5:42811922 minus strand	318502
SEPP1	NM_001093726	NP_001087195	Coding	chr5:42811922 minus strand	318502
SEPP1	NM_005410	NP_005401	Coding	chr5:42811922 minus strand	318502
SEPT8	NM_001098811	NP_001092281	Coding	chr5:132777375 minus strand	318503
SEPT8	NM_001098812	NP_001092282	Coding	chr5:132777375 minus strand	318503
SEPT8	NM_001098813	NP_001092283	Coding	chr5:132777869 minus strand	318504
SEPT8	NM_001300798	NP_001287727	Coding	chr5:132777375 minus strand	318503
SEPT8	NM_001300799	NP_001287728	Coding	chr5:132777375 minus strand	318503
SEPT8	NM_015146	NP_055961	Coding	chr5:132777375 minus strand	318503
SERF1A	NM_021967	NP_068802	Coding	chr5:70025244 plus strand	318505
SERF1A	NM_021967	NP_068802	Coding	chr5:70900662 plus strand	318506
SERF1A	NM_022968	NP_075257	Coding	chr5:70025244 plus strand	318505
SERF1A	NM_022968	NP_075257	Coding	chr5:70900662 plus strand	318506
SERF1B	NM_001178087	NP_001171558	Coding	chr5:70025250 plus strand	318507
SERF1B	NM_001178087	NP_001171558	Coding	chr5:70900668 plus strand	318508
SERF1B	NM_022978	NP_075267	Coding	chr5:70025250 plus strand	318507
SERF1B	NM_022978	NP_075267	Coding	chr5:70900668 plus strand	318508
SERINC5	NM_001174071	NP_001167542	Coding	chr5:80256082 minus strand	318509
SERINC5	NM_001174072	NP_001167543	Coding	chr5:80256082 minus	318509

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				strand	
SERINC5	NM_178276	NP_840060	Coding	chr5:80256082 minus strand	318509
SETD9	NM_001171990	NP_001165461	Coding	chr5:56909259 plus strand	318510
SETD9	NM_153706	NP_714917	Coding	chr5:56909259 plus strand	318510
SFXN1	NM_022754	NP_073591	Coding	chr5:175478510 plus strand	318511
SGCD	NM_000337	NP_000328	Coding	chr5:156326756 plus strand	318512
SGCD	NM_001128209	NP_001121681	Coding	chr5:156326756 plus strand	318512
SGCD	NM_172244	NP_758447	Coding	chr5:156326756 plus strand	318512
SGTB	NM_019072	NP_061945	Coding	chr5:65722114 minus strand	318513
SH3PXD2B	NM_001017995	NP_001017995	Coding	chr5:172454523 minus strand	318514
SH3RF2	NM_152550	NP_689763	Coding	chr5:145936562 plus strand	318515
SH3TC2	NM_024577	NP_078853	Coding	chr5:149063174 minus strand	318516
SHROOM1	NM_001172700	NP_001166171	Coding	chr5:132830898 minus strand	318517
SHROOM1	NM_133456	NP_597713	Coding	chr5:132826310 minus strand	318518
SIL1	NM_001037633	NP_001032722	Coding	chr5:139198376 minus strand	318519
SIL1	NM_022464	NP_071909	Coding	chr5:139198376 minus strand	318519
SIMC1	NM_198567	NP_940969	Coding	chr5:176238366 plus strand	318520
SKIV2L2	NM_015360	NP_056175	Coding	chr5:55307747 plus strand	318521
SKP1	NM_006930	NP_008861	Coding	chr5:134177033 minus strand	318522
SKP1	NM_170679	NP_733779	Coding	chr5:134177033 minus strand	318522
SKP2	NM_001243120	NP_001230049	Coding	chr5:36152042 plus strand	318523
SKP2	NM_005983	NP_005974	Coding	chr5:36152042 plus strand	318523
SKP2	NM_032637	NP_116026	Coding	chr5:36152042 plus strand	318523
SLC12A2	NM_001046	NP_001037	Coding	chr5:128083790 plus strand	318524
SLC12A2	NM_001256461	NP_001243390	Coding	chr5:128083790 plus strand	318524
SLC12A7	NM_006598	NP_006589	Coding	chr5:1112057 minus strand	318525
SLC1A3	NM_001166695	NP_001160167	Coding	chr5:36606354 plus strand	318526
SLC1A3	NM_001166696	NP_001160168	Coding	chr5:36606354 plus strand	318526
SLC1A3	NM_001289939	NP_001276868	Coding	chr5:36606354 plus strand	318526
SLC1A3	NM_001289940	NP_001276869	Coding	chr5:36606354 plus strand	318526
SLC1A3	NM_004172	NP_004163	Coding	chr5:36606354 plus strand	318526
SLC22A4	NM_003059	NP_003050	Coding	chr5:132294451 plus	318527

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				strand	
SLC22A5	NM_003060	NP_003051	Coding	chr5:132369708 plus strand	318528
SLC23A1	NM_005847	NP_005838	Coding	chr5:139383350 minus strand	318529
SLC23A1	NM_152685	NP_689898	Coding	chr5:139383350 minus strand	318529
SLC25A2	NM_031947	NP_114153	Coding	chr5:141304045 minus strand	318530
SLC25A46	NM_138773	NP_620128	Coding	chr5:110739052 plus strand	318531
SLC25A48	NM_145282	NP_660325	Coding	chr5:135834675 plus strand	318532
SLC26A2	NM_000112	NP_000103	Coding	chr5:149960736 plus strand	318533
SLC27A6	NM_001017372	NP_001017372	Coding	chr5:128965519 plus strand	318534
SLC27A6	NM_014031	NP_054750	Coding	chr5:128965516 plus strand	318535
SLC30A5	NM_001251969	NP_001238898	Coding	chr5:69093948 plus strand	318536
SLC30A5	NM_022902	NP_075053	Coding	chr5:69093948 plus strand	318536
SLC30A5	NM_024055	NP_076960	Coding	chr5:69093948 plus strand	318536
SLC34A1	NM_001167579	NP_001161051	Coding	chr5:177384430 plus strand	318537
SLC34A1	NM_003052	NP_003043	Coding	chr5:177384430 plus strand	318537
SLC35A4	NM_080670	NP_542401	Coding	chr5:140564834 plus strand	318538
SLC36A1	NM_078483	NP_510968	Coding	chr5:151447601 plus strand	318539
SLC36A2	NM_181776	NP_861441	Coding	chr5:151347590 minus strand	318540
SLC36A3	NM_001145017	NP_001138489	Coding	chr5:151303773 minus strand	318541
SLC36A3	NM_181774	NP_861439	Coding	chr5:151303773 minus strand	318541
SLC38A9	NM_001258286	NP_001245215	Coding	chr5:55693053 minus strand	318542
SLC38A9	NM_001258287	NP_001245216	Coding	chr5:55693053 minus strand	318542
SLC38A9	NM_001282429	NP_001269358	Coding	chr5:55712335 minus strand	318543
SLC38A9	NM_173514	NP_775785	Coding	chr5:55712335 minus strand	318543
SLC45A2	NM_001012509	NP_001012527	Coding	chr5:33984675 minus strand	318544
SLC45A2	NM_001297417	NP_001284346	Coding	chr5:33984675 minus strand	318544
SLC45A2	NM_016180	NP_057264	Coding	chr5:33984675 minus strand	318544
SLC4A9	NM_001258426	NP_001245355	Coding	chr5:140360201 plus strand	318545
SLC4A9	NM_001258427	NP_001245356	Coding	chr5:140360201 plus	318545

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				strand	
SLC4A9	NM_001258428	NP_001245357	Coding	chr5:140360201 plus strand	318545
SLC4A9	NM_031467	NP_113655	Coding	chr5:140360201 plus strand	318545
SLC6A18	NM_182632	NP_872438	Coding	chr5:1225354 plus strand	318546
SLC6A19	NM_001003841	NP_001003841	Coding	chr5:1201594 plus strand	318547
SLC6A3	NM_001044	NP_001035	Coding	chr5:1445428 minus strand	318548
SLC6A7	NM_014228	NP_055043	Coding	chr5:150189956 plus strand	318549
SLC9A3	NM_001284351	NP_001271280	Coding	chr5:524434 minus strand	318550
SLC9A3	NM_004174	NP_004165	Coding	chr5:524434 minus strand	318550
SLCO4C1	NM_180991	NP_851322	Coding	chr5:102296549 minus strand	318551
SLCO6A1	NM_001289002	NP_001275931	Coding	chr5:102499016 minus strand	318552
SLCO6A1	NM_001289004	NP_001275933	Coding	chr5:102499016 minus strand	318552
SLCO6A1	NM_173488	NP_775759	Coding	chr5:102499016 minus strand	318552
SLIT3	NM_001271946	NP_001258875	Coding	chr5:169301129 minus strand	318553
SLIT3	NM_003062	NP_003053	Coding	chr5:169301129 minus strand	318553
SLU7	NM_006425	NP_006416	Coding	chr5:160419161 minus strand	318554
SMAD5	NM_001001419	NP_001001419	Coding	chr5:136132844 plus strand	318555
SMAD5	NM_001001420	NP_001001420	Coding	chr5:136132844 plus strand	318555
SMAD5	NM_005903	NP_005894	Coding	chr5:136132844 plus strand	318555
SMIM15	NM_001048249	NP_001041714	Coding	chr5:61162475 minus strand	318556
SMIM23	NM_001289970	NP_001276899	Coding	chr5:171785871 plus strand	318557
SMIM3	NM_032947	NP_116565	Coding	chr5:150777945 plus strand	318558
SMN1	NM_000344	NP_000335	Coding	chr5:70049522 plus strand	318559
SMN1	NM_000344	NP_000335	Coding	chr5:70924940 plus strand	318560
SMN1	NM_001297715	NP_001284644	Coding	chr5:70049522 plus strand	318559
SMN1	NM_001297715	NP_001284644	Coding	chr5:70924940 plus strand	318560
SMN1	NM_022874	NP_075012	Coding	chr5:70049522 plus strand	318559
SMN1	NM_022874	NP_075012	Coding	chr5:70924940 plus strand	318560
SMN2	NM_017411	NP_059107	Coding	chr5:70049522 plus strand	318561
SMN2	NM_017411	NP_059107	Coding	chr5:70924940 plus strand	318562
SMN2	NM_022875	NP_075013	Coding	chr5:70049522 plus strand	318561
SMN2	NM_022875	NP_075013	Coding	chr5:70924940 plus strand	318562
SMN2	NM_022876	NP_075014	Coding	chr5:70049522 plus strand	318561

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SMN2	NM_022876	NP_075014	Coding	chr5:70924940 plus strand	318562
SMN2	NM_022877	NP_075015	Coding	chr5:70049522 plus strand	318561
SMN2	NM_022877	NP_075015	Coding	chr5:70924940 plus strand	318562
SNCAIP	NM_001242935	NP_001229864	Coding	chr5:122312124 plus strand	318563
SNCAIP	NM_005460	NP_005451	Coding	chr5:122312124 plus strand	318563
SNCB	NM_001001502	NP_001001502	Coding	chr5:176630556 minus strand	318564
SNCB	NM_003085	NP_003076	Coding	chr5:176630556 minus strand	318564
SNX18	NM_001102575	NP_001096045	Coding	chr5:54517762 plus strand	318565
SNX18	NM_001145427	NP_001138899	Coding	chr5:54517758 plus strand	318566
SNX18	NM_052870	NP_443102	Coding	chr5:54517762 plus strand	318565
SNX2	NM_001278199	NP_001265128	Coding	chr5:122774995 plus strand	318567
SNX2	NM_003100	NP_003091	Coding	chr5:122774995 plus strand	318567
SNX24	NM_014035	NP_054754	Coding	chr5:122845464 plus strand	318568
SOWAHA	NM_175873	NP_787069	Coding	chr5:132813323 plus strand	318569
SOX30	NM_007017	NP_008948	Coding	chr5:157652420 minus strand	318570
SOX30	NM_178424	NP_848511	Coding	chr5:157652420 minus strand	318570
SPARC	NM_003118	NP_003109	Coding	chr5:151687054 minus strand	318571
SPATA24	NM_194296	NP_919272	Coding	chr5:139404087 minus strand	318572
SPATA9	NM_031952	NP_114158	Coding	chr5:95683010 minus strand	318573
SPDL1	NM_017785	NP_060255	Coding	chr5:169583633 plus strand	318574
SPEF2	NM_024867	NP_079143	Coding	chr5:35617886 plus strand	318575
SPEF2	NM_144722	NP_653323	Coding	chr5:35617886 plus strand	318575
SPINK1	NM_003122	NP_003113	Coding	chr5:147839231 minus strand	318576
SPINK13	NM_001040129	NP_001035218	Coding	chr5:148268859 plus strand	318577
SPINK14	NM_001001325	NP_001001325	Coding	chr5:148169732 plus strand	318578
SPINK5	NM_001127698	NP_001121170	Coding	chr5:148063971 plus strand	318579
SPINK5	NM_001127699	NP_001121171	Coding	chr5:148063971 plus strand	318579
SPINK5	NM_006846	NP_006837	Coding	chr5:148063971 plus strand	318579
SPINK6	NM_001195290	NP_001182219	Coding	chr5:148202793 plus strand	318580
SPINK6	NM_205841	NP_995313	Coding	chr5:148202793 plus strand	318580

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SPINK7	NM_032566	NP_115955	Coding	chr5:148312426 plus strand	318581
SPINK9	NM_001040433	NP_001035523	Coding	chr5:148335558 plus strand	318582
SPOCK1	NM_004598	NP_004589	Coding	chr5:137499329 minus strand	318583
SPRY4	NM_001127496	NP_001120968	Coding	chr5:142325055 minus strand	318584
SPRY4	NM_001293289	NP_001280218	Coding	chr5:142324417 minus strand	318585
SPRY4	NM_001293290	NP_001280219	Coding	chr5:142324417 minus strand	318585
SPRY4	NM_030964	NP_112226	Coding	chr5:142325055 minus strand	318584
SPZ1	NM_032567	NP_115956	Coding	chr5:80319970 plus strand	318586
SQSTM1	NM_001142298	NP_001135770	Coding	chr5:179806387 plus strand	318587
SQSTM1	NM_001142299	NP_001135771	Coding	chr5:179807002 plus strand	318588
SQSTM1	NM_003900	NP_003891	Coding	chr5:179820841 plus strand	318589
SRA1	NM_001035235	NP_001030312	Coding	chr5:140558093 minus strand	318590
SRA1	NM_001253764	NP_001240693	Coding	chr5:140557456 minus strand	318591
SRD5A1	NM_001047	NP_001038	Coding	chr5:6633386 plus strand	318592
SREK1	NM_001077199	NP_001070667	Coding	chr5:66144217 plus strand	318593
SREK1	NM_001270492	NP_001257421	Coding	chr5:66144217 plus strand	318593
SREK1	NM_001270493	NP_001257422	Coding	chr5:66144217 plus strand	318593
SREK1	NM_139168	NP_631907	Coding	chr5:66144834 plus strand	318594
SREK1IP1	NM_173829	NP_776190	Coding	chr5:64768669 minus strand	318595
SRFBP1	NM_152546	NP_689759	Coding	chr5:121961960 plus strand	318596
SRP19	NM_001204193	NP_001191122	Coding	chr5:112861187 plus strand	318597
SRP19	NM_001204194	NP_001191123	Coding	chr5:112861187 plus strand	318597
SRP19	NM_001204196	NP_001191125	Coding	chr5:112861187 plus strand	318597
SRP19	NM_001204199	NP_001191128	Coding	chr5:112861187 plus strand	318597
SRP19	NM_003135	NP_003126	Coding	chr5:112861187 plus strand	318597
SSBP2	NM_001256732	NP_001243661	Coding	chr5:81751253 minus strand	318598
SSBP2	NM_001256733	NP_001243662	Coding	chr5:81751253 minus strand	318598
SSBP2	NM_001256734	NP_001243663	Coding	chr5:81751253 minus strand	318598
SSBP2	NM_001256735	NP_001243664	Coding	chr5:81751253 minus strand	318598

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SSBP2	NM_001256736	NP_001243665	Coding	chr5:81751253 minus strand	318598
SSBP2	NM_012446	NP_036578	Coding	chr5:81751253 minus strand	318598
ST8SIA4	NM_005668	NP_005659	Coding	chr5:100903285 minus strand	318599
ST8SIA4	NM_175052	NP_778222	Coding	chr5:100903285 minus strand	318599
STARD4	NM_139164	NP_631903	Coding	chr5:111512459 minus strand	318600
STC2	NM_003714	NP_003705	Coding	chr5:173329503 minus strand	318601
STK10	NM_005990	NP_005981	Coding	chr5:172188342 minus strand	318602
STK32A	NM_001112724	NP_001106195	Coding	chr5:147235015 plus strand	318603
STK32A	NM_001287740	NP_001274669	Coding	chr5:147235015 plus strand	318603
STK32A	NM_145001	NP_659438	Coding	chr5:147235015 plus strand	318603
SUB1	NM_006713	NP_006704	Coding	chr5:32585498 plus strand	318604
SV2C	NM_001297716	NP_001284645	Coding	chr5:76083413 plus strand	318605
SV2C	NM_014979	NP_055794	Coding	chr5:76083413 plus strand	318605
SYNPO	NM_001109974	NP_001103444	Coding	chr5:150640644 plus strand	318606
SYNPO	NM_001166208	NP_001159680	Coding	chr5:150601079 plus strand	318607
SYNPO	NM_001166209	NP_001159681	Coding	chr5:150617643 plus strand	318608
SYNPO	NM_007286	NP_009217	Coding	chr5:150640644 plus strand	318606
TAF7	NM_005642	NP_005633	Coding	chr5:141320784 minus strand	318609
TAF9	NM_001015892	NP_001015892	Coding	chr5:69370013 minus strand	318610
TAF9	NM_003187	NP_003178	Coding	chr5:69369582 minus strand	318611
TARS	NM_001258437	NP_001245366	Coding	chr5:33440695 plus strand	318612
TARS	NM_001258438	NP_001245367	Coding	chr5:33440775 plus strand	318613
TARS	NM_152295	NP_689508	Coding	chr5:33440775 plus strand	318613
TAS2R1	NM_019599	NP_062545	Coding	chr5:9630351 minus strand	318614
TBC1D9B	NM_015043	NP_055858	Coding	chr5:179907856 minus strand	318615
TBC1D9B	NM_198868	NP_942568	Coding	chr5:179907856 minus strand	318615
TBCA	NM_001297738	NP_001284667	Coding	chr5:77776361 minus strand	318616
TBCA	NM_001297740	NP_001284669	Coding	chr5:77776361 minus strand	318616
TBCA	NM_004607	NP_004598	Coding	chr5:77776361 minus strand	318616
TCERG1	NM_001040006	NP_001035095	Coding	chr5:146447309 plus	318617

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				strand	
TCERG1	NM_006706	NP_006697	Coding	chr5:146447309 plus strand	318617
TCF7	NM_001134851	NP_001128323	Coding	chr5:134115606 plus strand	318618
TCF7	NM_003202	NP_003193	Coding	chr5:134114710 plus strand	318619
TCF7	NM_201632	NP_963963	Coding	chr5:134115606 plus strand	318618
TCF7	NM_201634	NP_963965	Coding	chr5:134115606 plus strand	318618
TCF7	NM_213648	NP_998813	Coding	chr5:134115606 plus strand	318618
TCOF1	NM_000356	NP_000347	Coding	chr5:150357638 plus strand	318620
TCOF1	NM_001008657	NP_001008657	Coding	chr5:150357638 plus strand	318620
TCOF1	NM_001135243	NP_001128715	Coding	chr5:150357638 plus strand	318620
TCOF1	NM_001135244	NP_001128716	Coding	chr5:150357638 plus strand	318620
TCOF1	NM_001135245	NP_001128717	Coding	chr5:150357638 plus strand	318620
TCOF1	NM_001195141	NP_001182070	Coding	chr5:150357638 plus strand	318620
TENM2	NM_001122679	NP_001116151	Coding	chr5:167284837 plus strand	318621
TERT	NM_001193376	NP_001180305	Coding	chr5:1295047 minus strand	318622
TERT	NM_198253	NP_937983	Coding	chr5:1295047 minus strand	318622
TEX43	NM_207408	NP_997291	Coding	chr5:126631721 plus strand	318623
TGFBI	NM_000358	NP_000349	Coding	chr5:136028894 plus strand	318624
THBS4	NM_003248	NP_003239	Coding	chr5:80035346 plus strand	318625
THG1L	NM_017872	NP_060342	Coding	chr5:157731314 plus strand	318626
THOC3	NM_032361	NP_115737	Coding	chr5:175968315 minus strand	318627
TICAM2	NM_021649	NP_067681	Coding	chr5:115602479 minus strand	318628
TIFAB	NM_001099221	NP_001092691	Coding	chr5:135452399 minus strand	318629
TIGD6	NM_001243253	NP_001230182	Coding	chr5:150000608 minus strand	318630
TIGD6	NM_030953	NP_112215	Coding	chr5:150001167 minus strand	318631
TIMD4	NM_001146726	NP_001140198	Coding	chr5:156963255 minus strand	318632
TIMD4	NM_138379	NP_612388	Coding	chr5:156963255 minus strand	318632
TLX3	NM_021025	NP_066305	Coding	chr5:171309283 plus strand	318633
TMCO6	NM_001300980	NP_001287909	Coding	chr5:140639426 plus	318634

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				strand	
TMCO6	NM_001300982	NP_001287911	Coding	chr5:140639426 plus strand	318634
TMCO6	NM_018502	NP_060972	Coding	chr5:140639426 plus strand	318634
TMED7	NM_181836	NP_861974	Coding	chr5:115626179 minus strand	318635
TMED7-TICAM2	NM_001164468	NP_001157940	Coding	chr5:115626179 minus strand	318636
TMED7-TICAM2	NM_001164469	NP_001157941	Coding	chr5:115626179 minus strand	318636
TMED9	NM_017510	NP_059980	Coding	chr5:177592211 plus strand	318637
TMEM161B	NM_001289007	NP_001275936	Coding	chr5:88268879 minus strand	318638
TMEM161B	NM_001289008	NP_001275937	Coding	chr5:88268879 minus strand	318638
TMEM161B	NM_153354	NP_699185	Coding	chr5:88268879 minus strand	318638
TMEM167A	NM_174909	NP_777569	Coding	chr5:83077453 minus strand	318639
TMEM171	NM_001161342	NP_001154814	Coding	chr5:73120560 plus strand	318640
TMEM171	NM_173490	NP_775761	Coding	chr5:73120560 plus strand	318640
TMEM173	NM_001301738	NP_001288667	Coding	chr5:139482302 minus strand	318641
TMEM173	NM_198282	NP_938023	Coding	chr5:139482790 minus strand	318642
TMEM174	NM_153217	NP_694949	Coding	chr5:73173195 plus strand	318643
TMEM232	NM_001039763	NP_001034852	Coding	chr5:110726749 minus strand	318644
TNFAIP8	NM_001077654	NP_001071122	Coding	chr5:119268691 plus strand	318645
TNFAIP8	NM_001286813	NP_001273742	Coding	chr5:119354772 plus strand	318646
TNFAIP8	NM_001286814	NP_001273743	Coding	chr5:119333174 plus strand	318647
TNFAIP8	NM_001286815	NP_001273744	Coding	chr5:119268691 plus strand	318645
TNFAIP8	NM_001286817	NP_001273746	Coding	chr5:119268691 plus strand	318645
TNFAIP8	NM_014350	NP_055165	Coding	chr5:119355819 plus strand	318648
TNIP1	NM_001252385	NP_001239314	Coding	chr5:151081084 minus strand	318649
TNIP1	NM_001252386	NP_001239315	Coding	chr5:151081084 minus strand	318649
TNIP1	NM_001252390	NP_001239319	Coding	chr5:151087660 minus strand	318650
TNIP1	NM_001252391	NP_001239320	Coding	chr5:151087186 minus strand	318651
TNIP1	NM_001252392	NP_001239321	Coding	chr5:151087186 minus strand	318651
TNIP1	NM_001252393	NP_001239322	Coding	chr5:151081084 minus	318649

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				strand	
TNIP1	NM_001258454	NP_001245383	Coding	chr5:151081088 minus strand	318652
TNIP1	NM_001258455	NP_001245384	Coding	chr5:151065131 minus strand	318653
TNIP1	NM_001258456	NP_001245385	Coding	chr5:151065131 minus strand	318653
TNIP1	NM_006058	NP_006049	Coding	chr5:151081084 minus strand	318649
TNPO1	NM_002270	NP_002261	Coding	chr5:72816590 plus strand	318654
TNPO1	NM_153188	NP_694858	Coding	chr5:72848102 plus strand	318655
TPPP	NM_007030	NP_008961	Coding	chr5:693395 minus strand	318656
TRAPPC13	NM_001093755	NP_001087224	Coding	chr5:65624730 plus strand	318657
TRAPPC13	NM_001093756	NP_001087225	Coding	chr5:65624730 plus strand	318657
TRAPPC13	NM_001243737	NP_001230666	Coding	chr5:65624730 plus strand	318657
TRAPPC13	NM_024941	NP_079217	Coding	chr5:65624730 plus strand	318657
TRIM23	NM_001656	NP_001647	Coding	chr5:65624360 minus strand	318658
TRIM23	NM_033227	NP_150230	Coding	chr5:65624360 minus strand	318658
TRIM23	NM_033228	NP_150231	Coding	chr5:65624360 minus strand	318658
TRIM36	NM_001017397	NP_001017397	Coding	chr5:115180546 minus strand	318659
TRIM36	NM_001017398	NP_001017398	Coding	chr5:115180546 minus strand	318659
TRIM36	NM_001300752	NP_001287681	Coding	chr5:115180546 minus strand	318659
TRIM36	NM_001300759	NP_001287688	Coding	chr5:115169963 minus strand	318660
TRIM36	NM_018700	NP_061170	Coding	chr5:115180546 minus strand	318659
TRIM41	NM_033549	NP_291027	Coding	chr5:181223262 plus strand	318661
TRIM41	NM_201627	NP_963921	Coding	chr5:181223262 plus strand	318661
TRIM52	NM_032765	NP_116154	Coding	chr5:181261118 minus strand	318662
TRIM7	NM_033342	NP_203128	Coding	chr5:181205293 minus strand	318663
TRIM7	NM_203293	NP_976038	Coding	chr5:181205293 minus strand	318663
TRIM7	NM_203294	NP_976039	Coding	chr5:181204340 minus strand	318664
TRIM7	NM_203295	NP_976040	Coding	chr5:181204340 minus strand	318664
TRIM7	NM_203296	NP_976041	Coding	chr5:181204340 minus strand	318664
TRIM7	NM_203297	NP_976042	Coding	chr5:181200930 minus strand	318665
TRIO	NM_007118	NP_009049	Coding	chr5:14143719 plus strand	318666

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TRIP13	NM_001166260	NP_001159732	Coding	chr5:892853 plus strand	318667
TRIP13	NM_004237	NP_004228	Coding	chr5:892853 plus strand	318667
TRPC7	NM_001167576	NP_001161048	Coding	chr5:136365476 minus strand	318668
TRPC7	NM_001167577	NP_001161049	Coding	chr5:136365476 minus strand	318668
TRPC7	NM_020389	NP_065122	Coding	chr5:136365476 minus strand	318668
TSLP	NM_033035	NP_149024	Coding	chr5:111071691 plus strand	318669
TSLP	NM_138551	NP_612561	Coding	chr5:111073313 plus strand	318670
TSPAN17	NM_001006616	NP_001006617	Coding	chr5:176647386 plus strand	318671
TSPAN17	NM_012171	NP_036303	Coding	chr5:176647386 plus strand	318671
TSPAN17	NM_130465	NP_569732	Coding	chr5:176647386 plus strand	318671
TSSK1B	NM_032028	NP_114417	Coding	chr5:113435031 minus strand	318672
TTC1	NM_001282500	NP_001269429	Coding	chr5:160009099 plus strand	318673
TTC1	NM_003314	NP_003305	Coding	chr5:160009099 plus strand	318673
TTC23L	NM_144725	NP_653326	Coding	chr5:34839163 plus strand	318674
TTC33	NM_012382	NP_036514	Coding	chr5:40755970 minus strand	318675
TTC37	NM_014639	NP_055454	Coding	chr5:95555005 minus strand	318676
TXNDC15	NM_024715	NP_078991	Coding	chr5:134873769 plus strand	318677
UBE2B	NM_003337	NP_003328	Coding	chr5:134371175 plus strand	318678
UBE2D2	NM_003339	NP_003330	Coding	chr5:139561165 plus strand	318679
UBE2D2	NM_181838	NP_862821	Coding	chr5:139561165 plus strand	318679
UBE2QL1	NM_001145161	NP_001138633	Coding	chr5:6448622 plus strand	318680
UBLCP1	NM_145049	NP_659486	Coding	chr5:159263080 plus strand	318681
UBTD2	NM_152277	NP_689490	Coding	chr5:172283791 minus strand	318682
UGT3A1	NM_001171873	NP_001165344	Coding	chr5:36001028 minus strand	318683
UGT3A1	NM_152404	NP_689617	Coding	chr5:35991433 minus strand	318684
UGT3A2	NM_001168316	NP_001161788	Coding	chr5:36066921 minus strand	318685
UGT3A2	NM_174914	NP_777574	Coding	chr5:36066921 minus strand	318685
UIMC1	NM_001199297	NP_001186226	Coding	chr5:177006779 minus strand	318686
UIMC1	NM_001199298	NP_001186227	Coding	chr5:177006794 minus	318687

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				strand	
UIMC1	NM_016290	NP_057374	Coding	chr5:177006442 minus strand	318688
UNC5A	NM_133369	NP_588610	Coding	chr5:176810558 plus strand	318689
UQCRQ	NM_014402	NP_055217	Coding	chr5:132866626 plus strand	318690
UTP15	NM_001284430	NP_001271359	Coding	chr5:73565740 plus strand	318691
UTP15	NM_001284431	NP_001271360	Coding	chr5:73565740 plus strand	318691
UTP15	NM_032175	NP_115551	Coding	chr5:73565740 plus strand	318691
VCAN	NM_001126336	NP_001119808	Coding	chr5:83471673 plus strand	318692
VCAN	NM_001164097	NP_001157569	Coding	chr5:83471673 plus strand	318692
VCAN	NM_001164098	NP_001157570	Coding	chr5:83471673 plus strand	318692
VCAN	NM_004385	NP_004376	Coding	chr5:83471673 plus strand	318692
VDAC1	NM_003374	NP_003365	Coding	chr5:134005133 minus strand	318693
WDR36	NM_139281	NP_644810	Coding	chr5:111092171 plus strand	318694
WDR41	NM_018268	NP_060738	Coding	chr5:77492507 minus strand	318695
WDR55	NM_017706	NP_060176	Coding	chr5:140664798 plus strand	318696
WDR70	NM_018034	NP_060504	Coding	chr5:37379309 plus strand	318697
WNT8A	NM_001300938	NP_001287867	Coding	chr5:138083891 plus strand	318698
WNT8A	NM_001300939	NP_001287868	Coding	chr5:138083891 plus strand	318698
WNT8A	NM_058244	NP_490645	Coding	chr5:138083891 plus strand	318698
WWC1	NM_001161661	NP_001155133	Coding	chr5:168292059 plus strand	318699
WWC1	NM_001161662	NP_001155134	Coding	chr5:168292059 plus strand	318699
WWC1	NM_015238	NP_056053	Coding	chr5:168292059 plus strand	318699
XRCC4	NM_003401	NP_003392	Coding	chr5:83077497 plus strand	318700
XRCC4	NM_022406	NP_071801	Coding	chr5:83077497 plus strand	318700
XRCC4	NM_022550	NP_072044	Coding	chr5:83077497 plus strand	318700
YIPF5	NM_001024947	NP_001020118	Coding	chr5:144170714 minus strand	318701
YIPF5	NM_001271732	NP_001258661	Coding	chr5:144170714 minus strand	318701
YIPF5	NM_030799	NP_110426	Coding	chr5:144170714 minus strand	318701
YTHDC2	NM_022828	NP_073739	Coding	chr5:113513693 plus strand	318702
ZBED3	NM_032367	NP_115743	Coding	chr5:77087205 minus strand	318703
ZBED8	NM_022090	NP_071373	Coding	chr5:160400053 minus strand	318704

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ZCCHC10	NM_001300816	NP_001287745	Coding	chr5:133026583 minus strand	318705
ZCCHC10	NM_001300817	NP_001287746	Coding	chr5:133026583 minus strand	318705
ZCCHC10	NM_001300818	NP_001287747	Coding	chr5:133026583 minus strand	318705
ZCCHC10	NM_001300819	NP_001287748	Coding	chr5:133026583 minus strand	318705
ZCCHC10	NM_001300822	NP_001287751	Coding	chr5:133026583 minus strand	318705
ZCCHC10	NM_001300825	NP_001287754	Coding	chr5:133026583 minus strand	318705
ZCCHC10	NM_017665	NP_060135	Coding	chr5:133026583 minus strand	318705
ZCCHC9	NM_001131035	NP_001124507	Coding	chr5:81301582 plus strand	318706
ZCCHC9	NM_001131036	NP_001124508	Coding	chr5:81301582 plus strand	318706
ZCCHC9	NM_032280	NP_115656	Coding	chr5:81301582 plus strand	318706
ZDHHC11	NM_024786	NP_079062	Coding	chr5:850986 minus strand	318707
ZFP2	NM_030613	NP_085116	Coding	chr5:178895914 plus strand	318708
ZFP62	NM_001172638	NP_001166109	Coding	chr5:180861286 minus strand	318709
ZFP62	NM_152283	NP_689496	Coding	chr5:180861286 minus strand	318709
ZFR	NM_016107	NP_057191	Coding	chr5:32444738 minus strand	318710
ZFYVE16	NM_001105251	NP_001098721	Coding	chr5:80408012 plus strand	318711
ZFYVE16	NM_001284236	NP_001271165	Coding	chr5:80408012 plus strand	318711
ZFYVE16	NM_001284237	NP_001271166	Coding	chr5:80408012 plus strand	318711
ZFYVE16	NM_014733	NP_055548	Coding	chr5:80408012 plus strand	318711
ZMAT2	NM_144723	NP_653324	Coding	chr5:140700446 plus strand	318712
ZNF131	NM_001297548	NP_001284477	Coding	chr5:43121507 plus strand	318713
ZNF131	NM_003432	NP_003423	Coding	chr5:43121493 plus strand	318714
ZNF300	NM_001172831	NP_001166302	Coding	chr5:150904983 minus strand	318715
ZNF300	NM_001172832	NP_001166303	Coding	chr5:150904983 minus strand	318715
ZNF300	NM_052860	NP_443092	Coding	chr5:150904983 minus strand	318715
ZNF346	NM_012279	NP_036411	Coding	chr5:177022695 plus strand	318716
ZNF354A	NM_005649	NP_005640	Coding	chr5:178730702 minus strand	318717
ZNF354B	NM_058230	NP_478137	Coding	chr5:178859952 plus strand	318718
ZNF354C	NM_014594	NP_055409	Coding	chr5:179060605 plus strand	318719
ZNF366	NM_152625	NP_689838	Coding	chr5:72507422 minus strand	318720
ZNF454	NM_001178089	NP_001171560	Coding	chr5:178941192 plus	318721

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				strand	
ZNF454	NM_001178090	NP_001171561	Coding	chr5:178941192 plus strand	318721
ZNF454	NM_182594	NP_872400	Coding	chr5:178941192 plus strand	318721
ZNF474	NM_207317	NP_997200	Coding	chr5:122129519 plus strand	318722
ZNF608	NM_020747	NP_065798	Coding	chr5:124745112 minus strand	318723
ZNF622	NM_033414	NP_219482	Coding	chr5:16465785 minus strand	318724
ZNF879	NM_001136116	NP_001129588	Coding	chr5:179023774 plus strand	318725
ZSWIM6	NM_020928	NP_065979	Coding	chr5:61332272 plus strand	318726
AARS2	NM_020745	NP_065796	Coding	chr6:44313326 minus strand	584785
ABCC10	NM_001198934	NP_001185863	Coding	chr6:43427553 plus strand	584786
ABCC10	NM_033450	NP_258261	Coding	chr6:43431750 plus strand	584787
ABCF1	NM_001025091	NP_001020262	Coding	chr6:30571392 plus strand	584788
ABCF1	NM_001090	NP_001081	Coding	chr6:30571392 plus strand	584788
ABHD16A	NM_001177515	NP_001170986	Coding	chr6:31703073 minus strand	584789
ABHD16A	NM_021160	NP_066983	Coding	chr6:31703360 minus strand	584790
ABRACL	NM_021243	NP_067066	Coding	chr6:139028681 plus strand	584791
ABT1	NM_013375	NP_037507	Coding	chr6:26596942 plus strand	584792
ACAT2	NM_005891	NP_005882	Coding	chr6:159761956 plus strand	584793
ACOT13	NM_001160094	NP_001153566	Coding	chr6:24667034 plus strand	584794
ACOT13	NM_018473	NP_060943	Coding	chr6:24667034 plus strand	584794
ADAT2	NM_001286259	NP_001273188	Coding	chr6:143442677 minus strand	584795
ADAT2	NM_182503	NP_872309	Coding	chr6:143450704 minus strand	584796
ADGB	NM_024694	NP_078970	Coding	chr6:146598999 plus strand	584797
ADTRP	NM_001143948	NP_001137420	Coding	chr6:11779047 minus strand	584798
ADTRP	NM_032744	NP_116133	Coding	chr6:11779047 minus strand	584798
AGER	NM_001136	NP_001127	Coding	chr6:32184322 minus strand	584799
AGER	NM_001206929	NP_001193858	Coding	chr6:32184322 minus strand	584799
AGER	NM_001206932	NP_001193861	Coding	chr6:32184322 minus strand	584799
AGER	NM_001206934	NP_001193863	Coding	chr6:32184322 minus strand	584799
AGER	NM_001206936	NP_001193865	Coding	chr6:32184322 minus strand	584799

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AGER	NM_001206940	NP_001193869	Coding	chr6:32184322 minus strand	584799
AGER	NM_001206954	NP_001193883	Coding	chr6:32184322 minus strand	584799
AGER	NM_001206966	NP_001193895	Coding	chr6:32184322 minus strand	584799
AGER	NM_172197	NP_751947	Coding	chr6:32184322 minus strand	584799
AGPAT1	NM_006411	NP_006402	Coding	chr6:32176139 minus strand	584800
AGPAT1	NM_032741	NP_116130	Coding	chr6:32178111 minus strand	584801
AGPAT4	NM_020133	NP_064518	Coding	chr6:161274075 minus strand	584802
AHI1	NM_001134830	NP_001128302	Coding	chr6:135497765 minus strand	584803
AHI1	NM_001134831	NP_001128303	Coding	chr6:135497765 minus strand	584803
AHI1	NM_001134832	NP_001128304	Coding	chr6:135497765 minus strand	584803
AHI1	NM_017651	NP_060121	Coding	chr6:135497765 minus strand	584803
AIF1	NM_001623	NP_001614	Coding	chr6:31615255 plus strand	584804
AIF1	NM_004847	NP_004838	Coding	chr6:31615216 plus strand	584805
AIF1	NM_032955	NP_116573	Coding	chr6:31616011 plus strand	584806
AIG1	NM_001286587	NP_001273516	Coding	chr6:143059362 plus strand	584807
AIG1	NM_001286588	NP_001273517	Coding	chr6:143060841 plus strand	584808
AIG1	NM_001286589	NP_001273518	Coding	chr6:143060841 plus strand	584808
AIG1	NM_016108	NP_057192	Coding	chr6:143060841 plus strand	584808
AIM1	NM_001624	NP_001615	Coding	chr6:106511854 plus strand	584809
AK9	NM_001145128	NP_001138600	Coding	chr6:109691212 minus strand	584810
AK9	NM_145025	NP_659462	Coding	chr6:109691212 minus strand	584810
AKAP12	NM_005100	NP_005091	Coding	chr6:151239998 plus strand	584811
AKAP12	NM_144497	NP_653080	Coding	chr6:151325530 plus strand	584812
AKAP7	NM_004842	NP_004833	Coding	chr6:131250158 plus strand	584813
AKAP7	NM_016377	NP_057461	Coding	chr6:131135685 plus strand	584814
AKAP7	NM_138633	NP_619539	Coding	chr6:131250158 plus strand	584813
AKIRIN2	NM_018064	NP_060534	Coding	chr6:87702267 minus strand	584815
ALDH5A1	NM_001080	NP_001071	Coding	chr6:24494968 plus strand	584816
ALDH5A1	NM_170740	NP_733936	Coding	chr6:24494968 plus strand	584816

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ALDH8A1	NM_001193480	NP_001180409	Coding	chr6:134950122 minus strand	584817
ALDH8A1	NM_022568	NP_072090	Coding	chr6:134950122 minus strand	584817
ALDH8A1	NM_170771	NP_739577	Coding	chr6:134950122 minus strand	584817
AMD1	NM_001287214	NP_001274143	Coding	chr6:110874783 plus strand	584818
AMD1	NM_001287215	NP_001274144	Coding	chr6:110814620 plus strand	584819
AMD1	NM_001287216	NP_001274145	Coding	chr6:110874783 plus strand	584818
AMD1	NM_001634	NP_001625	Coding	chr6:110874783 plus strand	584818
ANKRD6	NM_001242809	NP_001229738	Coding	chr6:89433177 plus strand	584820
ANKRD6	NM_001242811	NP_001229740	Coding	chr6:89562317 plus strand	584821
ANKRD6	NM_001242813	NP_001229742	Coding	chr6:89433177 plus strand	584820
ANKRD6	NM_001242814	NP_001229743	Coding	chr6:89566837 plus strand	584822
ANKRD6	NM_014942	NP_055757	Coding	chr6:89433177 plus strand	584820
ANKRD66	NM_001162435	NP_001155907	Coding	chr6:46746916 plus strand	584823
ANKS1A	NM_015245	NP_056060	Coding	chr6:34889260 plus strand	584824
APOBEC2	NM_006789	NP_006780	Coding	chr6:41053200 plus strand	584825
APOM	NM_001256169	NP_001243098	Coding	chr6:31652409 plus strand	584826
APOM	NM_019101	NP_061974	Coding	chr6:31655893 plus strand	584827
ARG1	NM_000045	NP_000036	Coding	chr6:131573203 plus strand	584828
ARG1	NM_001244438	NP_001231367	Coding	chr6:131573203 plus strand	584828
ARHGAP18	NM_033515	NP_277050	Coding	chr6:129710225 minus strand	584829
ARID1B	NM_017519	NP_059989	Coding	chr6:156777929 plus strand	584830
ARID1B	NM_020732	NP_065783	Coding	chr6:156777929 plus strand	584830
ARMC12	NM_001286574	NP_001273503	Coding	chr6:35737031 plus strand	584831
ARMC12	NM_001286576	NP_001273505	Coding	chr6:35737031 plus strand	584831
ARMC12	NM_145028	NP_659465	Coding	chr6:35737031 plus strand	584831
ARMC2	NM_001286609	NP_001273538	Coding	chr6:108848415 plus strand	584832
ARMC2	NM_032131	NP_115507	Coding	chr6:108848415 plus strand	584832
ASCC3	NM_001284271	NP_001271200	Coding	chr6:100881372 minus strand	584833
ASCC3	NM_006828	NP_006819	Coding	chr6:100881372 minus strand	584833
ASCC3	NM_022091	NP_071374	Coding	chr6:100881372 minus strand	584833
ASF1A	NM_014034	NP_054753	Coding	chr6:118894076 plus strand	584834
ATAT1	NM_001031722	NP_001026892	Coding	chr6:30626885 plus strand	584835

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ATAT1	NM_001254952	NP_001241881	Coding	chr6:30626837 plus strand	584836
ATAT1	NM_024909	NP_079185	Coding	chr6:30626835 plus strand	584837
ATF6B	NM_001136153	NP_001129625	Coding	chr6:32128240 minus strand	584838
ATF6B	NM_004381	NP_004372	Coding	chr6:32128240 minus strand	584838
ATG5	NM_001286106	NP_001273035	Coding	chr6:106325435 minus strand	584839
ATG5	NM_001286107	NP_001273036	Coding	chr6:106325820 minus strand	584840
ATG5	NM_001286108	NP_001273037	Coding	chr6:106325820 minus strand	584840
ATG5	NM_001286111	NP_001273040	Coding	chr6:106325820 minus strand	584840
ATG5	NM_004849	NP_004840	Coding	chr6:106325820 minus strand	584840
ATP6V1G2	NM_001204078	NP_001191007	Coding	chr6:31546848 minus strand	584841
ATP6V1G2	NM_130463	NP_569730	Coding	chr6:31546848 minus strand	584841
ATP6V1G2	NM_138282	NP_612139	Coding	chr6:31546848 minus strand	584841
ATXN1	NM_000332	NP_000323	Coding	chr6:16761490 minus strand	584842
ATXN1	NM_001128164	NP_001121636	Coding	chr6:16761490 minus strand	584842
B3GALT4	NM_003782	NP_003773	Coding	chr6:33277139 plus strand	584843
B3GAT2	NM_080742	NP_542780	Coding	chr6:70957085 minus strand	584844
BACH2	NM_001170794	NP_001164265	Coding	chr6:90296908 minus strand	584845
BACH2	NM_021813	NP_068585	Coding	chr6:90296908 minus strand	584845
BAG2	NM_004282	NP_004273	Coding	chr6:57172305 plus strand	584846
BAG6	NM_001098534	NP_001092004	Coding	chr6:31652393 minus strand	584847
BAG6	NM_001199697	NP_001186626	Coding	chr6:31652700 minus strand	584848
BAG6	NM_001199698	NP_001186627	Coding	chr6:31652700 minus strand	584848
BAG6	NM_004639	NP_004630	Coding	chr6:31652700 minus strand	584848
BAG6	NM_080702	NP_542433	Coding	chr6:31652700 minus strand	584848
BAG6	NM_080703	NP_542434	Coding	chr6:31652700 minus strand	584848
BAI3	NM_001704	NP_001695	Coding	chr6:68635739 plus strand	584849
BAK1	NM_001188	NP_001179	Coding	chr6:33580293 minus strand	584850
BCKDHB	NM_000056	NP_000047	Coding	chr6:80106626 plus strand	584851
BCKDHB	NM_183050	NP_898871	Coding	chr6:80106626 plus strand	584851
BCLAF1	NM_001077440	NP_001070908	Coding	chr6:136289851 minus	584852

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				strand	
BCLAF1	NM_001077441	NP_001070909	Coding	chr6:136289851 minus strand	584852
BCLAF1	NM_001301038	NP_001287967	Coding	chr6:136289851 minus strand	584852
BCLAF1	NM_014739	NP_055554	Coding	chr6:136289851 minus strand	584852
BEND3	NM_001080450	NP_001073919	Coding	chr6:107114432 minus strand	584853
BEND6	NM_152731	NP_689944	Coding	chr6:56954974 plus strand	584854
BLOC1S5	NM_001199322	NP_001186251	Coding	chr6:8064414 minus strand	584855
BLOC1S5	NM_001199323	NP_001186252	Coding	chr6:8064414 minus strand	584855
BLOC1S5	NM_201280	NP_958437	Coding	chr6:8064414 minus strand	584855
BMP5	NM_021073	NP_066551	Coding	chr6:55875577 minus strand	584856
BMP6	NM_001718	NP_001709	Coding	chr6:7726777 plus strand	584857
BPHL	NM_001302777	NP_001289706	Coding	chr6:3118375 plus strand	584858
BPHL	NM_004332	NP_004323	Coding	chr6:3118375 plus strand	584858
BRD2	NM_001113182	NP_001106653	Coding	chr6:32970887 plus strand	584859
BRD2	NM_001199455	NP_001186384	Coding	chr6:32971594 plus strand	584860
BRD2	NM_001199456	NP_001186385	Coding	chr6:32973083 plus strand	584861
BRD2	NM_001291986	NP_001278915	Coding	chr6:32970887 plus strand	584859
BRD2	NM_005104	NP_005095	Coding	chr6:32968659 plus strand	584862
BRPF3	NM_015695	NP_056510	Coding	chr6:36196772 plus strand	584863
BTBD9	NM_001099272	NP_001092742	Coding	chr6:38640148 minus strand	584864
BTBD9	NM_001172418	NP_001165889	Coding	chr6:38596067 minus strand	584865
BTBD9	NM_052893	NP_443125	Coding	chr6:38640148 minus strand	584864
BTBD9	NM_152733	NP_689946	Coding	chr6:38596067 minus strand	584865
BTN1A1	NM_001732	NP_001723	Coding	chr6:26501266 plus strand	584866
BTN2A1	NM_001197233	NP_001184162	Coding	chr6:26457903 plus strand	584867
BTN2A1	NM_001197234	NP_001184163	Coding	chr6:26457903 plus strand	584867
BTN2A1	NM_007049	NP_008980	Coding	chr6:26457903 plus strand	584867
BTN2A1	NM_078476	NP_510961	Coding	chr6:26457903 plus strand	584867
BTN2A2	NM_001197237	NP_001184166	Coding	chr6:26383210 plus strand	584868
BTN2A2	NM_001197238	NP_001184167	Coding	chr6:26383095 plus strand	584869
BTN2A2	NM_001197239	NP_001184168	Coding	chr6:26383100 plus strand	584870
BTN2A2	NM_001197240	NP_001184169	Coding	chr6:26383100 plus strand	584870
BTN2A2	NM_006995	NP_008926	Coding	chr6:26383100 plus strand	584870
BTN2A2	NM_181531	NP_853509	Coding	chr6:26383100 plus strand	584870
BTN3A1	NM_001145008	NP_001138480	Coding	chr6:26402236 plus strand	584871
BTN3A1	NM_001145009	NP_001138481	Coding	chr6:26402236 plus strand	584871
BTN3A1	NM_007048	NP_008979	Coding	chr6:26402236 plus strand	584871

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BTN3A1	NM_194441	NP_919423	Coding	chr6:26402236 plus strand	584871
BTN3A2	NM_001197246	NP_001184175	Coding	chr6:26368177 plus strand	584872
BTN3A2	NM_001197247	NP_001184176	Coding	chr6:26365158 plus strand	584873
BTN3A2	NM_001197248	NP_001184177	Coding	chr6:26365158 plus strand	584873
BTN3A2	NM_001197249	NP_001184178	Coding	chr6:26365158 plus strand	584873
BTN3A2	NM_007047	NP_008978	Coding	chr6:26365158 plus strand	584873
BTN3A3	NM_001242803	NP_001229732	Coding	chr6:26440471 plus strand	584874
BTN3A3	NM_006994	NP_008925	Coding	chr6:26440471 plus strand	584874
BTN3A3	NM_197974	NP_932078	Coding	chr6:26440471 plus strand	584874
BTNL2	NM_019602	NP_062548	Coding	chr6:32407123 minus strand	584875
BVES	NM_001199563	NP_001186492	Coding	chr6:105137174 minus strand	584876
BVES	NM_007073	NP_009004	Coding	chr6:105136668 minus strand	584877
BVES	NM_147147	NP_671488	Coding	chr6:105136346 minus strand	584878
BYSL	NM_004053	NP_004044	Coding	chr6:41921226 plus strand	584879
C2	NM_000063	NP_000054	Coding	chr6:31927476 plus strand	584880
C2	NM_001145903	NP_001139375	Coding	chr6:31927476 plus strand	584880
C2	NM_001178063	NP_001171534	Coding	chr6:31900998 plus strand	584881
C2	NM_001282457	NP_001269386	Coding	chr6:31897784 plus strand	584882
C2	NM_001282458	NP_001269387	Coding	chr6:31927476 plus strand	584880
C2	NM_001282459	NP_001269388	Coding	chr6:31927476 plus strand	584880
C4A	NM_001252204	NP_001239133	Coding	chr6:31982056 plus strand	584883
C4A	NM_007293	NP_009224	Coding	chr6:31982056 plus strand	584883
C4B	NM_001002029	NP_001002029	Coding	chr6:31982056 plus strand	584884
C4B	NM_001002029	NP_001002029	Coding	chr6:32014794 plus strand	584885
C4B_2	NM_001242823	NP_001229752	Coding	chr6:31982056 plus strand	584886
C4B_2	NM_001242823	NP_001229752	Coding	chr6:32014794 plus strand	584887
C6orf1	NM_001008703	NP_001008703	Coding	chr6:34249108 minus strand	584888
C6orf1	NM_001008704	NP_001008704	Coding	chr6:34249108 minus strand	584888
C6orf1	NM_001287396	NP_001274325	Coding	chr6:34249108 minus strand	584888
C6orf1	NM_001287397	NP_001274326	Coding	chr6:34249108 minus strand	584888
C6orf1	NM_001287398	NP_001274327	Coding	chr6:34249108 minus strand	584888
C6orf1	NM_178508	NP_848603	Coding	chr6:34249108 minus strand	584888
C6orf10	NM_001286474	NP_001273403	Coding	chr6:32371912 minus strand	584889
C6orf10	NM_001286475	NP_001273404	Coding	chr6:32371912 minus strand	584889
C6orf10	NM_006781	NP_006772	Coding	chr6:32371912 minus strand	584889

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C6orf106	NM_022758	NP_073595	Coding	chr6:34696850 minus strand	584890
C6orf106	NM_024294	NP_077270	Coding	chr6:34696850 minus strand	584890
C6orf118	NM_144980	NP_659417	Coding	chr6:165309622 minus strand	584891
C6orf120	NM_001029863	NP_001025034	Coding	chr6:169702160 plus strand	584892
C6orf132	NM_001164446	NP_001157918	Coding	chr6:42142977 minus strand	584893
C6orf136	NM_001109938	NP_001103408	Coding	chr6:30647038 plus strand	584894
C6orf136	NM_001161376	NP_001154848	Coding	chr6:30647038 plus strand	584894
C6orf136	NM_145029	NP_659466	Coding	chr6:30647038 plus strand	584894
C6orf141	NM_001145652	NP_001139124	Coding	chr6:49550399 plus strand	584895
C6orf15	NM_014070	NP_054789	Coding	chr6:31112555 minus strand	584896
C6orf163	NM_001010868	NP_001010868	Coding	chr6:87344852 plus strand	584897
C6orf165	NM_001031743	NP_001026913	Coding	chr6:87407971 plus strand	584898
C6orf195	NM_152554	NP_689767	Coding	chr6:2635064 minus strand	584899
C6orf201	NM_001085401	NP_001078870	Coding	chr6:4079205 plus strand	584900
C6orf203	NM_001142468	NP_001135940	Coding	chr6:107028171 plus strand	584901
C6orf203	NM_001142470	NP_001135942	Coding	chr6:107028171 plus strand	584901
C6orf203	NM_016487	NP_057571	Coding	chr6:107028171 plus strand	584901
C6orf211	NM_001286562	NP_001273491	Coding	chr6:151452257 plus strand	584902
C6orf211	NM_024573	NP_078849	Coding	chr6:151452257 plus strand	584902
C6orf222	NM_001010903	NP_001010903	Coding	chr6:36336885 minus strand	584903
C6orf223	NM_001171992	NP_001165463	Coding	chr6:44000599 plus strand	584904
C6orf223	NM_153246	NP_694978	Coding	chr6:44000599 plus strand	584904
C6orf226	NM_001008739	NP_001008739	Coding	chr6:42890816 minus strand	584905
C6orf229	NM_001282492	NP_001269421	Coding	chr6:24798896 minus strand	584906
C6orf25	NM_025260	NP_079536	Coding	chr6:31723343 plus strand	584907
C6orf25	NM_138272	NP_612116	Coding	chr6:31723343 plus strand	584907
C6orf25	NM_138273	NP_612117	Coding	chr6:31723343 plus strand	584907
C6orf25	NM_138274	NP_612118	Coding	chr6:31723343 plus strand	584907
C6orf25	NM_138275	NP_612119	Coding	chr6:31723343 plus strand	584907
C6orf25	NM_138277	NP_612121	Coding	chr6:31723343 plus strand	584907
C6orf47	NM_021184	NP_067007	Coding	chr6:31660772 minus strand	584908
C6orf48	NM_001040437	NP_001035527	Coding	chr6:31834914 plus strand	584909
C6orf48	NM_001040438	NP_001035528	Coding	chr6:31834914 plus strand	584909
C6orf48	NM_001287482	NP_001274411	Coding	chr6:31834914 plus strand	584909

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C6orf48	NM_001287483	NP_001274412	Coding	chr6:31834914 plus strand	584909
C6orf48	NM_001287484	NP_001274413	Coding	chr6:31834914 plus strand	584909
C6orf48	NM_001287485	NP_001274414	Coding	chr6:31834914 plus strand	584909
C6orf48	NM_001287486	NP_001274415	Coding	chr6:31834914 plus strand	584909
C6orf48	NM_001287487	NP_001274416	Coding	chr6:31834914 plus strand	584909
C6orf48	NM_001287488	NP_001274417	Coding	chr6:31834914 plus strand	584909
C6orf52	NM_001145020	NP_001138492	Coding	chr6:10694606 minus strand	584910
C6orf57	NM_145267	NP_660310	Coding	chr6:70566921 plus strand	584911
C6orf58	NM_001010905	NP_001010905	Coding	chr6:127577173 plus strand	584912
C6orf62	NM_030939	NP_112201	Coding	chr6:24719175 minus strand	584913
C6orf7	NM_001243308	NP_001230237	Coding	chr6:79870420 minus strand	584914
C6orf89	NM_001286635	NP_001273564	Coding	chr6:36885863 plus strand	584915
C6orf89	NM_001286636	NP_001273565	Coding	chr6:36871869 plus strand	584916
C6orf89	NM_001286637	NP_001273566	Coding	chr6:36885863 plus strand	584915
C6orf89	NM_152734	NP_689947	Coding	chr6:36885863 plus strand	584915
C6orf99	NM_001195032	NP_001181961	Coding	chr6:158888586 plus strand	584917
C6orf99	NM_001302839	NP_001289768	Coding	chr6:158869866 plus strand	584918
C6orf99	NM_001302840	NP_001289769	Coding	chr6:158869866 plus strand	584918
C6orf99	NM_001302841	NP_001289770	Coding	chr6:158869866 plus strand	584918
CAGE1	NM_001170692	NP_001164163	Coding	chr6:7389709 minus strand	584919
CAGE1	NM_001170693	NP_001164164	Coding	chr6:7389709 minus strand	584919
CAGE1	NM_205864	NP_995586	Coding	chr6:7389709 minus strand	584919
CAP2	NM_006366	NP_006357	Coding	chr6:17393504 plus strand	584920
CAPN11	NM_007058	NP_008989	Coding	chr6:44158810 plus strand	584921
CASP8AP2	NM_001137667	NP_001131139	Coding	chr6:89829899 plus strand	584922
CASP8AP2	NM_001137668	NP_001131140	Coding	chr6:89829899 plus strand	584922
CASP8AP2	NM_012115	NP_036247	Coding	chr6:89829899 plus strand	584922
CCDC167	NM_138493	NP_612502	Coding	chr6:37499924 minus strand	584923
CCDC170	NM_025059	NP_079335	Coding	chr6:151494039 plus strand	584924
CCDC28A	NM_015439	NP_056254	Coding	chr6:138773519 plus strand	584925
CCHCR1	NM_001105563	NP_001099033	Coding	chr6:31157789 minus strand	584926
CCHCR1	NM_001105564	NP_001099034	Coding	chr6:31157789 minus strand	584926
CCHCR1	NM_019052	NP_061925	Coding	chr6:31158238 minus strand	584927
CCNC	NM_001013399	NP_001013417	Coding	chr6:99568814 minus strand	584928

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CCNC	NM_005190	NP_005181	Coding	chr6:99568814 minus strand	584928
CCND3	NM_001136017	NP_001129489	Coding	chr6:42048894 minus strand	584929
CCND3	NM_001136125	NP_001129597	Coding	chr6:41941848 minus strand	584930
CCND3	NM_001136126	NP_001129598	Coding	chr6:42048894 minus strand	584929
CCND3	NM_001287427	NP_001274356	Coding	chr6:41941848 minus strand	584930
CCND3	NM_001287434	NP_001274363	Coding	chr6:42048894 minus strand	584929
CCND3	NM_001760	NP_001751	Coding	chr6:41941848 minus strand	584930
CCR6	NM_004367	NP_004358	Coding	chr6:167111806 plus strand	584931
CCR6	NM_031409	NP_113597	Coding	chr6:167122752 plus strand	584932
CD109	NM_001159587	NP_001153059	Coding	chr6:73696084 plus strand	584933
CD109	NM_001159588	NP_001153060	Coding	chr6:73696084 plus strand	584933
CD109	NM_133493	NP_598000	Coding	chr6:73696084 plus strand	584933
CD164	NM_001142401	NP_001135873	Coding	chr6:109382559 minus strand	584934
CD164	NM_001142402	NP_001135874	Coding	chr6:109382559 minus strand	584934
CD164	NM_001142403	NP_001135875	Coding	chr6:109382559 minus strand	584934
CD164	NM_001142404	NP_001135876	Coding	chr6:109382559 minus strand	584934
CD164	NM_006016	NP_006007	Coding	chr6:109382559 minus strand	584934
CD24	NM_001291737	NP_001278666	Coding	chr6:106975627 minus strand	584935
CD24	NM_001291738	NP_001278667	Coding	chr6:106976855 minus strand	584936
CD24	NM_001291739	NP_001278668	Coding	chr6:106974039 minus strand	584937
CD24	NM_013230	NP_037362	Coding	chr6:106975465 minus strand	584938
CD2AP	NM_012120	NP_036252	Coding	chr6:47477788 plus strand	584939
CD83	NM_001040280	NP_001035370	Coding	chr6:14117633 plus strand	584940
CD83	NM_001251901	NP_001238830	Coding	chr6:14117255 plus strand	584941
CD83	NM_004233	NP_004224	Coding	chr6:14117633 plus strand	584940
CDC40	NM_015891	NP_056975	Coding	chr6:110180420 plus strand	584942
CDC5L	NM_001253	NP_001244	Coding	chr6:44387513 plus strand	584943
CDK19	NM_001300960	NP_001287889	Coding	chr6:110815316 minus strand	584944
CDK19	NM_001300963	NP_001287892	Coding	chr6:110815632 minus strand	584945
CDK19	NM_001300964	NP_001287893	Coding	chr6:110815885 minus strand	584946

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CDK19	NM_015076	NP_055891	Coding	chr6:110815316 minus strand	584944
CDKAL1	NM_017774	NP_060244	Coding	chr6:20534456 plus strand	584947
CDKN1A	NM_000389	NP_000380	Coding	chr6:36678678 plus strand	584948
CDKN1A	NM_001220777	NP_001207706	Coding	chr6:36676459 plus strand	584949
CDKN1A	NM_001220778	NP_001207707	Coding	chr6:36678709 plus strand	584950
CDKN1A	NM_001291549	NP_001278478	Coding	chr6:36676536 plus strand	584951
CDKN1A	NM_078467	NP_510867	Coding	chr6:36676489 plus strand	584952
CDSN	NM_001264	NP_001255	Coding	chr6:31120475 minus strand	584953
CDYL	NM_001143970	NP_001137442	Coding	chr6:4836097 plus strand	584954
CDYL	NM_001143971	NP_001137443	Coding	chr6:4889991 plus strand	584955
CDYL	NM_004824	NP_004815	Coding	chr6:4776445 plus strand	584956
CENPQ	NM_018132	NP_060602	Coding	chr6:49463382 plus strand	584957
CENPW	NM_001012507	NP_001012525	Coding	chr6:126339788 plus strand	584958
CENPW	NM_001286524	NP_001273453	Coding	chr6:126339788 plus strand	584958
CENPW	NM_001286525	NP_001273454	Coding	chr6:126339788 plus strand	584958
CEP162	NM_001286206	NP_001273135	Coding	chr6:84227635 minus strand	584959
CEP162	NM_014895	NP_055710	Coding	chr6:84227635 minus strand	584959
CEP57L1	NM_001083535	NP_001077004	Coding	chr6:109095152 plus strand	584960
CEP57L1	NM_001271852	NP_001258781	Coding	chr6:109095152 plus strand	584960
CEP57L1	NM_001271853	NP_001258782	Coding	chr6:109095152 plus strand	584960
CEP57L1	NM_173830	NP_776191	Coding	chr6:109129303 plus strand	584961
CEP85L	NM_001042475	NP_001035940	Coding	chr6:118651857 minus strand	584962
CEP85L	NM_001178035	NP_001171506	Coding	chr6:118710075 minus strand	584963
CEP85L	NM_206921	NP_996804	Coding	chr6:118651857 minus strand	584962
CFB	NM_001710	NP_001701	Coding	chr6:31945943 plus strand	584964
CGA	NM_000735	NP_000726	Coding	chr6:87095147 minus strand	584965
CGA	NM_001252383	NP_001239312	Coding	chr6:87095147 minus strand	584965
CITED2	NM_001168388	NP_001161860	Coding	chr6:139374362 minus strand	584966
CITED2	NM_001168389	NP_001161861	Coding	chr6:139374213 minus strand	584967
CITED2	NM_006079	NP_006070	Coding	chr6:139374650 minus strand	584968
CLDN20	NM_001001346	NP_001001346	Coding	chr6:155264012 plus strand	584969

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CLIC1	NM_001287593	NP_001274522	Coding	chr6:31737318 minus strand	584970
CLIC1	NM_001287594	NP_001274523	Coding	chr6:31736545 minus strand	584971
CLIC1	NM_001288	NP_001279	Coding	chr6:31736564 minus strand	584972
CLIC5	NM_001114086	NP_001107558	Coding	chr6:46080348 minus strand	584973
CLIC5	NM_001256023	NP_001242952	Coding	chr6:46015889 minus strand	584974
CLIC5	NM_016929	NP_058625	Coding	chr6:46015889 minus strand	584974
CLPS	NM_001252597	NP_001239526	Coding	chr6:35797344 minus strand	584975
CLPS	NM_001252598	NP_001239527	Coding	chr6:35797344 minus strand	584975
CLPS	NM_001832	NP_001823	Coding	chr6:35797344 minus strand	584975
CLPSL1	NM_001010886	NP_001010886	Coding	chr6:35781053 plus strand	584976
CLPSL2	NM_001286550	NP_001273479	Coding	chr6:35776593 plus strand	584977
CLPSL2	NM_207409	NP_997292	Coding	chr6:35776593 plus strand	584977
CLVS2	NM_001010852	NP_001010852	Coding	chr6:122995970 plus strand	584978
CMTR1	NM_015050	NP_055865	Coding	chr6:37433130 plus strand	584979
CNKSR3	NM_173515	NP_775786	Coding	chr6:154510619 minus strand	584980
CNPY3	NM_006586	NP_006577	Coding	chr6:42929121 plus strand	584981
CNR1	NM_001160226	NP_001153698	Coding	chr6:88166048 minus strand	584982
CNR1	NM_001160258	NP_001153730	Coding	chr6:88166048 minus strand	584982
CNR1	NM_001160259	NP_001153731	Coding	chr6:88166048 minus strand	584982
CNR1	NM_016083	NP_057167	Coding	chr6:88166048 minus strand	584982
CNR1	NM_033181	NP_149421	Coding	chr6:88145337 minus strand	584983
COL10A1	NM_000493	NP_000484	Coding	chr6:116126133 minus strand	584984
COL11A2	NM_001163771	NP_001157243	Coding	chr6:33192468 minus strand	584985
COL11A2	NM_080679	NP_542410	Coding	chr6:33192468 minus strand	584985
COL11A2	NM_080680	NP_542411	Coding	chr6:33192468 minus strand	584985
COL11A2	NM_080681	NP_542412	Coding	chr6:33192468 minus strand	584985
COL12A1	NM_004370	NP_004361	Coding	chr6:75205907 minus strand	584986
COL12A1	NM_080645	NP_542376	Coding	chr6:75205907 minus strand	584986
COL19A1	NM_001858	NP_001849	Coding	chr6:69866555 plus strand	584987

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COL21A1	NM_030820	NP_110447	Coding	chr6:56247580 minus strand	584988
COL9A1	NM_001851	NP_001842	Coding	chr6:70303083 minus strand	584989
COL9A1	NM_078485	NP_511040	Coding	chr6:70283208 minus strand	584990
COQ3	NM_017421	NP_059117	Coding	chr6:99394206 minus strand	584991
COX7A2	NM_001865	NP_001856	Coding	chr6:75243928 minus strand	584992
CPNE5	NM_020939	NP_065990	Coding	chr6:36839444 minus strand	584993
CRIP3	NM_206922	NP_996805	Coding	chr6:43308792 minus strand	584994
CRISP1	NM_001131	NP_001122	Coding	chr6:49866505 minus strand	584995
CRISP1	NM_001205220	NP_001192149	Coding	chr6:49877096 minus strand	584996
CRISP1	NM_170609	NP_733758	Coding	chr6:49866505 minus strand	584995
CRISP2	NM_001142407	NP_001135879	Coding	chr6:49713590 minus strand	584997
CRISP2	NM_001142408	NP_001135880	Coding	chr6:49713590 minus strand	584997
CRISP2	NM_001142417	NP_001135889	Coding	chr6:49713590 minus strand	584997
CRISP2	NM_001142435	NP_001135907	Coding	chr6:49713590 minus strand	584997
CRISP2	NM_001261822	NP_001248751	Coding	chr6:49713590 minus strand	584997
CRISP2	NM_003296	NP_003287	Coding	chr6:49713590 minus strand	584997
CRISP3	NM_001190986	NP_001177915	Coding	chr6:49744437 minus strand	584998
CRISP3	NM_006061	NP_006052	Coding	chr6:49744455 minus strand	584999
CSNK2B	NM_001282385	NP_001269314	Coding	chr6:31665879 plus strand	585000
CSNK2B	NM_001320	NP_001311	Coding	chr6:31665879 plus strand	585000
CTAGE9	NM_001145659	NP_001139131	Coding	chr6:131711017 minus strand	585001
CTGF	NM_001901	NP_001892	Coding	chr6:131951378 minus strand	585002
CUL7	NM_001168370	NP_001161842	Coding	chr6:43053945 minus strand	585003
CUL7	NM_014780	NP_055595	Coding	chr6:43053945 minus strand	585003
CUL9	NM_015089	NP_055904	Coding	chr6:43182183 plus strand	585004
CUTA	NM_001014433	NP_001014433	Coding	chr6:33418288 minus strand	585005
CUTA	NM_001014837	NP_001014837	Coding	chr6:33418288 minus strand	585005
CUTA	NM_001014838	NP_001014838	Coding	chr6:33418288 minus strand	585005

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CUTA	NM_001014840	NP_001014840	Coding	chr6:33418288 minus strand	585005
CUTA	NM_015921	NP_057005	Coding	chr6:33418288 minus strand	585005
CYB5R4	NM_016230	NP_057314	Coding	chr6:83859650 plus strand	585006
CYP21A2	NM_000500	NP_000491	Coding	chr6:32038315 plus strand	585007
CYP21A2	NM_001128590	NP_001122062	Coding	chr6:32038315 plus strand	585007
CYP39A1	NM_001278738	NP_001265667	Coding	chr6:46652830 minus strand	585008
CYP39A1	NM_001278739	NP_001265668	Coding	chr6:46652830 minus strand	585008
CYP39A1	NM_016593	NP_057677	Coding	chr6:46652830 minus strand	585008
DAAM2	NM_001201427	NP_001188356	Coding	chr6:39792382 plus strand	585009
DAAM2	NM_015345	NP_056160	Coding	chr6:39792996 plus strand	585010
DACT2	NM_001286350	NP_001273279	Coding	chr6:168319754 minus strand	585011
DACT2	NM_001286351	NP_001273280	Coding	chr6:168319754 minus strand	585011
DACT2	NM_214462	NP_999627	Coding	chr6:168319754 minus strand	585011
DAXX	NM_001141969	NP_001135441	Coding	chr6:33323016 minus strand	585012
DAXX	NM_001141970	NP_001135442	Coding	chr6:33323016 minus strand	585012
DAXX	NM_001254717	NP_001241646	Coding	chr6:33323016 minus strand	585012
DAXX	NM_001350	NP_001341	Coding	chr6:33323016 minus strand	585012
DCBLD1	NM_173674	NP_775945	Coding	chr6:117482656 plus strand	585013
DCDC2	NM_001195610	NP_001182539	Coding	chr6:24383292 minus strand	585014
DCDC2	NM_016356	NP_057440	Coding	chr6:24358052 minus strand	585015
DDAH2	NM_001303007	NP_001289936	Coding	chr6:31730265 minus strand	585016
DDAH2	NM_001303008	NP_001289937	Coding	chr6:31729501 minus strand	585017
DDAH2	NM_013974	NP_039268	Coding	chr6:31730265 minus strand	585016
DDO	NM_003649	NP_003640	Coding	chr6:110415550 minus strand	585018
DDO	NM_004032	NP_004023	Coding	chr6:110415550 minus strand	585018
DDR1	NM_001202521	NP_001189450	Coding	chr6:30888687 plus strand	585019
DDR1	NM_001202522	NP_001189451	Coding	chr6:30888687 plus strand	585019
DDR1	NM_001202523	NP_001189452	Coding	chr6:30884979 plus strand	585020
DDR1	NM_001297652	NP_001284581	Coding	chr6:30882612 plus strand	585021
DDR1	NM_001297653	NP_001284582	Coding	chr6:30884537 plus strand	585022
DDR1	NM_001297654	NP_001284583	Coding	chr6:30884537 plus strand	585022

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DDR1	NM_001954	NP_001945	Coding	chr6:30884083 plus strand	585023
DDR1	NM_013993	NP_054699	Coding	chr6:30884549 plus strand	585024
DDR1	NM_013994	NP_054700	Coding	chr6:30888687 plus strand	585019
DDX39B	NM_004640	NP_004631	Coding	chr6:31542475 minus strand	585025
DDX39B	NM_080598	NP_542165	Coding	chr6:31542475 minus strand	585025
DDX43	NM_018665	NP_061135	Coding	chr6:73394561 plus strand	585026
DEF6	NM_022047	NP_071330	Coding	chr6:35297817 plus strand	585027
DEFB110	NM_001037497	NP_001032586	Coding	chr6:50021981 minus strand	585028
DEFB110	NM_001037728	NP_001032817	Coding	chr6:50021981 minus strand	585028
DEFB112	NM_001037498	NP_001032587	Coding	chr6:50048651 minus strand	585029
DEFB113	NM_001037729	NP_001032818	Coding	chr6:49969625 minus strand	585030
DEFB114	NM_001037499	NP_001032588	Coding	chr6:49964105 minus strand	585031
DEFB133	NM_001166478	NP_001159950	Coding	chr6:49949444 minus strand	585032
DEK	NM_001134709	NP_001128181	Coding	chr6:18264568 minus strand	585033
DEK	NM_003472	NP_003463	Coding	chr6:18264568 minus strand	585033
DHX16	NM_001164239	NP_001157711	Coding	chr6:30673053 minus strand	585034
DHX16	NM_003587	NP_003578	Coding	chr6:30673053 minus strand	585034
DLK2	NM_001286655	NP_001273584	Coding	chr6:43456632 minus strand	585035
DLK2	NM_001286656	NP_001273585	Coding	chr6:43455624 minus strand	585036
DLK2	NM_023932	NP_076421	Coding	chr6:43455624 minus strand	585036
DLK2	NM_206539	NP_996262	Coding	chr6:43456632 minus strand	585035
DLL1	NM_005618	NP_005609	Coding	chr6:170290609 minus strand	585037
DNAH8	NM_001206927	NP_001193856	Coding	chr6:38715340 plus strand	585038
DNPH1	NM_006443	NP_006434	Coding	chr6:43229473 minus strand	585039
DNPH1	NM_199184	NP_954653	Coding	chr6:43229473 minus strand	585039
DOPEY1	NM_001199942	NP_001186871	Coding	chr6:83067665 plus strand	585040
DOPEY1	NM_015018	NP_055833	Coding	chr6:83067665 plus strand	585040
DPCR1	NM_080870	NP_543146	Coding	chr6:30940999 plus strand	585041
DPPA5	NM_001025290	NP_001020461	Coding	chr6:73354276 minus strand	585042
DSE	NM_001080976	NP_001074445	Coding	chr6:116280119 plus strand	585043

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DSE	NM_013352	NP_037484	Coding	chr6:116370946 plus strand	585044
DSP	NM_001008844	NP_001008844	Coding	chr6:7541636 plus strand	585045
DSP	NM_004415	NP_004406	Coding	chr6:7541636 plus strand	585045
DST	NM_001144769	NP_001138241	Coding	chr6:56954628 minus strand	585046
DST	NM_001144770	NP_001138242	Coding	chr6:56851916 minus strand	585047
DST	NM_001723	NP_001714	Coding	chr6:56642896 minus strand	585048
DST	NM_015548	NP_056363	Coding	chr6:56642896 minus strand	585048
DST	NM_183380	NP_899236	Coding	chr6:56843665 minus strand	585049
DTNBP1	NM_001271667	NP_001258596	Coding	chr6:15663058 minus strand	585050
DTNBP1	NM_001271668	NP_001258597	Coding	chr6:15663058 minus strand	585050
DTNBP1	NM_001271669	NP_001258598	Coding	chr6:15663058 minus strand	585050
DTNBP1	NM_032122	NP_115498	Coding	chr6:15663058 minus strand	585050
DTNBP1	NM_183040	NP_898861	Coding	chr6:15663058 minus strand	585050
DUSP22	NM_001286555	NP_001273484	Coding	chr6:292056 plus strand	585051
DUSP22	NM_020185	NP_064570	Coding	chr6:292056 plus strand	585051
DXO	NM_005510	NP_005501	Coding	chr6:31972255 minus strand	585052
DYNLT1	NM_001291602	NP_001278531	Coding	chr6:158644786 minus strand	585053
DYNLT1	NM_001291603	NP_001278532	Coding	chr6:158644786 minus strand	585053
DYNLT1	NM_006519	NP_006510	Coding	chr6:158644786 minus strand	585053
E2F3	NM_001243076	NP_001230005	Coding	chr6:20403678 plus strand	585054
E2F3	NM_001949	NP_001940	Coding	chr6:20401905 plus strand	585055
ECHDC1	NM_001002030	NP_001002030	Coding	chr6:127343609 minus strand	585056
ECHDC1	NM_001105544	NP_001099014	Coding	chr6:127343609 minus strand	585056
ECHDC1	NM_001105545	NP_001099015	Coding	chr6:127343609 minus strand	585056
ECHDC1	NM_001139510	NP_001132982	Coding	chr6:127342407 minus strand	585057
ECHDC1	NM_018479	NP_060949	Coding	chr6:127343609 minus strand	585056
ECI2	NM_001166010	NP_001159482	Coding	chr6:4135468 minus strand	585058
ECI2	NM_006117	NP_006108	Coding	chr6:4135597 minus strand	585059
ECI2	NM_206836	NP_996667	Coding	chr6:4135597 minus strand	585059
ECT2L	NM_001077706	NP_001071174	Coding	chr6:138796110 plus strand	585060

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ECT2L	NM_001195037	NP_001181966	Coding	chr6:138796110 plus strand	585060
EDN1	NM_001168319	NP_001161791	Coding	chr6:12290295 plus strand	585061
EDN1	NM_001955	NP_001946	Coding	chr6:12290295 plus strand	585061
EEF1A1	NM_001402	NP_001393	Coding	chr6:73521032 minus strand	585062
EEF1E1	NM_001135650	NP_001129122	Coding	chr6:8102595 minus strand	585063
EEF1E1	NM_004280	NP_004271	Coding	chr6:8102595 minus strand	585063
EFHC1	NM_001172420	NP_001165891	Coding	chr6:52421006 plus strand	585064
EFHC1	NM_018100	NP_060570	Coding	chr6:52420195 plus strand	585065
EGFL8	NM_030652	NP_085155	Coding	chr6:32164604 plus strand	585066
EHMT2	NM_001289413	NP_001276342	Coding	chr6:31897206 minus strand	585067
EHMT2	NM_006709	NP_006700	Coding	chr6:31897707 minus strand	585068
EHMT2	NM_025256	NP_079532	Coding	chr6:31897707 minus strand	585068
ELOVL2	NM_017770	NP_060240	Coding	chr6:11044391 minus strand	585069
ELOVL4	NM_022726	NP_073563	Coding	chr6:79947598 minus strand	585070
ELOVL5	NM_001242828	NP_001229757	Coding	chr6:53349179 minus strand	585071
ELOVL5	NM_001242830	NP_001229759	Coding	chr6:53349179 minus strand	585071
ELOVL5	NM_001242831	NP_001229760	Coding	chr6:53349179 minus strand	585071
ELOVL5	NM_001301856	NP_001288785	Coding	chr6:53348945 minus strand	585072
ELOVL5	NM_021814	NP_068586	Coding	chr6:53349179 minus strand	585071
ENPP1	NM_006208	NP_006199	Coding	chr6:131808015 plus strand	585073
ENPP3	NM_005021	NP_005012	Coding	chr6:131637301 plus strand	585074
ENPP4	NM_014936	NP_055751	Coding	chr6:46129963 plus strand	585075
ENPP5	NM_001290072	NP_001277001	Coding	chr6:46171010 minus strand	585076
ENPP5	NM_001290073	NP_001277002	Coding	chr6:46171010 minus strand	585076
ENPP5	NM_021572	NP_067547	Coding	chr6:46171010 minus strand	585076
EPB41L2	NM_001135554	NP_001129026	Coding	chr6:131063322 minus strand	585077
EPB41L2	NM_001135555	NP_001129027	Coding	chr6:131063322 minus strand	585077
EPB41L2	NM_001199388	NP_001186317	Coding	chr6:131063322 minus strand	585077
EPB41L2	NM_001252660	NP_001239589	Coding	chr6:131000767 minus strand	585078
EPB41L2	NM_001431	NP_001422	Coding	chr6:131063322 minus strand	585077

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EPHA7	NM_001288629	NP_001275558	Coding	chr6:93419582 minus strand	585079
EPHA7	NM_001288630	NP_001275559	Coding	chr6:93419582 minus strand	585079
EPHA7	NM_004440	NP_004431	Coding	chr6:93419582 minus strand	585079
EPM2A	NM_001018041	NP_001018051	Coding	chr6:145735855 minus strand	585080
EPM2A	NM_005670	NP_005661	Coding	chr6:145735855 minus strand	585080
ERMARD	NM_001278531	NP_001265460	Coding	chr6:169751621 plus strand	585081
ERMARD	NM_001278532	NP_001265461	Coding	chr6:169751621 plus strand	585081
ERMARD	NM_001278533	NP_001265462	Coding	chr6:169751621 plus strand	585081
ERMARD	NM_018341	NP_060811	Coding	chr6:169751621 plus strand	585081
ERVFRD-1	NM_207582	NP_997465	Coding	chr6:11111838 minus strand	585082
ESR1	NM_000125	NP_000116	Coding	chr6:151807678 plus strand	585083
ESR1	NM_001122740	NP_001116212	Coding	chr6:151807318 plus strand	585084
ESR1	NM_001122741	NP_001116213	Coding	chr6:151805672 plus strand	585085
ESR1	NM_001122742	NP_001116214	Coding	chr6:151690495 plus strand	585086
ESR1	NM_001291230	NP_001278159	Coding	chr6:151805672 plus strand	585085
ESR1	NM_001291241	NP_001278170	Coding	chr6:151805672 plus strand	585085
ETV7	NM_001207035	NP_001193964	Coding	chr6:36387800 minus strand	585087
ETV7	NM_001207036	NP_001193965	Coding	chr6:36387800 minus strand	585087
ETV7	NM_001207037	NP_001193966	Coding	chr6:36387800 minus strand	585087
ETV7	NM_001207038	NP_001193967	Coding	chr6:36387791 minus strand	585088
ETV7	NM_001207039	NP_001193968	Coding	chr6:36387800 minus strand	585087
ETV7	NM_001207040	NP_001193969	Coding	chr6:36387800 minus strand	585087
ETV7	NM_001207041	NP_001193970	Coding	chr6:36387800 minus strand	585087
ETV7	NM_016135	NP_057219	Coding	chr6:36387800 minus strand	585087
EXOC2	NM_018303	NP_060773	Coding	chr6:693141 minus strand	585089
EYA4	NM_001301012	NP_001287941	Coding	chr6:133241498 plus strand	585090
EYA4	NM_001301013	NP_001287942	Coding	chr6:133241498 plus strand	585090
EYA4	NM_004100	NP_004091	Coding	chr6:133241356 plus	585091

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				strand	
EYA4	NM_172103	NP_742101	Coding	chr6:133241356 plus strand	585091
EYA4	NM_172105	NP_742103	Coding	chr6:133241356 plus strand	585091
EYS	NM_001142800	NP_001136272	Coding	chr6:65707225 minus strand	585092
EYS	NM_001142801	NP_001136273	Coding	chr6:65707225 minus strand	585092
EYS	NM_001292009	NP_001278938	Coding	chr6:65707225 minus strand	585092
EYS	NM_198283	NP_938024	Coding	chr6:65579804 minus strand	585093
EZR	NM_001111077	NP_001104547	Coding	chr6:158819424 minus strand	585094
EZR	NM_003379	NP_003370	Coding	chr6:158818308 minus strand	585095
F13A1	NM_000129	NP_000120	Coding	chr6:6320691 minus strand	585096
FABP7	NM_001446	NP_001437	Coding	chr6:122779500 plus strand	585097
FAM120B	NM_001286379	NP_001273308	Coding	chr6:170290702 plus strand	585098
FAM120B	NM_001286380	NP_001273309	Coding	chr6:170295320 plus strand	585099
FAM120B	NM_001286381	NP_001273310	Coding	chr6:170306721 plus strand	585100
FAM120B	NM_032448	NP_115824	Coding	chr6:170306721 plus strand	585100
FAM135A	NM_001105531	NP_001099001	Coding	chr6:70413403 plus strand	585101
FAM135A	NM_001162529	NP_001156001	Coding	chr6:70426438 plus strand	585102
FAM135A	NM_020819	NP_065870	Coding	chr6:70413403 plus strand	585101
FAM162B	NM_001085480	NP_001078949	Coding	chr6:116765723 minus strand	585103
FAM184A	NM_001100411	NP_001093881	Coding	chr6:119149193 minus strand	585104
FAM184A	NM_001288576	NP_001275505	Coding	chr6:119149193 minus strand	585104
FAM184A	NM_024581	NP_078857	Coding	chr6:119078647 minus strand	585105
FAM217A	NM_173563	NP_775834	Coding	chr6:4079223 minus strand	585106
FAM229B	NM_001033564	NP_001028736	Coding	chr6:112087470 plus strand	585107
FAM26D	NM_001256887	NP_001243816	Coding	chr6:116529012 plus strand	585108
FAM26D	NM_001256888	NP_001243817	Coding	chr6:116529012 plus strand	585108
FAM26D	NM_001256889	NP_001243818	Coding	chr6:116529012 plus strand	585108
FAM26D	NM_153036	NP_694581	Coding	chr6:116529012 plus strand	585108
FAM26E	NM_153711	NP_714922	Coding	chr6:116511644 plus strand	585109

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FAM26F	NM_001010919	NP_001010919	Coding	chr6:116461369 plus strand	585110
FAM26F	NM_001276460	NP_001263389	Coding	chr6:116461369 plus strand	585110
FAM46A	NM_017633	NP_060103	Coding	chr6:81752711 minus strand	585111
FAM50B	NM_012135	NP_036267	Coding	chr6:3849397 plus strand	585112
FAM65B	NM_001286445	NP_001273374	Coding	chr6:24936052 minus strand	585113
FAM65B	NM_001286446	NP_001273375	Coding	chr6:25042168 minus strand	585114
FAM65B	NM_001286447	NP_001273376	Coding	chr6:24877365 minus strand	585115
FAM65B	NM_014722	NP_055537	Coding	chr6:24911170 minus strand	585116
FAM65B	NM_015864	NP_056948	Coding	chr6:24877365 minus strand	585115
FAM83B	NM_001010872	NP_001010872	Coding	chr6:54846770 plus strand	585117
FAM8A1	NM_016255	NP_057339	Coding	chr6:17600286 plus strand	585118
FANCE	NM_021922	NP_068741	Coding	chr6:35452360 plus strand	585119
FARS2	NM_006567	NP_006558	Coding	chr6:5261350 plus strand	585120
FAXC	NM_032511	NP_115900	Coding	chr6:99349655 minus strand	585121
FBXL4	NM_001278716	NP_001265645	Coding	chr6:98948006 minus strand	585122
FBXL4	NM_012160	NP_036292	Coding	chr6:98948006 minus strand	585122
FBXO30	NM_032145	NP_115521	Coding	chr6:145814785 minus strand	585123
FBXO5	NM_001142522	NP_001135994	Coding	chr6:152983605 minus strand	585124
FBXO5	NM_012177	NP_036309	Coding	chr6:152983068 minus strand	585125
FBXO9	NM_012347	NP_036479	Coding	chr6:53070972 plus strand	585126
FBXO9	NM_033480	NP_258441	Coding	chr6:53065458 plus strand	585127
FBXO9	NM_033481	NP_258442	Coding	chr6:53064997 plus strand	585128
FGD2	NM_173558	NP_775829	Coding	chr6:37005646 plus strand	585129
FGFR1OP	NM_001278690	NP_001265619	Coding	chr6:166999316 plus strand	585130
FGFR1OP	NM_007045	NP_008976	Coding	chr6:166999316 plus strand	585130
FGFR1OP	NM_194429	NP_919410	Coding	chr6:166999316 plus strand	585130
FHL5	NM_001170807	NP_001164278	Coding	chr6:96562547 plus strand	585131
FHL5	NM_020482	NP_065228	Coding	chr6:96562547 plus strand	585131
FIG4	NM_014845	NP_055660	Coding	chr6:109691220 plus strand	585132
FILIP1	NM_001289987	NP_001276916	Coding	chr6:75493829 minus strand	585133
FILIP1	NM_001300866	NP_001287795	Coding	chr6:75493829 minus strand	585133

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FILIP1	NM_015687	NP_056502	Coding	chr6:75493829 minus strand	585133
FKBP5	NM_001145775	NP_001139247	Coding	chr6:35728583 minus strand	585134
FKBP5	NM_001145776	NP_001139248	Coding	chr6:35688915 minus strand	585135
FKBP5	NM_001145777	NP_001139249	Coding	chr6:35688942 minus strand	585136
FKBP5	NM_004117	NP_004108	Coding	chr6:35688942 minus strand	585136
FKBPL	NM_022110	NP_071393	Coding	chr6:32130290 minus strand	585137
FLOT1	NM_005803	NP_005794	Coding	chr6:30742676 minus strand	585138
FNDC1	NM_032532	NP_115921	Coding	chr6:159169396 plus strand	585139
FOXC1	NM_001453	NP_001444	Coding	chr6:1610445 plus strand	585140
FOXF2	NM_001452	NP_001443	Coding	chr6:1389833 plus strand	585141
FOXO3	NM_001455	NP_001446	Coding	chr6:108560865 plus strand	585142
FOXO3	NM_201559	NP_963853	Coding	chr6:108559822 plus strand	585143
FOXP4	NM_001012426	NP_001012426	Coding	chr6:41546425 plus strand	585144
FOXP4	NM_001012427	NP_001012427	Coding	chr6:41546425 plus strand	585144
FOXP4	NM_138457	NP_612466	Coding	chr6:41546425 plus strand	585144
FOXQ1	NM_033260	NP_150285	Coding	chr6:1312439 plus strand	585145
FRK	NM_002031	NP_002022	Coding	chr6:116060758 minus strand	585146
FRMD1	NM_001122841	NP_001116313	Coding	chr6:168075866 minus strand	585147
FRMD1	NM_024919	NP_079195	Coding	chr6:168079159 minus strand	585148
FRS3	NM_006653	NP_006644	Coding	chr6:41779905 minus strand	585149
FUCA2	NM_032020	NP_114409	Coding	chr6:143511883 minus strand	585150
FUT9	NM_006581	NP_006572	Coding	chr6:96015968 plus strand	585151
FYN	NM_002037	NP_002028	Coding	chr6:111873452 minus strand	585152
FYN	NM_153047	NP_694592	Coding	chr6:111720062 minus strand	585153
FYN	NM_153048	NP_694593	Coding	chr6:111759131 minus strand	585154
GABBR1	NM_001470	NP_001461	Coding	chr6:29633185 minus strand	585155
GABBR1	NM_021903	NP_068703	Coding	chr6:29628228 minus strand	585156
GABBR1	NM_021904	NP_068704	Coding	chr6:29633185 minus strand	585155
GABRR1	NM_001256703	NP_001243632	Coding	chr6:89217777 minus strand	585157
GABRR1	NM_001256704	NP_001243633	Coding	chr6:89217777 minus	585157

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				strand	
GABRR1	NM_001267582	NP_001254511	Coding	chr6:89231288 minus strand	585158
GABRR1	NM_002042	NP_002033	Coding	chr6:89217777 minus strand	585157
GABRR2	NM_002043	NP_002034	Coding	chr6:89315299 minus strand	585159
GCLC	NM_001197115	NP_001184044	Coding	chr6:53545129 minus strand	585160
GCLC	NM_001498	NP_001489	Coding	chr6:53545129 minus strand	585160
GCM1	NM_003643	NP_003634	Coding	chr6:53148826 minus strand	585161
GCM2	NM_004752	NP_004743	Coding	chr6:10881865 minus strand	585162
GCNT2	NM_001491	NP_001482	Coding	chr6:10555715 plus strand	585163
GCNT2	NM_145649	NP_663624	Coding	chr6:10521334 plus strand	585164
GCNT2	NM_145655	NP_663630	Coding	chr6:10585759 plus strand	585165
GFOD1	NM_001242628	NP_001229557	Coding	chr6:13486183 minus strand	585166
GFOD1	NM_001242629	NP_001229558	Coding	chr6:13487637 minus strand	585167
GFOD1	NM_001242630	NP_001229559	Coding	chr6:13408137 minus strand	585168
GFOD1	NM_018988	NP_061861	Coding	chr6:13487637 minus strand	585167
GFRAL	NM_207410	NP_997293	Coding	chr6:55327468 plus strand	585169
GINM1	NM_138785	NP_620140	Coding	chr6:149566391 plus strand	585170
GJA1	NM_000165	NP_000156	Coding	chr6:121435576 plus strand	585171
GJA10	NM_032602	NP_115991	Coding	chr6:89894468 plus strand	585172
GJB7	NM_198568	NP_940970	Coding	chr6:87329278 minus strand	585173
GLO1	NM_006708	NP_006699	Coding	chr6:38703176 minus strand	585174
GLP1R	NM_002062	NP_002053	Coding	chr6:39048780 plus strand	585175
GLTSCR1L	NM_015349	NP_056164	Coding	chr6:42821055 plus strand	585176
GLYATL3	NM_001010904	NP_001010904	Coding	chr6:49499957 plus strand	585177
GMDS	NM_001253846	NP_001240775	Coding	chr6:2175991 minus strand	585178
GMDS	NM_001500	NP_001491	Coding	chr6:2245634 minus strand	585179
GMNN	NM_001251989	NP_001238918	Coding	chr6:24774930 plus strand	585180
GMNN	NM_001251990	NP_001238919	Coding	chr6:24774930 plus strand	585180
GMNN	NM_001251991	NP_001238920	Coding	chr6:24775412 plus strand	585181
GMNN	NM_015895	NP_056979	Coding	chr6:24774930 plus strand	585180
GMPR	NM_006877	NP_006868	Coding	chr6:16238579 plus strand	585182
GNL1	NM_005275	NP_005266	Coding	chr6:30557594 minus strand	585183
GNMT	NM_018960	NP_061833	Coding	chr6:42960761 plus strand	585184

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GOPC	NM_001017408	NP_001017408	Coding	chr6:117602542 minus strand	585185
GOPC	NM_020399	NP_065132	Coding	chr6:117602542 minus strand	585185
GPANK1	NM_001199237	NP_001186166	Coding	chr6:31666283 minus strand	585186
GPANK1	NM_001199238	NP_001186167	Coding	chr6:31665862 minus strand	585187
GPANK1	NM_001199239	NP_001186168	Coding	chr6:31665862 minus strand	585187
GPANK1	NM_001199240	NP_001186169	Coding	chr6:31665630 minus strand	585188
GPANK1	NM_033177	NP_149417	Coding	chr6:31665402 minus strand	585189
GPLD1	NM_001503	NP_001494	Coding	chr6:24489622 minus strand	585190
GPR110	NM_025048	NP_079324	Coding	chr6:47042346 minus strand	585191
GPR110	NM_153840	NP_722582	Coding	chr6:47042346 minus strand	585191
GPR111	NM_153839	NP_722581	Coding	chr6:47656589 plus strand	585192
GPR115	NM_153838	NP_722580	Coding	chr6:47698552 plus strand	585193
GPR116	NM_001098518	NP_001091988	Coding	chr6:46921977 minus strand	585194
GPR116	NM_015234	NP_056049	Coding	chr6:46954938 minus strand	585195
GPR126	NM_001032394	NP_001027566	Coding	chr6:142301918 plus strand	585196
GPR126	NM_001032395	NP_001027567	Coding	chr6:142301918 plus strand	585196
GPR126	NM_020455	NP_065188	Coding	chr6:142301918 plus strand	585196
GPR126	NM_198569	NP_940971	Coding	chr6:142301918 plus strand	585196
GPR31	NM_005299	NP_005290	Coding	chr6:167157831 minus strand	585197
GPR6	NM_001286099	NP_001273028	Coding	chr6:109978255 plus strand	585198
GPR6	NM_005284	NP_005275	Coding	chr6:109978255 plus strand	585198
GPR63	NM_001143957	NP_001137429	Coding	chr6:96837477 minus strand	585199
GPR63	NM_030784	NP_110411	Coding	chr6:96837477 minus strand	585199
GPRC6A	NM_001286354	NP_001273283	Coding	chr6:116829057 minus strand	585200
GPRC6A	NM_001286355	NP_001273284	Coding	chr6:116829057 minus strand	585200
GPRC6A	NM_148963	NP_683766	Coding	chr6:116829057 minus strand	585200
GPSM3	NM_001276501	NP_001263430	Coding	chr6:32192915 minus strand	585201
GPSM3	NM_022107	NP_071390	Coding	chr6:32195523 minus strand	585202

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GPX5	NM_001509	NP_001500	Coding	chr6:28526011 plus strand	585203
GPX5	NM_003996	NP_003987	Coding	chr6:28526011 plus strand	585203
GPX6	NM_182701	NP_874360	Coding	chr6:28515793 minus strand	585204
GRIK2	NM_001166247	NP_001159719	Coding	chr6:101398984 plus strand	585205
GRIK2	NM_021956	NP_068775	Coding	chr6:101398984 plus strand	585205
GRIK2	NM_175768	NP_786944	Coding	chr6:101398984 plus strand	585205
GRM1	NM_001278064	NP_001264993	Coding	chr6:146029197 plus strand	585206
GRM1	NM_001278065	NP_001264994	Coding	chr6:146027781 plus strand	585207
GRM1	NM_001278066	NP_001264995	Coding	chr6:146029197 plus strand	585206
GRM1	NM_001278067	NP_001264996	Coding	chr6:146029197 plus strand	585206
GRM4	NM_000841	NP_000832	Coding	chr6:34146137 minus strand	585208
GRM4	NM_001256809	NP_001243738	Coding	chr6:34155622 minus strand	585209
GRM4	NM_001256811	NP_001243740	Coding	chr6:34146137 minus strand	585208
GRM4	NM_001256812	NP_001243741	Coding	chr6:34110763 minus strand	585210
GRM4	NM_001256813	NP_001243742	Coding	chr6:34105982 minus strand	585211
GRM4	NM_001282847	NP_001269776	Coding	chr6:34146137 minus strand	585208
GSTA1	NM_145740	NP_665683	Coding	chr6:52803866 minus strand	585212
GSTA2	NM_000846	NP_000837	Coding	chr6:52763563 minus strand	585213
GSTA3	NM_000847	NP_000838	Coding	chr6:52909698 minus strand	585214
GSTA4	NM_001512	NP_001503	Coding	chr6:52995380 minus strand	585215
GSTA5	NM_153699	NP_714543	Coding	chr6:52846095 minus strand	585216
GTF2H4	NM_001517	NP_001508	Coding	chr6:30908199 plus strand	585217
GTF2H5	NM_207118	NP_997001	Coding	chr6:158168346 plus strand	585218
GTF3C6	NM_138408	NP_612417	Coding	chr6:110958559 plus strand	585219
GTPBP2	NM_001286216	NP_001273145	Coding	chr6:43627353 minus strand	585220
GTPBP2	NM_019096	NP_061969	Coding	chr6:43629246 minus strand	585221
GUCA1A	NM_000409	NP_000400	Coding	chr6:42155405 plus strand	585222
GUCA1B	NM_002098	NP_002089	Coding	chr6:42194956 minus strand	585223
HACE1	NM_020771	NP_065822	Coding	chr6:104859919 minus	585224

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				strand	
HBS1L	NM_001145158	NP_001138630	Coding	chr6:135054898 minus strand	585225
HBS1L	NM_001145207	NP_001138679	Coding	chr6:135054898 minus strand	585225
HBS1L	NM_006620	NP_006611	Coding	chr6:135054898 minus strand	585225
HCRTR2	NM_001526	NP_001517	Coding	chr6:55174272 plus strand	585226
HDAC2	NM_001527	NP_001518	Coding	chr6:113971195 minus strand	585227
HDDC2	NM_016063	NP_057147	Coding	chr6:125302136 minus strand	585228
HDGFL1	NM_138574	NP_612641	Coding	chr6:22569448 plus strand	585229
HEBP2	NM_014320	NP_055135	Coding	chr6:138404198 plus strand	585230
HECA	NM_016217	NP_057301	Coding	chr6:139135111 plus strand	585231
HEY2	NM_012259	NP_036391	Coding	chr6:125749585 plus strand	585232
HFE	NM_000410	NP_000401	Coding	chr6:26087280 plus strand	585233
HFE	NM_001300749	NP_001287678	Coding	chr6:26087280 plus strand	585233
HFE	NM_139003	NP_620572	Coding	chr6:26087280 plus strand	585233
HFE	NM_139004	NP_620573	Coding	chr6:26087280 plus strand	585233
HFE	NM_139006	NP_620575	Coding	chr6:26087280 plus strand	585233
HFE	NM_139007	NP_620576	Coding	chr6:26087280 plus strand	585233
HFE	NM_139008	NP_620577	Coding	chr6:26087280 plus strand	585233
HFE	NM_139009	NP_620578	Coding	chr6:26087280 plus strand	585233
HFE	NM_139010	NP_620579	Coding	chr6:26087280 plus strand	585233
HFE	NM_139011	NP_620580	Coding	chr6:26087280 plus strand	585233
HGC6.3	NM_001129895	NP_001123367	Coding	chr6:167976939 minus strand	585234
HINT3	NM_138571	NP_612638	Coding	chr6:125956714 plus strand	585235
HIST1H1A	NM_005325	NP_005316	Coding	chr6:26017812 minus strand	585236
HIST1H1B	NM_005322	NP_005313	Coding	chr6:27867581 minus strand	585237
HIST1H1C	NM_005319	NP_005310	Coding	chr6:26056471 minus strand	585238
HIST1H1D	NM_005320	NP_005311	Coding	chr6:26234988 minus strand	585239
HIST1H1E	NM_005321	NP_005312	Coding	chr6:26156330 plus strand	585240
HIST1H1T	NM_005323	NP_005314	Coding	chr6:26108136 minus strand	585241
HIST1H2AA	NM_170745	NP_734466	Coding	chr6:25726562 minus strand	585242
HIST1H2AB	NM_003513	NP_003504	Coding	chr6:26033568 minus strand	585243
HIST1H2AC	NM_003512	NP_003503	Coding	chr6:26124144 plus strand	585244
HIST1H2AD	NM_021065	NP_066409	Coding	chr6:26199293 minus	585245

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				strand	
HIST1H2AE	NM_021052	NP_066390	Coding	chr6:26216919 plus strand	585246
HIST1H2AG	NM_021064	NP_066408	Coding	chr6:27133037 plus strand	585247
HIST1H2AH	NM_080596	NP_542163	Coding	chr6:27147081 plus strand	585248
HIST1H2AI	NM_003509	NP_003500	Coding	chr6:27808198 plus strand	585249
HIST1H2AJ	NM_021066	NP_066544	Coding	chr6:27814740 minus strand	585250
HIST1H2AK	NM_003510	NP_003501	Coding	chr6:27838339 minus strand	585251
HIST1H2AL	NM_003511	NP_003502	Coding	chr6:27865328 plus strand	585252
HIST1H2AM	NM_003514	NP_003505	Coding	chr6:27893185 minus strand	585253
HIST1H2BA	NM_170610	NP_733759	Coding	chr6:25726908 plus strand	585254
HIST1H2BB	NM_021062	NP_066406	Coding	chr6:26043657 minus strand	585255
HIST1H2BC	NM_003526	NP_003517	Coding	chr6:26123904 minus strand	585256
HIST1H2BD	NM_021063	NP_066407	Coding	chr6:26158120 plus strand	585257
HIST1H2BD	NM_138720	NP_619790	Coding	chr6:26158120 plus strand	585257
HIST1H2BE	NM_003523	NP_003514	Coding	chr6:26183795 plus strand	585258
HIST1H2BF	NM_003522	NP_003513	Coding	chr6:26199558 plus strand	585259
HIST1H2BG	NM_003518	NP_003509	Coding	chr6:26216644 minus strand	585260
HIST1H2BH	NM_003524	NP_003515	Coding	chr6:26251650 plus strand	585261
HIST1H2BI	NM_003525	NP_003516	Coding	chr6:26272975 plus strand	585262
HIST1H2BJ	NM_021058	NP_066402	Coding	chr6:27132796 minus strand	585263
HIST1H2BK	NM_080593	NP_542160	Coding	chr6:27146858 minus strand	585264
HIST1H2BL	NM_003519	NP_003510	Coding	chr6:27807931 minus strand	585265
HIST1H2BM	NM_003521	NP_003512	Coding	chr6:27815043 plus strand	585266
HIST1H2BN	NM_003520	NP_003511	Coding	chr6:27838661 plus strand	585267
HIST1H2BO	NM_003527	NP_003518	Coding	chr6:27893424 plus strand	585268
HIST1H3A	NM_003529	NP_003520	Coding	chr6:26020489 plus strand	585269
HIST1H3B	NM_003537	NP_003528	Coding	chr6:26032060 minus strand	585270
HIST1H3C	NM_003531	NP_003522	Coding	chr6:26045410 plus strand	585271
HIST1H3D	NM_003530	NP_003521	Coding	chr6:26199293 minus strand	585272
HIST1H3E	NM_003532	NP_003523	Coding	chr6:26225154 plus strand	585273
HIST1H3F	NM_021018	NP_066298	Coding	chr6:26250607 minus strand	585274
HIST1H3G	NM_003534	NP_003525	Coding	chr6:26271384 minus strand	585275
HIST1H3H	NM_003536	NP_003527	Coding	chr6:27810063 plus strand	585276
HIST1H3I	NM_003533	NP_003524	Coding	chr6:27872321 minus strand	585277

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HIST1H3J	NM_003535	NP_003526	Coding	chr6:27890792 minus strand	585278
HIST1H4A	NM_003538	NP_003529	Coding	chr6:26021678 plus strand	585279
HIST1H4B	NM_003544	NP_003535	Coding	chr6:26027252 minus strand	585280
HIST1H4C	NM_003542	NP_003533	Coding	chr6:26103947 plus strand	585281
HIST1H4D	NM_003539	NP_003530	Coding	chr6:26189076 minus strand	585282
HIST1H4E	NM_003545	NP_003536	Coding	chr6:26204644 plus strand	585283
HIST1H4F	NM_003540	NP_003531	Coding	chr6:26240425 plus strand	585284
HIST1H4G	NM_003547	NP_003538	Coding	chr6:26246977 minus strand	585285
HIST1H4H	NM_003543	NP_003534	Coding	chr6:26285499 minus strand	585286
HIST1H4I	NM_003495	NP_003486	Coding	chr6:27139308 plus strand	585287
HIST1H4J	NM_021968	NP_068803	Coding	chr6:27824124 plus strand	585288
HIST1H4K	NM_003541	NP_003532	Coding	chr6:27831527 minus strand	585289
HIST1H4L	NM_003546	NP_003537	Coding	chr6:27873511 minus strand	585290
HIVEP1	NM_002114	NP_002105	Coding	chr6:12012490 plus strand	585291
HIVEP2	NM_006734	NP_006725	Coding	chr6:142945201 minus strand	585292
HLA-A	NM_001242758	NP_001229687	Coding	chr6:29942469 plus strand	585293
HLA-A	NM_002116	NP_002107	Coding	chr6:29942469 plus strand	585293
HLA-B	NM_005514	NP_005505	Coding	chr6:31357212 minus strand	585294
HLA-C	NM_001243042	NP_001229971	Coding	chr6:31272136 minus strand	585295
HLA-C	NM_002117	NP_002108	Coding	chr6:31272136 minus strand	585295
HLA-DMA	NM_006120	NP_006111	Coding	chr6:32953122 minus strand	585296
HLA-DMB	NM_002118	NP_002109	Coding	chr6:32941070 minus strand	585297
HLA-DOA	NM_002119	NP_002110	Coding	chr6:33009612 minus strand	585298
HLA-DOB	NM_002120	NP_002111	Coding	chr6:32817048 minus strand	585299
HLA-DPA1	NM_001242524	NP_001229453	Coding	chr6:33080778 minus strand	585300
HLA-DPA1	NM_001242525	NP_001229454	Coding	chr6:33080778 minus strand	585300
HLA-DPA1	NM_033554	NP_291032	Coding	chr6:33073677 minus strand	585301
HLA-DPB1	NM_002121	NP_002112	Coding	chr6:33075925 plus strand	585302
HLA-DQA1	NM_002122	NP_002113	Coding	chr6:32637405 plus strand	585303
HLA-DQA2	NM_020056	NP_064440	Coding	chr6:32741385 plus strand	585304
HLA-DQB1	NM_001243961	NP_001230890	Coding	chr6:32666689 minus strand	585305

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HLA-DQB1	NM_002123	NP_002114	Coding	chr6:32666689 minus strand	585305
HLA-DQB2	NM_001198858	NP_001185787	Coding	chr6:32763553 minus strand	585306
HLA-DQB2	NM_001300790	NP_001287719	Coding	chr6:32763553 minus strand	585306
HLA-DRA	NM_019111	NP_061984	Coding	chr6:32439841 plus strand	585307
HLA-DRB1	NM_001243965	NP_001230894	Coding	chr6:32589836 minus strand	585308
HLA-DRB1	NM_002124	NP_002115	Coding	chr6:32589836 minus strand	585308
HLA-DRB5	NM_002125	NP_002116	Coding	chr6:32530229 minus strand	585309
HLA-E	NM_005516	NP_005507	Coding	chr6:30489405 plus strand	585310
HLA-F	NM_001098478	NP_001091948	Coding	chr6:29723339 plus strand	585311
HLA-F	NM_001098479	NP_001091949	Coding	chr6:29723339 plus strand	585311
HLA-F	NM_018950	NP_061823	Coding	chr6:29723339 plus strand	585311
HLA-G	NM_002127	NP_002118	Coding	chr6:29826978 plus strand	585312
HMGA1	NM_002131	NP_002122	Coding	chr6:34236799 plus strand	585313
HMGA1	NM_145899	NP_665906	Coding	chr6:34236799 plus strand	585313
HMGA1	NM_145901	NP_665908	Coding	chr6:34236872 plus strand	585314
HMGA1	NM_145902	NP_665909	Coding	chr6:34236872 plus strand	585314
HMGA1	NM_145903	NP_665910	Coding	chr6:34236799 plus strand	585313
HMGA1	NM_145905	NP_665912	Coding	chr6:34238790 plus strand	585315
HMGCLL1	NM_001042406	NP_001035865	Coding	chr6:55579214 minus strand	585316
HMGCLL1	NM_001287741	NP_001274670	Coding	chr6:55579214 minus strand	585316
HMGCLL1	NM_001287746	NP_001274675	Coding	chr6:55579214 minus strand	585316
HMGCLL1	NM_001287753	NP_001274682	Coding	chr6:55579214 minus strand	585316
HMGCLL1	NM_019036	NP_061909	Coding	chr6:55579214 minus strand	585316
HMGN3	NM_001201362	NP_001188291	Coding	chr6:79234738 minus strand	585317
HMGN3	NM_001201363	NP_001188292	Coding	chr6:79234738 minus strand	585317
HMGN3	NM_004242	NP_004233	Coding	chr6:79234738 minus strand	585317
HMGN3	NM_138730	NP_620058	Coding	chr6:79234738 minus strand	585317
HMGN4	NM_006353	NP_006344	Coding	chr6:26538343 plus strand	585318
HS3ST5	NM_153612	NP_705840	Coding	chr6:114062877 minus strand	585319
HSD17B8	NM_014234	NP_055049	Coding	chr6:33204636 plus strand	585320
HSF2	NM_001135564	NP_001129036	Coding	chr6:122399550 plus strand	585321
HSF2	NM_001243094	NP_001230023	Coding	chr6:122399550 plus strand	585321

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HSF2	NM_004506	NP_004497	Coding	chr6:122399550 plus strand	585321
HSP90AB1	NM_001271969	NP_001258898	Coding	chr6:44246957 plus strand	585322
HSP90AB1	NM_001271970	NP_001258899	Coding	chr6:44246165 plus strand	585323
HSP90AB1	NM_001271971	NP_001258900	Coding	chr6:44246957 plus strand	585322
HSP90AB1	NM_001271972	NP_001258901	Coding	chr6:44246957 plus strand	585322
HSP90AB1	NM_007355	NP_031381	Coding	chr6:44246957 plus strand	585322
HSPA1A	NM_005345	NP_005336	Coding	chr6:31815513 plus strand	585324
HSPA1B	NM_005346	NP_005337	Coding	chr6:31827734 plus strand	585325
HSPA1L	NM_005527	NP_005518	Coding	chr6:31815058 minus strand	585326
HTR1B	NM_000863	NP_000854	Coding	chr6:77463403 minus strand	585327
HTR1E	NM_000865	NP_000856	Coding	chr6:86937305 plus strand	585328
HUS1B	NM_148959	NP_683762	Coding	chr6:656964 minus strand	585329
IBTK	NM_001300906	NP_001287835	Coding	chr6:82247754 minus strand	585330
IBTK	NM_015525	NP_056340	Coding	chr6:82247754 minus strand	585330
ICK	NM_014920	NP_055735	Coding	chr6:53061802 minus strand	585331
ICK	NM_016513	NP_057597	Coding	chr6:53061802 minus strand	585331
ID4	NM_001546	NP_001537	Coding	chr6:19837369 plus strand	585332
IER3	NM_003897	NP_003888	Coding	chr6:30744550 minus strand	585333
IFNGR1	NM_000416	NP_000407	Coding	chr6:137219430 minus strand	585334
IGF2R	NM_000876	NP_000867	Coding	chr6:159969098 plus strand	585335
IL17A	NM_002190	NP_002181	Coding	chr6:52186386 plus strand	585336
IL17F	NM_052872	NP_443104	Coding	chr6:52244500 minus strand	585337
IL20RA	NM_001278722	NP_001265651	Coding	chr6:137044312 minus strand	585338
IL20RA	NM_001278723	NP_001265652	Coding	chr6:137045180 minus strand	585339
IL20RA	NM_001278724	NP_001265653	Coding	chr6:137045180 minus strand	585339
IL20RA	NM_014432	NP_055247	Coding	chr6:137045180 minus strand	585339
IL22RA2	NM_052962	NP_443194	Coding	chr6:137173648 minus strand	585340
IL22RA2	NM_181309	NP_851826	Coding	chr6:137173648 minus strand	585340
IL22RA2	NM_181310	NP_851827	Coding	chr6:137173648 minus strand	585340
IMPG1	NM_001282368	NP_001269297	Coding	chr6:76072678 minus strand	585341
IMPG1	NM_001563	NP_001554	Coding	chr6:76072678 minus strand	585341

【０５１０】

IP6K3	NM_001142883	NP_001136355	Coding	chr6:33746985 minus strand	585342
IP6K3	NM_054111	NP_473452	Coding	chr6:33746985 minus strand	585342
IPCEF1	NM_001130699	NP_001124171	Coding	chr6:154330081 minus strand	585343
IPCEF1	NM_001130700	NP_001124172	Coding	chr6:154356766 minus strand	585344
IPCEF1	NM_015553	NP_056368	Coding	chr6:154356766 minus strand	585344
IRAK1BP1	NM_001010844	NP_001010844	Coding	chr6:78867543 plus strand	585345
IRF4	NM_001195286	NP_001182215	Coding	chr6:391738 plus strand	585346
IRF4	NM_002460	NP_002451	Coding	chr6:391738 plus strand	585346
ITPR3	NM_002224	NP_002215	Coding	chr6:33621378 plus strand	585347
IYD	NM_001164694	NP_001158166	Coding	chr6:150368891 plus strand	585348
IYD	NM_001164695	NP_001158167	Coding	chr6:150368891 plus strand	585348
IYD	NM_203395	NP_981932	Coding	chr6:150368891 plus strand	585348
JARID2	NM_001267040	NP_001253969	Coding	chr6:15248854 plus strand	585349
JARID2	NM_004973	NP_004964	Coding	chr6:15245974 plus strand	585350
KAAG1	NM_181337	NP_851854	Coding	chr6:24356902 plus strand	585351
KATNA1	NM_001204076	NP_001191005	Coding	chr6:149648804 minus strand	585352
KATNA1	NM_007044	NP_008975	Coding	chr6:149648804 minus strand	585352
KCNK16	NM_001135105	NP_001128577	Coding	chr6:39322554 minus strand	585353
KCNK16	NM_001135106	NP_001128578	Coding	chr6:39322554 minus strand	585353
KCNK16	NM_001135107	NP_001128579	Coding	chr6:39322554 minus strand	585353
KCNK16	NM_032115	NP_115491	Coding	chr6:39322554 minus strand	585353
KCNK17	NM_001135111	NP_001128583	Coding	chr6:39314461 minus strand	585354
KCNK17	NM_031460	NP_113648	Coding	chr6:39314460 minus strand	585355
KCNK5	NM_003740	NP_003731	Coding	chr6:39229475 minus strand	585356
KCNQ5	NM_001160130	NP_001153602	Coding	chr6:72621842 plus strand	585357
KCNQ5	NM_001160132	NP_001153604	Coding	chr6:72621842 plus strand	585357
KCNQ5	NM_001160133	NP_001153605	Coding	chr6:72621842 plus strand	585357
KCNQ5	NM_001160134	NP_001153606	Coding	chr6:72621842 plus strand	585357
KCNQ5	NM_019842	NP_062816	Coding	chr6:72621842 plus strand	585357
KCTD20	NM_001286579	NP_001273508	Coding	chr6:36442766 plus strand	585358
KCTD20	NM_001286580	NP_001273509	Coding	chr6:36442766 plus strand	585358
KCTD20	NM_173562	NP_775833	Coding	chr6:36442766 plus strand	585358
KDM1B	NM_153042	NP_694587	Coding	chr6:18155387 plus strand	585359

【０５１１】

KHDC1	NM_001251874	NP_001238803	Coding	chr6:73310215 minus strand	585360
KHDC1	NM_030568	NP_085045	Coding	chr6:73263196 minus strand	585361
KHDC1L	NM_001126063	NP_001119535	Coding	chr6:73225452 minus strand	585362
KHDC3L	NM_001017361	NP_001017361	Coding	chr6:73362676 plus strand	585363
KHDRBS2	NM_152688	NP_689901	Coding	chr6:62286195 minus strand	585364
KIAA0319	NM_001168374	NP_001161846	Coding	chr6:24646155 minus strand	585365
KIAA0319	NM_001168375	NP_001161847	Coding	chr6:24646021 minus strand	585366
KIAA0319	NM_001168376	NP_001161848	Coding	chr6:24646021 minus strand	585366
KIAA0319	NM_001168377	NP_001161849	Coding	chr6:24646155 minus strand	585365
KIAA0319	NM_001252328	NP_001239257	Coding	chr6:24583227 minus strand	585367
KIAA0319	NM_014809	NP_055624	Coding	chr6:24646155 minus strand	585365
KIAA0408	NM_014702	NP_055517	Coding	chr6:127459390 minus strand	585368
KIAA1244	NM_020340	NP_065073	Coding	chr6:138161915 plus strand	585369
KIAA1586	NM_001286274	NP_001273203	Coding	chr6:57046531 plus strand	585370
KIAA1586	NM_001286275	NP_001273204	Coding	chr6:57046531 plus strand	585370
KIAA1586	NM_001286276	NP_001273205	Coding	chr6:57046746 plus strand	585371
KIAA1586	NM_020931	NP_065982	Coding	chr6:57046531 plus strand	585370
KIAA1919	NM_153369	NP_699200	Coding	chr6:111259278 plus strand	585372
KIF13A	NM_001105566	NP_001099036	Coding	chr6:17987623 minus strand	585373
KIF13A	NM_001105567	NP_001099037	Coding	chr6:17987623 minus strand	585373
KIF13A	NM_001105568	NP_001099038	Coding	chr6:17987623 minus strand	585373
KIF13A	NM_001243423	NP_001230352	Coding	chr6:17987623 minus strand	585373
KIF13A	NM_022113	NP_071396	Coding	chr6:17987623 minus strand	585373
KIF25	NM_005355	NP_005346	Coding	chr6:168017872 plus strand	585374
KIF25	NM_030615	NP_085118	Coding	chr6:168017872 plus strand	585374
KIF6	NM_001289020	NP_001275949	Coding	chr6:39725405 minus strand	585375
KIF6	NM_001289021	NP_001275950	Coding	chr6:39725405 minus strand	585375
KIF6	NM_001289024	NP_001275953	Coding	chr6:39431374 minus strand	585376
KIF6	NM_145027	NP_659464	Coding	chr6:39725405 minus strand	585375

【０５１２】

KIFC1	NM_002263	NP_002254	Coding	chr6:33391535 plus strand	585377
KLC4	NM_001289034	NP_001275963	Coding	chr6:43059856 plus strand	585378
KLC4	NM_001289035	NP_001275964	Coding	chr6:43059593 plus strand	585379
KLC4	NM_138343	NP_612352	Coding	chr6:43059593 plus strand	585379
KLC4	NM_201521	NP_958929	Coding	chr6:43059593 plus strand	585379
KLC4	NM_201522	NP_958930	Coding	chr6:43059856 plus strand	585378
KLC4	NM_201523	NP_958931	Coding	chr6:43059856 plus strand	585378
KLHDC3	NM_057161	NP_476502	Coding	chr6:43014102 plus strand	585380
KLHL31	NM_001003760	NP_001003760	Coding	chr6:53665708 minus strand	585381
KLHL32	NM_001286250	NP_001273179	Coding	chr6:96924619 plus strand	585382
KLHL32	NM_001286251	NP_001273180	Coding	chr6:96924619 plus strand	585382
KLHL32	NM_001286252	NP_001273181	Coding	chr6:96924619 plus strand	585382
KLHL32	NM_001286254	NP_001273183	Coding	chr6:97010198 plus strand	585383
KLHL32	NM_052904	NP_443136	Coding	chr6:96924619 plus strand	585382
KPNA5	NM_002269	NP_002260	Coding	chr6:116681203 plus strand	585384
L3MBTL3	NM_001007102	NP_001007103	Coding	chr6:130018582 plus strand	585385
L3MBTL3	NM_032438	NP_115814	Coding	chr6:130018582 plus strand	585385
LACE1	NM_145315	NP_660358	Coding	chr6:108294893 plus strand	585386
LAMA2	NM_000426	NP_000417	Coding	chr6:128883140 plus strand	585387
LAMA2	NM_001079823	NP_001073291	Coding	chr6:128883140 plus strand	585387
LAMA4	NM_001105206	NP_001098676	Coding	chr6:112254715 minus strand	585388
LAMA4	NM_001105207	NP_001098677	Coding	chr6:112254715 minus strand	585388
LAMA4	NM_001105208	NP_001098678	Coding	chr6:112254715 minus strand	585388
LAMA4	NM_001105209	NP_001098679	Coding	chr6:112254715 minus strand	585388
LAMA4	NM_002290	NP_002281	Coding	chr6:112254715 minus strand	585388
LATS1	NM_001270519	NP_001257448	Coding	chr6:149718256 minus strand	585389
LATS1	NM_004690	NP_004681	Coding	chr6:149718256 minus strand	585389
LCA5	NM_001122769	NP_001116241	Coding	chr6:79537430 minus strand	585390
LCA5	NM_181714	NP_859065	Coding	chr6:79537430 minus strand	585390
LEMD2	NM_001143944	NP_001137416	Coding	chr6:33786942 minus strand	585391
LEMD2	NM_181336	NP_851853	Coding	chr6:33789129 minus strand	585392
LGSN	NM_001143940	NP_001137412	Coding	chr6:63319977 minus	585393

【０５１３】

				strand	
LGSN	NM_016571	NP_057655	Coding	chr6:63319977 minus strand	585393
LHFPL5	NM_182548	NP_872354	Coding	chr6:35805293 plus strand	585394
LIN28B	NM_001004317	NP_001004317	Coding	chr6:104957047 plus strand	585395
LMBRD1	NM_018368	NP_060838	Coding	chr6:69797157 minus strand	585396
LOC100130357	NM_001242698	NP_001229627	Coding	chr6:13295586 minus strand	585397
LOC100507462	NM_001242740	NP_001229669	Coding	chr6:138773679 minus strand	585398
LOC100996634	NM_001277339	NP_001264268	Coding	chr6:109236613 plus strand	585399
LOC441155	NM_001271675	NP_001258604	Coding	chr6:65301417 plus strand	585400
LOC554223	NM_001207043	NP_001193972	Coding	chr6:29791905 plus strand	585401
LPA	NM_005577	NP_005568	Coding	chr6:160666375 minus strand	585402
LRFN2	NM_020737	NP_065788	Coding	chr6:40587387 minus strand	585403
LRP11	NM_032832	NP_116221	Coding	chr6:149864344 minus strand	585404
LRRC1	NM_018214	NP_060684	Coding	chr6:53794979 plus strand	585405
LRRC16A	NM_001173977	NP_001167448	Coding	chr6:25279427 plus strand	585406
LRRC16A	NM_017640	NP_060110	Coding	chr6:25279427 plus strand	585406
LRRC73	NM_001012974	NP_001012992	Coding	chr6:43510343 minus strand	585407
LRRC73	NM_001271882	NP_001258811	Coding	chr6:43510343 minus strand	585407
LSM2	NM_021177	NP_067000	Coding	chr6:31806984 minus strand	585408
LST1	NM_001166538	NP_001160010	Coding	chr6:31587199 plus strand	585409
LST1	NM_007161	NP_009092	Coding	chr6:31587199 plus strand	585409
LST1	NM_205837	NP_995309	Coding	chr6:31586698 plus strand	585410
LST1	NM_205838	NP_995310	Coding	chr6:31586178 plus strand	585411
LST1	NM_205839	NP_995311	Coding	chr6:31586178 plus strand	585411
LST1	NM_205840	NP_995312	Coding	chr6:31587199 plus strand	585409
LTA	NM_000595	NP_000586	Coding	chr6:31572293 plus strand	585412
LTA	NM_001159740	NP_001153212	Coding	chr6:31572098 plus strand	585413
LTB	NM_002341	NP_002332	Coding	chr6:31582425 minus strand	585414
LTB	NM_009588	NP_033666	Coding	chr6:31582425 minus strand	585414
LTV1	NM_032860	NP_116249	Coding	chr6:143843370 plus strand	585415
LY6G5B	NM_021221	NP_067044	Coding	chr6:31670950 plus strand	585416
LY6G5C	NM_025262	NP_079538	Coding	chr6:31680373 minus strand	585417
LY6G6C	NM_025261	NP_079537	Coding	chr6:31721734 minus strand	585418

【０５１４】

LY6G6D	NM_021246	NP_067069	Coding	chr6:31715355 plus strand	585419
LY6G6F	NM_001003693	NP_001003693	Coding	chr6:31706906 plus strand	585420
LY86	NM_004271	NP_004262	Coding	chr6:6588700 plus strand	585421
LYRM2	NM_020466	NP_065199	Coding	chr6:89638755 minus strand	585422
LYRM4	NM_001164840	NP_001158312	Coding	chr6:5260950 minus strand	585423
LYRM4	NM_001164841	NP_001158313	Coding	chr6:5260950 minus strand	585423
LYRM4	NM_020408	NP_065141	Coding	chr6:5260950 minus strand	585423
MAD2L1BP	NM_001003690	NP_001003690	Coding	chr6:43629541 plus strand	585424
MAD2L1BP	NM_014628	NP_055443	Coding	chr6:43635839 plus strand	585425
MAK	NM_001242385	NP_001229314	Coding	chr6:10838555 minus strand	585426
MAK	NM_001242957	NP_001229886	Coding	chr6:10838555 minus strand	585426
MAK	NM_005906	NP_005897	Coding	chr6:10838555 minus strand	585426
MAN1A1	NM_005907	NP_005898	Coding	chr6:119349766 minus strand	585427
MANEA	NM_024641	NP_078917	Coding	chr6:95577496 plus strand	585428
MAP3K4	NM_001291958	NP_001278887	Coding	chr6:160991726 plus strand	585429
MAP3K4	NM_001301072	NP_001288001	Coding	chr6:160991726 plus strand	585429
MAP3K4	NM_005922	NP_005913	Coding	chr6:160991726 plus strand	585429
MAP3K4	NM_006724	NP_006715	Coding	chr6:160991726 plus strand	585429
MAP3K5	NM_005923	NP_005914	Coding	chr6:136792518 minus strand	585430
MAP3K7	NM_003188	NP_003179	Coding	chr6:90587301 minus strand	585431
MAP3K7	NM_145331	NP_663304	Coding	chr6:90587301 minus strand	585431
MAP3K7	NM_145332	NP_663305	Coding	chr6:90587301 minus strand	585431
MAP3K7	NM_145333	NP_663306	Coding	chr6:90587301 minus strand	585431
MAP7	NM_001198608	NP_001185537	Coding	chr6:136526213 minus strand	585432
MAP7	NM_001198609	NP_001185538	Coding	chr6:136526213 minus strand	585432
MAP7	NM_001198611	NP_001185540	Coding	chr6:136526213 minus strand	585432
MAP7	NM_001198614	NP_001185543	Coding	chr6:136526606 minus strand	585433
MAP7	NM_001198615	NP_001185544	Coding	chr6:136466875 minus strand	585434
MAP7	NM_001198616	NP_001185545	Coding	chr6:136550819 minus strand	585435
MAP7	NM_001198617	NP_001185546	Coding	chr6:136550819 minus strand	585435

【０５１５】

MAP7	NM_001198618	NP_001185547	Coding	chr6:136526606 minus strand	585433
MAP7	NM_001198619	NP_001185548	Coding	chr6:136526710 minus strand	585436
MAP7	NM_003980	NP_003971	Coding	chr6:136550819 minus strand	585435
MAPK13	NM_002754	NP_002745	Coding	chr6:36130483 plus strand	585437
MAPK14	NM_001315	NP_001306	Coding	chr6:36027676 plus strand	585438
MAPK14	NM_139012	NP_620581	Coding	chr6:36027676 plus strand	585438
MAPK14	NM_139013	NP_620582	Coding	chr6:36027676 plus strand	585438
MAPK14	NM_139014	NP_620583	Coding	chr6:36027676 plus strand	585438
MARCKS	NM_002356	NP_002347	Coding	chr6:113857347 plus strand	585439
MAS1	NM_002377	NP_002368	Coding	chr6:159906941 plus strand	585440
MAS1L	NM_052967	NP_443199	Coding	chr6:29487902 minus strand	585441
MB21D1	NM_138441	NP_612450	Coding	chr6:73452320 minus strand	585442
MBOAT1	NM_001080480	NP_001073949	Coding	chr6:20212464 minus strand	585443
MCCD1	NM_001011700	NP_001011700	Coding	chr6:31528961 plus strand	585444
MCHR2	NM_001040179	NP_001035269	Coding	chr6:99994223 minus strand	585445
MCHR2	NM_032503	NP_115892	Coding	chr6:99994238 minus strand	585446
MCM3	NM_001270472	NP_001257401	Coding	chr6:52284881 minus strand	585447
MCM3	NM_002388	NP_002379	Coding	chr6:52284881 minus strand	585447
MCM9	NM_017696	NP_060166	Coding	chr6:118931738 minus strand	585448
MCM9	NM_153255	NP_694987	Coding	chr6:118935162 minus strand	585449
MCUR1	NM_001031713	NP_001026883	Coding	chr6:13814560 minus strand	585450
MDC1	NM_014641	NP_055456	Coding	chr6:30717681 minus strand	585451
MDFI	NM_001300804	NP_001287733	Coding	chr6:41637176 plus strand	585452
MDFI	NM_001300805	NP_001287734	Coding	chr6:41638456 plus strand	585453
MDFI	NM_001300806	NP_001287735	Coding	chr6:41638456 plus strand	585453
MDFI	NM_005586	NP_005577	Coding	chr6:41638456 plus strand	585453
MDGA1	NM_153487	NP_705691	Coding	chr6:37697990 minus strand	585454
MDN1	NM_014611	NP_055426	Coding	chr6:89819794 minus strand	585455
ME1	NM_002395	NP_002386	Coding	chr6:83431219 minus strand	585456
MEA1	NM_014623	NP_055438	Coding	chr6:43013880 minus strand	585457
MED20	NM_004275	NP_004266	Coding	chr6:41921139 minus	585458

【０５１６】

				strand	
MED23	NM_001270521	NP_001257450	Coding	chr6:131628239 minus strand	585459
MED23	NM_001270522	NP_001257451	Coding	chr6:131628239 minus strand	585459
MED23	NM_004830	NP_004821	Coding	chr6:131628239 minus strand	585459
MED23	NM_015979	NP_057063	Coding	chr6:131628239 minus strand	585459
MEI4	NM_001282136	NP_001269065	Coding	chr6:77690655 plus strand	585460
MEP1A	NM_005588	NP_005579	Coding	chr6:46793356 plus strand	585461
METTL24	NM_001123364	NP_001116836	Coding	chr6:110358272 minus strand	585462
MICA	NM_000247	NP_000238	Coding	chr6:31403566 plus strand	585463
MICA	NM_001177519	NP_001170990	Coding	chr6:31403566 plus strand	585463
MICA	NM_001289152	NP_001276081	Coding	chr6:31399783 plus strand	585464
MICA	NM_001289153	NP_001276082	Coding	chr6:31399783 plus strand	585464
MICA	NM_001289154	NP_001276083	Coding	chr6:31399783 plus strand	585464
MICAL1	NM_001159291	NP_001152763	Coding	chr6:109455987 minus strand	585465
MICAL1	NM_001286613	NP_001273542	Coding	chr6:109465968 minus strand	585466
MICAL1	NM_022765	NP_073602	Coding	chr6:109455987 minus strand	585465
MICB	NM_001289160	NP_001276089	Coding	chr6:31494880 plus strand	585467
MICB	NM_001289161	NP_001276090	Coding	chr6:31498049 plus strand	585468
MICB	NM_005931	NP_005922	Coding	chr6:31498049 plus strand	585468
MLIP	NM_001281746	NP_001268675	Coding	chr6:54018915 plus strand	585469
MLIP	NM_001281747	NP_001268676	Coding	chr6:54111417 plus strand	585470
MLIP	NM_138569	NP_612636	Coding	chr6:54018915 plus strand	585469
MLLT4	NM_001040000	NP_001035089	Coding	chr6:167826990 plus strand	585471
MLLT4	NM_001207008	NP_001193937	Coding	chr6:167826990 plus strand	585471
MLLT4	NM_001291964	NP_001278893	Coding	chr6:167827634 plus strand	585472
MLN	NM_001040109	NP_001035198	Coding	chr6:33804016 minus strand	585473
MLN	NM_001184698	NP_001171627	Coding	chr6:33804016 minus strand	585473
MLN	NM_002418	NP_002409	Coding	chr6:33804016 minus strand	585473
MMS22L	NM_198468	NP_940870	Coding	chr6:97283176 minus strand	585474
MOCS1	NM_001075098	NP_001068566	Coding	chr6:39934551 minus strand	585475
MOCS1	NM_005943	NP_005934	Coding	chr6:39927716 minus strand	585476
MOG	NM_001008228	NP_001008229	Coding	chr6:29656980 plus strand	585477
MOG	NM_001008229	NP_001008230	Coding	chr6:29656980 plus strand	585477

【０５１７】

MOG	NM_001170418	NP_001163889	Coding	chr6:29656980 plus strand	585477
MOG	NM_002433	NP_002424	Coding	chr6:29656980 plus strand	585477
MOG	NM_206809	NP_996532	Coding	chr6:29656980 plus strand	585477
MOG	NM_206810	NP_996533	Coding	chr6:29656980 plus strand	585477
MOG	NM_206811	NP_996534	Coding	chr6:29656980 plus strand	585477
MOG	NM_206812	NP_996535	Coding	chr6:29656980 plus strand	585477
MOG	NM_206814	NP_996537	Coding	chr6:29656980 plus strand	585477
MOXD1	NM_015529	NP_056344	Coding	chr6:132401534 minus strand	585478
MPC1	NM_001270879	NP_001257808	Coding	chr6:166383013 minus strand	585479
MPC1	NM_016098	NP_057182	Coding	chr6:166383013 minus strand	585479
MRAP2	NM_138409	NP_612418	Coding	chr6:84033700 plus strand	585480
MRPL14	NM_032111	NP_115487	Coding	chr6:44127454 minus strand	585481
MRPL18	NM_014161	NP_054880	Coding	chr6:159790459 plus strand	585482
MRPL2	NM_001300848	NP_001287777	Coding	chr6:43059545 minus strand	585483
MRPL2	NM_015950	NP_057034	Coding	chr6:43059545 minus strand	585483
MRPS10	NM_018141	NP_060611	Coding	chr6:42217895 minus strand	585484
MRPS18A	NM_001193343	NP_001180272	Coding	chr6:43687812 minus strand	585485
MRPS18A	NM_018135	NP_060605	Coding	chr6:43687812 minus strand	585485
MRPS18B	NM_014046	NP_054765	Coding	chr6:30617708 plus strand	585486
MRS2	NM_001286264	NP_001273193	Coding	chr6:24402907 plus strand	585487
MRS2	NM_001286265	NP_001273194	Coding	chr6:24402907 plus strand	585487
MRS2	NM_001286266	NP_001273195	Coding	chr6:24402907 plus strand	585487
MRS2	NM_020662	NP_065713	Coding	chr6:24402907 plus strand	585487
MSH5	NM_002441	NP_002432	Coding	chr6:31739947 plus strand	585488
MSH5	NM_025259	NP_079535	Coding	chr6:31739947 plus strand	585488
MSH5	NM_172165	NP_751897	Coding	chr6:31739947 plus strand	585488
MSH5	NM_172166	NP_751898	Coding	chr6:31739947 plus strand	585488
MTCH1	NM_001271641	NP_001258570	Coding	chr6:36986551 minus strand	585489
MTCH1	NM_014341	NP_055156	Coding	chr6:36986551 minus strand	585489
MTFR2	NM_001099286	NP_001092756	Coding	chr6:136250311 minus strand	585490
MTFR2	NM_138419	NP_612428	Coding	chr6:136250311 minus strand	585490
MTHFD1L	NM_001242767	NP_001229696	Coding	chr6:150865678 plus strand	585491
MTHFD1L	NM_001242768	NP_001229697	Coding	chr6:150866332 plus strand	585492

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MTHFD1L	NM_001242769	NP_001229698	Coding	chr6:150865678 plus strand	585491
MTHFD1L	NM_015440	NP_056255	Coding	chr6:150865678 plus strand	585491
MTO1	NM_001123226	NP_001116698	Coding	chr6:73461730 plus strand	585493
MTO1	NM_012123	NP_036255	Coding	chr6:73461730 plus strand	585493
MTO1	NM_133645	NP_598400	Coding	chr6:73461730 plus strand	585493
MTRF1L	NM_001114184	NP_001107656	Coding	chr6:153002815 minus strand	585494
MTRF1L	NM_001301047	NP_001287976	Coding	chr6:153002815 minus strand	585494
MTRF1L	NM_001301870	NP_001288799	Coding	chr6:153002815 minus strand	585494
MTRF1L	NM_001301871	NP_001288800	Coding	chr6:153002815 minus strand	585494
MTRF1L	NM_001301872	NP_001288801	Coding	chr6:153002815 minus strand	585494
MTRF1L	NM_019041	NP_061914	Coding	chr6:153002815 minus strand	585494
MTRNR2L9	NM_001190706	NP_001177635	Coding	chr6:61574102 plus strand	585495
MUC21	NM_001010909	NP_001010909	Coding	chr6:30983707 plus strand	585496
MUC22	NM_001198815	NP_001185744	Coding	chr6:31005951 plus strand	585497
MUT	NM_000255	NP_000246	Coding	chr6:49463328 minus strand	585498
MYB	NM_001130172	NP_001123644	Coding	chr6:135181314 plus strand	585499
MYB	NM_001130173	NP_001123645	Coding	chr6:135181314 plus strand	585499
MYB	NM_001161656	NP_001155128	Coding	chr6:135181314 plus strand	585499
MYB	NM_001161657	NP_001155129	Coding	chr6:135181314 plus strand	585499
MYB	NM_001161658	NP_001155130	Coding	chr6:135181314 plus strand	585499
MYB	NM_001161659	NP_001155131	Coding	chr6:135181314 plus strand	585499
MYB	NM_001161660	NP_001155132	Coding	chr6:135181314 plus strand	585499
MYB	NM_005375	NP_005366	Coding	chr6:135181314 plus strand	585499
MYCT1	NM_025107	NP_079383	Coding	chr6:152697894 plus strand	585500
MYLIP	NM_013262	NP_037394	Coding	chr6:16129085 plus strand	585501
MYLK4	NM_001012418	NP_001012418	Coding	chr6:2750920 minus strand	585502
MYO6	NM_001300899	NP_001287828	Coding	chr6:75749175 plus strand	585503
MYO6	NM_004999	NP_004990	Coding	chr6:75749191 plus strand	585504
NCOA7	NM_001122842	NP_001116314	Coding	chr6:125790762 plus strand	585505
NCOA7	NM_001199619	NP_001186548	Coding	chr6:125781160 plus strand	585506
NCOA7	NM_001199620	NP_001186549	Coding	chr6:125781160 plus	585506

【０５１９】

				strand	
NCOA7	NM_001199621	NP_001186550	Coding	chr6:125790762 plus strand	585505
NCOA7	NM_001199622	NP_001186551	Coding	chr6:125919223 plus strand	585507
NCOA7	NM_181782	NP_861447	Coding	chr6:125790762 plus strand	585505
NCR2	NM_001199509	NP_001186438	Coding	chr6:41335789 plus strand	585508
NCR2	NM_001199510	NP_001186439	Coding	chr6:41335789 plus strand	585508
NCR2	NM_004828	NP_004819	Coding	chr6:41335789 plus strand	585508
NCR3	NM_001145466	NP_001138938	Coding	chr6:31592985 minus strand	585509
NCR3	NM_001145467	NP_001138939	Coding	chr6:31592985 minus strand	585509
NCR3	NM_147130	NP_667341	Coding	chr6:31592985 minus strand	585509
NDUFAF4	NM_014165	NP_054884	Coding	chr6:96897891 minus strand	585510
NEDD9	NM_001142393	NP_001135865	Coding	chr6:11382348 minus strand	585511
NEDD9	NM_001271033	NP_001257962	Coding	chr6:11232682 minus strand	585512
NEDD9	NM_006403	NP_006394	Coding	chr6:11232682 minus strand	585512
NEDD9	NM_182966	NP_892011	Coding	chr6:11232682 minus strand	585512
NELFE	NM_002904	NP_002895	Coding	chr6:31959087 minus strand	585513
NEU1	NM_000434	NP_000425	Coding	chr6:31862932 minus strand	585514
NFKBIE	NM_004556	NP_004547	Coding	chr6:44265788 minus strand	585515
NFKBIL1	NM_001144961	NP_001138433	Coding	chr6:31547575 plus strand	585516
NFKBIL1	NM_001144962	NP_001138434	Coding	chr6:31546850 plus strand	585517
NFKBIL1	NM_001144963	NP_001138435	Coding	chr6:31546850 plus strand	585517
NFKBIL1	NM_005007	NP_004998	Coding	chr6:31547575 plus strand	585516
NFYA	NM_002505	NP_002496	Coding	chr6:41072967 plus strand	585518
NFYA	NM_021705	NP_068351	Coding	chr6:41072967 plus strand	585518
NHLRC1	NM_198586	NP_940988	Coding	chr6:18122620 minus strand	585519
NHSL1	NM_001144060	NP_001137532	Coding	chr6:138499442 minus strand	585520
NHSL1	NM_020464	NP_065197	Coding	chr6:138572531 minus strand	585521
NKAIN2	NM_001040214	NP_001035304	Coding	chr6:123803845 plus strand	585522
NKAIN2	NM_001300737	NP_001287666	Coding	chr6:123803845 plus strand	585522
NKAIN2	NM_001300738	NP_001287667	Coding	chr6:123803845 plus strand	585522
NKAIN2	NM_001300740	NP_001287669	Coding	chr6:124283004 plus	585523

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				strand	
NKAIN2	NM_153355	NP_699186	Coding	chr6:123803845 plus strand	585522
NKAPL	NM_001007531	NP_001007532	Coding	chr6:28259296 plus strand	585524
NMBR	NM_002511	NP_002502	Coding	chr6:142088799 minus strand	585525
NOL7	NM_016167	NP_057251	Coding	chr6:13615326 plus strand	585526
NOTCH4	NM_004557	NP_004548	Coding	chr6:32224067 minus strand	585527
NOX3	NM_015718	NP_056533	Coding	chr6:155455903 minus strand	585528
NQO2	NM_000904	NP_000895	Coding	chr6:2999815 plus strand	585529
NQO2	NM_001290221	NP_001277150	Coding	chr6:2999815 plus strand	585529
NQO2	NM_001290222	NP_001277151	Coding	chr6:2999815 plus strand	585529
NR2E1	NM_001286102	NP_001273031	Coding	chr6:108168022 plus strand	585530
NR2E1	NM_003269	NP_003260	Coding	chr6:108166057 plus strand	585531
NRM	NM_001270707	NP_001257636	Coding	chr6:30691129 minus strand	585532
NRM	NM_001270708	NP_001257637	Coding	chr6:30691129 minus strand	585532
NRM	NM_001270709	NP_001257638	Coding	chr6:30691129 minus strand	585532
NRM	NM_001270710	NP_001257639	Coding	chr6:30691129 minus strand	585532
NRM	NM_007243	NP_009174	Coding	chr6:30691420 minus strand	585533
NRN1	NM_001278710	NP_001265639	Coding	chr6:6007605 minus strand	585534
NRN1	NM_001278711	NP_001265640	Coding	chr6:6004044 minus strand	585535
NRN1	NM_016588	NP_057672	Coding	chr6:6007400 minus strand	585536
NRSN1	NM_080723	NP_542454	Coding	chr6:24126185 plus strand	585537
NT5DC1	NM_152729	NP_689942	Coding	chr6:116100835 plus strand	585538
NT5E	NM_001204813	NP_001191742	Coding	chr6:85449583 plus strand	585539
NT5E	NM_002526	NP_002517	Coding	chr6:85449583 plus strand	585539
NUDT3	NM_006703	NP_006694	Coding	chr6:34392680 minus strand	585540
NUP153	NM_001278209	NP_001265138	Coding	chr6:17706834 minus strand	585541
NUP153	NM_001278210	NP_001265139	Coding	chr6:17706834 minus strand	585541
NUP153	NM_005124	NP_005115	Coding	chr6:17706834 minus strand	585541
NUP43	NM_198887	NP_942590	Coding	chr6:149746572 minus strand	585542
NUS1	NM_138459	NP_612468	Coding	chr6:117675453 plus strand	585543
OARD1	NM_145063	NP_659500	Coding	chr6:41072449 minus strand	585544

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OGFRL1	NM_024576	NP_078852	Coding	chr6:71288773 plus strand	585545
OLIG3	NM_175747	NP_786923	Coding	chr6:137494394 minus strand	585546
OOEP	NM_001080507	NP_001073976	Coding	chr6:73369792 minus strand	585547
OPN5	NM_181744	NP_859528	Coding	chr6:47782038 plus strand	585548
OPRM1	NM_000914	NP_000905	Coding	chr6:154039101 plus strand	585549
OPRM1	NM_001008503	NP_001008503	Coding	chr6:154039410 plus strand	585550
OPRM1	NM_001008504	NP_001008504	Coding	chr6:154039101 plus strand	585549
OPRM1	NM_001008505	NP_001008505	Coding	chr6:154039410 plus strand	585550
OPRM1	NM_001145279	NP_001138751	Coding	chr6:154010495 plus strand	585551
OPRM1	NM_001145280	NP_001138752	Coding	chr6:154010495 plus strand	585551
OPRM1	NM_001145281	NP_001138753	Coding	chr6:154010495 plus strand	585551
OPRM1	NM_001145282	NP_001138754	Coding	chr6:154039410 plus strand	585550
OPRM1	NM_001145283	NP_001138755	Coding	chr6:154039410 plus strand	585550
OPRM1	NM_001145284	NP_001138756	Coding	chr6:154039410 plus strand	585550
OPRM1	NM_001145285	NP_001138757	Coding	chr6:154039410 plus strand	585550
OPRM1	NM_001145286	NP_001138758	Coding	chr6:154039410 plus strand	585550
OPRM1	NM_001145287	NP_001138759	Coding	chr6:154086506 plus strand	585552
OPRM1	NM_001285522	NP_001272451	Coding	chr6:154039101 plus strand	585549
OPRM1	NM_001285523	NP_001272452	Coding	chr6:154039101 plus strand	585549
OPRM1	NM_001285524	NP_001272453	Coding	chr6:154039101 plus strand	585549
OPRM1	NM_001285526	NP_001272455	Coding	chr6:154086506 plus strand	585552
OPRM1	NM_001285527	NP_001272456	Coding	chr6:154089761 plus strand	585553
OPRM1	NM_001285528	NP_001272457	Coding	chr6:154089761 plus strand	585553
OR10C1	NM_013941	NP_039229	Coding	chr6:29439938 plus strand	585554
OR11A1	NM_013937	NP_039225	Coding	chr6:29427732 minus strand	585555
OR12D2	NM_013936	NP_039224	Coding	chr6:29396638 plus strand	585556
OR12D3	NM_030959	NP_112221	Coding	chr6:29375291 minus strand	585557
OR14J1	NM_030946	NP_112208	Coding	chr6:29306689 plus strand	585558
OR2A4	NM_030908	NP_112170	Coding	chr6:131701401 minus strand	585559

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OR2B2	NM_033057	NP_149046	Coding	chr6:27912396 minus strand	585560
OR2B3	NM_001005226	NP_001005226	Coding	chr6:29087313 minus strand	585561
OR2B6	NM_012367	NP_036499	Coding	chr6:27957240 plus strand	585562
OR2H1	NM_030883	NP_112145	Coding	chr6:29458452 plus strand	585563
OR2H2	NM_007160	NP_009091	Coding	chr6:29587905 plus strand	585564
OR2J2	NM_030905	NP_112167	Coding	chr6:29173533 plus strand	585565
OR2J3	NM_001005216	NP_001005216	Coding	chr6:29111809 plus strand	585566
OR2W1	NM_030903	NP_112165	Coding	chr6:29045175 minus strand	585567
OR5V1	NM_030876	NP_110503	Coding	chr6:29356277 minus strand	585568
ORC3	NM_001197259	NP_001184188	Coding	chr6:87590066 plus strand	585569
ORC3	NM_012381	NP_036513	Coding	chr6:87590066 plus strand	585569
ORC3	NM_181837	NP_862820	Coding	chr6:87590066 plus strand	585569
OSTM1	NM_014028	NP_054747	Coding	chr6:108074737 minus strand	585570
PACRG	NM_001080378	NP_001073847	Coding	chr6:162727131 plus strand	585571
PACRG	NM_001080379	NP_001073848	Coding	chr6:162727969 plus strand	585572
PACRG	NM_152410	NP_689623	Coding	chr6:162727131 plus strand	585571
PACSIN1	NM_001199583	NP_001186512	Coding	chr6:34514871 plus strand	585573
PACSIN1	NM_020804	NP_065855	Coding	chr6:34466060 plus strand	585574
PAK1IP1	NM_017906	NP_060376	Coding	chr6:10694954 plus strand	585575
PAQR8	NM_133367	NP_588608	Coding	chr6:52362127 plus strand	585576
PARK2	NM_004562	NP_004553	Coding	chr6:162727802 minus strand	585577
PARK2	NM_013987	NP_054642	Coding	chr6:162727802 minus strand	585577
PARK2	NM_013988	NP_054643	Coding	chr6:162727802 minus strand	585577
PBOV1	NM_021635	NP_067648	Coding	chr6:138218490 minus strand	585578
PBX2	NM_002586	NP_002577	Coding	chr6:32190186 minus strand	585579
PCMT1	NM_001252049	NP_001238978	Coding	chr6:149749694 plus strand	585580
PCMT1	NM_001252050	NP_001238979	Coding	chr6:149749694 plus strand	585580
PCMT1	NM_001252051	NP_001238980	Coding	chr6:149749694 plus strand	585580
PCMT1	NM_001252052	NP_001238981	Coding	chr6:149749694 plus strand	585580
PCMT1	NM_001252053	NP_001238982	Coding	chr6:149749694 plus strand	585580
PCMT1	NM_005389	NP_005380	Coding	chr6:149749694 plus strand	585580

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PDCD2	NM_001199461	NP_001186390	Coding	chr6:170584692 minus strand	585581
PDCD2	NM_001199462	NP_001186391	Coding	chr6:170584654 minus strand	585582
PDCD2	NM_001199463	NP_001186392	Coding	chr6:170584654 minus strand	585582
PDCD2	NM_001199464	NP_001186393	Coding	chr6:170584654 minus strand	585582
PDCD2	NM_002598	NP_002589	Coding	chr6:170584692 minus strand	585581
PDCD2	NM_144781	NP_659005	Coding	chr6:170584692 minus strand	585581
PDE10A	NM_001130690	NP_001124162	Coding	chr6:165662100 minus strand	585583
PDE7B	NM_018945	NP_061818	Coding	chr6:135851695 plus strand	585584
PDSS2	NM_020381	NP_065114	Coding	chr6:107459575 minus strand	585585
PERP	NM_022121	NP_071404	Coding	chr6:138107523 minus strand	585586
PEX3	NM_003630	NP_003621	Coding	chr6:143450780 plus strand	585587
PEX6	NM_000287	NP_000278	Coding	chr6:42979243 minus strand	585588
PEX7	NM_000288	NP_000279	Coding	chr6:136822563 plus strand	585589
PFDN6	NM_001185181	NP_001172110	Coding	chr6:33289634 plus strand	585590
PFDN6	NM_001265595	NP_001252524	Coding	chr6:33289596 plus strand	585591
PFDN6	NM_001265596	NP_001252525	Coding	chr6:33289596 plus strand	585591
PFDN6	NM_014260	NP_055075	Coding	chr6:33289596 plus strand	585591
PGBD1	NM_001184743	NP_001171672	Coding	chr6:28281536 plus strand	585592
PGBD1	NM_032507	NP_115896	Coding	chr6:28281536 plus strand	585592
PGC	NM_001166424	NP_001159896	Coding	chr6:41747401 minus strand	585593
PGC	NM_002630	NP_002621	Coding	chr6:41747401 minus strand	585593
PGK2	NM_138733	NP_620061	Coding	chr6:49787340 minus strand	585594
PGM3	NM_001199917	NP_001186846	Coding	chr6:83193936 minus strand	585595
PGM3	NM_001199918	NP_001186847	Coding	chr6:83193293 minus strand	585596
PGM3	NM_001199919	NP_001186848	Coding	chr6:83193293 minus strand	585596
PGM3	NM_015599	NP_056414	Coding	chr6:83193293 minus strand	585596
PHACTR1	NM_001242648	NP_001229577	Coding	chr6:12716804 plus strand	585597
PHACTR1	NM_030948	NP_112210	Coding	chr6:12716804 plus strand	585597
PHACTR2	NM_001100164	NP_001093634	Coding	chr6:143677964 plus strand	585598
PHACTR2	NM_001100165	NP_001093635	Coding	chr6:143677964 plus strand	585598

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PHACTR2	NM_001100166	NP_001093636	Coding	chr6:143608179 plus strand	585599
PHACTR2	NM_014721	NP_055536	Coding	chr6:143608179 plus strand	585599
PHF1	NM_002636	NP_002627	Coding	chr6:33410995 plus strand	585600
PHF1	NM_024165	NP_077084	Coding	chr6:33410995 plus strand	585600
PHF10	NM_018288	NP_060758	Coding	chr6:169724010 minus strand	585601
PHF10	NM_133325	NP_579866	Coding	chr6:169724010 minus strand	585601
PHF3	NM_001290259	NP_001277188	Coding	chr6:63635801 plus strand	585602
PHF3	NM_001290260	NP_001277189	Coding	chr6:63636480 plus strand	585603
PHF3	NM_015153	NP_055968	Coding	chr6:63646525 plus strand	585604
PHIP	NM_017934	NP_060404	Coding	chr6:79078294 minus strand	585605
PI16	NM_001199159	NP_001186088	Coding	chr6:36948262 plus strand	585606
PI16	NM_153370	NP_699201	Coding	chr6:36954432 plus strand	585607
PIM1	NM_001243186	NP_001230115	Coding	chr6:37170145 plus strand	585608
PIM1	NM_002648	NP_002639	Coding	chr6:37170145 plus strand	585608
PKHD1	NM_138694	NP_619639	Coding	chr6:52087625 minus strand	585609
PKHD1	NM_170724	NP_733842	Coding	chr6:52087625 minus strand	585609
PKIB	NM_001270393	NP_001257322	Coding	chr6:122471916 plus strand	585610
PKIB	NM_001270394	NP_001257323	Coding	chr6:122471916 plus strand	585610
PKIB	NM_001270395	NP_001257324	Coding	chr6:122652728 plus strand	585611
PKIB	NM_032471	NP_115860	Coding	chr6:122610231 plus strand	585612
PKIB	NM_181794	NP_861459	Coding	chr6:122471916 plus strand	585610
PKIB	NM_181795	NP_861460	Coding	chr6:122610231 plus strand	585612
PLA2G7	NM_001168357	NP_001161829	Coding	chr6:46735693 minus strand	585613
PLA2G7	NM_005084	NP_005075	Coding	chr6:46735414 minus strand	585614
PLAGL1	NM_001080951	NP_001074420	Coding	chr6:144064598 minus strand	585615
PLAGL1	NM_001080952	NP_001074421	Coding	chr6:144008404 minus strand	585616
PLAGL1	NM_001080953	NP_001074422	Coding	chr6:144008404 minus strand	585616
PLAGL1	NM_001080954	NP_001074423	Coding	chr6:144008404 minus strand	585616
PLAGL1	NM_001080955	NP_001074424	Coding	chr6:144064598 minus strand	585615
PLAGL1	NM_001080956	NP_001074425	Coding	chr6:144008404 minus strand	585616

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PLAGL1	NM_001289037	NP_001275966	Coding	chr6:144064599 minus strand	585617
PLAGL1	NM_001289038	NP_001275967	Coding	chr6:144064599 minus strand	585617
PLAGL1	NM_001289039	NP_001275968	Coding	chr6:144064599 minus strand	585617
PLAGL1	NM_001289040	NP_001275969	Coding	chr6:144064599 minus strand	585617
PLAGL1	NM_001289041	NP_001275970	Coding	chr6:144008416 minus strand	585618
PLAGL1	NM_001289042	NP_001275971	Coding	chr6:144064599 minus strand	585617
PLAGL1	NM_001289043	NP_001275972	Coding	chr6:144064599 minus strand	585617
PLAGL1	NM_001289044	NP_001275973	Coding	chr6:144064599 minus strand	585617
PLAGL1	NM_001289045	NP_001275974	Coding	chr6:144008416 minus strand	585618
PLAGL1	NM_001289046	NP_001275975	Coding	chr6:144008416 minus strand	585618
PLAGL1	NM_001289047	NP_001275976	Coding	chr6:144008416 minus strand	585618
PLAGL1	NM_001289048	NP_001275977	Coding	chr6:144008416 minus strand	585618
PLAGL1	NM_001289049	NP_001275978	Coding	chr6:144008416 minus strand	585618
PLAGL1	NM_002656	NP_002647	Coding	chr6:144008404 minus strand	585616
PLAGL1	NM_006718	NP_006709	Coding	chr6:144008404 minus strand	585616
PLEKHG1	NM_001029884	NP_001025055	Coding	chr6:150599862 plus strand	585619
PLG	NM_000301	NP_000292	Coding	chr6:160702192 plus strand	585620
PLG	NM_001168338	NP_001161810	Coding	chr6:160702192 plus strand	585620
PLN	NM_002667	NP_002658	Coding	chr6:118548278 plus strand	585621
PM20D2	NM_001010853	NP_001010853	Coding	chr6:89146049 plus strand	585622
PNISR	NM_015491	NP_056306	Coding	chr6:99425331 minus strand	585623
PNISR	NM_032870	NP_116259	Coding	chr6:99425331 minus strand	585623
PNLDC1	NM_001271862	NP_001258791	Coding	chr6:159800248 plus strand	585624
PNLDC1	NM_173516	NP_775787	Coding	chr6:159800248 plus strand	585624
PNPLA1	NM_001145716	NP_001139188	Coding	chr6:36243167 plus strand	585625
PNPLA1	NM_001145717	NP_001139189	Coding	chr6:36270459 plus strand	585626
PNPLA1	NM_173676	NP_775947	Coding	chr6:36243167 plus strand	585625
PNRC1	NM_006813	NP_006804	Coding	chr6:89080709 plus strand	585627
POLH	NM_001291969	NP_001278898	Coding	chr6:43576140 plus strand	585628

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POLH	NM_001291970	NP_001278899	Coding	chr6:43576140 plus strand	585628
POLH	NM_006502	NP_006493	Coding	chr6:43576140 plus strand	585628
POLR1C	NM_203290	NP_976035	Coding	chr6:43517038 plus strand	585629
POM121L2	NM_033482	NP_258443	Coding	chr6:27312232 minus strand	585630
POPDC3	NM_022361	NP_071756	Coding	chr6:105179983 minus strand	585631
POU3F2	NM_005604	NP_005595	Coding	chr6:98834703 plus strand	585632
POU5F1	NM_001173531	NP_001167002	Coding	chr6:31167170 minus strand	585633
POU5F1	NM_001285986	NP_001272915	Coding	chr6:31167170 minus strand	585633
POU5F1	NM_001285987	NP_001272916	Coding	chr6:31167170 minus strand	585633
POU5F1	NM_002701	NP_002692	Coding	chr6:31170693 minus strand	585634
POU5F1	NM_203289	NP_976034	Coding	chr6:31167170 minus strand	585633
PPARD	NM_001171818	NP_001165289	Coding	chr6:35342557 plus strand	585635
PPARD	NM_001171819	NP_001165290	Coding	chr6:35342557 plus strand	585635
PPARD	NM_001171820	NP_001165291	Coding	chr6:35342557 plus strand	585635
PPARD	NM_006238	NP_006229	Coding	chr6:35342557 plus strand	585635
PPARD	NM_177435	NP_803184	Coding	chr6:35342557 plus strand	585635
PPIL1	NM_016059	NP_057143	Coding	chr6:36875024 minus strand	585636
PPIL4	NM_139126	NP_624311	Coding	chr6:149546102 minus strand	585637
PPIL6	NM_001111298	NP_001104768	Coding	chr6:109441171 minus strand	585638
PPIL6	NM_001286360	NP_001273289	Coding	chr6:109441171 minus strand	585638
PPIL6	NM_001286361	NP_001273290	Coding	chr6:109441171 minus strand	585638
PPIL6	NM_173672	NP_775943	Coding	chr6:109441171 minus strand	585638
PPP1R10	NM_002714	NP_002705	Coding	chr6:30617307 minus strand	585639
PPP1R11	NM_021959	NP_068778	Coding	chr6:30067154 plus strand	585640
PPP1R14C	NM_030949	NP_112211	Coding	chr6:150143051 plus strand	585641
PPP1R18	NM_001134870	NP_001128342	Coding	chr6:30687316 minus strand	585642
PPP1R18	NM_133471	NP_597728	Coding	chr6:30687895 minus strand	585643
PPP1R3G	NM_001145115	NP_001138587	Coding	chr6:5085485 plus strand	585644
PPP2R5D	NM_001270476	NP_001257405	Coding	chr6:42984498 plus strand	585645
PPP2R5D	NM_006245	NP_006236	Coding	chr6:42984498 plus strand	585645
PPP2R5D	NM_180976	NP_851307	Coding	chr6:42984498 plus strand	585645
PPP2R5D	NM_180977	NP_851308	Coding	chr6:42984498 plus strand	585645
PPT2	NM_001204103	NP_001191032	Coding	chr6:32153998 plus strand	585646

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PPT2	NM_005155	NP_005146	Coding	chr6:32153998 plus strand	585646
PPT2	NM_138717	NP_619731	Coding	chr6:32153451 plus strand	585647
PRDM1	NM_001198	NP_001189	Coding	chr6:106086319 plus strand	585648
PRDM1	NM_182907	NP_878911	Coding	chr6:106098861 plus strand	585649
PRDM13	NM_021620	NP_067633	Coding	chr6:99606773 plus strand	585650
PREP	NM_002726	NP_002717	Coding	chr6:105403124 minus strand	585651
PRICKLE4	NM_013397	NP_037529	Coding	chr6:41780761 plus strand	585652
PRIM2	NM_000947	NP_000938	Coding	chr6:57317616 plus strand	585653
PRIM2	NM_001282487	NP_001269416	Coding	chr6:57317616 plus strand	585653
PRIM2	NM_001282488	NP_001269417	Coding	chr6:57314804 plus strand	585654
PRL	NM_000948	NP_000939	Coding	chr6:22297501 minus strand	585655
PRL	NM_001163558	NP_001157030	Coding	chr6:22302853 minus strand	585656
PRPF4B	NM_003913	NP_003904	Coding	chr6:4021334 plus strand	585657
PRPH2	NM_000322	NP_000313	Coding	chr6:42722620 minus strand	585658
PRR18	NM_175922	NP_787118	Coding	chr6:166308383 minus strand	585659
PRR3	NM_001077497	NP_001070965	Coding	chr6:30556708 plus strand	585660
PRR3	NM_025263	NP_079539	Coding	chr6:30556708 plus strand	585660
PRRC2A	NM_004638	NP_004629	Coding	chr6:31620672 plus strand	585661
PRRC2A	NM_080686	NP_542417	Coding	chr6:31620672 plus strand	585661
PRRT1	NM_030651	NP_085154	Coding	chr6:32151943 minus strand	585662
PRSS16	NM_005865	NP_005856	Coding	chr6:27247722 plus strand	585663
PRSS35	NM_001170423	NP_001163894	Coding	chr6:83512474 plus strand	585664
PRSS35	NM_153362	NP_699193	Coding	chr6:83512474 plus strand	585664
PSMB1	NM_002793	NP_002784	Coding	chr6:170553329 minus strand	585665
PSMB8	NM_004159	NP_004150	Coding	chr6:32844935 minus strand	585666
PSMB8	NM_148919	NP_683720	Coding	chr6:32844039 minus strand	585667
PSMB9	NM_002800	NP_002791	Coding	chr6:32854160 plus strand	585668
PSMG4	NM_001128591	NP_001122063	Coding	chr6:3258927 plus strand	585669
PSMG4	NM_001128592	NP_001122064	Coding	chr6:3258927 plus strand	585669
PSMG4	NM_001135750	NP_001129222	Coding	chr6:3258927 plus strand	585669
PSORS1C1	NM_014068	NP_054787	Coding	chr6:31114830 plus strand	585670
PSORS1C2	NM_014069	NP_054788	Coding	chr6:31139350 minus strand	585671
PTCHD4	NM_001013732	NP_001013754	Coding	chr6:48068689 minus strand	585672
PTCHD4	NM_207499	NP_997382	Coding	chr6:48068689 minus strand	585672

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PTCRA	NM_001243168	NP_001230097	Coding	chr6:42915988 plus strand	585673
PTCRA	NM_001243169	NP_001230098	Coding	chr6:42915988 plus strand	585673
PTCRA	NM_001243170	NP_001230099	Coding	chr6:42915988 plus strand	585673
PTCRA	NM_138296	NP_612153	Coding	chr6:42915988 plus strand	585673
PTK7	NM_001270398	NP_001257327	Coding	chr6:43076813 plus strand	585674
PTK7	NM_002821	NP_002812	Coding	chr6:43076267 plus strand	585675
PTK7	NM_152880	NP_690619	Coding	chr6:43076267 plus strand	585675
PTK7	NM_152881	NP_690620	Coding	chr6:43076267 plus strand	585675
PTK7	NM_152882	NP_690621	Coding	chr6:43076267 plus strand	585675
PTP4A1	NM_003463	NP_003454	Coding	chr6:63572011 plus strand	585676
PTPRK	NM_001135648	NP_001129120	Coding	chr6:128520674 minus strand	585677
PTPRK	NM_001291981	NP_001278910	Coding	chr6:128520674 minus strand	585677
PTPRK	NM_001291982	NP_001278911	Coding	chr6:128520674 minus strand	585677
PTPRK	NM_001291983	NP_001278912	Coding	chr6:128520674 minus strand	585677
PTPRK	NM_001291984	NP_001278913	Coding	chr6:128520674 minus strand	585677
PTPRK	NM_002844	NP_002835	Coding	chr6:128520674 minus strand	585677
PXDC1	NM_183373	NP_899229	Coding	chr6:3752012 minus strand	585678
PXT1	NM_152990	NP_694535	Coding	chr6:36442889 minus strand	585679
QKI	NM_001301085	NP_001288014	Coding	chr6:163414642 plus strand	585680
QKI	NM_006775	NP_006766	Coding	chr6:163414642 plus strand	585680
QKI	NM_206853	NP_996735	Coding	chr6:163414642 plus strand	585680
QKI	NM_206854	NP_996736	Coding	chr6:163414642 plus strand	585680
QKI	NM_206855	NP_996737	Coding	chr6:163414642 plus strand	585680
QRSL1	NM_018292	NP_060762	Coding	chr6:106629565 plus strand	585681
RAB23	NM_001278666	NP_001265595	Coding	chr6:57222314 minus strand	585682
RAB23	NM_001278667	NP_001265596	Coding	chr6:57222314 minus strand	585682
RAB23	NM_001278668	NP_001265597	Coding	chr6:57221461 minus strand	585683
RAB23	NM_016277	NP_057361	Coding	chr6:57222314 minus strand	585682
RAB23	NM_183227	NP_899050	Coding	chr6:57221461 minus strand	585683
RAB32	NM_006834	NP_006825	Coding	chr6:146543691 plus strand	585684
RAB44	NM_001257357	NP_001244286	Coding	chr6:36697850 plus strand	585685

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RAET1E	NM_001243325	NP_001230254	Coding	chr6:149891034 minus strand	585686
RAET1E	NM_001243327	NP_001230256	Coding	chr6:149891034 minus strand	585686
RAET1E	NM_001243328	NP_001230257	Coding	chr6:149896059 minus strand	585687
RAET1E	NM_139165	NP_631904	Coding	chr6:149891034 minus strand	585686
RAET1G	NM_001001788	NP_001001788	Coding	chr6:149923152 minus strand	585688
RAET1L	NM_130900	NP_570970	Coding	chr6:150025532 minus strand	585689
RANBP9	NM_005493	NP_005484	Coding	chr6:13711564 minus strand	585690
RARS2	NM_020320	NP_064716	Coding	chr6:87590017 minus strand	585691
RBM24	NM_001143941	NP_001137413	Coding	chr6:17282063 plus strand	585692
RBM24	NM_001143942	NP_001137414	Coding	chr6:17281577 plus strand	585693
RBM24	NM_153020	NP_694565	Coding	chr6:17282700 plus strand	585694
RCAN2	NM_001251973	NP_001238902	Coding	chr6:46492067 minus strand	585695
RCAN2	NM_001251974	NP_001238903	Coding	chr6:46491323 minus strand	585696
RCAN2	NM_005822	NP_005813	Coding	chr6:46325892 minus strand	585697
REPS1	NM_001128617	NP_001122089	Coding	chr6:138988261 minus strand	585698
REPS1	NM_001286611	NP_001273540	Coding	chr6:138988261 minus strand	585698
REPS1	NM_001286612	NP_001273541	Coding	chr6:138988261 minus strand	585698
REPS1	NM_031922	NP_114128	Coding	chr6:138988261 minus strand	585698
REV3L	NM_001286431	NP_001273360	Coding	chr6:111483715 minus strand	585699
REV3L	NM_001286432	NP_001273361	Coding	chr6:111483715 minus strand	585699
REV3L	NM_002912	NP_002903	Coding	chr6:111483715 minus strand	585699
RFPL4B	NM_001013734	NP_001013756	Coding	chr6:112347329 plus strand	585700
RFX6	NM_173560	NP_775831	Coding	chr6:116877212 plus strand	585701
RGL2	NM_001243738	NP_001230667	Coding	chr6:33299388 minus strand	585702
RGL2	NM_004761	NP_004752	Coding	chr6:33299388 minus strand	585702
RGS17	NM_012419	NP_036551	Coding	chr6:153131254 minus strand	585703
RHAG	NM_000324	NP_000315	Coding	chr6:49636874 minus strand	585704
RIMS1	NM_001168407	NP_001161879	Coding	chr6:72212810 plus strand	585705
RIMS1	NM_001168408	NP_001161880	Coding	chr6:72212810 plus strand	585705

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RIMS1	NM_001168409	NP_001161881	Coding	chr6:72216441 plus strand	585706
RIMS1	NM_001168410	NP_001161882	Coding	chr6:72216759 plus strand	585707
RIMS1	NM_001168411	NP_001161883	Coding	chr6:72366729 plus strand	585708
RIMS1	NM_014989	NP_055804	Coding	chr6:71886702 plus strand	585709
RING1	NM_002931	NP_002922	Coding	chr6:33208508 plus strand	585710
RIOK1	NM_031480	NP_113668	Coding	chr6:7389828 plus strand	585711
RIOK1	NM_153005	NP_694550	Coding	chr6:7402646 plus strand	585712
RIPK1	NM_003804	NP_003795	Coding	chr6:3076823 plus strand	585713
RIPPLY2	NM_001009994	NP_001009994	Coding	chr6:83853265 plus strand	585714
RMND1	NM_001271937	NP_001258866	Coding	chr6:151452181 minus strand	585715
RMND1	NM_017909	NP_060379	Coding	chr6:151452181 minus strand	585715
RNASET2	NM_003730	NP_003721	Coding	chr6:166956589 minus strand	585716
RNF144B	NM_182757	NP_877434	Coding	chr6:18387349 plus strand	585717
RNF146	NM_001242844	NP_001229773	Coding	chr6:127266737 plus strand	585718
RNF146	NM_001242845	NP_001229774	Coding	chr6:127266837 plus strand	585719
RNF146	NM_001242846	NP_001229775	Coding	chr6:127266837 plus strand	585719
RNF146	NM_001242849	NP_001229778	Coding	chr6:127266737 plus strand	585718
RNF146	NM_001242850	NP_001229779	Coding	chr6:127266837 plus strand	585719
RNF146	NM_001242851	NP_001229780	Coding	chr6:127266681 plus strand	585720
RNF146	NM_001242852	NP_001229781	Coding	chr6:127266737 plus strand	585718
RNF146	NM_030963	NP_112225	Coding	chr6:127266837 plus strand	585719
RNF182	NM_001165032	NP_001158504	Coding	chr6:13924866 plus strand	585721
RNF182	NM_001165033	NP_001158505	Coding	chr6:13925192 plus strand	585722
RNF182	NM_001165034	NP_001158506	Coding	chr6:13924445 plus strand	585723
RNF182	NM_152737	NP_689950	Coding	chr6:13924866 plus strand	585721
RNF217	NM_001286398	NP_001273327	Coding	chr6:124962544 plus strand	585724
RNF217	NM_152553	NP_689766	Coding	chr6:124983363 plus strand	585725
RNF39	NM_025236	NP_079512	Coding	chr6:30075851 minus strand	585726
RNF39	NM_170769	NP_739575	Coding	chr6:30075849 minus strand	585727
RNF5	NM_006913	NP_008844	Coding	chr6:32178384 plus strand	585728
RNF8	NM_003958	NP_003949	Coding	chr6:37353971 plus strand	585729
RNF8	NM_183078	NP_898901	Coding	chr6:37353971 plus strand	585729
RNGTT	NM_001286426	NP_001273355	Coding	chr6:88963629 minus strand	585730

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RNGTT	NM_001286428	NP_001273357	Coding	chr6:88963629 minus strand	585730
RNGTT	NM_003800	NP_003791	Coding	chr6:88963629 minus strand	585730
ROS1	NM_002944	NP_002935	Coding	chr6:117425855 minus strand	585731
RPF2	NM_001289111	NP_001276040	Coding	chr6:110982016 plus strand	585732
RPF2	NM_032194	NP_115570	Coding	chr6:110982016 plus strand	585732
RPL10A	NM_007104	NP_009035	Coding	chr6:35468400 plus strand	585733
RPL7L1	NM_198486	NP_940888	Coding	chr6:42879932 plus strand	585734
RPP21	NM_001199120	NP_001186049	Coding	chr6:30345128 plus strand	585735
RPP21	NM_001199121	NP_001186050	Coding	chr6:30345128 plus strand	585735
RPP21	NM_024839	NP_079115	Coding	chr6:30345128 plus strand	585735
RPP40	NM_001286132	NP_001273061	Coding	chr6:5004063 minus strand	585736
RPP40	NM_001286133	NP_001273062	Coding	chr6:5004063 minus strand	585736
RPP40	NM_006638	NP_006629	Coding	chr6:5004063 minus strand	585736
RPS10	NM_001014	NP_001005	Coding	chr6:34426125 minus strand	585737
RPS10	NM_001203245	NP_001190174	Coding	chr6:34426041 minus strand	585738
RPS10	NM_001204091	NP_001191020	Coding	chr6:34426125 minus strand	585737
RPS10-NUDT3	NM_001202470	NP_001189399	Coding	chr6:34426125 minus strand	585739
RPS12	NM_001016	NP_001007	Coding	chr6:132814568 plus strand	585740
RPS18	NM_022551	NP_072045	Coding	chr6:33272074 plus strand	585741
RPS6KA2	NM_001006932	NP_001006933	Coding	chr6:166862283 minus strand	585742
RPS6KA2	NM_021135	NP_066958	Coding	chr6:166627238 minus strand	585743
RRAGD	NM_021244	NP_067067	Coding	chr6:89412276 minus strand	585744
RREB1	NM_001003698	NP_001003698	Coding	chr6:7107852 plus strand	585745
RREB1	NM_001003699	NP_001003699	Coding	chr6:7107852 plus strand	585745
RREB1	NM_001003700	NP_001003700	Coding	chr6:7107852 plus strand	585745
RREB1	NM_001168344	NP_001161816	Coding	chr6:7107596 plus strand	585746
RRP36	NM_033112	NP_149103	Coding	chr6:43021646 plus strand	585747
RSPH3	NM_031924	NP_114130	Coding	chr6:159000166 minus strand	585748
RSPH4A	NM_001010892	NP_001010892	Coding	chr6:116616478 plus strand	585749
RSPH4A	NM_001161664	NP_001155136	Coding	chr6:116616478 plus strand	585749
RSPH9	NM_001193341	NP_001180270	Coding	chr6:43645029 plus strand	585750
RSPH9	NM_152732	NP_689945	Coding	chr6:43645029 plus strand	585750
RSPO3	NM_032784	NP_116173	Coding	chr6:127118902 plus strand	585751

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RTN4IP1	NM_032730	NP_116119	Coding	chr6:106629498 minus strand	585752
RUNX2	NM_001015051	NP_001015051	Coding	chr6:45328316 plus strand	585753
RUNX2	NM_001024630	NP_001019801	Coding	chr6:45328316 plus strand	585753
RUNX2	NM_001278478	NP_001265407	Coding	chr6:45422576 plus strand	585754
RWDD1	NM_001007464	NP_001007465	Coding	chr6:116571366 plus strand	585755
RWDD1	NM_015952	NP_057036	Coding	chr6:116571366 plus strand	585755
RWDD1	NM_016104	NP_057188	Coding	chr6:116571366 plus strand	585755
RWDD2A	NM_033411	NP_219479	Coding	chr6:83193312 plus strand	585756
RXRB	NM_001270401	NP_001257330	Coding	chr6:33200696 minus strand	585757
RXRB	NM_001291989	NP_001278918	Coding	chr6:33200853 minus strand	585758
RXRB	NM_021976	NP_068811	Coding	chr6:33200696 minus strand	585757
SAMD3	NM_001017373	NP_001017373	Coding	chr6:130222954 minus strand	585759
SAMD3	NM_001258275	NP_001245204	Coding	chr6:130365425 minus strand	585760
SAMD3	NM_001277185	NP_001264114	Coding	chr6:130215885 minus strand	585761
SAMD5	NM_001030060	NP_001025231	Coding	chr6:147508691 plus strand	585762
SAPCD1	NM_001039651	NP_001034740	Coding	chr6:31762995 plus strand	585763
SASH1	NM_015278	NP_056093	Coding	chr6:148342592 plus strand	585764
SAYSD1	NM_018322	NP_060792	Coding	chr6:39115089 minus strand	585765
SCAF8	NM_001286188	NP_001273117	Coding	chr6:154733377 plus strand	585766
SCAF8	NM_001286189	NP_001273118	Coding	chr6:154733377 plus strand	585766
SCAF8	NM_001286194	NP_001273123	Coding	chr6:154733377 plus strand	585766
SCAF8	NM_001286199	NP_001273128	Coding	chr6:154733377 plus strand	585766
SCAF8	NM_014892	NP_055707	Coding	chr6:154733377 plus strand	585766
SCGN	NM_006998	NP_008929	Coding	chr6:25652200 plus strand	585767
SCML4	NM_001286408	NP_001273337	Coding	chr6:107824317 minus strand	585768
SCML4	NM_001286409	NP_001273338	Coding	chr6:107732396 minus strand	585769
SCML4	NM_198081	NP_932347	Coding	chr6:107824317 minus strand	585768
SCUBE3	NM_152753	NP_689966	Coding	chr6:35214412 plus strand	585770
SEC63	NM_007214	NP_009145	Coding	chr6:107958278 minus strand	585771
SENP6	NM_001100409	NP_001093879	Coding	chr6:75601905 plus strand	585772

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SENP6	NM_015571	NP_056386	Coding	chr6:75601905 plus strand	585772
SERAC1	NM_032861	NP_116250	Coding	chr6:158168280 minus strand	585773
SERINC1	NM_020755	NP_065806	Coding	chr6:122471807 minus strand	585774
SERPINB1	NM_030666	NP_109591	Coding	chr6:2842049 minus strand	585775
SERPINB6	NM_001195291	NP_001182220	Coding	chr6:2972165 minus strand	585776
SERPINB6	NM_001271822	NP_001258751	Coding	chr6:2971309 minus strand	585777
SERPINB6	NM_001271823	NP_001258752	Coding	chr6:2971048 minus strand	585778
SERPINB6	NM_001271824	NP_001258753	Coding	chr6:2972165 minus strand	585776
SERPINB6	NM_001271825	NP_001258754	Coding	chr6:2962170 minus strand	585779
SERPINB6	NM_001297699	NP_001284628	Coding	chr6:2972165 minus strand	585776
SERPINB6	NM_001297700	NP_001284629	Coding	chr6:2972165 minus strand	585776
SERPINB6	NM_004568	NP_004559	Coding	chr6:2972165 minus strand	585776
SERPINB9	NM_004155	NP_004146	Coding	chr6:2903312 minus strand	585780
SESN1	NM_001199933	NP_001186862	Coding	chr6:109009555 minus strand	585781
SESN1	NM_001199934	NP_001186863	Coding	chr6:109008988 minus strand	585782
SESN1	NM_014454	NP_055269	Coding	chr6:109094505 minus strand	585783
SF3B5	NM_031287	NP_112577	Coding	chr6:144095617 minus strand	585784
SFT2D1	NM_145169	NP_660152	Coding	chr6:166342606 minus strand	585785
SFTA2	NM_205854	NP_995326	Coding	chr6:30932175 minus strand	585786
SGK1	NM_001143676	NP_001137148	Coding	chr6:134318058 minus strand	585787
SGK1	NM_001143677	NP_001137149	Coding	chr6:134177872 minus strand	585788
SGK1	NM_001143678	NP_001137150	Coding	chr6:134175932 minus strand	585789
SGK1	NM_001291995	NP_001278924	Coding	chr6:134174896 minus strand	585790
SGK1	NM_005627	NP_005618	Coding	chr6:134174896 minus strand	585790
SH3BGRL2	NM_031469	NP_113657	Coding	chr6:79631282 plus strand	585791
SHPRH	NM_001042683	NP_001036148	Coding	chr6:145964097 minus strand	585792
SHPRH	NM_173082	NP_775105	Coding	chr6:145964097 minus strand	585792
SIM1	NM_005068	NP_005059	Coding	chr6:100463675 minus strand	585793
SIRT5	NM_001193267	NP_001180196	Coding	chr6:13574528 plus strand	585794
SIRT5	NM_001242827	NP_001229756	Coding	chr6:13574528 plus strand	585794
SIRT5	NM_012241	NP_036373	Coding	chr6:13574626 plus strand	585795
SIRT5	NM_031244	NP_112534	Coding	chr6:13574528 plus strand	585794
SKIV2L	NM_006929	NP_008860	Coding	chr6:31958803 plus strand	585796

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SLC16A10	NM_018593	NP_061063	Coding	chr6:111087577 plus strand	585797
SLC17A1	NM_005074	NP_005065	Coding	chr6:25832059 minus strand	585798
SLC17A2	NM_001286123	NP_001273052	Coding	chr6:25925879 minus strand	585799
SLC17A2	NM_001286125	NP_001273054	Coding	chr6:25925879 minus strand	585799
SLC17A2	NM_005835	NP_005826	Coding	chr6:25930726 minus strand	585800
SLC17A3	NM_001098486	NP_001091956	Coding	chr6:25874243 minus strand	585801
SLC17A3	NM_006632	NP_006623	Coding	chr6:25874243 minus strand	585801
SLC17A4	NM_001286121	NP_001273050	Coding	chr6:25754698 plus strand	585802
SLC17A4	NM_005495	NP_005486	Coding	chr6:25754698 plus strand	585802
SLC17A5	NM_012434	NP_036566	Coding	chr6:73654014 minus strand	585803
SLC18B1	NM_052831	NP_439896	Coding	chr6:132798608 minus strand	585804
SLC22A1	NM_003057	NP_003048	Coding	chr6:160121830 plus strand	585805
SLC22A1	NM_153187	NP_694857	Coding	chr6:160121830 plus strand	585805
SLC22A16	NM_033125	NP_149116	Coding	chr6:110476641 minus strand	585806
SLC22A2	NM_003058	NP_003049	Coding	chr6:160258931 minus strand	585807
SLC22A23	NM_001286455	NP_001273384	Coding	chr6:3445013 minus strand	585808
SLC22A23	NM_001286456	NP_001273385	Coding	chr6:3456559 minus strand	585809
SLC22A23	NM_015482	NP_056297	Coding	chr6:3456559 minus strand	585809
SLC22A23	NM_021945	NP_068764	Coding	chr6:3445013 minus strand	585808
SLC22A3	NM_021977	NP_068812	Coding	chr6:160348372 plus strand	585810
SLC22A7	NM_006672	NP_006663	Coding	chr6:43298259 plus strand	585811
SLC22A7	NM_153320	NP_696961	Coding	chr6:43298259 plus strand	585811
SLC25A27	NM_001204051	NP_001190980	Coding	chr6:46652914 plus strand	585812
SLC25A27	NM_001204052	NP_001190981	Coding	chr6:46652914 plus strand	585812
SLC25A27	NM_004277	NP_004268	Coding	chr6:46652914 plus strand	585812
SLC26A8	NM_001193476	NP_001180405	Coding	chr6:36024528 minus strand	585813
SLC26A8	NM_052961	NP_443193	Coding	chr6:36024636 minus strand	585814
SLC26A8	NM_138718	NP_619732	Coding	chr6:36024500 minus strand	585815
SLC29A1	NM_001078174	NP_001071642	Coding	chr6:44219504 plus strand	585816
SLC29A1	NM_001078175	NP_001071643	Coding	chr6:44223503 plus strand	585817
SLC29A1	NM_001078176	NP_001071644	Coding	chr6:44223503 plus strand	585817
SLC29A1	NM_001078177	NP_001071645	Coding	chr6:44223625 plus strand	585818
SLC29A1	NM_004955	NP_004946	Coding	chr6:44219504 plus strand	585816

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SLC2A12	NM_145176	NP_660159	Coding	chr6:134052651 minus strand	585819
SLC35A1	NM_001168398	NP_001161870	Coding	chr6:87472924 plus strand	585820
SLC35A1	NM_006416	NP_006407	Coding	chr6:87472924 plus strand	585820
SLC35B2	NM_001286509	NP_001273438	Coding	chr6:44257571 minus strand	585821
SLC35B2	NM_001286510	NP_001273439	Coding	chr6:44257352 minus strand	585822
SLC35B2	NM_001286511	NP_001273440	Coding	chr6:44257890 minus strand	585823
SLC35B2	NM_001286512	NP_001273441	Coding	chr6:44257352 minus strand	585822
SLC35B2	NM_001286513	NP_001273442	Coding	chr6:44257571 minus strand	585821
SLC35B2	NM_001286517	NP_001273446	Coding	chr6:44257571 minus strand	585821
SLC35B2	NM_001286519	NP_001273448	Coding	chr6:44257571 minus strand	585821
SLC35B2	NM_001286520	NP_001273449	Coding	chr6:44257571 minus strand	585821
SLC35B2	NM_178148	NP_835361	Coding	chr6:44257571 minus strand	585821
SLC35B3	NM_001142541	NP_001136013	Coding	chr6:8435567 minus strand	585824
SLC35B3	NM_015948	NP_057032	Coding	chr6:8435567 minus strand	585824
SLC35D3	NM_001008783	NP_001008783	Coding	chr6:136922240 plus strand	585825
SLC35F1	NM_001029858	NP_001025029	Coding	chr6:117907525 plus strand	585826
SLC39A7	NM_001077516	NP_001070984	Coding	chr6:33200825 plus strand	585827
SLC39A7	NM_001288777	NP_001275706	Coding	chr6:33200825 plus strand	585827
SLC39A7	NM_006979	NP_008910	Coding	chr6:33200825 plus strand	585827
SLC44A4	NM_001178044	NP_001171515	Coding	chr6:31879046 minus strand	585828
SLC44A4	NM_001178045	NP_001171516	Coding	chr6:31877671 minus strand	585829
SLC44A4	NM_025257	NP_079533	Coding	chr6:31879046 minus strand	585828
SMAP1	NM_001044305	NP_001037770	Coding	chr6:70667770 plus strand	585830
SMAP1	NM_001281439	NP_001268368	Coding	chr6:70667770 plus strand	585830
SMAP1	NM_001281440	NP_001268369	Coding	chr6:70668529 plus strand	585831
SMAP1	NM_021940	NP_068759	Coding	chr6:70667770 plus strand	585830
SMIM13	NM_001135575	NP_001129047	Coding	chr6:11094032 plus strand	585832
SMIM8	NM_001042493	NP_001035958	Coding	chr6:87322587 plus strand	585833
SMIM8	NM_001287445	NP_001274374	Coding	chr6:87322587 plus strand	585833
SMIM8	NM_020425	NP_065158	Coding	chr6:87322587 plus strand	585833
SMLR1	NM_001195597	NP_001182526	Coding	chr6:130827404 plus strand	585834
SMOC2	NM_001166412	NP_001159884	Coding	chr6:168441150 plus strand	585835
SMOC2	NM_022138	NP_071421	Coding	chr6:168441150 plus	585835

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				strand	
SMPD2	NM_003080	NP_003071	Coding	chr6:109440727 plus strand	585836
SMPDL3A	NM_001286138	NP_001273067	Coding	chr6:122789048 plus strand	585837
SMPDL3A	NM_006714	NP_006705	Coding	chr6:122789048 plus strand	585837
SNAP91	NM_001242792	NP_001229721	Coding	chr6:83709128 minus strand	585838
SNAP91	NM_001242793	NP_001229722	Coding	chr6:83709408 minus strand	585839
SNAP91	NM_001242794	NP_001229723	Coding	chr6:83709408 minus strand	585839
SNAP91	NM_001256717	NP_001243646	Coding	chr6:83709408 minus strand	585839
SNAP91	NM_001256718	NP_001243647	Coding	chr6:83708801 minus strand	585840
SNAP91	NM_014841	NP_055656	Coding	chr6:83709408 minus strand	585839
SNRNP48	NM_152551	NP_689764	Coding	chr6:7590198 plus strand	585841
SNRPC	NM_003093	NP_003084	Coding	chr6:34757093 plus strand	585842
SNX14	NM_001297614	NP_001284543	Coding	chr6:85594132 minus strand	585843
SNX14	NM_020468	NP_065201	Coding	chr6:85594132 minus strand	585843
SNX14	NM_153816	NP_722523	Coding	chr6:85594132 minus strand	585843
SNX3	NM_001300928	NP_001287857	Coding	chr6:108261260 minus strand	585844
SNX3	NM_001300929	NP_001287858	Coding	chr6:108261260 minus strand	585844
SNX3	NM_003795	NP_003786	Coding	chr6:108261260 minus strand	585844
SNX3	NM_152827	NP_690040	Coding	chr6:108261260 minus strand	585844
SNX9	NM_016224	NP_057308	Coding	chr6:157823170 plus strand	585845
SOBP	NM_018013	NP_060483	Coding	chr6:107490112 plus strand	585846
SOD2	NM_000636	NP_000627	Coding	chr6:159693321 minus strand	585847
SOD2	NM_001024465	NP_001019636	Coding	chr6:159693321 minus strand	585847
SOD2	NM_001024466	NP_001019637	Coding	chr6:159693321 minus strand	585847
SOGA3	NM_001012279	NP_001012279	Coding	chr6:127519355 minus strand	585848
SOX4	NM_003107	NP_003098	Coding	chr6:21593740 plus strand	585849
SPACA1	NM_030960	NP_112222	Coding	chr6:88047788 plus strand	585850
SPATS1	NM_145026	NP_659463	Coding	chr6:44342659 plus strand	585851
SPDEF	NM_001252294	NP_001239223	Coding	chr6:34556333 minus strand	585852

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SPDEF	NM_012391	NP_036523	Coding	chr6:34556333 minus strand	585852
SRF	NM_001292001	NP_001278930	Coding	chr6:43172389 plus strand	585853
SRF	NM_003131	NP_003122	Coding	chr6:43171294 plus strand	585854
SRPK1	NM_003137	NP_003128	Coding	chr6:35921180 minus strand	585855
SRSF12	NM_080743	NP_542781	Coding	chr6:89118081 minus strand	585856
SRSF3	NM_003017	NP_003008	Coding	chr6:36594312 plus strand	585857
SSR1	NM_001292008	NP_001278937	Coding	chr6:7313314 minus strand	585858
SSR1	NM_003144	NP_003135	Coding	chr6:7313314 minus strand	585858
STK19	NM_004197	NP_004188	Coding	chr6:31971868 plus strand	585859
STK19	NM_004197	NP_004188	Coding	chr6:32013269 plus strand	585860
STK19	NM_032454	NP_115830	Coding	chr6:31971868 plus strand	585859
STK19	NM_032454	NP_115830	Coding	chr6:32013269 plus strand	585860
STK38	NM_007271	NP_009202	Coding	chr6:36547470 minus strand	585861
STMND1	NM_001190766	NP_001177695	Coding	chr6:17102257 plus strand	585862
STX11	NM_003764	NP_003755	Coding	chr6:144150516 plus strand	585863
STX7	NM_003569	NP_003560	Coding	chr6:132513198 minus strand	585864
STXBP5	NM_001127715	NP_001121187	Coding	chr6:147204357 plus strand	585865
STXBP5	NM_139244	NP_640337	Coding	chr6:147204357 plus strand	585865
SUMO4	NM_001002255	NP_001002255	Coding	chr6:149400358 plus strand	585866
SUPT3H	NM_001261823	NP_001248752	Coding	chr6:45378051 minus strand	585867
SUPT3H	NM_003599	NP_003590	Coding	chr6:45378051 minus strand	585867
SUPT3H	NM_181356	NP_852001	Coding	chr6:45378051 minus strand	585867
SYCP2L	NM_001040274	NP_001035364	Coding	chr6:10886830 plus strand	585868
SYNCRIP	NM_001159673	NP_001153145	Coding	chr6:85642922 minus strand	585869
SYNCRIP	NM_001159674	NP_001153146	Coding	chr6:85642890 minus strand	585870
SYNCRIP	NM_001159675	NP_001153147	Coding	chr6:85641451 minus strand	585871
SYNCRIP	NM_001159676	NP_001153148	Coding	chr6:85641451 minus strand	585871
SYNCRIP	NM_001159677	NP_001153149	Coding	chr6:85643325 minus strand	585872
SYNCRIP	NM_001253771	NP_001240700	Coding	chr6:85642890 minus strand	585870
SYNCRIP	NM_006372	NP_006363	Coding	chr6:85643325 minus strand	585872
SYNE1	NM_033071	NP_149062	Coding	chr6:152636851 minus strand	585873

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SYNE1	NM_182961	NP_892006	Coding	chr6:152637399 minus strand	585874
SYNGAP1	NM_006772	NP_006763	Coding	chr6:33420069 plus strand	585875
SYNJ2	NM_001178088	NP_001171559	Coding	chr6:158017047 plus strand	585876
SYNJ2	NM_003898	NP_003889	Coding	chr6:157981855 plus strand	585877
SYTL3	NM_001009991	NP_001009991	Coding	chr6:158650013 plus strand	585878
SYTL3	NM_001242384	NP_001229313	Coding	chr6:158650013 plus strand	585878
SYTL3	NM_001242394	NP_001229323	Coding	chr6:158650013 plus strand	585878
SYTL3	NM_001242395	NP_001229324	Coding	chr6:158650013 plus strand	585878
T	NM_001270484	NP_001257413	Coding	chr6:166168669 minus strand	585879
T	NM_003181	NP_003172	Coding	chr6:166168669 minus strand	585879
TAAR1	NM_138327	NP_612200	Coding	chr6:132646003 minus strand	585880
TAAR2	NM_001033080	NP_001028252	Coding	chr6:132624275 minus strand	585881
TAAR2	NM_014626	NP_055441	Coding	chr6:132618093 minus strand	585882
TAAR5	NM_003967	NP_003958	Coding	chr6:132589738 minus strand	585883
TAAR6	NM_175067	NP_778237	Coding	chr6:132570321 plus strand	585884
TAAR8	NM_053278	NP_444508	Coding	chr6:132552692 plus strand	585885
TAAR9	NM_175057	NP_778227	Coding	chr6:132538287 plus strand	585886
TAB2	NM_001292034	NP_001278963	Coding	chr6:149317926 plus strand	585887
TAB2	NM_001292035	NP_001278964	Coding	chr6:149217923 plus strand	585888
TAB2	NM_015093	NP_055908	Coding	chr6:149318299 plus strand	585889
TAF11	NM_001270488	NP_001257417	Coding	chr6:34888071 minus strand	585890
TAF11	NM_005643	NP_005634	Coding	chr6:34888071 minus strand	585890
TAF8	NM_138572	NP_612639	Coding	chr6:42050512 plus strand	585891
TAGAP	NM_001278733	NP_001265662	Coding	chr6:159042353 minus strand	585892
TAGAP	NM_054114	NP_473455	Coding	chr6:159045152 minus strand	585893
TAGAP	NM_138810	NP_620165	Coding	chr6:159045152 minus strand	585893
TAGAP	NM_152133	NP_687034	Coding	chr6:159045152 minus strand	585893
TAP1	NM_000593	NP_000584	Coding	chr6:32853971 minus strand	585894

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TAP1	NM_001292022	NP_001278951	Coding	chr6:32852787 minus strand	585895
TAP2	NM_000544	NP_000535	Coding	chr6:32838770 minus strand	585896
TAP2	NM_001290043	NP_001276972	Coding	chr6:32838823 minus strand	585897
TAP2	NM_018833	NP_061313	Coding	chr6:32838770 minus strand	585896
TAPBP	NM_003190	NP_003181	Coding	chr6:33314387 minus strand	585898
TAPBP	NM_172208	NP_757345	Coding	chr6:33314387 minus strand	585898
TAPBP	NM_172209	NP_757346	Coding	chr6:33314387 minus strand	585898
TBC1D22B	NM_017772	NP_060242	Coding	chr6:37257703 plus strand	585899
TBC1D32	NM_152730	NP_689943	Coding	chr6:121334500 minus strand	585900
TBC1D7	NM_001143964	NP_001137436	Coding	chr6:13328583 minus strand	585901
TBC1D7	NM_001143965	NP_001137437	Coding	chr6:13328583 minus strand	585901
TBC1D7	NM_001143966	NP_001137438	Coding	chr6:13328583 minus strand	585901
TBC1D7	NM_001258457	NP_001245386	Coding	chr6:13328583 minus strand	585901
TBC1D7	NM_016495	NP_057579	Coding	chr6:13328583 minus strand	585901
TBCC	NM_003192	NP_003183	Coding	chr6:42746146 minus strand	585902
TBP	NM_001172085	NP_001165556	Coding	chr6:170554332 plus strand	585903
TBP	NM_003194	NP_003185	Coding	chr6:170554332 plus strand	585903
TBPL1	NM_001253676	NP_001240605	Coding	chr6:133952169 plus strand	585904
TBPL1	NM_004865	NP_004856	Coding	chr6:133953162 plus strand	585905
TBX18	NM_001080508	NP_001073977	Coding	chr6:84764236 minus strand	585906
TCF19	NM_001077511	NP_001070979	Coding	chr6:31158525 plus strand	585907
TCF19	NM_007109	NP_009040	Coding	chr6:31158525 plus strand	585907
TCF21	NM_003206	NP_003197	Coding	chr6:133889121 plus strand	585908
TCF21	NM_198392	NP_938206	Coding	chr6:133889120 plus strand	585909
TCP1	NM_001008897	NP_001008897	Coding	chr6:159789703 minus strand	585910
TCP1	NM_030752	NP_110379	Coding	chr6:159789703 minus strand	585910
TCP10	NM_004610	NP_004601	Coding	chr6:167384510 minus strand	585911
TCP10L2	NM_001145121	NP_001138593	Coding	chr6:167170592 plus strand	585912

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TCP11	NM_001093728	NP_001087197	Coding	chr6:35141410 minus strand	585913
TCP11	NM_001261817	NP_001248746	Coding	chr6:35141410 minus strand	585913
TCP11	NM_001261818	NP_001248747	Coding	chr6:35141410 minus strand	585913
TCP11	NM_001261819	NP_001248748	Coding	chr6:35141410 minus strand	585913
TCP11	NM_001261820	NP_001248749	Coding	chr6:35141410 minus strand	585913
TCP11	NM_001261821	NP_001248750	Coding	chr6:35141410 minus strand	585913
TCP11	NM_018679	NP_061149	Coding	chr6:35141410 minus strand	585913
TCTE1	NM_182539	NP_872345	Coding	chr6:44297721 minus strand	585914
TCTE3	NM_174910	NP_777570	Coding	chr6:169751542 minus strand	585915
TDP2	NM_016614	NP_057698	Coding	chr6:24666887 minus strand	585916
TDRD6	NM_001010870	NP_001010870	Coding	chr6:46687874 plus strand	585917
TDRD6	NM_001168359	NP_001161831	Coding	chr6:46687874 plus strand	585917
TEAD3	NM_003214	NP_003205	Coding	chr6:35497084 minus strand	585918
TFAP2A	NM_001032280	NP_001027451	Coding	chr6:10412374 minus strand	585919
TFAP2A	NM_001042425	NP_001035890	Coding	chr6:10419564 minus strand	585920
TFAP2A	NM_003220	NP_003211	Coding	chr6:10415237 minus strand	585921
TFAP2B	NM_003221	NP_003212	Coding	chr6:50818725 plus strand	585922
TFAP2D	NM_172238	NP_758438	Coding	chr6:50713543 plus strand	585923
TFB1M	NM_016020	NP_057104	Coding	chr6:155314483 minus strand	585924
TFEB	NM_001167827	NP_001161299	Coding	chr6:41736259 minus strand	585925
TFEB	NM_001271943	NP_001258872	Coding	chr6:41735527 minus strand	585926
TFEB	NM_001271944	NP_001258873	Coding	chr6:41735527 minus strand	585926
TFEB	NM_001271945	NP_001258874	Coding	chr6:41734401 minus strand	585927
TFEB	NM_007162	NP_009093	Coding	chr6:41735060 minus strand	585928
THBS2	NM_003247	NP_003238	Coding	chr6:169254114 minus strand	585929
THEMIS	NM_001010923	NP_001010923	Coding	chr6:127901081 minus strand	585930
THEMIS	NM_001164685	NP_001158157	Coding	chr6:127901081 minus strand	585930
THEMIS	NM_001164687	NP_001158159	Coding	chr6:127918631 minus strand	585931
TIAM2	NM_001010927	NP_001010927	Coding	chr6:155216962 plus	585932

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				strand	
TIAM2	NM_012454	NP_036586	Coding	chr6:155090288 plus strand	585933
TINAG	NM_014464	NP_055279	Coding	chr6:54308404 plus strand	585934
TJAP1	NM_001146016	NP_001139488	Coding	chr6:43477522 plus strand	585935
TJAP1	NM_001146017	NP_001139489	Coding	chr6:43489583 plus strand	585936
TJAP1	NM_001146018	NP_001139490	Coding	chr6:43477522 plus strand	585935
TJAP1	NM_001146019	NP_001139491	Coding	chr6:43477522 plus strand	585935
TJAP1	NM_001146020	NP_001139492	Coding	chr6:43477522 plus strand	585935
TJAP1	NM_080604	NP_542171	Coding	chr6:43477522 plus strand	585935
TMEM14A	NM_014051	NP_054770	Coding	chr6:52671085 plus strand	585937
TMEM14B	NM_001127711	NP_001121183	Coding	chr6:10747758 plus strand	585938
TMEM14B	NM_001286484	NP_001273413	Coding	chr6:10747758 plus strand	585938
TMEM14B	NM_001286488	NP_001273417	Coding	chr6:10747758 plus strand	585938
TMEM14B	NM_001286489	NP_001273418	Coding	chr6:10747758 plus strand	585938
TMEM14B	NM_030969	NP_112231	Coding	chr6:10747758 plus strand	585938
TMEM14C	NM_001165258	NP_001158730	Coding	chr6:10722914 plus strand	585939
TMEM14C	NM_016462	NP_057546	Coding	chr6:10722914 plus strand	585939
TMEM151B	NM_001137560	NP_001131032	Coding	chr6:44270742 plus strand	585940
TMEM170B	NM_001100829	NP_001094299	Coding	chr6:11538226 plus strand	585941
TMEM181	NM_020823	NP_065874	Coding	chr6:158536435 plus strand	585942
TMEM200A	NM_001258276	NP_001245205	Coding	chr6:130366280 plus strand	585943
TMEM200A	NM_001258277	NP_001245206	Coding	chr6:130366280 plus strand	585943
TMEM200A	NM_001258278	NP_001245207	Coding	chr6:130421095 plus strand	585944
TMEM200A	NM_052913	NP_443145	Coding	chr6:130437116 plus strand	585945
TMEM217	NM_001162900	NP_001156372	Coding	chr6:37258155 minus strand	585946
TMEM217	NM_001286401	NP_001273330	Coding	chr6:37258155 minus strand	585946
TMEM217	NM_145316	NP_660359	Coding	chr6:37257637 minus strand	585947
TMEM242	NM_018452	NP_060922	Coding	chr6:157324259 minus strand	585948
TMEM244	NM_001010876	NP_001010876	Coding	chr6:129861271 minus strand	585949
TMEM30A	NM_001143958	NP_001137430	Coding	chr6:75284916 minus strand	585950
TMEM30A	NM_018247	NP_060717	Coding	chr6:75284916 minus strand	585950
TMEM63B	NM_018426	NP_060896	Coding	chr6:44127638 plus strand	585951
TNF	NM_000594	NP_000585	Coding	chr6:31575566 plus strand	585952
TNFAIP3	NM_001270507	NP_001257436	Coding	chr6:137867187 plus strand	585953

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TNFAIP3	NM_001270508	NP_001257437	Coding	chr6:137867187 plus strand	585953
TNFAIP3	NM_006290	NP_006281	Coding	chr6:137867187 plus strand	585953
TNFRSF21	NM_014452	NP_055267	Coding	chr6:47309947 minus strand	585954
TNXB	NM_019105	NP_061978	Coding	chr6:32109374 minus strand	585955
TNXB	NM_032470	NP_115859	Coding	chr6:32013273 minus strand	585956
TNXB	NM_032470	NP_115859	Coding	chr6:32046128 minus strand	585957
TOMM6	NM_001134493	NP_001127965	Coding	chr6:41787442 plus strand	585958
TPBG	NM_001166392	NP_001159864	Coding	chr6:82364243 plus strand	585959
TPBG	NM_006670	NP_006661	Coding	chr6:82363205 plus strand	585960
TPD52L1	NM_001003395	NP_001003395	Coding	chr6:125154273 plus strand	585961
TPD52L1	NM_001003396	NP_001003396	Coding	chr6:125153732 plus strand	585962
TPD52L1	NM_001003397	NP_001003397	Coding	chr6:125153732 plus strand	585962
TPD52L1	NM_001292026	NP_001278955	Coding	chr6:125154273 plus strand	585961
TPD52L1	NM_001300994	NP_001287923	Coding	chr6:125153728 plus strand	585963
TPD52L1	NM_003287	NP_003278	Coding	chr6:125153732 plus strand	585962
TPMT	NM_000367	NP_000358	Coding	chr6:18155165 minus strand	585964
TRAF3IP2	NM_001164281	NP_001157753	Coding	chr6:111606274 minus strand	585965
TRAF3IP2	NM_001164283	NP_001157755	Coding	chr6:111567360 minus strand	585966
TRAF3IP2	NM_147686	NP_679211	Coding	chr6:111606274 minus strand	585965
TRAM2	NM_012288	NP_036420	Coding	chr6:52577064 minus strand	585967
TRAPPC3L	NM_001139444	NP_001132916	Coding	chr6:116545610 minus strand	585968
TRDN	NM_001251987	NP_001238916	Coding	chr6:123637093 minus strand	585969
TRDN	NM_001256020	NP_001242949	Coding	chr6:123637093 minus strand	585969
TRDN	NM_001256021	NP_001242950	Coding	chr6:123637093 minus strand	585969
TRDN	NM_001256022	NP_001242951	Coding	chr6:123637093 minus strand	585969
TRDN	NM_006073	NP_006064	Coding	chr6:123637093 minus strand	585969
TREM1	NM_001242589	NP_001229518	Coding	chr6:41286719 minus strand	585970
TREM1	NM_001242590	NP_001229519	Coding	chr6:41286719 minus strand	585970

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TREM1	NM_018643	NP_061113	Coding	chr6:41286719 minus strand	585970
TREM2	NM_001271821	NP_001258750	Coding	chr6:41163186 minus strand	585971
TREM2	NM_018965	NP_061838	Coding	chr6:41163186 minus strand	585971
TREML1	NM_001271807	NP_001258736	Coding	chr6:41154349 minus strand	585972
TREML1	NM_001271808	NP_001258737	Coding	chr6:41154349 minus strand	585972
TREML1	NM_178174	NP_835468	Coding	chr6:41154349 minus strand	585972
TREML2	NM_024807	NP_079083	Coding	chr6:41201187 minus strand	585973
TREML4	NM_198153	NP_937796	Coding	chr6:41228323 plus strand	585974
TRERF1	NM_001297573	NP_001284502	Coding	chr6:42452051 minus strand	585975
TRERF1	NM_001297574	NP_001284503	Coding	chr6:42452051 minus strand	585975
TRERF1	NM_033502	NP_277037	Coding	chr6:42452051 minus strand	585975
TRIM10	NM_006778	NP_006769	Coding	chr6:30160934 minus strand	585976
TRIM10	NM_052828	NP_439893	Coding	chr6:30160934 minus strand	585976
TRIM15	NM_033229	NP_150232	Coding	chr6:30163205 plus strand	585977
TRIM26	NM_001242783	NP_001229712	Coding	chr6:30213494 minus strand	585978
TRIM26	NM_003449	NP_003440	Coding	chr6:30213494 minus strand	585978
TRIM27	NM_006510	NP_006501	Coding	chr6:28923991 minus strand	585979
TRIM31	NM_007028	NP_008959	Coding	chr6:30113090 minus strand	585980
TRIM38	NM_006355	NP_006346	Coding	chr6:25962688 plus strand	585981
TRIM39	NM_021253	NP_067076	Coding	chr6:30326843 plus strand	585982
TRIM39	NM_172016	NP_742013	Coding	chr6:30327230 plus strand	585983
TRIM39-RPP21	NM_001199119	NP_001186048	Coding	chr6:30329310 plus strand	585984
TRIM40	NM_001286633	NP_001273562	Coding	chr6:30136107 plus strand	585985
TRIM40	NM_138700	NP_619645	Coding	chr6:30136732 plus strand	585986
TRMT11	NM_001031712	NP_001026882	Coding	chr6:125986429 plus strand	585987
TSPO2	NM_001010873	NP_001010873	Coding	chr6:41042497 plus strand	585988
TSPO2	NM_001159726	NP_001153198	Coding	chr6:41042717 plus strand	585989
TSPYL1	NM_003309	NP_003300	Coding	chr6:116280117 minus strand	585990
TSPYL4	NM_021648	NP_067680	Coding	chr6:116254098 minus strand	585991
TSTD3	NM_001195131	NP_001182060	Coding	chr6:99520993 plus strand	585992
TTBK1	NM_032538	NP_115927	Coding	chr6:43243483 plus strand	585993

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TTK	NM_001166691	NP_001160163	Coding	chr6:80004604 plus strand	585994
TTK	NM_003318	NP_003309	Coding	chr6:80004604 plus strand	585994
TTLL2	NM_031949	NP_114155	Coding	chr6:167325085 plus strand	585995
TUBB	NM_001293212	NP_001280141	Coding	chr6:30721548 plus strand	585996
TUBB	NM_001293213	NP_001280142	Coding	chr6:30720200 plus strand	585997
TUBB	NM_001293214	NP_001280143	Coding	chr6:30720200 plus strand	585997
TUBB	NM_001293215	NP_001280144	Coding	chr6:30721548 plus strand	585996
TUBB	NM_001293216	NP_001280145	Coding	chr6:30721548 plus strand	585996
TUBB	NM_178014	NP_821133	Coding	chr6:30720200 plus strand	585997
TUBB2A	NM_001069	NP_001060	Coding	chr6:3157549 minus strand	585998
TUBB2B	NM_178012	NP_821080	Coding	chr6:3227734 minus strand	585999
TUBE1	NM_016262	NP_057346	Coding	chr6:112087548 minus strand	586000
TULP1	NM_001289395	NP_001276324	Coding	chr6:35512902 minus strand	586001
TULP1	NM_003322	NP_003313	Coding	chr6:35512902 minus strand	586001
TULP4	NM_001007466	NP_001007467	Coding	chr6:158312659 plus strand	586002
TULP4	NM_020245	NP_064630	Coding	chr6:158312659 plus strand	586002
TXLNB	NM_153235	NP_694967	Coding	chr6:139292071 minus strand	586003
TXNDC5	NM_001145549	NP_001139021	Coding	chr6:7910077 minus strand	586004
TXNDC5	NM_030810	NP_110437	Coding	chr6:7910814 minus strand	586005
UBD	NM_006398	NP_006389	Coding	chr6:29559925 minus strand	586006
UBE2J1	NM_016021	NP_057105	Coding	chr6:89352900 minus strand	586007
UBE3D	NM_198920	NP_944602	Coding	chr6:83065826 minus strand	586008
UBR2	NM_001184801	NP_001171730	Coding	chr6:42564021 plus strand	586009
UBR2	NM_015255	NP_056070	Coding	chr6:42564021 plus strand	586009
UFL1	NM_015323	NP_056138	Coding	chr6:96521825 plus strand	586010
UHRF1BP1	NM_017754	NP_060224	Coding	chr6:34792016 plus strand	586011
ULBP1	NM_025218	NP_079494	Coding	chr6:149964006 plus strand	586012
ULBP2	NM_025217	NP_079493	Coding	chr6:149941937 plus strand	586013
ULBP3	NM_024518	NP_078794	Coding	chr6:150069066 minus strand	586014
UNC5CL	NM_173561	NP_775832	Coding	chr6:41039199 minus strand	586015
UNC93A	NM_001143947	NP_001137419	Coding	chr6:167291314 plus strand	586016
UNC93A	NM_018974	NP_061847	Coding	chr6:167291314 plus strand	586016
UQCC2	NM_032340	NP_115716	Coding	chr6:33711751 minus strand	586017

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USP45	NM_001080481	NP_001073950	Coding	chr6:99515376 minus strand	586018
USP49	NM_001286554	NP_001273483	Coding	chr6:41871637 minus strand	586019
USP49	NM_018561	NP_061031	Coding	chr6:41895361 minus strand	586020
UST	NM_005715	NP_005706	Coding	chr6:148747134 plus strand	586021
UTRN	NM_007124	NP_009055	Coding	chr6:144291736 plus strand	586022
VARS	NM_006295	NP_006286	Coding	chr6:31795935 minus strand	586023
VARS2	NM_001167733	NP_001161205	Coding	chr6:30914207 plus strand	586024
VARS2	NM_001167734	NP_001161206	Coding	chr6:30914330 plus strand	586025
VARS2	NM_020442	NP_065175	Coding	chr6:30914207 plus strand	586024
VEGFA	NM_001025366	NP_001020537	Coding	chr6:43770208 plus strand	586026
VEGFA	NM_001025367	NP_001020538	Coding	chr6:43770208 plus strand	586026
VEGFA	NM_001025368	NP_001020539	Coding	chr6:43770208 plus strand	586026
VEGFA	NM_001025369	NP_001020540	Coding	chr6:43770208 plus strand	586026
VEGFA	NM_001025370	NP_001020541	Coding	chr6:43770208 plus strand	586026
VEGFA	NM_001033756	NP_001028928	Coding	chr6:43770208 plus strand	586026
VEGFA	NM_001171622	NP_001165093	Coding	chr6:43770208 plus strand	586026
VEGFA	NM_001171623	NP_001165094	Coding	chr6:43770208 plus strand	586026
VEGFA	NM_001171624	NP_001165095	Coding	chr6:43770208 plus strand	586026
VEGFA	NM_001171625	NP_001165096	Coding	chr6:43770208 plus strand	586026
VEGFA	NM_001171626	NP_001165097	Coding	chr6:43770208 plus strand	586026
VEGFA	NM_001171627	NP_001165098	Coding	chr6:43770208 plus strand	586026
VEGFA	NM_001171628	NP_001165099	Coding	chr6:43770208 plus strand	586026
VEGFA	NM_001171629	NP_001165100	Coding	chr6:43770208 plus strand	586026
VEGFA	NM_001171630	NP_001165101	Coding	chr6:43770208 plus strand	586026
VEGFA	NM_001204384	NP_001191313	Coding	chr6:43770208 plus strand	586026
VEGFA	NM_001204385	NP_001191314	Coding	chr6:43770208 plus strand	586026
VEGFA	NM_001287044	NP_001273973	Coding	chr6:43771984 plus strand	586027
VEGFA	NM_003376	NP_003367	Coding	chr6:43770208 plus strand	586026
VGLL2	NM_153453	NP_703154	Coding	chr6:117265557 plus strand	586028
VGLL2	NM_182645	NP_872586	Coding	chr6:117265557 plus strand	586028
VIP	NM_003381	NP_003372	Coding	chr6:152750796 plus strand	586029
VIP	NM_194435	NP_919416	Coding	chr6:152750796 plus strand	586029
VNN1	NM_004666	NP_004657	Coding	chr6:132714055 minus strand	586030
VNN2	NM_001242350	NP_001229279	Coding	chr6:132758008 minus strand	586031
VNN2	NM_004665	NP_004656	Coding	chr6:132758008 minus strand	586031

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VNN2	NM_078488	NP_511043	Coding	chr6:132763459 minus strand	586032
VNN3	NM_001291702	NP_001278631	Coding	chr6:132734765 minus strand	586033
VNN3	NM_001291703	NP_001278632	Coding	chr6:132734765 minus strand	586033
VPS52	NM_001289174	NP_001276103	Coding	chr6:33271965 minus strand	586034
VPS52	NM_001289175	NP_001276104	Coding	chr6:33271965 minus strand	586034
VPS52	NM_001289176	NP_001276105	Coding	chr6:33271965 minus strand	586034
VPS52	NM_022553	NP_072047	Coding	chr6:33271965 minus strand	586034
VTA1	NM_001286371	NP_001273300	Coding	chr6:142147161 plus strand	586035
VTA1	NM_001286372	NP_001273301	Coding	chr6:142147161 plus strand	586035
VTA1	NM_016485	NP_057569	Coding	chr6:142147161 plus strand	586035
VWA7	NM_025258	NP_079534	Coding	chr6:31777331 minus strand	586036
WASF1	NM_001024934	NP_001020105	Coding	chr6:110180004 minus strand	586037
WASF1	NM_001024935	NP_001020106	Coding	chr6:110180004 minus strand	586037
WASF1	NM_001024936	NP_001020107	Coding	chr6:110180004 minus strand	586037
WASF1	NM_003931	NP_003922	Coding	chr6:110180004 minus strand	586037
WDR27	NM_001202550	NP_001189479	Coding	chr6:169702063 minus strand	586038
WDR27	NM_182552	NP_872358	Coding	chr6:169702063 minus strand	586038
WDR46	NM_001164267	NP_001157739	Coding	chr6:33289527 minus strand	586039
WDR46	NM_005452	NP_005443	Coding	chr6:33289527 minus strand	586039
WISP3	NM_003880	NP_003871	Coding	chr6:112054074 plus strand	586040
WISP3	NM_198239	NP_937882	Coding	chr6:112054167 plus strand	586041
WRNIP1	NM_020135	NP_064520	Coding	chr6:2765431 plus strand	586042
WRNIP1	NM_130395	NP_569079	Coding	chr6:2765431 plus strand	586042
WTAP	NM_001270531	NP_001257460	Coding	chr6:159727499 plus strand	586043
WTAP	NM_001270532	NP_001257461	Coding	chr6:159726997 plus strand	586044
WTAP	NM_001270533	NP_001257462	Coding	chr6:159727499 plus strand	586043
WTAP	NM_004906	NP_004897	Coding	chr6:159726997 plus strand	586044
WTAP	NM_152857	NP_690596	Coding	chr6:159727499 plus strand	586043

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WTAP	NM_152858	NP_690597	Coding	chr6:159726997 plus strand	586044
XPO5	NM_020750	NP_065801	Coding	chr6:43576075 minus strand	586045
YIPF3	NM_015388	NP_056203	Coding	chr6:43516990 minus strand	586046
ZBED9	NM_052923	NP_443155	Coding	chr6:28587335 minus strand	586047
ZBTB12	NM_181842	NP_862825	Coding	chr6:31901992 minus strand	586048
ZBTB2	NM_020861	NP_065912	Coding	chr6:151391542 minus strand	586049
ZBTB22	NM_001145338	NP_001138810	Coding	chr6:33317942 minus strand	586050
ZBTB22	NM_005453	NP_005444	Coding	chr6:33317735 minus strand	586051
ZBTB24	NM_001164313	NP_001157785	Coding	chr6:109483237 minus strand	586052
ZBTB24	NM_014797	NP_055612	Coding	chr6:109483237 minus strand	586052
ZBTB9	NM_152735	NP_689948	Coding	chr6:33454578 plus strand	586053
ZC2HC1B	NM_001013623	NP_001013645	Coding	chr6:143864435 plus strand	586054
ZC3H12D	NM_207360	NP_997243	Coding	chr6:149485012 minus strand	586055
ZDHHC14	NM_024630	NP_078906	Coding	chr6:157381524 plus strand	586056
ZDHHC14	NM_153746	NP_714968	Coding	chr6:157381524 plus strand	586056
ZFAND3	NM_021943	NP_068762	Coding	chr6:37819530 plus strand	586057
ZFP57	NM_001109809	NP_001103279	Coding	chr6:29677154 minus strand	586058
ZKSCAN3	NM_001242894	NP_001229823	Coding	chr6:28349913 plus strand	586059
ZKSCAN3	NM_001242895	NP_001229824	Coding	chr6:28349913 plus strand	586059
ZKSCAN3	NM_024493	NP_077819	Coding	chr6:28349913 plus strand	586059
ZKSCAN4	NM_019110	NP_061983	Coding	chr6:28252224 minus strand	586060
ZKSCAN8	NM_001278119	NP_001265048	Coding	chr6:28141909 plus strand	586061
ZKSCAN8	NM_001278121	NP_001265050	Coding	chr6:28142210 plus strand	586062
ZKSCAN8	NM_001278122	NP_001265051	Coding	chr6:28141909 plus strand	586061
ZKSCAN8	NM_006298	NP_006289	Coding	chr6:28141909 plus strand	586061
ZNF165	NM_003447	NP_003438	Coding	chr6:28080703 plus strand	586063
ZNF184	NM_007149	NP_009080	Coding	chr6:27473118 minus strand	586064
ZNF292	NM_015021	NP_055836	Coding	chr6:87155550 plus strand	586065
ZNF311	NM_001010877	NP_001010877	Coding	chr6:29005260 minus strand	586066
ZNF318	NM_014345	NP_055160	Coding	chr6:43369443 minus strand	586067
ZNF322	NM_001242797	NP_001229726	Coding	chr6:26659752 minus strand	586068

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ZNF322	NM_001242798	NP_001229727	Coding	chr6:26659752 minus strand	586068
ZNF322	NM_001242799	NP_001229728	Coding	chr6:26659752 minus strand	586068
ZNF322	NM_024639	NP_078915	Coding	chr6:26659752 minus strand	586068
ZNF391	NM_001076781	NP_001070249	Coding	chr6:27388744 plus strand	586069
ZNF451	NM_001031623	NP_001026794	Coding	chr6:57090029 plus strand	586070
ZNF451	NM_001257273	NP_001244202	Coding	chr6:57090009 plus strand	586071
ZNF451	NM_015555	NP_056370	Coding	chr6:57090029 plus strand	586070
ZNF76	NM_001292032	NP_001278961	Coding	chr6:35259713 plus strand	586072
ZNF76	NM_003427	NP_003418	Coding	chr6:35259713 plus strand	586072
ZNRD1	NM_001278785	NP_001265714	Coding	chr6:30061239 plus strand	586073
ZNRD1	NM_001278786	NP_001265715	Coding	chr6:30061239 plus strand	586073
ZNRD1	NM_014596	NP_055411	Coding	chr6:30061239 plus strand	586073
ZNRD1	NM_170783	NP_740753	Coding	chr6:30061239 plus strand	586073
ZSCAN12	NM_001163391	NP_001156863	Coding	chr6:28399767 minus strand	586074
ZSCAN16	NM_025231	NP_079507	Coding	chr6:28124608 plus strand	586075
ZSCAN23	NM_001012455	NP_001012458	Coding	chr6:28443502 minus strand	586076
ZSCAN26	NM_001023560	NP_001018854	Coding	chr6:28267009 plus strand	586077
ZSCAN26	NM_001111039	NP_001104509	Coding	chr6:28267009 plus strand	586077
ZSCAN26	NM_001287421	NP_001274350	Coding	chr6:28267358 plus strand	586078
ZSCAN26	NM_001287422	NP_001274351	Coding	chr6:28267009 plus strand	586077
ZSCAN26	NM_152736	NP_689949	Coding	chr6:28267009 plus strand	586077
ZSCAN31	NM_001135216	NP_001128688	Coding	chr6:28336134 minus strand	586079
ZSCAN31	NM_001243241	NP_001230170	Coding	chr6:28336375 minus strand	586080
ZSCAN31	NM_001243242	NP_001230171	Coding	chr6:28336375 minus strand	586080
ZSCAN31	NM_001243243	NP_001230172	Coding	chr6:28336134 minus strand	586079
ZSCAN31	NM_001243244	NP_001230173	Coding	chr6:28336375 minus strand	586080
ZSCAN31	NM_030899	NP_112161	Coding	chr6:28336375 minus strand	586080
ZSCAN9	NM_001199479	NP_001186408	Coding	chr6:28225250 plus strand	586081
ZSCAN9	NM_001199480	NP_001186409	Coding	chr6:28225250 plus strand	586081
ZSCAN9	NM_006299	NP_006290	Coding	chr6:28225250 plus strand	586081
ZUFSP	NM_145062	NP_659499	Coding	chr6:116668810 minus strand	586082
AASS	NM_005763	NP_005754	Coding	chr7:122144290 minus strand	586083
ABCA13	NM_152701	NP_689914	Coding	chr7:48171459 plus strand	586084
ABCB1	NM_000927	NP_000918	Coding	chr7:87713323 minus strand	586085

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ABCB4	NM_000443	NP_000434	Coding	chr7:87475703 minus strand	586086
ABCB4	NM_018849	NP_061337	Coding	chr7:87475703 minus strand	586086
ABCB4	NM_018850	NP_061338	Coding	chr7:87475703 minus strand	586086
ABCB5	NM_001163941	NP_001157413	Coding	chr7:20615621 plus strand	586087
ABCB5	NM_001163942	NP_001157414	Coding	chr7:20647342 plus strand	586088
ABCB5	NM_001163993	NP_001157465	Coding	chr7:20647342 plus strand	586088
ABCB5	NM_178559	NP_848654	Coding	chr7:20647342 plus strand	586088
ABCB8	NM_001282291	NP_001269220	Coding	chr7:151028421 plus strand	586089
ABCB8	NM_001282292	NP_001269221	Coding	chr7:151028421 plus strand	586089
ABCB8	NM_001282293	NP_001269222	Coding	chr7:151028421 plus strand	586089
ABCB8	NM_007188	NP_009119	Coding	chr7:151028421 plus strand	586089
ABCF2	NM_005692	NP_005683	Coding	chr7:151227374 minus strand	586090
ABCF2	NM_007189	NP_009120	Coding	chr7:151227374 minus strand	586090
ABHD11	NM_001145364	NP_001138836	Coding	chr7:73738854 minus strand	586091
ABHD11	NM_001301058	NP_001287987	Coding	chr7:73738867 minus strand	586092
ABHD11	NM_148912	NP_683710	Coding	chr7:73738854 minus strand	586091
ABHD11	NM_148913	NP_683711	Coding	chr7:73738854 minus strand	586091
ACHE	NM_000665	NP_000656	Coding	chr7:100895971 minus strand	586093
ACHE	NM_001282449	NP_001269378	Coding	chr7:100895971 minus strand	586093
ACHE	NM_001302621	NP_001289550	Coding	chr7:100895971 minus strand	586093
ACHE	NM_001302622	NP_001289551	Coding	chr7:100896133 minus strand	586094
ACHE	NM_015831	NP_056646	Coding	chr7:100895920 minus strand	586095
ACN9	NM_020186	NP_064571	Coding	chr7:97116592 plus strand	586096
ACTB	NM_001101	NP_001092	Coding	chr7:5530601 minus strand	586097
ACTL6B	NM_016188	NP_057272	Coding	chr7:100656461 minus strand	586098
ACTR3B	NM_001040135	NP_001035225	Coding	chr7:152759748 plus strand	586099
ACTR3B	NM_020445	NP_065178	Coding	chr7:152759748 plus strand	586099
ACTR3C	NM_001164458	NP_001157930	Coding	chr7:150323669 minus strand	586100
ACTR3C	NM_001164459	NP_001157931	Coding	chr7:150302980 minus strand	586101

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ADAM22	NM_004194	NP_004185	Coding	chr7:87934250 plus strand	586102
ADAM22	NM_016351	NP_057435	Coding	chr7:87934250 plus strand	586102
ADAM22	NM_021721	NP_068367	Coding	chr7:87934250 plus strand	586102
ADAM22	NM_021722	NP_068368	Coding	chr7:87934250 plus strand	586102
ADAM22	NM_021723	NP_068369	Coding	chr7:87934250 plus strand	586102
ADAP1	NM_001284308	NP_001271237	Coding	chr7:955407 minus strand	586103
ADAP1	NM_001284309	NP_001271238	Coding	chr7:945816 minus strand	586104
ADAP1	NM_001284310	NP_001271239	Coding	chr7:927216 minus strand	586105
ADAP1	NM_001284311	NP_001271240	Coding	chr7:920889 minus strand	586106
ADAP1	NM_006869	NP_006860	Coding	chr7:954683 minus strand	586107
ADCK2	NM_052853	NP_443085	Coding	chr7:140673152 plus strand	586108
ADCY1	NM_001281768	NP_001268697	Coding	chr7:45574139 plus strand	586109
ADCY1	NM_021116	NP_066939	Coding	chr7:45574525 plus strand	586110
ADCYAP1R1	NM_001118	NP_001109	Coding	chr7:31052460 plus strand	586111
ADCYAP1R1	NM_001199635	NP_001186564	Coding	chr7:31052460 plus strand	586111
ADCYAP1R1	NM_001199636	NP_001186565	Coding	chr7:31052460 plus strand	586111
ADCYAP1R1	NM_001199637	NP_001186566	Coding	chr7:31052460 plus strand	586111
AEBP1	NM_001129	NP_001120	Coding	chr7:44104360 plus strand	586112
AGAP3	NM_001042535	NP_001036000	Coding	chr7:151086711 plus strand	586113
AGAP3	NM_001281300	NP_001268229	Coding	chr7:151085830 plus strand	586114
AGAP3	NM_031946	NP_114152	Coding	chr7:151086711 plus strand	586113
AGBL3	NM_178563	NP_848658	Coding	chr7:134986507 plus strand	586115
AGFG2	NM_006076	NP_006067	Coding	chr7:100539210 plus strand	586116
AGK	NM_018238	NP_060708	Coding	chr7:141551277 plus strand	586117
AGMO	NM_001004320	NP_001004320	Coding	chr7:15562015 minus strand	586118
AGR2	NM_006408	NP_006399	Coding	chr7:16805114 minus strand	586119
AGR3	NM_176813	NP_789783	Coding	chr7:16881989 minus strand	586120
AHCYL2	NM_001130720	NP_001124192	Coding	chr7:129225013 plus strand	586121
AHCYL2	NM_001130722	NP_001124194	Coding	chr7:129375642 plus strand	586122
AHCYL2	NM_001130723	NP_001124195	Coding	chr7:129368122 plus strand	586123
AHCYL2	NM_015328	NP_056143	Coding	chr7:129225013 plus strand	586121
AHR	NM_001621	NP_001612	Coding	chr7:17298651 plus strand	586124
AIMP2	NM_006303	NP_006294	Coding	chr7:6009250 plus strand	586125
AKAP9	NM_005751	NP_005742	Coding	chr7:91940874 plus strand	586126

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AKAP9	NM_147185	NP_671714	Coding	chr7:91940874 plus strand	586126
AKR1B1	NM_001628	NP_001619	Coding	chr7:134459136 minus strand	586127
AKR1B10	NM_020299	NP_064695	Coding	chr7:134527591 plus strand	586128
AKR1B15	NM_001080538	NP_001074007	Coding	chr7:134549096 plus strand	586129
AKR1D1	NM_001190906	NP_001177835	Coding	chr7:138076431 plus strand	586130
AKR1D1	NM_001190907	NP_001177836	Coding	chr7:138076431 plus strand	586130
AKR1D1	NM_005989	NP_005980	Coding	chr7:138076431 plus strand	586130
ALKBH4	NM_017621	NP_060091	Coding	chr7:102464874 minus strand	586131
AMPH	NM_001635	NP_001626	Coding	chr7:38631567 minus strand	586132
AMPH	NM_139316	NP_647477	Coding	chr7:38631567 minus strand	586132
AMZ1	NM_001284355	NP_001271284	Coding	chr7:2688201 plus strand	586133
AMZ1	NM_133463	NP_597720	Coding	chr7:2679521 plus strand	586134
ANKIB1	NM_019004	NP_061877	Coding	chr7:92246233 plus strand	586135
ANKMY2	NM_020319	NP_064715	Coding	chr7:16645817 minus strand	586136
ANKRD61	NM_001271700	NP_001258629	Coding	chr7:6031375 plus strand	586137
ANKRD7	NM_019644	NP_062618	Coding	chr7:118224657 plus strand	586138
ANLN	NM_001284301	NP_001271230	Coding	chr7:36389802 plus strand	586139
ANLN	NM_001284302	NP_001271231	Coding	chr7:36389802 plus strand	586139
ANLN	NM_018685	NP_061155	Coding	chr7:36389802 plus strand	586139
AOAH	NM_001177506	NP_001170977	Coding	chr7:36724549 minus strand	586140
AOAH	NM_001177507	NP_001170978	Coding	chr7:36724549 minus strand	586140
AOAH	NM_001637	NP_001628	Coding	chr7:36724549 minus strand	586140
AOC1	NM_001091	NP_001082	Coding	chr7:150852476 plus strand	586141
AOC1	NM_001272072	NP_001259001	Coding	chr7:150852476 plus strand	586141
AP1S1	NM_001283	NP_001274	Coding	chr7:101154404 plus strand	586142
AP4M1	NM_004722	NP_004713	Coding	chr7:100101506 plus strand	586143
AP5Z1	NM_014855	NP_055670	Coding	chr7:4775630 plus strand	586144
AQP1	NM_001185060	NP_001171989	Coding	chr7:30921299 plus strand	586145
AQP1	NM_001185061	NP_001171990	Coding	chr7:30921489 plus strand	586146
AQP1	NM_001185062	NP_001171991	Coding	chr7:30921503 plus strand	586147
AQP1	NM_198098	NP_932766	Coding	chr7:30911799 plus strand	586148
ARF5	NM_001662	NP_001653	Coding	chr7:127588351 plus	586149

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				strand	
ARHGEF35	NM_001003702	NP_001003702	Coding	chr7:144195698 minus strand	586150
ARHGEF5	NM_005435	NP_005426	Coding	chr7:144355395 plus strand	586151
ARL4A	NM_001037164	NP_001032241	Coding	chr7:12686826 plus strand	586152
ARL4A	NM_001195396	NP_001182325	Coding	chr7:12687285 plus strand	586153
ARL4A	NM_005738	NP_005729	Coding	chr7:12687285 plus strand	586153
ARL4A	NM_212460	NP_997625	Coding	chr7:12686826 plus strand	586152
ARMC10	NM_001161009	NP_001154481	Coding	chr7:103074880 plus strand	586154
ARMC10	NM_001161010	NP_001154482	Coding	chr7:103074880 plus strand	586154
ARMC10	NM_001161011	NP_001154483	Coding	chr7:103074880 plus strand	586154
ARMC10	NM_001161012	NP_001154484	Coding	chr7:103074880 plus strand	586154
ARMC10	NM_001161013	NP_001154485	Coding	chr7:103074880 plus strand	586154
ARMC10	NM_031905	NP_114111	Coding	chr7:103074880 plus strand	586154
ARPC1A	NM_001190996	NP_001177925	Coding	chr7:99325872 plus strand	586155
ARPC1A	NM_006409	NP_006400	Coding	chr7:99325872 plus strand	586155
ARPC1B	NM_005720	NP_005711	Coding	chr7:99374674 plus strand	586156
ASB10	NM_001142459	NP_001135931	Coding	chr7:151187391 minus strand	586157
ASB10	NM_001142460	NP_001135932	Coding	chr7:151187391 minus strand	586157
ASB10	NM_080871	NP_543147	Coding	chr7:151187832 minus strand	586158
ASB15	NM_001290258	NP_001277187	Coding	chr7:123601866 plus strand	586159
ASB15	NM_080928	NP_563616	Coding	chr7:123609022 plus strand	586160
ASB4	NM_016116	NP_057200	Coding	chr7:95485900 plus strand	586161
ASB4	NM_145872	NP_665879	Coding	chr7:95485900 plus strand	586161
ASIC3	NM_004769	NP_004760	Coding	chr7:151048291 plus strand	586162
ASIC3	NM_020321	NP_064717	Coding	chr7:151048291 plus strand	586162
ASIC3	NM_020322	NP_064718	Coding	chr7:151048291 plus strand	586162
ASL	NM_000048	NP_000039	Coding	chr7:66075788 plus strand	586163
ASL	NM_001024943	NP_001020114	Coding	chr7:66075846 plus strand	586164
ASL	NM_001024944	NP_001020115	Coding	chr7:66075846 plus strand	586164
ASL	NM_001024946	NP_001020117	Coding	chr7:66075846 plus strand	586164
ASNS	NM_001178075	NP_001171546	Coding	chr7:97872542 minus strand	586165
ASNS	NM_001178076	NP_001171547	Coding	chr7:97872542 minus strand	586165

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ASNS	NM_001178077	NP_001171548	Coding	chr7:97872165 minus strand	586166
ASNS	NM_001673	NP_001664	Coding	chr7:97872542 minus strand	586165
ASNS	NM_133436	NP_597680	Coding	chr7:97872165 minus strand	586166
ASNS	NM_183356	NP_899199	Coding	chr7:97872542 minus strand	586165
ASZ1	NM_001301821	NP_001288750	Coding	chr7:117427523 minus strand	586167
ASZ1	NM_001301822	NP_001288751	Coding	chr7:117427523 minus strand	586167
ASZ1	NM_130768	NP_570124	Coding	chr7:117427523 minus strand	586167
ATG9B	NM_173681	NP_775952	Coding	chr7:151024499 minus strand	586168
ATP5J2	NM_001003713	NP_001003713	Coding	chr7:99466201 minus strand	586169
ATP5J2	NM_001003714	NP_001003714	Coding	chr7:99466201 minus strand	586169
ATP5J2	NM_001039178	NP_001034267	Coding	chr7:99466201 minus strand	586169
ATP5J2	NM_004889	NP_004880	Coding	chr7:99466201 minus strand	586169
ATP5J2-PTCD1	NM_001198879	NP_001185808	Coding	chr7:99466201 minus strand	586170
ATP6V0A4	NM_020632	NP_065683	Coding	chr7:138798196 minus strand	586171
ATP6V0A4	NM_130840	NP_570855	Coding	chr7:138798196 minus strand	586171
ATP6V0A4	NM_130841	NP_570856	Coding	chr7:138774037 minus strand	586172
ATP6V0E2	NM_001100592	NP_001094062	Coding	chr7:149872967 plus strand	586173
ATP6V0E2	NM_001289990	NP_001276919	Coding	chr7:149872967 plus strand	586173
ATP6V0E2	NM_145230	NP_660265	Coding	chr7:149872967 plus strand	586173
ATP6V1F	NM_001198909	NP_001185838	Coding	chr7:128862802 plus strand	586174
ATP6V1F	NM_004231	NP_004222	Coding	chr7:128862802 plus strand	586174
ATXN7L1	NM_020725	NP_065776	Coding	chr7:105876585 minus strand	586175
ATXN7L1	NM_138495	NP_612504	Coding	chr7:105679162 minus strand	586176
ATXN7L1	NM_152749	NP_689962	Coding	chr7:105876585 minus strand	586175
AUTS2	NM_001127231	NP_001120703	Coding	chr7:69598918 plus strand	586177
AUTS2	NM_001127232	NP_001120704	Coding	chr7:69598918 plus strand	586177
AUTS2	NM_015570	NP_056385	Coding	chr7:69598918 plus strand	586177
AVL9	NM_015060	NP_055875	Coding	chr7:32495563 plus strand	586178
AZGP1	NM_001185	NP_001176	Coding	chr7:99976112 minus	586179

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				strand	
BAIAP2L1	NM_018842	NP_061330	Coding	chr7:98401115 minus strand	586180
BAZ1B	NM_032408	NP_115784	Coding	chr7:73522285 minus strand	586181
BBS9	NM_001033604	NP_001028776	Coding	chr7:33129539 plus strand	586182
BBS9	NM_001033605	NP_001028777	Coding	chr7:33129539 plus strand	586182
BBS9	NM_014451	NP_055266	Coding	chr7:33129539 plus strand	586182
BBS9	NM_198428	NP_940820	Coding	chr7:33129539 plus strand	586182
BCAP29	NM_001008405	NP_001008405	Coding	chr7:107580758 plus strand	586183
BCAP29	NM_018844	NP_061332	Coding	chr7:107579976 plus strand	586184
BCL7B	NM_001197244	NP_001184173	Coding	chr7:73557735 minus strand	586185
BCL7B	NM_001301061	NP_001287990	Coding	chr7:73557735 minus strand	586185
BCL7B	NM_001707	NP_001698	Coding	chr7:73557735 minus strand	586185
BET1	NM_005868	NP_005859	Coding	chr7:94004378 minus strand	586186
BHLHA15	NM_177455	NP_803238	Coding	chr7:98212253 plus strand	586187
BLVRA	NM_000712	NP_000703	Coding	chr7:43758672 plus strand	586188
BLVRA	NM_001253823	NP_001240752	Coding	chr7:43758672 plus strand	586188
BMPER	NM_133468	NP_597725	Coding	chr7:33904910 plus strand	586189
BPGM	NM_001293085	NP_001280014	Coding	chr7:134646778 plus strand	586190
BPGM	NM_001724	NP_001715	Coding	chr7:134646778 plus strand	586190
BPGM	NM_199186	NP_954655	Coding	chr7:134646778 plus strand	586190
BRAF	NM_004333	NP_004324	Coding	chr7:140924764 minus strand	586191
BRAT1	NM_152743	NP_689956	Coding	chr7:2555758 minus strand	586192
BRI3	NM_001159491	NP_001152963	Coding	chr7:98281666 plus strand	586193
BRI3	NM_015379	NP_056194	Coding	chr7:98281666 plus strand	586193
BUD31	NM_003910	NP_003901	Coding	chr7:99408977 plus strand	586194
BZW2	NM_001159767	NP_001153239	Coding	chr7:16646133 plus strand	586195
BZW2	NM_014038	NP_054757	Coding	chr7:16646133 plus strand	586195
C1GALT1	NM_020156	NP_064541	Coding	chr7:7182614 plus strand	586196
C7orf25	NM_001099858	NP_001093328	Coding	chr7:42912090 minus strand	586197
C7orf25	NM_024054	NP_076959	Coding	chr7:42912090 minus strand	586197
C7orf26	NM_024067	NP_076972	Coding	chr7:6590283 plus strand	586198
C7orf31	NM_138811	NP_620166	Coding	chr7:25180198 minus strand	586199
C7orf33	NM_145304	NP_660347	Coding	chr7:148590564 plus strand	586200

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C7orf34	NM_178829	NP_849151	Coding	chr7:142939505 plus strand	586201
C7orf43	NM_018275	NP_060745	Coding	chr7:100158679 minus strand	586202
C7orf49	NM_001243749	NP_001230678	Coding	chr7:135170826 minus strand	586203
C7orf49	NM_001243751	NP_001230680	Coding	chr7:135170826 minus strand	586203
C7orf49	NM_001243752	NP_001230681	Coding	chr7:135170524 minus strand	586204
C7orf49	NM_001243753	NP_001230682	Coding	chr7:135169474 minus strand	586205
C7orf49	NM_001243754	NP_001230683	Coding	chr7:135170826 minus strand	586203
C7orf49	NM_001243755	NP_001230684	Coding	chr7:135169474 minus strand	586205
C7orf49	NM_024033	NP_076938	Coding	chr7:135170826 minus strand	586203
C7orf50	NM_001134395	NP_001127867	Coding	chr7:1138257 minus strand	586206
C7orf50	NM_001134396	NP_001127868	Coding	chr7:1138257 minus strand	586206
C7orf50	NM_032350	NP_115726	Coding	chr7:1138257 minus strand	586206
C7orf55	NM_197964	NP_932068	Coding	chr7:139341131 plus strand	586207
C7orf55-LUC7L2	NM_001244584	NP_001231513	Coding	chr7:139341131 plus strand	586208
C7orf57	NM_001100159	NP_001093629	Coding	chr7:48035510 plus strand	586209
C7orf57	NM_001267865	NP_001254794	Coding	chr7:48035510 plus strand	586209
C7orf57	NM_001267866	NP_001254795	Coding	chr7:48035510 plus strand	586209
C7orf60	NM_152556	NP_689769	Coding	chr7:112939877 minus strand	586210
C7orf61	NM_001004323	NP_001004323	Coding	chr7:100464271 minus strand	586211
C7orf62	NM_152706	NP_689919	Coding	chr7:88795717 minus strand	586212
C7orf65	NM_001123065	NP_001116537	Coding	chr7:47655243 plus strand	586213
C7orf66	NM_001024607	NP_001019778	Coding	chr7:108884587 minus strand	586214
C7orf69	NM_001302627	NP_001289556	Coding	chr7:47795290 plus strand	586215
C7orf69	NM_025031	NP_079307	Coding	chr7:47795290 plus strand	586215
C7orf71	NM_001145531	NP_001139003	Coding	chr7:26637870 plus strand	586216
C7orf71	NM_001302625	NP_001289554	Coding	chr7:26639084 plus strand	586217
C7orf72	NM_001161834	NP_001155306	Coding	chr7:50096085 plus strand	586218
C7orf73	NM_001130929	NP_001124401	Coding	chr7:135662472 plus strand	586219
C7orf76	NM_001201450	NP_001188379	Coding	chr7:96503523 minus strand	586220
C7orf76	NM_001201451	NP_001188380	Coding	chr7:96503523 minus strand	586220
CACNA2D1	NM_000722	NP_000713	Coding	chr7:82443806 minus strand	586221

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CACNA2D1	NM_001302890	NP_001289819	Coding	chr7:82443806 minus strand	586221
CADPS2	NM_001009571	NP_001009571	Coding	chr7:122886759 minus strand	586222
CADPS2	NM_001167940	NP_001161412	Coding	chr7:122886759 minus strand	586222
CADPS2	NM_017954	NP_060424	Coding	chr7:122886759 minus strand	586222
CALCR	NM_001164737	NP_001158209	Coding	chr7:93574730 minus strand	586223
CALCR	NM_001164738	NP_001158210	Coding	chr7:93559810 minus strand	586224
CALCR	NM_001742	NP_001733	Coding	chr7:93574730 minus strand	586223
CALD1	NM_004342	NP_004333	Coding	chr7:134779412 plus strand	586225
CALD1	NM_033138	NP_149129	Coding	chr7:134779412 plus strand	586225
CALD1	NM_033139	NP_149130	Coding	chr7:134891399 plus strand	586226
CALD1	NM_033140	NP_149131	Coding	chr7:134891399 plus strand	586226
CALD1	NM_033157	NP_149347	Coding	chr7:134779412 plus strand	586225
CALN1	NM_001017440	NP_001017440	Coding	chr7:72337223 minus strand	586227
CALN1	NM_031468	NP_113656	Coding	chr7:72412375 minus strand	586228
CALU	NM_001130674	NP_001124146	Coding	chr7:128739291 plus strand	586229
CALU	NM_001199671	NP_001186600	Coding	chr7:128739291 plus strand	586229
CALU	NM_001199672	NP_001186601	Coding	chr7:128739291 plus strand	586229
CALU	NM_001199673	NP_001186602	Coding	chr7:128739291 plus strand	586229
CALU	NM_001219	NP_001210	Coding	chr7:128739291 plus strand	586229
CAMK2B	NM_001220	NP_001211	Coding	chr7:44325631 minus strand	586230
CAMK2B	NM_001293170	NP_001280099	Coding	chr7:44325631 minus strand	586230
CAMK2B	NM_172078	NP_742075	Coding	chr7:44325631 minus strand	586230
CAMK2B	NM_172079	NP_742076	Coding	chr7:44325631 minus strand	586230
CAMK2B	NM_172080	NP_742077	Coding	chr7:44325631 minus strand	586230
CAMK2B	NM_172081	NP_742078	Coding	chr7:44325631 minus strand	586230
CAMK2B	NM_172082	NP_742079	Coding	chr7:44325631 minus strand	586230
CAMK2B	NM_172083	NP_742080	Coding	chr7:44325631 minus strand	586230

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CAMK2B	NM_172084	NP_742081	Coding	chr7:44325631 minus strand	586230
CAPZA2	NM_006136	NP_006127	Coding	chr7:116862508 plus strand	586231
CARD11	NM_032415	NP_115791	Coding	chr7:3043945 minus strand	586232
CASD1	NM_022900	NP_075051	Coding	chr7:94509857 plus strand	586233
CASP2	NM_001224	NP_001215	Coding	chr7:143289587 plus strand	586234
CASP2	NM_032982	NP_116764	Coding	chr7:143288214 plus strand	586235
CASP2	NM_032983	NP_116765	Coding	chr7:143288214 plus strand	586235
CAV1	NM_001172895	NP_001166366	Coding	chr7:116525008 plus strand	586236
CAV1	NM_001172896	NP_001166367	Coding	chr7:116526292 plus strand	586237
CAV1	NM_001172897	NP_001166368	Coding	chr7:116526357 plus strand	586238
CAV1	NM_001753	NP_001744	Coding	chr7:116524784 plus strand	586239
CAV2	NM_001206747	NP_001193676	Coding	chr7:116499600 plus strand	586240
CAV2	NM_001206748	NP_001193677	Coding	chr7:116500043 plus strand	586241
CAV2	NM_001233	NP_001224	Coding	chr7:116499600 plus strand	586240
CAV2	NM_198212	NP_937855	Coding	chr7:116499600 plus strand	586240
CBLL1	NM_001284291	NP_001271220	Coding	chr7:107743696 plus strand	586242
CBLL1	NM_024814	NP_079090	Coding	chr7:107743696 plus strand	586242
CBX3	NM_007276	NP_009207	Coding	chr7:26201210 plus strand	586243
CBX3	NM_016587	NP_057671	Coding	chr7:26201703 plus strand	586244
CCDC126	NM_138771	NP_620126	Coding	chr7:23597378 plus strand	586245
CCDC129	NM_001257967	NP_001244896	Coding	chr7:31514070 plus strand	586246
CCDC129	NM_001257968	NP_001244897	Coding	chr7:31529674 plus strand	586247
CCDC129	NM_194300	NP_919276	Coding	chr7:31553001 plus strand	586248
CCDC132	NM_001257998	NP_001244927	Coding	chr7:93232339 plus strand	586249
CCDC132	NM_017667	NP_060137	Coding	chr7:93232339 plus strand	586249
CCDC132	NM_024553	NP_078829	Coding	chr7:93232339 plus strand	586249
CCDC136	NM_001201372	NP_001188301	Coding	chr7:128791409 plus strand	586250
CCDC136	NM_022742	NP_073579	Coding	chr7:128791995 plus strand	586251
CCDC146	NM_020879	NP_065930	Coding	chr7:77122616 plus strand	586252
CCDC71L	NM_175884	NP_787080	Coding	chr7:106661188 minus strand	586253
CCL24	NM_002991	NP_002982	Coding	chr7:75813715 minus strand	586254

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CCL26	NM_006072	NP_006063	Coding	chr7:75789746 minus strand	586255
CCM2	NM_001029835	NP_001025006	Coding	chr7:45027633 plus strand	586256
CCM2	NM_001167934	NP_001161406	Coding	chr7:45000187 plus strand	586257
CCM2	NM_001167935	NP_001161407	Coding	chr7:45000187 plus strand	586257
CCM2	NM_031443	NP_113631	Coding	chr7:45000187 plus strand	586257
CCT6A	NM_001009186	NP_001009186	Coding	chr7:56051684 plus strand	586258
CCT6A	NM_001762	NP_001753	Coding	chr7:56051684 plus strand	586258
CCZ1	NM_015622	NP_056437	Coding	chr7:5898709 plus strand	586259
CCZ1B	NM_198097	NP_932765	Coding	chr7:6826295 minus strand	586260
CD36	NM_000072	NP_000063	Coding	chr7:80638515 plus strand	586261
CD36	NM_001001547	NP_001001547	Coding	chr7:80602187 plus strand	586262
CD36	NM_001001548	NP_001001548	Coding	chr7:80638515 plus strand	586261
CD36	NM_001127443	NP_001120915	Coding	chr7:80646328 plus strand	586263
CD36	NM_001127444	NP_001120916	Coding	chr7:80646445 plus strand	586264
CD36	NM_001289908	NP_001276837	Coding	chr7:80646652 plus strand	586265
CD36	NM_001289909	NP_001276838	Coding	chr7:80646091 plus strand	586266
CD36	NM_001289911	NP_001276840	Coding	chr7:80602206 plus strand	586267
CDCA7L	NM_001127370	NP_001120842	Coding	chr7:21945924 minus strand	586268
CDCA7L	NM_001127371	NP_001120843	Coding	chr7:21945924 minus strand	586268
CDCA7L	NM_018719	NP_061189	Coding	chr7:21945924 minus strand	586268
CDHR3	NM_001301161	NP_001288090	Coding	chr7:105963210 plus strand	586269
CDHR3	NM_152750	NP_689963	Coding	chr7:105963210 plus strand	586269
CDK13	NM_003718	NP_003709	Coding	chr7:39950359 plus strand	586270
CDK13	NM_031267	NP_112557	Coding	chr7:39950359 plus strand	586270
CDK14	NM_001287135	NP_001274064	Coding	chr7:90596361 plus strand	586271
CDK14	NM_001287136	NP_001274065	Coding	chr7:90709815 plus strand	586272
CDK14	NM_001287137	NP_001274066	Coding	chr7:90709815 plus strand	586272
CDK14	NM_012395	NP_036527	Coding	chr7:90709397 plus strand	586273
CDK5	NM_001164410	NP_001157882	Coding	chr7:151057965 minus strand	586274
CDK5	NM_004935	NP_004926	Coding	chr7:151057965 minus strand	586274
CDK6	NM_001145306	NP_001138778	Coding	chr7:92836627 minus strand	586275
CDK6	NM_001259	NP_001250	Coding	chr7:92833917 minus strand	586276
CEP41	NM_001257158	NP_001244087	Coding	chr7:130441210 minus strand	586277
CEP41	NM_001257159	NP_001244088	Coding	chr7:130441210 minus strand	586277
CEP41	NM_001257160	NP_001244089	Coding	chr7:130441210 minus strand	586277

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CEP41	NM_018718	NP_061188	Coding	chr7:130441210 minus strand	586277
CFAP69	NM_001039706	NP_001034795	Coding	chr7:90245173 plus strand	586278
CFAP69	NM_001160138	NP_001153610	Coding	chr7:90245173 plus strand	586278
CFTR	NM_000492	NP_000483	Coding	chr7:117479962 plus strand	586279
CHCHD2	NM_016139	NP_057223	Coding	chr7:56106494 minus strand	586280
CHCHD3	NM_017812	NP_060282	Coding	chr7:133082068 minus strand	586281
CHN2	NM_001039936	NP_001035025	Coding	chr7:29479711 plus strand	586282
CHN2	NM_001293069	NP_001279998	Coding	chr7:29146546 plus strand	586283
CHN2	NM_001293070	NP_001279999	Coding	chr7:29194504 plus strand	586284
CHN2	NM_001293071	NP_001280000	Coding	chr7:29194504 plus strand	586284
CHN2	NM_001293072	NP_001280001	Coding	chr7:29197740 plus strand	586285
CHN2	NM_001293073	NP_001280002	Coding	chr7:29479711 plus strand	586282
CHN2	NM_001293075	NP_001280004	Coding	chr7:29479711 plus strand	586282
CHN2	NM_001293076	NP_001280005	Coding	chr7:29479711 plus strand	586282
CHN2	NM_001293077	NP_001280006	Coding	chr7:29479711 plus strand	586282
CHN2	NM_001293078	NP_001280007	Coding	chr7:29479711 plus strand	586282
CHN2	NM_001293079	NP_001280008	Coding	chr7:29479711 plus strand	586282
CHN2	NM_001293080	NP_001280009	Coding	chr7:29479711 plus strand	586282
CHN2	NM_001293081	NP_001280010	Coding	chr7:29483815 plus strand	586286
CHN2	NM_004067	NP_004058	Coding	chr7:29194504 plus strand	586284
CHPF2	NM_001284295	NP_001271224	Coding	chr7:151232488 plus strand	586287
CHPF2	NM_019015	NP_061888	Coding	chr7:151232488 plus strand	586287
CHRM2	NM_000739	NP_000730	Coding	chr7:136869084 plus strand	586288
CHRM2	NM_001006626	NP_001006627	Coding	chr7:136869121 plus strand	586289
CHRM2	NM_001006627	NP_001006628	Coding	chr7:136868651 plus strand	586290
CHRM2	NM_001006628	NP_001006629	Coding	chr7:136869245 plus strand	586291
CHRM2	NM_001006629	NP_001006630	Coding	chr7:136869236 plus strand	586292
CHRM2	NM_001006630	NP_001006631	Coding	chr7:136868651 plus strand	586290
CHRM2	NM_001006631	NP_001006632	Coding	chr7:136869084 plus strand	586288
CHRM2	NM_001006632	NP_001006633	Coding	chr7:136869084 plus strand	586288
CHST12	NM_001243794	NP_001230723	Coding	chr7:2403559 plus strand	586293
CHST12	NM_001243795	NP_001230724	Coding	chr7:2403559 plus strand	586293
CHST12	NM_018641	NP_061111	Coding	chr7:2403559 plus strand	586293
CLCN1	NM_000083	NP_000074	Coding	chr7:143316125 plus strand	586294

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CLDN12	NM_001185072	NP_001172001	Coding	chr7:90403333 plus strand	586295
CLDN12	NM_001185073	NP_001172002	Coding	chr7:90403333 plus strand	586295
CLDN12	NM_012129	NP_036261	Coding	chr7:90403333 plus strand	586295
CLDN15	NM_001185080	NP_001172009	Coding	chr7:101238820 minus strand	586296
CLDN15	NM_014343	NP_055158	Coding	chr7:101237946 minus strand	586297
CLDN3	NM_001306	NP_001297	Coding	chr7:73770270 minus strand	586298
CLDN4	NM_001305	NP_001296	Coding	chr7:73830862 plus strand	586299
CLEC2L	NM_001080511	NP_001073980	Coding	chr7:139523927 plus strand	586300
CLEC5A	NM_001301167	NP_001288096	Coding	chr7:141947007 minus strand	586301
CLEC5A	NM_013252	NP_037384	Coding	chr7:141946983 minus strand	586302
CLIP2	NM_003388	NP_003379	Coding	chr7:74289474 plus strand	586303
CLIP2	NM_032421	NP_115797	Coding	chr7:74289474 plus strand	586303
CNOT4	NM_001008225	NP_001008226	Coding	chr7:135510127 minus strand	586304
CNOT4	NM_001190847	NP_001177776	Coding	chr7:135510127 minus strand	586304
CNOT4	NM_001190848	NP_001177777	Coding	chr7:135510127 minus strand	586304
CNOT4	NM_001190849	NP_001177778	Coding	chr7:135510127 minus strand	586304
CNOT4	NM_001190850	NP_001177779	Coding	chr7:135510127 minus strand	586304
CNOT4	NM_013316	NP_037448	Coding	chr7:135510127 minus strand	586304
CNPY1	NM_001103176	NP_001096646	Coding	chr7:155533844 minus strand	586305
CNPY4	NM_152755	NP_689968	Coding	chr7:100119641 plus strand	586306
CNTNAP2	NM_014141	NP_054860	Coding	chr7:146116360 plus strand	586307
COA1	NM_018224	NP_060694	Coding	chr7:43729541 minus strand	586308
COBL	NM_001287436	NP_001274365	Coding	chr7:51316818 minus strand	586309
COBL	NM_001287438	NP_001274367	Coding	chr7:51316818 minus strand	586309
COBL	NM_015198	NP_056013	Coding	chr7:51316818 minus strand	586309
COG5	NM_001161520	NP_001154992	Coding	chr7:107564514 minus strand	586310
COG5	NM_006348	NP_006339	Coding	chr7:107564514 minus strand	586310
COG5	NM_181733	NP_859422	Coding	chr7:107564514 minus strand	586310
COL1A2	NM_000089	NP_000080	Coding	chr7:94394560 plus strand	586311
COL26A1	NM_001278563	NP_001265492	Coding	chr7:101362819 plus	586312

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				strand	
COL26A1	NM_133457	NP_597714	Coding	chr7:101362819 plus strand	586312
COL28A1	NM_001037763	NP_001032852	Coding	chr7:7535829 minus strand	586313
COPG2	NM_001290033	NP_001276962	Coding	chr7:130668758 minus strand	586314
COPG2	NM_012133	NP_036265	Coding	chr7:130668758 minus strand	586314
COPS6	NM_006833	NP_006824	Coding	chr7:100088959 plus strand	586315
COX19	NM_001031617	NP_001026788	Coding	chr7:975599 minus strand	586316
CPA1	NM_001868	NP_001859	Coding	chr7:130380448 plus strand	586317
CPA2	NM_001869	NP_001860	Coding	chr7:130266862 plus strand	586318
CPA4	NM_001163446	NP_001156918	Coding	chr7:130293133 plus strand	586319
CPA4	NM_016352	NP_057436	Coding	chr7:130293133 plus strand	586319
CPA5	NM_001127441	NP_001120913	Coding	chr7:130344789 plus strand	586320
CPA5	NM_001127442	NP_001120914	Coding	chr7:130344789 plus strand	586320
CPA5	NM_080385	NP_525124	Coding	chr7:130344789 plus strand	586320
CPED1	NM_001105533	NP_001099003	Coding	chr7:120989390 plus strand	586321
CPED1	NM_024913	NP_079189	Coding	chr7:120988696 plus strand	586322
CPSF4	NM_001081559	NP_001075028	Coding	chr7:99438939 plus strand	586323
CPSF4	NM_006693	NP_006684	Coding	chr7:99438939 plus strand	586323
CPVL	NM_019029	NP_061902	Coding	chr7:29146537 minus strand	586324
CPVL	NM_031311	NP_112601	Coding	chr7:29146537 minus strand	586324
CRCP	NM_001040647	NP_001035737	Coding	chr7:66114817 plus strand	586325
CRCP	NM_001040648	NP_001035738	Coding	chr7:66114817 plus strand	586325
CRCP	NM_001142414	NP_001135886	Coding	chr7:66114817 plus strand	586325
CRCP	NM_014478	NP_055293	Coding	chr7:66114817 plus strand	586325
CREB3L2	NM_001253775	NP_001240704	Coding	chr7:138002101 minus strand	586326
CREB3L2	NM_194071	NP_919047	Coding	chr7:138002101 minus strand	586326
CREB5	NM_001011666	NP_001011666	Coding	chr7:28686103 plus strand	586327
CREB5	NM_004904	NP_004895	Coding	chr7:28435614 plus strand	586328
CREB5	NM_182898	NP_878901	Coding	chr7:28412524 plus strand	586329
CREB5	NM_182899	NP_878902	Coding	chr7:28299320 plus strand	586330
CRHR2	NM_001202475	NP_001189404	Coding	chr7:30700103 minus strand	586331
CRHR2	NM_001202481	NP_001189410	Coding	chr7:30700103 minus	586331

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				strand	
CRHR2	NM_001202482	NP_001189411	Coding	chr7:30682525 minus strand	586332
CRHR2	NM_001202483	NP_001189412	Coding	chr7:30682525 minus strand	586332
CRHR2	NM_001883	NP_001874	Coding	chr7:30682525 minus strand	586332
CROT	NM_001143935	NP_001137407	Coding	chr7:87345634 plus strand	586333
CROT	NM_001243745	NP_001230674	Coding	chr7:87345634 plus strand	586333
CROT	NM_021151	NP_066974	Coding	chr7:87345634 plus strand	586333
CRYGN	NM_144727	NP_653328	Coding	chr7:151440013 minus strand	586334
CTAGE15	NM_001008747	NP_001008747	Coding	chr7:143571800 plus strand	586335
CTAGE4	NM_198495	NP_940897	Coding	chr7:144183454 plus strand	586336
CTAGE4	NM_198495	NP_940897	Coding	chr7:144269299 minus strand	586337
CTAGE6	NM_178561	NP_848656	Coding	chr7:143757750 minus strand	586338
CTAGE8	NM_001278507	NP_001265436	Coding	chr7:144182969 plus strand	586339
CTAGE8	NM_001278507	NP_001265436	Coding	chr7:144269784 minus strand	586340
CTTNBP2	NM_033427	NP_219499	Coding	chr7:117873507 minus strand	586341
CUL1	NM_003592	NP_003583	Coding	chr7:148698840 plus strand	586342
CUX1	NM_001202543	NP_001189472	Coding	chr7:101815903 plus strand	586343
CUX1	NM_001202544	NP_001189473	Coding	chr7:101815903 plus strand	586343
CUX1	NM_001202545	NP_001189474	Coding	chr7:101815903 plus strand	586343
CUX1	NM_001202546	NP_001189475	Coding	chr7:101816007 plus strand	586344
CUX1	NM_001913	NP_001904	Coding	chr7:101815903 plus strand	586343
CUX1	NM_181500	NP_852477	Coding	chr7:101815903 plus strand	586343
CUX1	NM_181552	NP_853530	Coding	chr7:101817601 plus strand	586345
CYCS	NM_018947	NP_061820	Coding	chr7:25125361 minus strand	586346
CYP2W1	NM_017781	NP_060251	Coding	chr7:983198 plus strand	586347
CYP3A4	NM_001202855	NP_001189784	Coding	chr7:99784188 minus strand	586348
CYP3A4	NM_017460	NP_059488	Coding	chr7:99784188 minus strand	586348
CYP3A43	NM_001278921	NP_001265850	Coding	chr7:99828012 plus strand	586349
CYP3A43	NM_022820	NP_073731	Coding	chr7:99828012 plus strand	586349
CYP3A43	NM_057095	NP_476436	Coding	chr7:99828012 plus strand	586349

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CYP3A43	NM_057096	NP_476437	Coding	chr7:99828012 plus strand	586349
CYP3A5	NM_000777	NP_000768	Coding	chr7:99680026 minus strand	586350
CYP3A5	NM_001190484	NP_001177413	Coding	chr7:99680026 minus strand	586350
CYP3A5	NM_001291829	NP_001278758	Coding	chr7:99680026 minus strand	586350
CYP3A5	NM_001291830	NP_001278759	Coding	chr7:99680026 minus strand	586350
CYP3A7	NM_000765	NP_000756	Coding	chr7:99735200 minus strand	586351
CYP3A7-CYP3AP1	NM_001256497	NP_001243426	Coding	chr7:99735200 minus strand	586352
CYP51A1	NM_000786	NP_000777	Coding	chr7:92134526 minus strand	586353
CYP51A1	NM_001146152	NP_001139624	Coding	chr7:92134745 minus strand	586354
CYTH3	NM_004227	NP_004218	Coding	chr7:6272611 minus strand	586355
DAGLB	NM_001142936	NP_001136408	Coding	chr7:6448012 minus strand	586356
DAGLB	NM_139179	NP_631918	Coding	chr7:6448012 minus strand	586356
DBF4	NM_006716	NP_006707	Coding	chr7:87876228 plus strand	586357
DBNL	NM_001014436	NP_001014436	Coding	chr7:44044639 plus strand	586358
DBNL	NM_001122956	NP_001116428	Coding	chr7:44044639 plus strand	586358
DBNL	NM_001284313	NP_001271242	Coding	chr7:44044639 plus strand	586358
DBNL	NM_001284315	NP_001271244	Coding	chr7:44044639 plus strand	586358
DBNL	NM_014063	NP_054782	Coding	chr7:44044639 plus strand	586358
DDC	NM_000790	NP_000781	Coding	chr7:50561071 minus strand	586359
DDC	NM_001082971	NP_001076440	Coding	chr7:50565457 minus strand	586360
DDC	NM_001242886	NP_001229815	Coding	chr7:50561071 minus strand	586359
DDC	NM_001242887	NP_001229816	Coding	chr7:50561071 minus strand	586359
DDC	NM_001242888	NP_001229817	Coding	chr7:50561071 minus strand	586359
DDC	NM_001242889	NP_001229818	Coding	chr7:50561071 minus strand	586359
DDC	NM_001242890	NP_001229819	Coding	chr7:50561071 minus strand	586359
DDX56	NM_001257189	NP_001244118	Coding	chr7:44574538 minus strand	586361
DDX56	NM_019082	NP_061955	Coding	chr7:44574538 minus strand	586361
DENND2A	NM_015689	NP_056504	Coding	chr7:140602542 minus strand	586362
DFNA5	NM_001127453	NP_001120925	Coding	chr7:24757464 minus strand	586363
DFNA5	NM_001127454	NP_001120926	Coding	chr7:24758020 minus strand	586364
DFNA5	NM_004403	NP_004394	Coding	chr7:24758020 minus	586364

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				strand	
DGKB	NM_004080	NP_004071	Coding	chr7:14841450 minus strand	586365
DGKB	NM_145695	NP_663733	Coding	chr7:14841450 minus strand	586365
DGKI	NM_004717	NP_004708	Coding	chr7:137846863 minus strand	586366
DLD	NM_000108	NP_000099	Coding	chr7:107891106 plus strand	586367
DLD	NM_001289750	NP_001276679	Coding	chr7:107891106 plus strand	586367
DLD	NM_001289751	NP_001276680	Coding	chr7:107891106 plus strand	586367
DLD	NM_001289752	NP_001276681	Coding	chr7:107891106 plus strand	586367
DLX5	NM_005221	NP_005212	Coding	chr7:97024831 minus strand	586368
DLX6	NM_005222	NP_005213	Coding	chr7:97005977 plus strand	586369
DMTF1	NM_001142326	NP_001135798	Coding	chr7:87152360 plus strand	586370
DMTF1	NM_001142327	NP_001135799	Coding	chr7:87152360 plus strand	586370
DMTF1	NM_021145	NP_066968	Coding	chr7:87152553 plus strand	586371
DNAAF5	NM_017802	NP_060272	Coding	chr7:726700 plus strand	586372
DNAH11	NM_001277115	NP_001264044	Coding	chr7:21543214 plus strand	586373
DNAJB6	NM_005494	NP_005485	Coding	chr7:157337015 plus strand	586374
DNAJB6	NM_058246	NP_490647	Coding	chr7:157337016 plus strand	586375
DNAJB9	NM_012328	NP_036460	Coding	chr7:108569744 plus strand	586376
DNAJC2	NM_001129887	NP_001123359	Coding	chr7:103344873 minus strand	586377
DNAJC2	NM_014377	NP_055192	Coding	chr7:103344873 minus strand	586377
DNAJC30	NM_032317	NP_115693	Coding	chr7:73683451 minus strand	586378
DOCK4	NM_014705	NP_055520	Coding	chr7:112206407 minus strand	586379
DPP6	NM_001039350	NP_001034439	Coding	chr7:153887096 plus strand	586380
DPP6	NM_001290252	NP_001277181	Coding	chr7:154305211 plus strand	586381
DPP6	NM_001290253	NP_001277182	Coding	chr7:154052417 plus strand	586382
DPP6	NM_001936	NP_001927	Coding	chr7:154305211 plus strand	586381
DPP6	NM_130797	NP_570629	Coding	chr7:154052417 plus strand	586382
DPY19L1	NM_015283	NP_056098	Coding	chr7:35038041 minus strand	586383
DTX2	NM_001102594	NP_001096064	Coding	chr7:76461654 plus strand	586384
DTX2	NM_001102595	NP_001096065	Coding	chr7:76461654 plus strand	586384

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DTX2	NM_001102596	NP_001096066	Coding	chr7:76480509 plus strand	586385
DTX2	NM_020892	NP_065943	Coding	chr7:76461654 plus strand	586384
DUS4L	NM_001270419	NP_001257348	Coding	chr7:107563956 plus strand	586386
DUS4L	NM_181581	NP_853559	Coding	chr7:107563956 plus strand	586386
DYNC1I1	NM_001135556	NP_001129028	Coding	chr7:95772505 plus strand	586387
DYNC1I1	NM_001135557	NP_001129029	Coding	chr7:95772505 plus strand	586387
DYNC1I1	NM_001278421	NP_001265350	Coding	chr7:95772505 plus strand	586387
DYNC1I1	NM_001278422	NP_001265351	Coding	chr7:95772505 plus strand	586387
DYNC1I1	NM_004411	NP_004402	Coding	chr7:95772505 plus strand	586387
EEPD1	NM_030636	NP_085139	Coding	chr7:36153226 plus strand	586388
EGFR	NM_005228	NP_005219	Coding	chr7:55019031 plus strand	586389
EGFR	NM_201282	NP_958439	Coding	chr7:55019031 plus strand	586389
EGFR	NM_201283	NP_958440	Coding	chr7:55019031 plus strand	586389
EGFR	NM_201284	NP_958441	Coding	chr7:55019031 plus strand	586389
EIF2AK1	NM_001134335	NP_001127807	Coding	chr7:6059229 minus strand	586390
EIF2AK1	NM_014413	NP_055228	Coding	chr7:6059229 minus strand	586390
EIF3B	NM_001037283	NP_001032360	Coding	chr7:2354838 plus strand	586391
EIF3B	NM_003751	NP_003742	Coding	chr7:2354838 plus strand	586391
EIF4H	NM_022170	NP_071496	Coding	chr7:74174375 plus strand	586392
EIF4H	NM_031992	NP_114381	Coding	chr7:74174375 plus strand	586392
ELFN1	NM_001128636	NP_001122108	Coding	chr7:1709161 plus strand	586393
ELMO1	NM_001039459	NP_001034548	Coding	chr7:36985112 minus strand	586394
ELMO1	NM_001206480	NP_001193409	Coding	chr7:37449326 minus strand	586395
ELMO1	NM_001206482	NP_001193411	Coding	chr7:37353668 minus strand	586396
ELMO1	NM_014800	NP_055615	Coding	chr7:37448952 minus strand	586397
ELMO1	NM_130442	NP_569709	Coding	chr7:36986266 minus strand	586398
ELN	NM_000501	NP_000492	Coding	chr7:74027788 plus strand	586399
ELN	NM_001081752	NP_001075221	Coding	chr7:74027788 plus strand	586399
ELN	NM_001081753	NP_001075222	Coding	chr7:74027788 plus strand	586399
ELN	NM_001081754	NP_001075223	Coding	chr7:74027788 plus strand	586399
ELN	NM_001081755	NP_001075224	Coding	chr7:74027788 plus strand	586399
ELN	NM_001278912	NP_001265841	Coding	chr7:74027788 plus strand	586399
ELN	NM_001278913	NP_001265842	Coding	chr7:74027788 plus strand	586399
ELN	NM_001278914	NP_001265843	Coding	chr7:74027788 plus strand	586399
ELN	NM_001278915	NP_001265844	Coding	chr7:74027788 plus strand	586399
ELN	NM_001278916	NP_001265845	Coding	chr7:74027788 plus strand	586399
ELN	NM_001278917	NP_001265846	Coding	chr7:74027788 plus strand	586399
ELN	NM_001278918	NP_001265847	Coding	chr7:74027788 plus strand	586399

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ELN	NM_001278939	NP_001265868	Coding	chr7:74027788 plus strand	586399
EN2	NM_001427	NP_001418	Coding	chr7:155458128 plus strand	586400
EPDR1	NM_001242946	NP_001229875	Coding	chr7:37920560 plus strand	586401
EPDR1	NM_001242948	NP_001229877	Coding	chr7:37921318 plus strand	586402
EPDR1	NM_017549	NP_060019	Coding	chr7:37920560 plus strand	586401
EPHA1	NM_005232	NP_005223	Coding	chr7:143408892 minus strand	586403
EPHB4	NM_004444	NP_004435	Coding	chr7:100827521 minus strand	586404
EPHB6	NM_001280794	NP_001267723	Coding	chr7:142855013 plus strand	586405
EPHB6	NM_001280795	NP_001267724	Coding	chr7:142862755 plus strand	586406
EPHB6	NM_004445	NP_004436	Coding	chr7:142862755 plus strand	586406
EPO	NM_000799	NP_000790	Coding	chr7:100720799 plus strand	586407
ERV3-1	NM_001007253	NP_001007254	Coding	chr7:65006746 minus strand	586408
ERVW-1	NM_001130925	NP_001124397	Coding	chr7:92477915 minus strand	586409
ERVW-1	NM_014590	NP_055405	Coding	chr7:92471424 minus strand	586410
ESYT2	NM_020728	NP_065779	Coding	chr7:158829628 minus strand	586411
ETV1	NM_001163147	NP_001156619	Coding	chr7:13990017 minus strand	586412
ETV1	NM_001163148	NP_001156620	Coding	chr7:13991425 minus strand	586413
ETV1	NM_001163149	NP_001156621	Coding	chr7:13991240 minus strand	586414
ETV1	NM_001163150	NP_001156622	Coding	chr7:13986514 minus strand	586415
ETV1	NM_001163151	NP_001156623	Coding	chr7:13986514 minus strand	586415
ETV1	NM_001163152	NP_001156624	Coding	chr7:13986514 minus strand	586415
ETV1	NM_004956	NP_004947	Coding	chr7:13990017 minus strand	586412
EVX1	NM_001989	NP_001980	Coding	chr7:27242544 plus strand	586416
EXOC4	NM_001037126	NP_001032203	Coding	chr7:133253066 plus strand	586417
EXOC4	NM_021807	NP_068579	Coding	chr7:133253066 plus strand	586417
EZH2	NM_001203247	NP_001190176	Coding	chr7:148884349 minus strand	586418
EZH2	NM_001203248	NP_001190177	Coding	chr7:148884349 minus strand	586418
EZH2	NM_001203249	NP_001190178	Coding	chr7:148883509 minus strand	586419
EZH2	NM_004456	NP_004447	Coding	chr7:148884349 minus strand	586418

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EZH2	NM_152998	NP_694543	Coding	chr7:148884349 minus strand	586418
FAM115A	NM_001206938	NP_001193867	Coding	chr7:143902185 minus strand	586420
FAM115A	NM_001206941	NP_001193870	Coding	chr7:143885373 minus strand	586421
FAM115A	NM_014719	NP_055534	Coding	chr7:143902079 minus strand	586422
FAM115C	NM_001130025	NP_001123497	Coding	chr7:143620951 plus strand	586423
FAM115C	NM_001130026	NP_001123498	Coding	chr7:143715845 plus strand	586424
FAM115C	NM_173678	NP_775949	Coding	chr7:143621448 plus strand	586425
FAM126A	NM_032581	NP_115970	Coding	chr7:23014151 minus strand	586426
FAM131B	NM_001031690	NP_001026860	Coding	chr7:143362747 minus strand	586427
FAM131B	NM_001278297	NP_001265226	Coding	chr7:143362747 minus strand	586427
FAM131B	NM_014690	NP_055505	Coding	chr7:143362080 minus strand	586428
FAM133B	NM_001040057	NP_001035146	Coding	chr7:92590394 minus strand	586429
FAM133B	NM_001288584	NP_001275513	Coding	chr7:92590070 minus strand	586430
FAM133B	NM_152789	NP_690002	Coding	chr7:92590394 minus strand	586429
FAM180A	NM_205855	NP_995327	Coding	chr7:135748846 minus strand	586431
FAM185A	NM_001145268	NP_001138740	Coding	chr7:102748951 plus strand	586432
FAM185A	NM_001145269	NP_001138741	Coding	chr7:102748951 plus strand	586432
FAM188B	NM_032222	NP_115598	Coding	chr7:30771416 plus strand	586433
FAM200A	NM_145111	NP_659802	Coding	chr7:99552134 minus strand	586434
FAM20C	NM_020223	NP_064608	Coding	chr7:192968 plus strand	586435
FAM220A	NM_001037163	NP_001032240	Coding	chr7:6348959 minus strand	586436
FAM221A	NM_001127364	NP_001120836	Coding	chr7:23680113 plus strand	586437
FAM221A	NM_001127365	NP_001120837	Coding	chr7:23680113 plus strand	586437
FAM221A	NM_001300932	NP_001287861	Coding	chr7:23680113 plus strand	586437
FAM221A	NM_199136	NP_954587	Coding	chr7:23680113 plus strand	586437
FAM3C	NM_001040020	NP_001035109	Coding	chr7:121396368 minus strand	586438
FAM3C	NM_014888	NP_055703	Coding	chr7:121396368 minus strand	586438
FAM71F1	NM_001282788	NP_001269717	Coding	chr7:128715341 plus strand	586439
FAM71F1	NM_001282789	NP_001269718	Coding	chr7:128709060 plus strand	586440
FAM71F1	NM_032599	NP_115988	Coding	chr7:128715341 plus	586439

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				strand	
FAM71F2	NM_001012454	NP_001012457	Coding	chr7:128672265 plus strand	586441
FAM71F2	NM_001128926	NP_001122398	Coding	chr7:128672265 plus strand	586441
FAM71F2	NM_001290254	NP_001277183	Coding	chr7:128672283 plus strand	586442
FAM71F2	NM_001290255	NP_001277184	Coding	chr7:128672265 plus strand	586441
FASTK	NM_001258461	NP_001245390	Coding	chr7:151080883 minus strand	586443
FASTK	NM_006712	NP_006703	Coding	chr7:151080883 minus strand	586443
FASTK	NM_033015	NP_148936	Coding	chr7:151080883 minus strand	586443
FBXL13	NM_001111038	NP_001104508	Coding	chr7:103074841 minus strand	586444
FBXL13	NM_001287150	NP_001274079	Coding	chr7:103074841 minus strand	586444
FBXL13	NM_145032	NP_659469	Coding	chr7:103074568 minus strand	586445
FBXL18	NM_024963	NP_079239	Coding	chr7:5513768 minus strand	586446
FBXO24	NM_001163499	NP_001156971	Coding	chr7:100589572 plus strand	586447
FBXO24	NM_012172	NP_036304	Coding	chr7:100589572 plus strand	586447
FBXO24	NM_033506	NP_277041	Coding	chr7:100586332 plus strand	586448
FERD3L	NM_152898	NP_690862	Coding	chr7:19145421 minus strand	586449
FEZF1	NM_001024613	NP_001019784	Coding	chr7:122304511 minus strand	586450
FEZF1	NM_001160264	NP_001153736	Coding	chr7:122304511 minus strand	586450
FGL2	NM_006682	NP_006673	Coding	chr7:77199833 minus strand	586451
FIGNL1	NM_001042762	NP_001036227	Coding	chr7:50450390 minus strand	586452
FIGNL1	NM_001287492	NP_001274421	Coding	chr7:50450390 minus strand	586452
FIGNL1	NM_001287493	NP_001274422	Coding	chr7:50450390 minus strand	586452
FIGNL1	NM_001287494	NP_001274423	Coding	chr7:50450390 minus strand	586452
FIGNL1	NM_001287495	NP_001274424	Coding	chr7:50450390 minus strand	586452
FIGNL1	NM_001287496	NP_001274425	Coding	chr7:50450390 minus strand	586452
FIGNL1	NM_022116	NP_071399	Coding	chr7:50450390 minus strand	586452
FIS1	NM_016068	NP_057152	Coding	chr7:101245090 minus strand	586453
FKBP14	NM_017946	NP_060416	Coding	chr7:30026801 minus strand	586454

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FKBP6	NM_001135211	NP_001128683	Coding	chr7:73328151 plus strand	586455
FKBP6	NM_001281304	NP_001268233	Coding	chr7:73328231 plus strand	586456
FKBP6	NM_003602	NP_003593	Coding	chr7:73328231 plus strand	586456
FKBP9	NM_001284341	NP_001271270	Coding	chr7:32957403 plus strand	586457
FKBP9	NM_001284343	NP_001271272	Coding	chr7:32979473 plus strand	586458
FKBP9	NM_007270	NP_009201	Coding	chr7:32957403 plus strand	586457
FLNC	NM_001127487	NP_001120959	Coding	chr7:128830428 plus strand	586459
FLNC	NM_001458	NP_001449	Coding	chr7:128830428 plus strand	586459
FOXK1	NM_001037165	NP_001032242	Coding	chr7:4682298 plus strand	586460
FOXP2	NM_001172766	NP_001166237	Coding	chr7:114414996 plus strand	586461
FOXP2	NM_001172767	NP_001166238	Coding	chr7:114426501 plus strand	586462
FOXP2	NM_014491	NP_055306	Coding	chr7:114414996 plus strand	586461
FOXP2	NM_148898	NP_683696	Coding	chr7:114414996 plus strand	586461
FOXP2	NM_148899	NP_683697	Coding	chr7:114426501 plus strand	586462
FOXP2	NM_148900	NP_683698	Coding	chr7:114414996 plus strand	586461
FSCN1	NM_003088	NP_003079	Coding	chr7:5592804 plus strand	586463
FSCN3	NM_020369	NP_065102	Coding	chr7:127593634 plus strand	586464
FTSJ2	NM_013393	NP_037525	Coding	chr7:2242198 minus strand	586465
FZD1	NM_003505	NP_003496	Coding	chr7:91264467 plus strand	586466
FZD9	NM_003508	NP_003499	Coding	chr7:73433778 plus strand	586467
GAL3ST4	NM_024637	NP_078913	Coding	chr7:100168750 minus strand	586468
GALNT11	NM_022087	NP_071370	Coding	chr7:152025692 plus strand	586469
GALNTL5	NM_145292	NP_660335	Coding	chr7:151956378 plus strand	586470
GARS	NM_002047	NP_002038	Coding	chr7:30594564 plus strand	586471
GATAD1	NM_021167	NP_066990	Coding	chr7:92447447 plus strand	586472
GATS	NM_178831	NP_849153	Coding	chr7:100272232 minus strand	586473
GATSL2	NM_001145064	NP_001138536	Coding	chr7:74964817 plus strand	586474
GBAS	NM_001202469	NP_001189398	Coding	chr7:55964576 plus strand	586475
GBAS	NM_001483	NP_001474	Coding	chr7:55964576 plus strand	586475
GBX1	NM_001098834	NP_001092304	Coding	chr7:151167548 minus strand	586476
GCC1	NM_024523	NP_078799	Coding	chr7:127585600 minus strand	586477
GCK	NM_000162	NP_000153	Coding	chr7:44189423 minus strand	586478
GCK	NM_033507	NP_277042	Coding	chr7:44159288 minus strand	586479

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GCK	NM_033508	NP_277043	Coding	chr7:44159288 minus strand	586479
GET4	NM_015949	NP_057033	Coding	chr7:876553 plus strand	586480
GGCT	NM_001199815	NP_001186744	Coding	chr7:30504841 minus strand	586481
GGCT	NM_001199816	NP_001186745	Coding	chr7:30504841 minus strand	586481
GGCT	NM_001199817	NP_001186746	Coding	chr7:30504841 minus strand	586481
GGCT	NM_024051	NP_076956	Coding	chr7:30504841 minus strand	586481
GHRHR	NM_000823	NP_000814	Coding	chr7:30964020 plus strand	586482
GIGYF1	NM_022574	NP_072096	Coding	chr7:100689247 minus strand	586483
GIMAP1	NM_130759	NP_570115	Coding	chr7:150716556 plus strand	586484
GIMAP1-GIMAP5	NM_001199577	NP_001186506	Coding	chr7:150716556 plus strand	586485
GIMAP2	NM_015660	NP_056475	Coding	chr7:150685705 plus strand	586486
GIMAP4	NM_018326	NP_060796	Coding	chr7:150567369 plus strand	586487
GIMAP5	NM_018384	NP_060854	Coding	chr7:150737347 plus strand	586488
GIMAP6	NM_001244071	NP_001231000	Coding	chr7:150632648 minus strand	586489
GIMAP6	NM_001244072	NP_001231001	Coding	chr7:150632648 minus strand	586489
GIMAP6	NM_024711	NP_078987	Coding	chr7:150632648 minus strand	586489
GIMAP7	NM_153236	NP_694968	Coding	chr7:150514856 plus strand	586490
GIMAP8	NM_175571	NP_783161	Coding	chr7:150450873 plus strand	586491
GJC3	NM_181538	NP_853516	Coding	chr7:99929620 minus strand	586492
GLCCI1	NM_138426	NP_612435	Coding	chr7:7968742 plus strand	586493
GLI3	NM_000168	NP_000159	Coding	chr7:42237019 minus strand	586494
GNA12	NM_001282440	NP_001269369	Coding	chr7:2763140 minus strand	586495
GNA12	NM_001282441	NP_001269370	Coding	chr7:2815259 minus strand	586496
GNA12	NM_001293092	NP_001280021	Coding	chr7:2844325 minus strand	586497
GNA12	NM_007353	NP_031379	Coding	chr7:2844325 minus strand	586497
GNAI1	NM_001256414	NP_001243343	Coding	chr7:80135754 plus strand	586498
GNAI1	NM_002069	NP_002060	Coding	chr7:80134823 plus strand	586499
GNAT3	NM_001102386	NP_001095856	Coding	chr7:80511926 minus strand	586500
GNB2	NM_005273	NP_005264	Coding	chr7:100673739 plus strand	586501
GNG11	NM_004126	NP_004117	Coding	chr7:93921703 plus strand	586502
GNGT1	NM_021955	NP_068774	Coding	chr7:93906507 plus strand	586503

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GPC2	NM_152742	NP_689955	Coding	chr7:100177367 minus strand	586504
GPER1	NM_001039966	NP_001035055	Coding	chr7:1086806 plus strand	586505
GPER1	NM_001098201	NP_001091671	Coding	chr7:1088086 plus strand	586506
GPER1	NM_001505	NP_001496	Coding	chr7:1086806 plus strand	586505
GPNMB	NM_001005340	NP_001005340	Coding	chr7:23246696 plus strand	586507
GPNMB	NM_002510	NP_002501	Coding	chr7:23246696 plus strand	586507
GPR141	NM_181791	NP_861456	Coding	chr7:37740393 plus strand	586508
GPR146	NM_138445	NP_612454	Coding	chr7:1057504 plus strand	586509
GPR22	NM_005295	NP_005286	Coding	chr7:107470056 plus strand	586510
GPR37	NM_005302	NP_005293	Coding	chr7:124766025 minus strand	586511
GPR85	NM_001146265	NP_001139737	Coding	chr7:113087778 minus strand	586512
GPR85	NM_001146266	NP_001139738	Coding	chr7:113086338 minus strand	586513
GPR85	NM_001146267	NP_001139739	Coding	chr7:113086487 minus strand	586514
GPR85	NM_018970	NP_061843	Coding	chr7:113087778 minus strand	586512
GRB10	NM_001001549	NP_001001549	Coding	chr7:50732353 minus strand	586515
GRB10	NM_001001550	NP_001001550	Coding	chr7:50705301 minus strand	586516
GRB10	NM_001001555	NP_001001555	Coding	chr7:50793462 minus strand	586517
GRB10	NM_005311	NP_005302	Coding	chr7:50732353 minus strand	586515
GRID2IP	NM_001145118	NP_001138590	Coding	chr7:6551436 minus strand	586518
GRIFIN	NM_001291784	NP_001278713	Coding	chr7:2476383 minus strand	586519
GRM3	NM_000840	NP_000831	Coding	chr7:86643913 plus strand	586520
GRM8	NM_000845	NP_000836	Coding	chr7:127243515 minus strand	586521
GRM8	NM_001127323	NP_001120795	Coding	chr7:127252374 minus strand	586522
GS1-259H13.2	NM_001195541	NP_001182470	Coding	chr7:99598278 plus strand	586523
GS1-259H13.2	NM_001195542	NP_001182471	Coding	chr7:99598278 plus strand	586523
GS1-259H13.2	NM_001195543	NP_001182472	Coding	chr7:99598278 plus strand	586523
GSAP	NM_017439	NP_059135	Coding	chr7:77416400 minus strand	586524
GSTK1	NM_001143679	NP_001137151	Coding	chr7:143263428 plus strand	586525
GSTK1	NM_001143680	NP_001137152	Coding	chr7:143263428 plus strand	586525
GSTK1	NM_001143681	NP_001137153	Coding	chr7:143263428 plus strand	586525
GSTK1	NM_015917	NP_057001	Coding	chr7:143263428 plus strand	586525
GTF2I	NM_001163636	NP_001157108	Coding	chr7:74657664 plus strand	586526

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GTF2I	NM_001280800	NP_001267729	Coding	chr7:74657664 plus strand	586526
GTF2I	NM_001518	NP_001509	Coding	chr7:74657664 plus strand	586526
GTF2I	NM_032999	NP_127492	Coding	chr7:74657664 plus strand	586526
GTF2I	NM_033000	NP_127493	Coding	chr7:74657664 plus strand	586526
GTF2I	NM_033001	NP_127494	Coding	chr7:74657664 plus strand	586526
GTF2IRD1	NM_001199207	NP_001186136	Coding	chr7:74453789 plus strand	586527
GTF2IRD1	NM_005685	NP_005676	Coding	chr7:74453789 plus strand	586527
GTF2IRD1	NM_016328	NP_057412	Coding	chr7:74453789 plus strand	586527
GTF2IRD2	NM_001281447	NP_001268376	Coding	chr7:74851576 minus strand	586528
GTF2IRD2	NM_173537	NP_775808	Coding	chr7:74851576 minus strand	586528
GTF2IRD2B	NM_001003795	NP_001003795	Coding	chr7:75092555 plus strand	586529
GTPBP10	NM_001042717	NP_001036182	Coding	chr7:90346664 plus strand	586530
GTPBP10	NM_033107	NP_149098	Coding	chr7:90346664 plus strand	586530
GUSB	NM_000181	NP_000172	Coding	chr7:65982314 minus strand	586531
GUSB	NM_001284290	NP_001271219	Coding	chr7:65982314 minus strand	586531
GUSB	NM_001293104	NP_001280033	Coding	chr7:65982314 minus strand	586531
GUSB	NM_001293105	NP_001280034	Coding	chr7:65982314 minus strand	586531
H2AFV	NM_012412	NP_036544	Coding	chr7:44848126 minus strand	586532
H2AFV	NM_138635	NP_619541	Coding	chr7:44848126 minus strand	586532
H2AFV	NM_201436	NP_958844	Coding	chr7:44848126 minus strand	586532
H2AFV	NM_201516	NP_958924	Coding	chr7:44848126 minus strand	586532
H2AFV	NM_201517	NP_958925	Coding	chr7:44848126 minus strand	586532
HBP1	NM_001244262	NP_001231191	Coding	chr7:107168960 plus strand	586533
HBP1	NM_012257	NP_036389	Coding	chr7:107169014 plus strand	586534
HDAC9	NM_001204144	NP_001191073	Coding	chr7:18086948 plus strand	586535
HDAC9	NM_001204145	NP_001191074	Coding	chr7:18495745 plus strand	586536
HDAC9	NM_001204146	NP_001191075	Coding	chr7:18495745 plus strand	586536
HDAC9	NM_001204147	NP_001191076	Coding	chr7:18509276 plus strand	586537
HDAC9	NM_001204148	NP_001191077	Coding	chr7:18509276 plus strand	586537
HDAC9	NM_014707	NP_055522	Coding	chr7:18495745 plus strand	586536
HDAC9	NM_058176	NP_478056	Coding	chr7:18496261 plus strand	586538
HDAC9	NM_178423	NP_848510	Coding	chr7:18495745 plus strand	586536
HDAC9	NM_178425	NP_848512	Coding	chr7:18496261 plus strand	586538
HECW1	NM_001287059	NP_001273988	Coding	chr7:43112598 plus strand	586539
HECW1	NM_015052	NP_055867	Coding	chr7:43112598 plus strand	586539

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HEPACAM2	NM_001039372	NP_001034461	Coding	chr7:93226519 minus strand	586540
HEPACAM2	NM_001288804	NP_001275733	Coding	chr7:93226519 minus strand	586540
HEPACAM2	NM_001288810	NP_001275739	Coding	chr7:93219595 minus strand	586541
HEPACAM2	NM_198151	NP_937794	Coding	chr7:93219595 minus strand	586541
HERPUD2	NM_022373	NP_071768	Coding	chr7:35695162 minus strand	586542
HGF	NM_000601	NP_000592	Coding	chr7:81770136 minus strand	586543
HGF	NM_001010931	NP_001010931	Coding	chr7:81770136 minus strand	586543
HGF	NM_001010932	NP_001010932	Coding	chr7:81770136 minus strand	586543
HGF	NM_001010933	NP_001010933	Coding	chr7:81770136 minus strand	586543
HGF	NM_001010934	NP_001010934	Coding	chr7:81770136 minus strand	586543
HIBADH	NM_152740	NP_689953	Coding	chr7:27663001 minus strand	586544
HILPDA	NM_001098786	NP_001092256	Coding	chr7:128455829 plus strand	586545
HILPDA	NM_013332	NP_037464	Coding	chr7:128455829 plus strand	586545
HIP1	NM_001243198	NP_001230127	Coding	chr7:75738972 minus strand	586546
HIP1	NM_005338	NP_005329	Coding	chr7:75738972 minus strand	586546
HIPK2	NM_001113239	NP_001106710	Coding	chr7:139777894 minus strand	586547
HIPK2	NM_022740	NP_073577	Coding	chr7:139777894 minus strand	586547
HNRNPA2B1	NM_002137	NP_002128	Coding	chr7:26200793 minus strand	586548
HNRNPA2B1	NM_031243	NP_112533	Coding	chr7:26200793 minus strand	586548
HOXA1	NM_005522	NP_005513	Coding	chr7:27096006 minus strand	586549
HOXA1	NM_153620	NP_705873	Coding	chr7:27096006 minus strand	586549
HOXA10	NM_018951	NP_061824	Coding	chr7:27174336 minus strand	586550
HOXA11	NM_005523	NP_005514	Coding	chr7:27185216 minus strand	586551
HOXA13	NM_000522	NP_000513	Coding	chr7:27200106 minus strand	586552
HOXA2	NM_006735	NP_006726	Coding	chr7:27102775 minus strand	586553
HOXA3	NM_030661	NP_109377	Coding	chr7:27119595 minus strand	586554
HOXA3	NM_153631	NP_705895	Coding	chr7:27127020 minus strand	586555

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HOXA4	NM_002141	NP_002132	Coding	chr7:27130780 minus strand	586556
HOXA5	NM_019102	NP_061975	Coding	chr7:27143668 minus strand	586557
HOXA6	NM_024014	NP_076919	Coding	chr7:27147774 minus strand	586558
HOXA7	NM_006896	NP_008827	Coding	chr7:27156677 minus strand	586559
HOXA9	NM_152739	NP_689952	Coding	chr7:27165530 minus strand	586560
HSPB1	NM_001540	NP_001531	Coding	chr7:76302557 plus strand	586561
HTR5A	NM_024012	NP_076917	Coding	chr7:155070323 plus strand	586562
HUS1	NM_004507	NP_004498	Coding	chr7:47979625 minus strand	586563
HYAL4	NM_012269	NP_036401	Coding	chr7:123845168 plus strand	586564
ICA1	NM_001136020	NP_001129492	Coding	chr7:8262281 minus strand	586565
ICA1	NM_001276478	NP_001263407	Coding	chr7:8262612 minus strand	586566
ICA1	NM_004968	NP_004959	Coding	chr7:8262612 minus strand	586566
ICA1	NM_022307	NP_071682	Coding	chr7:8262052 minus strand	586567
IFRD1	NM_001007245	NP_001007246	Coding	chr7:112423143 plus strand	586568
IFRD1	NM_001197079	NP_001184008	Coding	chr7:112452057 plus strand	586569
IFRD1	NM_001197080	NP_001184009	Coding	chr7:112423143 plus strand	586568
IFRD1	NM_001550	NP_001541	Coding	chr7:112450427 plus strand	586570
IFT22	NM_001130820	NP_001124292	Coding	chr7:101321823 minus strand	586571
IFT22	NM_001130821	NP_001124293	Coding	chr7:101321823 minus strand	586571
IFT22	NM_001130822	NP_001124294	Coding	chr7:101321823 minus strand	586571
IFT22	NM_001287525	NP_001274454	Coding	chr7:101321823 minus strand	586571
IFT22	NM_001287526	NP_001274455	Coding	chr7:101321823 minus strand	586571
IFT22	NM_022777	NP_073614	Coding	chr7:101321823 minus strand	586571
IGF2BP3	NM_006547	NP_006538	Coding	chr7:23470376 minus strand	586572
IGFBP1	NM_000596	NP_000587	Coding	chr7:45888359 plus strand	586573
IGFBP3	NM_000598	NP_000589	Coding	chr7:45921272 minus strand	586574
IGFBP3	NM_001013398	NP_001013416	Coding	chr7:45921272 minus strand	586574
IKZF1	NM_001220765	NP_001207694	Coding	chr7:50304668 plus strand	586575
IKZF1	NM_001220767	NP_001207696	Coding	chr7:50319047 plus strand	586576
IKZF1	NM_001220768	NP_001207697	Coding	chr7:50319047 plus strand	586576

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IKZF1	NM_001220770	NP_001207699	Coding	chr7:50319047 plus strand	586576
IKZF1	NM_001220771	NP_001207700	Coding	chr7:50319047 plus strand	586576
IKZF1	NM_001291837	NP_001278766	Coding	chr7:50308679 plus strand	586577
IKZF1	NM_001291838	NP_001278767	Coding	chr7:50308679 plus strand	586577
IKZF1	NM_001291839	NP_001278768	Coding	chr7:50304082 plus strand	586578
IKZF1	NM_001291840	NP_001278769	Coding	chr7:50319047 plus strand	586576
IKZF1	NM_001291841	NP_001278770	Coding	chr7:50319047 plus strand	586576
IKZF1	NM_001291842	NP_001278771	Coding	chr7:50319047 plus strand	586576
IKZF1	NM_001291843	NP_001278772	Coding	chr7:50319047 plus strand	586576
IKZF1	NM_001291844	NP_001278773	Coding	chr7:50319047 plus strand	586576
IKZF1	NM_001291845	NP_001278774	Coding	chr7:50304668 plus strand	586575
IKZF1	NM_001291846	NP_001278775	Coding	chr7:50304668 plus strand	586575
IKZF1	NM_001291847	NP_001278776	Coding	chr7:50308679 plus strand	586577
IKZF1	NM_006060	NP_006051	Coding	chr7:50304668 plus strand	586575
IL6	NM_000600	NP_000591	Coding	chr7:22727146 plus strand	586579
IMMP2L	NM_001244606	NP_001231535	Coding	chr7:111562517 minus strand	586580
IMMP2L	NM_032549	NP_115938	Coding	chr7:111562291 minus strand	586581
IMPDH1	NM_000883	NP_000874	Coding	chr7:128409982 minus strand	586582
IMPDH1	NM_001102605	NP_001096075	Coding	chr7:128409982 minus strand	586582
IMPDH1	NM_001142573	NP_001136045	Coding	chr7:128405970 minus strand	586583
IMPDH1	NM_001142574	NP_001136046	Coding	chr7:128405970 minus strand	586583
IMPDH1	NM_001142575	NP_001136047	Coding	chr7:128405970 minus strand	586583
IMPDH1	NM_001142576	NP_001136048	Coding	chr7:128409982 minus strand	586582
IMPDH1	NM_183243	NP_899066	Coding	chr7:128409982 minus strand	586582
ING3	NM_019071	NP_061944	Coding	chr7:120950762 plus strand	586584
ING3	NM_198267	NP_938008	Coding	chr7:120950762 plus strand	586584
INHBA	NM_002192	NP_002183	Coding	chr7:41703108 minus strand	586585
INMT	NM_001199219	NP_001186148	Coding	chr7:30752134 plus strand	586586
INMT	NM_006774	NP_006765	Coding	chr7:30752134 plus strand	586586
INSIG1	NM_005542	NP_005533	Coding	chr7:155297775 plus strand	586587
INSIG1	NM_198336	NP_938150	Coding	chr7:155297775 plus strand	586587
INSIG1	NM_198337	NP_938151	Coding	chr7:155297775 plus strand	586587
INTS1	NM_001080453	NP_001073922	Coding	chr7:1504382 minus strand	586588
IQCE	NM_001287499	NP_001274428	Coding	chr7:2558971 plus strand	586589

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IQCE	NM_001287500	NP_001274429	Coding	chr7:2558971 plus strand	586589
IQCE	NM_001287501	NP_001274430	Coding	chr7:2558971 plus strand	586589
IQCE	NM_001287502	NP_001274431	Coding	chr7:2558971 plus strand	586589
IQCE	NM_152558	NP_689771	Coding	chr7:2558971 plus strand	586589
IQUB	NM_001282855	NP_001269784	Coding	chr7:123532948 minus strand	586590
IQUB	NM_178827	NP_849149	Coding	chr7:123534664 minus strand	586591
IRF5	NM_001098627	NP_001092097	Coding	chr7:128940669 plus strand	586592
IRF5	NM_001098629	NP_001092099	Coding	chr7:128937936 plus strand	586593
IRF5	NM_001098630	NP_001092100	Coding	chr7:128937936 plus strand	586593
IRF5	NM_001242452	NP_001229381	Coding	chr7:128937936 plus strand	586593
IRF5	NM_032643	NP_116032	Coding	chr7:128938216 plus strand	586594
ISPD	NM_001101417	NP_001094887	Coding	chr7:16421322 minus strand	586595
ISPD	NM_001101426	NP_001094896	Coding	chr7:16421322 minus strand	586595
ITGB8	NM_002214	NP_002205	Coding	chr7:20331101 plus strand	586596
JAZF1	NM_175061	NP_778231	Coding	chr7:28180818 minus strand	586597
KBTBD2	NM_015483	NP_056298	Coding	chr7:32891856 minus strand	586598
KCND2	NM_012281	NP_036413	Coding	chr7:120273667 plus strand	586599
KCNH2	NM_000238	NP_000229	Coding	chr7:150978314 minus strand	586600
KCNH2	NM_001204798	NP_001191727	Coding	chr7:150955829 minus strand	586601
KCNH2	NM_172056	NP_742053	Coding	chr7:150978314 minus strand	586600
KCNH2	NM_172057	NP_742054	Coding	chr7:150955829 minus strand	586601
KCP	NM_001135914	NP_001129386	Coding	chr7:128910719 minus strand	586602
KCP	NM_199349	NP_955381	Coding	chr7:128910719 minus strand	586602
KCTD7	NM_001167961	NP_001161433	Coding	chr7:66628880 plus strand	586603
KCTD7	NM_153033	NP_694578	Coding	chr7:66628880 plus strand	586603
KDELR2	NM_001100603	NP_001094073	Coding	chr7:6484218 minus strand	586604
KDELR2	NM_006854	NP_006845	Coding	chr7:6484218 minus strand	586604
KDM7A	NM_030647	NP_085150	Coding	chr7:140176941 minus strand	586605
KEL	NM_000420	NP_000411	Coding	chr7:142962416 minus strand	586606
KIAA0895	NM_001100425	NP_001093895	Coding	chr7:36390125 minus strand	586607

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KIAA0895	NM_001199706	NP_001186635	Coding	chr7:36367233 minus strand	586608
KIAA0895	NM_001199707	NP_001186636	Coding	chr7:36367173 minus strand	586609
KIAA0895	NM_001199708	NP_001186637	Coding	chr7:36367269 minus strand	586610
KIAA0895	NM_001300956	NP_001287885	Coding	chr7:36367269 minus strand	586610
KIAA0895	NM_015314	NP_056129	Coding	chr7:36367241 minus strand	586611
KIAA1147	NM_001080392	NP_001073861	Coding	chr7:141702153 minus strand	586612
KIAA1324L	NM_001142749	NP_001136221	Coding	chr7:87059698 minus strand	586613
KIAA1324L	NM_001291990	NP_001278919	Coding	chr7:87040234 minus strand	586614
KIAA1324L	NM_001291991	NP_001278920	Coding	chr7:87040234 minus strand	586614
KIAA1324L	NM_152748	NP_689961	Coding	chr7:86965975 minus strand	586615
KIAA1549	NM_001164665	NP_001158137	Coding	chr7:138981318 minus strand	586616
KIAA1549	NM_020910	NP_065961	Coding	chr7:138981318 minus strand	586616
KLF14	NM_138693	NP_619638	Coding	chr7:130734033 minus strand	586617
KLHDC10	NM_014997	NP_055812	Coding	chr7:130070508 plus strand	586618
KLHL7	NM_001031710	NP_001026880	Coding	chr7:23105733 plus strand	586619
KLHL7	NM_001172428	NP_001165899	Coding	chr7:23105733 plus strand	586619
KLHL7	NM_018846	NP_061334	Coding	chr7:23106297 plus strand	586620
KLRG2	NM_198508	NP_940910	Coding	chr7:139483711 minus strand	586621
KMT2C	NM_170606	NP_733751	Coding	chr7:152436005 minus strand	586622
KMT2E	NM_018682	NP_061152	Coding	chr7:105014189 plus strand	586623
KMT2E	NM_182931	NP_891847	Coding	chr7:105014189 plus strand	586623
KPNA7	NM_001145715	NP_001139187	Coding	chr7:99207466 minus strand	586624
KRBA1	NM_001290187	NP_001277116	Coding	chr7:149715010 plus strand	586625
KRBA1	NM_032534	NP_115923	Coding	chr7:149715010 plus strand	586625
KRIT1	NM_001013406	NP_001013424	Coding	chr7:92245914 minus strand	586626
KRIT1	NM_004912	NP_004903	Coding	chr7:92245898 minus strand	586627
KRIT1	NM_194454	NP_919436	Coding	chr7:92245914 minus strand	586626
KRIT1	NM_194455	NP_919437	Coding	chr7:92246100 minus strand	586628

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KRIT1	NM_194456	NP_919438	Coding	chr7:92246100 minus strand	586628
LAMB1	NM_002291	NP_002282	Coding	chr7:108003359 minus strand	586629
LAMB4	NM_007356	NP_031382	Coding	chr7:108130356 minus strand	586630
LAMTOR4	NM_001008395	NP_001008396	Coding	chr7:100148906 plus strand	586631
LANCL2	NM_018697	NP_061167	Coding	chr7:55365447 plus strand	586632
LAT2	NM_014146	NP_054865	Coding	chr7:74209756 plus strand	586633
LAT2	NM_032463	NP_115852	Coding	chr7:74209756 plus strand	586633
LAT2	NM_032464	NP_115853	Coding	chr7:74209756 plus strand	586633
LEP	NM_000230	NP_000221	Coding	chr7:128241277 plus strand	586634
LFNG	NM_001040167	NP_001035257	Coding	chr7:2519844 plus strand	586635
LFNG	NM_001040168	NP_001035258	Coding	chr7:2519844 plus strand	586635
LFNG	NM_001166355	NP_001159827	Coding	chr7:2512528 plus strand	586636
LFNG	NM_002304	NP_002295	Coding	chr7:2517862 plus strand	586637
LHFPL3	NM_199000	NP_945351	Coding	chr7:104328655 plus strand	586638
LIMK1	NM_001204426	NP_001191355	Coding	chr7:74093155 plus strand	586639
LIMK1	NM_002314	NP_002305	Coding	chr7:74083776 plus strand	586640
LMBR1	NM_022458	NP_071903	Coding	chr7:156893208 minus strand	586641
LMOD2	NM_207163	NP_997046	Coding	chr7:123655806 plus strand	586642
LMTK2	NM_014916	NP_055731	Coding	chr7:98106884 plus strand	586643
LOC100130705	NM_001195150	NP_001182079	Coding	chr7:128866409 plus strand	586644
LOC100130880	NM_001243523	NP_001230452	Coding	chr7:137953347 plus strand	586645
LOC100289561	NM_001242713	NP_001229642	Coding	chr7:102363860 plus strand	586646
LOC154872	NM_001024603	NP_001019774	Coding	chr7:124790810 minus strand	586647
LOC389602	NM_001291913	NP_001278842	Coding	chr7:155962631 plus strand	586648
LOC93432	NM_001293626	NP_001280555	Coding	chr7:142111748 plus strand	586649
LRCH4	NM_001289934	NP_001276863	Coding	chr7:100586188 minus strand	586650
LRCH4	NM_002319	NP_002310	Coding	chr7:100586188 minus strand	586650
LRGUK	NM_144648	NP_653249	Coding	chr7:134127351 plus strand	586651
LRRC17	NM_001031692	NP_001026862	Coding	chr7:102912896 plus strand	586652
LRRC17	NM_005824	NP_005815	Coding	chr7:102912896 plus strand	586652
LRRC4	NM_022143	NP_071426	Coding	chr7:128030949 minus strand	586653

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LRRC61	NM_001142928	NP_001136400	Coding	chr7:150323206 plus strand	586654
LRRC61	NM_023942	NP_076431	Coding	chr7:150323206 plus strand	586654
LRRC72	NM_001195280	NP_001182209	Coding	chr7:16526879 plus strand	586655
LRRD1	NM_001161528	NP_001155000	Coding	chr7:92165276 minus strand	586656
LRRN3	NM_001099658	NP_001093128	Coding	chr7:111091005 plus strand	586657
LRRN3	NM_001099660	NP_001093130	Coding	chr7:111091005 plus strand	586657
LRRN3	NM_018334	NP_060804	Coding	chr7:111091005 plus strand	586657
LRWD1	NM_152892	NP_690852	Coding	chr7:102464942 plus strand	586658
LSM5	NM_001130710	NP_001124182	Coding	chr7:32495258 minus strand	586659
LSM5	NM_001139499	NP_001132971	Coding	chr7:32495258 minus strand	586659
LSM5	NM_012322	NP_036454	Coding	chr7:32490411 minus strand	586660
LSM8	NM_016200	NP_057284	Coding	chr7:118184031 plus strand	586661
LSMEM1	NM_001134468	NP_001127940	Coding	chr7:112480852 plus strand	586662
LSMEM1	NM_182597	NP_872403	Coding	chr7:112481010 plus strand	586663
LUC7L2	NM_001244585	NP_001231514	Coding	chr7:139340358 plus strand	586664
LUC7L2	NM_001270643	NP_001257572	Coding	chr7:139359845 plus strand	586665
LUC7L2	NM_016019	NP_057103	Coding	chr7:139359845 plus strand	586665
LUZP6	NM_001128619	NP_001122091	Coding	chr7:135977456 minus strand	586666
MACC1	NM_182762	NP_877439	Coding	chr7:20217390 minus strand	586667
MAD1L1	NM_001013836	NP_001013858	Coding	chr7:2232948 minus strand	586668
MAD1L1	NM_001013837	NP_001013859	Coding	chr7:2232948 minus strand	586668
MAD1L1	NM_003550	NP_003541	Coding	chr7:2232948 minus strand	586668
MAFK	NM_002360	NP_002351	Coding	chr7:1530731 plus strand	586669
MAGI2	NM_001301128	NP_001288057	Coding	chr7:79453574 minus strand	586670
MAGI2	NM_012301	NP_036433	Coding	chr7:79453574 minus strand	586670
MALSU1	NM_138446	NP_612455	Coding	chr7:23299320 plus strand	586671
MBLAC1	NM_203397	NP_981942	Coding	chr7:100126696 plus strand	586672
MCM7	NM_001278595	NP_001265524	Coding	chr7:100101940 minus strand	586673
MCM7	NM_005916	NP_005907	Coding	chr7:100101940 minus strand	586673

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MCM7	NM_182776	NP_877577	Coding	chr7:100100780 minus strand	586674
MDFIC	NM_001166345	NP_001159817	Coding	chr7:114922153 plus strand	586675
MDFIC	NM_001166346	NP_001159818	Coding	chr7:114922153 plus strand	586675
MDFIC	NM_199072	NP_951038	Coding	chr7:114922153 plus strand	586675
MDH2	NM_001282403	NP_001269332	Coding	chr7:76048018 plus strand	586676
MDH2	NM_001282404	NP_001269333	Coding	chr7:76048018 plus strand	586676
MDH2	NM_005918	NP_005909	Coding	chr7:76048018 plus strand	586676
MEOX2	NM_005924	NP_005915	Coding	chr7:15686683 minus strand	586677
MEPCE	NM_001194990	NP_001181919	Coding	chr7:100428789 plus strand	586678
MEPCE	NM_001194991	NP_001181920	Coding	chr7:100428789 plus strand	586678
MEPCE	NM_001194992	NP_001181921	Coding	chr7:100428789 plus strand	586678
MEPCE	NM_019606	NP_062552	Coding	chr7:100429630 plus strand	586679
MEST	NM_001253900	NP_001240829	Coding	chr7:130492057 plus strand	586680
MEST	NM_001253901	NP_001240830	Coding	chr7:130486174 plus strand	586681
MEST	NM_001253902	NP_001240831	Coding	chr7:130486346 plus strand	586682
MEST	NM_002402	NP_002393	Coding	chr7:130492057 plus strand	586680
MEST	NM_177524	NP_803490	Coding	chr7:130486174 plus strand	586681
MEST	NM_177525	NP_803491	Coding	chr7:130491328 plus strand	586683
MET	NM_000245	NP_000236	Coding	chr7:116672404 plus strand	586684
MET	NM_001127500	NP_001120972	Coding	chr7:116672404 plus strand	586684
METTL2B	NM_018396	NP_060866	Coding	chr7:128476728 plus strand	586685
MGAM	NM_004668	NP_004659	Coding	chr7:141995878 plus strand	586686
MICALL2	NM_182924	NP_891554	Coding	chr7:1459473 minus strand	586687
MIOS	NM_019005	NP_061878	Coding	chr7:7566984 plus strand	586688
MKLN1	NM_001145354	NP_001138826	Coding	chr7:131110095 plus strand	586689
MKLN1	NM_013255	NP_037387	Coding	chr7:131327835 plus strand	586690
MKRN1	NM_001145125	NP_001138597	Coding	chr7:140479569 minus strand	586691
MKRN1	NM_001291663	NP_001278592	Coding	chr7:140479569 minus strand	586691
MKRN1	NM_013446	NP_038474	Coding	chr7:140479569 minus strand	586691

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MLXIPL	NM_032951	NP_116569	Coding	chr7:73624540 minus strand	586692
MLXIPL	NM_032952	NP_116570	Coding	chr7:73624540 minus strand	586692
MLXIPL	NM_032953	NP_116571	Coding	chr7:73624540 minus strand	586692
MLXIPL	NM_032954	NP_116572	Coding	chr7:73624540 minus strand	586692
MMD2	NM_001100600	NP_001094070	Coding	chr7:4959213 minus strand	586693
MMD2	NM_001270375	NP_001257304	Coding	chr7:4959213 minus strand	586693
MMD2	NM_198403	NP_940685	Coding	chr7:4959213 minus strand	586693
MNX1	NM_001165255	NP_001158727	Coding	chr7:157009435 minus strand	586694
MNX1	NM_005515	NP_005506	Coding	chr7:157010653 minus strand	586695
MOGAT3	NM_001287147	NP_001274076	Coding	chr7:101201021 minus strand	586696
MOGAT3	NM_178176	NP_835470	Coding	chr7:101201021 minus strand	586696
MOSPD3	NM_001040097	NP_001035186	Coding	chr7:100612101 plus strand	586697
MOSPD3	NM_001040098	NP_001035187	Coding	chr7:100612429 plus strand	586698
MOSPD3	NM_001040099	NP_001035188	Coding	chr7:100612490 plus strand	586699
MOSPD3	NM_023948	NP_076438	Coding	chr7:100612490 plus strand	586699
MPLKIP	NM_138701	NP_619646	Coding	chr7:40134652 minus strand	586700
MPP6	NM_016447	NP_057531	Coding	chr7:24573465 plus strand	586701
MRPL32	NM_031903	NP_114109	Coding	chr7:42932339 plus strand	586702
MRPS17	NM_015969	NP_057053	Coding	chr7:55951917 plus strand	586703
MRPS24	NM_032014	NP_114403	Coding	chr7:43869546 minus strand	586704
MRPS33	NM_016071	NP_057155	Coding	chr7:141014679 minus strand	586705
MRPS33	NM_053035	NP_444263	Coding	chr7:141014981 minus strand	586706
MTERF1	NM_001301134	NP_001288063	Coding	chr7:91880720 minus strand	586707
MTERF1	NM_001301135	NP_001288064	Coding	chr7:91880720 minus strand	586707
MTERF1	NM_006980	NP_008911	Coding	chr7:91880720 minus strand	586707
MTPN	NM_145808	NP_665807	Coding	chr7:135977456 minus strand	586708
MTRNR2L6	NM_001190487	NP_001177416	Coding	chr7:142666298 plus strand	586709
MTURN	NM_152793	NP_690006	Coding	chr7:30134935 plus strand	586710
MUC12	NM_001164462	NP_001157934	Coding	chr7:100969622 plus strand	586711
MUC17	NM_001040105	NP_001035194	Coding	chr7:101020082 plus	586712

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				strand	
MUC3A	NM_005960	NP_005951	Coding	chr7:100949419 plus strand	586713
MYL10	NM_138403	NP_612412	Coding	chr7:101629296 minus strand	586714
MYL7	NM_021223	NP_067046	Coding	chr7:44141317 minus strand	586715
MYO1G	NM_033054	NP_149043	Coding	chr7:44979105 minus strand	586716
NACAD	NM_001146334	NP_001139806	Coding	chr7:45088894 minus strand	586717
NAMPT	NM_005746	NP_005737	Coding	chr7:106285192 minus strand	586718
NAPEPLD	NM_001122838	NP_001116310	Coding	chr7:103149122 minus strand	586719
NAPEPLD	NM_198990	NP_945341	Coding	chr7:103149122 minus strand	586719
NAT16	NM_198571	NP_940973	Coding	chr7:101180276 minus strand	586720
NCAPG2	NM_001281932	NP_001268861	Coding	chr7:158704831 minus strand	586721
NCAPG2	NM_001281933	NP_001268862	Coding	chr7:158704831 minus strand	586721
NCAPG2	NM_017760	NP_060230	Coding	chr7:158704831 minus strand	586721
NCF1	NM_000265	NP_000256	Coding	chr7:74773961 plus strand	586722
NDUFA4	NM_002489	NP_002480	Coding	chr7:10940186 minus strand	586723
NDUFA5	NM_001282419	NP_001269348	Coding	chr7:123557904 minus strand	586724
NDUFA5	NM_001282420	NP_001269349	Coding	chr7:123557771 minus strand	586725
NDUFA5	NM_001282421	NP_001269350	Coding	chr7:123557771 minus strand	586725
NDUFA5	NM_001282422	NP_001269351	Coding	chr7:123557904 minus strand	586724
NDUFA5	NM_001291304	NP_001278233	Coding	chr7:123601651 minus strand	586726
NDUFA5	NM_005000	NP_004991	Coding	chr7:123557904 minus strand	586724
NDUFB2	NM_004546	NP_004537	Coding	chr7:140696680 plus strand	586727
NEUROD6	NM_022728	NP_073565	Coding	chr7:31340924 minus strand	586728
NFE2L3	NM_004289	NP_004280	Coding	chr7:26152226 plus strand	586729
NFE4	NM_001085386	NP_001078855	Coding	chr7:102973436 plus strand	586730
NME8	NM_016616	NP_057700	Coding	chr7:37848596 plus strand	586731
NOBOX	NM_001080413	NP_001073882	Coding	chr7:144410227 minus strand	586732
NOD1	NM_006092	NP_006083	Coding	chr7:30478777 minus strand	586733
NOM1	NM_138400	NP_612409	Coding	chr7:156949722 plus	586734

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				strand	
NOS3	NM_000603	NP_000594	Coding	chr7:150991055 plus strand	586735
NOS3	NM_001160109	NP_001153581	Coding	chr7:150993803 plus strand	586736
NOS3	NM_001160110	NP_001153582	Coding	chr7:150993803 plus strand	586736
NOS3	NM_001160111	NP_001153583	Coding	chr7:150993803 plus strand	586736
NPC1L1	NM_001101648	NP_001095118	Coding	chr7:44541315 minus strand	586737
NPC1L1	NM_001300967	NP_001287896	Coding	chr7:44541315 minus strand	586737
NPC1L1	NM_013389	NP_037521	Coding	chr7:44541315 minus strand	586737
NPSR1	NM_001300933	NP_001287862	Coding	chr7:34658238 plus strand	586738
NPSR1	NM_001300934	NP_001287863	Coding	chr7:34658238 plus strand	586738
NPSR1	NM_001300935	NP_001287864	Coding	chr7:34658238 plus strand	586738
NPSR1	NM_207172	NP_997055	Coding	chr7:34658284 plus strand	586739
NPSR1	NM_207173	NP_997056	Coding	chr7:34658284 plus strand	586739
NPTX2	NM_002523	NP_002514	Coding	chr7:98617284 plus strand	586740
NPVF	NM_022150	NP_071433	Coding	chr7:25228486 minus strand	586741
NPY	NM_000905	NP_000896	Coding	chr7:24284187 plus strand	586742
NRCAM	NM_001037132	NP_001032209	Coding	chr7:108240170 minus strand	586743
NRCAM	NM_001193582	NP_001180511	Coding	chr7:108456397 minus strand	586744
NRCAM	NM_001193583	NP_001180512	Coding	chr7:108456397 minus strand	586744
NRCAM	NM_001193584	NP_001180513	Coding	chr7:108456397 minus strand	586744
NRCAM	NM_005010	NP_005001	Coding	chr7:108456397 minus strand	586744
NRF1	NM_001040110	NP_001035199	Coding	chr7:129630077 plus strand	586745
NRF1	NM_001293163	NP_001280092	Coding	chr7:129611701 plus strand	586746
NRF1	NM_001293164	NP_001280093	Coding	chr7:129611701 plus strand	586746
NRF1	NM_005011	NP_005002	Coding	chr7:129611701 plus strand	586746
NSUN5	NM_001168347	NP_001161819	Coding	chr7:73308867 minus strand	586747
NSUN5	NM_001168348	NP_001161820	Coding	chr7:73308867 minus strand	586747
NSUN5	NM_018044	NP_060514	Coding	chr7:73308867 minus strand	586747
NSUN5	NM_148956	NP_683759	Coding	chr7:73308867 minus strand	586747
NT5C3A	NM_001002009	NP_001002009	Coding	chr7:33062797 minus strand	586748

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NT5C3A	NM_001002010	NP_001002010	Coding	chr7:33062797 minus strand	586748
NT5C3A	NM_001166118	NP_001159590	Coding	chr7:33041165 minus strand	586749
NT5C3A	NM_016489	NP_057573	Coding	chr7:33041165 minus strand	586749
NUB1	NM_001243351	NP_001230280	Coding	chr7:151341760 plus strand	586750
NUB1	NM_016118	NP_057202	Coding	chr7:151341760 plus strand	586750
NUDCD3	NM_015332	NP_056147	Coding	chr7:44490786 minus strand	586751
NUDT1	NM_002452	NP_002443	Coding	chr7:2242221 plus strand	586752
NUDT1	NM_198948	NP_945186	Coding	chr7:2242221 plus strand	586752
NUDT1	NM_198949	NP_945187	Coding	chr7:2242221 plus strand	586752
NUDT1	NM_198950	NP_945188	Coding	chr7:2242260 plus strand	586753
NUDT1	NM_198952	NP_945190	Coding	chr7:2242260 plus strand	586753
NUDT1	NM_198953	NP_945191	Coding	chr7:2242904 plus strand	586754
NUDT1	NM_198954	NP_945192	Coding	chr7:2242904 plus strand	586754
NUP205	NM_015135	NP_055950	Coding	chr7:135557913 plus strand	586755
NUPL2	NM_007342	NP_031368	Coding	chr7:23181826 plus strand	586756
NUPR1L	NM_001145712	NP_001139184	Coding	chr7:56116397 minus strand	586757
NXPH1	NM_152745	NP_689958	Coding	chr7:8433954 plus strand	586758
NYAP1	NM_173564	NP_775835	Coding	chr7:100483926 plus strand	586759
OCM	NM_001097622	NP_001091091	Coding	chr7:5880797 plus strand	586760
OCM2	NM_006188	NP_006179	Coding	chr7:97990104 minus strand	586761
OGDH	NM_001003941	NP_001003941	Coding	chr7:44606521 plus strand	586762
OGDH	NM_001165036	NP_001158508	Coding	chr7:44606521 plus strand	586762
OGDH	NM_002541	NP_002532	Coding	chr7:44606521 plus strand	586762
OPN1SW	NM_001708	NP_001699	Coding	chr7:128775790 minus strand	586763
OR2A1	NM_001005287	NP_001005287	Coding	chr7:144232843 minus strand	586764
OR2A1	NM_001005287	NP_001005287	Coding	chr7:144318124 plus strand	586765
OR2A12	NM_001004135	NP_001004135	Coding	chr7:144095107 plus strand	586766
OR2A14	NM_001001659	NP_001001659	Coding	chr7:144129112 plus strand	586767
OR2A2	NM_001005480	NP_001005480	Coding	chr7:144109582 plus strand	586768
OR2A25	NM_001004488	NP_001004488	Coding	chr7:144074219 plus strand	586769
OR2A42	NM_001001802	NP_001001802	Coding	chr7:144232843 minus strand	586770
OR2A42	NM_001001802	NP_001001802	Coding	chr7:144318124 plus	586771

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				strand	
OR2A5	NM_012365	NP_036497	Coding	chr7:144050401 plus strand	586772
OR2A7	NM_001005328	NP_001005328	Coding	chr7:144259628 minus strand	586773
OR2AE1	NM_001005276	NP_001005276	Coding	chr7:99877033 minus strand	586774
OR2F1	NM_012369	NP_036501	Coding	chr7:143959926 plus strand	586775
OR2F2	NM_001004685	NP_001004685	Coding	chr7:143935232 plus strand	586776
OR6B1	NM_001005281	NP_001005281	Coding	chr7:144003996 plus strand	586777
OR6V1	NM_001001667	NP_001001667	Coding	chr7:143052340 plus strand	586778
OR9A2	NM_001001658	NP_001001658	Coding	chr7:143027132 minus strand	586779
OR9A4	NM_001001656	NP_001001656	Coding	chr7:141918875 plus strand	586780
ORAI2	NM_001126340	NP_001119812	Coding	chr7:102433529 plus strand	586781
ORAI2	NM_001271818	NP_001258747	Coding	chr7:102433529 plus strand	586781
ORAI2	NM_001271819	NP_001258748	Coding	chr7:102433529 plus strand	586781
ORAI2	NM_032831	NP_116220	Coding	chr7:102433529 plus strand	586781
ORC5	NM_002553	NP_002544	Coding	chr7:104208047 minus strand	586782
ORC5	NM_181747	NP_859531	Coding	chr7:104208047 minus strand	586782
OSBPL3	NM_015550	NP_056365	Coding	chr7:24980212 minus strand	586783
OSBPL3	NM_145320	NP_663160	Coding	chr7:24892621 minus strand	586784
OSBPL3	NM_145321	NP_663161	Coding	chr7:24892621 minus strand	586784
OSBPL3	NM_145322	NP_663162	Coding	chr7:24892621 minus strand	586784
PAPOLB	NM_020144	NP_064529	Coding	chr7:4861994 minus strand	586785
PARP12	NM_022750	NP_073587	Coding	chr7:140063721 minus strand	586786
PAX4	NM_006193	NP_006184	Coding	chr7:127615726 minus strand	586787
PAXIP1	NM_007349	NP_031375	Coding	chr7:155002972 minus strand	586788
PCLO	NM_014510	NP_055325	Coding	chr7:83162881 minus strand	586789
PCLO	NM_033026	NP_149015	Coding	chr7:83162881 minus strand	586789
PCOLCE	NM_002593	NP_002584	Coding	chr7:100602258 plus strand	586790
PDAP1	NM_014891	NP_055706	Coding	chr7:99408682 minus strand	586791

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PDE1C	NM_001191056	NP_001177985	Coding	chr7:32070862 minus strand	586792
PDE1C	NM_001191057	NP_001177986	Coding	chr7:32070862 minus strand	586792
PDE1C	NM_001191058	NP_001177987	Coding	chr7:32299404 minus strand	586793
PDE1C	NM_001191059	NP_001177988	Coding	chr7:32071436 minus strand	586794
PDE1C	NM_005020	NP_005011	Coding	chr7:32071433 minus strand	586795
PDGFA	NM_002607	NP_002598	Coding	chr7:519844 minus strand	586796
PDGFA	NM_033023	NP_148983	Coding	chr7:519844 minus strand	586796
PDIA4	NM_004911	NP_004902	Coding	chr7:149028690 minus strand	586797
PDK4	NM_002612	NP_002603	Coding	chr7:95596613 minus strand	586798
PEG10	NM_001040152	NP_001035242	Coding	chr7:94656324 plus strand	586799
PEG10	NM_001172437	NP_001165908	Coding	chr7:94656324 plus strand	586799
PEG10	NM_001172438	NP_001165909	Coding	chr7:94656324 plus strand	586799
PEG10	NM_001184961	NP_001171890	Coding	chr7:94656324 plus strand	586799
PEG10	NM_001184962	NP_001171891	Coding	chr7:94656324 plus strand	586799
PEG10	NM_015068	NP_055883	Coding	chr7:94656324 plus strand	586799
PEX1	NM_000466	NP_000457	Coding	chr7:92528531 minus strand	586800
PEX1	NM_001282677	NP_001269606	Coding	chr7:92528531 minus strand	586800
PEX1	NM_001282678	NP_001269607	Coding	chr7:92528531 minus strand	586800
PGAM2	NM_000290	NP_000281	Coding	chr7:44065587 minus strand	586801
PHF14	NM_014660	NP_055475	Coding	chr7:10973871 plus strand	586802
PHKG1	NM_001258459	NP_001245388	Coding	chr7:56092996 minus strand	586803
PHKG1	NM_001258460	NP_001245389	Coding	chr7:56092996 minus strand	586803
PHKG1	NM_006213	NP_006204	Coding	chr7:56092996 minus strand	586803
PHTF2	NM_001127357	NP_001120829	Coding	chr7:77840129 plus strand	586804
PHTF2	NM_001127358	NP_001120830	Coding	chr7:77798791 plus strand	586805
PHTF2	NM_001127359	NP_001120831	Coding	chr7:77840129 plus strand	586804
PHTF2	NM_001127360	NP_001120832	Coding	chr7:77798791 plus strand	586805
PHTF2	NM_020432	NP_065165	Coding	chr7:77840129 plus strand	586804
PIK3CG	NM_001282426	NP_001269355	Coding	chr7:106865277 plus strand	586806
PIK3CG	NM_001282427	NP_001269356	Coding	chr7:106865277 plus strand	586806
PIK3CG	NM_002649	NP_002640	Coding	chr7:106865478 plus strand	586807
PILRA	NM_013439	NP_038467	Coding	chr7:100373444 plus strand	586808

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PILRA	NM_178272	NP_840056	Coding	chr7:100373444 plus strand	586808
PILRA	NM_178273	NP_840057	Coding	chr7:100373444 plus strand	586808
PILRB	NM_178238	NP_839956	Coding	chr7:100358002 plus strand	586809
PIP	NM_002652	NP_002643	Coding	chr7:143132080 plus strand	586810
PKD1L1	NM_138295	NP_612152	Coding	chr7:47948474 minus strand	586811
PLEKHA8	NM_001197026	NP_001183955	Coding	chr7:30028360 plus strand	586812
PLEKHA8	NM_001197027	NP_001183956	Coding	chr7:30028360 plus strand	586812
PLEKHA8	NM_032639	NP_116028	Coding	chr7:30028360 plus strand	586812
PLOD3	NM_001084	NP_001075	Coding	chr7:101217730 minus strand	586813
PLXNA4	NM_001105543	NP_001099013	Coding	chr7:132576564 minus strand	586814
PLXNA4	NM_020911	NP_065962	Coding	chr7:132576564 minus strand	586814
PLXNA4	NM_181775	NP_861440	Coding	chr7:132648688 minus strand	586815
PMPCB	NM_004279	NP_004270	Coding	chr7:103297425 plus strand	586816
PMS2	NM_000535	NP_000526	Coding	chr7:6009106 minus strand	586817
PNPLA8	NM_001256007	NP_001242936	Coding	chr7:108526318 minus strand	586818
PNPLA8	NM_001256008	NP_001242937	Coding	chr7:108526318 minus strand	586818
PNPLA8	NM_001256009	NP_001242938	Coding	chr7:108526318 minus strand	586818
PNPLA8	NM_001256010	NP_001242939	Coding	chr7:108526318 minus strand	586818
PNPLA8	NM_001256011	NP_001242940	Coding	chr7:108528161 minus strand	586819
PNPLA8	NM_015723	NP_056538	Coding	chr7:108526318 minus strand	586818
PODXL	NM_001018111	NP_001018121	Coding	chr7:131556617 minus strand	586820
PODXL	NM_005397	NP_005388	Coding	chr7:131556617 minus strand	586820
POLD2	NM_001127218	NP_001120690	Coding	chr7:44123570 minus strand	586821
POLD2	NM_001256879	NP_001243808	Coding	chr7:44123508 minus strand	586822
POLD2	NM_006230	NP_006221	Coding	chr7:44123570 minus strand	586821
POLM	NM_001284330	NP_001271259	Coding	chr7:44082540 minus strand	586823
POLM	NM_001284331	NP_001271260	Coding	chr7:44082540 minus strand	586823
POLM	NM_013284	NP_037416	Coding	chr7:44082540 minus strand	586823
POLR2J	NM_006234	NP_006225	Coding	chr7:102478934 minus	586824

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				strand	
POLR2J2	NM_032959	NP_116581	Coding	chr7:102671729 minus strand	586825
POLR2J3	NM_001097615	NP_001091084	Coding	chr7:102572621 minus strand	586826
POM121	NM_001257190	NP_001244119	Coding	chr7:72879334 plus strand	586827
POM121	NM_172020	NP_742017	Coding	chr7:72890626 plus strand	586828
POM121C	NM_001099415	NP_001092885	Coding	chr7:75486288 minus strand	586829
POM121L12	NM_182595	NP_872401	Coding	chr7:53035655 plus strand	586830
POMZP3	NM_012230	NP_036362	Coding	chr7:76627303 minus strand	586831
POMZP3	NM_152992	NP_694537	Coding	chr7:76627303 minus strand	586831
PON1	NM_000446	NP_000437	Coding	chr7:95324572 minus strand	586832
PON2	NM_000305	NP_000296	Coding	chr7:95435072 minus strand	586833
PON2	NM_001018161	NP_001018171	Coding	chr7:95435072 minus strand	586833
PON3	NM_000940	NP_000931	Coding	chr7:95396375 minus strand	586834
POP7	NM_005837	NP_005828	Coding	chr7:100706052 plus strand	586835
POR	NM_000941	NP_000932	Coding	chr7:75915101 plus strand	586836
POT1	NM_001042594	NP_001036059	Coding	chr7:124929983 minus strand	586837
POT1	NM_015450	NP_056265	Coding	chr7:124929983 minus strand	586837
POU6F2	NM_001166018	NP_001159490	Coding	chr7:38978008 plus strand	586838
POU6F2	NM_007252	NP_009183	Coding	chr7:38978008 plus strand	586838
PPIA	NM_001300981	NP_001287910	Coding	chr7:44796635 plus strand	586839
PPIA	NM_021130	NP_066953	Coding	chr7:44796635 plus strand	586839
PPP1R17	NM_001145123	NP_001138595	Coding	chr7:31687016 plus strand	586840
PPP1R17	NM_006658	NP_006649	Coding	chr7:31687016 plus strand	586840
PPP1R35	NM_145030	NP_659467	Coding	chr7:100436471 minus strand	586841
PPP1R3A	NM_002711	NP_002702	Coding	chr7:113919027 minus strand	586842
PPP1R9A	NM_001166160	NP_001159632	Coding	chr7:94907636 plus strand	586843
PPP1R9A	NM_001166161	NP_001159633	Coding	chr7:94909897 plus strand	586844
PPP1R9A	NM_001166162	NP_001159634	Coding	chr7:94909897 plus strand	586844
PPP1R9A	NM_001166163	NP_001159635	Coding	chr7:94909897 plus strand	586844
PPP1R9A	NM_017650	NP_060120	Coding	chr7:94907636 plus strand	586843
PRKAG2	NM_001040633	NP_001035723	Coding	chr7:151814871 minus strand	586845
PRKAG2	NM_016203	NP_057287	Coding	chr7:151877231 minus strand	586846
PRKAG2	NM_024429	NP_077747	Coding	chr7:151632258 minus strand	586847

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PRKAR1B	NM_001164758	NP_001158230	Coding	chr7:727676 minus strand	586848
PRKAR1B	NM_001164759	NP_001158231	Coding	chr7:727676 minus strand	586848
PRKAR1B	NM_001164760	NP_001158232	Coding	chr7:727341 minus strand	586849
PRKAR1B	NM_001164761	NP_001158233	Coding	chr7:713207 minus strand	586850
PRKAR1B	NM_001164762	NP_001158234	Coding	chr7:712940 minus strand	586851
PRKAR1B	NM_002735	NP_002726	Coding	chr7:712524 minus strand	586852
PRKAR2B	NM_002736	NP_002727	Coding	chr7:107044732 plus strand	586853
PRKRIP1	NM_024653	NP_078929	Coding	chr7:102396356 plus strand	586854
PRPS1L1	NM_175886	NP_787082	Coding	chr7:18027863 minus strand	586855
PRR15	NM_175887	NP_787083	Coding	chr7:29563810 plus strand	586856
PRRT4	NM_001114726	NP_001108198	Coding	chr7:128361685 minus strand	586857
PRRT4	NM_001174164	NP_001167635	Coding	chr7:128361685 minus strand	586857
PRSS1	NM_002769	NP_002760	Coding	chr7:142749467 plus strand	586858
PRSS2	NM_002770	NP_002761	Coding	chr7:142770976 plus strand	586859
PRSS37	NM_001008270	NP_001008271	Coding	chr7:141841421 minus strand	586860
PRSS37	NM_001171951	NP_001165422	Coding	chr7:141841421 minus strand	586860
PRSS58	NM_001001317	NP_001001317	Coding	chr7:142258058 minus strand	586861
PSMA2	NM_002787	NP_002778	Coding	chr7:42932206 minus strand	586862
PSMC2	NM_001204453	NP_001191382	Coding	chr7:103347523 plus strand	586863
PSMC2	NM_002803	NP_002794	Coding	chr7:103347523 plus strand	586863
PSMG3	NM_001134340	NP_001127812	Coding	chr7:1570032 minus strand	586864
PSMG3	NM_032302	NP_115678	Coding	chr7:1569993 minus strand	586865
PSPH	NM_004577	NP_004568	Coding	chr7:56051575 minus strand	586866
PTCD1	NM_015545	NP_056360	Coding	chr7:99438839 minus strand	586867
PTN	NM_002825	NP_002816	Coding	chr7:137343800 minus strand	586868
PTPN12	NM_001131008	NP_001124480	Coding	chr7:77538034 plus strand	586869
PTPN12	NM_001131009	NP_001124481	Coding	chr7:77538034 plus strand	586869
PTPN12	NM_002835	NP_002826	Coding	chr7:77537455 plus strand	586870
PTPRN2	NM_002847	NP_002838	Coding	chr7:158587790 minus strand	586871
PTPRN2	NM_130842	NP_570857	Coding	chr7:158587790 minus strand	586871
PTPRN2	NM_130843	NP_570858	Coding	chr7:158587790 minus strand	586871

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PTPRZ1	NM_001206838	NP_001193767	Coding	chr7:121873104 plus strand	586872
PTPRZ1	NM_001206839	NP_001193768	Coding	chr7:121873104 plus strand	586872
PTPRZ1	NM_002851	NP_002842	Coding	chr7:121873104 plus strand	586872
PURB	NM_033224	NP_150093	Coding	chr7:44885385 minus strand	586873
PUS7	NM_019042	NP_061915	Coding	chr7:105522238 minus strand	586874
PVRIG	NM_024070	NP_076975	Coding	chr7:100219247 plus strand	586875
RAB19	NM_001008749	NP_001008749	Coding	chr7:140404042 plus strand	586876
RABGEF1	NM_001287060	NP_001273989	Coding	chr7:66682090 plus strand	586877
RABGEF1	NM_001287061	NP_001273990	Coding	chr7:66755881 plus strand	586878
RABGEF1	NM_001287062	NP_001273991	Coding	chr7:66740655 plus strand	586879
RABGEF1	NM_014504	NP_055319	Coding	chr7:66740655 plus strand	586879
RAC1	NM_006908	NP_008839	Coding	chr7:6374494 plus strand	586880
RAC1	NM_018890	NP_061485	Coding	chr7:6374494 plus strand	586880
RADIL	NM_018059	NP_060529	Coding	chr7:4883704 minus strand	586881
RALA	NM_005402	NP_005393	Coding	chr7:39623552 plus strand	586882
RAMP3	NM_005856	NP_005847	Coding	chr7:45157767 plus strand	586883
RAPGEF5	NM_012294	NP_036426	Coding	chr7:22356914 minus strand	586884
RARRES2	NM_002889	NP_002880	Coding	chr7:150341674 minus strand	586885
RASA4	NM_001079877	NP_001073346	Coding	chr7:102616758 minus strand	586886
RASA4	NM_006989	NP_008920	Coding	chr7:102616758 minus strand	586886
RASA4B	NM_001277335	NP_001264264	Coding	chr7:102517777 minus strand	586887
RASA4B	NM_001277335	NP_001264264	Coding	chr7:102616756 minus strand	586888
RBAK	NM_001204456	NP_001191385	Coding	chr7:5045820 plus strand	586889
RBAK	NM_021163	NP_066986	Coding	chr7:5045921 plus strand	586890
RBAK-RBAKDN	NM_001204513	NP_001191442	Coding	chr7:5045820 plus strand	586891
RBM28	NM_001166135	NP_001159607	Coding	chr7:128343908 minus strand	586892
RBM28	NM_018077	NP_060547	Coding	chr7:128343908 minus strand	586892
RBM33	NM_053043	NP_444271	Coding	chr7:155644508 plus strand	586893
RBM48	NM_032120	NP_115496	Coding	chr7:92528772 plus strand	586894
RELN	NM_005045	NP_005036	Coding	chr7:103989516 minus strand	586895
RELN	NM_173054	NP_774959	Coding	chr7:103989516 minus strand	586895

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REPIN1	NM_001099695	NP_001093165	Coding	chr7:150368789 plus strand	586896
REPIN1	NM_001099696	NP_001093166	Coding	chr7:150368789 plus strand	586896
REPIN1	NM_013400	NP_037532	Coding	chr7:150368789 plus strand	586896
REPIN1	NM_014374	NP_055189	Coding	chr7:150371168 plus strand	586897
RFC2	NM_001278791	NP_001265720	Coding	chr7:74254458 minus strand	586898
RFC2	NM_001278792	NP_001265721	Coding	chr7:74254458 minus strand	586898
RFC2	NM_001278793	NP_001265722	Coding	chr7:74254458 minus strand	586898
RFC2	NM_002914	NP_002905	Coding	chr7:74254458 minus strand	586898
RFC2	NM_181471	NP_852136	Coding	chr7:74254458 minus strand	586898
RHBDD2	NM_001040456	NP_001035546	Coding	chr7:75878998 plus strand	586899
RHBDD2	NM_001040457	NP_001035547	Coding	chr7:75878998 plus strand	586899
RHEB	NM_005614	NP_005605	Coding	chr7:151519924 minus strand	586900
RINT1	NM_021930	NP_068749	Coding	chr7:105532084 plus strand	586901
RNF133	NM_139175	NP_631914	Coding	chr7:122699154 minus strand	586902
RNF148	NM_198085	NP_932351	Coding	chr7:122702967 minus strand	586903
RNF216	NM_207111	NP_996994	Coding	chr7:5781730 minus strand	586904
RNF216	NM_207116	NP_996999	Coding	chr7:5781730 minus strand	586904
RNF32	NM_001184996	NP_001171925	Coding	chr7:156640746 plus strand	586905
RNF32	NM_001184997	NP_001171926	Coding	chr7:156642976 plus strand	586906
RNF32	NM_030936	NP_112198	Coding	chr7:156640658 plus strand	586907
RP9	NM_203288	NP_976033	Coding	chr7:33109390 minus strand	586908
RPA3	NM_002947	NP_002938	Coding	chr7:7718607 minus strand	586909
RSBN1L	NM_198467	NP_940869	Coding	chr7:77696425 plus strand	586910
RSPH10B	NM_173565	NP_775836	Coding	chr7:5970683 minus strand	586911
RSPH10B	NM_173565	NP_775836	Coding	chr7:6754108 plus strand	586912
RSPH10B2	NM_001099697	NP_001093167	Coding	chr7:5970683 minus strand	586913
RSPH10B2	NM_001099697	NP_001093167	Coding	chr7:6754108 plus strand	586914
RUNDC3B	NM_001134405	NP_001127877	Coding	chr7:87628412 plus strand	586915
RUNDC3B	NM_001134406	NP_001127878	Coding	chr7:87628412 plus strand	586915
RUNDC3B	NM_138290	NP_612147	Coding	chr7:87628412 plus strand	586915
SAMD9	NM_001193307	NP_001180236	Coding	chr7:93118023 minus strand	586916
SAMD9	NM_017654	NP_060124	Coding	chr7:93118023 minus	586916

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				strand	
SAMD9L	NM_152703	NP_689916	Coding	chr7:93148367 minus strand	586917
SAP25	NM_001168682	NP_001162153	Coding	chr7:100573647 minus strand	586918
SBDS	NM_016038	NP_057122	Coding	chr7:66995601 minus strand	586919
SCIN	NM_001112706	NP_001106177	Coding	chr7:12570576 plus strand	586920
SCIN	NM_033128	NP_149119	Coding	chr7:12589522 plus strand	586921
SCRN1	NM_001145513	NP_001138985	Coding	chr7:29990118 minus strand	586922
SCRN1	NM_001145514	NP_001138986	Coding	chr7:29990289 minus strand	586923
SCRN1	NM_001145515	NP_001138987	Coding	chr7:29989809 minus strand	586924
SCRN1	NM_014766	NP_055581	Coding	chr7:29989809 minus strand	586924
SDK1	NM_001079653	NP_001073121	Coding	chr7:4129684 plus strand	586925
SDK1	NM_152744	NP_689957	Coding	chr7:3301447 plus strand	586926
SEC61G	NM_001012456	NP_001012474	Coding	chr7:54759246 minus strand	586927
SEC61G	NM_014302	NP_055117	Coding	chr7:54759246 minus strand	586927
SEMA3A	NM_006080	NP_006071	Coding	chr7:84194901 minus strand	586928
SEMA3C	NM_006379	NP_006370	Coding	chr7:80919351 minus strand	586929
SEMA3D	NM_152754	NP_689967	Coding	chr7:85121931 minus strand	586930
SEMA3E	NM_001178129	NP_001171600	Coding	chr7:83641431 minus strand	586931
SEMA3E	NM_012431	NP_036563	Coding	chr7:83649163 minus strand	586932
SEPT14	NM_207366	NP_997249	Coding	chr7:55862789 minus strand	586933
SEPT7	NM_001011553	NP_001011553	Coding	chr7:35800985 plus strand	586934
SEPT7	NM_001242956	NP_001229885	Coding	chr7:35800985 plus strand	586934
SEPT7	NM_001788	NP_001779	Coding	chr7:35800985 plus strand	586934
SERPINE1	NM_000602	NP_000593	Coding	chr7:101127088 plus strand	586935
SFRP4	NM_003014	NP_003005	Coding	chr7:37916923 minus strand	586936
SGCE	NM_001099400	NP_001092870	Coding	chr7:94656209 minus strand	586937
SGCE	NM_001099401	NP_001092871	Coding	chr7:94656209 minus strand	586937
SGCE	NM_001301139	NP_001288068	Coding	chr7:94656209 minus strand	586937
SGCE	NM_003919	NP_003910	Coding	chr7:94656209 minus strand	586937
SH2B2	NM_020979	NP_066189	Coding	chr7:102285061 plus strand	586938

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SHFM1	NM_006304	NP_006295	Coding	chr7:96709891 minus strand	586939
SHH	NM_000193	NP_000184	Coding	chr7:155812273 minus strand	586940
SKAP2	NM_003930	NP_003921	Coding	chr7:26864722 minus strand	586941
SLC12A9	NM_001267812	NP_001254741	Coding	chr7:100852718 plus strand	586942
SLC12A9	NM_001267814	NP_001254743	Coding	chr7:100852718 plus strand	586942
SLC12A9	NM_020246	NP_064631	Coding	chr7:100852718 plus strand	586942
SLC13A1	NM_022444	NP_071889	Coding	chr7:123199971 minus strand	586943
SLC13A4	NM_012450	NP_036582	Coding	chr7:135728185 minus strand	586944
SLC25A13	NM_001160210	NP_001153682	Coding	chr7:96322147 minus strand	586945
SLC25A13	NM_014251	NP_055066	Coding	chr7:96322147 minus strand	586945
SLC25A40	NM_018843	NP_061331	Coding	chr7:87876377 minus strand	586946
SLC26A3	NM_000111	NP_000102	Coding	chr7:107803233 minus strand	586947
SLC26A4	NM_000441	NP_000432	Coding	chr7:107660634 plus strand	586948
SLC26A5	NM_001167962	NP_001161434	Coding	chr7:103446177 minus strand	586949
SLC26A5	NM_198999	NP_945350	Coding	chr7:103446177 minus strand	586949
SLC26A5	NM_206883	NP_996766	Coding	chr7:103446177 minus strand	586949
SLC26A5	NM_206884	NP_996767	Coding	chr7:103446177 minus strand	586949
SLC26A5	NM_206885	NP_996768	Coding	chr7:103446177 minus strand	586949
SLC29A4	NM_001040661	NP_001035751	Coding	chr7:5282929 plus strand	586950
SLC29A4	NM_001300847	NP_001287776	Coding	chr7:5282929 plus strand	586950
SLC29A4	NM_153247	NP_694979	Coding	chr7:5282929 plus strand	586950
SLC35B4	NM_032826	NP_116215	Coding	chr7:134317075 minus strand	586951
SLC37A3	NM_001287498	NP_001274427	Coding	chr7:140398550 minus strand	586952
SLC37A3	NM_032295	NP_115671	Coding	chr7:140398550 minus strand	586952
SLC37A3	NM_207113	NP_996996	Coding	chr7:140398550 minus strand	586952
SLC4A2	NM_001199692	NP_001186621	Coding	chr7:151058211 plus strand	586953
SLC4A2	NM_001199693	NP_001186622	Coding	chr7:151062546 plus strand	586954
SLC4A2	NM_001199694	NP_001186623	Coding	chr7:151062651 plus strand	586955

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SLC4A2	NM_003040	NP_003031	Coding	chr7:151059569 plus strand	586956
SMARCD3	NM_001003801	NP_001003801	Coding	chr7:151248663 minus strand	586957
SMARCD3	NM_001003802	NP_001003802	Coding	chr7:151276734 minus strand	586958
SMARCD3	NM_003078	NP_003069	Coding	chr7:151277145 minus strand	586959
SMKR1	NM_001195243	NP_001182172	Coding	chr7:129502478 plus strand	586960
SMO	NM_005631	NP_005622	Coding	chr7:129188871 plus strand	586961
SMURF1	NM_001199847	NP_001186776	Coding	chr7:99144120 minus strand	586962
SMURF1	NM_020429	NP_065162	Coding	chr7:99144120 minus strand	586962
SMURF1	NM_181349	NP_851994	Coding	chr7:99144120 minus strand	586962
SND1	NM_014390	NP_055205	Coding	chr7:127652147 plus strand	586963
SNX10	NM_001199835	NP_001186764	Coding	chr7:26291894 plus strand	586964
SNX10	NM_001199837	NP_001186766	Coding	chr7:26360883 plus strand	586965
SNX10	NM_001199838	NP_001186767	Coding	chr7:26364324 plus strand	586966
SNX10	NM_013322	NP_037454	Coding	chr7:26291894 plus strand	586964
SNX13	NM_015132	NP_055947	Coding	chr7:17940508 minus strand	586967
SNX8	NM_013321	NP_037453	Coding	chr7:2314475 minus strand	586968
SOSTDC1	NM_015464	NP_056279	Coding	chr7:16465849 minus strand	586969
SP4	NM_003112	NP_003103	Coding	chr7:21428070 plus strand	586970
SP8	NM_182700	NP_874359	Coding	chr7:20786889 minus strand	586971
SP8	NM_198956	NP_945194	Coding	chr7:20786889 minus strand	586971
SPAM1	NM_001174044	NP_001167515	Coding	chr7:123925231 plus strand	586972
SPAM1	NM_001174045	NP_001167516	Coding	chr7:123925854 plus strand	586973
SPAM1	NM_001174046	NP_001167517	Coding	chr7:123925854 plus strand	586973
SPAM1	NM_003117	NP_003108	Coding	chr7:123925231 plus strand	586972
SPAM1	NM_153189	NP_694859	Coding	chr7:123925231 plus strand	586972
SPDYE1	NM_175064	NP_778234	Coding	chr7:44000889 plus strand	586974
SPDYE2	NM_001031618	NP_001026789	Coding	chr7:102551231 plus strand	586975
SPDYE2	NM_001031618	NP_001026789	Coding	chr7:102650324 plus strand	586976
SPDYE2B	NM_001166339	NP_001159811	Coding	chr7:102551231 plus strand	586977
SPDYE2B	NM_001166339	NP_001159811	Coding	chr7:102650324 plus	586978

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				strand	
SPDYE3	NM_001004351	NP_001004351	Coding	chr7:100307701 plus strand	586979
SPDYE5	NM_001099435	NP_001092905	Coding	chr7:75494979 plus strand	586980
SPDYE6	NM_001146210	NP_001139682	Coding	chr7:102356444 minus strand	586981
SRI	NM_001256891	NP_001243820	Coding	chr7:88220084 minus strand	586982
SRI	NM_001256892	NP_001243821	Coding	chr7:88226993 minus strand	586983
SRI	NM_003130	NP_003121	Coding	chr7:88220084 minus strand	586982
SRI	NM_198901	NP_944490	Coding	chr7:88226993 minus strand	586983
SRPK2	NM_001278273	NP_001265202	Coding	chr7:105298779 minus strand	586984
SRPK2	NM_182691	NP_872633	Coding	chr7:105269077 minus strand	586985
SRPK2	NM_182692	NP_872634	Coding	chr7:105388930 minus strand	586986
SRRM3	NM_001110199	NP_001103669	Coding	chr7:76201892 plus strand	586987
SRRM3	NM_001291831	NP_001278760	Coding	chr7:76201892 plus strand	586987
SRRT	NM_001128852	NP_001122324	Coding	chr7:100875078 plus strand	586988
SRRT	NM_001128853	NP_001122325	Coding	chr7:100875078 plus strand	586988
SRRT	NM_001128854	NP_001122326	Coding	chr7:100875078 plus strand	586988
SRRT	NM_015908	NP_056992	Coding	chr7:100875078 plus strand	586988
SSBP1	NM_001256510	NP_001243439	Coding	chr7:141738606 plus strand	586989
SSBP1	NM_001256511	NP_001243440	Coding	chr7:141738320 plus strand	586990
SSBP1	NM_001256512	NP_001243441	Coding	chr7:141738320 plus strand	586990
SSBP1	NM_001256513	NP_001243442	Coding	chr7:141738320 plus strand	586990
SSBP1	NM_003143	NP_003134	Coding	chr7:141738320 plus strand	586990
SSC4D	NM_080744	NP_542782	Coding	chr7:76409695 minus strand	586991
SSMEM1	NM_145268	NP_660311	Coding	chr7:130207863 plus strand	586992
SSPO	NM_198455	NP_940857	Coding	chr7:149776041 plus strand	586993
ST7	NM_018412	NP_060882	Coding	chr7:116953326 plus strand	586994
ST7	NM_021908	NP_068708	Coding	chr7:116953326 plus strand	586994
STAG3	NM_001282716	NP_001269645	Coding	chr7:100177723 plus strand	586995
STAG3	NM_001282717	NP_001269646	Coding	chr7:100177742 plus	586996

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				strand	
STAG3	NM_001282718	NP_001269647	Coding	chr7:100177742 plus strand	586996
STAG3	NM_012447	NP_036579	Coding	chr7:100177742 plus strand	586996
STARD3NL	NM_032016	NP_114405	Coding	chr7:38178205 plus strand	586997
STEAP1	NM_012449	NP_036581	Coding	chr7:90154374 plus strand	586998
STEAP1B	NM_001164460	NP_001157932	Coding	chr7:22500282 minus strand	586999
STEAP1B	NM_207342	NP_997225	Coding	chr7:22500282 minus strand	586999
STEAP2	NM_001040665	NP_001035755	Coding	chr7:90211859 plus strand	587000
STEAP2	NM_001040666	NP_001035756	Coding	chr7:90213819 plus strand	587001
STEAP2	NM_001244944	NP_001231873	Coding	chr7:90211685 plus strand	587002
STEAP2	NM_001244945	NP_001231874	Coding	chr7:90211685 plus strand	587002
STEAP2	NM_001244946	NP_001231875	Coding	chr7:90211859 plus strand	587000
STEAP2	NM_152999	NP_694544	Coding	chr7:90211685 plus strand	587002
STEAP4	NM_001205315	NP_001192244	Coding	chr7:88306913 minus strand	587003
STEAP4	NM_001205316	NP_001192245	Coding	chr7:88306913 minus strand	587003
STEAP4	NM_024636	NP_078912	Coding	chr7:88306913 minus strand	587003
STK17A	NM_004760	NP_004751	Coding	chr7:43583092 plus strand	587004
STK31	NM_001260504	NP_001247433	Coding	chr7:23710325 plus strand	587005
STK31	NM_001260505	NP_001247434	Coding	chr7:23710166 plus strand	587006
STK31	NM_031414	NP_113602	Coding	chr7:23710166 plus strand	587006
STK31	NM_032944	NP_116562	Coding	chr7:23710325 plus strand	587005
STRA8	NM_182489	NP_872295	Coding	chr7:135231978 plus strand	587007
STRIP2	NM_001134336	NP_001127808	Coding	chr7:129434432 plus strand	587008
STRIP2	NM_020704	NP_065755	Coding	chr7:129434432 plus strand	587008
STX1A	NM_001165903	NP_001159375	Coding	chr7:73719687 minus strand	587009
STX1A	NM_004603	NP_004594	Coding	chr7:73719687 minus strand	587009
STYXL1	NM_016086	NP_057170	Coding	chr7:76048003 minus strand	587010
SUGCT	NM_001193311	NP_001180240	Coding	chr7:40134975 plus strand	587011
SUGCT	NM_001193312	NP_001180241	Coding	chr7:40134975 plus strand	587011
SUGCT	NM_001193313	NP_001180242	Coding	chr7:40134975 plus strand	587011
SUGCT	NM_024728	NP_079004	Coding	chr7:40134975 plus strand	587011
SUMF2	NM_001042469	NP_001035934	Coding	chr7:56064223 plus strand	587012
SUMF2	NM_001042470	NP_001035935	Coding	chr7:56064223 plus strand	587012
SUMF2	NM_001130069	NP_001123541	Coding	chr7:56064223 plus strand	587012
SUMF2	NM_001146333	NP_001139805	Coding	chr7:56064223 plus strand	587012

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SUMF2	NM_015411	NP_056226	Coding	chr7:56064223 plus strand	587012
SUN1	NM_001130965	NP_001124437	Coding	chr7:832504 plus strand	587013
SUN1	NM_001171944	NP_001165415	Coding	chr7:816614 plus strand	587014
SUN1	NM_001171945	NP_001165416	Coding	chr7:816614 plus strand	587014
SUN1	NM_001171946	NP_001165417	Coding	chr7:815556 plus strand	587015
SUN1	NM_025154	NP_079430	Coding	chr7:816614 plus strand	587014
SUN3	NM_001030019	NP_001025190	Coding	chr7:48029119 minus strand	587016
SUN3	NM_001284350	NP_001271279	Coding	chr7:48029119 minus strand	587016
SUN3	NM_152782	NP_689995	Coding	chr7:48029119 minus strand	587016
SVOPL	NM_001139456	NP_001132928	Coding	chr7:138679045 minus strand	587017
SVOPL	NM_174959	NP_777619	Coding	chr7:138664224 minus strand	587018
SYPL1	NM_006754	NP_006745	Coding	chr7:106112647 minus strand	587019
SYPL1	NM_182715	NP_874384	Coding	chr7:106112345 minus strand	587020
TAC1	NM_003182	NP_003173	Coding	chr7:97731958 plus strand	587021
TAC1	NM_013996	NP_054702	Coding	chr7:97731958 plus strand	587021
TAC1	NM_013997	NP_054703	Coding	chr7:97731958 plus strand	587021
TAC1	NM_013998	NP_054704	Coding	chr7:97731958 plus strand	587021
TAF6	NM_001190415	NP_001177344	Coding	chr7:100119858 minus strand	587022
TAF6	NM_005641	NP_005632	Coding	chr7:100119372 minus strand	587023
TAF6	NM_139315	NP_647476	Coding	chr7:100119398 minus strand	587024
TARP	NM_001003799	NP_001003799	Coding	chr7:38273647 minus strand	587025
TARP	NM_001003806	NP_001003806	Coding	chr7:38273647 minus strand	587025
TAS2R16	NM_016945	NP_058641	Coding	chr7:122995700 minus strand	587026
TAS2R3	NM_016943	NP_058639	Coding	chr7:141764096 plus strand	587027
TAS2R38	NM_176817	NP_789787	Coding	chr7:141973773 minus strand	587028
TAS2R39	NM_176881	NP_795362	Coding	chr7:143183418 plus strand	587029
TAS2R4	NM_016944	NP_058640	Coding	chr7:141778488 plus strand	587030
TAS2R40	NM_176882	NP_795363	Coding	chr7:143222078 plus strand	587031
TAS2R41	NM_176883	NP_795364	Coding	chr7:143477872 plus strand	587032
TAS2R5	NM_018980	NP_061853	Coding	chr7:141790216 plus strand	587033
TAS2R60	NM_177437	NP_803186	Coding	chr7:143443452 plus	587034

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				strand	
TAX1BP1	NM_001079864	NP_001073333	Coding	chr7:27740094 plus strand	587035
TAX1BP1	NM_001206901	NP_001193830	Coding	chr7:27739372 plus strand	587036
TAX1BP1	NM_001206902	NP_001193831	Coding	chr7:27740094 plus strand	587035
TAX1BP1	NM_006024	NP_006015	Coding	chr7:27740094 plus strand	587035
TBL2	NM_012453	NP_036585	Coding	chr7:73578683 minus strand	587037
TBRG4	NM_001261834	NP_001248763	Coding	chr7:45111747 minus strand	587038
TBRG4	NM_004749	NP_004740	Coding	chr7:45111747 minus strand	587038
TBRG4	NM_030900	NP_112162	Coding	chr7:45111747 minus strand	587038
TBRG4	NM_199122	NP_954573	Coding	chr7:45111747 minus strand	587038
TBX20	NM_001077653	NP_001071121	Coding	chr7:35254100 minus strand	587039
TBX20	NM_001166220	NP_001159692	Coding	chr7:35254100 minus strand	587039
TBXAS1	NM_001061	NP_001052	Coding	chr7:139829152 plus strand	587040
TBXAS1	NM_001130966	NP_001124438	Coding	chr7:139778247 plus strand	587041
TBXAS1	NM_001166253	NP_001159725	Coding	chr7:139829152 plus strand	587040
TBXAS1	NM_001166254	NP_001159726	Coding	chr7:139778247 plus strand	587041
TBXAS1	NM_030984	NP_112246	Coding	chr7:139829152 plus strand	587040
TECPR1	NM_015395	NP_056210	Coding	chr7:98252251 minus strand	587042
TES	NM_015641	NP_056456	Coding	chr7:116210492 plus strand	587043
TES	NM_152829	NP_690042	Coding	chr7:116222950 plus strand	587044
TFEC	NM_001018058	NP_001018068	Coding	chr7:116030813 minus strand	587045
TFEC	NM_001244583	NP_001231512	Coding	chr7:115968313 minus strand	587046
TFEC	NM_012252	NP_036384	Coding	chr7:116030813 minus strand	587045
TFPI2	NM_001271003	NP_001257932	Coding	chr7:93890991 minus strand	587047
TFPI2	NM_001271004	NP_001257933	Coding	chr7:93890991 minus strand	587047
TFPI2	NM_006528	NP_006519	Coding	chr7:93890991 minus strand	587047
TFR2	NM_001206855	NP_001193784	Coding	chr7:100633650 minus strand	587048
TFR2	NM_003227	NP_003218	Coding	chr7:100641550 minus strand	587049
THAP5	NM_001130475	NP_001123947	Coding	chr7:108569768 minus strand	587050

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THAP5	NM_001287598	NP_001274527	Coding	chr7:108569453 minus strand	587051
THAP5	NM_001287599	NP_001274528	Coding	chr7:108569768 minus strand	587050
THAP5	NM_001287601	NP_001274530	Coding	chr7:108569768 minus strand	587050
THAP5	NM_182529	NP_872335	Coding	chr7:108569453 minus strand	587051
THSD7A	NM_015204	NP_056019	Coding	chr7:11832198 minus strand	587052
TMED4	NM_182547	NP_872353	Coding	chr7:44582228 minus strand	587053
TMEM106B	NM_001134232	NP_001127704	Coding	chr7:12211221 plus strand	587054
TMEM106B	NM_018374	NP_060844	Coding	chr7:12211221 plus strand	587054
TMEM120A	NM_031925	NP_114131	Coding	chr7:75994674 minus strand	587055
TMEM130	NM_001134450	NP_001127922	Coding	chr7:98870050 minus strand	587056
TMEM130	NM_001134451	NP_001127923	Coding	chr7:98870050 minus strand	587056
TMEM130	NM_152913	NP_690877	Coding	chr7:98870050 minus strand	587056
TMEM139	NM_001242773	NP_001229702	Coding	chr7:143284898 plus strand	587057
TMEM139	NM_001242774	NP_001229703	Coding	chr7:143284898 plus strand	587057
TMEM139	NM_001242775	NP_001229704	Coding	chr7:143284898 plus strand	587057
TMEM139	NM_001282876	NP_001269805	Coding	chr7:143284949 plus strand	587058
TMEM139	NM_001282877	NP_001269806	Coding	chr7:143284898 plus strand	587057
TMEM139	NM_153345	NP_699176	Coding	chr7:143284898 plus strand	587057
TMEM140	NM_018295	NP_060765	Coding	chr7:135148013 plus strand	587059
TMEM168	NM_001287497	NP_001274426	Coding	chr7:112790423 minus strand	587060
TMEM168	NM_022484	NP_071929	Coding	chr7:112790423 minus strand	587060
TMEM176A	NM_018487	NP_060957	Coding	chr7:150800765 plus strand	587061
TMEM176B	NM_001101311	NP_001094781	Coding	chr7:150800533 minus strand	587062
TMEM176B	NM_001101312	NP_001094782	Coding	chr7:150800533 minus strand	587062
TMEM176B	NM_001101314	NP_001094784	Coding	chr7:150800533 minus strand	587062
TMEM176B	NM_014020	NP_054739	Coding	chr7:150801360 minus strand	587063
TMEM178B	NM_001195278	NP_001182207	Coding	chr7:141074231 plus strand	587064
TMEM184A	NM_001097620	NP_001091089	Coding	chr7:1556430 minus strand	587065

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TMEM196	NM_152774	NP_689987	Coding	chr7:19772781 minus strand	587066
TMEM209	NM_001301163	NP_001288092	Coding	chr7:130205498 minus strand	587067
TMEM209	NM_032842	NP_116231	Coding	chr7:130205498 minus strand	587067
TMEM213	NM_001085429	NP_001078898	Coding	chr7:138797993 plus strand	587068
TMEM229A	NM_001136002	NP_001129474	Coding	chr7:124033469 minus strand	587069
TMEM243	NM_024315	NP_077291	Coding	chr7:87219715 minus strand	587070
TMEM248	NM_017994	NP_060464	Coding	chr7:66921215 plus strand	587071
TMEM60	NM_032936	NP_116325	Coding	chr7:77798430 minus strand	587072
TMUB1	NM_001136044	NP_001129516	Coding	chr7:151083533 minus strand	587073
TMUB1	NM_031434	NP_113622	Coding	chr7:151083326 minus strand	587074
TNPO3	NM_001191028	NP_001177957	Coding	chr7:129055173 minus strand	587075
TNPO3	NM_012470	NP_036602	Coding	chr7:129055173 minus strand	587075
TNRC18	NM_001080495	NP_001073964	Coding	chr7:5423546 minus strand	587076
TNS3	NM_022748	NP_073585	Coding	chr7:47582144 minus strand	587077
TOMM7	NM_019059	NP_061932	Coding	chr7:22822852 minus strand	587078
TPK1	NM_001042482	NP_001035947	Coding	chr7:144836053 minus strand	587079
TPK1	NM_022445	NP_071890	Coding	chr7:144836053 minus strand	587079
TPST1	NM_003596	NP_003587	Coding	chr7:66205271 plus strand	587080
TRA2A	NM_001282757	NP_001269686	Coding	chr7:23532041 minus strand	587081
TRA2A	NM_001282758	NP_001269687	Coding	chr7:23532041 minus strand	587081
TRA2A	NM_001282759	NP_001269688	Coding	chr7:23532041 minus strand	587081
TRA2A	NM_013293	NP_037425	Coding	chr7:23532041 minus strand	587081
TRIL	NM_014817	NP_055632	Coding	chr7:28958413 minus strand	587082
TRIM24	NM_003852	NP_003843	Coding	chr7:138460333 plus strand	587083
TRIM24	NM_015905	NP_056989	Coding	chr7:138460333 plus strand	587083
TRIM4	NM_033017	NP_148977	Coding	chr7:99919600 minus strand	587084
TRIM4	NM_033091	NP_149082	Coding	chr7:99919600 minus strand	587084
TRIM50	NM_001281450	NP_001268379	Coding	chr7:73328082 minus strand	587085

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TRIM50	NM_001281451	NP_001268380	Coding	chr7:73325575 minus strand	587086
TRIM50	NM_178125	NP_835226	Coding	chr7:73328082 minus strand	587085
TRIM56	NM_030961	NP_112223	Coding	chr7:101085504 plus strand	587087
TRIM73	NM_198924	NP_944606	Coding	chr7:72969466 minus strand	587088
TRIM73	NM_198924	NP_944606	Coding	chr7:75395628 plus strand	587089
TRIM74	NM_198853	NP_942150	Coding	chr7:72969466 minus strand	587090
TRIM74	NM_198853	NP_942150	Coding	chr7:75395628 plus strand	587091
TRIP6	NM_003302	NP_003293	Coding	chr7:100867327 plus strand	587092
TRPV5	NM_019841	NP_062815	Coding	chr7:142933723 minus strand	587093
TRPV6	NM_018646	NP_061116	Coding	chr7:142885745 minus strand	587094
TRRAP	NM_001244580	NP_001231509	Coding	chr7:98878489 plus strand	587095
TRRAP	NM_003496	NP_003487	Coding	chr7:98878489 plus strand	587095
TSC22D4	NM_030935	NP_112197	Coding	chr7:100479279 minus strand	587096
TSGA13	NM_052933	NP_443165	Coding	chr7:130686568 minus strand	587097
TSPAN12	NM_012338	NP_036470	Coding	chr7:120858123 minus strand	587098
TSPAN13	NM_014399	NP_055214	Coding	chr7:16753725 plus strand	587099
TSPAN33	NM_178562	NP_848657	Coding	chr7:129144715 plus strand	587100
TTC26	NM_001144920	NP_001138392	Coding	chr7:139133743 plus strand	587101
TTC26	NM_001144923	NP_001138395	Coding	chr7:139133743 plus strand	587101
TTC26	NM_001287512	NP_001274441	Coding	chr7:139133743 plus strand	587101
TTC26	NM_001287513	NP_001274442	Coding	chr7:139133743 plus strand	587101
TTC26	NM_024926	NP_079202	Coding	chr7:139133743 plus strand	587101
TTYH3	NM_025250	NP_079526	Coding	chr7:2631968 plus strand	587102
TWIST1	NM_000474	NP_000465	Coding	chr7:19117672 minus strand	587103
TWISTNB	NM_001002926	NP_001002926	Coding	chr7:19709037 minus strand	587104
TYW1	NM_018264	NP_060734	Coding	chr7:66996804 plus strand	587105
TYW1B	NM_001145440	NP_001138912	Coding	chr7:72828234 minus strand	587106
UBE2D4	NM_015983	NP_057067	Coding	chr7:43926435 plus strand	587107
UBE2H	NM_001202498	NP_001189427	Coding	chr7:129952943 minus strand	587108
UBE2H	NM_003344	NP_003335	Coding	chr7:129952960 minus strand	587109

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UBE2H	NM_182697	NP_874356	Coding	chr7:129952960 minus strand	587109
UBE3C	NM_014671	NP_055486	Coding	chr7:157138960 plus strand	587110
UBN2	NM_173569	NP_775840	Coding	chr7:139231484 plus strand	587111
UFSP1	NM_001015072	NP_001015072	Coding	chr7:100889718 minus strand	587112
UMAD1	NM_001302348	NP_001289277	Coding	chr7:7640635 plus strand	587113
UMAD1	NM_001302349	NP_001289278	Coding	chr7:7640635 plus strand	587113
UMAD1	NM_001302350	NP_001289279	Coding	chr7:7640635 plus strand	587113
UNCX	NM_001080461	NP_001073930	Coding	chr7:1233017 plus strand	587114
UPK3B	NM_030570	NP_085047	Coding	chr7:76510422 plus strand	587115
UPK3B	NM_182683	NP_872624	Coding	chr7:76510422 plus strand	587115
UPK3B	NM_182684	NP_872625	Coding	chr7:76510422 plus strand	587115
UPK3BL	NM_001114403	NP_001107875	Coding	chr7:102642791 minus strand	587116
UPP1	NM_001287426	NP_001274355	Coding	chr7:48088602 plus strand	587117
UPP1	NM_001287428	NP_001274357	Coding	chr7:48088602 plus strand	587117
UPP1	NM_001287429	NP_001274358	Coding	chr7:48089139 plus strand	587118
UPP1	NM_001287430	NP_001274359	Coding	chr7:48089253 plus strand	587119
UPP1	NM_003364	NP_003355	Coding	chr7:48089211 plus strand	587120
URGCP	NM_001077663	NP_001071131	Coding	chr7:43907069 minus strand	587121
URGCP	NM_001077664	NP_001071132	Coding	chr7:43926411 minus strand	587122
URGCP	NM_001290075	NP_001277004	Coding	chr7:43907069 minus strand	587121
URGCP	NM_001290076	NP_001277005	Coding	chr7:43926411 minus strand	587122
URGCP	NM_017920	NP_060390	Coding	chr7:43907069 minus strand	587121
URGCP-MRPS24	NM_001204871	NP_001191800	Coding	chr7:43906632 minus strand	587123
USP42	NM_032172	NP_115548	Coding	chr7:6104918 plus strand	587124
VGF	NM_003378	NP_003369	Coding	chr7:101165571 minus strand	587125
VIPR2	NM_003382	NP_003373	Coding	chr7:159144957 minus strand	587126
VKORC1L1	NM_001284342	NP_001271271	Coding	chr7:65873269 plus strand	587127
VKORC1L1	NM_173517	NP_775788	Coding	chr7:65873269 plus strand	587127
VOPP1	NM_001284282	NP_001271211	Coding	chr7:55552773 minus strand	587128
VOPP1	NM_001284283	NP_001271212	Coding	chr7:55538667 minus strand	587129
VOPP1	NM_001284284	NP_001271213	Coding	chr7:55537716 minus strand	587130
VOPP1	NM_030796	NP_110423	Coding	chr7:55572507 minus strand	587131
VPS37D	NM_001077621	NP_001071089	Coding	chr7:73667843 plus strand	587132

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VPS41	NM_014396	NP_055211	Coding	chr7:38909200 minus strand	587133
VPS41	NM_080631	NP_542198	Coding	chr7:38909200 minus strand	587133
VSTM2A	NM_001301009	NP_001287938	Coding	chr7:54542324 plus strand	587134
VSTM2A	NM_182546	NP_872352	Coding	chr7:54542324 plus strand	587134
VWC2	NM_198570	NP_940972	Coding	chr7:49773660 plus strand	587135
VWDE	NM_001135924	NP_001129396	Coding	chr7:12404226 minus strand	587136
WASL	NM_003941	NP_003932	Coding	chr7:123749071 minus strand	587137
WBSCR16	NM_001281441	NP_001268370	Coding	chr7:75073881 minus strand	587138
WBSCR16	NM_030798	NP_110425	Coding	chr7:75073881 minus strand	587138
WBSCR16	NM_148842	NP_683682	Coding	chr7:75073881 minus strand	587138
WBSCR17	NM_022479	NP_071924	Coding	chr7:71132536 plus strand	587139
WBSCR22	NM_001202560	NP_001189489	Coding	chr7:73683567 plus strand	587140
WBSCR22	NM_017528	NP_059998	Coding	chr7:73683567 plus strand	587140
WBSCR27	NM_152559	NP_689772	Coding	chr7:73842525 minus strand	587141
WBSCR28	NM_182504	NP_872310	Coding	chr7:73861158 plus strand	587142
WDR60	NM_018051	NP_060521	Coding	chr7:158856577 plus strand	587143
WDR86	NM_001284260	NP_001271189	Coding	chr7:151410038 minus strand	587144
WDR86	NM_001284261	NP_001271190	Coding	chr7:151410705 minus strand	587145
WDR86	NM_001284262	NP_001271191	Coding	chr7:151410705 minus strand	587145
WDR86	NM_198285	NP_938026	Coding	chr7:151410038 minus strand	587144
WDR91	NM_014149	NP_054868	Coding	chr7:135211564 minus strand	587146
WEE2	NM_001105558	NP_001099028	Coding	chr7:141708352 plus strand	587147
WI2-2373I1.2	NM_001195127	NP_001182056	Coding	chr7:290169 plus strand	587148
WIPF3	NM_001080529	NP_001073998	Coding	chr7:29806553 plus strand	587149
WIPI2	NM_001033518	NP_001028690	Coding	chr7:5190203 plus strand	587150
WIPI2	NM_001033519	NP_001028691	Coding	chr7:5190203 plus strand	587150
WIPI2	NM_001033520	NP_001028692	Coding	chr7:5214268 plus strand	587151
WIPI2	NM_001278299	NP_001265228	Coding	chr7:5190203 plus strand	587150
WIPI2	NM_015610	NP_056425	Coding	chr7:5190203 plus strand	587150
WIPI2	NM_016003	NP_057087	Coding	chr7:5190203 plus strand	587150
WNT16	NM_016087	NP_057171	Coding	chr7:121325366 plus strand	587152
WNT16	NM_057168	NP_476509	Coding	chr7:121329035 plus strand	587153
WNT2	NM_003391	NP_003382	Coding	chr7:117323289 minus	587154

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				strand	
XRCC2	NM_005431	NP_005422	Coding	chr7:152676165 minus strand	587155
YAE1D1	NM_001282446	NP_001269375	Coding	chr7:39566375 plus strand	587156
YAE1D1	NM_020192	NP_064577	Coding	chr7:39566375 plus strand	587156
YKT6	NM_006555	NP_006546	Coding	chr7:44200978 plus strand	587157
YWHAG	NM_012479	NP_036611	Coding	chr7:76359025 minus strand	587158
ZAN	NM_003386	NP_003377	Coding	chr7:100733625 plus strand	587159
ZAN	NM_173059	NP_775082	Coding	chr7:100733625 plus strand	587159
ZASP	NM_001289933	NP_001276862	Coding	chr7:100574733 minus strand	587160
ZBED6CL	NM_138434	NP_612443	Coding	chr7:150329848 plus strand	587161
ZC3HAV1	NM_020119	NP_064504	Coding	chr7:139109719 minus strand	587162
ZC3HAV1	NM_024625	NP_078901	Coding	chr7:139109719 minus strand	587162
ZC3HAV1L	NM_080660	NP_542391	Coding	chr7:139036029 minus strand	587163
ZC3HC1	NM_001282190	NP_001269119	Coding	chr7:130051451 minus strand	587164
ZC3HC1	NM_001282191	NP_001269120	Coding	chr7:130051451 minus strand	587164
ZC3HC1	NM_016478	NP_057562	Coding	chr7:130051451 minus strand	587164
ZCWPW1	NM_001258008	NP_001244937	Coding	chr7:100428808 minus strand	587165
ZCWPW1	NM_017984	NP_060454	Coding	chr7:100428808 minus strand	587165
ZDHHC4	NM_001134387	NP_001127859	Coding	chr7:6577433 plus strand	587166
ZDHHC4	NM_001134388	NP_001127860	Coding	chr7:6577433 plus strand	587166
ZDHHC4	NM_001134389	NP_001127861	Coding	chr7:6577433 plus strand	587166
ZDHHC4	NM_018106	NP_060576	Coding	chr7:6577433 plus strand	587166
ZFAND2A	NM_182491	NP_872297	Coding	chr7:1160219 minus strand	587167
ZKSCAN1	NM_001287054	NP_001273983	Coding	chr7:100015571 plus strand	587168
ZKSCAN1	NM_001287055	NP_001273984	Coding	chr7:100015571 plus strand	587168
ZKSCAN1	NM_003439	NP_003430	Coding	chr7:100015571 plus strand	587168
ZKSCAN5	NM_014569	NP_055384	Coding	chr7:99504949 plus strand	587169
ZKSCAN5	NM_145102	NP_659570	Coding	chr7:99504649 plus strand	587170
ZMIZ2	NM_001300959	NP_001287888	Coding	chr7:44748565 plus strand	587171
ZMIZ2	NM_031449	NP_113637	Coding	chr7:44748930 plus strand	587172
ZMIZ2	NM_174929	NP_777589	Coding	chr7:44756187 plus strand	587173
ZNF107	NM_001013746	NP_001013768	Coding	chr7:64666082 plus strand	587174
ZNF107	NM_001282359	NP_001269288	Coding	chr7:64666082 plus strand	587174

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ZNF107	NM_001282360	NP_001269289	Coding	chr7:64666082 plus strand	587174
ZNF107	NM_016220	NP_057304	Coding	chr7:64666082 plus strand	587174
ZNF117	NM_015852	NP_056936	Coding	chr7:64991036 minus strand	587175
ZNF12	NM_006956	NP_008887	Coding	chr7:6706935 minus strand	587176
ZNF12	NM_016265	NP_057349	Coding	chr7:6706935 minus strand	587176
ZNF138	NM_001160183	NP_001153655	Coding	chr7:64794387 plus strand	587177
ZNF138	NM_001271637	NP_001258566	Coding	chr7:64794387 plus strand	587177
ZNF138	NM_001271638	NP_001258567	Coding	chr7:64794387 plus strand	587177
ZNF138	NM_001271639	NP_001258568	Coding	chr7:64794387 plus strand	587177
ZNF138	NM_001271640	NP_001258569	Coding	chr7:64794387 plus strand	587177
ZNF138	NM_001271649	NP_001258578	Coding	chr7:64794387 plus strand	587177
ZNF138	NM_006524	NP_006515	Coding	chr7:64794387 plus strand	587177
ZNF212	NM_012256	NP_036388	Coding	chr7:149239650 plus strand	587178
ZNF273	NM_021148	NP_066971	Coding	chr7:64903241 plus strand	587179
ZNF277	NM_021994	NP_068834	Coding	chr7:112206587 plus strand	587180
ZNF282	NM_003575	NP_003566	Coding	chr7:149195484 plus strand	587181
ZNF3	NM_001278284	NP_001265213	Coding	chr7:100082548 minus strand	587182
ZNF3	NM_001278287	NP_001265216	Coding	chr7:100082548 minus strand	587182
ZNF3	NM_001278290	NP_001265219	Coding	chr7:100081764 minus strand	587183
ZNF3	NM_001278291	NP_001265220	Coding	chr7:100081764 minus strand	587183
ZNF3	NM_001278292	NP_001265221	Coding	chr7:100081764 minus strand	587183
ZNF3	NM_017715	NP_060185	Coding	chr7:100081764 minus strand	587183
ZNF3	NM_032924	NP_116313	Coding	chr7:100081764 minus strand	587183
ZNF316	NM_001278559	NP_001265488	Coding	chr7:6637321 plus strand	587184
ZNF394	NM_032164	NP_115540	Coding	chr7:99500254 minus strand	587185
ZNF398	NM_020781	NP_065832	Coding	chr7:149126415 plus strand	587186
ZNF398	NM_170686	NP_733787	Coding	chr7:149147467 plus strand	587187
ZNF425	NM_001001661	NP_001001661	Coding	chr7:149126346 minus strand	587188
ZNF467	NM_207336	NP_997219	Coding	chr7:149773206 minus strand	587189
ZNF479	NM_033273	NP_150376	Coding	chr7:57139864 minus strand	587190
ZNF655	NM_001009958	NP_001009958	Coding	chr7:99558824 plus strand	587191
ZNF655	NM_001009960	NP_001009960	Coding	chr7:99558824 plus strand	587191
ZNF655	NM_001083956	NP_001077425	Coding	chr7:99558421 plus strand	587192

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ZNF655	NM_001085366	NP_001078835	Coding	chr7:99558421 plus strand	587192
ZNF655	NM_001085367	NP_001078836	Coding	chr7:99558824 plus strand	587191
ZNF655	NM_001085368	NP_001078837	Coding	chr7:99558824 plus strand	587191
ZNF655	NM_024061	NP_076966	Coding	chr7:99558421 plus strand	587192
ZNF655	NM_138494	NP_612503	Coding	chr7:99558421 plus strand	587192
ZNF679	NM_153363	NP_699194	Coding	chr7:64228473 plus strand	587193
ZNF680	NM_001130022	NP_001123494	Coding	chr7:64563127 minus strand	587194
ZNF680	NM_178558	NP_848653	Coding	chr7:64563127 minus strand	587194
ZNF713	NM_182633	NP_872439	Coding	chr7:55912637 plus strand	587195
ZNF716	NM_001159279	NP_001152751	Coding	chr7:57450176 plus strand	587196
ZNF727	NM_001159522	NP_001152994	Coding	chr7:64045442 plus strand	587197
ZNF735	NM_001159524	NP_001152996	Coding	chr7:64207202 plus strand	587198
ZNF736	NM_001170905	NP_001164376	Coding	chr7:64313872 plus strand	587199
ZNF736	NM_001294255	NP_001281184	Coding	chr7:64313872 plus strand	587199
ZNF746	NM_001163474	NP_001156946	Coding	chr7:149497807 minus strand	587200
ZNF746	NM_152557	NP_689770	Coding	chr7:149497807 minus strand	587200
ZNF775	NM_173680	NP_775951	Coding	chr7:150379316 plus strand	587201
ZNF777	NM_015694	NP_056509	Coding	chr7:149460962 minus strand	587202
ZNF783	NM_001195220	NP_001182149	Coding	chr7:149262170 plus strand	587203
ZNF786	NM_152411	NP_689624	Coding	chr7:149090777 minus strand	587204
ZNF789	NM_001013258	NP_001013276	Coding	chr7:99472891 plus strand	587205
ZNF789	NM_213603	NP_998768	Coding	chr7:99472891 plus strand	587205
ZNF800	NM_176814	NP_789784	Coding	chr7:127392713 minus strand	587206
ZNF804B	NM_181646	NP_857597	Coding	chr7:88759438 plus strand	587207
ZNF853	NM_017560	NP_060030	Coding	chr7:6615895 plus strand	587208
ZNF862	NM_001099220	NP_001092690	Coding	chr7:149838419 plus strand	587209
ZNF92	NM_001287532	NP_001274461	Coding	chr7:65373798 plus strand	587210
ZNF92	NM_001287533	NP_001274462	Coding	chr7:65373798 plus strand	587210
ZNF92	NM_001287534	NP_001274463	Coding	chr7:65373798 plus strand	587210
ZNF92	NM_007139	NP_009070	Coding	chr7:65373798 plus strand	587210
ZNF92	NM_152626	NP_689839	Coding	chr7:65373798 plus strand	587210
ZNHIT1	NM_006349	NP_006340	Coding	chr7:101217703 plus strand	587211
ZNRF2	NM_147128	NP_667339	Coding	chr7:30284306 plus strand	587212
ZP3	NM_001110354	NP_001103824	Coding	chr7:76424954 plus strand	587213
ZP3	NM_007155	NP_009086	Coding	chr7:76397523 plus strand	587214
ZPBP	NM_001159878	NP_001153350	Coding	chr7:50093264 minus	587215

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				strand	
ZPBP	NM_007009	NP_008940	Coding	chr7:50093264 minus strand	587215
ZSCAN21	NM_145914	NP_666019	Coding	chr7:100049793 plus strand	587216
ZSCAN25	NM_145115	NP_660090	Coding	chr7:99616947 plus strand	587217
ZYX	NM_001010972	NP_001010972	Coding	chr7:143381266 plus strand	587218
ZYX	NM_003461	NP_003452	Coding	chr7:143381266 plus strand	587218
AARD	NM_001025357	NP_001020528	Coding	chr8:116938224 plus strand	587219
ABRA	NM_139166	NP_631905	Coding	chr8:106770244 minus strand	587220
ADAM18	NM_001190956	NP_001177885	Coding	chr8:39584567 plus strand	587221
ADAM18	NM_014237	NP_055052	Coding	chr8:39584567 plus strand	587221
ADAM2	NM_001278113	NP_001265042	Coding	chr8:39838289 minus strand	587222
ADAM2	NM_001278114	NP_001265043	Coding	chr8:39838289 minus strand	587222
ADAM2	NM_001464	NP_001455	Coding	chr8:39838289 minus strand	587222
ADAM28	NM_014265	NP_055080	Coding	chr8:24294066 plus strand	587223
ADAM28	NM_021777	NP_068547	Coding	chr8:24294066 plus strand	587223
ADAM32	NM_145004	NP_659441	Coding	chr8:39107530 plus strand	587224
ADAM7	NM_003817	NP_003808	Coding	chr8:24440995 plus strand	587225
ADAM9	NM_003816	NP_003807	Coding	chr8:38996985 plus strand	587226
ADAMDEC1	NM_001145271	NP_001138743	Coding	chr8:24384284 plus strand	587227
ADAMDEC1	NM_001145272	NP_001138744	Coding	chr8:24384284 plus strand	587227
ADAMDEC1	NM_014479	NP_055294	Coding	chr8:24384284 plus strand	587227
ADCK5	NM_174922	NP_777582	Coding	chr8:144374014 plus strand	587228
ADCY8	NM_001115	NP_001106	Coding	chr8:131040589 minus strand	587229
ADHFE1	NM_144650	NP_653251	Coding	chr8:66432482 plus strand	587230
ADRA1A	NM_000680	NP_000671	Coding	chr8:26865405 minus strand	587231
ADRA1A	NM_033302	NP_150645	Coding	chr8:26865405 minus strand	587231
ADRA1A	NM_033303	NP_150646	Coding	chr8:26865405 minus strand	587231
ADRA1A	NM_033304	NP_150647	Coding	chr8:26865405 minus strand	587231
ADRB3	NM_000025	NP_000016	Coding	chr8:37966666 minus strand	587232
AGO2	NM_001164623	NP_001158095	Coding	chr8:140635547 minus strand	587233
AGO2	NM_012154	NP_036286	Coding	chr8:140635547 minus strand	587233
AGPAT5	NM_018361	NP_060831	Coding	chr8:6708356 plus strand	587234

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AGPAT6	NM_178819	NP_848934	Coding	chr8:41578187 plus strand	587235
ANGPT1	NM_001146	NP_001137	Coding	chr8:107498026 minus strand	587236
ANGPT1	NM_001199859	NP_001186788	Coding	chr8:107498026 minus strand	587236
ANGPT2	NM_001118887	NP_001112359	Coding	chr8:6563263 minus strand	587237
ANGPT2	NM_001118888	NP_001112360	Coding	chr8:6563263 minus strand	587237
ANGPT2	NM_001147	NP_001138	Coding	chr8:6563263 minus strand	587237
ANK1	NM_000037	NP_000028	Coding	chr8:41797622 minus strand	587238
ANK1	NM_001142445	NP_001135917	Coding	chr8:41665286 minus strand	587239
ANK1	NM_001142446	NP_001135918	Coding	chr8:41896762 minus strand	587240
ANK1	NM_020475	NP_065208	Coding	chr8:41797622 minus strand	587238
ANK1	NM_020476	NP_065209	Coding	chr8:41797622 minus strand	587238
ANK1	NM_020477	NP_065210	Coding	chr8:41797622 minus strand	587238
ANK1	NM_020478	NP_065211	Coding	chr8:41665286 minus strand	587239
ANK1	NM_020480	NP_065213	Coding	chr8:41665286 minus strand	587239
ANKRD46	NM_001270377	NP_001257306	Coding	chr8:100559786 minus strand	587241
ANKRD46	NM_001270378	NP_001257307	Coding	chr8:100559711 minus strand	587242
ANKRD46	NM_001270379	NP_001257308	Coding	chr8:100559786 minus strand	587241
ANKRD46	NM_198401	NP_940683	Coding	chr8:100559786 minus strand	587241
ANXA13	NM_001003954	NP_001003954	Coding	chr8:123737407 minus strand	587243
ANXA13	NM_004306	NP_004297	Coding	chr8:123737407 minus strand	587243
AP3M2	NM_001134296	NP_001127768	Coding	chr8:42152945 plus strand	587244
AP3M2	NM_006803	NP_006794	Coding	chr8:42152945 plus strand	587244
ARC	NM_015193	NP_056008	Coding	chr8:142614472 minus strand	587245
ARFGEF1	NM_006421	NP_006412	Coding	chr8:67343677 minus strand	587246
ARHGAP39	NM_025251	NP_079527	Coding	chr8:144613503 minus strand	587247
ARHGEF10	NM_014629	NP_055444	Coding	chr8:1823982 plus strand	587248
ARMC1	NM_001286702	NP_001273631	Coding	chr8:65634217 minus strand	587249
ARMC1	NM_018120	NP_060590	Coding	chr8:65634217 minus strand	587249
ASAH1	NM_001127505	NP_001120977	Coding	chr8:18084998 minus strand	587250
ASAH1	NM_004315	NP_004306	Coding	chr8:18084998 minus	587250

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				strand	
ASAH1	NM_177924	NP_808592	Coding	chr8:18084370 minus strand	587251
ASAP1	NM_001247996	NP_001234925	Coding	chr8:130443660 minus strand	587252
ASAP1	NM_018482	NP_060952	Coding	chr8:130443660 minus strand	587252
ASH2L	NM_001105214	NP_001098684	Coding	chr8:38105792 plus strand	587253
ASH2L	NM_001261832	NP_001248761	Coding	chr8:38105792 plus strand	587253
ASH2L	NM_001282272	NP_001269201	Coding	chr8:38105492 plus strand	587254
ASH2L	NM_004674	NP_004665	Coding	chr8:38105492 plus strand	587254
ASPH	NM_001164750	NP_001158222	Coding	chr8:61689849 minus strand	587255
ASPH	NM_001164751	NP_001158223	Coding	chr8:61689849 minus strand	587255
ASPH	NM_001164752	NP_001158224	Coding	chr8:61689849 minus strand	587255
ASPH	NM_001164753	NP_001158225	Coding	chr8:61689849 minus strand	587255
ASPH	NM_001164754	NP_001158226	Coding	chr8:61714640 minus strand	587256
ASPH	NM_001164755	NP_001158227	Coding	chr8:61714640 minus strand	587256
ASPH	NM_001164756	NP_001158228	Coding	chr8:61714640 minus strand	587256
ASPH	NM_004318	NP_004309	Coding	chr8:61714640 minus strand	587256
ASPH	NM_020164	NP_064549	Coding	chr8:61689849 minus strand	587255
ASPH	NM_032466	NP_115855	Coding	chr8:61714640 minus strand	587256
ASPH	NM_032467	NP_115856	Coding	chr8:61689849 minus strand	587255
ASPH	NM_032468	NP_115857	Coding	chr8:61689849 minus strand	587255
ATAD2	NM_014109	NP_054828	Coding	chr8:123396465 minus strand	587257
ATP6V0D2	NM_152565	NP_689778	Coding	chr8:86098909 plus strand	587258
ATP6V1B2	NM_001693	NP_001684	Coding	chr8:20197192 plus strand	587259
ATP6V1C1	NM_001695	NP_001686	Coding	chr8:103021019 plus strand	587260
ATP6V1H	NM_015941	NP_057025	Coding	chr8:53843311 minus strand	587261
ATP6V1H	NM_213619	NP_998784	Coding	chr8:53843311 minus strand	587261
ATP6V1H	NM_213620	NP_998785	Coding	chr8:53843042 minus strand	587262
AZIN1	NM_001301668	NP_001288597	Coding	chr8:102864200 minus strand	587263
AZIN1	NM_015878	NP_056962	Coding	chr8:102864200 minus strand	587263
AZIN1	NM_148174	NP_680479	Coding	chr8:102864200 minus	587263

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				strand	
BAALC	NM_001024372	NP_001019543	Coding	chr8:103140692 plus strand	587264
BAALC	NM_024812	NP_079088	Coding	chr8:103140692 plus strand	587264
BAG4	NM_001204878	NP_001191807	Coding	chr8:38176587 plus strand	587265
BAG4	NM_004874	NP_004865	Coding	chr8:38176587 plus strand	587265
BAI1	NM_001702	NP_001693	Coding	chr8:142464015 plus strand	587266
BHLHE22	NM_152414	NP_689627	Coding	chr8:64580237 plus strand	587267
BIN3	NM_018688	NP_061158	Coding	chr8:22669148 minus strand	587268
BLK	NM_001715	NP_001706	Coding	chr8:11494011 plus strand	587269
BMP1	NM_001199	NP_001190	Coding	chr8:22165139 plus strand	587270
BMP1	NM_006129	NP_006120	Coding	chr8:22165139 plus strand	587270
BNIP3L	NM_004331	NP_004322	Coding	chr8:26383006 plus strand	587271
BOP1	NM_015201	NP_056016	Coding	chr8:144291438 minus strand	587272
BRF2	NM_018310	NP_060780	Coding	chr8:37849913 minus strand	587273
C8orf22	NM_001007176	NP_001007177	Coding	chr8:49072340 plus strand	587274
C8orf22	NM_001256596	NP_001243525	Coding	chr8:49054335 plus strand	587275
C8orf22	NM_001256597	NP_001243526	Coding	chr8:49072340 plus strand	587274
C8orf22	NM_001256598	NP_001243527	Coding	chr8:49072340 plus strand	587274
C8orf31	NM_173687	NP_775958	Coding	chr8:143039208 plus strand	587276
C8orf33	NM_023080	NP_075568	Coding	chr8:145052437 plus strand	587277
C8orf34	NM_001195639	NP_001182568	Coding	chr8:68330721 plus strand	587278
C8orf34	NM_052958	NP_443190	Coding	chr8:68330721 plus strand	587278
C8orf37	NM_177965	NP_808880	Coding	chr8:95269234 minus strand	587279
C8orf4	NM_020130	NP_064515	Coding	chr8:40153467 plus strand	587280
C8orf44	NM_019607	NP_062553	Coding	chr8:66667551 plus strand	587281
C8orf44-SGK3	NM_001204173	NP_001191102	Coding	chr8:66667551 plus strand	587282
C8orf46	NM_152765	NP_689978	Coding	chr8:66493255 plus strand	587283
C8orf48	NM_001007090	NP_001007091	Coding	chr8:13566842 plus strand	587284
C8orf58	NM_001013842	NP_001013864	Coding	chr8:22599600 plus strand	587285
C8orf58	NM_001198827	NP_001185756	Coding	chr8:22599600 plus strand	587285
C8orf58	NM_173686	NP_775957	Coding	chr8:22599600 plus strand	587285
C8orf59	NM_001099670	NP_001093140	Coding	chr8:85220422 minus strand	587286
C8orf59	NM_001099671	NP_001093141	Coding	chr8:85220422 minus strand	587286
C8orf59	NM_001099672	NP_001093142	Coding	chr8:85220422 minus strand	587286
C8orf59	NM_001099673	NP_001093143	Coding	chr8:85220422 minus strand	587286

【０６１１】

C8orf59	NM_001293320	NP_001280249	Coding	chr8:85220422 minus strand	587286
C8orf74	NM_001040032	NP_001035121	Coding	chr8:10672636 plus strand	587287
C8orf76	NM_032847	NP_116236	Coding	chr8:123241398 minus strand	587288
C8orf82	NM_001001795	NP_001001795	Coding	chr8:144529074 minus strand	587289
C8orf86	NM_207412	NP_997295	Coding	chr8:38528662 minus strand	587290
C8orf87	NM_001242668	NP_001229597	Coding	chr8:93166850 minus strand	587291
C8orf88	NM_001190972	NP_001177901	Coding	chr8:90985257 minus strand	587292
C8orf89	NM_001243237	NP_001230166	Coding	chr8:73259502 minus strand	587293
CA1	NM_001128829	NP_001122301	Coding	chr8:85378154 minus strand	587294
CA1	NM_001128830	NP_001122302	Coding	chr8:85378154 minus strand	587294
CA1	NM_001128831	NP_001122303	Coding	chr8:85378154 minus strand	587294
CA1	NM_001164830	NP_001158302	Coding	chr8:85341714 minus strand	587295
CA1	NM_001291967	NP_001278896	Coding	chr8:85378154 minus strand	587294
CA1	NM_001291968	NP_001278897	Coding	chr8:85378154 minus strand	587294
CA1	NM_001738	NP_001729	Coding	chr8:85378154 minus strand	587294
CA13	NM_198584	NP_940986	Coding	chr8:85245486 plus strand	587296
CA2	NM_000067	NP_000058	Coding	chr8:85463901 plus strand	587297
CA2	NM_001293675	NP_001280604	Coding	chr8:85463901 plus strand	587297
CA3	NM_005181	NP_005172	Coding	chr8:85438826 plus strand	587298
CA8	NM_004056	NP_004047	Coding	chr8:60281395 minus strand	587299
CALB1	NM_004929	NP_004920	Coding	chr8:90082879 minus strand	587300
CCAR2	NM_021174	NP_066997	Coding	chr8:22605025 plus strand	587301
CCDC166	NM_001162914	NP_001156386	Coding	chr8:143708109 minus strand	587302
CCDC25	NM_018246	NP_060716	Coding	chr8:27772653 minus strand	587303
CCNE2	NM_057749	NP_477097	Coding	chr8:94895254 minus strand	587304
CDCA2	NM_152562	NP_689775	Coding	chr8:25458996 plus strand	587305
CDH17	NM_001144663	NP_001138135	Coding	chr8:94217303 minus strand	587306
CDH17	NM_004063	NP_004054	Coding	chr8:94208587 minus strand	587307
CEBPD	NM_005195	NP_005186	Coding	chr8:47738164 minus strand	587308
CHCHD7	NM_001011667	NP_001011667	Coding	chr8:56211755 plus strand	587309

【０６１２】

CHCHD7	NM_001011668	NP_001011668	Coding	chr8:56211755 plus strand	587309
CHCHD7	NM_001011669	NP_001011669	Coding	chr8:56211755 plus strand	587309
CHCHD7	NM_001011670	NP_001011670	Coding	chr8:56211755 plus strand	587309
CHCHD7	NM_001011671	NP_001011671	Coding	chr8:56211755 plus strand	587309
CHCHD7	NM_024300	NP_077276	Coding	chr8:56211755 plus strand	587309
CHD7	NM_017780	NP_060250	Coding	chr8:60678764 plus strand	587310
CHMP4C	NM_152284	NP_689497	Coding	chr8:81732452 plus strand	587311
CHMP7	NM_152272	NP_689485	Coding	chr8:23243636 plus strand	587312
CHRAC1	NM_017444	NP_059140	Coding	chr8:140511297 plus strand	587313
CHRNA2	NM_000742	NP_000733	Coding	chr8:27479296 minus strand	587314
CHRNA2	NM_001282455	NP_001269384	Coding	chr8:27479296 minus strand	587314
CHRNA6	NM_001199279	NP_001186208	Coding	chr8:42768786 minus strand	587315
CHRNA6	NM_004198	NP_004189	Coding	chr8:42768786 minus strand	587315
CHRNB3	NM_000749	NP_000740	Coding	chr8:42697418 plus strand	587316
CLDN23	NM_194284	NP_919260	Coding	chr8:8702155 plus strand	587317
CLN8	NM_018941	NP_061764	Coding	chr8:1763703 plus strand	587318
CLU	NM_001831	NP_001822	Coding	chr8:27614811 minus strand	587319
CLVS1	NM_173519	NP_775790	Coding	chr8:61287965 plus strand	587320
CNBD1	NM_173538	NP_775809	Coding	chr8:86866447 plus strand	587321
CNGB3	NM_019098	NP_061971	Coding	chr8:86743675 minus strand	587322
CNOT7	NM_013354	NP_037486	Coding	chr8:17246878 minus strand	587323
CNOT7	NM_054026	NP_473367	Coding	chr8:17246878 minus strand	587323
COL14A1	NM_021110	NP_066933	Coding	chr8:120125107 plus strand	587324
COL22A1	NM_152888	NP_690848	Coding	chr8:138913993 minus strand	587325
COLEC10	NM_006438	NP_006429	Coding	chr8:119067184 plus strand	587326
COMMD5	NM_001081003	NP_001074472	Coding	chr8:144853578 minus strand	587327
COMMD5	NM_001081004	NP_001074473	Coding	chr8:144853067 minus strand	587328
COMMD5	NM_001287237	NP_001274166	Coding	chr8:144853067 minus strand	587328
COMMD5	NM_014066	NP_054785	Coding	chr8:144853067 minus strand	587328
COPS5	NM_006837	NP_006828	Coding	chr8:67062327 minus strand	587329
COX6C	NM_004374	NP_004365	Coding	chr8:99894014 minus strand	587330
CPA6	NM_020361	NP_065094	Coding	chr8:67746385 minus	587331

【０６１３】

				strand	
CPNE3	NM_003909	NP_003900	Coding	chr8:86514426 plus strand	587332
CPQ	NM_016134	NP_057218	Coding	chr8:96645226 plus strand	587333
CPSF1	NM_013291	NP_037423	Coding	chr8:144409349 minus strand	587334
CRH	NM_000756	NP_000747	Coding	chr8:66178611 minus strand	587335
CRISPLD1	NM_001286777	NP_001273706	Coding	chr8:75000153 plus strand	587336
CRISPLD1	NM_001286778	NP_001273707	Coding	chr8:75000153 plus strand	587336
CRISPLD1	NM_031461	NP_113649	Coding	chr8:74984472 plus strand	587337
CSGALNACT1	NM_001130518	NP_001123990	Coding	chr8:19602545 minus strand	587338
CSGALNACT1	NM_018371	NP_060841	Coding	chr8:19682583 minus strand	587339
CSMD1	NM_033225	NP_150094	Coding	chr8:4994806 minus strand	587340
CSMD3	NM_052900	NP_443132	Coding	chr8:113437013 minus strand	587341
CSMD3	NM_198123	NP_937756	Coding	chr8:113437013 minus strand	587341
CSMD3	NM_198124	NP_937757	Coding	chr8:113377153 minus strand	587342
CSPP1	NM_001291339	NP_001278268	Coding	chr8:67083847 plus strand	587343
CSPP1	NM_024790	NP_079066	Coding	chr8:67064367 plus strand	587344
CTHRC1	NM_001256099	NP_001243028	Coding	chr8:103372432 plus strand	587345
CTHRC1	NM_138455	NP_612464	Coding	chr8:103371514 plus strand	587346
CTSB	NM_001908	NP_001899	Coding	chr8:11868137 minus strand	587347
CTSB	NM_147780	NP_680090	Coding	chr8:11868137 minus strand	587347
CTSB	NM_147781	NP_680091	Coding	chr8:11868137 minus strand	587347
CTSB	NM_147782	NP_680092	Coding	chr8:11868137 minus strand	587347
CTSB	NM_147783	NP_680093	Coding	chr8:11868137 minus strand	587347
CYC1	NM_001916	NP_001907	Coding	chr8:144095034 plus strand	587348
CYHR1	NM_001129888	NP_001123360	Coding	chr8:144465648 minus strand	587349
CYHR1	NM_032687	NP_116076	Coding	chr8:144465466 minus strand	587350
CYHR1	NM_138496	NP_612505	Coding	chr8:144465035 minus strand	587351
CYP11B1	NM_000497	NP_000488	Coding	chr8:142879820 minus strand	587352
CYP11B1	NM_001026213	NP_001021384	Coding	chr8:142879820 minus strand	587352
CYP11B2	NM_000498	NP_000489	Coding	chr8:142917843 minus strand	587353

【０６１４】

CYP7A1	NM_000780	NP_000771	Coding	chr8:58500161 minus strand	587354
CYP7B1	NM_004820	NP_004811	Coding	chr8:64798791 minus strand	587355
DCAF13	NM_015420	NP_056235	Coding	chr8:103414713 plus strand	587356
DCAF4L2	NM_152418	NP_689631	Coding	chr8:87874068 minus strand	587357
DCSTAMP	NM_001257317	NP_001244246	Coding	chr8:104339795 plus strand	587358
DCSTAMP	NM_030788	NP_110415	Coding	chr8:104339795 plus strand	587358
DCTN6	NM_006571	NP_006562	Coding	chr8:30156296 plus strand	587359
DDHD2	NM_001164232	NP_001157704	Coding	chr8:38231952 plus strand	587360
DDHD2	NM_001164234	NP_001157706	Coding	chr8:38231490 plus strand	587361
DDHD2	NM_015214	NP_056029	Coding	chr8:38231490 plus strand	587361
DECR1	NM_001359	NP_001350	Coding	chr8:90001351 plus strand	587362
DEFA1	NM_004084	NP_004075	Coding	chr8:6980092 minus strand	587363
DEFA1	NM_004084	NP_004075	Coding	chr8:6999202 minus strand	587364
DEFA1B	NM_001042500	NP_001035965	Coding	chr8:6980092 minus strand	587365
DEFA1B	NM_001042500	NP_001035965	Coding	chr8:6999202 minus strand	587366
DEFA1B	NM_001302265	NP_001289194	Coding	chr8:6980092 minus strand	587365
DEFA1B	NM_001302265	NP_001289194	Coding	chr8:6999202 minus strand	587366
DEFA3	NM_005217	NP_005208	Coding	chr8:7018294 minus strand	587367
DEFA4	NM_001925	NP_001916	Coding	chr8:6938338 minus strand	587368
DEFA5	NM_021010	NP_066290	Coding	chr8:7056739 minus strand	587369
DEFA6	NM_001926	NP_001917	Coding	chr8:6926076 minus strand	587370
DEFB1	NM_005218	NP_005209	Coding	chr8:6878007 minus strand	587371
DEFB103A	NM_001081551	NP_001075020	Coding	chr8:7430348 minus strand	587372
DEFB103A	NM_001081551	NP_001075020	Coding	chr8:7881203 plus strand	587373
DEFB103B	NM_018661	NP_061131	Coding	chr8:7430348 minus strand	587374
DEFB103B	NM_018661	NP_061131	Coding	chr8:7881203 plus strand	587375
DEFB104A	NM_080389	NP_525128	Coding	chr8:7475082 minus strand	587376
DEFB104A	NM_080389	NP_525128	Coding	chr8:7836470 plus strand	587377
DEFB104B	NM_001040702	NP_001035792	Coding	chr8:7475082 minus strand	587378
DEFB104B	NM_001040702	NP_001035792	Coding	chr8:7836470 plus strand	587379
DEFB105A	NM_152250	NP_689463	Coding	chr8:7487668 plus strand	587380
DEFB105A	NM_152250	NP_689463	Coding	chr8:7823890 minus strand	587381
DEFB105B	NM_001040703	NP_001035793	Coding	chr8:7487668 plus strand	587382
DEFB105B	NM_001040703	NP_001035793	Coding	chr8:7823890 minus strand	587383
DEFB106A	NM_152251	NP_689464	Coding	chr8:7486387 minus strand	587384
DEFB106A	NM_152251	NP_689464	Coding	chr8:7825171 plus strand	587385
DEFB106B	NM_001040704	NP_001035794	Coding	chr8:7486387 minus strand	587386
DEFB106B	NM_001040704	NP_001035794	Coding	chr8:7825171 plus strand	587387

【０６１５】

DEFB107A	NM_001037668	NP_001032757	Coding	chr8:7495845 plus strand	587388
DEFB107A	NM_001037668	NP_001032757	Coding	chr8:7815716 minus strand	587389
DEFB107B	NM_001040705	NP_001035795	Coding	chr8:7495845 plus strand	587390
DEFB107B	NM_001040705	NP_001035795	Coding	chr8:7815716 minus strand	587391
DEFB130	NM_001037804	NP_001032893	Coding	chr8:12071747 minus strand	587392
DEFB130	NM_001037804	NP_001032893	Coding	chr8:12318316 minus strand	587393
DEFB134	NM_001033019	NP_001028191	Coding	chr8:11996251 minus strand	587394
DEFB134	NM_001302695	NP_001289624	Coding	chr8:12000752 minus strand	587395
DEFB135	NM_001033017	NP_001028189	Coding	chr8:11982320 plus strand	587396
DEFB136	NM_001033018	NP_001028190	Coding	chr8:11974599 minus strand	587397
DEFB4A	NM_004942	NP_004933	Coding	chr8:7894564 plus strand	587398
DEFB4B	NM_001205266	NP_001192195	Coding	chr8:7416832 minus strand	587399
DENND3	NM_014957	NP_055772	Coding	chr8:141128620 plus strand	587400
DEPTOR	NM_001283012	NP_001269941	Coding	chr8:119873654 plus strand	587401
DEPTOR	NM_022783	NP_073620	Coding	chr8:119873654 plus strand	587401
DERL1	NM_001134671	NP_001128143	Coding	chr8:123042423 minus strand	587402
DERL1	NM_024295	NP_077271	Coding	chr8:123042423 minus strand	587402
DGAT1	NM_012079	NP_036211	Coding	chr8:144326919 minus strand	587403
DKK4	NM_014420	NP_055235	Coding	chr8:42377156 minus strand	587404
DLC1	NM_001164271	NP_001157743	Coding	chr8:13116244 minus strand	587405
DLC1	NM_006094	NP_006085	Coding	chr8:13133300 minus strand	587406
DLC1	NM_024767	NP_079043	Coding	chr8:13514920 minus strand	587407
DLC1	NM_182643	NP_872584	Coding	chr8:13514920 minus strand	587407
DLGAP2	NM_001277161	NP_001264090	Coding	chr8:1501365 plus strand	587408
DLGAP2	NM_004745	NP_004736	Coding	chr8:1501365 plus strand	587408
DMTN	NM_001114135	NP_001107607	Coding	chr8:22057863 plus strand	587409
DMTN	NM_001114136	NP_001107608	Coding	chr8:22054816 plus strand	587410
DMTN	NM_001114137	NP_001107609	Coding	chr8:22053554 plus strand	587411
DMTN	NM_001114138	NP_001107610	Coding	chr8:22059144 plus strand	587412
DMTN	NM_001114139	NP_001107611	Coding	chr8:22054816 plus strand	587410
DMTN	NM_001302816	NP_001289745	Coding	chr8:22059144 plus strand	587412
DMTN	NM_001302817	NP_001289746	Coding	chr8:22054816 plus strand	587410
DMTN	NM_001978	NP_001969	Coding	chr8:22059144 plus strand	587412

【０６１６】

DNAJC5B	NM_033105	NP_149096	Coding	chr8:66021555 plus strand	587413
DOCK5	NM_024940	NP_079216	Coding	chr8:25184771 plus strand	587414
DOK2	NM_003974	NP_003965	Coding	chr8:21913694 minus strand	587415
DPY19L4	NM_181787	NP_861452	Coding	chr8:94719874 plus strand	587416
DPYS	NM_001385	NP_001376	Coding	chr8:104467049 minus strand	587417
DPYSL2	NM_001197293	NP_001184222	Coding	chr8:26514192 plus strand	587418
DPYSL2	NM_001244604	NP_001231533	Coding	chr8:26578404 plus strand	587419
DPYSL2	NM_001386	NP_001377	Coding	chr8:26577823 plus strand	587420
DSCC1	NM_024094	NP_076999	Coding	chr8:119855930 minus strand	587421
DUSP26	NM_024025	NP_076930	Coding	chr8:33599921 minus strand	587422
DUSP4	NM_001394	NP_001385	Coding	chr8:29350750 minus strand	587423
DUSP4	NM_057158	NP_476499	Coding	chr8:29348805 minus strand	587424
E2F5	NM_001083588	NP_001077057	Coding	chr8:85177383 plus strand	587425
E2F5	NM_001083589	NP_001077058	Coding	chr8:85187674 plus strand	587426
E2F5	NM_001951	NP_001942	Coding	chr8:85177383 plus strand	587425
EBAG9	NM_001278938	NP_001265867	Coding	chr8:109540625 plus strand	587427
EBAG9	NM_004215	NP_004206	Coding	chr8:109540074 plus strand	587428
EBAG9	NM_198120	NP_936056	Coding	chr8:109539699 plus strand	587429
EBF2	NM_022659	NP_073150	Coding	chr8:26045124 minus strand	587430
EEF1D	NM_001130053	NP_001123525	Coding	chr8:143597675 minus strand	587431
EEF1D	NM_001130055	NP_001123527	Coding	chr8:143597675 minus strand	587431
EEF1D	NM_001130056	NP_001123528	Coding	chr8:143597675 minus strand	587431
EEF1D	NM_001130057	NP_001123529	Coding	chr8:143597388 minus strand	587432
EEF1D	NM_001195203	NP_001182132	Coding	chr8:143597675 minus strand	587431
EEF1D	NM_001289950	NP_001276879	Coding	chr8:143597675 minus strand	587431
EEF1D	NM_001960	NP_001951	Coding	chr8:143597675 minus strand	587431
EEF1D	NM_032378	NP_115754	Coding	chr8:143597675 minus strand	587431
EFCAB1	NM_001142857	NP_001136329	Coding	chr8:48735311 minus strand	587433
EFCAB1	NM_024593	NP_078869	Coding	chr8:48735311 minus strand	587433
EFR3A	NM_015137	NP_055952	Coding	chr8:131904108 plus strand	587434

【０６１７】

EGR3	NM_001199880	NP_001186809	Coding	chr8:22692389 minus strand	587435
EGR3	NM_001199881	NP_001186810	Coding	chr8:22692580 minus strand	587436
EGR3	NM_004430	NP_004421	Coding	chr8:22693302 minus strand	587437
EIF3E	NM_001568	NP_001559	Coding	chr8:108248730 minus strand	587438
EIF3H	NM_003756	NP_003747	Coding	chr8:116755823 minus strand	587439
EIF4EBP1	NM_004095	NP_004086	Coding	chr8:38030501 plus strand	587440
ELP3	NM_001284220	NP_001271149	Coding	chr8:28093066 plus strand	587441
ELP3	NM_001284222	NP_001271151	Coding	chr8:28090230 plus strand	587442
ELP3	NM_001284224	NP_001271153	Coding	chr8:28093066 plus strand	587441
ELP3	NM_001284225	NP_001271154	Coding	chr8:28093066 plus strand	587441
ELP3	NM_001284226	NP_001271155	Coding	chr8:28093066 plus strand	587441
ELP3	NM_018091	NP_060561	Coding	chr8:28093066 plus strand	587441
EMC2	NM_014673	NP_055488	Coding	chr8:108443623 plus strand	587443
ENPP2	NM_001040092	NP_001035181	Coding	chr8:119638866 minus strand	587444
ENPP2	NM_001130863	NP_001124335	Coding	chr8:119638866 minus strand	587444
ENPP2	NM_006209	NP_006200	Coding	chr8:119638866 minus strand	587444
ENTPD4	NM_001128930	NP_001122402	Coding	chr8:23457731 minus strand	587445
ENTPD4	NM_004901	NP_004892	Coding	chr8:23457731 minus strand	587445
ENY2	NM_001193557	NP_001180486	Coding	chr8:109334322 plus strand	587446
ENY2	NM_020189	NP_064574	Coding	chr8:109334322 plus strand	587446
EPHX2	NM_001256482	NP_001243411	Coding	chr8:27491001 plus strand	587447
EPHX2	NM_001256483	NP_001243412	Coding	chr8:27491001 plus strand	587447
EPHX2	NM_001256484	NP_001243413	Coding	chr8:27491167 plus strand	587448
EPHX2	NM_001979	NP_001970	Coding	chr8:27491001 plus strand	587447
EPPK1	NM_031308	NP_112598	Coding	chr8:143878464 minus strand	587449
ERI1	NM_153332	NP_699163	Coding	chr8:9002803 plus strand	587450
ERICH1	NM_207332	NP_997215	Coding	chr8:731226 minus strand	587451
ERICH5	NM_001170806	NP_001164277	Coding	chr8:98064521 plus strand	587452
ERICH5	NM_173549	NP_775820	Coding	chr8:98064521 plus strand	587452
ERLIN2	NM_001003790	NP_001003790	Coding	chr8:37736678 plus strand	587453
ERLIN2	NM_001003791	NP_001003791	Coding	chr8:37736578 plus strand	587454
ERLIN2	NM_007175	NP_009106	Coding	chr8:37736578 plus strand	587454
ESCO2	NM_001017420	NP_001017420	Coding	chr8:27774540 plus strand	587455
ESRP1	NM_001034915	NP_001030087	Coding	chr8:94641135 plus strand	587456

【０６１８】

ESRP1	NM_001122825	NP_001116297	Coding	chr8:94641135 plus strand	587456
ESRP1	NM_001122826	NP_001116298	Coding	chr8:94641135 plus strand	587456
ESRP1	NM_001122827	NP_001116299	Coding	chr8:94641135 plus strand	587456
ESRP1	NM_017697	NP_060167	Coding	chr8:94641135 plus strand	587456
EXOSC4	NM_019037	NP_061910	Coding	chr8:144078618 plus strand	587457
EXT1	NM_000127	NP_000118	Coding	chr8:118111819 minus strand	587458
EXTL3	NM_001440	NP_001431	Coding	chr8:28701472 plus strand	587459
EYA1	NM_000503	NP_000494	Coding	chr8:71362232 minus strand	587460
EYA1	NM_001288574	NP_001275503	Coding	chr8:71362232 minus strand	587460
EYA1	NM_001288575	NP_001275504	Coding	chr8:71362232 minus strand	587460
EYA1	NM_172058	NP_742055	Coding	chr8:71356689 minus strand	587461
EYA1	NM_172059	NP_742056	Coding	chr8:71356511 minus strand	587462
EYA1	NM_172060	NP_742057	Coding	chr8:71356689 minus strand	587461
FABP12	NM_001105281	NP_001098751	Coding	chr8:81531315 minus strand	587463
FABP4	NM_001442	NP_001433	Coding	chr8:81483238 minus strand	587464
FABP5	NM_001444	NP_001435	Coding	chr8:81280482 plus strand	587465
FABP9	NM_001080526	NP_001073995	Coding	chr8:81461523 minus strand	587466
FAM110B	NM_147189	NP_671722	Coding	chr8:57994553 plus strand	587467
FAM135B	NM_015912	NP_056996	Coding	chr8:138496822 minus strand	587468
FAM150A	NM_207413	NP_997296	Coding	chr8:52565461 minus strand	587469
FAM160B2	NM_022749	NP_073586	Coding	chr8:22089202 plus strand	587470
FAM167A	NM_053279	NP_444509	Coding	chr8:11466767 minus strand	587471
FAM49B	NM_001256763	NP_001243692	Coding	chr8:129939872 minus strand	587472
FAM49B	NM_016623	NP_057707	Coding	chr8:129939872 minus strand	587472
FAM83A	NM_001288587	NP_001275516	Coding	chr8:123182025 plus strand	587473
FAM83A	NM_032899	NP_116288	Coding	chr8:123179046 plus strand	587474
FAM83A	NM_207006	NP_996889	Coding	chr8:123179046 plus strand	587474
FAM83H	NM_198488	NP_940890	Coding	chr8:143733744 minus strand	587475
FAM84B	NM_174911	NP_777571	Coding	chr8:126558466 minus strand	587476
FAM86B1	NM_001083537	NP_001077006	Coding	chr8:12194115 minus strand	587477

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FAM86B2	NM_001137610	NP_001131082	Coding	chr8:12436343 minus strand	587478
FAM91A1	NM_144963	NP_659400	Coding	chr8:123768641 plus strand	587479
FAM92A1	NM_001283034	NP_001269963	Coding	chr8:93700506 plus strand	587480
FAM92A1	NM_145269	NP_660312	Coding	chr8:93700506 plus strand	587480
FBXL6	NM_012162	NP_036294	Coding	chr8:144358523 minus strand	587481
FBXL6	NM_024555	NP_078831	Coding	chr8:144358523 minus strand	587481
FBXO16	NM_001258211	NP_001245140	Coding	chr8:28490318 minus strand	587482
FBXO16	NM_172366	NP_758954	Coding	chr8:28490318 minus strand	587482
FBXO25	NM_012173	NP_036305	Coding	chr8:406807 plus strand	587483
FBXO25	NM_183420	NP_904356	Coding	chr8:406807 plus strand	587483
FBXO25	NM_183421	NP_904357	Coding	chr8:406807 plus strand	587483
FBXO32	NM_001242463	NP_001229392	Coding	chr8:123541253 minus strand	587484
FBXO32	NM_058229	NP_478136	Coding	chr8:123541253 minus strand	587484
FBXO32	NM_148177	NP_680482	Coding	chr8:123532143 minus strand	587485
FBXO43	NM_001029860	NP_001025031	Coding	chr8:100145871 minus strand	587486
FDFT1	NM_001287742	NP_001274671	Coding	chr8:11795572 plus strand	587487
FDFT1	NM_001287743	NP_001274672	Coding	chr8:11795572 plus strand	587487
FDFT1	NM_001287744	NP_001274673	Coding	chr8:11795572 plus strand	587487
FDFT1	NM_001287745	NP_001274674	Coding	chr8:11802610 plus strand	587488
FDFT1	NM_001287747	NP_001274676	Coding	chr8:11803043 plus strand	587489
FDFT1	NM_001287748	NP_001274677	Coding	chr8:11803088 plus strand	587490
FDFT1	NM_001287749	NP_001274678	Coding	chr8:11807942 plus strand	587491
FDFT1	NM_001287750	NP_001274679	Coding	chr8:11808416 plus strand	587492
FDFT1	NM_001287751	NP_001274680	Coding	chr8:11809143 plus strand	587493
FDFT1	NM_001287756	NP_001274685	Coding	chr8:11802610 plus strand	587488
FDFT1	NM_004462	NP_004453	Coding	chr8:11802610 plus strand	587488
FER1L6	NM_001039112	NP_001034201	Coding	chr8:123851986 plus strand	587494
FGF17	NM_003867	NP_003858	Coding	chr8:22042916 plus strand	587495
FGF20	NM_019851	NP_062825	Coding	chr8:17002165 minus strand	587496
FGFR1	NM_001174063	NP_001167534	Coding	chr8:38468834 minus strand	587497
FGFR1	NM_001174064	NP_001167535	Coding	chr8:38468834 minus strand	587497
FGFR1	NM_001174065	NP_001167536	Coding	chr8:38467845 minus strand	587498
FGFR1	NM_001174066	NP_001167537	Coding	chr8:38467845 minus strand	587498

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FGFR1	NM_001174067	NP_001167538	Coding	chr8:38467845 minus strand	587498
FGFR1	NM_015850	NP_056934	Coding	chr8:38468834 minus strand	587497
FGFR1	NM_023105	NP_075593	Coding	chr8:38468834 minus strand	587497
FGFR1	NM_023106	NP_075594	Coding	chr8:38468834 minus strand	587497
FGFR1	NM_023110	NP_075598	Coding	chr8:38468834 minus strand	587497
FGL1	NM_004467	NP_004458	Coding	chr8:17895538 minus strand	587499
FGL1	NM_147203	NP_671736	Coding	chr8:17895404 minus strand	587500
FGL1	NM_201552	NP_963846	Coding	chr8:17895538 minus strand	587499
FGL1	NM_201553	NP_963847	Coding	chr8:17895404 minus strand	587500
FNTA	NM_002027	NP_002018	Coding	chr8:43056298 plus strand	587501
FOXH1	NM_003923	NP_003914	Coding	chr8:144476335 minus strand	587502
FSBP	NM_001256141	NP_001243070	Coding	chr8:94436952 minus strand	587503
FUT10	NM_032664	NP_116053	Coding	chr8:33473146 minus strand	587504
FZD3	NM_017412	NP_059108	Coding	chr8:28494204 plus strand	587505
FZD3	NM_145866	NP_665873	Coding	chr8:28494204 plus strand	587505
FZD6	NM_001164615	NP_001158087	Coding	chr8:103298432 plus strand	587506
FZD6	NM_001164616	NP_001158088	Coding	chr8:103298830 plus strand	587507
FZD6	NM_003506	NP_003497	Coding	chr8:103298830 plus strand	587507
GATA4	NM_002052	NP_002043	Coding	chr8:11704207 plus strand	587508
GDAP1	NM_001040875	NP_001035808	Coding	chr8:74350382 plus strand	587509
GDAP1	NM_018972	NP_061845	Coding	chr8:74350382 plus strand	587509
GDF6	NM_001001557	NP_001001557	Coding	chr8:96160792 minus strand	587510
GEM	NM_005261	NP_005252	Coding	chr8:94262319 minus strand	587511
GEM	NM_181702	NP_859053	Coding	chr8:94262319 minus strand	587511
GFRA2	NM_001165038	NP_001158510	Coding	chr8:21788834 minus strand	587512
GFRA2	NM_001165039	NP_001158511	Coding	chr8:21788834 minus strand	587512
GFRA2	NM_001495	NP_001486	Coding	chr8:21788834 minus strand	587512
GGH	NM_003878	NP_003869	Coding	chr8:63039051 minus strand	587513
GINS4	NM_032336	NP_115712	Coding	chr8:41529205 plus strand	587514
GLI4	NM_138465	NP_612474	Coding	chr8:143267436 plus	587515

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				strand	
GML	NM_002066	NP_002057	Coding	chr8:142834800 plus strand	587516
GNRH1	NM_000825	NP_000816	Coding	chr8:25425040 minus strand	587517
GNRH1	NM_001083111	NP_001076580	Coding	chr8:25425040 minus strand	587517
GOLGA7	NM_001002296	NP_001002296	Coding	chr8:41490653 plus strand	587518
GOLGA7	NM_001174124	NP_001167595	Coding	chr8:41490561 plus strand	587519
GOLGA7	NM_016099	NP_057183	Coding	chr8:41490561 plus strand	587519
GOT1L1	NM_152413	NP_689626	Coding	chr8:37940129 minus strand	587520
GPAA1	NM_003801	NP_003792	Coding	chr8:144082620 plus strand	587521
GPIHBP1	NM_001301772	NP_001288701	Coding	chr8:143213192 plus strand	587522
GPIHBP1	NM_178172	NP_835466	Coding	chr8:143213192 plus strand	587522
GPR124	NM_032777	NP_116166	Coding	chr8:37796882 plus strand	587523
GPR20	NM_005293	NP_005284	Coding	chr8:141367265 minus strand	587524
GPT	NM_005309	NP_005300	Coding	chr8:144504081 plus strand	587525
GRHL2	NM_024915	NP_079191	Coding	chr8:101492439 plus strand	587526
GRIN1	NM_000837	NP_000828	Coding	chr8:143990057 plus strand	587527
GRIN1	NM_001009184	NP_001009184	Coding	chr8:143990057 plus strand	587527
GSDMC	NM_031415	NP_113603	Coding	chr8:129786888 minus strand	587528
GSDMD	NM_001166237	NP_001159709	Coding	chr8:143553386 plus strand	587529
GSDMD	NM_024736	NP_079012	Coding	chr8:143558306 plus strand	587530
GSR	NM_000637	NP_000628	Coding	chr8:30727969 minus strand	587531
GSR	NM_001195102	NP_001182031	Coding	chr8:30727969 minus strand	587531
GSR	NM_001195103	NP_001182032	Coding	chr8:30727969 minus strand	587531
GSR	NM_001195104	NP_001182033	Coding	chr8:30727969 minus strand	587531
GTF2E2	NM_002095	NP_002086	Coding	chr8:30658221 minus strand	587532
HAS2	NM_005328	NP_005319	Coding	chr8:121641390 minus strand	587533
HEY1	NM_001040708	NP_001035798	Coding	chr8:79767863 minus strand	587534
HEY1	NM_001282851	NP_001269780	Coding	chr8:79766475 minus strand	587535
HEY1	NM_012258	NP_036390	Coding	chr8:79767863 minus strand	587534

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HGH1	NM_016458	NP_057542	Coding	chr8:144137768 plus strand	587536
HGSNAT	NM_152419	NP_689632	Coding	chr8:43140448 plus strand	587537
HHLA1	NM_001145095	NP_001138567	Coding	chr8:132105265 minus strand	587538
HMBOX1	NM_001135726	NP_001129198	Coding	chr8:28890393 plus strand	587539
HMBOX1	NM_024567	NP_078843	Coding	chr8:28890707 plus strand	587540
HNF4G	NM_004133	NP_004124	Coding	chr8:75539967 plus strand	587541
HOOK3	NM_032410	NP_115786	Coding	chr8:42896889 plus strand	587542
HR	NM_005144	NP_005135	Coding	chr8:22131052 minus strand	587543
HR	NM_018411	NP_060881	Coding	chr8:22131052 minus strand	587543
HRSP12	NM_005836	NP_005827	Coding	chr8:98117190 minus strand	587544
HSF1	NM_005526	NP_005517	Coding	chr8:144291587 plus strand	587545
HTRA4	NM_153692	NP_710159	Coding	chr8:38974148 plus strand	587546
IDO1	NM_002164	NP_002155	Coding	chr8:39913808 plus strand	587547
IDO2	NM_194294	NP_919270	Coding	chr8:39934954 plus strand	587548
IKBKB	NM_001190720	NP_001177649	Coding	chr8:42271301 plus strand	587549
IKBKB	NM_001242778	NP_001229707	Coding	chr8:42271301 plus strand	587549
IKBKB	NM_001556	NP_001547	Coding	chr8:42271301 plus strand	587549
IL7	NM_000880	NP_000871	Coding	chr8:78805523 minus strand	587550
IL7	NM_001199886	NP_001186815	Coding	chr8:78805523 minus strand	587550
IL7	NM_001199887	NP_001186816	Coding	chr8:78805523 minus strand	587550
IL7	NM_001199888	NP_001186817	Coding	chr8:78805523 minus strand	587550
IMPA1	NM_001144878	NP_001138350	Coding	chr8:81686354 minus strand	587551
IMPA1	NM_001144879	NP_001138351	Coding	chr8:81686354 minus strand	587551
IMPA1	NM_005536	NP_005527	Coding	chr8:81686354 minus strand	587551
IMPAD1	NM_017813	NP_060283	Coding	chr8:56993871 minus strand	587552
INTS10	NM_018142	NP_060612	Coding	chr8:19817406 plus strand	587553
INTS8	NM_017864	NP_060334	Coding	chr8:94823289 plus strand	587554
INTS9	NM_001145159	NP_001138631	Coding	chr8:28890181 minus strand	587555
INTS9	NM_001172562	NP_001166033	Coding	chr8:28889915 minus strand	587556
INTS9	NM_018250	NP_060720	Coding	chr8:28890181 minus strand	587555
JPH1	NM_020647	NP_065698	Coding	chr8:74321327 minus strand	587557
JRK	NM_001077527	NP_001070995	Coding	chr8:142669994 minus	587558

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				strand	
JRK	NM_001279352	NP_001266281	Coding	chr8:142669994 minus strand	587558
JRK	NM_003724	NP_003715	Coding	chr8:142669994 minus strand	587558
KAT6A	NM_001099412	NP_001092882	Coding	chr8:42051987 minus strand	587559
KAT6A	NM_001099413	NP_001092883	Coding	chr8:42051987 minus strand	587559
KAT6A	NM_006766	NP_006757	Coding	chr8:42051987 minus strand	587559
KBTBD11	NM_014867	NP_055682	Coding	chr8:1973877 plus strand	587560
KCNB2	NM_004770	NP_004761	Coding	chr8:72537390 plus strand	587561
KCNK9	NM_001282534	NP_001269463	Coding	chr8:139703056 minus strand	587562
KCNQ3	NM_001204824	NP_001191753	Coding	chr8:132447262 minus strand	587563
KCNQ3	NM_004519	NP_004510	Coding	chr8:132480757 minus strand	587564
KCNS2	NM_020697	NP_065748	Coding	chr8:98427021 plus strand	587565
KCNU1	NM_001031836	NP_001027006	Coding	chr8:36784323 plus strand	587566
KCNV1	NM_014379	NP_055194	Coding	chr8:109974730 minus strand	587567
KCTD9	NM_017634	NP_060104	Coding	chr8:25458468 minus strand	587568
KHDRBS3	NM_006558	NP_006549	Coding	chr8:135457472 plus strand	587569
KIAA0196	NM_014846	NP_055661	Coding	chr8:125091819 minus strand	587570
KIAA1429	NM_015496	NP_056311	Coding	chr8:94553518 minus strand	587571
KIAA1429	NM_183009	NP_892121	Coding	chr8:94553518 minus strand	587571
KIAA1456	NM_001099677	NP_001093147	Coding	chr8:13012263 plus strand	587572
KIAA1456	NM_020844	NP_065895	Coding	chr8:12945673 plus strand	587573
KIF13B	NM_015254	NP_056069	Coding	chr8:29263093 minus strand	587574
KIFC2	NM_145754	NP_665697	Coding	chr8:144466354 plus strand	587575
KLF10	NM_001032282	NP_001027453	Coding	chr8:102653964 minus strand	587576
KLF10	NM_005655	NP_005646	Coding	chr8:102655902 minus strand	587577
KLHL38	NM_001081675	NP_001075144	Coding	chr8:123652950 minus strand	587578
LACTB2	NM_016027	NP_057111	Coding	chr8:70669212 minus strand	587579
LAPTM4B	NM_018407	NP_060877	Coding	chr8:97775580 plus strand	587580
LEPROTL1	NM_001128208	NP_001121680	Coding	chr8:30095405 plus strand	587581
LEPROTL1	NM_015344	NP_056159	Coding	chr8:30095405 plus strand	587581
LETM2	NM_001199659	NP_001186588	Coding	chr8:38386440 plus strand	587582

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LETM2	NM_001199660	NP_001186589	Coding	chr8:38387130 plus strand	587583
LETM2	NM_001286787	NP_001273716	Coding	chr8:38386440 plus strand	587582
LETM2	NM_001286819	NP_001273748	Coding	chr8:38386440 plus strand	587582
LETM2	NM_001286821	NP_001273750	Coding	chr8:38386440 plus strand	587582
LETM2	NM_144652	NP_653253	Coding	chr8:38386440 plus strand	587582
LGI3	NM_139278	NP_644807	Coding	chr8:22156831 minus strand	587584
LOC100133267	NM_001195257	NP_001182186	Coding	chr8:12071747 minus strand	587585
LOC100133267	NM_001195257	NP_001182186	Coding	chr8:12318316 minus strand	587586
LONRF1	NM_152271	NP_689484	Coding	chr8:12755483 minus strand	587587
LOXL2	NM_002318	NP_002309	Coding	chr8:23404209 minus strand	587588
LPL	NM_000237	NP_000228	Coding	chr8:19939070 plus strand	587589
LRP12	NM_001135703	NP_001129175	Coding	chr8:104589024 minus strand	587590
LRP12	NM_013437	NP_038465	Coding	chr8:104589024 minus strand	587590
LRRC14	NM_001272036	NP_001258965	Coding	chr8:144517964 plus strand	587591
LRRC14	NM_014665	NP_055480	Coding	chr8:144517964 plus strand	587591
LRRC24	NM_001024678	NP_001019849	Coding	chr8:144527032 minus strand	587592
LRRC6	NM_012472	NP_036604	Coding	chr8:132675617 minus strand	587593
LRRC69	NM_001129890	NP_001123362	Coding	chr8:91102618 plus strand	587594
LRRCC1	NM_033402	NP_208325	Coding	chr8:85107087 plus strand	587595
LSM1	NM_014462	NP_055277	Coding	chr8:38176730 minus strand	587596
LY6D	NM_003695	NP_003686	Coding	chr8:142786592 minus strand	587597
LY6E	NM_001127213	NP_001120685	Coding	chr8:143018484 plus strand	587598
LY6E	NM_002346	NP_002337	Coding	chr8:143018484 plus strand	587598
LY6H	NM_001130478	NP_001123950	Coding	chr8:143160636 minus strand	587599
LY6H	NM_001135655	NP_001129127	Coding	chr8:143160338 minus strand	587600
LY6H	NM_002347	NP_002338	Coding	chr8:143160040 minus strand	587601
LY6K	NM_001160354	NP_001153826	Coding	chr8:142700110 plus strand	587602
LY6K	NM_001160355	NP_001153827	Coding	chr8:142700110 plus strand	587602
LY6K	NM_017527	NP_059997	Coding	chr8:142700110 plus strand	587602
LY96	NM_001195797	NP_001182726	Coding	chr8:73991328 plus strand	587603

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LY96	NM_015364	NP_056179	Coding	chr8:73991328 plus strand	587603
LYN	NM_001111097	NP_001104567	Coding	chr8:55879826 plus strand	587604
LYN	NM_002350	NP_002341	Coding	chr8:55879826 plus strand	587604
LYNX1	NM_023946	NP_076435	Coding	chr8:142778223 minus strand	587605
LYNX1	NM_177457	NP_803252	Coding	chr8:142778224 minus strand	587606
LYNX1	NM_177458	NP_803253	Coding	chr8:142769828 minus strand	587607
LYNX1	NM_177476	NP_803429	Coding	chr8:142777021 minus strand	587608
LYNX1	NM_177477	NP_803430	Coding	chr8:142777328 minus strand	587609
LYPD2	NM_205545	NP_991108	Coding	chr8:142752534 minus strand	587610
LYPLA1	NM_001279356	NP_001266285	Coding	chr8:54102017 minus strand	587611
LYPLA1	NM_001279357	NP_001266286	Coding	chr8:54102017 minus strand	587611
LYPLA1	NM_001279358	NP_001266287	Coding	chr8:54102017 minus strand	587611
LYPLA1	NM_001279359	NP_001266288	Coding	chr8:54102017 minus strand	587611
LYPLA1	NM_001279360	NP_001266289	Coding	chr8:54101554 minus strand	587612
LYPLA1	NM_006330	NP_006321	Coding	chr8:54102017 minus strand	587611
LZTS1	NM_021020	NP_066300	Coding	chr8:20255292 minus strand	587613
MAF1	NM_032272	NP_115648	Coding	chr8:144104401 plus strand	587614
MAFA	NM_201589	NP_963883	Coding	chr8:143430432 minus strand	587615
MAK16	NM_032509	NP_115898	Coding	chr8:33485166 plus strand	587616
MAL2	NM_052886	NP_443118	Coding	chr8:119208370 plus strand	587617
MAPK15	NM_139021	NP_620590	Coding	chr8:143716336 plus strand	587618
MATN2	NM_002380	NP_002371	Coding	chr8:97869082 plus strand	587619
MATN2	NM_030583	NP_085072	Coding	chr8:97869082 plus strand	587619
MBOAT4	NM_001100916	NP_001094386	Coding	chr8:30144684 minus strand	587620
MCM4	NM_005914	NP_005905	Coding	chr8:47960202 plus strand	587621
MCM4	NM_182746	NP_877423	Coding	chr8:47960202 plus strand	587621
MCMDC2	NM_001136160	NP_001129632	Coding	chr8:66871501 plus strand	587622
MCMDC2	NM_001136161	NP_001129633	Coding	chr8:66870748 plus strand	587623
MCMDC2	NM_173518	NP_775789	Coding	chr8:66870748 plus strand	587623
MCPH1	NM_001172574	NP_001166045	Coding	chr8:6406591 plus strand	587624
MCPH1	NM_001172575	NP_001166046	Coding	chr8:6406591 plus strand	587624
MCPH1	NM_024596	NP_078872	Coding	chr8:6406591 plus strand	587624

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MED30	NM_001282986	NP_001269915	Coding	chr8:117520712 plus strand	587625
MED30	NM_080651	NP_542382	Coding	chr8:117520712 plus strand	587625
MFHAS1	NM_004225	NP_004216	Coding	chr8:8893621 minus strand	587626
MFSD3	NM_138431	NP_612440	Coding	chr8:144509168 plus strand	587627
MICU3	NM_181723	NP_859074	Coding	chr8:17027237 plus strand	587628
MMP16	NM_005941	NP_005932	Coding	chr8:88327488 minus strand	587629
MOS	NM_005372	NP_005363	Coding	chr8:56113982 minus strand	587630
MROH1	NM_001099280	NP_001092750	Coding	chr8:144148015 plus strand	587631
MROH1	NM_001099281	NP_001092751	Coding	chr8:144148015 plus strand	587631
MROH1	NM_001288814	NP_001275743	Coding	chr8:144148644 plus strand	587632
MROH1	NM_032450	NP_115826	Coding	chr8:144148015 plus strand	587631
MROH5	NM_207414	NP_997297	Coding	chr8:141507230 minus strand	587633
MROH6	NM_001100878	NP_001094348	Coding	chr8:143572758 minus strand	587634
MRPL13	NM_014078	NP_054797	Coding	chr8:120445407 minus strand	587635
MRPL15	NM_014175	NP_054894	Coding	chr8:54135220 plus strand	587636
MRPS28	NM_014018	NP_054737	Coding	chr8:80030271 minus strand	587637
MSC	NM_005098	NP_005089	Coding	chr8:71844496 minus strand	587638
MSR1	NM_002445	NP_002436	Coding	chr8:16192791 minus strand	587639
MSR1	NM_138715	NP_619729	Coding	chr8:16192791 minus strand	587639
MSR1	NM_138716	NP_619730	Coding	chr8:16192791 minus strand	587639
MSRA	NM_001135670	NP_001129142	Coding	chr8:10054268 plus strand	587640
MSRA	NM_001135671	NP_001129143	Coding	chr8:10095551 plus strand	587641
MSRA	NM_001199729	NP_001186658	Coding	chr8:10095551 plus strand	587641
MSRA	NM_012331	NP_036463	Coding	chr8:10054268 plus strand	587640
MTBP	NM_022045	NP_071328	Coding	chr8:120445397 plus strand	587642
MTDH	NM_178812	NP_848927	Coding	chr8:97644178 plus strand	587643
MTERF3	NM_001286643	NP_001273572	Coding	chr8:96261613 minus strand	587644
MTERF3	NM_015942	NP_057026	Coding	chr8:96261613 minus strand	587644
MTFR1	NM_001145838	NP_001139310	Coding	chr8:65669872 plus strand	587645
MTFR1	NM_001145839	NP_001139311	Coding	chr8:65644652 plus strand	587646
MTFR1	NM_014637	NP_055452	Coding	chr8:65644652 plus strand	587646

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MTMR7	NM_004686	NP_004677	Coding	chr8:17413531 minus strand	587647
MTMR9	NM_015458	NP_056273	Coding	chr8:11284490 plus strand	587648
MTSS1	NM_001282971	NP_001269900	Coding	chr8:124728507 minus strand	587649
MTSS1	NM_001282974	NP_001269903	Coding	chr8:124728507 minus strand	587649
MTSS1	NM_014751	NP_055566	Coding	chr8:124728507 minus strand	587649
MTUS1	NM_001001924	NP_001001924	Coding	chr8:17800917 minus strand	587650
MTUS1	NM_001001925	NP_001001925	Coding	chr8:17800917 minus strand	587650
MTUS1	NM_001001931	NP_001001931	Coding	chr8:17722221 minus strand	587651
MTUS1	NM_001166393	NP_001159865	Coding	chr8:17722575 minus strand	587652
MTUS1	NM_020749	NP_065800	Coding	chr8:17697737 minus strand	587653
MYBL1	NM_001080416	NP_001073885	Coding	chr8:66613249 minus strand	587654
MYBL1	NM_001144755	NP_001138227	Coding	chr8:66613249 minus strand	587654
MYBL1	NM_001294282	NP_001281211	Coding	chr8:66613249 minus strand	587654
MYC	NM_002467	NP_002458	Coding	chr8:127736068 plus strand	587655
MYOM2	NM_003970	NP_003961	Coding	chr8:2045042 plus strand	587656
NAPRT	NM_001286829	NP_001273758	Coding	chr8:143578351 minus strand	587657
NAPRT	NM_145201	NP_660202	Coding	chr8:143578351 minus strand	587657
NAT1	NM_000662	NP_000653	Coding	chr8:18210102 plus strand	587658
NAT1	NM_001160170	NP_001153642	Coding	chr8:18210102 plus strand	587658
NAT1	NM_001160171	NP_001153643	Coding	chr8:18210102 plus strand	587658
NAT1	NM_001160172	NP_001153644	Coding	chr8:18210102 plus strand	587658
NAT1	NM_001160173	NP_001153645	Coding	chr8:18210102 plus strand	587658
NAT1	NM_001160174	NP_001153646	Coding	chr8:18221667 plus strand	587659
NAT1	NM_001160175	NP_001153647	Coding	chr8:18210102 plus strand	587658
NAT1	NM_001160176	NP_001153648	Coding	chr8:18210102 plus strand	587658
NAT1	NM_001160179	NP_001153651	Coding	chr8:18170461 plus strand	587660
NAT1	NM_001291962	NP_001278891	Coding	chr8:18170461 plus strand	587660
NAT2	NM_000015	NP_000006	Coding	chr8:18391244 plus strand	587661
NBN	NM_002485	NP_002476	Coding	chr8:89984671 minus strand	587662
NCALD	NM_001040624	NP_001035714	Coding	chr8:102124334 minus strand	587663
NCALD	NM_001040625	NP_001035715	Coding	chr8:102124334 minus strand	587663
NCALD	NM_001040626	NP_001035716	Coding	chr8:102124334 minus	587663

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				strand	
NCALD	NM_001040627	NP_001035717	Coding	chr8:102124334 minus strand	587663
NCALD	NM_001040628	NP_001035718	Coding	chr8:102124334 minus strand	587663
NCALD	NM_001040629	NP_001035719	Coding	chr8:102124334 minus strand	587663
NCALD	NM_001040630	NP_001035720	Coding	chr8:102124907 minus strand	587664
NCALD	NM_032041	NP_114430	Coding	chr8:101791211 minus strand	587665
NCOA2	NM_006540	NP_006531	Coding	chr8:70403785 minus strand	587666
NDRG1	NM_001135242	NP_001128714	Coding	chr8:133297304 minus strand	587667
NDRG1	NM_001258432	NP_001245361	Coding	chr8:133297304 minus strand	587667
NDRG1	NM_001258433	NP_001245362	Coding	chr8:133297304 minus strand	587667
NDRG1	NM_006096	NP_006087	Coding	chr8:133297304 minus strand	587667
NDUFAF6	NM_152416	NP_689629	Coding	chr8:95024985 plus strand	587668
NDUFB9	NM_001278645	NP_001265574	Coding	chr8:124539101 plus strand	587669
NDUFB9	NM_001278646	NP_001265575	Coding	chr8:124539101 plus strand	587669
NDUFB9	NM_005005	NP_004996	Coding	chr8:124539101 plus strand	587669
NECAB1	NM_022351	NP_071746	Coding	chr8:90791692 plus strand	587670
NEFL	NM_006158	NP_006149	Coding	chr8:24956869 minus strand	587671
NEFM	NM_001105541	NP_001099011	Coding	chr8:24914941 plus strand	587672
NEFM	NM_005382	NP_005373	Coding	chr8:24913760 plus strand	587673
NEIL2	NM_001135746	NP_001129218	Coding	chr8:11769662 plus strand	587674
NEIL2	NM_001135747	NP_001129219	Coding	chr8:11769662 plus strand	587674
NEIL2	NM_001135748	NP_001129220	Coding	chr8:11769662 plus strand	587674
NEIL2	NM_145043	NP_659480	Coding	chr8:11769662 plus strand	587674
NIPAL2	NM_024759	NP_079035	Coding	chr8:98294393 minus strand	587675
NKAIN3	NM_173688	NP_775959	Coding	chr8:62248941 plus strand	587676
NKX2-6	NM_001136271	NP_001129743	Coding	chr8:23706598 minus strand	587677
NKX3-1	NM_001256339	NP_001243268	Coding	chr8:23682889 minus strand	587678
NKX3-1	NM_006167	NP_006158	Coding	chr8:23682937 minus strand	587679
NKX6-3	NM_152568	NP_689781	Coding	chr8:41647359 minus strand	587680
NOV	NM_002514	NP_002505	Coding	chr8:119416311 plus strand	587681
NPBWR1	NM_005285	NP_005276	Coding	chr8:52939907 plus strand	587682

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NPM2	NM_001286680	NP_001273609	Coding	chr8:22024109 plus strand	587683
NPM2	NM_001286681	NP_001273610	Coding	chr8:22024842 plus strand	587684
NPM2	NM_182795	NP_877724	Coding	chr8:22024842 plus strand	587684
NRBP2	NM_178564	NP_848659	Coding	chr8:143840974 minus strand	587685
NRG1	NM_001159995	NP_001153467	Coding	chr8:32595825 plus strand	587686
NRG1	NM_001159996	NP_001153468	Coding	chr8:32721832 plus strand	587687
NRG1	NM_001159999	NP_001153471	Coding	chr8:32595825 plus strand	587686
NRG1	NM_001160001	NP_001153473	Coding	chr8:32595825 plus strand	587686
NRG1	NM_001160002	NP_001153474	Coding	chr8:32548209 plus strand	587688
NRG1	NM_001160004	NP_001153476	Coding	chr8:32548209 plus strand	587688
NRG1	NM_001160005	NP_001153477	Coding	chr8:32548209 plus strand	587688
NRG1	NM_001160007	NP_001153479	Coding	chr8:32548209 plus strand	587688
NRG1	NM_001160008	NP_001153480	Coding	chr8:32548209 plus strand	587688
NRG1	NM_004495	NP_004486	Coding	chr8:32548209 plus strand	587688
NRG1	NM_013956	NP_039250	Coding	chr8:32548209 plus strand	587688
NRG1	NM_013957	NP_039251	Coding	chr8:32548209 plus strand	587688
NRG1	NM_013958	NP_039252	Coding	chr8:32548209 plus strand	587688
NRG1	NM_013959	NP_039253	Coding	chr8:32646731 plus strand	587689
NRG1	NM_013960	NP_039254	Coding	chr8:32548209 plus strand	587688
NRG1	NM_013962	NP_039256	Coding	chr8:31639751 plus strand	587690
NRG1	NM_013964	NP_039258	Coding	chr8:32548209 plus strand	587688
NSMAF	NM_001144772	NP_001138244	Coding	chr8:58659407 minus strand	587691
NSMAF	NM_003580	NP_003571	Coding	chr8:58659845 minus strand	587692
NSMCE2	NM_173685	NP_775956	Coding	chr8:125091840 plus strand	587693
NUDCD1	NM_001128211	NP_001121683	Coding	chr8:109329933 minus strand	587694
NUDCD1	NM_032869	NP_116258	Coding	chr8:109334121 minus strand	587695
NUDT18	NM_024815	NP_079091	Coding	chr8:22109419 minus strand	587696
NUGGC	NM_001010906	NP_001010906	Coding	chr8:28083871 minus strand	587697
OC90	NM_001080399	NP_001073868	Coding	chr8:132059380 minus strand	587698
ODF1	NM_024410	NP_077721	Coding	chr8:102551619 plus strand	587699
OPLAH	NM_017570	NP_060040	Coding	chr8:144060703 minus strand	587700
OPRK1	NM_000912	NP_000903	Coding	chr8:53251634 minus strand	587701
OPRK1	NM_001282904	NP_001269833	Coding	chr8:53251697 minus strand	587702
OR4F21	NM_001005504	NP_001005504	Coding	chr8:167024 minus strand	587703
OSGIN2	NM_001126111	NP_001119583	Coding	chr8:89902533 plus strand	587704

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OSGIN2	NM_004337	NP_004328	Coding	chr8:89901867 plus strand	587705
OSR2	NM_001142462	NP_001135934	Coding	chr8:98944402 plus strand	587706
OSR2	NM_001286841	NP_001273770	Coding	chr8:98944402 plus strand	587706
OSR2	NM_053001	NP_443727	Coding	chr8:98944402 plus strand	587706
OTUD6B	NM_001286745	NP_001273674	Coding	chr8:91070195 plus strand	587707
OTUD6B	NM_016023	NP_057107	Coding	chr8:91070195 plus strand	587707
OXR1	NM_001198532	NP_001185461	Coding	chr8:106447923 plus strand	587708
OXR1	NM_001198533	NP_001185462	Coding	chr8:106270177 plus strand	587709
OXR1	NM_001198534	NP_001185463	Coding	chr8:106726106 plus strand	587710
OXR1	NM_001198535	NP_001185464	Coding	chr8:106726106 plus strand	587710
OXR1	NM_018002	NP_060472	Coding	chr8:106270177 plus strand	587709
OXR1	NM_181354	NP_851999	Coding	chr8:106657807 plus strand	587711
PABPC1	NM_002568	NP_002559	Coding	chr8:100722087 minus strand	587712
PAG1	NM_018440	NP_060910	Coding	chr8:81112068 minus strand	587713
PARP10	NM_032789	NP_116178	Coding	chr8:143986467 minus strand	587714
PBK	NM_001278945	NP_001265874	Coding	chr8:27838095 minus strand	587715
PBK	NM_018492	NP_060962	Coding	chr8:27838095 minus strand	587715
PCM1	NM_006197	NP_006188	Coding	chr8:17922856 plus strand	587716
PCMTD1	NM_001286782	NP_001273711	Coding	chr8:51899186 minus strand	587717
PCMTD1	NM_001286783	NP_001273712	Coding	chr8:51899186 minus strand	587717
PCMTD1	NM_052937	NP_443169	Coding	chr8:51899186 minus strand	587717
PDE7A	NM_001242318	NP_001229247	Coding	chr8:65841734 minus strand	587718
PDE7A	NM_002603	NP_002594	Coding	chr8:65789094 minus strand	587719
PDGFRL	NM_006207	NP_006198	Coding	chr8:17576432 plus strand	587720
PDLIM2	NM_021630	NP_067643	Coding	chr8:22578740 plus strand	587721
PDLIM2	NM_176871	NP_789847	Coding	chr8:22580473 plus strand	587722
PDLIM2	NM_198042	NP_932159	Coding	chr8:22580473 plus strand	587722
PDP1	NM_001161779	NP_001155251	Coding	chr8:93916946 plus strand	587723
PDP1	NM_001161780	NP_001155252	Coding	chr8:93916933 plus strand	587724
PDP1	NM_001161781	NP_001155253	Coding	chr8:93917050 plus strand	587725
PDP1	NM_018444	NP_060914	Coding	chr8:93916854 plus strand	587726
PEBP4	NM_144962	NP_659399	Coding	chr8:22927908 minus strand	587727
PENK	NM_001135690	NP_001129162	Coding	chr8:56446723 minus	587728

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				strand	
PENK	NM_006211	NP_006202	Coding	chr8:56446034 minus strand	587729
PEX2	NM_000318	NP_000309	Coding	chr8:77000288 minus strand	587730
PEX2	NM_001079867	NP_001073336	Coding	chr8:77000288 minus strand	587730
PEX2	NM_001172086	NP_001165557	Coding	chr8:77001044 minus strand	587731
PEX2	NM_001172087	NP_001165558	Coding	chr8:77001044 minus strand	587731
PHF20L1	NM_001277196	NP_001264125	Coding	chr8:132775357 plus strand	587732
PHF20L1	NM_016018	NP_057102	Coding	chr8:132775357 plus strand	587732
PHF20L1	NM_198513	NP_940915	Coding	chr8:132775357 plus strand	587732
PHYHIP	NM_001099335	NP_001092805	Coding	chr8:22232338 minus strand	587733
PHYHIP	NM_014759	NP_055574	Coding	chr8:22232338 minus strand	587733
PI15	NM_015886	NP_056970	Coding	chr8:74824536 plus strand	587734
PINX1	NM_001284356	NP_001271285	Coding	chr8:10839899 minus strand	587735
PINX1	NM_017884	NP_060354	Coding	chr8:10839899 minus strand	587735
PIWIL2	NM_001135721	NP_001129193	Coding	chr8:22275566 plus strand	587736
PIWIL2	NM_018068	NP_060538	Coding	chr8:22275296 plus strand	587737
PKHD1L1	NM_177531	NP_803875	Coding	chr8:109362476 plus strand	587738
PKIA	NM_006823	NP_006814	Coding	chr8:78516100 plus strand	587739
PKIA	NM_181839	NP_862822	Coding	chr8:78516100 plus strand	587739
PLAG1	NM_001114634	NP_001108106	Coding	chr8:56211300 minus strand	587740
PLAG1	NM_001114635	NP_001108107	Coding	chr8:56211300 minus strand	587740
PLAG1	NM_002655	NP_002646	Coding	chr8:56211300 minus strand	587740
PLAT	NM_000930	NP_000921	Coding	chr8:42207676 minus strand	587741
PLAT	NM_033011	NP_127509	Coding	chr8:42207676 minus strand	587741
PLEC	NM_000445	NP_000436	Coding	chr8:143976745 minus strand	587742
PLEC	NM_201378	NP_958780	Coding	chr8:143973529 minus strand	587743
PLEC	NM_201379	NP_958781	Coding	chr8:143953920 minus strand	587744
PLEC	NM_201380	NP_958782	Coding	chr8:143950876 minus strand	587745
PLEC	NM_201381	NP_958783	Coding	chr8:143944737 minus strand	587746

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PLEC	NM_201382	NP_958784	Coding	chr8:143943958 minus strand	587747
PLEC	NM_201383	NP_958785	Coding	chr8:143942524 minus strand	587748
PLEC	NM_201384	NP_958786	Coding	chr8:143939590 minus strand	587749
PLEKHA2	NM_021623	NP_067636	Coding	chr8:38901234 plus strand	587750
PLEKHF2	NM_024613	NP_078889	Coding	chr8:95133720 plus strand	587751
PMP2	NM_002677	NP_002668	Coding	chr8:81447484 minus strand	587752
PNMA2	NM_007257	NP_009188	Coding	chr8:26513967 minus strand	587753
PNOC	NM_001284244	NP_001271173	Coding	chr8:28338647 plus strand	587754
PNOC	NM_006228	NP_006219	Coding	chr8:28317131 plus strand	587755
POLB	NM_002690	NP_002681	Coding	chr8:42338454 plus strand	587756
POLR2K	NM_005034	NP_005025	Coding	chr8:100150610 plus strand	587757
POLR3D	NM_001722	NP_001713	Coding	chr8:22245105 plus strand	587758
POMK	NM_001277971	NP_001264900	Coding	chr8:43093505 plus strand	587759
POMK	NM_032237	NP_115613	Coding	chr8:43093505 plus strand	587759
POP1	NM_001145860	NP_001139332	Coding	chr8:98117292 plus strand	587760
POP1	NM_001145861	NP_001139333	Coding	chr8:98117292 plus strand	587760
POP1	NM_015029	NP_055844	Coding	chr8:98117839 plus strand	587761
POTEA	NM_001002920	NP_001002920	Coding	chr8:43292441 plus strand	587762
POTEA	NM_001005365	NP_001005365	Coding	chr8:43292441 plus strand	587762
POU5F1B	NM_001159542	NP_001153014	Coding	chr8:127415611 plus strand	587763
PPAPDC1B	NM_001102559	NP_001096029	Coding	chr8:38269220 minus strand	587764
PPAPDC1B	NM_001102560	NP_001096030	Coding	chr8:38269220 minus strand	587764
PPAPDC1B	NM_032483	NP_115872	Coding	chr8:38269220 minus strand	587764
PPP1R16A	NM_032902	NP_116291	Coding	chr8:144496725 plus strand	587765
PPP1R3B	NM_001201329	NP_001188258	Coding	chr8:9151642 minus strand	587766
PPP1R3B	NM_024607	NP_078883	Coding	chr8:9150710 minus strand	587767
PPP1R42	NM_001013626	NP_001013648	Coding	chr8:67028551 minus strand	587768
PPP2CB	NM_001009552	NP_001009552	Coding	chr8:30812836 minus strand	587769
PPP2R2A	NM_001177591	NP_001171062	Coding	chr8:26293215 plus strand	587770
PPP2R2A	NM_002717	NP_002708	Coding	chr8:26291490 plus strand	587771
PPP3CC	NM_001243974	NP_001230903	Coding	chr8:22440969 plus strand	587772
PPP3CC	NM_001243975	NP_001230904	Coding	chr8:22440969 plus strand	587772
PPP3CC	NM_005605	NP_005596	Coding	chr8:22440969 plus strand	587772
PRDM14	NM_024504	NP_078780	Coding	chr8:70071327 minus strand	587773

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PREX2	NM_024870	NP_079146	Coding	chr8:67952367 plus strand	587774
PREX2	NM_025170	NP_079446	Coding	chr8:67952367 plus strand	587774
PRKDC	NM_001081640	NP_001075109	Coding	chr8:47960183 minus strand	587775
PRKDC	NM_006904	NP_008835	Coding	chr8:47960183 minus strand	587775
PROSC	NM_007198	NP_009129	Coding	chr8:37762582 plus strand	587776
PRR23D1	NM_001282479	NP_001269408	Coding	chr8:7539626 plus strand	587777
PRR23D1	NM_001282479	NP_001269408	Coding	chr8:7781414 minus strand	587778
PRR23D2	NM_001282478	NP_001269407	Coding	chr8:7539627 plus strand	587779
PRR23D2	NM_001282478	NP_001269407	Coding	chr8:7781413 minus strand	587780
PRSS55	NM_001197020	NP_001183949	Coding	chr8:10525545 plus strand	587781
PRSS55	NM_198464	NP_940866	Coding	chr8:10525545 plus strand	587781
PSCA	NM_005672	NP_005663	Coding	chr8:142680455 plus strand	587782
PSD3	NM_015310	NP_056125	Coding	chr8:19013686 minus strand	587783
PSD3	NM_206909	NP_996792	Coding	chr8:18808895 minus strand	587784
PSKH2	NM_033126	NP_149117	Coding	chr8:86069622 minus strand	587785
PTDSS1	NM_001290225	NP_001277154	Coding	chr8:96261885 plus strand	587786
PTDSS1	NM_014754	NP_055569	Coding	chr8:96261885 plus strand	587786
PTK2	NM_001199649	NP_001186578	Coding	chr8:141001313 minus strand	587787
PTK2	NM_005607	NP_005598	Coding	chr8:141001313 minus strand	587787
PTK2	NM_153831	NP_722560	Coding	chr8:141001313 minus strand	587787
PTK2B	NM_004103	NP_004094	Coding	chr8:27322401 plus strand	587788
PTK2B	NM_173174	NP_775266	Coding	chr8:27311481 plus strand	587789
PTK2B	NM_173175	NP_775267	Coding	chr8:27325563 plus strand	587790
PTK2B	NM_173176	NP_775268	Coding	chr8:27325478 plus strand	587791
PTP4A3	NM_007079	NP_009010	Coding	chr8:141421387 plus strand	587792
PTP4A3	NM_032611	NP_116000	Coding	chr8:141421387 plus strand	587792
PUF60	NM_001136033	NP_001129505	Coding	chr8:143829109 minus strand	587793
PUF60	NM_001271096	NP_001258025	Coding	chr8:143829386 minus strand	587794
PUF60	NM_001271097	NP_001258026	Coding	chr8:143829386 minus strand	587794
PUF60	NM_001271098	NP_001258027	Coding	chr8:143829386 minus strand	587794
PUF60	NM_001271099	NP_001258028	Coding	chr8:143829386 minus strand	587794
PUF60	NM_001271100	NP_001258029	Coding	chr8:143829109 minus strand	587793
PUF60	NM_014281	NP_055096	Coding	chr8:143829386 minus	587794

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				strand	
PUF60	NM_078480	NP_510965	Coding	chr8:143829386 minus strand	587794
PURG	NM_001015508	NP_001015508	Coding	chr8:31033715 minus strand	587795
PURG	NM_013357	NP_037489	Coding	chr8:31032801 minus strand	587796
PXDNL	NM_144651	NP_653252	Coding	chr8:51809445 minus strand	587797
PYCRL	NM_023078	NP_075566	Coding	chr8:143609614 minus strand	587798
R3HCC1	NM_001136108	NP_001129580	Coding	chr8:23288091 plus strand	587799
R3HCC1	NM_001301650	NP_001288579	Coding	chr8:23288091 plus strand	587799
RAB11FIP1	NM_001002814	NP_001002814	Coding	chr8:37899497 minus strand	587800
RAB11FIP1	NM_025151	NP_079427	Coding	chr8:37899497 minus strand	587800
RAB2A	NM_001242644	NP_001229573	Coding	chr8:60516909 plus strand	587801
RAB2A	NM_002865	NP_002856	Coding	chr8:60516909 plus strand	587801
RAD21	NM_006265	NP_006256	Coding	chr8:116874866 minus strand	587802
RAD54B	NM_001205262	NP_001192191	Coding	chr8:94475115 minus strand	587803
RAD54B	NM_001205263	NP_001192192	Coding	chr8:94436952 minus strand	587804
RAD54B	NM_012415	NP_036547	Coding	chr8:94475115 minus strand	587803
RALYL	NM_001100391	NP_001093861	Coding	chr8:84184864 plus strand	587805
RALYL	NM_001100392	NP_001093862	Coding	chr8:84183217 plus strand	587806
RALYL	NM_001100393	NP_001093863	Coding	chr8:84183217 plus strand	587806
RALYL	NM_001287243	NP_001274172	Coding	chr8:84183350 plus strand	587807
RALYL	NM_001287244	NP_001274173	Coding	chr8:84705926 plus strand	587808
RALYL	NM_173848	NP_776247	Coding	chr8:84183350 plus strand	587807
RB1CC1	NM_001083617	NP_001077086	Coding	chr8:52714466 minus strand	587809
RB1CC1	NM_014781	NP_055596	Coding	chr8:52714466 minus strand	587809
RBM12B	NM_203390	NP_976324	Coding	chr8:93740996 minus strand	587810
RBPMS	NM_001008710	NP_001008710	Coding	chr8:30384500 plus strand	587811
RBPMS	NM_001008711	NP_001008711	Coding	chr8:30384500 plus strand	587811
RBPMS	NM_001008712	NP_001008712	Coding	chr8:30384500 plus strand	587811
RBPMS	NM_006867	NP_006858	Coding	chr8:30384500 plus strand	587811
RDH10	NM_172037	NP_742034	Coding	chr8:73294601 plus strand	587812
RECQL4	NM_004260	NP_004251	Coding	chr8:144517826 minus strand	587813
REEP4	NM_025232	NP_079508	Coding	chr8:22141935 minus strand	587814
RGS20	NM_001286673	NP_001273602	Coding	chr8:53851807 plus strand	587815

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RGS20	NM_001286674	NP_001273603	Coding	chr8:53851807 plus strand	587815
RGS20	NM_001286675	NP_001273604	Coding	chr8:53851807 plus strand	587815
RGS20	NM_003702	NP_003693	Coding	chr8:53880871 plus strand	587816
RGS20	NM_170587	NP_733466	Coding	chr8:53851807 plus strand	587815
RGS22	NM_001286692	NP_001273621	Coding	chr8:100106116 minus strand	587817
RGS22	NM_001286693	NP_001273622	Coding	chr8:100105626 minus strand	587818
RGS22	NM_015668	NP_056483	Coding	chr8:100106116 minus strand	587817
RHOBTB2	NM_001160036	NP_001153508	Coding	chr8:22987416 plus strand	587819
RHOBTB2	NM_001160037	NP_001153509	Coding	chr8:22995847 plus strand	587820
RHOBTB2	NM_015178	NP_055993	Coding	chr8:22999578 plus strand	587821
RHPN1	NM_052924	NP_443156	Coding	chr8:143368854 plus strand	587822
RIMS2	NM_001100117	NP_001093587	Coding	chr8:103500747 plus strand	587823
RIMS2	NM_001282881	NP_001269810	Coding	chr8:103819187 plus strand	587824
RIMS2	NM_001282882	NP_001269811	Coding	chr8:104223334 plus strand	587825
RIMS2	NM_014677	NP_055492	Coding	chr8:103819187 plus strand	587824
RIPK2	NM_003821	NP_003812	Coding	chr8:89757746 plus strand	587826
RMDN1	NM_001286707	NP_001273636	Coding	chr8:86508780 minus strand	587827
RMDN1	NM_001286719	NP_001273648	Coding	chr8:86508780 minus strand	587827
RMDN1	NM_016033	NP_057117	Coding	chr8:86508780 minus strand	587827
RNF122	NM_024787	NP_079063	Coding	chr8:33567128 minus strand	587828
RNF139	NM_007218	NP_009149	Coding	chr8:124474766 plus strand	587829
RNF170	NM_001160223	NP_001153695	Coding	chr8:42896723 minus strand	587830
RNF170	NM_001160224	NP_001153696	Coding	chr8:42896723 minus strand	587830
RNF170	NM_001160225	NP_001153697	Coding	chr8:42896723 minus strand	587830
RNF170	NM_030954	NP_112216	Coding	chr8:42896723 minus strand	587830
RNF19A	NM_001280539	NP_001267468	Coding	chr8:100336218 minus strand	587831
RNF19A	NM_015435	NP_056250	Coding	chr8:100303259 minus strand	587832
RNF19A	NM_183419	NP_904355	Coding	chr8:100310166 minus strand	587833
RP1	NM_006269	NP_006260	Coding	chr8:54616066 plus strand	587834
RP1L1	NM_178857	NP_849188	Coding	chr8:10655107 minus strand	587835

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RPL30	NM_000989	NP_000980	Coding	chr8:98045590 minus strand	587836
RPL7	NM_000971	NP_000962	Coding	chr8:73293634 minus strand	587837
RPL8	NM_000973	NP_000964	Coding	chr8:144792420 minus strand	587838
RPL8	NM_033301	NP_150644	Coding	chr8:144792344 minus strand	587839
RPS20	NM_001023	NP_001014	Coding	chr8:56074581 minus strand	587840
RPS20	NM_001146227	NP_001139699	Coding	chr8:56074581 minus strand	587840
RRM2B	NM_001172477	NP_001165948	Coding	chr8:102238831 minus strand	587841
RRM2B	NM_001172478	NP_001165949	Coding	chr8:102239118 minus strand	587842
RRM2B	NM_015713	NP_056528	Coding	chr8:102239118 minus strand	587842
RRS1	NM_015169	NP_055984	Coding	chr8:66429027 plus strand	587843
RSPO2	NM_001282863	NP_001269792	Coding	chr8:108083203 minus strand	587844
RSPO2	NM_178565	NP_848660	Coding	chr8:108083685 minus strand	587845
RUNX1T1	NM_001198625	NP_001185554	Coding	chr8:92095654 minus strand	587846
RUNX1T1	NM_001198626	NP_001185555	Coding	chr8:92095654 minus strand	587846
RUNX1T1	NM_001198627	NP_001185556	Coding	chr8:92095654 minus strand	587846
RUNX1T1	NM_001198628	NP_001185557	Coding	chr8:92099688 minus strand	587847
RUNX1T1	NM_001198629	NP_001185558	Coding	chr8:92095262 minus strand	587848
RUNX1T1	NM_001198630	NP_001185559	Coding	chr8:92095262 minus strand	587848
RUNX1T1	NM_001198631	NP_001185560	Coding	chr8:92095654 minus strand	587846
RUNX1T1	NM_001198632	NP_001185561	Coding	chr8:92095262 minus strand	587848
RUNX1T1	NM_001198633	NP_001185562	Coding	chr8:92103226 minus strand	587849
RUNX1T1	NM_001198634	NP_001185563	Coding	chr8:92095654 minus strand	587846
RUNX1T1	NM_001198679	NP_001185608	Coding	chr8:92095654 minus strand	587846
RUNX1T1	NM_004349	NP_004340	Coding	chr8:92062963 minus strand	587850
RUNX1T1	NM_175634	NP_783552	Coding	chr8:92103226 minus strand	587849
RUNX1T1	NM_175635	NP_783553	Coding	chr8:92095262 minus strand	587848
RUNX1T1	NM_175636	NP_783554	Coding	chr8:92017680 minus strand	587851
SAMD12	NM_001101676	NP_001095146	Coding	chr8:118621945 minus	587852

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				strand	
SAMD12	NM_207506	NP_997389	Coding	chr8:118621945 minus strand	587852
SARAF	NM_001284239	NP_001271168	Coding	chr8:30083208 minus strand	587853
SARAF	NM_016127	NP_057211	Coding	chr8:30083208 minus strand	587853
SBSPON	NM_153225	NP_694957	Coding	chr8:73093272 minus strand	587854
SCARA3	NM_016240	NP_057324	Coding	chr8:27634059 plus strand	587855
SCARA3	NM_182826	NP_878185	Coding	chr8:27634059 plus strand	587855
SCARA5	NM_173833	NP_776194	Coding	chr8:27992852 minus strand	587856
SCRIB	NM_015356	NP_056171	Coding	chr8:143815379 minus strand	587857
SCRIB	NM_182706	NP_874365	Coding	chr8:143815379 minus strand	587857
SCRT1	NM_031309	NP_112599	Coding	chr8:144336281 minus strand	587858
SCX	NM_001080514	NP_001073983	Coding	chr8:144266557 plus strand	587859
SDC2	NM_002998	NP_002989	Coding	chr8:96493653 plus strand	587860
SDCBP	NM_001007067	NP_001007068	Coding	chr8:58553168 plus strand	587861
SDCBP	NM_001007068	NP_001007069	Coding	chr8:58553168 plus strand	587861
SDCBP	NM_001007069	NP_001007070	Coding	chr8:58553168 plus strand	587861
SDCBP	NM_001007070	NP_001007071	Coding	chr8:58553168 plus strand	587861
SDCBP	NM_005625	NP_005616	Coding	chr8:58553168 plus strand	587861
SDR16C5	NM_138969	NP_620419	Coding	chr8:56320682 minus strand	587862
SFRP1	NM_003012	NP_003003	Coding	chr8:41309471 minus strand	587863
SFTPC	NM_001172357	NP_001165828	Coding	chr8:22161670 plus strand	587864
SFTPC	NM_001172410	NP_001165881	Coding	chr8:22161670 plus strand	587864
SFTPC	NM_003018	NP_003009	Coding	chr8:22161670 plus strand	587864
SGCZ	NM_139167	NP_631906	Coding	chr8:15238283 minus strand	587865
SGK223	NM_001080826	NP_001074295	Coding	chr8:8381834 minus strand	587866
SGK3	NM_001033578	NP_001028750	Coding	chr8:66712417 plus strand	587867
SGK3	NM_013257	NP_037389	Coding	chr8:66775180 plus strand	587868
SGK3	NM_170709	NP_733827	Coding	chr8:66775180 plus strand	587868
SH2D4A	NM_001174159	NP_001167630	Coding	chr8:19313975 plus strand	587869
SH2D4A	NM_001174160	NP_001167631	Coding	chr8:19313569 plus strand	587870
SH2D4A	NM_022071	NP_071354	Coding	chr8:19313569 plus strand	587870
SHARPIN	NM_030974	NP_112236	Coding	chr8:144104237 minus strand	587871
SLA	NM_001045556	NP_001039021	Coding	chr8:133103066 minus strand	587872
SLA	NM_001045557	NP_001039022	Coding	chr8:133103066 minus strand	587872

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SLA	NM_001282964	NP_001269893	Coding	chr8:133103066 minus strand	587872
SLA	NM_001282965	NP_001269894	Coding	chr8:133103066 minus strand	587872
SLA	NM_006748	NP_006739	Coding	chr8:133060358 minus strand	587873
SLC10A5	NM_001010893	NP_001010893	Coding	chr8:81694972 minus strand	587874
SLC18A1	NM_001135691	NP_001129163	Coding	chr8:20183206 minus strand	587875
SLC18A1	NM_001142324	NP_001135796	Coding	chr8:20183206 minus strand	587875
SLC18A1	NM_001142325	NP_001135797	Coding	chr8:20183206 minus strand	587875
SLC18A1	NM_003053	NP_003044	Coding	chr8:20183206 minus strand	587875
SLC20A2	NM_001257180	NP_001244109	Coding	chr8:42501460 minus strand	587876
SLC20A2	NM_001257181	NP_001244110	Coding	chr8:42541512 minus strand	587877
SLC20A2	NM_006749	NP_006740	Coding	chr8:42542213 minus strand	587878
SLC25A32	NM_030780	NP_110407	Coding	chr8:103415335 minus strand	587879
SLC25A37	NM_016612	NP_057696	Coding	chr8:23528849 plus strand	587880
SLC26A7	NM_001282356	NP_001269285	Coding	chr8:91209493 plus strand	587881
SLC26A7	NM_001282357	NP_001269286	Coding	chr8:91209493 plus strand	587881
SLC26A7	NM_052832	NP_439897	Coding	chr8:91249287 plus strand	587882
SLC26A7	NM_134266	NP_599028	Coding	chr8:91249287 plus strand	587882
SLC30A8	NM_001172811	NP_001166282	Coding	chr8:116950272 plus strand	587883
SLC30A8	NM_001172813	NP_001166284	Coding	chr8:116950950 plus strand	587884
SLC30A8	NM_001172814	NP_001166285	Coding	chr8:117135097 plus strand	587885
SLC30A8	NM_001172815	NP_001166286	Coding	chr8:116950950 plus strand	587884
SLC30A8	NM_173851	NP_776250	Coding	chr8:117135097 plus strand	587885
SLC35G5	NM_054028	NP_473369	Coding	chr8:11330985 plus strand	587886
SLC39A14	NM_001128431	NP_001121903	Coding	chr8:22367248 plus strand	587887
SLC39A14	NM_001135153	NP_001128625	Coding	chr8:22367536 plus strand	587888
SLC39A14	NM_001135154	NP_001128626	Coding	chr8:22367248 plus strand	587887
SLC39A14	NM_015359	NP_056174	Coding	chr8:22367248 plus strand	587887
SLC39A4	NM_001280557	NP_001267486	Coding	chr8:144413591 minus strand	587889
SLC39A4	NM_017767	NP_060237	Coding	chr8:144416533 minus strand	587890
SLC39A4	NM_130849	NP_570901	Coding	chr8:144416895 minus strand	587891
SLC45A4	NM_001080431	NP_001073900	Coding	chr8:141228574 minus	587892

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				strand	
SLC45A4	NM_001286646	NP_001273575	Coding	chr8:141254629 minus strand	587893
SLC45A4	NM_001286648	NP_001273577	Coding	chr8:141228574 minus strand	587892
SLC52A2	NM_001253815	NP_001240744	Coding	chr8:144358580 plus strand	587894
SLC52A2	NM_001253816	NP_001240745	Coding	chr8:144358556 plus strand	587895
SLC52A2	NM_024531	NP_078807	Coding	chr8:144358615 plus strand	587896
SLC7A13	NM_138817	NP_620172	Coding	chr8:86230375 minus strand	587897
SLC7A2	NM_001008539	NP_001008539	Coding	chr8:17497087 plus strand	587898
SLC7A2	NM_001164771	NP_001158243	Coding	chr8:17538776 plus strand	587899
SLC7A2	NM_003046	NP_003037	Coding	chr8:17538776 plus strand	587899
SLCO5A1	NM_001146008	NP_001139480	Coding	chr8:69833390 minus strand	587900
SLCO5A1	NM_001146009	NP_001139481	Coding	chr8:69833169 minus strand	587901
SLCO5A1	NM_030958	NP_112220	Coding	chr8:69835064 minus strand	587902
SLURP1	NM_020427	NP_065160	Coding	chr8:142742411 minus strand	587903
SMIM18	NM_001206847	NP_001193776	Coding	chr8:30638599 plus strand	587904
SMIM19	NM_001135674	NP_001129146	Coding	chr8:42541621 plus strand	587905
SMIM19	NM_001135675	NP_001129147	Coding	chr8:42541795 plus strand	587906
SMIM19	NM_001135676	NP_001129148	Coding	chr8:42541154 plus strand	587907
SMIM19	NM_138436	NP_612445	Coding	chr8:42541574 plus strand	587908
SNAI2	NM_003068	NP_003059	Coding	chr8:48921440 minus strand	587909
SNTB1	NM_021021	NP_066301	Coding	chr8:120812069 minus strand	587910
SNTG1	NM_001287813	NP_001274742	Coding	chr8:49909788 plus strand	587911
SNTG1	NM_001287814	NP_001274743	Coding	chr8:49911778 plus strand	587912
SNTG1	NM_018967	NP_061840	Coding	chr8:49911778 plus strand	587912
SNX16	NM_022133	NP_071416	Coding	chr8:81842286 minus strand	587913
SNX16	NM_152836	NP_690049	Coding	chr8:81842286 minus strand	587913
SNX16	NM_152837	NP_690050	Coding	chr8:81842286 minus strand	587913
SNX31	NM_152628	NP_689841	Coding	chr8:100649665 minus strand	587914
SORBS3	NM_001018003	NP_001018003	Coding	chr8:22565665 plus strand	587915
SORBS3	NM_005775	NP_005766	Coding	chr8:22551737 plus strand	587916
SOX17	NM_022454	NP_071899	Coding	chr8:54457934 plus strand	587917
SOX7	NM_031439	NP_113627	Coding	chr8:10730574 minus strand	587918
SPAG1	NM_003114	NP_003105	Coding	chr8:100158334 plus	587919

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				strand	
SPAG1	NM_172218	NP_757367	Coding	chr8:100158034 plus strand	587920
SPAG11A	NM_001081552	NP_001075021	Coding	chr8:7847879 plus strand	587921
SPAG11B	NM_016512	NP_057596	Coding	chr8:7463670 minus strand	587922
SPAG11B	NM_058200	NP_478107	Coding	chr8:7463670 minus strand	587922
SPAG11B	NM_058201	NP_478108	Coding	chr8:7463670 minus strand	587922
SPAG11B	NM_058202	NP_478109	Coding	chr8:7463670 minus strand	587922
SPAG11B	NM_058203	NP_478110	Coding	chr8:7463670 minus strand	587922
SPAG11B	NM_058203	NP_478110	Coding	chr8:7847879 plus strand	587923
SPAG11B	NM_058206	NP_478113	Coding	chr8:7452365 minus strand	587924
SPAG11B	NM_058207	NP_478114	Coding	chr8:7452365 minus strand	587924
SPATC1	NM_001134374	NP_001127846	Coding	chr8:144012413 plus strand	587925
SPATC1	NM_198572	NP_940974	Coding	chr8:144012413 plus strand	587925
SPIDR	NM_001080394	NP_001073863	Coding	chr8:47260877 plus strand	587926
SPIDR	NM_001282916	NP_001269845	Coding	chr8:47260877 plus strand	587926
SPIDR	NM_001282919	NP_001269848	Coding	chr8:47260877 plus strand	587926
SQLE	NM_003129	NP_003120	Coding	chr8:124998477 plus strand	587927
ST18	NM_014682	NP_055497	Coding	chr8:52409879 minus strand	587928
ST3GAL1	NM_003033	NP_003024	Coding	chr8:133571940 minus strand	587929
ST3GAL1	NM_173344	NP_775479	Coding	chr8:133571940 minus strand	587929
STAR	NM_000349	NP_000340	Coding	chr8:38151082 minus strand	587930
STAU2	NM_001164380	NP_001157852	Coding	chr8:73746927 minus strand	587931
STAU2	NM_001164381	NP_001157853	Coding	chr8:73746927 minus strand	587931
STAU2	NM_001164382	NP_001157854	Coding	chr8:73746927 minus strand	587931
STAU2	NM_001164383	NP_001157855	Coding	chr8:73746927 minus strand	587931
STAU2	NM_001164384	NP_001157856	Coding	chr8:73747708 minus strand	587932
STAU2	NM_001164385	NP_001157857	Coding	chr8:73746927 minus strand	587931
STAU2	NM_014393	NP_055208	Coding	chr8:73746927 minus strand	587931
STC1	NM_003155	NP_003146	Coding	chr8:23854807 minus strand	587933
STK3	NM_001256312	NP_001243241	Coding	chr8:98942571 minus strand	587934
STK3	NM_001256313	NP_001243242	Coding	chr8:98825671 minus strand	587935
STK3	NM_006281	NP_006272	Coding	chr8:98825681 minus	587936

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				strand	
STMN2	NM_001199214	NP_001186143	Coding	chr8:79610813 plus strand	587937
STMN2	NM_007029	NP_008960	Coding	chr8:79610813 plus strand	587937
STMN4	NM_001283053	NP_001269982	Coding	chr8:27258439 minus strand	587938
STMN4	NM_001283054	NP_001269983	Coding	chr8:27258439 minus strand	587938
STMN4	NM_001283055	NP_001269984	Coding	chr8:27258439 minus strand	587938
STMN4	NM_030795	NP_110422	Coding	chr8:27258439 minus strand	587938
SULF1	NM_001128204	NP_001121676	Coding	chr8:69466623 plus strand	587939
SULF1	NM_001128205	NP_001121677	Coding	chr8:69492792 plus strand	587940
SULF1	NM_001128206	NP_001121678	Coding	chr8:69492792 plus strand	587940
SULF1	NM_015170	NP_055985	Coding	chr8:69466623 plus strand	587939
SYBU	NM_001099743	NP_001093213	Coding	chr8:109691791 minus strand	587941
SYBU	NM_001099744	NP_001093214	Coding	chr8:109691791 minus strand	587941
SYBU	NM_001099745	NP_001093215	Coding	chr8:109681005 minus strand	587942
SYBU	NM_001099746	NP_001093216	Coding	chr8:109681005 minus strand	587942
SYBU	NM_001099747	NP_001093217	Coding	chr8:109648903 minus strand	587943
SYBU	NM_001099748	NP_001093218	Coding	chr8:109648903 minus strand	587943
SYBU	NM_001099749	NP_001093219	Coding	chr8:109648903 minus strand	587943
SYBU	NM_001099750	NP_001093220	Coding	chr8:109648903 minus strand	587943
SYBU	NM_001099751	NP_001093221	Coding	chr8:109645593 minus strand	587944
SYBU	NM_001099752	NP_001093222	Coding	chr8:109645593 minus strand	587944
SYBU	NM_001099753	NP_001093223	Coding	chr8:109644822 minus strand	587945
SYBU	NM_001099754	NP_001093224	Coding	chr8:109644822 minus strand	587945
SYBU	NM_001099755	NP_001093225	Coding	chr8:109644822 minus strand	587945
SYBU	NM_001099756	NP_001093226	Coding	chr8:109643190 minus strand	587946
SYBU	NM_017786	NP_060256	Coding	chr8:109648903 minus strand	587943
TACC1	NM_001122824	NP_001116296	Coding	chr8:38787203 plus strand	587947
TACC1	NM_001146216	NP_001139688	Coding	chr8:38728185 plus strand	587948
TACC1	NM_006283	NP_006274	Coding	chr8:38787203 plus strand	587947
TAF2	NM_003184	NP_003175	Coding	chr8:119832834 minus strand	587949
TATDN1	NM_001146160	NP_001139632	Coding	chr8:124539088 minus	587950

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				strand	
TATDN1	NM_032026	NP_114415	Coding	chr8:124539088 minus strand	587950
TBC1D31	NM_001145088	NP_001138560	Coding	chr8:123072679 plus strand	587951
TBC1D31	NM_145647	NP_663622	Coding	chr8:123072679 plus strand	587951
TCEA1	NM_006756	NP_006747	Coding	chr8:54022456 minus strand	587952
TCEA1	NM_201437	NP_958845	Coding	chr8:54022456 minus strand	587952
TCEB1	NM_001204857	NP_001191786	Coding	chr8:73972287 minus strand	587953
TCEB1	NM_001204858	NP_001191787	Coding	chr8:73972287 minus strand	587953
TCEB1	NM_001204859	NP_001191788	Coding	chr8:73972287 minus strand	587953
TCEB1	NM_001204860	NP_001191789	Coding	chr8:73972287 minus strand	587953
TCEB1	NM_001204861	NP_001191790	Coding	chr8:73971908 minus strand	587954
TCEB1	NM_001204862	NP_001191791	Coding	chr8:73971908 minus strand	587954
TCEB1	NM_001204863	NP_001191792	Coding	chr8:73972287 minus strand	587953
TCEB1	NM_001204864	NP_001191793	Coding	chr8:73972287 minus strand	587953
TCEB1	NM_005648	NP_005639	Coding	chr8:73972287 minus strand	587953
TCF24	NM_001193502	NP_001180431	Coding	chr8:66962590 minus strand	587955
TDRP	NM_001256113	NP_001243042	Coding	chr8:544845 minus strand	587956
TDRP	NM_175075	NP_778250	Coding	chr8:545781 minus strand	587957
TERF1	NM_003218	NP_003209	Coding	chr8:73008861 plus strand	587958
TERF1	NM_017489	NP_059523	Coding	chr8:73008861 plus strand	587958
TEX15	NM_031271	NP_112561	Coding	chr8:30849017 minus strand	587959
TG	NM_003235	NP_003226	Coding	chr8:132866959 plus strand	587960
TGS1	NM_024831	NP_079107	Coding	chr8:55773231 plus strand	587961
THAP1	NM_018105	NP_060575	Coding	chr8:42843331 minus strand	587962
THAP1	NM_199003	NP_945354	Coding	chr8:42843331 minus strand	587962
THEM6	NM_016647	NP_057731	Coding	chr8:142727202 plus strand	587963
TIGD5	NM_032862	NP_116251	Coding	chr8:143597903 plus strand	587964
TM2D2	NM_001024380	NP_001019551	Coding	chr8:38996522 minus strand	587965
TM2D2	NM_001024381	NP_001019552	Coding	chr8:38996522 minus strand	587965

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TM2D2	NM_031940	NP_114146	Coding	chr8:38996522 minus strand	587965
TM2D2	NM_078473	NP_510882	Coding	chr8:38996522 minus strand	587965
TMEM249	NM_001252402	NP_001239331	Coding	chr8:144354931 minus strand	587966
TMEM249	NM_001252404	NP_001239333	Coding	chr8:144354931 minus strand	587966
TMEM249	NM_001280561	NP_001267490	Coding	chr8:144355609 minus strand	587967
TMEM55A	NM_018710	NP_061180	Coding	chr8:91040975 minus strand	587968
TMEM64	NM_001008495	NP_001008495	Coding	chr8:90645905 minus strand	587969
TMEM64	NM_001146273	NP_001139745	Coding	chr8:90645905 minus strand	587969
TMEM65	NM_194291	NP_919267	Coding	chr8:124372699 minus strand	587970
TMEM67	NM_001142301	NP_001135773	Coding	chr8:93754843 plus strand	587971
TMEM67	NM_153704	NP_714915	Coding	chr8:93754843 plus strand	587971
TMEM68	NM_001286657	NP_001273586	Coding	chr8:55763980 minus strand	587972
TMEM68	NM_001286660	NP_001273589	Coding	chr8:55773407 minus strand	587973
TMEM68	NM_001286661	NP_001273590	Coding	chr8:55773407 minus strand	587973
TMEM68	NM_152417	NP_689630	Coding	chr8:55773407 minus strand	587973
TMEM70	NM_001040613	NP_001035703	Coding	chr8:73976141 plus strand	587974
TMEM70	NM_017866	NP_060336	Coding	chr8:73976141 plus strand	587974
TMEM71	NM_001145153	NP_001138625	Coding	chr8:132760668 minus strand	587975
TMEM71	NM_144649	NP_653250	Coding	chr8:132760668 minus strand	587975
TMEM74	NM_153015	NP_694560	Coding	chr8:108787541 minus strand	587976
TNFRSF10A	NM_003844	NP_003835	Coding	chr8:23225167 minus strand	587977
TNFRSF10B	NM_003842	NP_003833	Coding	chr8:23069187 minus strand	587978
TNFRSF10B	NM_147187	NP_671716	Coding	chr8:23069187 minus strand	587978
TNFRSF10C	NM_003841	NP_003832	Coding	chr8:23102813 plus strand	587979
TNFRSF10D	NM_003840	NP_003831	Coding	chr8:23164030 minus strand	587980
TNFRSF11B	NM_002546	NP_002537	Coding	chr8:118952144 minus strand	587981
TNKS	NM_003747	NP_003738	Coding	chr8:9555934 plus strand	587982
TONSL	NM_013432	NP_038460	Coding	chr8:144444429 minus strand	587983
TOP1MT	NM_001258446	NP_001245375	Coding	chr8:143359977 minus strand	587984

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TOP1MT	NM_001258447	NP_001245376	Coding	chr8:143359977 minus strand	587984
TOP1MT	NM_052963	NP_443195	Coding	chr8:143334891 minus strand	587985
TOX	NM_014729	NP_055544	Coding	chr8:59119208 minus strand	587986
TP53INP1	NM_001135733	NP_001129205	Coding	chr8:94949387 minus strand	587987
TP53INP1	NM_033285	NP_150601	Coding	chr8:94949387 minus strand	587987
TPD52	NM_001025252	NP_001020423	Coding	chr8:80080831 minus strand	587988
TPD52	NM_001025253	NP_001020424	Coding	chr8:80171659 minus strand	587989
TPD52	NM_001287140	NP_001274069	Coding	chr8:80080831 minus strand	587988
TPD52	NM_001287142	NP_001274071	Coding	chr8:80080831 minus strand	587988
TPD52	NM_001287143	NP_001274072	Coding	chr8:80080831 minus strand	587988
TPD52	NM_001287144	NP_001274073	Coding	chr8:80171659 minus strand	587989
TPD52	NM_005079	NP_005070	Coding	chr8:80171659 minus strand	587989
TRAM1	NM_014294	NP_055109	Coding	chr8:70608459 minus strand	587990
TRAPPC9	NM_001160372	NP_001153844	Coding	chr8:140457762 minus strand	587991
TRAPPC9	NM_031466	NP_113654	Coding	chr8:140458579 minus strand	587992
TRHR	NM_003301	NP_003292	Coding	chr8:109087423 plus strand	587993
TRIB1	NM_001282985	NP_001269914	Coding	chr8:125432208 plus strand	587994
TRIB1	NM_025195	NP_079471	Coding	chr8:125430320 plus strand	587995
TRIM35	NM_171982	NP_741983	Coding	chr8:27311317 minus strand	587996
TRIM55	NM_033058	NP_149047	Coding	chr8:66127042 plus strand	587997
TRIM55	NM_184085	NP_908973	Coding	chr8:66127042 plus strand	587997
TRIM55	NM_184086	NP_908974	Coding	chr8:66127042 plus strand	587997
TRIM55	NM_184087	NP_908975	Coding	chr8:66127042 plus strand	587997
TRIQK	NM_001171795	NP_001165266	Coding	chr8:92966144 minus strand	587998
TRIQK	NM_001171796	NP_001165267	Coding	chr8:92966144 minus strand	587998
TRIQK	NM_001171797	NP_001165268	Coding	chr8:92966144 minus strand	587998
TRIQK	NM_001171798	NP_001165269	Coding	chr8:92966144 minus strand	587998
TRIQK	NM_001171799	NP_001165270	Coding	chr8:92966144 minus strand	587998
TRIQK	NM_001191035	NP_001177964	Coding	chr8:92966037 minus	587999

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				strand	
TRIQK	NM_001191036	NP_001177965	Coding	chr8:92965589 minus strand	588000
TRMT12	NM_017956	NP_060426	Coding	chr8:124450806 plus strand	588001
TRPA1	NM_007332	NP_015628	Coding	chr8:72075584 minus strand	588002
TRPS1	NM_001282902	NP_001269831	Coding	chr8:115668012 minus strand	588003
TRPS1	NM_001282903	NP_001269832	Coding	chr8:115669028 minus strand	588004
TRPS1	NM_014112	NP_054831	Coding	chr8:115669028 minus strand	588004
TSNARE1	NM_001291931	NP_001278860	Coding	chr8:142403249 minus strand	588005
TSNARE1	NM_145003	NP_659440	Coding	chr8:142403249 minus strand	588005
TSPYL5	NM_033512	NP_277047	Coding	chr8:97277948 minus strand	588006
TSTA3	NM_003313	NP_003304	Coding	chr8:143617562 minus strand	588007
TTI2	NM_001102401	NP_001095871	Coding	chr8:33513185 minus strand	588008
TTI2	NM_001265581	NP_001252510	Coding	chr8:33513185 minus strand	588008
TTI2	NM_025115	NP_079391	Coding	chr8:33513185 minus strand	588008
TTPA	NM_000370	NP_000361	Coding	chr8:63086053 minus strand	588009
TUSC3	NM_006765	NP_006756	Coding	chr8:15540086 plus strand	588010
TUSC3	NM_178234	NP_839952	Coding	chr8:15540086 plus strand	588010
UBE2V2	NM_003350	NP_003341	Coding	chr8:48008434 plus strand	588011
UBE2W	NM_001001481	NP_001001481	Coding	chr8:73878910 minus strand	588012
UBE2W	NM_001271015	NP_001257944	Coding	chr8:73878910 minus strand	588012
UBE2W	NM_018299	NP_060769	Coding	chr8:73878910 minus strand	588012
UBR5	NM_001282873	NP_001269802	Coding	chr8:102412689 minus strand	588013
UBR5	NM_015902	NP_056986	Coding	chr8:102412689 minus strand	588013
UBXN2B	NM_001077619	NP_001071087	Coding	chr8:58411263 plus strand	588014
UBXN8	NM_001282189	NP_001269118	Coding	chr8:30744164 plus strand	588015
UBXN8	NM_001282199	NP_001269128	Coding	chr8:30744164 plus strand	588015
UBXN8	NM_005671	NP_005662	Coding	chr8:30744164 plus strand	588015
UNC5D	NM_080872	NP_543148	Coding	chr8:35235456 plus strand	588016
UQCRB	NM_001199975	NP_001186904	Coding	chr8:96235634 minus strand	588017
UQCRB	NM_001254752	NP_001241681	Coding	chr8:96235634 minus strand	588017

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UQCRB	NM_006294	NP_006285	Coding	chr8:96235634 minus strand	588017
USP17L1	NM_001256873	NP_001243802	Coding	chr8:7332386 plus strand	588018
USP17L2	NM_201402	NP_958804	Coding	chr8:12138760 minus strand	588019
USP17L3	NM_001256871	NP_001243800	Coding	chr8:7977985 minus strand	588020
USP17L4	NM_001256874	NP_001243803	Coding	chr8:7337114 plus strand	588021
USP17L7	NM_001256869	NP_001243798	Coding	chr8:12134009 minus strand	588022
USP17L8	NM_001256872	NP_001243801	Coding	chr8:7973253 minus strand	588023
UTP23	NM_032334	NP_115710	Coding	chr8:116766502 plus strand	588024
VCPIP1	NM_025054	NP_079330	Coding	chr8:66667217 minus strand	588025
VDAC3	NM_001135694	NP_001129166	Coding	chr8:42391760 plus strand	588026
VDAC3	NM_005662	NP_005653	Coding	chr8:42391760 plus strand	588026
VPS13B	NM_015243	NP_056058	Coding	chr8:99013265 plus strand	588027
VPS13B	NM_017890	NP_060360	Coding	chr8:99013265 plus strand	588027
VPS13B	NM_152564	NP_689777	Coding	chr8:99013265 plus strand	588027
VPS13B	NM_181661	NP_858047	Coding	chr8:99013265 plus strand	588027
VPS28	NM_016208	NP_057292	Coding	chr8:144428563 minus strand	588028
VPS28	NM_183057	NP_898880	Coding	chr8:144428563 minus strand	588028
VPS37A	NM_001145152	NP_001138624	Coding	chr8:17246891 plus strand	588029
VPS37A	NM_152415	NP_689628	Coding	chr8:17246891 plus strand	588029
WDYHV1	NM_001283024	NP_001269953	Coding	chr8:123416724 plus strand	588030
WDYHV1	NM_001283027	NP_001269956	Coding	chr8:123416724 plus strand	588030
WDYHV1	NM_018024	NP_060494	Coding	chr8:123416724 plus strand	588030
WHSC1L1	NM_017778	NP_060248	Coding	chr8:38382272 minus strand	588031
WHSC1L1	NM_023034	NP_075447	Coding	chr8:38382272 minus strand	588031
WISP1	NM_001204869	NP_001191798	Coding	chr8:133191038 plus strand	588032
WISP1	NM_001204870	NP_001191799	Coding	chr8:133191038 plus strand	588032
WISP1	NM_003882	NP_003873	Coding	chr8:133191038 plus strand	588032
WISP1	NM_080838	NP_543028	Coding	chr8:133191038 plus strand	588032
WRN	NM_000553	NP_000544	Coding	chr8:31033261 plus strand	588033
WWP1	NM_007013	NP_008944	Coding	chr8:86342764 plus strand	588034
XKR4	NM_052898	NP_443130	Coding	chr8:55102456 plus strand	588035
XKR5	NM_001289973	NP_001276902	Coding	chr8:6835644 minus strand	588036
XKR5	NM_207411	NP_997294	Coding	chr8:6835644 minus strand	588036

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XKR6	NM_173683	NP_775954	Coding	chr8:11201366 minus strand	588037
XKR9	NM_001011720	NP_001011720	Coding	chr8:70669364 plus strand	588038
XKR9	NM_001287258	NP_001274187	Coding	chr8:70669364 plus strand	588038
XKR9	NM_001287259	NP_001274188	Coding	chr8:70669364 plus strand	588038
XKR9	NM_001287260	NP_001274189	Coding	chr8:70669446 plus strand	588039
XPO7	NM_015024	NP_055839	Coding	chr8:21919668 plus strand	588040
YTHDF3	NM_001277813	NP_001264742	Coding	chr8:63168552 plus strand	588041
YTHDF3	NM_001277814	NP_001264743	Coding	chr8:63169002 plus strand	588042
YTHDF3	NM_001277815	NP_001264744	Coding	chr8:63168552 plus strand	588041
YTHDF3	NM_001277816	NP_001264745	Coding	chr8:63168552 plus strand	588041
YTHDF3	NM_001277817	NP_001264746	Coding	chr8:63168626 plus strand	588043
YTHDF3	NM_001277818	NP_001264747	Coding	chr8:63169002 plus strand	588042
YTHDF3	NM_152758	NP_689971	Coding	chr8:63168552 plus strand	588041
YWHAZ	NM_001135699	NP_001129171	Coding	chr8:100952993 minus strand	588044
YWHAZ	NM_001135700	NP_001129172	Coding	chr8:100951332 minus strand	588045
YWHAZ	NM_001135701	NP_001129173	Coding	chr8:100951332 minus strand	588045
YWHAZ	NM_001135702	NP_001129174	Coding	chr8:100950571 minus strand	588046
YWHAZ	NM_003406	NP_003397	Coding	chr8:100953395 minus strand	588047
YWHAZ	NM_145690	NP_663723	Coding	chr8:100952129 minus strand	588048
ZBTB10	NM_001105539	NP_001099009	Coding	chr8:80486212 plus strand	588049
ZBTB10	NM_001277145	NP_001264074	Coding	chr8:80485618 plus strand	588050
ZBTB10	NM_023929	NP_076418	Coding	chr8:80486212 plus strand	588049
ZC2HC1A	NM_016010	NP_057094	Coding	chr8:78666046 plus strand	588051
ZC3H3	NM_015117	NP_055932	Coding	chr8:143541450 minus strand	588052
ZDHHC2	NM_016353	NP_057437	Coding	chr8:17156326 plus strand	588053
ZFAND1	NM_001170796	NP_001164267	Coding	chr8:81721304 minus strand	588054
ZFAND1	NM_001170797	NP_001164268	Coding	chr8:81721304 minus strand	588054
ZFAND1	NM_024699	NP_078975	Coding	chr8:81721304 minus strand	588054
ZFAT	NM_001029939	NP_001025110	Coding	chr8:134696558 minus strand	588055
ZFAT	NM_001167583	NP_001161055	Coding	chr8:134696558 minus strand	588055
ZFAT	NM_001174157	NP_001167628	Coding	chr8:134713049 minus strand	588056
ZFAT	NM_001174158	NP_001167629	Coding	chr8:134696558 minus strand	588055
ZFAT	NM_001289394	NP_001276323	Coding	chr8:134713049 minus strand	588056

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ZFAT	NM_020863	NP_065914	Coding	chr8:134713049 minus strand	588056
ZFHX4	NM_024721	NP_078997	Coding	chr8:76681279 plus strand	588057
ZFP41	NM_001271156	NP_001258085	Coding	chr8:143246820 plus strand	588058
ZFP41	NM_173832	NP_776193	Coding	chr8:143246927 plus strand	588059
ZFPM2	NM_012082	NP_036214	Coding	chr8:105318918 plus strand	588060
ZHX1	NM_001017926	NP_001017926	Coding	chr8:123274487 minus strand	588061
ZHX1	NM_007222	NP_009153	Coding	chr8:123274487 minus strand	588061
ZHX1-C8orf76	NM_001204180	NP_001191109	Coding	chr8:123274487 minus strand	588062
ZHX2	NM_014943	NP_055758	Coding	chr8:122781661 plus strand	588063
ZMAT4	NM_001135731	NP_001129203	Coding	chr8:40897824 minus strand	588064
ZMAT4	NM_024645	NP_078921	Coding	chr8:40897824 minus strand	588064
ZNF16	NM_001029976	NP_001025147	Coding	chr8:144950888 minus strand	588065
ZNF16	NM_006958	NP_008889	Coding	chr8:144950888 minus strand	588065
ZNF250	NM_001109689	NP_001103159	Coding	chr8:144901461 minus strand	588066
ZNF250	NM_021061	NP_066405	Coding	chr8:144901461 minus strand	588066
ZNF251	NM_138367	NP_612376	Coding	chr8:144755585 minus strand	588067
ZNF34	NM_001286769	NP_001273698	Coding	chr8:144787345 minus strand	588068
ZNF34	NM_001286770	NP_001273699	Coding	chr8:144787345 minus strand	588068
ZNF34	NM_030580	NP_085057	Coding	chr8:144787345 minus strand	588068
ZNF395	NM_018660	NP_061130	Coding	chr8:28386460 minus strand	588069
ZNF517	NM_213605	NP_998770	Coding	chr8:144798875 plus strand	588070
ZNF572	NM_152412	NP_689625	Coding	chr8:124973296 plus strand	588071
ZNF596	NM_001042415	NP_001035880	Coding	chr8:232459 plus strand	588072
ZNF596	NM_001042416	NP_001035881	Coding	chr8:232396 plus strand	588073
ZNF596	NM_001287254	NP_001274183	Coding	chr8:232549 plus strand	588074
ZNF596	NM_001287255	NP_001274184	Coding	chr8:232136 plus strand	588075
ZNF596	NM_001287256	NP_001274185	Coding	chr8:232136 plus strand	588075
ZNF596	NM_001287399	NP_001274328	Coding	chr8:232199 plus strand	588076
ZNF596	NM_173539	NP_775810	Coding	chr8:232199 plus strand	588076
ZNF623	NM_001082480	NP_001075949	Coding	chr8:143636161 plus strand	588077

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ZNF623	NM_001261843	NP_001248772	Coding	chr8:143636012 plus strand	588078
ZNF623	NM_014789	NP_055604	Coding	chr8:143649783 plus strand	588079
ZNF696	NM_030895	NP_112157	Coding	chr8:143291388 plus strand	588080
ZNF7	NM_001282795	NP_001269724	Coding	chr8:144827517 plus strand	588081
ZNF7	NM_001282796	NP_001269725	Coding	chr8:144827517 plus strand	588081
ZNF7	NM_001282797	NP_001269726	Coding	chr8:144827517 plus strand	588081
ZNF7	NM_003416	NP_003407	Coding	chr8:144827517 plus strand	588081
ZNF703	NM_025069	NP_079345	Coding	chr8:37695782 plus strand	588082
ZNF704	NM_001033723	NP_001028895	Coding	chr8:80874781 minus strand	588083
ZNF705B	NM_001193630	NP_001180559	Coding	chr8:7926336 plus strand	588084
ZNF705D	NM_001039615	NP_001034704	Coding	chr8:12089337 plus strand	588085
ZNF705G	NM_001164457	NP_001157929	Coding	chr8:7362968 minus strand	588086
ZNF706	NM_001042510	NP_001035975	Coding	chr8:101205732 minus strand	588087
ZNF706	NM_001267708	NP_001254637	Coding	chr8:101205732 minus strand	588087
ZNF706	NM_001267709	NP_001254638	Coding	chr8:101206064 minus strand	588088
ZNF706	NM_016096	NP_057180	Coding	chr8:101205732 minus strand	588087
ZNF707	NM_001100598	NP_001094068	Coding	chr8:143684451 plus strand	588089
ZNF707	NM_001100599	NP_001094069	Coding	chr8:143684451 plus strand	588089
ZNF707	NM_001288805	NP_001275734	Coding	chr8:143684451 plus strand	588089
ZNF707	NM_001288806	NP_001275735	Coding	chr8:143684451 plus strand	588089
ZNF707	NM_001288807	NP_001275736	Coding	chr8:143684451 plus strand	588089
ZNF707	NM_001288808	NP_001275737	Coding	chr8:143684451 plus strand	588089
ZNF707	NM_001288809	NP_001275738	Coding	chr8:143684451 plus strand	588089
ZNF707	NM_173831	NP_776192	Coding	chr8:143684451 plus strand	588089
AAED1	NM_153698	NP_714542	Coding	chr9:96655317 minus strand	588090
ABCA1	NM_005502	NP_005493	Coding	chr9:104928246 minus strand	588091
ABCA2	NM_001606	NP_001597	Coding	chr9:137028288 minus strand	588092
ABCA2	NM_212533	NP_997698	Coding	chr9:137028922 minus strand	588093
ABHD17B	NM_001025780	NP_001020951	Coding	chr9:71911232 minus	588094

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				strand	
ABHD17B	NM_016014	NP_057098	Coding	chr9:71911232 minus strand	588094
ABL1	NM_005157	NP_005148	Coding	chr9:130835254 plus strand	588095
ABL1	NM_007313	NP_009297	Coding	chr9:130713880 plus strand	588096
ABO	NM_020469	NP_065202	Coding	chr9:133275214 minus strand	588097
ACER2	NM_001010887	NP_001010887	Coding	chr9:19408926 plus strand	588098
ACO1	NM_001278352	NP_001265281	Coding	chr9:32384602 plus strand	588099
ACO1	NM_002197	NP_002188	Coding	chr9:32384602 plus strand	588099
ACTL7A	NM_006687	NP_006678	Coding	chr9:108862227 plus strand	588100
ACTL7B	NM_006686	NP_006677	Coding	chr9:108855995 minus strand	588101
ADAMTS13	NM_139025	NP_620594	Coding	chr9:133421999 plus strand	588102
ADAMTS13	NM_139026	NP_620595	Coding	chr9:133421999 plus strand	588102
ADAMTS13	NM_139027	NP_620596	Coding	chr9:133421999 plus strand	588102
ADAMTSL1	NM_001040272	NP_001035362	Coding	chr9:18474080 plus strand	588103
ADAMTSL1	NM_052866	NP_443098	Coding	chr9:18474080 plus strand	588103
ADAMTSL2	NM_001145320	NP_001138792	Coding	chr9:133532163 plus strand	588104
ADAMTSL2	NM_014694	NP_055509	Coding	chr9:133534852 plus strand	588105
AGPAT2	NM_001012727	NP_001012745	Coding	chr9:136687459 minus strand	588106
AGPAT2	NM_006412	NP_006403	Coding	chr9:136687459 minus strand	588106
AGTPBP1	NM_001286715	NP_001273644	Coding	chr9:85742029 minus strand	588107
AGTPBP1	NM_001286717	NP_001273646	Coding	chr9:85742029 minus strand	588107
AGTPBP1	NM_015239	NP_056054	Coding	chr9:85742029 minus strand	588107
AIF1L	NM_001185095	NP_001172024	Coding	chr9:131096475 plus strand	588108
AIF1L	NM_001185096	NP_001172025	Coding	chr9:131096475 plus strand	588108
AIF1L	NM_031426	NP_113614	Coding	chr9:131096475 plus strand	588108
AK1	NM_000476	NP_000467	Coding	chr9:127877743 minus strand	588109
AK3	NM_001199852	NP_001186781	Coding	chr9:4741309 minus strand	588110
AK3	NM_001199853	NP_001186782	Coding	chr9:4742043 minus strand	588111
AK3	NM_001199855	NP_001186784	Coding	chr9:4741799 minus strand	588112
AK3	NM_001199856	NP_001186785	Coding	chr9:4726227 minus strand	588113
AK3	NM_016282	NP_057366	Coding	chr9:4741309 minus strand	588110

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AK8	NM_152572	NP_689785	Coding	chr9:132878811 minus strand	588114
AKAP2	NM_001004065	NP_001004065	Coding	chr9:110048597 plus strand	588115
AKAP2	NM_001136562	NP_001130034	Coding	chr9:110125500 plus strand	588116
AKAP2	NM_001198656	NP_001185585	Coding	chr9:110048597 plus strand	588115
AKNA	NM_030767	NP_110394	Coding	chr9:114394405 minus strand	588117
ALAD	NM_000031	NP_000022	Coding	chr9:113401338 minus strand	588118
ALDH1A1	NM_000689	NP_000680	Coding	chr9:72953317 minus strand	588119
ALDH1B1	NM_000692	NP_000683	Coding	chr9:38392663 plus strand	588120
ALDOB	NM_000035	NP_000026	Coding	chr9:101435780 minus strand	588121
ALG2	NM_033087	NP_149078	Coding	chr9:99221964 minus strand	588122
AMBP	NM_001633	NP_001624	Coding	chr9:114078472 minus strand	588123
ANAPC2	NM_013366	NP_037498	Coding	chr9:137188605 minus strand	588124
ANGPTL2	NM_012098	NP_036230	Coding	chr9:127122765 minus strand	588125
ANKRD18A	NM_147195	NP_671728	Coding	chr9:38620363 minus strand	588126
ANKRD18B	NM_001244752	NP_001231681	Coding	chr9:33524412 plus strand	588127
ANKRD20A1	NM_032250	NP_115626	Coding	chr9:66152966 minus strand	588128
ANKRD20A1	NM_032250	NP_115626	Coding	chr9:67859314 plus strand	588129
ANKRD20A2	NM_001012421	NP_001012421	Coding	chr9:40223284 plus strand	588130
ANKRD20A2	NM_001012421	NP_001012421	Coding	chr9:66152966 minus strand	588131
ANKRD20A3	NM_001012419	NP_001012419	Coding	chr9:40223318 plus strand	588132
ANKRD20A3	NM_001012419	NP_001012419	Coding	chr9:66152932 minus strand	588133
ANKRD20A3	NM_001012419	NP_001012419	Coding	chr9:67859348 plus strand	588134
ANKRD20A4	NM_001098805	NP_001092275	Coding	chr9:64369562 plus strand	588135
ANKS6	NM_173551	NP_775822	Coding	chr9:98796512 minus strand	588136
ANP32B	NM_006401	NP_006392	Coding	chr9:97983206 plus strand	588137
ANXA1	NM_000700	NP_000691	Coding	chr9:73151864 plus strand	588138
APBA1	NM_001163	NP_001154	Coding	chr9:69672359 minus strand	588139
APTX	NM_001195248	NP_001182177	Coding	chr9:33001641 minus strand	588140
APTX	NM_001195249	NP_001182178	Coding	chr9:33001576 minus strand	588141
APTX	NM_001195250	NP_001182179	Coding	chr9:33001641 minus strand	588140

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APTX	NM_001195251	NP_001182180	Coding	chr9:33001641 minus strand	588140
APTX	NM_001195252	NP_001182181	Coding	chr9:33001641 minus strand	588140
APTX	NM_001195254	NP_001182183	Coding	chr9:33001612 minus strand	588142
APTX	NM_175069	NP_778239	Coding	chr9:33001641 minus strand	588140
APTX	NM_175073	NP_778243	Coding	chr9:33001641 minus strand	588140
AQP3	NM_004925	NP_004916	Coding	chr9:33447633 minus strand	588143
AQP7	NM_001170	NP_001161	Coding	chr9:33402519 minus strand	588144
ARHGEF39	NM_032818	NP_116207	Coding	chr9:35665281 minus strand	588145
ARID3C	NM_001017363	NP_001017363	Coding	chr9:34628014 minus strand	588146
ARPC5L	NM_030978	NP_112240	Coding	chr9:124869204 plus strand	588147
ARRDC1	NM_152285	NP_689498	Coding	chr9:137605643 plus strand	588148
ASB6	NM_001202403	NP_001189332	Coding	chr9:129642169 minus strand	588149
ASB6	NM_017873	NP_060343	Coding	chr9:129642169 minus strand	588149
ASB6	NM_177999	NP_821066	Coding	chr9:129642169 minus strand	588149
ASPN	NM_001193335	NP_001180264	Coding	chr9:92482562 minus strand	588150
ASPN	NM_017680	NP_060150	Coding	chr9:92482562 minus strand	588150
ASS1	NM_000050	NP_000041	Coding	chr9:130444706 plus strand	588151
ASS1	NM_054012	NP_446464	Coding	chr9:130444706 plus strand	588151
ASTN2	NM_001184734	NP_001171663	Coding	chr9:116687263 minus strand	588152
ASTN2	NM_001184735	NP_001171664	Coding	chr9:116687263 minus strand	588152
ASTN2	NM_014010	NP_054729	Coding	chr9:117415039 minus strand	588153
ASTN2	NM_198186	NP_937829	Coding	chr9:116687215 minus strand	588154
ASTN2	NM_198187	NP_937830	Coding	chr9:116687263 minus strand	588152
ASTN2	NM_198188	NP_937831	Coding	chr9:116687263 minus strand	588152
ATP6V1G1	NM_004888	NP_004879	Coding	chr9:114587713 plus strand	588155
AUH	NM_001698	NP_001689	Coding	chr9:91361924 minus strand	588156
B4GALT1	NM_001497	NP_001488	Coding	chr9:33167358 minus strand	588157

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BAAT	NM_001127610	NP_001121082	Coding	chr9:101383519 minus strand	588158
BAAT	NM_001701	NP_001692	Coding	chr9:101385005 minus strand	588159
BAG1	NM_001172415	NP_001165886	Coding	chr9:33264761 minus strand	588160
BAG1	NM_004323	NP_004314	Coding	chr9:33264761 minus strand	588160
BARHL1	NM_020064	NP_064448	Coding	chr9:132582605 plus strand	588161
BARX1	NM_021570	NP_067545	Coding	chr9:93955326 minus strand	588162
BICD2	NM_001003800	NP_001003800	Coding	chr9:92764801 minus strand	588163
BICD2	NM_015250	NP_056065	Coding	chr9:92764801 minus strand	588163
BNC2	NM_017637	NP_060107	Coding	chr9:16870788 minus strand	588164
BRD3	NM_007371	NP_031397	Coding	chr9:134068019 minus strand	588165
BRINP1	NM_014618	NP_055433	Coding	chr9:119369461 minus strand	588166
BSPRY	NM_017688	NP_060158	Coding	chr9:113349531 plus strand	588167
C5	NM_001735	NP_001726	Coding	chr9:121050276 minus strand	588168
C8G	NM_000606	NP_000597	Coding	chr9:136945245 plus strand	588169
C9orf106	NM_001012715	NP_001012733	Coding	chr9:129321015 plus strand	588170
C9orf114	NM_016390	NP_057474	Coding	chr9:128829821 minus strand	588171
C9orf116	NM_001048265	NP_001041730	Coding	chr9:135499915 minus strand	588172
C9orf116	NM_144654	NP_653255	Coding	chr9:135499915 minus strand	588172
C9orf117	NM_001012502	NP_001012520	Coding	chr9:127706991 plus strand	588173
C9orf129	NM_001098808	NP_001092278	Coding	chr9:93346414 minus strand	588174
C9orf131	NM_001040410	NP_001035500	Coding	chr9:35042207 plus strand	588175
C9orf131	NM_001040411	NP_001035501	Coding	chr9:35041094 plus strand	588176
C9orf131	NM_001040412	NP_001035502	Coding	chr9:35041094 plus strand	588176
C9orf131	NM_001287391	NP_001274320	Coding	chr9:35042471 plus strand	588177
C9orf131	NM_203299	NP_976044	Coding	chr9:35042207 plus strand	588175
C9orf135	NM_001010940	NP_001010940	Coding	chr9:69820814 plus strand	588178
C9orf139	NM_207511	NP_997394	Coding	chr9:137027463 plus strand	588179
C9orf142	NM_183241	NP_899064	Coding	chr9:136992417 plus strand	588180
C9orf152	NM_001012993	NP_001013011	Coding	chr9:110208133 minus strand	588181

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C9orf153	NM_001276366	NP_001263295	Coding	chr9:86259657 minus strand	588182
C9orf153	NM_001276367	NP_001263296	Coding	chr9:86259657 minus strand	588182
C9orf153	NM_001276368	NP_001263297	Coding	chr9:86256033 minus strand	588183
C9orf156	NM_016481	NP_057565	Coding	chr9:97922570 minus strand	588184
C9orf16	NM_024112	NP_077017	Coding	chr9:128160259 plus strand	588185
C9orf163	NM_152571	NP_689784	Coding	chr9:136483494 plus strand	588186
C9orf170	NM_001001709	NP_001001709	Coding	chr9:87148643 plus strand	588187
C9orf171	NM_001282957	NP_001269886	Coding	chr9:132410195 plus strand	588188
C9orf171	NM_207417	NP_997300	Coding	chr9:132410195 plus strand	588188
C9orf172	NM_001080482	NP_001073951	Coding	chr9:136844414 plus strand	588189
C9orf173	NM_001004353	NP_001004353	Coding	chr9:137251260 plus strand	588190
C9orf173	NM_001256699	NP_001243628	Coding	chr9:137251260 plus strand	588190
C9orf173	NM_001256700	NP_001243629	Coding	chr9:137251260 plus strand	588190
C9orf173	NM_001256701	NP_001243630	Coding	chr9:137251260 plus strand	588190
C9orf24	NM_001252195	NP_001239124	Coding	chr9:34381600 minus strand	588191
C9orf24	NM_032596	NP_115985	Coding	chr9:34397851 minus strand	588192
C9orf24	NM_147168	NP_671697	Coding	chr9:34381600 minus strand	588191
C9orf24	NM_147169	NP_671698	Coding	chr9:34381600 minus strand	588191
C9orf3	NM_001193329	NP_001180258	Coding	chr9:94759648 plus strand	588193
C9orf3	NM_001193331	NP_001180260	Coding	chr9:94726668 plus strand	588194
C9orf3	NM_032823	NP_116212	Coding	chr9:94726668 plus strand	588194
C9orf40	NM_017998	NP_060468	Coding	chr9:74952886 minus strand	588195
C9orf41	NM_152420	NP_689633	Coding	chr9:75028394 minus strand	588196
C9orf43	NM_001278629	NP_001265558	Coding	chr9:113410643 plus strand	588197
C9orf43	NM_001278630	NP_001265559	Coding	chr9:113410708 plus strand	588198
C9orf43	NM_152786	NP_689999	Coding	chr9:113410707 plus strand	588199
C9orf47	NM_001001938	NP_001001938	Coding	chr9:88990862 plus strand	588200
C9orf47	NM_001142413	NP_001135885	Coding	chr9:88990862 plus strand	588200
C9orf50	NM_199350	NP_955382	Coding	chr9:129620776 minus strand	588201

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C9orf57	NM_001128618	NP_001122090	Coding	chr9:72060605 minus strand	588202
C9orf62	NM_173520	NP_775791	Coding	chr9:135343248 plus strand	588203
C9orf64	NM_032307	NP_115683	Coding	chr9:83956748 minus strand	588204
C9orf66	NM_152569	NP_689782	Coding	chr9:215893 minus strand	588205
C9orf69	NM_001256526	NP_001243455	Coding	chr9:136118431 minus strand	588206
C9orf69	NM_152833	NP_690046	Coding	chr9:136118885 minus strand	588207
C9orf72	NM_001256054	NP_001242983	Coding	chr9:27573866 minus strand	588208
C9orf72	NM_018325	NP_060795	Coding	chr9:27573493 minus strand	588209
C9orf72	NM_145005	NP_659442	Coding	chr9:27573866 minus strand	588208
C9orf78	NM_016520	NP_057604	Coding	chr9:129835293 minus strand	588210
C9orf84	NM_001080551	NP_001074020	Coding	chr9:111759533 minus strand	588211
C9orf84	NM_173521	NP_775792	Coding	chr9:111783499 minus strand	588212
C9orf85	NM_182505	NP_872311	Coding	chr9:71911506 plus strand	588213
C9orf89	NM_032310	NP_115686	Coding	chr9:93096167 plus strand	588214
C9orf9	NM_018956	NP_061829	Coding	chr9:132878902 plus strand	588215
C9orf91	NM_153045	NP_694590	Coding	chr9:114611425 plus strand	588216
C9orf92	NM_001271829	NP_001258758	Coding	chr9:16253107 minus strand	588217
CA9	NM_001216	NP_001207	Coding	chr9:35673917 plus strand	588218
CAAP1	NM_001167575	NP_001161047	Coding	chr9:26892828 minus strand	588219
CAAP1	NM_024828	NP_079104	Coding	chr9:26892828 minus strand	588219
CACFD1	NM_001135775	NP_001129247	Coding	chr9:133459964 plus strand	588220
CACFD1	NM_001242369	NP_001229298	Coding	chr9:133459964 plus strand	588220
CACFD1	NM_001242370	NP_001229299	Coding	chr9:133459964 plus strand	588220
CACFD1	NM_017586	NP_060056	Coding	chr9:133459964 plus strand	588220
CACNA1B	NM_000718	NP_000709	Coding	chr9:137877788 plus strand	588221
CACNA1B	NM_001243812	NP_001230741	Coding	chr9:137877788 plus strand	588221
CAMSAP1	NM_015447	NP_056262	Coding	chr9:135907159 minus strand	588222
CARD9	NM_052813	NP_434700	Coding	chr9:136373681 minus strand	588223
CARD9	NM_052814	NP_434701	Coding	chr9:136373681 minus	588223

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				strand	
CBWD1	NM_001145355	NP_001138827	Coding	chr9:179075 minus strand	588224
CBWD1	NM_001145356	NP_001138828	Coding	chr9:179075 minus strand	588224
CBWD1	NM_018491	NP_060961	Coding	chr9:179075 minus strand	588224
CBWD3	NM_001291821	NP_001278750	Coding	chr9:68241944 plus strand	588225
CBWD3	NM_201453	NP_958861	Coding	chr9:68241944 plus strand	588225
CBWD5	NM_001024916	NP_001020087	Coding	chr9:65675833 plus strand	588226
CBWD5	NM_001286835	NP_001273764	Coding	chr9:65675833 plus strand	588226
CBWD5	NM_001286836	NP_001273765	Coding	chr9:41189401 minus strand	588227
CBWD5	NM_001286836	NP_001273765	Coding	chr9:65675833 plus strand	588226
CBWD5	NM_001286836	NP_001273765	Coding	chr9:68241888 plus strand	588228
CBWD6	NM_001085457	NP_001078926	Coding	chr9:41189364 minus strand	588229
CCBL1	NM_001122671	NP_001116143	Coding	chr9:128882075 minus strand	588230
CCBL1	NM_001122672	NP_001116144	Coding	chr9:128882075 minus strand	588230
CCBL1	NM_001287390	NP_001274319	Coding	chr9:128882075 minus strand	588230
CCBL1	NM_004059	NP_004050	Coding	chr9:128882075 minus strand	588230
CCDC107	NM_001195200	NP_001182129	Coding	chr9:35658289 plus strand	588231
CCDC107	NM_001195201	NP_001182130	Coding	chr9:35658289 plus strand	588231
CCDC107	NM_001195217	NP_001182146	Coding	chr9:35658289 plus strand	588231
CCDC107	NM_174923	NP_777583	Coding	chr9:35658289 plus strand	588231
CCDC171	NM_173550	NP_775821	Coding	chr9:15553098 plus strand	588232
CCDC180	NM_020893	NP_065944	Coding	chr9:97307627 plus strand	588233
CCDC183	NM_001039374	NP_001034463	Coding	chr9:136796337 plus strand	588234
CCIN	NM_005893	NP_005884	Coding	chr9:36169391 plus strand	588235
CCL19	NM_006274	NP_006265	Coding	chr9:34691277 minus strand	588236
CCL21	NM_002989	NP_002980	Coding	chr9:34710167 minus strand	588237
CCL27	NM_006664	NP_006655	Coding	chr9:34662692 minus strand	588238
CD274	NM_001267706	NP_001254635	Coding	chr9:5450502 plus strand	588239
CD274	NM_014143	NP_054862	Coding	chr9:5450502 plus strand	588239
CD72	NM_001782	NP_001773	Coding	chr9:35618427 minus strand	588240
CDC14B	NM_001077181	NP_001070649	Coding	chr9:96566921 minus strand	588241
CDC14B	NM_003671	NP_003662	Coding	chr9:96619830 minus strand	588242
CDC14B	NM_033331	NP_201588	Coding	chr9:96619830 minus strand	588242
CDC26	NM_139286	NP_644815	Coding	chr9:113275589 minus strand	588243

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CDC37L1	NM_017913	NP_060383	Coding	chr9:4679565 plus strand	588244
CDK20	NM_001039803	NP_001034892	Coding	chr9:87974780 minus strand	588245
CDK20	NM_001170639	NP_001164110	Coding	chr9:87974780 minus strand	588245
CDK20	NM_001170640	NP_001164111	Coding	chr9:87974780 minus strand	588245
CDK20	NM_012119	NP_036251	Coding	chr9:87974780 minus strand	588245
CDK20	NM_178432	NP_848519	Coding	chr9:87974780 minus strand	588245
CDK5RAP2	NM_001011649	NP_001011649	Coding	chr9:120580170 minus strand	588246
CDK5RAP2	NM_001272039	NP_001258968	Coding	chr9:120580170 minus strand	588246
CDK5RAP2	NM_018249	NP_060719	Coding	chr9:120580170 minus strand	588246
CDK9	NM_001261	NP_001252	Coding	chr9:127786025 plus strand	588247
CDKN2A	NM_000077	NP_000068	Coding	chr9:21975133 minus strand	588248
CDKN2A	NM_001195132	NP_001182061	Coding	chr9:21975133 minus strand	588248
CDKN2A	NM_058195	NP_478102	Coding	chr9:21994491 minus strand	588249
CDKN2A	NM_058197	NP_478104	Coding	chr9:21974827 minus strand	588250
CDKN2B	NM_004936	NP_004927	Coding	chr9:22009313 minus strand	588251
CDKN2B	NM_078487	NP_511042	Coding	chr9:22009313 minus strand	588251
CEL	NM_001807	NP_001798	Coding	chr9:133061977 plus strand	588252
CENPP	NM_001012267	NP_001012267	Coding	chr9:92325467 plus strand	588253
CENPP	NM_001286969	NP_001273898	Coding	chr9:92325467 plus strand	588253
CENPP	NM_001286971	NP_001273900	Coding	chr9:92600256 plus strand	588254
CEP78	NM_001098802	NP_001092272	Coding	chr9:78236074 plus strand	588255
CEP78	NM_032171	NP_115547	Coding	chr9:78236074 plus strand	588255
CER1	NM_005454	NP_005445	Coding	chr9:14722717 minus strand	588256
CERCAM	NM_001286760	NP_001273689	Coding	chr9:128419159 plus strand	588257
CERCAM	NM_016174	NP_057258	Coding	chr9:128420479 plus strand	588258
CHMP5	NM_001195536	NP_001182465	Coding	chr9:33264878 plus strand	588259
CHMP5	NM_016410	NP_057494	Coding	chr9:33264878 plus strand	588259
CIZ1	NM_001131015	NP_001124487	Coding	chr9:128204383 minus strand	588260
CIZ1	NM_001131016	NP_001124488	Coding	chr9:128191589 minus strand	588261
CIZ1	NM_001131017	NP_001124489	Coding	chr9:128191589 minus strand	588261

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CIZ1	NM_001131018	NP_001124490	Coding	chr9:128191589 minus strand	588261
CIZ1	NM_001257975	NP_001244904	Coding	chr9:128192104 minus strand	588262
CIZ1	NM_001257976	NP_001244905	Coding	chr9:128191589 minus strand	588261
CIZ1	NM_012127	NP_036259	Coding	chr9:128204383 minus strand	588260
CKS2	NM_001827	NP_001818	Coding	chr9:89311197 plus strand	588263
CLIC3	NM_004669	NP_004660	Coding	chr9:136996572 minus strand	588264
CLTA	NM_001076677	NP_001070145	Coding	chr9:36190855 plus strand	588265
CLTA	NM_001184760	NP_001171689	Coding	chr9:36190855 plus strand	588265
CLTA	NM_001184761	NP_001171690	Coding	chr9:36190855 plus strand	588265
CLTA	NM_001184762	NP_001171691	Coding	chr9:36190855 plus strand	588265
CLTA	NM_001833	NP_001824	Coding	chr9:36190855 plus strand	588265
CLTA	NM_007096	NP_009027	Coding	chr9:36190855 plus strand	588265
CNTFR	NM_001207011	NP_001193940	Coding	chr9:34590140 minus strand	588266
CNTFR	NM_001842	NP_001833	Coding	chr9:34589737 minus strand	588267
CNTFR	NM_147164	NP_671693	Coding	chr9:34589737 minus strand	588267
CNTLN	NM_001114395	NP_001107867	Coding	chr9:17134990 plus strand	588268
CNTLN	NM_001286984	NP_001273913	Coding	chr9:17134990 plus strand	588268
CNTLN	NM_001286985	NP_001273914	Coding	chr9:17134990 plus strand	588268
CNTLN	NM_017738	NP_060208	Coding	chr9:17134990 plus strand	588268
CNTNAP3	NM_033655	NP_387504	Coding	chr9:39288303 minus strand	588269
CNTNAP3B	NM_001201380	NP_001188309	Coding	chr9:42129504 minus strand	588270
CNTRL	NM_007018	NP_008949	Coding	chr9:121088295 plus strand	588271
COL15A1	NM_001855	NP_001846	Coding	chr9:98943712 plus strand	588272
COL27A1	NM_032888	NP_116277	Coding	chr9:114155544 plus strand	588273
COL5A1	NM_000093	NP_000084	Coding	chr9:134641804 plus strand	588274
COL5A1	NM_001278074	NP_001265003	Coding	chr9:134641804 plus strand	588274
COQ4	NM_016035	NP_057119	Coding	chr9:128322511 plus strand	588275
CORO2A	NM_003389	NP_003380	Coding	chr9:98172892 minus strand	588276
CORO2A	NM_052820	NP_438171	Coding	chr9:98192674 minus strand	588277
CRAT	NM_000755	NP_000746	Coding	chr9:129110791 minus strand	588278
CRAT	NM_001257363	NP_001244292	Coding	chr9:129110791 minus strand	588278

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CRB2	NM_173689	NP_775960	Coding	chr9:123356166 plus strand	588279
CREB3	NM_006368	NP_006359	Coding	chr9:35732319 plus strand	588280
CTNNAL1	NM_001286974	NP_001273903	Coding	chr9:109013594 minus strand	588281
CTNNAL1	NM_003798	NP_003789	Coding	chr9:109013594 minus strand	588281
CTSL	NM_001257971	NP_001244900	Coding	chr9:87726058 plus strand	588282
CTSL	NM_001257972	NP_001244901	Coding	chr9:87726058 plus strand	588282
CTSL	NM_001257973	NP_001244902	Coding	chr9:87726058 plus strand	588282
CTSL	NM_001912	NP_001903	Coding	chr9:87726058 plus strand	588282
CTSL	NM_145918	NP_666023	Coding	chr9:87726058 plus strand	588282
CTSV	NM_001201575	NP_001188504	Coding	chr9:97039643 minus strand	588283
CTSV	NM_001333	NP_001324	Coding	chr9:97039310 minus strand	588284
CYLC2	NM_001340	NP_001331	Coding	chr9:102995310 plus strand	588285
CYSRT1	NM_199001	NP_945352	Coding	chr9:137224634 plus strand	588286
DAB2IP	NM_032552	NP_115941	Coding	chr9:121567101 plus strand	588287
DAB2IP	NM_138709	NP_619723	Coding	chr9:121742784 plus strand	588288
DAPK1	NM_001288729	NP_001275658	Coding	chr9:87498534 plus strand	588289
DAPK1	NM_001288730	NP_001275659	Coding	chr9:87497680 plus strand	588290
DAPK1	NM_001288731	NP_001275660	Coding	chr9:87497227 plus strand	588291
DAPK1	NM_004938	NP_004929	Coding	chr9:87497680 plus strand	588290
DBH	NM_000787	NP_000778	Coding	chr9:133636362 plus strand	588292
DCAF10	NM_001286810	NP_001273739	Coding	chr9:37800553 plus strand	588293
DCAF10	NM_024345	NP_077321	Coding	chr9:37800785 plus strand	588294
DCAF12	NM_015397	NP_056212	Coding	chr9:34126773 minus strand	588295
DCTN3	NM_001281425	NP_001268354	Coding	chr9:34620523 minus strand	588296
DCTN3	NM_001281426	NP_001268355	Coding	chr9:34620523 minus strand	588296
DCTN3	NM_001281427	NP_001268356	Coding	chr9:34620523 minus strand	588296
DCTN3	NM_007234	NP_009165	Coding	chr9:34620523 minus strand	588296
DCTN3	NM_024348	NP_077324	Coding	chr9:34620523 minus strand	588296
DDX31	NM_022779	NP_073616	Coding	chr9:132670401 minus strand	588297
DDX31	NM_138620	NP_619526	Coding	chr9:132670401 minus strand	588297
DDX58	NM_014314	NP_055129	Coding	chr9:32526324 minus strand	588298

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DEC1	NM_017418	NP_059114	Coding	chr9:115141817 plus strand	588299
DENND1A	NM_020946	NP_065997	Coding	chr9:123930138 minus strand	588300
DENND1A	NM_024820	NP_079096	Coding	chr9:123930138 minus strand	588300
DENND4C	NM_017925	NP_060395	Coding	chr9:19230764 plus strand	588301
DFNB31	NM_001083885	NP_001077354	Coding	chr9:114503215 minus strand	588302
DFNB31	NM_001173425	NP_001166896	Coding	chr9:114505456 minus strand	588303
DFNB31	NM_015404	NP_056219	Coding	chr9:114505456 minus strand	588303
DIRAS2	NM_017594	NP_060064	Coding	chr9:90642826 minus strand	588304
DMRT1	NM_021951	NP_068770	Coding	chr9:841689 plus strand	588305
DMRT2	NM_001130865	NP_001124337	Coding	chr9:1050353 plus strand	588306
DMRT2	NM_006557	NP_006548	Coding	chr9:1050345 plus strand	588307
DMRT2	NM_181872	NP_870987	Coding	chr9:1050619 plus strand	588308
DMRT3	NM_021240	NP_067063	Coding	chr9:976967 plus strand	588309
DMRTA1	NM_022160	NP_071443	Coding	chr9:22446840 plus strand	588310
DNAI1	NM_001281428	NP_001268357	Coding	chr9:34458751 plus strand	588311
DNAI1	NM_012144	NP_036276	Coding	chr9:34458751 plus strand	588311
DNAJA1	NM_001539	NP_001530	Coding	chr9:33025210 plus strand	588312
DNAJB5	NM_001135004	NP_001128476	Coding	chr9:34989640 plus strand	588313
DNAJB5	NM_001135005	NP_001128477	Coding	chr9:34990269 plus strand	588314
DNAJB5	NM_012266	NP_036398	Coding	chr9:34989640 plus strand	588313
DNAJC25	NM_001015882	NP_001015882	Coding	chr9:111631351 plus strand	588315
DNAJC25-GNG10	NM_004125	NP_004116	Coding	chr9:111631351 plus strand	588316
DNLZ	NM_001080849	NP_001074318	Coding	chr9:136363811 minus strand	588317
DNM1	NM_001005336	NP_001005336	Coding	chr9:128203354 plus strand	588318
DNM1	NM_001288737	NP_001275666	Coding	chr9:128203354 plus strand	588318
DNM1	NM_001288738	NP_001275667	Coding	chr9:128203354 plus strand	588318
DNM1	NM_001288739	NP_001275668	Coding	chr9:128203354 plus strand	588318
DNM1	NM_004408	NP_004399	Coding	chr9:128203354 plus strand	588318
DOCK8	NM_001190458	NP_001177387	Coding	chr9:273047 plus strand	588319
DOCK8	NM_001193536	NP_001180465	Coding	chr9:273047 plus strand	588319
DOCK8	NM_203447	NP_982272	Coding	chr9:214864 plus strand	588320
DOLK	NM_014908	NP_055723	Coding	chr9:128947733 minus strand	588321
DOLPP1	NM_001135917	NP_001129389	Coding	chr9:129081103 plus strand	588322

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DOLPP1	NM_020438	NP_065171	Coding	chr9:129081103 plus strand	588322
DPH7	NM_138778	NP_620133	Coding	chr9:137578935 minus strand	588323
DPM2	NM_003863	NP_003854	Coding	chr9:127938484 minus strand	588324
DPP7	NM_013379	NP_037511	Coding	chr9:137114743 minus strand	588325
ECM2	NM_001197295	NP_001184224	Coding	chr9:92536092 minus strand	588326
ECM2	NM_001197296	NP_001184225	Coding	chr9:92536092 minus strand	588326
ECM2	NM_001393	NP_001384	Coding	chr9:92536092 minus strand	588326
EDF1	NM_001281297	NP_001268226	Coding	chr9:136866336 minus strand	588327
EDF1	NM_001281298	NP_001268227	Coding	chr9:136866336 minus strand	588327
EDF1	NM_001281299	NP_001268228	Coding	chr9:136866336 minus strand	588327
EDF1	NM_003792	NP_003783	Coding	chr9:136866336 minus strand	588327
EDF1	NM_153200	NP_694880	Coding	chr9:136866336 minus strand	588327
EGFL7	NM_016215	NP_057299	Coding	chr9:136662926 plus strand	588328
EGFL7	NM_201446	NP_958854	Coding	chr9:136665771 plus strand	588329
EHMT1	NM_001145527	NP_001138999	Coding	chr9:137618991 plus strand	588330
EHMT1	NM_024757	NP_079033	Coding	chr9:137618991 plus strand	588330
ELAVL2	NM_001171195	NP_001164666	Coding	chr9:23821845 minus strand	588331
ELAVL2	NM_001171197	NP_001164668	Coding	chr9:23821480 minus strand	588332
ELAVL2	NM_004432	NP_004423	Coding	chr9:23826065 minus strand	588333
ENDOG	NM_004435	NP_004426	Coding	chr9:128818499 plus strand	588334
ENG	NM_000118	NP_000109	Coding	chr9:127854773 minus strand	588335
ENG	NM_001114753	NP_001108225	Coding	chr9:127854773 minus strand	588335
ENG	NM_001278138	NP_001265067	Coding	chr9:127847167 minus strand	588336
ENHO	NM_198573	NP_940975	Coding	chr9:34523039 minus strand	588337
ENTPD2	NM_001246	NP_001237	Coding	chr9:137054051 minus strand	588338
ENTPD2	NM_203468	NP_982293	Coding	chr9:137054051 minus strand	588338
ENTPD8	NM_001033113	NP_001028285	Coding	chr9:137441449 minus strand	588339

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ENTPD8	NM_198585	NP_940987	Coding	chr9:137441449 minus strand	588339
EPB41L4B	NM_018424	NP_060894	Coding	chr9:109320964 minus strand	588340
EPB41L4B	NM_019114	NP_061987	Coding	chr9:109320964 minus strand	588340
EQTN	NM_001161585	NP_001155057	Coding	chr9:27297139 minus strand	588341
EQTN	NM_020641	NP_065692	Coding	chr9:27297139 minus strand	588341
ERCC6L2	NM_001010895	NP_001010895	Coding	chr9:95875617 plus strand	588342
ERCC6L2	NM_020207	NP_064592	Coding	chr9:95875617 plus strand	588342
ERMP1	NM_024896	NP_079172	Coding	chr9:5833081 minus strand	588343
ERP44	NM_015051	NP_055866	Coding	chr9:100099048 minus strand	588344
EXD3	NM_001286823	NP_001273752	Coding	chr9:137423262 minus strand	588345
EXD3	NM_017820	NP_060290	Coding	chr9:137423262 minus strand	588345
EXOSC2	NM_001282708	NP_001269637	Coding	chr9:130693759 plus strand	588346
EXOSC2	NM_001282709	NP_001269638	Coding	chr9:130693759 plus strand	588346
EXOSC2	NM_014285	NP_055100	Coding	chr9:130693759 plus strand	588346
EXOSC3	NM_001002269	NP_001002269	Coding	chr9:37785092 minus strand	588347
EXOSC3	NM_016042	NP_057126	Coding	chr9:37785092 minus strand	588347
FAM102A	NM_001035254	NP_001030331	Coding	chr9:127980533 minus strand	588348
FAM102A	NM_203305	NP_976050	Coding	chr9:127950714 minus strand	588349
FAM120A	NM_001286722	NP_001273651	Coding	chr9:93451695 plus strand	588350
FAM120A	NM_001286723	NP_001273652	Coding	chr9:93451695 plus strand	588350
FAM120A	NM_001286724	NP_001273653	Coding	chr9:93451695 plus strand	588350
FAM120A	NM_014612	NP_055427	Coding	chr9:93451695 plus strand	588350
FAM120AOS	NM_198841	NP_942138	Coding	chr9:93453592 minus strand	588351
FAM122A	NM_138333	NP_612206	Coding	chr9:68780047 plus strand	588352
FAM129B	NM_001035534	NP_001030611	Coding	chr9:127579007 minus strand	588353
FAM129B	NM_022833	NP_073744	Coding	chr9:127569117 minus strand	588354
FAM154A	NM_001287049	NP_001273978	Coding	chr9:19049354 minus strand	588355
FAM154A	NM_001287050	NP_001273979	Coding	chr9:19033258 minus strand	588356
FAM154A	NM_153707	NP_714918	Coding	chr9:19033258 minus strand	588356
FAM157B	NM_001145249	NP_001138721	Coding	chr9:138216186 plus strand	588357

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FAM163B	NM_001080515	NP_001073984	Coding	chr9:133580246 minus strand	588358
FAM166A	NM_001001710	NP_001001710	Coding	chr9:137247792 minus strand	588359
FAM166B	NM_001099951	NP_001093421	Coding	chr9:35563899 minus strand	588360
FAM166B	NM_001164310	NP_001157782	Coding	chr9:35563899 minus strand	588360
FAM166B	NM_001287238	NP_001274167	Coding	chr9:35563899 minus strand	588360
FAM166B	NM_001287239	NP_001274168	Coding	chr9:35563899 minus strand	588360
FAM189A2	NM_001127608	NP_001121080	Coding	chr9:69324571 plus strand	588361
FAM189A2	NM_004816	NP_004807	Coding	chr9:69329324 plus strand	588362
FAM205A	NM_001141917	NP_001135389	Coding	chr9:34729538 minus strand	588363
FAM206A	NM_017832	NP_060302	Coding	chr9:108934392 plus strand	588364
FAM214B	NM_025182	NP_079458	Coding	chr9:35115896 minus strand	588365
FAM219A	NM_001184940	NP_001171869	Coding	chr9:34458570 minus strand	588366
FAM219A	NM_001184941	NP_001171870	Coding	chr9:34458570 minus strand	588366
FAM219A	NM_001184942	NP_001171871	Coding	chr9:34458570 minus strand	588366
FAM219A	NM_001184943	NP_001171872	Coding	chr9:34458570 minus strand	588366
FAM219A	NM_001184945	NP_001171874	Coding	chr9:34458570 minus strand	588366
FAM219A	NM_147202	NP_671735	Coding	chr9:34458570 minus strand	588366
FAM221B	NM_001012446	NP_001012448	Coding	chr9:35828747 minus strand	588367
FAM69B	NM_152421	NP_689634	Coding	chr9:136712571 plus strand	588368
FAM73B	NM_032809	NP_116198	Coding	chr9:129036973 plus strand	588369
FAM78A	NM_033387	NP_203745	Coding	chr9:131276519 minus strand	588370
FANCC	NM_000136	NP_000127	Coding	chr9:95317709 minus strand	588371
FANCC	NM_001243743	NP_001230672	Coding	chr9:95317254 minus strand	588372
FANCC	NM_001243744	NP_001230673	Coding	chr9:95317709 minus strand	588371
FANCG	NM_004629	NP_004620	Coding	chr9:35080016 minus strand	588373
FBP1	NM_000507	NP_000498	Coding	chr9:94639641 minus strand	588374
FBP1	NM_001127628	NP_001121100	Coding	chr9:94640249 minus strand	588375
FBP2	NM_003837	NP_003828	Coding	chr9:94593832 minus strand	588376

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FBXO10	NM_012166	NP_036298	Coding	chr9:37576253 minus strand	588377
FBXW2	NM_012164	NP_036296	Coding	chr9:120793462 minus strand	588378
FBXW5	NM_018998	NP_061871	Coding	chr9:136944754 minus strand	588379
FCN1	NM_002003	NP_001994	Coding	chr9:134917960 minus strand	588380
FCN2	NM_004108	NP_004099	Coding	chr9:134880811 plus strand	588381
FCN2	NM_015837	NP_056652	Coding	chr9:134880811 plus strand	588381
FGD3	NM_001083536	NP_001077005	Coding	chr9:92947318 plus strand	588382
FGD3	NM_001286993	NP_001273922	Coding	chr9:92963960 plus strand	588383
FGD3	NM_033086	NP_149077	Coding	chr9:92974435 plus strand	588384
FIBCD1	NM_001145106	NP_001138578	Coding	chr9:130939068 minus strand	588385
FIBCD1	NM_032843	NP_116232	Coding	chr9:130938852 minus strand	588386
FKBP15	NM_015258	NP_056073	Coding	chr9:113221361 minus strand	588387
FKTN	NM_001079802	NP_001073270	Coding	chr9:105558129 plus strand	588388
FKTN	NM_001198963	NP_001185892	Coding	chr9:105558129 plus strand	588388
FKTN	NM_006731	NP_006722	Coding	chr9:105558129 plus strand	588388
FNBP1	NM_015033	NP_055848	Coding	chr9:130043194 minus strand	588389
FOCAD	NM_017794	NP_060264	Coding	chr9:20658308 plus strand	588390
FOXB2	NM_001013735	NP_001013757	Coding	chr9:77019654 plus strand	588391
FOXD4	NM_207305	NP_997188	Coding	chr9:118417 minus strand	588392
FOXD4L3	NM_199135	NP_954586	Coding	chr9:68302866 plus strand	588393
FOXD4L4	NM_199244	NP_954714	Coding	chr9:65737145 plus strand	588394
FOXD4L5	NM_001126334	NP_001119806	Coding	chr9:65285209 minus strand	588395
FOXD4L6	NM_001085476	NP_001078945	Coding	chr9:41128975 minus strand	588396
FOXE1	NM_004473	NP_004464	Coding	chr9:97853254 plus strand	588397
FPGS	NM_001018078	NP_001018088	Coding	chr9:127803180 plus strand	588398
FPGS	NM_001288803	NP_001275732	Coding	chr9:127802857 plus strand	588399
FPGS	NM_004957	NP_004948	Coding	chr9:127802857 plus strand	588399
FREM1	NM_001177704	NP_001171175	Coding	chr9:14779533 minus strand	588400
FREM1	NM_144966	NP_659403	Coding	chr9:14910995 minus strand	588401
FRMD3	NM_001244959	NP_001231888	Coding	chr9:83538433 minus strand	588402

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FRMD3	NM_001244960	NP_001231889	Coding	chr9:83467742 minus strand	588403
FRMD3	NM_001244961	NP_001231890	Coding	chr9:83331961 minus strand	588404
FRMD3	NM_001244962	NP_001231891	Coding	chr9:83267287 minus strand	588405
FRMD3	NM_174938	NP_777598	Coding	chr9:83538433 minus strand	588402
FRMPD1	NM_014907	NP_055722	Coding	chr9:37651054 plus strand	588406
FRRS1L	NM_014334	NP_055149	Coding	chr9:109167291 minus strand	588407
FSD1L	NM_001145313	NP_001138785	Coding	chr9:105448033 plus strand	588408
FSD1L	NM_001287191	NP_001274120	Coding	chr9:105448033 plus strand	588408
FSD1L	NM_001287192	NP_001274121	Coding	chr9:105448033 plus strand	588408
FSD1L	NM_031919	NP_114125	Coding	chr9:105448033 plus strand	588408
FUBP3	NM_003934	NP_003925	Coding	chr9:130579572 plus strand	588409
FUT7	NM_004479	NP_004470	Coding	chr9:137032840 minus strand	588410
FXN	NM_000144	NP_000135	Coding	chr9:69035562 plus strand	588411
FXN	NM_001161706	NP_001155178	Coding	chr9:69035562 plus strand	588411
FXN	NM_181425	NP_852090	Coding	chr9:69035562 plus strand	588411
GABBR2	NM_005458	NP_005449	Coding	chr9:98709197 minus strand	588412
GADD45G	NM_006705	NP_006696	Coding	chr9:89605011 plus strand	588413
GALNT12	NM_024642	NP_078918	Coding	chr9:98807698 plus strand	588414
GALT	NM_000155	NP_000146	Coding	chr9:34646588 plus strand	588415
GALT	NM_001258332	NP_001245261	Coding	chr9:34646588 plus strand	588415
GAPVD1	NM_001282679	NP_001269608	Coding	chr9:125261793 plus strand	588416
GAPVD1	NM_001282680	NP_001269609	Coding	chr9:125261793 plus strand	588416
GAPVD1	NM_001282681	NP_001269610	Coding	chr9:125298889 plus strand	588417
GAPVD1	NM_015635	NP_056450	Coding	chr9:125261793 plus strand	588416
GARNL3	NM_001286779	NP_001273708	Coding	chr9:127263661 plus strand	588418
GARNL3	NM_032293	NP_115669	Coding	chr9:127264476 plus strand	588419
GAS1	NM_002048	NP_002039	Coding	chr9:86947189 minus strand	588420
GBA2	NM_020944	NP_065995	Coding	chr9:35749228 minus strand	588421
GBGT1	NM_001282629	NP_001269558	Coding	chr9:133163945 minus strand	588422
GBGT1	NM_001282632	NP_001269561	Coding	chr9:133163945 minus strand	588422

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GBGT1	NM_001288572	NP_001275501	Coding	chr9:133163945 minus strand	588422
GBGT1	NM_001288573	NP_001275502	Coding	chr9:133163945 minus strand	588422
GBGT1	NM_021996	NP_068836	Coding	chr9:133163945 minus strand	588422
GCNT1	NM_001097633	NP_001091102	Coding	chr9:76459151 plus strand	588423
GCNT1	NM_001097634	NP_001091103	Coding	chr9:76441665 plus strand	588424
GCNT1	NM_001097635	NP_001091104	Coding	chr9:76478340 plus strand	588425
GCNT1	NM_001097636	NP_001091105	Coding	chr9:76500632 plus strand	588426
GCNT1	NM_001490	NP_001481	Coding	chr9:76459151 plus strand	588423
GDA	NM_001242505	NP_001229434	Coding	chr9:72149350 plus strand	588427
GDA	NM_001242506	NP_001229435	Coding	chr9:72149350 plus strand	588427
GDA	NM_001242507	NP_001229436	Coding	chr9:72114594 plus strand	588428
GDA	NM_004293	NP_004284	Coding	chr9:72149350 plus strand	588427
GFI1B	NM_001135031	NP_001128503	Coding	chr9:132978710 plus strand	588429
GFI1B	NM_004188	NP_004179	Coding	chr9:132945544 plus strand	588430
GKAP1	NM_001135953	NP_001129425	Coding	chr9:83817837 minus strand	588431
GKAP1	NM_025211	NP_079487	Coding	chr9:83817837 minus strand	588431
GLDC	NM_000170	NP_000161	Coding	chr9:6645692 minus strand	588432
GLE1	NM_001003722	NP_001003722	Coding	chr9:128504691 plus strand	588433
GLE1	NM_001499	NP_001490	Coding	chr9:128504691 plus strand	588433
GLIPR2	NM_001287010	NP_001273939	Coding	chr9:36136535 plus strand	588434
GLIPR2	NM_001287011	NP_001273940	Coding	chr9:36136535 plus strand	588434
GLIPR2	NM_001287012	NP_001273941	Coding	chr9:36136535 plus strand	588434
GLIPR2	NM_001287013	NP_001273942	Coding	chr9:36136784 plus strand	588435
GLIPR2	NM_001287014	NP_001273943	Coding	chr9:36136784 plus strand	588435
GLIPR2	NM_022343	NP_071738	Coding	chr9:36136535 plus strand	588434
GLIS3	NM_001042413	NP_001035878	Coding	chr9:4300035 minus strand	588436
GLIS3	NM_152629	NP_689842	Coding	chr9:4152183 minus strand	588437
GLT6D1	NM_182974	NP_892019	Coding	chr9:135639540 minus strand	588438
GNA14	NM_004297	NP_004288	Coding	chr9:77648316 minus strand	588439
GNAQ	NM_002072	NP_002063	Coding	chr9:78031449 minus strand	588440
GNE	NM_001128227	NP_001121699	Coding	chr9:36277056 minus strand	588441
GNE	NM_001190383	NP_001177312	Coding	chr9:36258499 minus strand	588442
GNE	NM_001190384	NP_001177313	Coding	chr9:36258499 minus strand	588442
GNE	NM_001190388	NP_001177317	Coding	chr9:36277056 minus	588441

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				strand	
GNE	NM_005476	NP_005467	Coding	chr9:36258499 minus strand	588442
GNG10	NM_001017998	NP_001017998	Coding	chr9:111661570 plus strand	588443
GNG10	NM_001198664	NP_001185593	Coding	chr9:111661570 plus strand	588443
GOLGA1	NM_002077	NP_002068	Coding	chr9:124941107 minus strand	588444
GOLGA2	NM_004486	NP_004477	Coding	chr9:128275989 minus strand	588445
GOLM1	NM_016548	NP_057632	Coding	chr9:86099595 minus strand	588446
GOLM1	NM_177937	NP_808800	Coding	chr9:86100201 minus strand	588447
GPR107	NM_001136557	NP_001130029	Coding	chr9:130053705 plus strand	588448
GPR107	NM_001136558	NP_001130030	Coding	chr9:130053705 plus strand	588448
GPR107	NM_001287346	NP_001274275	Coding	chr9:130053705 plus strand	588448
GPR107	NM_020960	NP_066011	Coding	chr9:130053705 plus strand	588448
GPR21	NM_005294	NP_005285	Coding	chr9:123033642 plus strand	588449
GPSM1	NM_001145638	NP_001139110	Coding	chr9:136327475 plus strand	588450
GPSM1	NM_001145639	NP_001139111	Coding	chr9:136353056 plus strand	588451
GPSM1	NM_001200003	NP_001186932	Coding	chr9:136354799 plus strand	588452
GPSM1	NM_015597	NP_056412	Coding	chr9:136327475 plus strand	588450
GRHPR	NM_012203	NP_036335	Coding	chr9:37422709 plus strand	588453
GRIN1	NM_000832	NP_000823	Coding	chr9:137139156 plus strand	588454
GRIN1	NM_001185090	NP_001172019	Coding	chr9:137139156 plus strand	588454
GRIN1	NM_001185091	NP_001172020	Coding	chr9:137139156 plus strand	588454
GRIN1	NM_007327	NP_015566	Coding	chr9:137139156 plus strand	588454
GRIN1	NM_021569	NP_067544	Coding	chr9:137139156 plus strand	588454
GRIN3A	NM_133445	NP_597702	Coding	chr9:101738580 minus strand	588455
GSN	NM_000177	NP_000168	Coding	chr9:121299800 plus strand	588456
GSN	NM_001127662	NP_001121134	Coding	chr9:121268101 plus strand	588457
GSN	NM_001127663	NP_001121135	Coding	chr9:121268101 plus strand	588457
GSN	NM_001127664	NP_001121136	Coding	chr9:121268101 plus strand	588457

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GSN	NM_001127665	NP_001121137	Coding	chr9:121268101 plus strand	588457
GSN	NM_001127666	NP_001121138	Coding	chr9:121268101 plus strand	588457
GSN	NM_001127667	NP_001121139	Coding	chr9:121268101 plus strand	588457
GSN	NM_001258029	NP_001244958	Coding	chr9:121286080 plus strand	588458
GSN	NM_001258030	NP_001244959	Coding	chr9:121286579 plus strand	588459
GSN	NM_198252	NP_937895	Coding	chr9:121268101 plus strand	588457
GTF3C4	NM_012204	NP_036336	Coding	chr9:132670340 plus strand	588460
GTF3C5	NM_001122823	NP_001116295	Coding	chr9:133030674 plus strand	588461
GTF3C5	NM_001286709	NP_001273638	Coding	chr9:133030674 plus strand	588461
GTF3C5	NM_012087	NP_036219	Coding	chr9:133030674 plus strand	588461
HABP4	NM_014282	NP_055097	Coding	chr9:96450154 plus strand	588462
HAUS6	NM_001270890	NP_001257819	Coding	chr9:19102942 minus strand	588463
HAUS6	NM_017645	NP_060115	Coding	chr9:19102942 minus strand	588463
HDHD3	NM_031219	NP_112496	Coding	chr9:113376061 minus strand	588464
HEMGN	NM_018437	NP_060907	Coding	chr9:97944915 minus strand	588465
HEMGN	NM_197978	NP_932095	Coding	chr9:97938393 minus strand	588466
HIATL1	NM_032558	NP_115947	Coding	chr9:94374550 plus strand	588467
HINT2	NM_032593	NP_115982	Coding	chr9:35815045 minus strand	588468
HMCN2	NM_001291815	NP_001278744	Coding	chr9:130265878 plus strand	588469
HNRNPK	NM_002140	NP_002131	Coding	chr9:83980654 minus strand	588470
HNRNPK	NM_031262	NP_112552	Coding	chr9:83980654 minus strand	588470
HNRNPK	NM_031263	NP_112553	Coding	chr9:83980269 minus strand	588471
HRCT1	NM_001039792	NP_001034881	Coding	chr9:35906191 plus strand	588472
HSD17B3	NM_000197	NP_000188	Coding	chr9:96302152 minus strand	588473
HSDL2	NM_001195822	NP_001182751	Coding	chr9:112379908 plus strand	588474
HSDL2	NM_032303	NP_115679	Coding	chr9:112379908 plus strand	588474
HSPA5	NM_005347	NP_005338	Coding	chr9:125241387 minus strand	588475
IARS	NM_002161	NP_002152	Coding	chr9:92293756 minus strand	588476

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IARS	NM_013417	NP_038203	Coding	chr9:92293756 minus strand	588476
IDNK	NM_001001551	NP_001001551	Coding	chr9:83623048 plus strand	588477
IDNK	NM_001256915	NP_001243844	Coding	chr9:83623048 plus strand	588477
IER5L	NM_203434	NP_982258	Coding	chr9:129178261 minus strand	588478
IFNA1	NM_024013	NP_076918	Coding	chr9:21440453 plus strand	588479
IFNA10	NM_002171	NP_002162	Coding	chr9:21207143 minus strand	588480
IFNA13	NM_006900	NP_008831	Coding	chr9:21368076 minus strand	588481
IFNA14	NM_002172	NP_002163	Coding	chr9:21239979 minus strand	588482
IFNA16	NM_002173	NP_002164	Coding	chr9:21217311 minus strand	588483
IFNA17	NM_021268	NP_067091	Coding	chr9:21228222 minus strand	588484
IFNA2	NM_000605	NP_000596	Coding	chr9:21385397 minus strand	588485
IFNA21	NM_002175	NP_002166	Coding	chr9:21166660 minus strand	588486
IFNA4	NM_021068	NP_066546	Coding	chr9:21187599 minus strand	588487
IFNA5	NM_002169	NP_002160	Coding	chr9:21305313 minus strand	588488
IFNA6	NM_021002	NP_066282	Coding	chr9:21350887 minus strand	588489
IFNA7	NM_021057	NP_066401	Coding	chr9:21202205 minus strand	588490
IFNA8	NM_002170	NP_002161	Coding	chr9:21409146 plus strand	588491
IFNB1	NM_002176	NP_002167	Coding	chr9:21077944 minus strand	588492
IFNE	NM_176891	NP_795372	Coding	chr9:21482313 minus strand	588493
IFNK	NM_020124	NP_064509	Coding	chr9:27524313 plus strand	588494
IFNW1	NM_002177	NP_002168	Coding	chr9:21142145 minus strand	588495
IFT74	NM_001099222	NP_001092692	Coding	chr9:26947311 plus strand	588496
IFT74	NM_001099223	NP_001092693	Coding	chr9:26947038 plus strand	588497
IFT74	NM_001099224	NP_001092694	Coding	chr9:26956372 plus strand	588498
IFT74	NM_025103	NP_079379	Coding	chr9:26956372 plus strand	588498
IGFBPL1	NM_001007563	NP_001007564	Coding	chr9:38424447 minus strand	588499
IKBKAP	NM_003640	NP_003631	Coding	chr9:108934328 minus strand	588500
IL11RA	NM_001142784	NP_001136256	Coding	chr9:34652184 plus strand	588501
IL33	NM_001199640	NP_001186569	Coding	chr9:6215785 plus strand	588502
IL33	NM_001199641	NP_001186570	Coding	chr9:6215785 plus strand	588502
IL33	NM_033439	NP_254274	Coding	chr9:6215785 plus strand	588502
INIP	NM_021218	NP_067041	Coding	chr9:112718107 minus	588503

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				strand	
INPP5E	NM_019892	NP_063945	Coding	chr9:136439804 minus strand	588504
INSL4	NM_002195	NP_002186	Coding	chr9:5231418 plus strand	588505
INSL6	NM_007179	NP_009110	Coding	chr9:5185618 minus strand	588506
INVS	NM_014425	NP_055240	Coding	chr9:100099219 plus strand	588507
INVS	NM_183245	NP_899068	Coding	chr9:100099219 plus strand	588507
IPPK	NM_022755	NP_073592	Coding	chr9:92670265 minus strand	588508
ISCA1	NM_030940	NP_112202	Coding	chr9:86282575 minus strand	588509
IZUMO3	NM_001271706	NP_001258635	Coding	chr9:24545676 minus strand	588510
JAK2	NM_004972	NP_004963	Coding	chr9:4985244 plus strand	588511
KANK1	NM_001256876	NP_001243805	Coding	chr9:470293 plus strand	588512
KANK1	NM_001256877	NP_001243806	Coding	chr9:504694 plus strand	588513
KANK1	NM_015158	NP_055973	Coding	chr9:504694 plus strand	588513
KANK1	NM_153186	NP_694856	Coding	chr9:706805 plus strand	588514
KCNT1	NM_001272003	NP_001258932	Coding	chr9:135702184 plus strand	588515
KCNT1	NM_020822	NP_065873	Coding	chr9:135702184 plus strand	588515
KCNV2	NM_133497	NP_598004	Coding	chr9:2717525 plus strand	588516
KDM4C	NM_001146694	NP_001140166	Coding	chr9:6757640 plus strand	588517
KDM4C	NM_001146695	NP_001140167	Coding	chr9:6757640 plus strand	588517
KDM4C	NM_001146696	NP_001140168	Coding	chr9:6720862 plus strand	588518
KDM4C	NM_015061	NP_055876	Coding	chr9:6757640 plus strand	588517
KIAA0020	NM_014878	NP_055693	Coding	chr9:2844130 minus strand	588519
KIAA0368	NM_001080398	NP_001073867	Coding	chr9:111484745 minus strand	588520
KIAA1045	NM_015297	NP_056112	Coding	chr9:34958194 plus strand	588521
KIAA1161	NM_020702	NP_065753	Coding	chr9:34376896 minus strand	588522
KIAA1958	NM_001287036	NP_001273965	Coding	chr9:112486967 plus strand	588523
KIAA1958	NM_001287038	NP_001273967	Coding	chr9:112486967 plus strand	588523
KIAA1958	NM_133465	NP_597722	Coding	chr9:112486967 plus strand	588523
KIAA2026	NM_001017969	NP_001017969	Coding	chr9:6008003 minus strand	588524
KIF12	NM_138424	NP_612433	Coding	chr9:114099057 minus strand	588525
KIF24	NM_194313	NP_919289	Coding	chr9:34329200 minus strand	588526
KIF27	NM_001271927	NP_001258856	Coding	chr9:83921465 minus strand	588527
KIF27	NM_001271928	NP_001258857	Coding	chr9:83921465 minus strand	588527

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KIF27	NM_017576	NP_060046	Coding	chr9:83921465 minus strand	588527
KLF4	NM_004235	NP_004226	Coding	chr9:107489766 minus strand	588528
KLF9	NM_001206	NP_001197	Coding	chr9:70414657 minus strand	588529
KLHL9	NM_018847	NP_061335	Coding	chr9:21335430 minus strand	588530
LAMC3	NM_006059	NP_006050	Coding	chr9:131009116 plus strand	588531
LCN1	NM_001252617	NP_001239546	Coding	chr9:135521437 plus strand	588532
LCN1	NM_001252618	NP_001239547	Coding	chr9:135521437 plus strand	588532
LCN1	NM_001252619	NP_001239548	Coding	chr9:135521437 plus strand	588532
LCN1	NM_002297	NP_002288	Coding	chr9:135521437 plus strand	588532
LCN10	NM_001001712	NP_001001712	Coding	chr9:136742959 minus strand	588533
LCN12	NM_178536	NP_848631	Coding	chr9:136952315 plus strand	588534
LCN15	NM_203347	NP_976222	Coding	chr9:136764513 minus strand	588535
LCN2	NM_005564	NP_005555	Coding	chr9:128149452 plus strand	588536
LCN6	NM_198946	NP_945184	Coding	chr9:136748528 minus strand	588537
LCN8	NM_178469	NP_848564	Coding	chr9:136758279 minus strand	588538
LCN9	NM_001001676	NP_001001676	Coding	chr9:135663321 plus strand	588539
LCNL1	NM_207510	NP_997393	Coding	chr9:136982992 plus strand	588540
LHX2	NM_004789	NP_004780	Coding	chr9:124011609 plus strand	588541
LHX3	NM_014564	NP_055379	Coding	chr9:136203158 minus strand	588542
LHX3	NM_178138	NP_835258	Coding	chr9:136205109 minus strand	588543
LHX6	NM_001242333	NP_001229262	Coding	chr9:122228428 minus strand	588544
LHX6	NM_001242334	NP_001229263	Coding	chr9:122227586 minus strand	588545
LHX6	NM_001242335	NP_001229264	Coding	chr9:122221740 minus strand	588546
LHX6	NM_014368	NP_055183	Coding	chr9:122228812 minus strand	588547
LHX6	NM_199160	NP_954629	Coding	chr9:122228812 minus strand	588547
LINGO2	NM_001258282	NP_001245211	Coding	chr9:29213000 minus strand	588548
LINGO2	NM_152570	NP_689783	Coding	chr9:28719305 minus strand	588549

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LMX1B	NM_001174146	NP_001167617	Coding	chr9:126614442 plus strand	588550
LMX1B	NM_001174147	NP_001167618	Coding	chr9:126614442 plus strand	588550
LMX1B	NM_002316	NP_002307	Coding	chr9:126614442 plus strand	588550
LOC100505478	NM_001199233	NP_001186162	Coding	chr9:114682089 minus strand	588551
LOC100506422	NM_001004352	NP_001004352	Coding	chr9:26066674 plus strand	588552
LOC158434	NM_001256408	NP_001243337	Coding	chr9:96116411 minus strand	588553
LOC286238	NM_001100111	NP_001093581	Coding	chr9:88652160 minus strand	588554
LPAR1	NM_001401	NP_001392	Coding	chr9:111038085 minus strand	588555
LPAR1	NM_057159	NP_476500	Coding	chr9:111038085 minus strand	588555
LPPR1	NM_017753	NP_060223	Coding	chr9:101185034 plus strand	588556
LPPR1	NM_207299	NP_997182	Coding	chr9:101028748 plus strand	588557
LRRC19	NM_022901	NP_075052	Coding	chr9:27005693 minus strand	588558
LRRC26	NM_001013653	NP_001013675	Coding	chr9:137170039 minus strand	588559
LRRC8A	NM_001127244	NP_001120716	Coding	chr9:128882501 plus strand	588560
LRRC8A	NM_001127245	NP_001120717	Coding	chr9:128882111 plus strand	588561
LRRC8A	NM_019594	NP_062540	Coding	chr9:128882111 plus strand	588561
LRSAM1	NM_001005373	NP_001005373	Coding	chr9:127451485 plus strand	588562
LRSAM1	NM_001005374	NP_001005374	Coding	chr9:127452254 plus strand	588563
LRSAM1	NM_001190723	NP_001177652	Coding	chr9:127451485 plus strand	588562
LRSAM1	NM_138361	NP_612370	Coding	chr9:127451485 plus strand	588562
LURAP1L	NM_203403	NP_981948	Coding	chr9:12775012 plus strand	588564
MAMDC2	NM_153267	NP_694999	Coding	chr9:70043580 plus strand	588565
MAMDC4	NM_206920	NP_996803	Coding	chr9:136852366 plus strand	588566
MAN1B1	NM_016219	NP_057303	Coding	chr9:137086926 plus strand	588567
MAPKAP1	NM_001006617	NP_001006618	Coding	chr9:125707234 minus strand	588568
MAPKAP1	NM_001006618	NP_001006619	Coding	chr9:125707234 minus strand	588568
MAPKAP1	NM_001006619	NP_001006620	Coding	chr9:125707234 minus strand	588568
MAPKAP1	NM_001006620	NP_001006621	Coding	chr9:125707234 minus strand	588568

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MAPKAP1	NM_001006621	NP_001006622	Coding	chr9:125707234 minus strand	588568
MAPKAP1	NM_024117	NP_077022	Coding	chr9:125707234 minus strand	588568
MED22	NM_133640	NP_598395	Coding	chr9:133348156 minus strand	588569
MED22	NM_181491	NP_852468	Coding	chr9:133348156 minus strand	588569
MED27	NM_001253881	NP_001240810	Coding	chr9:132079887 minus strand	588570
MED27	NM_001253882	NP_001240811	Coding	chr9:132079887 minus strand	588570
MED27	NM_004269	NP_004260	Coding	chr9:132079887 minus strand	588570
MEGF9	NM_001080497	NP_001073966	Coding	chr9:120714487 minus strand	588571
MELK	NM_001256685	NP_001243614	Coding	chr9:36572861 plus strand	588572
MELK	NM_001256687	NP_001243616	Coding	chr9:36572861 plus strand	588572
MELK	NM_001256688	NP_001243617	Coding	chr9:36572861 plus strand	588572
MELK	NM_001256689	NP_001243618	Coding	chr9:36572861 plus strand	588572
MELK	NM_001256690	NP_001243619	Coding	chr9:36572861 plus strand	588572
MELK	NM_001256691	NP_001243620	Coding	chr9:36572861 plus strand	588572
MELK	NM_001256692	NP_001243621	Coding	chr9:36572861 plus strand	588572
MELK	NM_001256693	NP_001243622	Coding	chr9:36572861 plus strand	588572
MELK	NM_014791	NP_055606	Coding	chr9:36572861 plus strand	588572
MGC50722	NM_001291516	NP_001278445	Coding	chr9:136306901 minus strand	588573
MLANA	NM_005511	NP_005502	Coding	chr9:5890908 plus strand	588574
MLLT3	NM_001286691	NP_001273620	Coding	chr9:20621987 minus strand	588575
MLLT3	NM_004529	NP_004520	Coding	chr9:20622543 minus strand	588576
MOB3B	NM_024761	NP_079037	Coding	chr9:27529852 minus strand	588577
MORN5	NM_001286828	NP_001273757	Coding	chr9:122159907 plus strand	588578
MORN5	NM_198469	NP_940871	Coding	chr9:122159907 plus strand	588578
MPDZ	NM_001261406	NP_001248335	Coding	chr9:13279564 minus strand	588579
MPDZ	NM_001261407	NP_001248336	Coding	chr9:13279564 minus strand	588579
MPDZ	NM_003829	NP_003820	Coding	chr9:13279564 minus strand	588579
MRPL41	NM_032477	NP_115866	Coding	chr9:137551856 plus strand	588580
MRPL50	NM_019051	NP_061924	Coding	chr9:101398637 minus strand	588581
MRPS2	NM_016034	NP_057118	Coding	chr9:135500630 plus strand	588582
MRRF	NM_001173512	NP_001166983	Coding	chr9:122264602 plus	588583

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				strand	
MRRF	NM_138777	NP_620132	Coding	chr9:122264602 plus strand	588583
MRRF	NM_199177	NP_954646	Coding	chr9:122270863 plus strand	588584
MSANTD3	NM_001198805	NP_001185734	Coding	chr9:100427428 plus strand	588585
MSANTD3	NM_001198806	NP_001185735	Coding	chr9:100429513 plus strand	588586
MSANTD3	NM_001198807	NP_001185736	Coding	chr9:100427212 plus strand	588587
MSANTD3	NM_080655	NP_542386	Coding	chr9:100427212 plus strand	588587
MSANTD3-TMEFF1	NM_001198812	NP_001185741	Coding	chr9:100441905 plus strand	588588
MSMP	NM_001044264	NP_001037729	Coding	chr9:35754277 minus strand	588589
MTAP	NM_002451	NP_002442	Coding	chr9:21802635 plus strand	588590
MURC	NM_001018116	NP_001018126	Coding	chr9:100578078 plus strand	588591
MUSK	NM_001166280	NP_001159752	Coding	chr9:110668770 plus strand	588592
MUSK	NM_001166281	NP_001159753	Coding	chr9:110668770 plus strand	588592
MUSK	NM_005592	NP_005583	Coding	chr9:110668770 plus strand	588592
MVB12B	NM_001011703	NP_001011703	Coding	chr9:126326843 plus strand	588593
MVB12B	NM_033446	NP_258257	Coding	chr9:126326843 plus strand	588593
NAA35	NM_024635	NP_078911	Coding	chr9:85941141 plus strand	588594
NACC2	NM_144653	NP_653254	Coding	chr9:136095285 minus strand	588595
NAIF1	NM_197956	NP_931045	Coding	chr9:128067320 minus strand	588596
NANS	NM_018946	NP_061819	Coding	chr9:98056676 plus strand	588597
NCBP1	NM_002486	NP_002477	Coding	chr9:97633422 plus strand	588598
NCS1	NM_001128826	NP_001122298	Coding	chr9:130200592 plus strand	588599
NCS1	NM_014286	NP_055101	Coding	chr9:130172577 plus strand	588600
NDOR1	NM_001144026	NP_001137498	Coding	chr9:137205666 plus strand	588601
NDOR1	NM_001144027	NP_001137499	Coding	chr9:137205666 plus strand	588601
NDOR1	NM_001144028	NP_001137500	Coding	chr9:137205666 plus strand	588601
NDOR1	NM_014434	NP_055249	Coding	chr9:137205666 plus strand	588601
NDUFA8	NM_014222	NP_055037	Coding	chr9:122159819 minus strand	588602
NDUFB6	NM_001199987	NP_001186916	Coding	chr9:32573184 minus strand	588603

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NDUFB6	NM_002493	NP_002484	Coding	chr9:32573184 minus strand	588603
NDUFB6	NM_182739	NP_877416	Coding	chr9:32573184 minus strand	588603
NEK6	NM_001145001	NP_001138473	Coding	chr9:124257916 plus strand	588604
NEK6	NM_001166167	NP_001159639	Coding	chr9:124257605 plus strand	588605
NEK6	NM_001166168	NP_001159640	Coding	chr9:124258250 plus strand	588606
NEK6	NM_001166169	NP_001159641	Coding	chr9:124292419 plus strand	588607
NEK6	NM_001166170	NP_001159642	Coding	chr9:124291970 plus strand	588608
NEK6	NM_001166171	NP_001159643	Coding	chr9:124291970 plus strand	588608
NEK6	NM_014397	NP_055212	Coding	chr9:124257916 plus strand	588604
NELFB	NM_015456	NP_056271	Coding	chr9:137255306 plus strand	588609
NFIB	NM_001190737	NP_001177666	Coding	chr9:14314046 minus strand	588610
NFIB	NM_001190738	NP_001177667	Coding	chr9:14398983 minus strand	588611
NFIB	NM_001282787	NP_001269716	Coding	chr9:14180802 minus strand	588612
NFIB	NM_005596	NP_005587	Coding	chr9:14314046 minus strand	588610
NFIL3	NM_001289999	NP_001276928	Coding	chr9:91424626 minus strand	588613
NFIL3	NM_001290000	NP_001276929	Coding	chr9:91424626 minus strand	588613
NFIL3	NM_005384	NP_005375	Coding	chr9:91423862 minus strand	588614
NFX1	NM_002504	NP_002495	Coding	chr9:33290419 plus strand	588615
NFX1	NM_147133	NP_667344	Coding	chr9:33290419 plus strand	588615
NFX1	NM_147134	NP_667345	Coding	chr9:33290419 plus strand	588615
NINJ1	NM_004148	NP_004139	Coding	chr9:93134288 minus strand	588616
NIPSNAP3A	NM_015469	NP_056284	Coding	chr9:104747687 plus strand	588617
NIPSNAP3B	NM_018376	NP_060846	Coding	chr9:104764169 plus strand	588618
NMRK1	NM_001127603	NP_001121075	Coding	chr9:75088217 minus strand	588619
NMRK1	NM_017881	NP_060351	Coding	chr9:75088217 minus strand	588619
NOL6	NM_022917	NP_075068	Coding	chr9:33473943 minus strand	588620
NOL6	NM_139235	NP_631981	Coding	chr9:33473943 minus strand	588620
NOL8	NM_001256394	NP_001243323	Coding	chr9:92325594 minus strand	588621

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NOL8	NM_017948	NP_060418	Coding	chr9:92325594 minus strand	588621
NOTCH1	NM_017617	NP_060087	Coding	chr9:136545786 minus strand	588622
NOXA1	NM_001256067	NP_001242996	Coding	chr9:137423394 plus strand	588623
NOXA1	NM_001256068	NP_001242997	Coding	chr9:137423394 plus strand	588623
NOXA1	NM_006647	NP_006638	Coding	chr9:137423394 plus strand	588623
NPDC1	NM_015392	NP_056207	Coding	chr9:137046224 minus strand	588624
NPR2	NM_003995	NP_003986	Coding	chr9:35792408 plus strand	588625
NR4A3	NM_006981	NP_008912	Coding	chr9:99821854 plus strand	588626
NR4A3	NM_173199	NP_775291	Coding	chr9:99821854 plus strand	588626
NR4A3	NM_173200	NP_775292	Coding	chr9:99821854 plus strand	588626
NR5A1	NM_004959	NP_004950	Coding	chr9:124507420 minus strand	588627
NR6A1	NM_001278546	NP_001265475	Coding	chr9:124771310 minus strand	588628
NR6A1	NM_001489	NP_001480	Coding	chr9:124771310 minus strand	588628
NR6A1	NM_033334	NP_201591	Coding	chr9:124771310 minus strand	588628
NRARP	NM_001004354	NP_001004354	Coding	chr9:137302251 minus strand	588629
NSMF	NM_001130969	NP_001124441	Coding	chr9:137459334 minus strand	588630
NSMF	NM_001130970	NP_001124442	Coding	chr9:137459334 minus strand	588630
NSMF	NM_001130971	NP_001124443	Coding	chr9:137459334 minus strand	588630
NSMF	NM_001178064	NP_001171535	Coding	chr9:137459334 minus strand	588630
NSMF	NM_015537	NP_056352	Coding	chr9:137459334 minus strand	588630
NTMT1	NM_001286796	NP_001273725	Coding	chr9:129608883 plus strand	588631
NTMT1	NM_001286797	NP_001273726	Coding	chr9:129620212 plus strand	588632
NTMT1	NM_001286798	NP_001273727	Coding	chr9:129626152 plus strand	588633
NTMT1	NM_001286799	NP_001273728	Coding	chr9:129626443 plus strand	588634
NTMT1	NM_001286800	NP_001273729	Coding	chr9:129626152 plus strand	588633
NTMT1	NM_001286801	NP_001273730	Coding	chr9:129626152 plus strand	588633
NTMT1	NM_001286802	NP_001273731	Coding	chr9:129626152 plus strand	588633
NTMT1	NM_001286803	NP_001273732	Coding	chr9:129626152 plus strand	588633
NTMT1	NM_014064	NP_054783	Coding	chr9:129626152 plus	588633

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				strand	
NTNG2	NM_032536	NP_115925	Coding	chr9:132161946 plus strand	588635
NTRK2	NM_001007097	NP_001007098	Coding	chr9:84669679 plus strand	588636
NTRK2	NM_001018064	NP_001018074	Coding	chr9:84670376 plus strand	588637
NTRK2	NM_001018065	NP_001018075	Coding	chr9:84669679 plus strand	588636
NTRK2	NM_001018066	NP_001018076	Coding	chr9:84669679 plus strand	588636
NTRK2	NM_001291937	NP_001278866	Coding	chr9:84668457 plus strand	588638
NTRK2	NM_006180	NP_006171	Coding	chr9:84668457 plus strand	588638
NUDT2	NM_001161	NP_001152	Coding	chr9:34329505 plus strand	588639
NUDT2	NM_001244390	NP_001231319	Coding	chr9:34329505 plus strand	588639
NUDT2	NM_147172	NP_671701	Coding	chr9:34329505 plus strand	588639
NUDT2	NM_147173	NP_671702	Coding	chr9:34329505 plus strand	588639
NUP188	NM_015354	NP_056169	Coding	chr9:128947692 plus strand	588640
NUP214	NM_005085	NP_005076	Coding	chr9:131125560 plus strand	588641
NUTM2F	NM_017561	NP_060031	Coding	chr9:94328644 minus strand	588642
NUTM2G	NM_001045477	NP_001038942	Coding	chr9:96929003 plus strand	588643
NUTM2G	NM_001170741	NP_001164212	Coding	chr9:96929003 plus strand	588643
NXNL2	NM_001161625	NP_001155097	Coding	chr9:88535100 plus strand	588644
NXNL2	NM_145283	NP_660326	Coding	chr9:88535100 plus strand	588644
OBP2A	NM_001293189	NP_001280118	Coding	chr9:135546138 plus strand	588645
OBP2A	NM_001293193	NP_001280122	Coding	chr9:135546138 plus strand	588645
OBP2A	NM_014582	NP_055397	Coding	chr9:135546138 plus strand	588645
OBP2B	NM_001288987	NP_001275916	Coding	chr9:133209250 minus strand	588646
OBP2B	NM_014581	NP_055396	Coding	chr9:133209250 minus strand	588646
ODF2	NM_001242352	NP_001229281	Coding	chr9:128456005 plus strand	588647
ODF2	NM_001242353	NP_001229282	Coding	chr9:128456005 plus strand	588647
ODF2	NM_001242354	NP_001229283	Coding	chr9:128456005 plus strand	588647
ODF2	NM_002540	NP_002531	Coding	chr9:128456005 plus strand	588647
ODF2	NM_153432	NP_702910	Coding	chr9:128456005 plus strand	588647
ODF2	NM_153433	NP_702911	Coding	chr9:128456399 plus strand	588648
ODF2	NM_153435	NP_702913	Coding	chr9:128456005 plus strand	588647
ODF2	NM_153436	NP_702914	Coding	chr9:128455154 plus strand	588649
ODF2	NM_153437	NP_702915	Coding	chr9:128456906 plus	588650

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				strand	
ODF2	NM_153439	NP_702917	Coding	chr9:128456005 plus strand	588647
ODF2	NM_153440	NP_702918	Coding	chr9:128456399 plus strand	588648
OGN	NM_014057	NP_054776	Coding	chr9:92404655 minus strand	588651
OGN	NM_033014	NP_148935	Coding	chr9:92404655 minus strand	588651
OLFM1	NM_001282611	NP_001269540	Coding	chr9:135087667 plus strand	588652
OLFM1	NM_001282612	NP_001269541	Coding	chr9:135087259 plus strand	588653
OLFM1	NM_006334	NP_006325	Coding	chr9:135075256 plus strand	588654
OLFM1	NM_014279	NP_055094	Coding	chr9:135075242 plus strand	588655
OLFML2A	NM_001282715	NP_001269644	Coding	chr9:124800873 plus strand	588656
OLFML2A	NM_182487	NP_872293	Coding	chr9:124777157 plus strand	588657
OMD	NM_005014	NP_005005	Coding	chr9:92424554 minus strand	588658
OR13C2	NM_001004481	NP_001004481	Coding	chr9:104605627 minus strand	588659
OR13C3	NM_001001961	NP_001001961	Coding	chr9:104536813 minus strand	588660
OR13C4	NM_001001919	NP_001001919	Coding	chr9:104527209 minus strand	588661
OR13C5	NM_001004482	NP_001004482	Coding	chr9:104599413 minus strand	588662
OR13C8	NM_001004483	NP_001004483	Coding	chr9:104569167 plus strand	588663
OR13C9	NM_001001956	NP_001001956	Coding	chr9:104618204 minus strand	588664
OR13D1	NM_001004484	NP_001004484	Coding	chr9:104694421 plus strand	588665
OR13F1	NM_001004485	NP_001004485	Coding	chr9:104504262 plus strand	588666
OR13J1	NM_001004487	NP_001004487	Coding	chr9:35870401 minus strand	588667
OR1B1	NM_001004450	NP_001004450	Coding	chr9:122629535 minus strand	588668
OR1J1	NM_001004451	NP_001004451	Coding	chr9:122477926 minus strand	588669
OR1J2	NM_054107	NP_473448	Coding	chr9:122510801 plus strand	588670
OR1J4	NM_001004452	NP_001004452	Coding	chr9:122519140 plus strand	588671
OR1K1	NM_080859	NP_543135	Coding	chr9:122800122 plus strand	588672
OR1L1	NM_001005236	NP_001005236	Coding	chr9:122661715 plus strand	588673
OR1L3	NM_001005234	NP_001005234	Coding	chr9:122675129 plus	588674

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				strand	
OR1L4	NM_001005235	NP_001005235	Coding	chr9:122723989 plus strand	588675
OR1L6	NM_001004453	NP_001004453	Coding	chr9:122749847 plus strand	588676
OR1L8	NM_001004454	NP_001004454	Coding	chr9:122568477 minus strand	588677
OR1N1	NM_012363	NP_036495	Coding	chr9:122527293 minus strand	588678
OR1N2	NM_001004457	NP_001004457	Coding	chr9:122553169 plus strand	588679
OR1Q1	NM_012364	NP_036496	Coding	chr9:122614737 plus strand	588680
OR2K2	NM_205859	NP_995581	Coding	chr9:111328433 minus strand	588681
OR2S2	NM_019897	NP_063950	Coding	chr9:35958154 minus strand	588682
OR5C1	NM_001001923	NP_001001923	Coding	chr9:122788932 plus strand	588683
ORM1	NM_000607	NP_000598	Coding	chr9:114323022 plus strand	588684
ORM2	NM_000608	NP_000599	Coding	chr9:114329788 plus strand	588685
OSTF1	NM_012383	NP_036515	Coding	chr9:75088481 plus strand	588686
PAEP	NM_001018049	NP_001018059	Coding	chr9:135561757 plus strand	588687
PAEP	NM_002571	NP_002562	Coding	chr9:135561757 plus strand	588687
PALM2	NM_001037293	NP_001032370	Coding	chr9:109640787 plus strand	588688
PALM2	NM_053016	NP_443749	Coding	chr9:109780296 plus strand	588689
PALM2-AKAP2	NM_007203	NP_009134	Coding	chr9:109780296 plus strand	588690
PALM2-AKAP2	NM_147150	NP_671492	Coding	chr9:109780296 plus strand	588690
PAPPA	NM_002581	NP_002572	Coding	chr9:116153791 plus strand	588691
PAX5	NM_001280547	NP_001267476	Coding	chr9:37034479 minus strand	588692
PAX5	NM_001280548	NP_001267477	Coding	chr9:37034479 minus strand	588692
PAX5	NM_001280549	NP_001267478	Coding	chr9:37034479 minus strand	588692
PAX5	NM_001280550	NP_001267479	Coding	chr9:37034479 minus strand	588692
PAX5	NM_001280551	NP_001267480	Coding	chr9:37034479 minus strand	588692
PAX5	NM_001280552	NP_001267481	Coding	chr9:37034479 minus strand	588692
PAX5	NM_001280553	NP_001267482	Coding	chr9:37034479 minus strand	588692
PAX5	NM_001280554	NP_001267483	Coding	chr9:37034479 minus strand	588692

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PAX5	NM_001280555	NP_001267484	Coding	chr9:37034479 minus strand	588692
PAX5	NM_001280556	NP_001267485	Coding	chr9:37034479 minus strand	588692
PAX5	NM_016734	NP_057953	Coding	chr9:37034479 minus strand	588692
PBX3	NM_001134778	NP_001128250	Coding	chr9:125748198 plus strand	588693
PBX3	NM_006195	NP_006186	Coding	chr9:125747337 plus strand	588694
PCSK5	NM_001190482	NP_001177411	Coding	chr9:75890643 plus strand	588695
PCSK5	NM_006200	NP_006191	Coding	chr9:75890643 plus strand	588695
PDCD1LG2	NM_025239	NP_079515	Coding	chr9:5510544 plus strand	588696
PDCL	NM_005388	NP_005379	Coding	chr9:122828656 minus strand	588697
PGM5	NM_021965	NP_068800	Coding	chr9:68356898 plus strand	588698
PHF19	NM_001009936	NP_001009936	Coding	chr9:120877328 minus strand	588699
PHF19	NM_001286840	NP_001273769	Coding	chr9:120894896 minus strand	588700
PHF19	NM_001286842	NP_001273771	Coding	chr9:120868911 minus strand	588701
PHF19	NM_001286843	NP_001273772	Coding	chr9:120877328 minus strand	588699
PHF19	NM_015651	NP_056466	Coding	chr9:120877328 minus strand	588699
PHF2	NM_005392	NP_005383	Coding	chr9:93576626 plus strand	588702
PHPT1	NM_001135861	NP_001129333	Coding	chr9:136848815 plus strand	588703
PHPT1	NM_001287342	NP_001274271	Coding	chr9:136848815 plus strand	588703
PHPT1	NM_001287343	NP_001274272	Coding	chr9:136848815 plus strand	588703
PHPT1	NM_014172	NP_054891	Coding	chr9:136848815 plus strand	588703
PHYHD1	NM_001100876	NP_001094346	Coding	chr9:128920894 plus strand	588704
PHYHD1	NM_001100877	NP_001094347	Coding	chr9:128922282 plus strand	588705
PHYHD1	NM_174933	NP_777593	Coding	chr9:128920894 plus strand	588704
PIGO	NM_001201484	NP_001188413	Coding	chr9:35096549 minus strand	588706
PIGO	NM_032634	NP_116023	Coding	chr9:35096549 minus strand	588706
PIGO	NM_152850	NP_690577	Coding	chr9:35096601 minus strand	588707
PIP5K1B	NM_001278253	NP_001265182	Coding	chr9:68705413 plus strand	588708
PIP5K1B	NM_003558	NP_003549	Coding	chr9:68705413 plus strand	588708
PIP5KL1	NM_001135219	NP_001128691	Coding	chr9:127930797 minus strand	588709
PIP5KL1	NM_173492	NP_775763	Coding	chr9:127927491 minus	588710

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				strand	
PKN3	NM_013355	NP_037487	Coding	chr9:128702522 plus strand	588711
PLAA	NM_001031689	NP_001026859	Coding	chr9:26947470 minus strand	588712
PLGRKT	NM_018465	NP_060935	Coding	chr9:5437937 minus strand	588713
PLIN2	NM_001122	NP_001113	Coding	chr9:19127606 minus strand	588714
PMPCA	NM_001282944	NP_001269873	Coding	chr9:136410572 plus strand	588715
PMPCA	NM_001282946	NP_001269875	Coding	chr9:136410572 plus strand	588715
PMPCA	NM_015160	NP_055975	Coding	chr9:136410572 plus strand	588715
PNPLA7	NM_001098537	NP_001092007	Coding	chr9:137550569 minus strand	588716
PNPLA7	NM_152286	NP_689499	Coding	chr9:137550569 minus strand	588716
POLE3	NM_001278255	NP_001265184	Coding	chr9:113410749 minus strand	588717
POLE3	NM_017443	NP_059139	Coding	chr9:113410749 minus strand	588717
POLR1E	NM_001282766	NP_001269695	Coding	chr9:37485934 plus strand	588718
POLR1E	NM_022490	NP_071935	Coding	chr9:37485934 plus strand	588718
POMT1	NM_001077365	NP_001070833	Coding	chr9:131502901 plus strand	588719
POMT1	NM_001077366	NP_001070834	Coding	chr9:131502901 plus strand	588719
POMT1	NM_001136113	NP_001129585	Coding	chr9:131502901 plus strand	588719
POMT1	NM_001136114	NP_001129586	Coding	chr9:131502901 plus strand	588719
POMT1	NM_007171	NP_009102	Coding	chr9:131502901 plus strand	588719
PPAPDC2	NM_203453	NP_982278	Coding	chr9:4662293 plus strand	588720
PPAPDC3	NM_032728	NP_116117	Coding	chr9:131289693 plus strand	588721
PPP1R26	NM_014811	NP_055626	Coding	chr9:135479801 plus strand	588722
PPP2R4	NM_001193397	NP_001180326	Coding	chr9:129111687 plus strand	588723
PPP2R4	NM_001271832	NP_001258761	Coding	chr9:129111313 plus strand	588724
PPP2R4	NM_021131	NP_066954	Coding	chr9:129110948 plus strand	588725
PPP2R4	NM_178000	NP_821067	Coding	chr9:129111313 plus strand	588724
PPP2R4	NM_178001	NP_821068	Coding	chr9:129111313 plus strand	588724
PPP2R4	NM_178003	NP_821070	Coding	chr9:129111313 plus strand	588724
PPP3R2	NM_147180	NP_671709	Coding	chr9:101595001 minus strand	588726

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PPP6C	NM_001123355	NP_001116827	Coding	chr9:125189939 minus strand	588727
PPP6C	NM_001123369	NP_001116841	Coding	chr9:125189939 minus strand	588727
PPP6C	NM_002721	NP_002712	Coding	chr9:125189939 minus strand	588727
PRDM12	NM_021619	NP_067632	Coding	chr9:130664593 plus strand	588728
PRKACG	NM_002732	NP_002723	Coding	chr9:69014123 minus strand	588729
PRPF4	NM_001244926	NP_001231855	Coding	chr9:113275633 plus strand	588730
PRPF4	NM_004697	NP_004688	Coding	chr9:113275633 plus strand	588730
PRRC2B	NM_013318	NP_037450	Coding	chr9:131430089 plus strand	588731
PRRX2	NM_016307	NP_057391	Coding	chr9:129665640 plus strand	588732
PRSS3	NM_001197097	NP_001184026	Coding	chr9:33750465 plus strand	588733
PRSS3	NM_001197098	NP_001184027	Coding	chr9:33750820 plus strand	588734
PRSS3	NM_002771	NP_002762	Coding	chr9:33795560 plus strand	588735
PRSS3	NM_007343	NP_031369	Coding	chr9:33750465 plus strand	588733
PRUNE2	NM_015225	NP_056040	Coding	chr9:76906087 minus strand	588736
PSAT1	NM_021154	NP_066977	Coding	chr9:78297074 plus strand	588737
PSAT1	NM_058179	NP_478059	Coding	chr9:78297074 plus strand	588737
PSIP1	NM_001128217	NP_001121689	Coding	chr9:15511005 minus strand	588738
PSIP1	NM_021144	NP_066967	Coding	chr9:15510289 minus strand	588739
PSIP1	NM_033222	NP_150091	Coding	chr9:15511005 minus strand	588738
PSMB7	NM_002799	NP_002790	Coding	chr9:124415473 minus strand	588740
PSMD5	NM_001270427	NP_001257356	Coding	chr9:120843021 minus strand	588741
PSMD5	NM_005047	NP_005038	Coding	chr9:120843021 minus strand	588741
PTAR1	NM_001099666	NP_001093136	Coding	chr9:69759960 minus strand	588742
PTBP3	NM_001163788	NP_001157260	Coding	chr9:112333664 minus strand	588743
PTBP3	NM_001163790	NP_001157262	Coding	chr9:112333664 minus strand	588743
PTBP3	NM_001244896	NP_001231825	Coding	chr9:112333664 minus strand	588743
PTBP3	NM_001244897	NP_001231826	Coding	chr9:112333664 minus strand	588743
PTBP3	NM_001244898	NP_001231827	Coding	chr9:112333026 minus strand	588744
PTBP3	NM_005156	NP_005147	Coding	chr9:112333664 minus strand	588743

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PTCH1	NM_000264	NP_000255	Coding	chr9:95508549 minus strand	588745
PTCH1	NM_001083602	NP_001077071	Coding	chr9:95516965 minus strand	588746
PTCH1	NM_001083603	NP_001077072	Coding	chr9:95516965 minus strand	588746
PTCH1	NM_001083604	NP_001077073	Coding	chr9:95508040 minus strand	588747
PTCH1	NM_001083605	NP_001077074	Coding	chr9:95508040 minus strand	588747
PTCH1	NM_001083606	NP_001077075	Coding	chr9:95507417 minus strand	588748
PTCH1	NM_001083607	NP_001077076	Coding	chr9:95507199 minus strand	588749
PTGDS	NM_000954	NP_000945	Coding	chr9:136977503 plus strand	588750
PTGES	NM_004878	NP_004869	Coding	chr9:129753065 minus strand	588751
PTGES2	NM_001256335	NP_001243264	Coding	chr9:128128188 minus strand	588752
PTGES2	NM_025072	NP_079348	Coding	chr9:128128462 minus strand	588753
PTGES2	NM_198938	NP_945176	Coding	chr9:128128462 minus strand	588753
PTGR1	NM_001146108	NP_001139580	Coding	chr9:111599855 minus strand	588754
PTGR1	NM_001146109	NP_001139581	Coding	chr9:111599855 minus strand	588754
PTGR1	NM_012212	NP_036344	Coding	chr9:111599431 minus strand	588755
PTGS1	NM_000962	NP_000953	Coding	chr9:122371004 plus strand	588756
PTGS1	NM_001271164	NP_001258093	Coding	chr9:122371004 plus strand	588756
PTGS1	NM_001271165	NP_001258094	Coding	chr9:122375321 plus strand	588757
PTGS1	NM_001271166	NP_001258095	Coding	chr9:122370529 plus strand	588758
PTGS1	NM_001271367	NP_001258296	Coding	chr9:122371004 plus strand	588756
PTGS1	NM_001271368	NP_001258297	Coding	chr9:122370529 plus strand	588758
PTGS1	NM_080591	NP_542158	Coding	chr9:122371004 plus strand	588756
PTPDC1	NM_001253829	NP_001240758	Coding	chr9:94084428 plus strand	588759
PTPDC1	NM_001253830	NP_001240759	Coding	chr9:94030808 plus strand	588760
PTPDC1	NM_152422	NP_689635	Coding	chr9:94084428 plus strand	588759
PTPDC1	NM_177995	NP_818931	Coding	chr9:94030793 plus strand	588761
PTPLAD2	NM_001010915	NP_001010915	Coding	chr9:21031636 minus strand	588762
PTPN3	NM_001145368	NP_001138840	Coding	chr9:109498313 minus strand	588763
PTPN3	NM_001145369	NP_001138841	Coding	chr9:109451384 minus	588764

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				strand	
PTPN3	NM_001145370	NP_001138842	Coding	chr9:109451384 minus strand	588764
PTPN3	NM_001145371	NP_001138843	Coding	chr9:109429043 minus strand	588765
PTPN3	NM_001145372	NP_001138844	Coding	chr9:109429043 minus strand	588765
PTPN3	NM_002829	NP_002820	Coding	chr9:109498313 minus strand	588763
PTPRD	NM_001040712	NP_001035802	Coding	chr9:8733946 minus strand	588766
PTPRD	NM_001171025	NP_001164496	Coding	chr9:8733946 minus strand	588766
PTPRD	NM_002839	NP_002830	Coding	chr9:10612723 minus strand	588767
PTPRD	NM_130391	NP_569075	Coding	chr9:8733946 minus strand	588766
PTPRD	NM_130392	NP_569076	Coding	chr9:8733946 minus strand	588766
PTPRD	NM_130393	NP_569077	Coding	chr9:8733946 minus strand	588766
PTRH1	NM_001002913	NP_001002913	Coding	chr9:127715657 minus strand	588768
QRFP	NM_198180	NP_937823	Coding	chr9:130893838 minus strand	588769
QSOX2	NM_181701	NP_859052	Coding	chr9:136245841 minus strand	588770
RAB14	NM_016322	NP_057406	Coding	chr9:121202087 minus strand	588771
RABEPK	NM_001174152	NP_001167623	Coding	chr9:125200541 plus strand	588772
RABEPK	NM_001174153	NP_001167624	Coding	chr9:125200541 plus strand	588772
RABEPK	NM_005833	NP_005824	Coding	chr9:125200582 plus strand	588773
RABGAP1	NM_012197	NP_036329	Coding	chr9:122941008 plus strand	588774
RABL6	NM_001173988	NP_001167459	Coding	chr9:136807921 plus strand	588775
RABL6	NM_001173989	NP_001167460	Coding	chr9:136807921 plus strand	588775
RABL6	NM_024718	NP_078994	Coding	chr9:136807921 plus strand	588775
RAD23B	NM_001244713	NP_001231642	Coding	chr9:107284768 plus strand	588776
RAD23B	NM_001244724	NP_001231653	Coding	chr9:107284052 plus strand	588777
RAD23B	NM_002874	NP_002865	Coding	chr9:107283235 plus strand	588778
RALGDS	NM_001042368	NP_001035827	Coding	chr9:133149220 minus strand	588779
RALGDS	NM_001271774	NP_001258703	Coding	chr9:133131157 minus strand	588780
RALGDS	NM_001271775	NP_001258704	Coding	chr9:133129401 minus strand	588781
RALGDS	NM_001271776	NP_001258705	Coding	chr9:133121250 minus strand	588782

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RALGDS	NM_006266	NP_006257	Coding	chr9:133121250 minus strand	588782
RALGPS1	NM_001190728	NP_001177657	Coding	chr9:126962224 plus strand	588783
RALGPS1	NM_001190729	NP_001177658	Coding	chr9:126914773 plus strand	588784
RALGPS1	NM_001190730	NP_001177659	Coding	chr9:126914773 plus strand	588784
RALGPS1	NM_014636	NP_055451	Coding	chr9:126914773 plus strand	588784
RANBP6	NM_001243202	NP_001230131	Coding	chr9:6015640 minus strand	588785
RANBP6	NM_001243203	NP_001230132	Coding	chr9:6015640 minus strand	588785
RANBP6	NM_012416	NP_036548	Coding	chr9:6015640 minus strand	588785
RAPGEF1	NM_005312	NP_005303	Coding	chr9:131737538 minus strand	588786
RAPGEF1	NM_198679	NP_941372	Coding	chr9:131709842 minus strand	588787
RASEF	NM_152573	NP_689786	Coding	chr9:83063128 minus strand	588788
RBM18	NM_033117	NP_149108	Coding	chr9:122264864 minus strand	588789
RC3H2	NM_001100588	NP_001094058	Coding	chr9:122905283 minus strand	588790
RC3H2	NM_018835	NP_061323	Coding	chr9:122905283 minus strand	588790
RCL1	NM_001286699	NP_001273628	Coding	chr9:4792833 plus strand	588791
RCL1	NM_001286700	NP_001273629	Coding	chr9:4792833 plus strand	588791
RCL1	NM_001286701	NP_001273630	Coding	chr9:4839768 plus strand	588792
RCL1	NM_005772	NP_005763	Coding	chr9:4792833 plus strand	588791
RECK	NM_021111	NP_066934	Coding	chr9:36036912 plus strand	588793
REXO4	NM_001279349	NP_001266278	Coding	chr9:133418096 minus strand	588794
REXO4	NM_001279350	NP_001266279	Coding	chr9:133418096 minus strand	588794
REXO4	NM_001279351	NP_001266280	Coding	chr9:133418172 minus strand	588795
REXO4	NM_020385	NP_065118	Coding	chr9:133418096 minus strand	588794
RFK	NM_018339	NP_060809	Coding	chr9:76394528 minus strand	588796
RFX3	NM_001282116	NP_001269045	Coding	chr9:3526001 minus strand	588797
RFX3	NM_001282117	NP_001269046	Coding	chr9:3489487 minus strand	588798
RFX3	NM_002919	NP_002910	Coding	chr9:3395596 minus strand	588799
RFX3	NM_134428	NP_602304	Coding	chr9:3526001 minus strand	588797
RGP1	NM_001080496	NP_001073965	Coding	chr9:35749279 plus strand	588800
RGS3	NM_001276260	NP_001263189	Coding	chr9:113536476 plus strand	588801
RGS3	NM_001276261	NP_001263190	Coding	chr9:113501426 plus strand	588802
RGS3	NM_001276262	NP_001263191	Coding	chr9:113594153 plus	588803

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				strand	
RGS3	NM_001282922	NP_001269851	Coding	chr9:113580876 plus strand	588804
RGS3	NM_001282923	NP_001269852	Coding	chr9:113463699 plus strand	588805
RGS3	NM_017790	NP_060260	Coding	chr9:113463699 plus strand	588805
RGS3	NM_130795	NP_570613	Coding	chr9:113501426 plus strand	588802
RGS3	NM_134427	NP_602299	Coding	chr9:113564953 plus strand	588806
RGS3	NM_144488	NP_652759	Coding	chr9:113444728 plus strand	588807
RGS3	NM_144489	NP_652760	Coding	chr9:113593919 plus strand	588808
RIC1	NM_001135920	NP_001129392	Coding	chr9:5629118 plus strand	588809
RIC1	NM_001206557	NP_001193486	Coding	chr9:5629118 plus strand	588809
RIC1	NM_020829	NP_065880	Coding	chr9:5629118 plus strand	588809
RLN1	NM_006911	NP_008842	Coding	chr9:5339873 minus strand	588810
RLN2	NM_005059	NP_005050	Coding	chr9:5304611 minus strand	588811
RLN2	NM_134441	NP_604390	Coding	chr9:5304611 minus strand	588811
RMI1	NM_024945	NP_079221	Coding	chr9:83980721 plus strand	588812
RNF183	NM_145051	NP_659488	Coding	chr9:113299040 minus strand	588813
RNF20	NM_019592	NP_062538	Coding	chr9:101533848 plus strand	588814
RNF208	NM_031297	NP_112587	Coding	chr9:137221323 minus strand	588815
RNF224	NM_001190228	NP_001177157	Coding	chr9:137227565 plus strand	588816
RNF38	NM_022781	NP_073618	Coding	chr9:36400299 minus strand	588817
RNF38	NM_194328	NP_919309	Coding	chr9:36400923 minus strand	588818
RNF38	NM_194329	NP_919310	Coding	chr9:36400299 minus strand	588817
RNF38	NM_194330	NP_919311	Coding	chr9:36401198 minus strand	588819
RNF38	NM_194332	NP_919313	Coding	chr9:36400923 minus strand	588818
ROR2	NM_004560	NP_004551	Coding	chr9:91950162 minus strand	588820
RORB	NM_006914	NP_008845	Coding	chr9:74497335 plus strand	588821
RPL12	NM_000976	NP_000967	Coding	chr9:127451432 minus strand	588822
RPL35	NM_007209	NP_009140	Coding	chr9:124861961 minus strand	588823
RPL7A	NM_000972	NP_000963	Coding	chr9:133348213 plus strand	588824
RPP25L	NM_148178	NP_680544	Coding	chr9:34612113 minus strand	588825

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RPP25L	NM_148179	NP_680545	Coding	chr9:34612113 minus strand	588825
RPS6	NM_001010	NP_001001	Coding	chr9:19380237 minus strand	588826
RRAGA	NM_006570	NP_006561	Coding	chr9:19049373 plus strand	588827
RUSC2	NM_001135999	NP_001129471	Coding	chr9:35538631 plus strand	588828
RUSC2	NM_014806	NP_055621	Coding	chr9:35489951 plus strand	588829
RXRA	NM_001291920	NP_001278849	Coding	chr9:134379294 plus strand	588830
RXRA	NM_001291921	NP_001278850	Coding	chr9:134406581 plus strand	588831
RXRA	NM_002957	NP_002948	Coding	chr9:134326462 plus strand	588832
S1PR3	NM_005226	NP_005217	Coding	chr9:88991408 plus strand	588833
SAPCD2	NM_178448	NP_848543	Coding	chr9:137070576 minus strand	588834
SARDH	NM_001134707	NP_001128179	Coding	chr9:133738357 minus strand	588835
SARDH	NM_007101	NP_009032	Coding	chr9:133739955 minus strand	588836
SCAI	NM_001144877	NP_001138349	Coding	chr9:125143559 minus strand	588837
SCAI	NM_173690	NP_775961	Coding	chr9:125143559 minus strand	588837
SDCCAG3	NM_001039707	NP_001034796	Coding	chr9:136410602 minus strand	588838
SDCCAG3	NM_001039708	NP_001034797	Coding	chr9:136410602 minus strand	588838
SDCCAG3	NM_006643	NP_006634	Coding	chr9:136410602 minus strand	588838
SEC16A	NM_001276418	NP_001263347	Coding	chr9:136483759 minus strand	588839
SEC16A	NM_014866	NP_055681	Coding	chr9:136483055 minus strand	588840
SEC61B	NM_006808	NP_006799	Coding	chr9:99222287 plus strand	588841
SECISBP2	NM_001282688	NP_001269617	Coding	chr9:89318472 plus strand	588842
SECISBP2	NM_001282689	NP_001269618	Coding	chr9:89318472 plus strand	588842
SECISBP2	NM_001282690	NP_001269619	Coding	chr9:89318850 plus strand	588843
SECISBP2	NM_024077	NP_076982	Coding	chr9:89318472 plus strand	588842
SEMA4D	NM_001142287	NP_001135759	Coding	chr9:89479696 minus strand	588844
SEMA4D	NM_006378	NP_006369	Coding	chr9:89479696 minus strand	588844
SET	NM_001122821	NP_001116293	Coding	chr9:128683654 plus strand	588845
SET	NM_001248000	NP_001234929	Coding	chr9:128685085 plus strand	588846
SET	NM_001248001	NP_001234930	Coding	chr9:128689974 plus strand	588847
SET	NM_003011	NP_003002	Coding	chr9:128689229 plus strand	588848

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SETX	NM_015046	NP_055861	Coding	chr9:132354985 minus strand	588849
SH2D3C	NM_001142531	NP_001136003	Coding	chr9:127762440 minus strand	588850
SH2D3C	NM_001142532	NP_001136004	Coding	chr9:127762418 minus strand	588851
SH2D3C	NM_001142533	NP_001136005	Coding	chr9:127755304 minus strand	588852
SH2D3C	NM_001142534	NP_001136006	Coding	chr9:127755282 minus strand	588853
SH2D3C	NM_001252334	NP_001239263	Coding	chr9:127771369 minus strand	588854
SH2D3C	NM_005489	NP_005480	Coding	chr9:127771369 minus strand	588854
SH2D3C	NM_170600	NP_733745	Coding	chr9:127778769 minus strand	588855
SH3GL2	NM_003026	NP_003017	Coding	chr9:17578953 plus strand	588856
SH3GLB2	NM_001287045	NP_001273974	Coding	chr9:129028353 minus strand	588857
SH3GLB2	NM_001287046	NP_001273975	Coding	chr9:129028353 minus strand	588857
SH3GLB2	NM_020145	NP_064530	Coding	chr9:129028353 minus strand	588857
SHB	NM_003028	NP_003019	Coding	chr9:38069213 minus strand	588858
SHC3	NM_016848	NP_058544	Coding	chr9:89178767 minus strand	588859
SIGMAR1	NM_001282205	NP_001269134	Coding	chr9:34637826 minus strand	588860
SIGMAR1	NM_001282206	NP_001269135	Coding	chr9:34637826 minus strand	588860
SIGMAR1	NM_001282207	NP_001269136	Coding	chr9:34637826 minus strand	588860
SIGMAR1	NM_001282208	NP_001269137	Coding	chr9:34637826 minus strand	588860
SIGMAR1	NM_001282209	NP_001269138	Coding	chr9:34637826 minus strand	588860
SIGMAR1	NM_005866	NP_005857	Coding	chr9:34637826 minus strand	588860
SIGMAR1	NM_147157	NP_671513	Coding	chr9:34637826 minus strand	588860
SIT1	NM_014450	NP_055265	Coding	chr9:35650950 minus strand	588861
SLC1A1	NM_004170	NP_004161	Coding	chr9:4490426 plus strand	588862
SLC24A2	NM_001193288	NP_001180217	Coding	chr9:19787019 minus strand	588863
SLC24A2	NM_020344	NP_065077	Coding	chr9:19787019 minus strand	588863
SLC25A25	NM_001006641	NP_001006642	Coding	chr9:128068199 plus strand	588864
SLC25A25	NM_001006642	NP_001006643	Coding	chr9:128091463 plus strand	588865
SLC25A25	NM_001265614	NP_001252543	Coding	chr9:128091463 plus strand	588865

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SLC25A25	NM_052901	NP_443133	Coding	chr9:128098481 plus strand	588866
SLC25A51	NM_033412	NP_219480	Coding	chr9:37904353 minus strand	588867
SLC27A4	NM_005094	NP_005085	Coding	chr9:128340559 plus strand	588868
SLC28A3	NM_001199633	NP_001186562	Coding	chr9:84340779 minus strand	588869
SLC28A3	NM_022127	NP_071410	Coding	chr9:84368498 minus strand	588870
SLC2A6	NM_001145099	NP_001138571	Coding	chr9:133479154 minus strand	588871
SLC2A6	NM_017585	NP_060055	Coding	chr9:133479154 minus strand	588871
SLC2A8	NM_001271711	NP_001258640	Coding	chr9:127397137 plus strand	588872
SLC2A8	NM_001271712	NP_001258641	Coding	chr9:127397137 plus strand	588872
SLC2A8	NM_014580	NP_055395	Coding	chr9:127397137 plus strand	588872
SLC31A1	NM_001859	NP_001850	Coding	chr9:113221527 plus strand	588873
SLC31A2	NM_001860	NP_001851	Coding	chr9:113150957 plus strand	588874
SLC34A3	NM_001177316	NP_001170787	Coding	chr9:137230756 plus strand	588875
SLC34A3	NM_001177317	NP_001170788	Coding	chr9:137230756 plus strand	588875
SLC34A3	NM_080877	NP_543153	Coding	chr9:137230932 plus strand	588876
SLC35D2	NM_001286990	NP_001273919	Coding	chr9:96383710 minus strand	588877
SLC35D2	NM_007001	NP_008932	Coding	chr9:96383710 minus strand	588877
SLC44A1	NM_001286730	NP_001273659	Coding	chr9:105244612 plus strand	588878
SLC44A1	NM_080546	NP_536856	Coding	chr9:105244612 plus strand	588878
SLC46A2	NM_033051	NP_149040	Coding	chr9:112890913 minus strand	588879
SMARCA2	NM_001289396	NP_001276325	Coding	chr9:2021944 plus strand	588880
SMARCA2	NM_001289397	NP_001276326	Coding	chr9:2015218 plus strand	588881
SMARCA2	NM_001289398	NP_001276327	Coding	chr9:2157679 plus strand	588882
SMARCA2	NM_001289399	NP_001276328	Coding	chr9:2158451 plus strand	588883
SMARCA2	NM_001289400	NP_001276329	Coding	chr9:2158455 plus strand	588884
SMARCA2	NM_003070	NP_003061	Coding	chr9:2015218 plus strand	588881
SMARCA2	NM_139045	NP_620614	Coding	chr9:2015218 plus strand	588881
SMC2	NM_001042550	NP_001036015	Coding	chr9:104094549 plus strand	588885
SMC2	NM_001042551	NP_001036016	Coding	chr9:104094259 plus strand	588886
SMC2	NM_001265602	NP_001252531	Coding	chr9:104094259 plus	588886

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				strand	
SMC2	NM_006444	NP_006435	Coding	chr9:104094259 plus strand	588886
SMC5	NM_015110	NP_055925	Coding	chr9:70258961 plus strand	588887
SMU1	NM_018225	NP_060695	Coding	chr9:33076716 minus strand	588888
SNAPC3	NM_001039697	NP_001034786	Coding	chr9:15422783 plus strand	588889
SNAPC4	NM_003086	NP_003077	Coding	chr9:136398437 minus strand	588890
SNX30	NM_001012994	NP_001013012	Coding	chr9:112750853 plus strand	588891
SOHLH1	NM_001012415	NP_001012415	Coding	chr9:135699528 minus strand	588892
SOHLH1	NM_001101677	NP_001095147	Coding	chr9:135699528 minus strand	588892
SPAG8	NM_001039592	NP_001034681	Coding	chr9:35812262 minus strand	588893
SPAG8	NM_172312	NP_758516	Coding	chr9:35812262 minus strand	588893
SPATA31A1	NM_001085452	NP_001078921	Coding	chr9:39355668 plus strand	588894
SPATA31A3	NM_001083124	NP_001076593	Coding	chr9:66992550 minus strand	588895
SPATA31A5	NM_001113541	NP_001107013	Coding	chr9:60914406 plus strand	588896
SPATA31A5	NM_001113541	NP_001107013	Coding	chr9:61190035 plus strand	588897
SPATA31A6	NM_001145196	NP_001138668	Coding	chr9:42183658 plus strand	588898
SPATA31A7	NM_015667	NP_056482	Coding	chr9:60914406 plus strand	588899
SPATA31A7	NM_015667	NP_056482	Coding	chr9:61190035 plus strand	588900
SPATA31C1	NM_001145124	NP_001138596	Coding	chr9:87917961 plus strand	588901
SPATA31C2	NM_001166137	NP_001159609	Coding	chr9:88134985 minus strand	588902
SPATA31D1	NM_001001670	NP_001001670	Coding	chr9:81988771 plus strand	588903
SPATA31D3	NM_207416	NP_997299	Coding	chr9:81943499 plus strand	588904
SPATA31D4	NM_001145197	NP_001138669	Coding	chr9:81928427 plus strand	588905
SPATA31E1	NM_178828	NP_849150	Coding	chr9:87882856 plus strand	588906
SPATA6L	NM_001039395	NP_001034484	Coding	chr9:4666674 minus strand	588907
SPIN1	NM_006717	NP_006708	Coding	chr9:88388381 plus strand	588908
SPINK4	NM_014471	NP_055286	Coding	chr9:33240197 plus strand	588909
SPTAN1	NM_001130438	NP_001123910	Coding	chr9:128552557 plus strand	588910
SPTAN1	NM_001195532	NP_001182461	Coding	chr9:128552557 plus strand	588910
SPTAN1	NM_003127	NP_003118	Coding	chr9:128552557 plus strand	588910
SPTLC1	NM_001281303	NP_001268232	Coding	chr9:92115474 minus strand	588911
SPTLC1	NM_006415	NP_006406	Coding	chr9:92115474 minus strand	588911
SPTLC1	NM_178324	NP_847894	Coding	chr9:92115474 minus strand	588911

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SSNA1	NM_003731	NP_003722	Coding	chr9:137188601 plus strand	588912
ST6GALNAC4	NM_175039	NP_778204	Coding	chr9:127917026 minus strand	588913
ST6GALNAC4	NM_175040	NP_778205	Coding	chr9:127917026 minus strand	588913
ST6GALNAC6	NM_001286999	NP_001273928	Coding	chr9:127899648 minus strand	588914
ST6GALNAC6	NM_001287000	NP_001273929	Coding	chr9:127899648 minus strand	588914
ST6GALNAC6	NM_001287001	NP_001273930	Coding	chr9:127897408 minus strand	588915
ST6GALNAC6	NM_001287002	NP_001273931	Coding	chr9:127905348 minus strand	588916
ST6GALNAC6	NM_001287003	NP_001273932	Coding	chr9:127897408 minus strand	588915
ST6GALNAC6	NM_013443	NP_038471	Coding	chr9:127899648 minus strand	588914
STKLD1	NM_153710	NP_714921	Coding	chr9:133376412 plus strand	588917
STOM	NM_001270526	NP_001257455	Coding	chr9:121370304 minus strand	588918
STOM	NM_001270527	NP_001257456	Coding	chr9:121370304 minus strand	588918
STOM	NM_004099	NP_004090	Coding	chr9:121370304 minus strand	588918
STOM	NM_198194	NP_937837	Coding	chr9:121370304 minus strand	588918
STOML2	NM_001287031	NP_001273960	Coding	chr9:35103195 minus strand	588919
STOML2	NM_001287032	NP_001273961	Coding	chr9:35103195 minus strand	588919
STOML2	NM_001287033	NP_001273962	Coding	chr9:35103195 minus strand	588919
STOML2	NM_013442	NP_038470	Coding	chr9:35103195 minus strand	588919
STRBP	NM_001171137	NP_001164608	Coding	chr9:123268576 minus strand	588920
STRBP	NM_018387	NP_060857	Coding	chr9:123268564 minus strand	588921
STX17	NM_017919	NP_060389	Coding	chr9:99906632 plus strand	588922
STXBP1	NM_001032221	NP_001027392	Coding	chr9:127612206 plus strand	588923
STXBP1	NM_003165	NP_003156	Coding	chr9:127612206 plus strand	588923
SURF1	NM_001280787	NP_001267716	Coding	chr9:133356485 minus strand	588924
SURF1	NM_003172	NP_003163	Coding	chr9:133356485 minus strand	588924
SURF2	NM_001278928	NP_001265857	Coding	chr9:133356544 plus strand	588925
SURF2	NM_017503	NP_059973	Coding	chr9:133356544 plus strand	588925
SURF4	NM_001280788	NP_001267717	Coding	chr9:133377949 minus	588926

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				strand	
SURF4	NM_001280789	NP_001267718	Coding	chr9:133376166 minus strand	588927
SURF4	NM_001280790	NP_001267719	Coding	chr9:133376166 minus strand	588927
SURF4	NM_001280791	NP_001267720	Coding	chr9:133376166 minus strand	588927
SURF4	NM_001280792	NP_001267721	Coding	chr9:133376166 minus strand	588927
SURF4	NM_001280793	NP_001267722	Coding	chr9:133376166 minus strand	588927
SURF4	NM_033161	NP_149351	Coding	chr9:133376166 minus strand	588927
SURF6	NM_001278942	NP_001265871	Coding	chr9:133336210 minus strand	588928
SURF6	NM_006753	NP_006744	Coding	chr9:133336210 minus strand	588928
SUSD1	NM_001282640	NP_001269569	Coding	chr9:112175297 minus strand	588929
SUSD1	NM_001282643	NP_001269572	Coding	chr9:112175297 minus strand	588929
SUSD1	NM_022486	NP_071931	Coding	chr9:112175297 minus strand	588929
SUSD3	NM_001287005	NP_001273934	Coding	chr9:93058687 plus strand	588930
SUSD3	NM_001287006	NP_001273935	Coding	chr9:93058687 plus strand	588930
SUSD3	NM_001287007	NP_001273936	Coding	chr9:93058687 plus strand	588930
SUSD3	NM_001287008	NP_001273937	Coding	chr9:93058687 plus strand	588930
SUSD3	NM_145006	NP_659443	Coding	chr9:93058687 plus strand	588930
SVEP1	NM_153366	NP_699197	Coding	chr9:110579880 minus strand	588931
SWI5	NM_001040011	NP_001035100	Coding	chr9:128276145 plus strand	588932
SYK	NM_001135052	NP_001128524	Coding	chr9:90801679 plus strand	588933
SYK	NM_001174167	NP_001167638	Coding	chr9:90827419 plus strand	588934
SYK	NM_001174168	NP_001167639	Coding	chr9:90801926 plus strand	588935
SYK	NM_003177	NP_003168	Coding	chr9:90801679 plus strand	588933
TAF1L	NM_153809	NP_722516	Coding	chr9:32635669 minus strand	588936
TAL2	NM_005421	NP_005412	Coding	chr9:105662456 plus strand	588937
TBC1D13	NM_001286772	NP_001273701	Coding	chr9:128787206 plus strand	588938
TBC1D13	NM_018201	NP_060671	Coding	chr9:128787206 plus strand	588938
TBC1D2	NM_001267571	NP_001254500	Coding	chr9:98255721 minus strand	588939
TBC1D2	NM_001267572	NP_001254501	Coding	chr9:98213551 minus strand	588940
TBC1D2	NM_018421	NP_060891	Coding	chr9:98255721 minus strand	588939
TDRD7	NM_001302884	NP_001289813	Coding	chr9:97412019 plus strand	588941

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TDRD7	NM_014290	NP_055105	Coding	chr9:97412019 plus strand	588941
TEK	NM_000459	NP_000450	Coding	chr9:27109140 plus strand	588942
TEK	NM_001290077	NP_001277006	Coding	chr9:27109140 plus strand	588942
TEK	NM_001290078	NP_001277007	Coding	chr9:27109140 plus strand	588942
TESK1	NM_006285	NP_006276	Coding	chr9:35605283 plus strand	588943
TEX10	NM_001161584	NP_001155056	Coding	chr9:100352571 minus strand	588944
TEX10	NM_017746	NP_060216	Coding	chr9:100352977 minus strand	588945
TGFBR1	NM_001130916	NP_001124388	Coding	chr9:99105129 plus strand	588946
TGFBR1	NM_004612	NP_004603	Coding	chr9:99105129 plus strand	588946
TJP2	NM_001170414	NP_001163885	Coding	chr9:69121263 plus strand	588947
TJP2	NM_001170415	NP_001163886	Coding	chr9:69205010 plus strand	588948
TJP2	NM_001170416	NP_001163887	Coding	chr9:69205161 plus strand	588949
TJP2	NM_001170630	NP_001164101	Coding	chr9:69174054 plus strand	588950
TJP2	NM_004817	NP_004808	Coding	chr9:69174054 plus strand	588950
TJP2	NM_201629	NP_963923	Coding	chr9:69174054 plus strand	588950
TLE1	NM_005077	NP_005068	Coding	chr9:81688681 minus strand	588951
TLE4	NM_001282748	NP_001269677	Coding	chr9:79571772 plus strand	588952
TLE4	NM_001282749	NP_001269678	Coding	chr9:79571772 plus strand	588952
TLE4	NM_001282753	NP_001269682	Coding	chr9:79571772 plus strand	588952
TLE4	NM_001282760	NP_001269689	Coding	chr9:79571772 plus strand	588952
TLE4	NM_007005	NP_008936	Coding	chr9:79571772 plus strand	588952
TLN1	NM_006289	NP_006280	Coding	chr9:35732395 minus strand	588953
TLR4	NM_003266	NP_003257	Coding	chr9:117704174 plus strand	588954
TLR4	NM_138554	NP_612564	Coding	chr9:117704174 plus strand	588954
TLR4	NM_138557	NP_612567	Coding	chr9:117704174 plus strand	588954
TMC1	NM_138691	NP_619636	Coding	chr9:72521800 plus strand	588955
TMEFF1	NM_003692	NP_003683	Coding	chr9:100473237 plus strand	588956
TMEM141	NM_032928	NP_116317	Coding	chr9:136791324 plus strand	588957
TMEM2	NM_001135820	NP_001129292	Coding	chr9:71768884 minus strand	588958
TMEM2	NM_013390	NP_037522	Coding	chr9:71768884 minus strand	588958
TMEM203	NM_053045	NP_444273	Coding	chr9:137205638 minus strand	588959
TMEM210	NM_001282477	NP_001269406	Coding	chr9:137172046 minus strand	588960
TMEM215	NM_212558	NP_997723	Coding	chr9:32783498 plus strand	588961
TMEM245	NM_032012	NP_114401	Coding	chr9:109119945 minus strand	588962

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TMEM246	NM_032342	NP_115718	Coding	chr9:101487193 minus strand	588963
TMEM252	NM_153237	NP_694969	Coding	chr9:68540867 minus strand	588964
TMEM261	NM_033428	NP_219500	Coding	chr9:7799799 minus strand	588965
TMEM38B	NM_018112	NP_060582	Coding	chr9:105694524 plus strand	588966
TMEM8B	NM_001042589	NP_001036054	Coding	chr9:35829224 plus strand	588967
TMEM8B	NM_001042590	NP_001036055	Coding	chr9:35829497 plus strand	588968
TMEM8B	NM_016446	NP_057530	Coding	chr9:35829224 plus strand	588967
TMEM8C	NM_001080483	NP_001073952	Coding	chr9:133524946 minus strand	588969
TMOD1	NM_001166116	NP_001159588	Coding	chr9:97501179 plus strand	588970
TMOD1	NM_003275	NP_003266	Coding	chr9:97501638 plus strand	588971
TNC	NM_002160	NP_002151	Coding	chr9:115118257 minus strand	588972
TNFSF15	NM_001204344	NP_001191273	Coding	chr9:114792530 minus strand	588973
TNFSF15	NM_005118	NP_005109	Coding	chr9:114806128 minus strand	588974
TNFSF8	NM_001244	NP_001235	Coding	chr9:114930595 minus strand	588975
TNFSF8	NM_001252290	NP_001239219	Coding	chr9:114930595 minus strand	588975
TOMM5	NM_001001790	NP_001001790	Coding	chr9:37592639 minus strand	588976
TOMM5	NM_001134484	NP_001127956	Coding	chr9:37592639 minus strand	588976
TOMM5	NM_001134485	NP_001127957	Coding	chr9:37592639 minus strand	588976
TOPORS	NM_001195622	NP_001182551	Coding	chr9:32552628 minus strand	588977
TOPORS	NM_005802	NP_005793	Coding	chr9:32552628 minus strand	588977
TOR1A	NM_000113	NP_000104	Coding	chr9:129824162 minus strand	588978
TOR1B	NM_014506	NP_055321	Coding	chr9:129803152 plus strand	588979
TOR2A	NM_001085347	NP_001078816	Coding	chr9:127735349 minus strand	588980
TOR2A	NM_001134430	NP_001127902	Coding	chr9:127735349 minus strand	588980
TOR2A	NM_001134431	NP_001127903	Coding	chr9:127735349 minus strand	588980
TOR2A	NM_001252018	NP_001238947	Coding	chr9:127735349 minus strand	588980
TOR2A	NM_001252021	NP_001238950	Coding	chr9:127735349 minus strand	588980
TOR2A	NM_001252023	NP_001238952	Coding	chr9:127735349 minus strand	588980
TOR2A	NM_130459	NP_569726	Coding	chr9:127735349 minus strand	588980

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TOR4A	NM_017723	NP_060193	Coding	chr9:137277827 plus strand	588981
TPD52L3	NM_001001874	NP_001001874	Coding	chr9:6328348 plus strand	588982
TPD52L3	NM_001001875	NP_001001875	Coding	chr9:6328348 plus strand	588982
TPD52L3	NM_033516	NP_277051	Coding	chr9:6328348 plus strand	588982
TPM2	NM_001301226	NP_001288155	Coding	chr9:35690056 minus strand	588983
TPM2	NM_001301227	NP_001288156	Coding	chr9:35690056 minus strand	588983
TPM2	NM_003289	NP_003280	Coding	chr9:35690056 minus strand	588983
TPM2	NM_213674	NP_998839	Coding	chr9:35690056 minus strand	588983
TPRN	NM_001128228	NP_001121700	Coding	chr9:137200711 minus strand	588984
TRAF1	NM_001190945	NP_001177874	Coding	chr9:120929173 minus strand	588985
TRAF1	NM_001190947	NP_001177876	Coding	chr9:120914572 minus strand	588986
TRAF1	NM_005658	NP_005649	Coding	chr9:120926895 minus strand	588987
TRAF2	NM_021138	NP_066961	Coding	chr9:136886512 plus strand	588988
TRIM14	NM_014788	NP_055603	Coding	chr9:98119353 minus strand	588989
TRIM14	NM_033219	NP_150088	Coding	chr9:98119353 minus strand	588989
TRIM32	NM_001099679	NP_001093149	Coding	chr9:116687301 plus strand	588990
TRIM32	NM_012210	NP_036342	Coding	chr9:116687301 plus strand	588990
TRMT10B	NM_001286950	NP_001273879	Coding	chr9:37753802 plus strand	588991
TRMT10B	NM_001286951	NP_001273880	Coding	chr9:37753802 plus strand	588991
TRMT10B	NM_001286952	NP_001273881	Coding	chr9:37753802 plus strand	588991
TRMT10B	NM_001286953	NP_001273882	Coding	chr9:37753802 plus strand	588991
TRMT10B	NM_001286954	NP_001273883	Coding	chr9:37753802 plus strand	588991
TRMT10B	NM_144964	NP_659401	Coding	chr9:37753802 plus strand	588991
TRPM3	NM_001007470	NP_001007471	Coding	chr9:70869058 minus strand	588992
TRPM3	NM_001007471	NP_001007472	Coding	chr9:71121598 minus strand	588993
TRPM3	NM_020952	NP_066003	Coding	chr9:70869058 minus strand	588992
TRPM3	NM_024971	NP_079247	Coding	chr9:70869058 minus strand	588992
TRPM3	NM_206944	NP_996827	Coding	chr9:70869058 minus strand	588992
TRPM3	NM_206945	NP_996828	Coding	chr9:70869058 minus strand	588992
TRPM3	NM_206946	NP_996829	Coding	chr9:70869058 minus strand	588992

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TRPM3	NM_206947	NP_996830	Coding	chr9:70869058 minus strand	588992
TRPM3	NM_206948	NP_996831	Coding	chr9:70869058 minus strand	588992
TRPM6	NM_001177310	NP_001170781	Coding	chr9:74887720 minus strand	588994
TRPM6	NM_001177311	NP_001170782	Coding	chr9:74887347 minus strand	588995
TRPM6	NM_017662	NP_060132	Coding	chr9:74888094 minus strand	588996
TRUB2	NM_015679	NP_056494	Coding	chr9:128322418 minus strand	588997
TSC1	NM_000368	NP_000359	Coding	chr9:132944633 minus strand	588998
TSC1	NM_001162426	NP_001155898	Coding	chr9:132944633 minus strand	588998
TSC1	NM_001162427	NP_001155899	Coding	chr9:132944633 minus strand	588998
TSTD2	NM_139246	NP_640339	Coding	chr9:97633680 minus strand	588999
TTC16	NM_144965	NP_659402	Coding	chr9:127716078 plus strand	589000
TTC39B	NM_001168339	NP_001161811	Coding	chr9:15307360 minus strand	589001
TTC39B	NM_001168340	NP_001161812	Coding	chr9:15307360 minus strand	589001
TTC39B	NM_001168341	NP_001161813	Coding	chr9:15307360 minus strand	589001
TTC39B	NM_001168342	NP_001161814	Coding	chr9:15250200 minus strand	589002
TTC39B	NM_152574	NP_689787	Coding	chr9:15307360 minus strand	589001
TTF1	NM_001205296	NP_001192225	Coding	chr9:132406851 minus strand	589003
TTF1	NM_007344	NP_031370	Coding	chr9:132406851 minus strand	589003
TTLL11	NM_001139442	NP_001132914	Coding	chr9:122093606 minus strand	589004
TTLL11	NM_194252	NP_919228	Coding	chr9:122093606 minus strand	589004
TUBB4B	NM_006088	NP_006079	Coding	chr9:137241258 plus strand	589005
TUSC1	NM_001004125	NP_001004125	Coding	chr9:25678858 minus strand	589006
TXN	NM_001244938	NP_001231867	Coding	chr9:110256640 minus strand	589007
TXN	NM_003329	NP_003320	Coding	chr9:110256640 minus strand	589007
TXNDC8	NM_001003936	NP_001003936	Coding	chr9:110337884 minus strand	589008
TXNDC8	NM_001286946	NP_001273875	Coding	chr9:110337884 minus strand	589008
TXNDC8	NM_001286947	NP_001273876	Coding	chr9:110337884 minus strand	589008

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TYRP1	NM_000550	NP_000541	Coding	chr9:12693385 plus strand	589009
UAP1L1	NM_207309	NP_997192	Coding	chr9:137077500 plus strand	589010
UBAC1	NM_016172	NP_057256	Coding	chr9:135961380 minus strand	589011
UBAP1	NM_001171201	NP_001164672	Coding	chr9:34179004 plus strand	589012
UBAP1	NM_001171202	NP_001164673	Coding	chr9:34179004 plus strand	589012
UBAP1	NM_001171203	NP_001164674	Coding	chr9:34179004 plus strand	589012
UBAP1	NM_001171204	NP_001164675	Coding	chr9:34179004 plus strand	589012
UBAP1	NM_016525	NP_057609	Coding	chr9:34179004 plus strand	589012
UBAP2	NM_001282529	NP_001269458	Coding	chr9:34048949 minus strand	589013
UBAP2	NM_001282530	NP_001269459	Coding	chr9:33934364 minus strand	589014
UBAP2	NM_018449	NP_060919	Coding	chr9:34048949 minus strand	589013
UBE2R2	NM_017811	NP_060281	Coding	chr9:33817183 plus strand	589015
UBQLN1	NM_013438	NP_038466	Coding	chr9:83708253 minus strand	589016
UBQLN1	NM_053067	NP_444295	Coding	chr9:83708253 minus strand	589016
UCK1	NM_001135954	NP_001129426	Coding	chr9:131531275 minus strand	589017
UCK1	NM_001261450	NP_001248379	Coding	chr9:131531275 minus strand	589017
UCK1	NM_001261451	NP_001248380	Coding	chr9:131531275 minus strand	589017
UCK1	NM_031432	NP_113620	Coding	chr9:131531275 minus strand	589017
UGCG	NM_003358	NP_003349	Coding	chr9:111896925 plus strand	589018
UHRF2	NM_152896	NP_690856	Coding	chr9:6413150 plus strand	589019
UNC13B	NM_006377	NP_006368	Coding	chr9:35161991 plus strand	589020
URM1	NM_001135947	NP_001129419	Coding	chr9:128371318 plus strand	589021
URM1	NM_001265582	NP_001252511	Coding	chr9:128371318 plus strand	589021
URM1	NM_030914	NP_112176	Coding	chr9:128371318 plus strand	589021
USP20	NM_001008563	NP_001008563	Coding	chr9:129835416 plus strand	589022
USP20	NM_001110303	NP_001103773	Coding	chr9:129835416 plus strand	589022
USP20	NM_006676	NP_006667	Coding	chr9:129835416 plus strand	589022
VAV2	NM_001134398	NP_001127870	Coding	chr9:133992324 minus strand	589023
VAV2	NM_003371	NP_003362	Coding	chr9:133992324 minus strand	589023
VCP	NM_007126	NP_009057	Coding	chr9:35072742 minus strand	589024

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VLDLR	NM_001018056	NP_001018066	Coding	chr9:2621792 plus strand	589025
VLDLR	NM_003383	NP_003374	Coding	chr9:2621792 plus strand	589025
VPS13A	NM_001018037	NP_001018047	Coding	chr9:77177444 plus strand	589026
VPS13A	NM_001018038	NP_001018048	Coding	chr9:77177444 plus strand	589026
VPS13A	NM_015186	NP_056001	Coding	chr9:77177444 plus strand	589026
VPS13A	NM_033305	NP_150648	Coding	chr9:77177444 plus strand	589026
WASH1	NM_182905	NP_878908	Coding	chr9:29739 minus strand	589027
WDR31	NM_001012361	NP_001012361	Coding	chr9:113340340 minus strand	589028
WDR31	NM_145241	NP_660284	Coding	chr9:113340340 minus strand	589028
WDR34	NM_052844	NP_443076	Coding	chr9:128656850 minus strand	589029
WDR38	NM_001045476	NP_001038941	Coding	chr9:124853416 plus strand	589030
WDR38	NM_001276374	NP_001263303	Coding	chr9:124853416 plus strand	589030
WDR38	NM_001276375	NP_001263304	Coding	chr9:124853416 plus strand	589030
WDR38	NM_001276376	NP_001263305	Coding	chr9:124853416 plus strand	589030
WDR5	NM_017588	NP_060058	Coding	chr9:134136087 plus strand	589031
WDR5	NM_052821	NP_438172	Coding	chr9:134139791 plus strand	589032
WNK2	NM_001282394	NP_001269323	Coding	chr9:93184929 plus strand	589033
WNK2	NM_006648	NP_006639	Coding	chr9:93184929 plus strand	589033
XPA	NM_000380	NP_000371	Coding	chr9:97697409 minus strand	589034
ZBTB26	NM_020924	NP_065975	Coding	chr9:122931500 minus strand	589035
ZBTB34	NM_001099270	NP_001092740	Coding	chr9:126860664 plus strand	589036
ZBTB43	NM_001135776	NP_001129248	Coding	chr9:126805005 plus strand	589037
ZBTB43	NM_014007	NP_054726	Coding	chr9:126805005 plus strand	589037
ZBTB5	NM_014872	NP_055687	Coding	chr9:37465410 minus strand	589038
ZBTB6	NM_006626	NP_006617	Coding	chr9:122913328 minus strand	589039
ZCCHC6	NM_001185059	NP_001171988	Coding	chr9:86354487 minus strand	589040
ZCCHC6	NM_001185074	NP_001172003	Coding	chr9:86354487 minus strand	589040
ZCCHC6	NM_024617	NP_078893	Coding	chr9:86354487 minus strand	589040
ZCCHC7	NM_001289119	NP_001276048	Coding	chr9:37120471 plus strand	589041
ZCCHC7	NM_001289120	NP_001276049	Coding	chr9:37120597 plus strand	589042
ZCCHC7	NM_001289121	NP_001276050	Coding	chr9:37120597 plus strand	589042

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ZCCHC7	NM_032226	NP_115602	Coding	chr9:37120471 plus strand	589041
ZDHHC12	NM_032799	NP_116188	Coding	chr9:128724129 minus strand	589043
ZDHHC21	NM_178566	NP_848661	Coding	chr9:14693482 minus strand	589044
ZER1	NM_006336	NP_006327	Coding	chr9:128771934 minus strand	589045
ZFAND5	NM_001102420	NP_001095890	Coding	chr9:72365247 minus strand	589046
ZFAND5	NM_001102421	NP_001095891	Coding	chr9:72365247 minus strand	589046
ZFAND5	NM_001278243	NP_001265172	Coding	chr9:72364592 minus strand	589047
ZFAND5	NM_001278244	NP_001265173	Coding	chr9:72364592 minus strand	589047
ZFAND5	NM_001278245	NP_001265174	Coding	chr9:72364592 minus strand	589047
ZFAND5	NM_006007	NP_005998	Coding	chr9:72365247 minus strand	589046
ZFP37	NM_001282515	NP_001269444	Coding	chr9:113056791 minus strand	589048
ZFP37	NM_001282518	NP_001269447	Coding	chr9:113056791 minus strand	589048
ZFP37	NM_003408	NP_003399	Coding	chr9:113056791 minus strand	589048
ZMYND19	NM_138462	NP_612471	Coding	chr9:137590485 minus strand	589049
ZNF169	NM_001301275	NP_001288204	Coding	chr9:94259265 plus strand	589050
ZNF169	NM_003448	NP_003439	Coding	chr9:94259265 plus strand	589050
ZNF169	NM_194320	NP_919301	Coding	chr9:94259265 plus strand	589050
ZNF189	NM_001278231	NP_001265160	Coding	chr9:101398853 plus strand	589051
ZNF189	NM_001278232	NP_001265161	Coding	chr9:101398853 plus strand	589051
ZNF189	NM_001278240	NP_001265169	Coding	chr9:101398853 plus strand	589051
ZNF189	NM_003452	NP_003443	Coding	chr9:101398853 plus strand	589051
ZNF189	NM_197977	NP_932094	Coding	chr9:101398853 plus strand	589051
ZNF367	NM_153695	NP_710162	Coding	chr9:96418387 minus strand	589052
ZNF462	NM_021224	NP_067047	Coding	chr9:106863096 plus strand	589053
ZNF483	NM_001007169	NP_001007170	Coding	chr9:111525158 plus strand	589054
ZNF483	NM_133464	NP_597721	Coding	chr9:111525158 plus strand	589054
ZNF484	NM_001007101	NP_001007102	Coding	chr9:92878038 minus strand	589055
ZNF484	NM_001261458	NP_001248387	Coding	chr9:92878038 minus strand	589055
ZNF484	NM_001261459	NP_001248388	Coding	chr9:92878038 minus	589055

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				strand	
ZNF484	NM_001261460	NP_001248389	Coding	chr9:92878038 minus strand	589055
ZNF484	NM_031486	NP_113674	Coding	chr9:92878038 minus strand	589055
ZNF510	NM_014930	NP_055745	Coding	chr9:96778046 minus strand	589056
ZNF618	NM_133374	NP_588615	Coding	chr9:113876281 plus strand	589057
ZNF658	NM_033160	NP_149350	Coding	chr9:66900728 plus strand	589058
ZNF782	NM_001001662	NP_001001662	Coding	chr9:96854107 minus strand	589059
ZNF79	NM_001286696	NP_001273625	Coding	chr9:127424373 plus strand	589060
ZNF79	NM_001286697	NP_001273626	Coding	chr9:127424373 plus strand	589060
ZNF79	NM_001286698	NP_001273627	Coding	chr9:127424373 plus strand	589060
ZNF79	NM_007135	NP_009066	Coding	chr9:127424373 plus strand	589060
ZNF883	NM_001101338	NP_001094808	Coding	chr9:113012192 minus strand	589061
A1CF	NM_001198818	NP_001185747	Coding	chr10:50885675 minus strand	913310
A1CF	NM_001198819	NP_001185748	Coding	chr10:50885675 minus strand	913310
A1CF	NM_001198820	NP_001185749	Coding	chr10:50885675 minus strand	913310
A1CF	NM_014576	NP_055391	Coding	chr10:50885675 minus strand	913310
A1CF	NM_138932	NP_620310	Coding	chr10:50885675 minus strand	913310
A1CF	NM_138933	NP_620311	Coding	chr10:50885675 minus strand	913310
ABCC2	NM_000392	NP_000383	Coding	chr10:99782597 plus strand	913311
ABI1	NM_001012750	NP_001012768	Coding	chr10:26861087 minus strand	913312
ABI1	NM_001012751	NP_001012769	Coding	chr10:26861087 minus strand	913312
ABI1	NM_001012752	NP_001012770	Coding	chr10:26861087 minus strand	913312
ABI1	NM_001178116	NP_001171587	Coding	chr10:26861087 minus strand	913312
ABI1	NM_001178119	NP_001171590	Coding	chr10:26861087 minus strand	913312
ABI1	NM_001178120	NP_001171591	Coding	chr10:26861087 minus strand	913312
ABI1	NM_001178121	NP_001171592	Coding	chr10:26861087 minus strand	913312
ABI1	NM_001178122	NP_001171593	Coding	chr10:26861087 minus strand	913312
ABI1	NM_001178123	NP_001171594	Coding	chr10:26861087 minus strand	913312

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ABI1	NM_001178124	NP_001171595	Coding	chr10:26861087 minus strand	913312
ABI1	NM_001178125	NP_001171596	Coding	chr10:26861087 minus strand	913312
ABI1	NM_005470	NP_005461	Coding	chr10:26861087 minus strand	913312
ABLIM1	NM_001003407	NP_001003407	Coding	chr10:114684655 minus strand	913313
ABLIM1	NM_001003408	NP_001003408	Coding	chr10:114684655 minus strand	913313
ABLIM1	NM_002313	NP_002304	Coding	chr10:114658299 minus strand	913314
ABLIM1	NM_006720	NP_006711	Coding	chr10:114526926 minus strand	913315
ACADSB	NM_001609	NP_001600	Coding	chr10:123008912 plus strand	913316
ACBD5	NM_001042473	NP_001035938	Coding	chr10:27242139 minus strand	913317
ACBD5	NM_001271512	NP_001258441	Coding	chr10:27240879 minus strand	913318
ACBD5	NM_001301251	NP_001288180	Coding	chr10:27242139 minus strand	913317
ACBD5	NM_001301252	NP_001288181	Coding	chr10:27240879 minus strand	913318
ACBD5	NM_001301253	NP_001288182	Coding	chr10:27242139 minus strand	913317
ACBD5	NM_001301254	NP_001288183	Coding	chr10:27240879 minus strand	913318
ACBD5	NM_145698	NP_663736	Coding	chr10:27240879 minus strand	913318
ACBD7	NM_001039844	NP_001034933	Coding	chr10:15088776 minus strand	913319
ACSL5	NM_016234	NP_057318	Coding	chr10:112376197 plus strand	913320
ACSL5	NM_203379	NP_976313	Coding	chr10:112374157 plus strand	913321
ACSL5	NM_203380	NP_976314	Coding	chr10:112375264 plus strand	913322
ACSM6	NM_207321	NP_997204	Coding	chr10:95194199 plus strand	913323
ACTA2	NM_001141945	NP_001135417	Coding	chr10:88991390 minus strand	913324
ACTA2	NM_001613	NP_001604	Coding	chr10:88952823 minus strand	913325
ACTR1A	NM_005736	NP_005727	Coding	chr10:102502755 minus strand	913326
ADAM12	NM_001288973	NP_001275902	Coding	chr10:126388558 minus strand	913327
ADAM12	NM_001288974	NP_001275903	Coding	chr10:126388558 minus strand	913327
ADAM12	NM_001288975	NP_001275904	Coding	chr10:126388558 minus strand	913327
ADAM12	NM_003474	NP_003465	Coding	chr10:126388558 minus strand	913327

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ADAM12	NM_021641	NP_067673	Coding	chr10:126388558 minus strand	913327
ADAM8	NM_001109	NP_001100	Coding	chr10:133276903 minus strand	913328
ADAM8	NM_001164489	NP_001157961	Coding	chr10:133276903 minus strand	913328
ADAM8	NM_001164490	NP_001157962	Coding	chr10:133276903 minus strand	913328
ADAMTS14	NM_080722	NP_542453	Coding	chr10:70672802 plus strand	913329
ADAMTS14	NM_139155	NP_631894	Coding	chr10:70672802 plus strand	913329
ADARB2	NM_018702	NP_061172	Coding	chr10:1737476 minus strand	913330
ADD3	NM_001121	NP_001112	Coding	chr10:110007952 plus strand	913331
ADD3	NM_016824	NP_058432	Coding	chr10:110007952 plus strand	913331
ADD3	NM_019903	NP_063968	Coding	chr10:110005967 plus strand	913332
ADIRF	NM_006829	NP_006820	Coding	chr10:86968430 plus strand	913333
ADK	NM_001123	NP_001114	Coding	chr10:74176488 plus strand	913334
ADK	NM_001202449	NP_001189378	Coding	chr10:74176488 plus strand	913334
ADK	NM_001202450	NP_001189379	Coding	chr10:74151184 plus strand	913335
ADK	NM_006721	NP_006712	Coding	chr10:74151184 plus strand	913335
ADO	NM_032804	NP_116193	Coding	chr10:62804755 plus strand	913336
ADRA2A	NM_000681	NP_000672	Coding	chr10:111077031 plus strand	913337
ADRB1	NM_000684	NP_000675	Coding	chr10:114044046 plus strand	913338
AFAP1L2	NM_001001936	NP_001001936	Coding	chr10:114404778 minus strand	913339
AFAP1L2	NM_001287824	NP_001274753	Coding	chr10:114404778 minus strand	913339
AFAP1L2	NM_032550	NP_115939	Coding	chr10:114404778 minus strand	913339
AGAP11	NM_133447	NP_597704	Coding	chr10:86970740 plus strand	913340
AGAP4	NM_001276343	NP_001263272	Coding	chr10:45847473 minus strand	913341
AGAP4	NM_001291379	NP_001278308	Coding	chr10:45853877 minus strand	913342
AGAP4	NM_133446	NP_597703	Coding	chr10:45847473 minus strand	913341
AGAP5	NM_001144000	NP_001137472	Coding	chr10:73697796 minus strand	913343
AGAP6	NM_001077665	NP_001071133	Coding	chr10:49988317 plus strand	913344

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AGAP7P	NM_001077685	NP_001071153	Coding	chr10:46109494 plus strand	913345
AGAP9	NM_001190810	NP_001177739	Coding	chr10:47523638 minus strand	913346
AIFM2	NM_001198696	NP_001185625	Coding	chr10:70132934 minus strand	913347
AIFM2	NM_032797	NP_116186	Coding	chr10:70132934 minus strand	913347
AKR1C1	NM_001353	NP_001344	Coding	chr10:4963261 plus strand	913348
AKR1C2	NM_001135241	NP_001128713	Coding	chr10:5004014 minus strand	913349
AKR1C2	NM_001354	NP_001345	Coding	chr10:5018033 minus strand	913350
AKR1C2	NM_205845	NP_995317	Coding	chr10:5018033 minus strand	913350
AKR1C3	NM_001253908	NP_001240837	Coding	chr10:5048765 plus strand	913351
AKR1C3	NM_001253909	NP_001240838	Coding	chr10:5094375 plus strand	913352
AKR1C3	NM_003739	NP_003730	Coding	chr10:5094375 plus strand	913352
AKR1C4	NM_001818	NP_001809	Coding	chr10:5196834 plus strand	913353
AKR1E2	NM_001040177	NP_001035267	Coding	chr10:4826176 plus strand	913354
AKR1E2	NM_001271021	NP_001257950	Coding	chr10:4826176 plus strand	913354
AKR1E2	NM_001271025	NP_001257954	Coding	chr10:4826176 plus strand	913354
ALDH18A1	NM_001017423	NP_001017423	Coding	chr10:95656810 minus strand	913355
ALDH18A1	NM_002860	NP_002851	Coding	chr10:95656810 minus strand	913355
ALOX5	NM_000698	NP_000689	Coding	chr10:45374175 plus strand	913356
ALOX5	NM_001256153	NP_001243082	Coding	chr10:45374175 plus strand	913356
ALOX5	NM_001256154	NP_001243083	Coding	chr10:45374175 plus strand	913356
ANAPC16	NM_001242546	NP_001229475	Coding	chr10:72215999 plus strand	913357
ANAPC16	NM_001242547	NP_001229476	Coding	chr10:72215999 plus strand	913357
ANAPC16	NM_001242548	NP_001229477	Coding	chr10:72215999 plus strand	913357
ANAPC16	NM_173473	NP_775744	Coding	chr10:72215999 plus strand	913357
ANK3	NM_001149	NP_001140	Coding	chr10:60141016 minus strand	913358
ANK3	NM_001204403	NP_001191332	Coding	chr10:60733526 minus strand	913359
ANK3	NM_001204404	NP_001191333	Coding	chr10:60572956 minus strand	913360
ANK3	NM_020987	NP_066267	Coding	chr10:60389876 minus strand	913361
ANKRD1	NM_014391	NP_055206	Coding	chr10:90921275 minus strand	913362
ANKRD16	NM_001009941	NP_001009941	Coding	chr10:5889897 minus strand	913363

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ANKRD16	NM_001009943	NP_001009943	Coding	chr10:5889897 minus strand	913363
ANKRD16	NM_019046	NP_061919	Coding	chr10:5889897 minus strand	913363
ANKRD2	NM_001129981	NP_001123453	Coding	chr10:97572440 plus strand	913364
ANKRD2	NM_001291218	NP_001278147	Coding	chr10:97572440 plus strand	913364
ANKRD2	NM_001291219	NP_001278148	Coding	chr10:97572440 plus strand	913364
ANKRD2	NM_020349	NP_065082	Coding	chr10:97572440 plus strand	913364
ANKRD22	NM_144590	NP_653191	Coding	chr10:88851975 minus strand	913365
ANKRD26	NM_001256053	NP_001242982	Coding	chr10:27100498 minus strand	913366
ANKRD26	NM_014915	NP_055730	Coding	chr10:27100498 minus strand	913366
ANKRD30A	NM_052997	NP_443723	Coding	chr10:37125856 plus strand	913367
ANTXRL	NM_001278688	NP_001265617	Coding	chr10:46286996 plus strand	913368
ANXA11	NM_001157	NP_001148	Coding	chr10:80205572 minus strand	913369
ANXA11	NM_001278407	NP_001265336	Coding	chr10:80205677 minus strand	913370
ANXA11	NM_001278408	NP_001265337	Coding	chr10:80204491 minus strand	913371
ANXA11	NM_001278409	NP_001265338	Coding	chr10:80205572 minus strand	913369
ANXA11	NM_145868	NP_665875	Coding	chr10:80205572 minus strand	913369
ANXA11	NM_145869	NP_665876	Coding	chr10:80205572 minus strand	913369
ANXA7	NM_001156	NP_001147	Coding	chr10:73414083 minus strand	913372
ANXA7	NM_004034	NP_004025	Coding	chr10:73414083 minus strand	913372
ANXA8	NM_001040084	NP_001035173	Coding	chr10:47484158 minus strand	913373
ANXA8	NM_001271702	NP_001258631	Coding	chr10:47484158 minus strand	913373
ANXA8	NM_001271703	NP_001258632	Coding	chr10:47484158 minus strand	913373
ANXA8L1	NM_001098845	NP_001092315	Coding	chr10:46375589 plus strand	913374
ANXA8L1	NM_001278923	NP_001265852	Coding	chr10:46375589 plus strand	913374
ANXA8L1	NM_001278924	NP_001265853	Coding	chr10:46375589 plus strand	913374
AP3M1	NM_012095	NP_036227	Coding	chr10:74151068 minus strand	913375
AP3M1	NM_207012	NP_996895	Coding	chr10:74151068 minus strand	913375

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APBB1IP	NM_019043	NP_061916	Coding	chr10:26438336 plus strand	913376
ARHGAP12	NM_001270695	NP_001257624	Coding	chr10:31928876 minus strand	913377
ARHGAP12	NM_001270696	NP_001257625	Coding	chr10:31928876 minus strand	913377
ARHGAP12	NM_001270697	NP_001257626	Coding	chr10:31928876 minus strand	913377
ARHGAP12	NM_001270698	NP_001257627	Coding	chr10:31928876 minus strand	913377
ARHGAP12	NM_001270699	NP_001257628	Coding	chr10:31908926 minus strand	913378
ARHGAP12	NM_018287	NP_060757	Coding	chr10:31928876 minus strand	913377
ARHGAP19	NM_001204300	NP_001191229	Coding	chr10:97292673 minus strand	913379
ARHGAP19	NM_001256423	NP_001243352	Coding	chr10:97270690 minus strand	913380
ARHGAP19	NM_032900	NP_116289	Coding	chr10:97292673 minus strand	913379
ARHGAP21	NM_020824	NP_065875	Coding	chr10:24723668 minus strand	913381
ARHGAP22	NM_001256024	NP_001242953	Coding	chr10:48605131 minus strand	913382
ARHGAP22	NM_001256025	NP_001242954	Coding	chr10:48652516 minus strand	913383
ARHGAP22	NM_001256026	NP_001242955	Coding	chr10:48493649 minus strand	913384
ARHGAP22	NM_021226	NP_067049	Coding	chr10:48605131 minus strand	913382
ARID5B	NM_001244638	NP_001231567	Coding	chr10:62049210 plus strand	913385
ARID5B	NM_032199	NP_115575	Coding	chr10:61901253 plus strand	913386
ARL3	NM_004311	NP_004302	Coding	chr10:102714433 minus strand	913387
ARL5B	NM_178815	NP_848930	Coding	chr10:18659383 plus strand	913388
ARMC3	NM_001282745	NP_001269674	Coding	chr10:22928023 plus strand	913389
ARMC3	NM_001282746	NP_001269675	Coding	chr10:22928023 plus strand	913389
ARMC3	NM_001282747	NP_001269676	Coding	chr10:22928023 plus strand	913389
ARMC3	NM_173081	NP_775104	Coding	chr10:22928023 plus strand	913389
ARMC4	NM_001290020	NP_001276949	Coding	chr10:27998906 minus strand	913390
ARMC4	NM_001290021	NP_001276950	Coding	chr10:27981917 minus strand	913391
ARMC4	NM_018076	NP_060546	Coding	chr10:27999055 minus strand	913392
ARMS2	NM_001099667	NP_001093137	Coding	chr10:122454662 plus strand	913393

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AS3MT	NM_020682	NP_065733	Coding	chr10:102869452 plus strand	913394
ASAH2	NM_001143974	NP_001137446	Coding	chr10:50248610 minus strand	913395
ASAH2	NM_019893	NP_063946	Coding	chr10:50248610 minus strand	913395
ASAH2B	NM_001079516	NP_001072984	Coding	chr10:50739927 plus strand	913396
ASB13	NM_024701	NP_078977	Coding	chr10:5666595 minus strand	913397
ASCC1	NM_001198798	NP_001185727	Coding	chr10:72216109 minus strand	913398
ASCC1	NM_001198799	NP_001185728	Coding	chr10:72216441 minus strand	913399
ASCC1	NM_001198800	NP_001185729	Coding	chr10:72216441 minus strand	913399
ATAD1	NM_032810	NP_116199	Coding	chr10:87818160 minus strand	913400
ATE1	NM_001001976	NP_001001976	Coding	chr10:121928063 minus strand	913401
ATE1	NM_001288734	NP_001275663	Coding	chr10:121928063 minus strand	913401
ATE1	NM_001288735	NP_001275664	Coding	chr10:121928063 minus strand	913401
ATE1	NM_001288736	NP_001275665	Coding	chr10:121928801 minus strand	913402
ATE1	NM_007041	NP_008972	Coding	chr10:121928063 minus strand	913401
ATOH7	NM_145178	NP_660161	Coding	chr10:68232113 minus strand	913403
ATP5C1	NM_001001973	NP_001001973	Coding	chr10:7788129 plus strand	913404
ATP5C1	NM_005174	NP_005165	Coding	chr10:7788129 plus strand	913404
ATRNL1	NM_001276282	NP_001263211	Coding	chr10:115093364 plus strand	913405
ATRNL1	NM_207303	NP_997186	Coding	chr10:115093364 plus strand	913405
AVPI1	NM_021732	NP_068378	Coding	chr10:97687258 minus strand	913406
BAG3	NM_004281	NP_004272	Coding	chr10:119651369 plus strand	913407
BAMBI	NM_012342	NP_036474	Coding	chr10:28677494 plus strand	913408
BBIP1	NM_001195304	NP_001182233	Coding	chr10:110919366 minus strand	913409
BBIP1	NM_001195305	NP_001182234	Coding	chr10:110919366 minus strand	913409
BBIP1	NM_001195306	NP_001182235	Coding	chr10:110918936 minus strand	913410
BBIP1	NM_001195307	NP_001182236	Coding	chr10:110919366 minus strand	913409
BBIP1	NM_001243783	NP_001230712	Coding	chr10:110919366 minus strand	913409
BCCIP	NM_016567	NP_057651	Coding	chr10:125823534 plus strand	913411

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BCCIP	NM_078468	NP_510868	Coding	chr10:125823534 plus strand	913411
BCCIP	NM_078469	NP_510869	Coding	chr10:125823534 plus strand	913411
BEND7	NM_001100912	NP_001094382	Coding	chr10:13502976 minus strand	913412
BEND7	NM_152751	NP_689964	Coding	chr10:13502976 minus strand	913412
BICC1	NM_001080512	NP_001073981	Coding	chr10:58513143 plus strand	913413
BLNK	NM_001114094	NP_001107566	Coding	chr10:96271576 minus strand	913414
BLNK	NM_001258440	NP_001245369	Coding	chr10:96271516 minus strand	913415
BLNK	NM_001258441	NP_001245370	Coding	chr10:96271516 minus strand	913415
BLNK	NM_001258442	NP_001245371	Coding	chr10:96271516 minus strand	913415
BLNK	NM_013314	NP_037446	Coding	chr10:96271576 minus strand	913414
BLOC1S2	NM_001001342	NP_001001342	Coding	chr10:100286364 minus strand	913416
BLOC1S2	NM_001282436	NP_001269365	Coding	chr10:100286712 minus strand	913417
BLOC1S2	NM_001282437	NP_001269366	Coding	chr10:100286712 minus strand	913417
BLOC1S2	NM_001282438	NP_001269367	Coding	chr10:100286378 minus strand	913418
BLOC1S2	NM_001282439	NP_001269368	Coding	chr10:100286712 minus strand	913417
BLOC1S2	NM_173809	NP_776170	Coding	chr10:100286712 minus strand	913417
BMI1	NM_005180	NP_005171	Coding	chr10:22321209 plus strand	913419
BMPR1A	NM_004329	NP_004320	Coding	chr10:86756638 plus strand	913420
BMS1	NM_014753	NP_055568	Coding	chr10:42782505 plus strand	913421
BNIP3	NM_004052	NP_004043	Coding	chr10:131981931 minus strand	913422
BTAF1	NM_003972	NP_003963	Coding	chr10:91923978 plus strand	913423
BTBD16	NM_144587	NP_653188	Coding	chr10:122271305 plus strand	913424
BTRC	NM_001256856	NP_001243785	Coding	chr10:101354032 plus strand	913425
BTRC	NM_003939	NP_003930	Coding	chr10:101354032 plus strand	913425
BTRC	NM_033637	NP_378663	Coding	chr10:101354032 plus strand	913425
BUB3	NM_001007793	NP_001007794	Coding	chr10:123154243 plus strand	913426
BUB3	NM_004725	NP_004716	Coding	chr10:123154243 plus strand	913426

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C10orf10	NM_007021	NP_008952	Coding	chr10:44978882 minus strand	913427
C10orf105	NM_001164375	NP_001157847	Coding	chr10:71719821 minus strand	913428
C10orf105	NM_001168390	NP_001161862	Coding	chr10:71737824 minus strand	913429
C10orf107	NM_173554	NP_775825	Coding	chr10:61662960 plus strand	913430
C10orf11	NM_032024	NP_114413	Coding	chr10:75782760 plus strand	913431
C10orf111	NM_153244	NP_694976	Coding	chr10:15097319 minus strand	913432
C10orf113	NM_001010896	NP_001010896	Coding	chr10:21146559 minus strand	913433
C10orf113	NM_001177483	NP_001170954	Coding	chr10:21146559 minus strand	913433
C10orf12	NM_015652	NP_056467	Coding	chr10:96981283 plus strand	913434
C10orf120	NM_001010912	NP_001010912	Coding	chr10:122699822 minus strand	913435
C10orf126	NM_001278522	NP_001265451	Coding	chr10:28846407 plus strand	913436
C10orf128	NM_001010863	NP_001010863	Coding	chr10:49188400 minus strand	913437
C10orf128	NM_001288740	NP_001275669	Coding	chr10:49188400 minus strand	913437
C10orf128	NM_001288741	NP_001275670	Coding	chr10:49188400 minus strand	913437
C10orf128	NM_001288742	NP_001275671	Coding	chr10:49188400 minus strand	913437
C10orf128	NM_001288743	NP_001275672	Coding	chr10:49188400 minus strand	913437
C10orf131	NM_001130446	NP_001123918	Coding	chr10:95907964 plus strand	913438
C10orf2	NM_001163812	NP_001157284	Coding	chr10:100987535 plus strand	913439
C10orf2	NM_001163813	NP_001157285	Coding	chr10:100987535 plus strand	913439
C10orf2	NM_001163814	NP_001157286	Coding	chr10:100987535 plus strand	913439
C10orf2	NM_021830	NP_068602	Coding	chr10:100987535 plus strand	913439
C10orf25	NM_001039380	NP_001034469	Coding	chr10:45000910 minus strand	913440
C10orf32	NM_001136200	NP_001129672	Coding	chr10:102854209 plus strand	913441
C10orf32	NM_144591	NP_653192	Coding	chr10:102854209 plus strand	913441
C10orf35	NM_145306	NP_660349	Coding	chr10:69630246 plus strand	913442
C10orf53	NM_001042427	NP_001035892	Coding	chr10:49679637 plus strand	913443
C10orf53	NM_182554	NP_872360	Coding	chr10:49679637 plus strand	913443

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C10orf54	NM_022153	NP_071436	Coding	chr10:71773580 minus strand	913444
C10orf55	NM_001001791	NP_001001791	Coding	chr10:73922777 minus strand	913445
C10orf62	NM_001009997	NP_001009997	Coding	chr10:97589692 plus strand	913446
C10orf67	NM_153714	NP_714925	Coding	chr10:23344843 minus strand	913447
C10orf71	NM_001135196	NP_001128668	Coding	chr10:49299141 plus strand	913448
C10orf76	NM_024541	NP_078817	Coding	chr10:102056175 minus strand	913449
C10orf82	NM_144661	NP_653262	Coding	chr10:116669970 minus strand	913450
C10orf88	NM_024942	NP_079218	Coding	chr10:122954403 minus strand	913451
C10orf90	NM_001004298	NP_001004298	Coding	chr10:126521441 minus strand	913452
C10orf91	NM_173541	NP_775812	Coding	chr10:132445209 plus strand	913453
C10orf95	NM_024886	NP_079162	Coding	chr10:102451543 minus strand	913454
C10orf99	NM_207373	NP_997256	Coding	chr10:84173797 plus strand	913455
C1QL3	NM_001010908	NP_001010908	Coding	chr10:16522005 minus strand	913456
CACNB2	NM_000724	NP_000715	Coding	chr10:18260654 plus strand	913457
CACNB2	NM_001167945	NP_001161417	Coding	chr10:18140812 plus strand	913458
CACNB2	NM_201570	NP_963864	Coding	chr10:18400583 plus strand	913459
CACNB2	NM_201571	NP_963865	Coding	chr10:18140812 plus strand	913458
CACNB2	NM_201572	NP_963866	Coding	chr10:18140812 plus strand	913458
CACNB2	NM_201590	NP_963884	Coding	chr10:18340684 plus strand	913460
CACNB2	NM_201593	NP_963887	Coding	chr10:18140676 plus strand	913461
CACNB2	NM_201596	NP_963890	Coding	chr10:18140676 plus strand	913461
CACNB2	NM_201597	NP_963891	Coding	chr10:18140676 plus strand	913461
CACUL1	NM_153810	NP_722517	Coding	chr10:118755246 minus strand	913462
CALHM1	NM_001001412	NP_001001412	Coding	chr10:103458891 minus strand	913463
CALHM2	NM_015916	NP_057000	Coding	chr10:103452405 minus strand	913464
CALHM3	NM_001129742	NP_001123214	Coding	chr10:103479240 minus strand	913465
CALML3	NM_005185	NP_005176	Coding	chr10:5524888 plus strand	913466
CALML5	NM_017422	NP_059118	Coding	chr10:5499570 minus	913467

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				strand	
CALY	NM_015722	NP_056537	Coding	chr10:133336971 minus strand	913468
CAMK1D	NM_020397	NP_065130	Coding	chr10:12349583 plus strand	913469
CAMK1D	NM_153498	NP_705718	Coding	chr10:12349583 plus strand	913469
CAMK2G	NM_001204492	NP_001191421	Coding	chr10:73874591 minus strand	913470
CAMK2G	NM_001222	NP_001213	Coding	chr10:73874591 minus strand	913470
CAMK2G	NM_172169	NP_751909	Coding	chr10:73874591 minus strand	913470
CAMK2G	NM_172170	NP_751910	Coding	chr10:73874591 minus strand	913470
CAMK2G	NM_172171	NP_751911	Coding	chr10:73874591 minus strand	913470
CAMK2G	NM_172173	NP_751913	Coding	chr10:73874591 minus strand	913470
CASC10	NM_001010911	NP_001010911	Coding	chr10:21497284 minus strand	913471
CASP7	NM_001227	NP_001218	Coding	chr10:113679668 plus strand	913472
CASP7	NM_001267056	NP_001253985	Coding	chr10:113679161 plus strand	913473
CASP7	NM_001267057	NP_001253986	Coding	chr10:113679668 plus strand	913472
CASP7	NM_001267058	NP_001253987	Coding	chr10:113709344 plus strand	913474
CASP7	NM_033338	NP_203124	Coding	chr10:113679668 plus strand	913472
CASP7	NM_033339	NP_203125	Coding	chr10:113679668 plus strand	913472
CASP7	NM_033340	NP_203126	Coding	chr10:113679161 plus strand	913473
CC2D2B	NM_001001732	NP_001001732	Coding	chr10:96000090 plus strand	913475
CC2D2B	NM_001159747	NP_001153219	Coding	chr10:96000090 plus strand	913475
CCAR1	NM_001282959	NP_001269888	Coding	chr10:68721143 plus strand	913476
CCAR1	NM_001282960	NP_001269889	Coding	chr10:68721143 plus strand	913476
CCAR1	NM_018237	NP_060707	Coding	chr10:68721143 plus strand	913476
CCDC172	NM_198515	NP_940917	Coding	chr10:116324427 plus strand	913477
CCDC186	NM_018017	NP_060487	Coding	chr10:114174605 minus strand	913478
CCDC3	NM_001282658	NP_001269587	Coding	chr10:13099773 minus strand	913479
CCDC3	NM_031455	NP_113643	Coding	chr10:13001704 minus strand	913480
CCDC6	NM_005436	NP_005427	Coding	chr10:59906656 minus	913481

【０７１１】

				strand	
CCDC7	NM_001026383	NP_001021554	Coding	chr10:32446081 plus strand	913482
CCDC7	NM_024688	NP_078964	Coding	chr10:32567722 plus strand	913483
CCDC7	NM_145023	NP_659460	Coding	chr10:32446081 plus strand	913482
CCNJ	NM_001134375	NP_001127847	Coding	chr10:96043401 plus strand	913484
CCNJ	NM_001134376	NP_001127848	Coding	chr10:96043401 plus strand	913484
CCNJ	NM_019084	NP_061957	Coding	chr10:96043401 plus strand	913484
CCNY	NM_001282852	NP_001269781	Coding	chr10:35336873 plus strand	913485
CCNY	NM_001282853	NP_001269782	Coding	chr10:35336873 plus strand	913485
CCNY	NM_001282854	NP_001269783	Coding	chr10:35336873 plus strand	913485
CCNY	NM_145012	NP_659449	Coding	chr10:35336873 plus strand	913485
CCNY	NM_181698	NP_859049	Coding	chr10:35246980 plus strand	913486
CCSER2	NM_001284240	NP_001271169	Coding	chr10:84328588 plus strand	913487
CCSER2	NM_001284241	NP_001271170	Coding	chr10:84328588 plus strand	913487
CCSER2	NM_001284242	NP_001271171	Coding	chr10:84425181 plus strand	913488
CCSER2	NM_001284243	NP_001271172	Coding	chr10:84424938 plus strand	913489
CCSER2	NM_018999	NP_061872	Coding	chr10:84328588 plus strand	913487
CDC123	NM_006023	NP_006014	Coding	chr10:12195961 plus strand	913490
CDH23	NM_001171930	NP_001165401	Coding	chr10:71396933 plus strand	913491
CDH23	NM_001171931	NP_001165402	Coding	chr10:71396933 plus strand	913491
CDH23	NM_001171932	NP_001165403	Coding	chr10:71396933 plus strand	913491
CDH23	NM_001171933	NP_001165404	Coding	chr10:71795770 plus strand	913492
CDH23	NM_001171934	NP_001165405	Coding	chr10:71795770 plus strand	913492
CDH23	NM_001171935	NP_001165406	Coding	chr10:71811882 plus strand	913493
CDH23	NM_001171936	NP_001165407	Coding	chr10:71811882 plus strand	913493
CDH23	NM_022124	NP_071407	Coding	chr10:71396933 plus strand	913491
CDH23	NM_052836	NP_443068	Coding	chr10:71396933 plus strand	913491
CDHR1	NM_001171971	NP_001165442	Coding	chr10:84194634 plus	913494

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				strand	
CDHR1	NM_033100	NP_149091	Coding	chr10:84194634 plus strand	913494
CDK1	NM_001170406	NP_001163877	Coding	chr10:60778330 plus strand	913495
CDK1	NM_001170407	NP_001163878	Coding	chr10:60778453 plus strand	913496
CDK1	NM_001786	NP_001777	Coding	chr10:60778453 plus strand	913496
CDK1	NM_033379	NP_203698	Coding	chr10:60778453 plus strand	913496
CDNF	NM_001029954	NP_001025125	Coding	chr10:14837984 minus strand	913497
CELF2	NM_001025076	NP_001020247	Coding	chr10:11165029 plus strand	913498
CELF2	NM_001025077	NP_001020248	Coding	chr10:11005295 plus strand	913499
CELF2	NM_001083591	NP_001077060	Coding	chr10:11165029 plus strand	913498
CELF2	NM_006561	NP_006552	Coding	chr10:11017929 plus strand	913500
CEP55	NM_001127182	NP_001120654	Coding	chr10:93496611 plus strand	913501
CEP55	NM_018131	NP_060601	Coding	chr10:93496631 plus strand	913502
CFAP43	NM_025145	NP_079421	Coding	chr10:104232362 minus strand	913503
CFAP46	NM_001200049	NP_001186978	Coding	chr10:132942585 minus strand	913504
CFAP58	NM_001008723	NP_001008723	Coding	chr10:104353763 plus strand	913505
CFAP70	NM_145170	NP_660153	Coding	chr10:73358859 minus strand	913506
CH25H	NM_003956	NP_003947	Coding	chr10:89207314 minus strand	913507
CHAT	NM_001142929	NP_001136401	Coding	chr10:49614036 plus strand	913508
CHAT	NM_001142933	NP_001136405	Coding	chr10:49614036 plus strand	913508
CHAT	NM_001142934	NP_001136406	Coding	chr10:49614036 plus strand	913508
CHAT	NM_020549	NP_065574	Coding	chr10:49614036 plus strand	913508
CHAT	NM_020984	NP_066264	Coding	chr10:49609094 plus strand	913509
CHAT	NM_020985	NP_066265	Coding	chr10:49613107 plus strand	913510
CHAT	NM_020986	NP_066266	Coding	chr10:49613107 plus strand	913510
CHCHD1	NM_203298	NP_976043	Coding	chr10:73782049 plus strand	913511
CHST15	NM_001270764	NP_001257693	Coding	chr10:124093607 minus strand	913512
CHST15	NM_001270765	NP_001257694	Coding	chr10:124093607 minus	913512

【０７１３】

				strand	
CHST15	NM_014863	NP_055678	Coding	chr10:124092424 minus strand	913513
CHST15	NM_015892	NP_056976	Coding	chr10:124092424 minus strand	913513
CHST3	NM_004273	NP_004264	Coding	chr10:71964361 plus strand	913514
CHUK	NM_001278	NP_001269	Coding	chr10:100229587 minus strand	913515
CISD1	NM_018464	NP_060934	Coding	chr10:58269101 plus strand	913516
CLRN3	NM_152311	NP_689524	Coding	chr10:127892947 minus strand	913517
CNNM1	NM_020348	NP_065081	Coding	chr10:99329098 plus strand	913518
CNNM2	NM_017649	NP_060119	Coding	chr10:102918317 plus strand	913519
CNNM2	NM_199076	NP_951058	Coding	chr10:102918317 plus strand	913519
CNNM2	NM_199077	NP_951059	Coding	chr10:102918317 plus strand	913519
COL13A1	NM_001130103	NP_001123575	Coding	chr10:69801887 plus strand	913520
COL13A1	NM_080798	NP_542988	Coding	chr10:69801887 plus strand	913520
COL13A1	NM_080800	NP_542990	Coding	chr10:69801887 plus strand	913520
COL13A1	NM_080801	NP_542991	Coding	chr10:69801887 plus strand	913520
COL13A1	NM_080802	NP_542992	Coding	chr10:69801887 plus strand	913520
COL13A1	NM_080805	NP_542995	Coding	chr10:69801887 plus strand	913520
COL17A1	NM_000494	NP_000485	Coding	chr10:104085880 minus strand	913521
COMMD3	NM_012071	NP_036203	Coding	chr10:22316382 plus strand	913522
COMMD3-BMI1	NM_001204062	NP_001190991	Coding	chr10:22316382 plus strand	913523
COMTD1	NM_144589	NP_653190	Coding	chr10:75236012 minus strand	913524
COX15	NM_004376	NP_004367	Coding	chr10:99732666 minus strand	913525
COX15	NM_078470	NP_510870	Coding	chr10:99732666 minus strand	913525
CPEB3	NM_001178137	NP_001171608	Coding	chr10:92243279 minus strand	913526
CPEB3	NM_014912	NP_055727	Coding	chr10:92291118 minus strand	913527
CPN1	NM_001308	NP_001299	Coding	chr10:100081885 minus strand	913528
CPXM2	NM_198148	NP_937791	Coding	chr10:123891984 minus strand	913529
CREM	NM_001267562	NP_001254491	Coding	chr10:35126840 plus	913530

【０７１４】

				strand	
CREM	NM_001267563	NP_001254492	Coding	chr10:35126840 plus strand	913530
CREM	NM_001267564	NP_001254493	Coding	chr10:35167538 plus strand	913531
CREM	NM_001267565	NP_001254494	Coding	chr10:35167538 plus strand	913531
CREM	NM_001267566	NP_001254495	Coding	chr10:35175586 plus strand	913532
CREM	NM_001267567	NP_001254496	Coding	chr10:35175586 plus strand	913532
CREM	NM_001267568	NP_001254497	Coding	chr10:35195126 plus strand	913533
CREM	NM_001267569	NP_001254498	Coding	chr10:35195126 plus strand	913533
CREM	NM_001267570	NP_001254499	Coding	chr10:35195901 plus strand	913534
CREM	NM_001881	NP_001872	Coding	chr10:35126840 plus strand	913530
CREM	NM_181571	NP_853549	Coding	chr10:35127456 plus strand	913535
CREM	NM_182717	NP_874386	Coding	chr10:35195126 plus strand	913533
CREM	NM_182718	NP_874387	Coding	chr10:35195126 plus strand	913533
CREM	NM_182719	NP_874388	Coding	chr10:35195126 plus strand	913533
CREM	NM_182720	NP_874389	Coding	chr10:35195126 plus strand	913533
CREM	NM_182721	NP_874390	Coding	chr10:35195901 plus strand	913534
CREM	NM_182723	NP_874392	Coding	chr10:35195901 plus strand	913534
CREM	NM_182724	NP_874393	Coding	chr10:35195901 plus strand	913534
CREM	NM_182769	NP_877570	Coding	chr10:35175586 plus strand	913532
CREM	NM_182770	NP_877571	Coding	chr10:35175586 plus strand	913532
CREM	NM_182771	NP_877572	Coding	chr10:35167538 plus strand	913531
CREM	NM_182772	NP_877573	Coding	chr10:35167538 plus strand	913531
CREM	NM_183011	NP_898829	Coding	chr10:35137781 plus strand	913536
CREM	NM_183012	NP_898830	Coding	chr10:35137781 plus strand	913536
CREM	NM_183013	NP_898831	Coding	chr10:35126840 plus strand	913530
CREM	NM_183060	NP_898883	Coding	chr10:35127456 plus strand	913535
CRTAC1	NM_001206528	NP_001193457	Coding	chr10:98030828 minus strand	913537
CRTAC1	NM_018058	NP_060528	Coding	chr10:98030828 minus	913537

【０７１５】

				strand	
CSGALNACT2	NM_018590	NP_061060	Coding	chr10:43138444 plus strand	913538
CSTF2T	NM_015235	NP_056050	Coding	chr10:51699595 minus strand	913539
CTBP2	NM_001083914	NP_001077383	Coding	chr10:125161055 minus strand	913540
CTBP2	NM_001290214	NP_001277143	Coding	chr10:125160534 minus strand	913541
CTBP2	NM_001290215	NP_001277144	Coding	chr10:125158815 minus strand	913542
CTBP2	NM_001329	NP_001320	Coding	chr10:125160534 minus strand	913541
CTBP2	NM_022802	NP_073713	Coding	chr10:125027884 minus strand	913543
CTNNA3	NM_001127384	NP_001120856	Coding	chr10:67665685 minus strand	913544
CTNNA3	NM_001291133	NP_001278062	Coding	chr10:67665685 minus strand	913544
CTNNA3	NM_013266	NP_037398	Coding	chr10:67696191 minus strand	913545
CUBN	NM_001081	NP_001072	Coding	chr10:17129817 minus strand	913546
CUEDC2	NM_024040	NP_076945	Coding	chr10:102432666 minus strand	913547
CUL2	NM_001198777	NP_001185706	Coding	chr10:35090642 minus strand	913548
CUL2	NM_001198778	NP_001185707	Coding	chr10:35074330 minus strand	913549
CUL2	NM_001198779	NP_001185708	Coding	chr10:35074330 minus strand	913549
CUL2	NM_003591	NP_003582	Coding	chr10:35090383 minus strand	913550
CUTC	NM_015960	NP_057044	Coding	chr10:99732200 plus strand	913551
CUZD1	NM_022034	NP_071317	Coding	chr10:122846175 minus strand	913552
CWF19L1	NM_018294	NP_060764	Coding	chr10:100267680 minus strand	913553
CXCL12	NM_000609	NP_000600	Coding	chr10:44385097 minus strand	913554
CXCL12	NM_001033886	NP_001029058	Coding	chr10:44385097 minus strand	913554
CXCL12	NM_001178134	NP_001171605	Coding	chr10:44385097 minus strand	913554
CXCL12	NM_001277990	NP_001264919	Coding	chr10:44385097 minus strand	913554
CXCL12	NM_199168	NP_954637	Coding	chr10:44385097 minus strand	913554
CYP17A1	NM_000102	NP_000093	Coding	chr10:102837533 minus strand	913555
CYP26A1	NM_000783	NP_000774	Coding	chr10:93073889 plus strand	913556
CYP26A1	NM_057157	NP_476498	Coding	chr10:93073474 plus	913557

【０７１６】

				strand	
CYP26C1	NM_183374	NP_899230	Coding	chr10:93061263 plus strand	913558
CYP2C18	NM_000772	NP_000763	Coding	chr10:94683493 plus strand	913559
CYP2C18	NM_001128925	NP_001122397	Coding	chr10:94683493 plus strand	913559
CYP2C19	NM_000769	NP_000760	Coding	chr10:94762680 plus strand	913560
CYP2C8	NM_000770	NP_000761	Coding	chr10:95069497 minus strand	913561
CYP2C8	NM_001198853	NP_001185782	Coding	chr10:95069497 minus strand	913561
CYP2C8	NM_001198854	NP_001185783	Coding	chr10:95069497 minus strand	913561
CYP2C8	NM_001198855	NP_001185784	Coding	chr10:95069497 minus strand	913561
CYP2C9	NM_000771	NP_000762	Coding	chr10:94938657 plus strand	913562
CYP2E1	NM_000773	NP_000764	Coding	chr10:133527362 plus strand	913563
DCLRE1A	NM_001271816	NP_001258745	Coding	chr10:113854404 minus strand	913564
DCLRE1A	NM_014881	NP_055696	Coding	chr10:113854216 minus strand	913565
DCLRE1C	NM_001033855	NP_001029027	Coding	chr10:14954432 minus strand	913566
DCLRE1C	NM_001033857	NP_001029029	Coding	chr10:14954432 minus strand	913566
DCLRE1C	NM_001033858	NP_001029030	Coding	chr10:14954432 minus strand	913566
DCLRE1C	NM_001289076	NP_001276005	Coding	chr10:14954432 minus strand	913566
DCLRE1C	NM_001289077	NP_001276006	Coding	chr10:14954432 minus strand	913566
DCLRE1C	NM_001289078	NP_001276007	Coding	chr10:14954432 minus strand	913566
DCLRE1C	NM_001289079	NP_001276008	Coding	chr10:14954432 minus strand	913566
DCLRE1C	NM_022487	NP_071932	Coding	chr10:14954432 minus strand	913566
DDIT4	NM_019058	NP_061931	Coding	chr10:72273918 plus strand	913567
DDX21	NM_001256910	NP_001243839	Coding	chr10:68956439 plus strand	913568
DDX21	NM_004728	NP_004719	Coding	chr10:68956122 plus strand	913569
DDX50	NM_024045	NP_076950	Coding	chr10:68901277 plus strand	913570
DHTKD1	NM_018706	NP_061176	Coding	chr10:12068916 plus strand	913571
DHX32	NM_018180	NP_060650	Coding	chr10:125881315 minus strand	913572
DIP2C	NM_014974	NP_055789	Coding	chr10:689668 minus strand	913573

【０７１７】

DKK1	NM_012242	NP_036374	Coding	chr10:52314280 plus strand	913574
DLG5	NM_004747	NP_004738	Coding	chr10:77926590 minus strand	913575
DMBT1	NM_004406	NP_004397	Coding	chr10:122560664 plus strand	913576
DMBT1	NM_007329	NP_015568	Coding	chr10:122560664 plus strand	913576
DMBT1	NM_017579	NP_060049	Coding	chr10:122560664 plus strand	913576
DNA2	NM_001080449	NP_001073918	Coding	chr10:68471973 minus strand	913577
DNAJB12	NM_001002762	NP_001002762	Coding	chr10:72355149 minus strand	913578
DNAJB12	NM_017626	NP_060096	Coding	chr10:72355149 minus strand	913578
DNAJC1	NM_022365	NP_071760	Coding	chr10:22003721 minus strand	913579
DNAJC12	NM_021800	NP_068572	Coding	chr10:67838179 minus strand	913580
DNAJC12	NM_201262	NP_957714	Coding	chr10:67838179 minus strand	913580
DNAJC9	NM_015190	NP_056005	Coding	chr10:73247267 minus strand	913581
DNMBP	NM_015221	NP_056036	Coding	chr10:100009919 minus strand	913582
DNTT	NM_001017520	NP_001017520	Coding	chr10:96304327 plus strand	913583
DNTT	NM_004088	NP_004079	Coding	chr10:96304327 plus strand	913583
DOCK1	NM_001290223	NP_001277152	Coding	chr10:126905408 plus strand	913584
DOCK1	NM_001380	NP_001371	Coding	chr10:126905408 plus strand	913584
DPCD	NM_015448	NP_056263	Coding	chr10:101588331 plus strand	913585
DPYSL4	NM_006426	NP_006417	Coding	chr10:132186909 plus strand	913586
DRGX	NM_001276451	NP_001263380	Coding	chr10:49396016 minus strand	913587
DUPD1	NM_001003892	NP_001003892	Coding	chr10:75058514 minus strand	913588
DUSP13	NM_001007271	NP_001007272	Coding	chr10:75109212 minus strand	913589
DUSP13	NM_001007272	NP_001007273	Coding	chr10:75109212 minus strand	913589
DUSP13	NM_001007273	NP_001007274	Coding	chr10:75109212 minus strand	913589
DUSP13	NM_016364	NP_057448	Coding	chr10:75099490 minus strand	913590
DUSP5	NM_004419	NP_004410	Coding	chr10:110497866 plus strand	913591
DYDC1	NM_001269053	NP_001255982	Coding	chr10:80356758 minus strand	913592

【０７１８】

DYDC1	NM_138812	NP_620167	Coding	chr10:80356758 minus strand	913592
DYDC2	NM_001270041	NP_001256970	Coding	chr10:80356767 plus strand	913593
DYDC2	NM_001270042	NP_001256971	Coding	chr10:80344744 plus strand	913594
DYDC2	NM_032372	NP_115748	Coding	chr10:80356767 plus strand	913593
EBF3	NM_001005463	NP_001005463	Coding	chr10:129963827 minus strand	913595
EBLN1	NM_001199938	NP_001186867	Coding	chr10:22209983 minus strand	913596
ECD	NM_001135752	NP_001129224	Coding	chr10:73168095 minus strand	913597
ECD	NM_001135753	NP_001129225	Coding	chr10:73168095 minus strand	913597
ECD	NM_007265	NP_009196	Coding	chr10:73168095 minus strand	913597
ECHDC3	NM_024693	NP_078969	Coding	chr10:11742356 plus strand	913598
ECHS1	NM_004092	NP_004083	Coding	chr10:133373404 minus strand	913599
EDRF1	NM_001202438	NP_001189367	Coding	chr10:125719514 plus strand	913600
EDRF1	NM_015608	NP_056423	Coding	chr10:125719514 plus strand	913600
EGR2	NM_000399	NP_000390	Coding	chr10:62816366 minus strand	913601
EGR2	NM_001136177	NP_001129649	Coding	chr10:62816366 minus strand	913601
EGR2	NM_001136178	NP_001129650	Coding	chr10:62819167 minus strand	913602
EGR2	NM_001136179	NP_001129651	Coding	chr10:62816366 minus strand	913601
EIF3A	NM_003750	NP_003741	Coding	chr10:119080822 minus strand	913603
EIF4EBP2	NM_004096	NP_004087	Coding	chr10:70404104 plus strand	913604
EIF5AL1	NM_001099692	NP_001093162	Coding	chr10:79512600 plus strand	913605
ELOVL3	NM_152310	NP_689523	Coding	chr10:102226277 plus strand	913606
EMX2	NM_001165924	NP_001159396	Coding	chr10:117542444 plus strand	913607
EMX2	NM_004098	NP_004089	Coding	chr10:117542444 plus strand	913607
ENKUR	NM_001270383	NP_001257312	Coding	chr10:25062279 minus strand	913608
ENKUR	NM_145010	NP_659447	Coding	chr10:25016156 minus strand	913609
ENO4	NM_001242699	NP_001229628	Coding	chr10:116849511 plus strand	913610
ENTPD1	NM_001098175	NP_001091645	Coding	chr10:95711778 plus strand	913611

【０７１９】

ENTPD1	NM_001164178	NP_001157650	Coding	chr10:95755651 plus strand	913612
ENTPD1	NM_001164179	NP_001157651	Coding	chr10:95755915 plus strand	913613
ENTPD1	NM_001164181	NP_001157653	Coding	chr10:95755651 plus strand	913612
ENTPD1	NM_001164182	NP_001157654	Coding	chr10:95755915 plus strand	913613
ENTPD1	NM_001164183	NP_001157655	Coding	chr10:95755915 plus strand	913613
ENTPD1	NM_001776	NP_001767	Coding	chr10:95755915 plus strand	913613
ENTPD7	NM_020354	NP_065087	Coding	chr10:99659505 plus strand	913614
EPC1	NM_001272004	NP_001258933	Coding	chr10:32347218 minus strand	913615
EPC1	NM_001272019	NP_001258948	Coding	chr10:32347048 minus strand	913616
EPC1	NM_001282391	NP_001269320	Coding	chr10:32378798 minus strand	913617
EPC1	NM_025209	NP_079485	Coding	chr10:32347218 minus strand	913615
ERCC6	NM_000124	NP_000115	Coding	chr10:49539123 minus strand	913618
ERCC6-PGBD3	NM_001277058	NP_001263987	Coding	chr10:49539123 minus strand	913619
ERCC6-PGBD3	NM_001277059	NP_001263988	Coding	chr10:49539538 minus strand	913620
ERLIN1	NM_001100626	NP_001094096	Coding	chr10:100186057 minus strand	913621
ERLIN1	NM_006459	NP_006450	Coding	chr10:100185977 minus strand	913622
EXOC6	NM_001013848	NP_001013870	Coding	chr10:92834712 plus strand	913623
EXOC6	NM_019053	NP_061926	Coding	chr10:92848467 plus strand	913624
EXOSC1	NM_016046	NP_057130	Coding	chr10:97446011 minus strand	913625
FAM107B	NM_001282695	NP_001269624	Coding	chr10:14774897 minus strand	913626
FAM107B	NM_001282696	NP_001269625	Coding	chr10:14604418 minus strand	913627
FAM107B	NM_001282697	NP_001269626	Coding	chr10:14604418 minus strand	913627
FAM107B	NM_001282698	NP_001269627	Coding	chr10:14572189 minus strand	913628
FAM107B	NM_001282699	NP_001269628	Coding	chr10:14572189 minus strand	913628
FAM107B	NM_001282700	NP_001269629	Coding	chr10:14572373 minus strand	913629
FAM107B	NM_001282701	NP_001269630	Coding	chr10:14572189 minus strand	913628
FAM107B	NM_001282702	NP_001269631	Coding	chr10:14572189 minus strand	913628

【０７２０】

FAM107B	NM_001282703	NP_001269632	Coding	chr10:14572189 minus strand	913628
FAM107B	NM_031453	NP_113641	Coding	chr10:14774897 minus strand	913626
FAM13C	NM_001001971	NP_001001971	Coding	chr10:59362594 minus strand	913630
FAM13C	NM_001143773	NP_001137245	Coding	chr10:59362903 minus strand	913631
FAM13C	NM_001166698	NP_001160170	Coding	chr10:59362594 minus strand	913630
FAM13C	NM_198215	NP_937858	Coding	chr10:59362594 minus strand	913630
FAM149B1	NM_173348	NP_775483	Coding	chr10:73168118 plus strand	913632
FAM160B1	NM_001135051	NP_001128523	Coding	chr10:114821743 plus strand	913633
FAM160B1	NM_020940	NP_065991	Coding	chr10:114821743 plus strand	913633
FAM170B	NM_001164484	NP_001157956	Coding	chr10:49134020 minus strand	913634
FAM171A1	NM_001010924	NP_001010924	Coding	chr10:15371059 minus strand	913635
FAM175B	NM_032182	NP_115558	Coding	chr10:124801784 plus strand	913636
FAM178A	NM_001136123	NP_001129595	Coding	chr10:100912568 plus strand	913637
FAM178A	NM_001243770	NP_001230699	Coding	chr10:100912568 plus strand	913637
FAM178A	NM_018121	NP_060591	Coding	chr10:100912568 plus strand	913637
FAM188A	NM_024948	NP_079224	Coding	chr10:15860520 minus strand	913638
FAM196A	NM_001039762	NP_001034851	Coding	chr10:127196158 minus strand	913639
FAM204A	NM_001134672	NP_001128144	Coding	chr10:118342327 minus strand	913640
FAM204A	NM_022063	NP_071346	Coding	chr10:118342327 minus strand	913640
FAM208B	NM_017782	NP_060252	Coding	chr10:5684837 plus strand	913641
FAM213A	NM_001243778	NP_001230707	Coding	chr10:80413818 plus strand	913642
FAM213A	NM_001243779	NP_001230708	Coding	chr10:80407828 plus strand	913643
FAM213A	NM_001243780	NP_001230709	Coding	chr10:80408485 plus strand	913644
FAM213A	NM_001243781	NP_001230710	Coding	chr10:80408485 plus strand	913644
FAM213A	NM_001243782	NP_001230711	Coding	chr10:80413818 plus strand	913642
FAM213A	NM_032333	NP_115709	Coding	chr10:80408485 plus strand	913644
FAM21A	NM_001005751	NP_001005751	Coding	chr10:50067887 plus strand	913645
FAM21A	NM_001291398	NP_001278327	Coding	chr10:50067887 plus	913645

【０７２１】

				strand	
FAM21C	NM_001169106	NP_001162577	Coding	chr10:45727199 plus strand	913646
FAM21C	NM_001169107	NP_001162578	Coding	chr10:45727199 plus strand	913646
FAM21C	NM_015262	NP_056077	Coding	chr10:45727199 plus strand	913646
FAM24A	NM_001029888	NP_001025059	Coding	chr10:122910700 plus strand	913647
FAM24B	NM_001204364	NP_001191293	Coding	chr10:122879641 minus strand	913648
FAM24B	NM_152644	NP_689857	Coding	chr10:122879641 minus strand	913648
FAM25A	NM_001146157	NP_001139629	Coding	chr10:87020288 plus strand	913649
FAM25C	NM_001137548	NP_001131020	Coding	chr10:47491700 minus strand	913650
FAM25C	NM_001137548	NP_001131020	Coding	chr10:47999791 minus strand	913651
FAM25G	NM_001137549	NP_001131021	Coding	chr10:47491700 minus strand	913652
FAM25G	NM_001137549	NP_001131021	Coding	chr10:47999791 minus strand	913653
FAM35A	NM_019054	NP_061927	Coding	chr10:87095195 plus strand	913654
FAM45A	NM_207009	NP_996892	Coding	chr10:119104098 plus strand	913655
FAM53B	NM_014661	NP_055476	Coding	chr10:124744361 minus strand	913656
FANK1	NM_145235	NP_660278	Coding	chr10:125896538 plus strand	913657
FAS	NM_000043	NP_000034	Coding	chr10:88990530 plus strand	913658
FAS	NM_152871	NP_690610	Coding	chr10:88990530 plus strand	913658
FAS	NM_152872	NP_690611	Coding	chr10:88990530 plus strand	913658
FBXL15	NM_024326	NP_077302	Coding	chr10:102419813 plus strand	913659
FBXO18	NM_001258452	NP_001245381	Coding	chr10:5889571 plus strand	913660
FBXO18	NM_001258453	NP_001245382	Coding	chr10:5890202 plus strand	913661
FBXO18	NM_032807	NP_116196	Coding	chr10:5894385 plus strand	913662
FBXO18	NM_178150	NP_835363	Coding	chr10:5890202 plus strand	913661
FBXW4	NM_022039	NP_071322	Coding	chr10:101694986 minus strand	913663
FFAR4	NM_001195755	NP_001182684	Coding	chr10:93566664 plus strand	913664
FFAR4	NM_181745	NP_859529	Coding	chr10:93566664 plus strand	913664
FGF8	NM_001206389	NP_001193318	Coding	chr10:101780369 minus strand	913665
FGF8	NM_006119	NP_006110	Coding	chr10:101776002 minus strand	913666

【０７２２】

FGF8	NM_033163	NP_149353	Coding	chr10:101776002 minus strand	913666
FGF8	NM_033164	NP_149354	Coding	chr10:101776002 minus strand	913666
FGF8	NM_033165	NP_149355	Coding	chr10:101776002 minus strand	913666
FGFBP3	NM_152429	NP_689642	Coding	chr10:91909501 minus strand	913667
FGFR2	NM_000141	NP_000132	Coding	chr10:121598458 minus strand	913668
FGFR2	NM_001144913	NP_001138385	Coding	chr10:121593967 minus strand	913669
FGFR2	NM_001144914	NP_001138386	Coding	chr10:121593967 minus strand	913669
FGFR2	NM_001144915	NP_001138387	Coding	chr10:121596645 minus strand	913670
FGFR2	NM_001144916	NP_001138388	Coding	chr10:121594258 minus strand	913671
FGFR2	NM_001144917	NP_001138389	Coding	chr10:121598458 minus strand	913668
FGFR2	NM_001144918	NP_001138390	Coding	chr10:121598458 minus strand	913668
FGFR2	NM_001144919	NP_001138391	Coding	chr10:121598458 minus strand	913668
FGFR2	NM_022970	NP_075259	Coding	chr10:121598458 minus strand	913668
FGFR2	NM_023029	NP_075418	Coding	chr10:121593967 minus strand	913669
FOXI2	NM_207426	NP_997309	Coding	chr10:127737273 plus strand	913672
FRA10AC1	NM_145246	NP_660289	Coding	chr10:93702572 minus strand	913673
FRAT1	NM_005479	NP_005470	Coding	chr10:97319264 plus strand	913674
FRAT2	NM_012083	NP_036215	Coding	chr10:97334701 minus strand	913675
FRG2B	NM_001080998	NP_001074467	Coding	chr10:133626795 minus strand	913676
FRMD4A	NM_018027	NP_060497	Coding	chr10:14330867 minus strand	913677
FRMPD2	NM_001018071	NP_001018081	Coding	chr10:48274898 minus strand	913678
FRMPD2	NM_001042512	NP_001035977	Coding	chr10:48175143 minus strand	913679
FUOM	NM_001098483	NP_001091953	Coding	chr10:133358025 minus strand	913680
FUOM	NM_001301827	NP_001288756	Coding	chr10:133358025 minus strand	913680
FUOM	NM_001301828	NP_001288757	Coding	chr10:133358025 minus strand	913680
FUOM	NM_198472	NP_940874	Coding	chr10:133358025 minus strand	913680
FUT11	NM_001284194	NP_001271123	Coding	chr10:73772290 plus strand	913681

【０７２３】

FUT11	NM_173540	NP_775811	Coding	chr10:73772290 plus strand	913681
FXYD4	NM_001184963	NP_001171892	Coding	chr10:43371643 plus strand	913682
FXYD4	NM_173160	NP_775183	Coding	chr10:43371643 plus strand	913682
FZD8	NM_031866	NP_114072	Coding	chr10:35641434 minus strand	913683
GAD2	NM_000818	NP_000809	Coding	chr10:26216306 plus strand	913684
GAD2	NM_001134366	NP_001127838	Coding	chr10:26216306 plus strand	913684
GATA3	NM_001002295	NP_001002295	Coding	chr10:8054703 plus strand	913685
GATA3	NM_002051	NP_002042	Coding	chr10:8054703 plus strand	913685
GBF1	NM_001199378	NP_001186307	Coding	chr10:102245497 plus strand	913686
GBF1	NM_001199379	NP_001186308	Coding	chr10:102245497 plus strand	913686
GBF1	NM_004193	NP_004184	Coding	chr10:102245497 plus strand	913686
GDF10	NM_004962	NP_004953	Coding	chr10:47300223 plus strand	913687
GDF2	NM_016204	NP_057288	Coding	chr10:47322489 plus strand	913688
GDI2	NM_001115156	NP_001108628	Coding	chr10:5813549 minus strand	913689
GDI2	NM_001494	NP_001485	Coding	chr10:5813549 minus strand	913689
GFRA1	NM_001145453	NP_001138925	Coding	chr10:116273284 minus strand	913690
GFRA1	NM_005264	NP_005255	Coding	chr10:116273614 minus strand	913691
GFRA1	NM_145793	NP_665736	Coding	chr10:116272307 minus strand	913692
GHITM	NM_014394	NP_055209	Coding	chr10:84139428 plus strand	913693
GJD4	NM_153368	NP_699199	Coding	chr10:35605409 plus strand	913694
GLRX3	NM_001199868	NP_001186797	Coding	chr10:130136374 plus strand	913695
GLRX3	NM_006541	NP_006532	Coding	chr10:130136374 plus strand	913695
GLUD1	NM_005271	NP_005262	Coding	chr10:87095019 minus strand	913696
GOLGA7B	NM_001010917	NP_001010917	Coding	chr10:97850237 plus strand	913697
GOT1	NM_002079	NP_002070	Coding	chr10:99430773 minus strand	913698
GPAM	NM_001244949	NP_001231878	Coding	chr10:112183779 minus strand	913699
GPAM	NM_020918	NP_065969	Coding	chr10:112183779 minus strand	913699
GPR123	NM_001083909	NP_001077378	Coding	chr10:133088003 plus strand	913700

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GPR123	NM_001291085	NP_001278014	Coding	chr10:133102245 plus strand	913701
GPR158	NM_020752	NP_065803	Coding	chr10:25175360 plus strand	913702
GPR26	NM_153442	NP_703143	Coding	chr10:123666354 plus strand	913703
GPRIN2	NM_014696	NP_055511	Coding	chr10:46556071 minus strand	913704
GRID1	NM_017551	NP_060021	Coding	chr10:86366493 minus strand	913705
GRK5	NM_005308	NP_005299	Coding	chr10:119207684 plus strand	913706
GSTO1	NM_001191002	NP_001177931	Coding	chr10:104254709 plus strand	913707
GSTO1	NM_001191003	NP_001177932	Coding	chr10:104254193 plus strand	913708
GSTO1	NM_004832	NP_004823	Coding	chr10:104254709 plus strand	913707
GSTO2	NM_001191013	NP_001177942	Coding	chr10:104268872 plus strand	913709
GSTO2	NM_001191014	NP_001177943	Coding	chr10:104275128 plus strand	913710
GSTO2	NM_001191015	NP_001177944	Coding	chr10:104275128 plus strand	913710
GSTO2	NM_183239	NP_899062	Coding	chr10:104268872 plus strand	913709
GTPBP4	NM_012341	NP_036473	Coding	chr10:988408 plus strand	913711
H2AFY2	NM_018649	NP_061119	Coding	chr10:70052600 plus strand	913712
HABP2	NM_001177660	NP_001171131	Coding	chr10:113550830 plus strand	913713
HABP2	NM_004132	NP_004123	Coding	chr10:113553018 plus strand	913714
HECTD2	NM_001284274	NP_001271203	Coding	chr10:91410284 plus strand	913715
HECTD2	NM_173497	NP_775768	Coding	chr10:91410284 plus strand	913715
HECTD2	NM_182765	NP_877497	Coding	chr10:91410284 plus strand	913715
HELLS	NM_001289067	NP_001275996	Coding	chr10:94545766 plus strand	913716
HELLS	NM_001289068	NP_001275997	Coding	chr10:94545766 plus strand	913716
HELLS	NM_001289069	NP_001275998	Coding	chr10:94545766 plus strand	913716
HELLS	NM_001289070	NP_001275999	Coding	chr10:94545766 plus strand	913716
HELLS	NM_001289071	NP_001276000	Coding	chr10:94545766 plus strand	913716
HELLS	NM_001289072	NP_001276001	Coding	chr10:94545766 plus strand	913716
HELLS	NM_001289073	NP_001276002	Coding	chr10:94545766 plus strand	913716
HELLS	NM_001289074	NP_001276003	Coding	chr10:94545766 plus	913716

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				strand	
HELLS	NM_001289075	NP_001276004	Coding	chr10:94545766 plus strand	913716
HELLS	NM_018063	NP_060533	Coding	chr10:94545766 plus strand	913716
HERC4	NM_001278185	NP_001265114	Coding	chr10:68075346 minus strand	913717
HERC4	NM_001278186	NP_001265115	Coding	chr10:68075346 minus strand	913717
HERC4	NM_001278187	NP_001265116	Coding	chr10:68075346 minus strand	913717
HERC4	NM_015601	NP_056416	Coding	chr10:68075346 minus strand	913717
HERC4	NM_022079	NP_071362	Coding	chr10:68075346 minus strand	913717
HHEX	NM_002729	NP_002720	Coding	chr10:92689923 plus strand	913718
HIF1AN	NM_017902	NP_060372	Coding	chr10:100535883 plus strand	913719
HK1	NM_000188	NP_000179	Coding	chr10:69318846 plus strand	913720
HK1	NM_033496	NP_277031	Coding	chr10:69315853 plus strand	913721
HK1	NM_033497	NP_277032	Coding	chr10:69269999 plus strand	913722
HK1	NM_033498	NP_277033	Coding	chr10:69269999 plus strand	913722
HK1	NM_033500	NP_277035	Coding	chr10:69269999 plus strand	913722
HKDC1	NM_025130	NP_079406	Coding	chr10:69220302 plus strand	913723
HMX2	NM_005519	NP_005510	Coding	chr10:123148121 plus strand	913724
HMX3	NM_001105574	NP_001099044	Coding	chr10:123136050 plus strand	913725
HNRNPF	NM_001098204	NP_001091674	Coding	chr10:43409248 minus strand	913726
HNRNPF	NM_001098205	NP_001091675	Coding	chr10:43408884 minus strand	913727
HNRNPF	NM_001098206	NP_001091676	Coding	chr10:43407851 minus strand	913728
HNRNPF	NM_001098207	NP_001091677	Coding	chr10:43397346 minus strand	913729
HNRNPF	NM_001098208	NP_001091678	Coding	chr10:43396831 minus strand	913730
HNRNPF	NM_004966	NP_004957	Coding	chr10:43409208 minus strand	913731
HNRNPH3	NM_012207	NP_036339	Coding	chr10:68332010 plus strand	913732
HNRNPH3	NM_021644	NP_067676	Coding	chr10:68332010 plus strand	913732
HOGA1	NM_001134670	NP_001128142	Coding	chr10:97584344 plus strand	913733
HOGA1	NM_138413	NP_612422	Coding	chr10:97584344 plus	913733

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				strand	
HPS1	NM_000195	NP_000186	Coding	chr10:98446947 minus strand	913734
HPS1	NM_182639	NP_872577	Coding	chr10:98446947 minus strand	913734
HPS6	NM_024747	NP_079023	Coding	chr10:102065366 plus strand	913735
HPSE2	NM_001166244	NP_001159716	Coding	chr10:99235875 minus strand	913736
HPSE2	NM_001166245	NP_001159717	Coding	chr10:99235875 minus strand	913736
HPSE2	NM_001166246	NP_001159718	Coding	chr10:99235875 minus strand	913736
HPSE2	NM_021828	NP_068600	Coding	chr10:99235875 minus strand	913736
HSPA12A	NM_025015	NP_079291	Coding	chr10:116742574 minus strand	913737
HSPA14	NM_001278205	NP_001265134	Coding	chr10:14838159 plus strand	913738
HSPA14	NM_016299	NP_057383	Coding	chr10:14838159 plus strand	913738
HTR7	NM_000872	NP_000863	Coding	chr10:90857914 minus strand	913739
HTR7	NM_019859	NP_062873	Coding	chr10:90857914 minus strand	913739
HTR7	NM_019860	NP_062874	Coding	chr10:90857914 minus strand	913739
HTRA1	NM_002775	NP_002766	Coding	chr10:122461524 plus strand	913740
IDE	NM_001165946	NP_001159418	Coding	chr10:92497761 minus strand	913741
IDE	NM_004969	NP_004960	Coding	chr10:92574095 minus strand	913742
IDI1	NM_004508	NP_004499	Coding	chr10:1049121 minus strand	913743
IDI2	NM_033261	NP_150286	Coding	chr10:1025859 minus strand	913744
IFIT1	NM_001270927	NP_001257856	Coding	chr10:89392545 plus strand	913745
IFIT1	NM_001270928	NP_001257857	Coding	chr10:89392545 plus strand	913745
IFIT1	NM_001270929	NP_001257858	Coding	chr10:89392545 plus strand	913745
IFIT1	NM_001270930	NP_001257859	Coding	chr10:89392545 plus strand	913745
IFIT1	NM_001548	NP_001539	Coding	chr10:89392545 plus strand	913745
IFIT1B	NM_001010987	NP_001010987	Coding	chr10:89378055 plus strand	913746
IFIT2	NM_001547	NP_001538	Coding	chr10:89301948 plus strand	913747
IFIT3	NM_001031683	NP_001026853	Coding	chr10:89332478 plus strand	913748
IFIT3	NM_001289758	NP_001276687	Coding	chr10:89327818 plus	913749

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				strand	
IFIT3	NM_001289759	NP_001276688	Coding	chr10:89332478 plus strand	913748
IFIT3	NM_001549	NP_001540	Coding	chr10:89327818 plus strand	913749
IFIT5	NM_012420	NP_036552	Coding	chr10:89414567 plus strand	913750
IKZF5	NM_001271840	NP_001258769	Coding	chr10:123008687 minus strand	913751
IL15RA	NM_001243539	NP_001230468	Coding	chr10:5978187 minus strand	913752
IL15RA	NM_001256765	NP_001243694	Coding	chr10:5977611 minus strand	913753
IL15RA	NM_002189	NP_002180	Coding	chr10:5977611 minus strand	913753
IL15RA	NM_172200	NP_751950	Coding	chr10:5977611 minus strand	913753
IL2RA	NM_000417	NP_000408	Coding	chr10:6062370 minus strand	913754
INA	NM_032727	NP_116116	Coding	chr10:103277162 plus strand	913755
INPP5A	NM_005539	NP_005530	Coding	chr10:132537848 plus strand	913756
INPP5F	NM_001243194	NP_001230123	Coding	chr10:119819256 plus strand	913757
INPP5F	NM_001243195	NP_001230124	Coding	chr10:119726046 plus strand	913758
INPP5F	NM_014937	NP_055752	Coding	chr10:119726046 plus strand	913758
IPMK	NM_152230	NP_689416	Coding	chr10:58267934 minus strand	913759
ITGA8	NM_001291494	NP_001278423	Coding	chr10:15720335 minus strand	913760
ITGA8	NM_003638	NP_003629	Coding	chr10:15720335 minus strand	913760
ITGB1	NM_002211	NP_002202	Coding	chr10:32958365 minus strand	913761
ITGB1	NM_033668	NP_391988	Coding	chr10:32935558 minus strand	913762
ITGB1	NM_133376	NP_596867	Coding	chr10:32957894 minus strand	913763
ITIH2	NM_002216	NP_002207	Coding	chr10:7703272 plus strand	913764
ITIH5	NM_001001851	NP_001001851	Coding	chr10:7666998 minus strand	913765
ITIH5	NM_030569	NP_085046	Coding	chr10:7666998 minus strand	913765
ITIH5	NM_032817	NP_116206	Coding	chr10:7619673 minus strand	913766
ITPRIP	NM_001272012	NP_001258941	Coding	chr10:104328992 minus strand	913767
ITPRIP	NM_001272013	NP_001258942	Coding	chr10:104338493 minus strand	913768
ITPRIP	NM_033397	NP_203755	Coding	chr10:104333905 minus strand	913769

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JAKMIP3	NM_001105521	NP_001098991	Coding	chr10:132104808 plus strand	913770
JMJD1C	NM_001282948	NP_001269877	Coding	chr10:63269223 minus strand	913771
JMJD1C	NM_032776	NP_116165	Coding	chr10:63466001 minus strand	913772
KAT6B	NM_001256468	NP_001243397	Coding	chr10:74826412 plus strand	913773
KAT6B	NM_001256469	NP_001243398	Coding	chr10:74826412 plus strand	913773
KAT6B	NM_012330	NP_036462	Coding	chr10:74826412 plus strand	913773
KAZALD1	NM_030929	NP_112191	Coding	chr10:101061241 plus strand	913774
KCNIP2	NM_014591	NP_055406	Coding	chr10:101843920 minus strand	913775
KCNIP2	NM_173191	NP_775283	Coding	chr10:101843920 minus strand	913775
KCNIP2	NM_173192	NP_775284	Coding	chr10:101843920 minus strand	913775
KCNIP2	NM_173193	NP_775285	Coding	chr10:101843920 minus strand	913775
KCNIP2	NM_173194	NP_775286	Coding	chr10:101839854 minus strand	913776
KCNIP2	NM_173195	NP_775287	Coding	chr10:101843920 minus strand	913775
KCNIP2	NM_173197	NP_775289	Coding	chr10:101843920 minus strand	913775
KCNK18	NM_181840	NP_862823	Coding	chr10:117197488 plus strand	913777
KCNMA1	NM_001014797	NP_001014797	Coding	chr10:77637819 minus strand	913778
KCNMA1	NM_001161352	NP_001154824	Coding	chr10:77637819 minus strand	913778
KCNMA1	NM_001161353	NP_001154825	Coding	chr10:77637819 minus strand	913778
KCNMA1	NM_001271518	NP_001258447	Coding	chr10:77637819 minus strand	913778
KCNMA1	NM_001271519	NP_001258448	Coding	chr10:77637819 minus strand	913778
KCNMA1	NM_001271520	NP_001258449	Coding	chr10:77637819 minus strand	913778
KCNMA1	NM_001271521	NP_001258450	Coding	chr10:77637819 minus strand	913778
KCNMA1	NM_001271522	NP_001258451	Coding	chr10:77637819 minus strand	913778
KCNMA1	NM_002247	NP_002238	Coding	chr10:77637819 minus strand	913778
KIAA1217	NM_001098500	NP_001091970	Coding	chr10:23694745 plus strand	913779
KIAA1217	NM_001282767	NP_001269696	Coding	chr10:24208790 plus strand	913780
KIAA1217	NM_001282768	NP_001269697	Coding	chr10:24208790 plus strand	913780

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KIAA1217	NM_001282769	NP_001269698	Coding	chr10:24449432 plus strand	913781
KIAA1217	NM_001282770	NP_001269699	Coding	chr10:24466504 plus strand	913782
KIAA1217	NM_019590	NP_062536	Coding	chr10:24208790 plus strand	913780
KIAA1279	NM_015634	NP_056449	Coding	chr10:68988720 plus strand	913783
KIAA1462	NM_020848	NP_065899	Coding	chr10:30059559 minus strand	913784
KIAA1598	NM_001127211	NP_001120683	Coding	chr10:117005577 minus strand	913785
KIAA1598	NM_001258298	NP_001245227	Coding	chr10:117005577 minus strand	913785
KIAA1598	NM_001258299	NP_001245228	Coding	chr10:117005577 minus strand	913785
KIAA1598	NM_001258300	NP_001245229	Coding	chr10:117126586 minus strand	913786
KIAA1598	NM_018330	NP_060800	Coding	chr10:117005577 minus strand	913785
KIF11	NM_004523	NP_004514	Coding	chr10:92593067 plus strand	913787
KIF20B	NM_001284259	NP_001271188	Coding	chr10:89701589 plus strand	913788
KIF20B	NM_016195	NP_057279	Coding	chr10:89701589 plus strand	913788
KIF5B	NM_004521	NP_004512	Coding	chr10:32056443 minus strand	913789
KIN	NM_012311	NP_036443	Coding	chr10:7788027 minus strand	913790
KLF6	NM_001160124	NP_001153596	Coding	chr10:3785281 minus strand	913791
KLF6	NM_001160125	NP_001153597	Coding	chr10:3785281 minus strand	913791
KLF6	NM_001300	NP_001291	Coding	chr10:3785281 minus strand	913791
KLLN	NM_001126049	NP_001119521	Coding	chr10:87863437 minus strand	913792
KNDC1	NM_152643	NP_689856	Coding	chr10:133160466 plus strand	913793
LARP4B	NM_015155	NP_055970	Coding	chr10:931705 minus strand	913794
LBX1	NM_006562	NP_006553	Coding	chr10:101228960 minus strand	913795
LCOR	NM_001170765	NP_001164236	Coding	chr10:96832259 plus strand	913796
LCOR	NM_001170766	NP_001164237	Coding	chr10:96832259 plus strand	913796
LCOR	NM_032440	NP_115816	Coding	chr10:96832954 plus strand	913797
LDB1	NM_001113407	NP_001106878	Coding	chr10:102120453 minus strand	913798
LDB1	NM_003893	NP_003884	Coding	chr10:102114966 minus strand	913799
LDB3	NM_001080114	NP_001073583	Coding	chr10:86668668 plus	913800

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				strand	
LDB3	NM_001080115	NP_001073584	Coding	chr10:86668668 plus strand	913800
LDB3	NM_001080116	NP_001073585	Coding	chr10:86668563 plus strand	913801
LDB3	NM_001171610	NP_001165081	Coding	chr10:86668448 plus strand	913802
LDB3	NM_001171611	NP_001165082	Coding	chr10:86668668 plus strand	913800
LDB3	NM_007078	NP_009009	Coding	chr10:86668668 plus strand	913800
LGI1	NM_005097	NP_005088	Coding	chr10:93757808 plus strand	913803
LHPP	NM_001167880	NP_001161352	Coding	chr10:124461771 plus strand	913804
LHPP	NM_022126	NP_071409	Coding	chr10:124461771 plus strand	913804
LIPA	NM_000235	NP_000226	Coding	chr10:89252039 minus strand	913805
LIPA	NM_001127605	NP_001121077	Coding	chr10:89251908 minus strand	913806
LIPA	NM_001288979	NP_001275908	Coding	chr10:89252039 minus strand	913805
LIPF	NM_001198828	NP_001185757	Coding	chr10:88664388 plus strand	913807
LIPF	NM_001198829	NP_001185758	Coding	chr10:88664388 plus strand	913807
LIPF	NM_001198830	NP_001185759	Coding	chr10:88664388 plus strand	913807
LIPF	NM_004190	NP_004181	Coding	chr10:88664388 plus strand	913807
LIPJ	NM_001010939	NP_001010939	Coding	chr10:88586761 plus strand	913808
LIPK	NM_001080518	NP_001073987	Coding	chr10:88724543 plus strand	913809
LIPM	NM_001128215	NP_001121687	Coding	chr10:88802729 plus strand	913810
LIPN	NM_001102469	NP_001095939	Coding	chr10:88761405 plus strand	913811
LOC100130539	NM_001258000	NP_001244929	Coding	chr10:44292749 plus strand	913812
LOC100996758	NM_001278795	NP_001265724	Coding	chr10:47921928 plus strand	913813
LOXL4	NM_032211	NP_115587	Coding	chr10:98268250 minus strand	913814
LRIT1	NM_015613	NP_056428	Coding	chr10:84241461 minus strand	913815
LRIT2	NM_001017924	NP_001017924	Coding	chr10:84225589 minus strand	913816
LRIT2	NM_001284223	NP_001271152	Coding	chr10:84225589 minus strand	913816
LRRC18	NM_001006939	NP_001006940	Coding	chr10:48914235 minus strand	913817
LRRC20	NM_001278211	NP_001265140	Coding	chr10:70382650 minus	913818

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				strand	
LRRC20	NM_001278212	NP_001265141	Coding	chr10:70382650 minus strand	913818
LRRC20	NM_001278213	NP_001265142	Coding	chr10:70376779 minus strand	913819
LRRC20	NM_001278214	NP_001265143	Coding	chr10:70382650 minus strand	913818
LRRC20	NM_018205	NP_060675	Coding	chr10:70382650 minus strand	913818
LRRC20	NM_018239	NP_060709	Coding	chr10:70382650 minus strand	913818
LRRC20	NM_207119	NP_997002	Coding	chr10:70381914 minus strand	913820
LRRC27	NM_001143757	NP_001137229	Coding	chr10:132332236 plus strand	913821
LRRC27	NM_001143758	NP_001137230	Coding	chr10:132332109 plus strand	913822
LRRC27	NM_001143759	NP_001137231	Coding	chr10:132332109 plus strand	913822
LRRC27	NM_030626	NP_085129	Coding	chr10:132332109 plus strand	913822
LRRTM3	NM_178011	NP_821079	Coding	chr10:66926033 plus strand	913823
LYZL1	NM_032517	NP_115906	Coding	chr10:29289060 plus strand	913824
LYZL2	NM_183058	NP_898881	Coding	chr10:30629718 minus strand	913825
LZTS2	NM_032429	NP_115805	Coding	chr10:100997106 plus strand	913826
MALRD1	NM_001142308	NP_001135780	Coding	chr10:19048770 plus strand	913827
MAP3K8	NM_001244134	NP_001231063	Coding	chr10:30434020 plus strand	913828
MAP3K8	NM_005204	NP_005195	Coding	chr10:30434020 plus strand	913828
MAPK8	NM_001278547	NP_001265476	Coding	chr10:48306638 plus strand	913829
MAPK8	NM_001278548	NP_001265477	Coding	chr10:48401611 plus strand	913830
MAPK8	NM_002750	NP_002741	Coding	chr10:48401611 plus strand	913830
MAPK8	NM_139046	NP_620634	Coding	chr10:48401611 plus strand	913830
MAPK8	NM_139049	NP_620637	Coding	chr10:48401611 plus strand	913830
MARCH5	NM_017824	NP_060294	Coding	chr10:92291162 plus strand	913831
MARCH8	NM_001002266	NP_001002266	Coding	chr10:45535394 minus strand	913832
MARCH8	NM_001282866	NP_001269795	Coding	chr10:45535394 minus strand	913832
MARCH8	NM_145021	NP_659458	Coding	chr10:45594906 minus strand	913833
MARVELD1	NM_031484	NP_113672	Coding	chr10:97713707 plus	913834

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				strand	
MASTL	NM_001172303	NP_001165774	Coding	chr10:27154823 plus strand	913835
MASTL	NM_001172304	NP_001165775	Coding	chr10:27154823 plus strand	913835
MASTL	NM_032844	NP_116233	Coding	chr10:27154823 plus strand	913835
MAT1A	NM_000429	NP_000420	Coding	chr10:80289678 minus strand	913836
MBL2	NM_000242	NP_000233	Coding	chr10:52771700 minus strand	913837
MCM10	NM_018518	NP_060988	Coding	chr10:13161553 plus strand	913838
MCM10	NM_182751	NP_877428	Coding	chr10:13161553 plus strand	913838
MCMBP	NM_001256378	NP_001243307	Coding	chr10:119872883 minus strand	913839
MCMBP	NM_001256379	NP_001243308	Coding	chr10:119873628 minus strand	913840
MCMBP	NM_024834	NP_079110	Coding	chr10:119872883 minus strand	913839
MCU	NM_001270679	NP_001257608	Coding	chr10:72692130 plus strand	913841
MCU	NM_001270680	NP_001257609	Coding	chr10:72692618 plus strand	913842
MCU	NM_138357	NP_612366	Coding	chr10:72692130 plus strand	913841
MEIG1	NM_001080836	NP_001074305	Coding	chr10:14959438 plus strand	913843
METTL10	NM_212554	NP_997719	Coding	chr10:124791870 minus strand	913844
MGEA5	NM_001142434	NP_001135906	Coding	chr10:101818465 minus strand	913845
MGEA5	NM_012215	NP_036347	Coding	chr10:101818465 minus strand	913845
MGMT	NM_002412	NP_002403	Coding	chr10:129467189 plus strand	913846
MICU1	NM_001195518	NP_001182447	Coding	chr10:72626191 minus strand	913847
MICU1	NM_001195519	NP_001182448	Coding	chr10:72523986 minus strand	913848
MICU1	NM_006077	NP_006068	Coding	chr10:72626191 minus strand	913847
MINPP1	NM_001178117	NP_001171588	Coding	chr10:87504465 plus strand	913849
MINPP1	NM_001178118	NP_001171589	Coding	chr10:87507832 plus strand	913850
MINPP1	NM_004897	NP_004888	Coding	chr10:87504465 plus strand	913849
MKI67	NM_001145966	NP_001139438	Coding	chr10:128126204 minus strand	913851
MKI67	NM_002417	NP_002408	Coding	chr10:128126204 minus strand	913851
MKX	NM_001242702	NP_001229631	Coding	chr10:27745849 minus	913852

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				strand	
MKX	NM_173576	NP_775847	Coding	chr10:27745849 minus strand	913852
MLLT10	NM_001195626	NP_001182555	Coding	chr10:21534644 plus strand	913853
MLLT10	NM_001195627	NP_001182556	Coding	chr10:21534171 plus strand	913854
MLLT10	NM_001195628	NP_001182557	Coding	chr10:21534171 plus strand	913854
MLLT10	NM_001195630	NP_001182559	Coding	chr10:21534171 plus strand	913854
MLLT10	NM_004641	NP_004632	Coding	chr10:21534171 plus strand	913854
MMP21	NM_147191	NP_671724	Coding	chr10:125775821 minus strand	913855
MMRN2	NM_024756	NP_079032	Coding	chr10:86957668 minus strand	913856
MMS19	NM_001289403	NP_001276332	Coding	chr10:97498609 minus strand	913857
MMS19	NM_001289404	NP_001276333	Coding	chr10:97498609 minus strand	913857
MMS19	NM_001289405	NP_001276334	Coding	chr10:97498794 minus strand	913858
MMS19	NM_022362	NP_071757	Coding	chr10:97498609 minus strand	913857
MORN4	NM_001098831	NP_001092301	Coding	chr10:97634156 minus strand	913859
MORN4	NM_178832	NP_849154	Coding	chr10:97633587 minus strand	913860
MPP7	NM_173496	NP_775767	Coding	chr10:28282138 minus strand	913861
MRC1	NM_002438	NP_002429	Coding	chr10:17809342 plus strand	913862
MRPL43	NM_032112	NP_115488	Coding	chr10:100987515 minus strand	913863
MRPL43	NM_176792	NP_789762	Coding	chr10:100987515 minus strand	913863
MRPL43	NM_176793	NP_789763	Coding	chr10:100987515 minus strand	913863
MRPL43	NM_176794	NP_789764	Coding	chr10:100987515 minus strand	913863
MRPS16	NM_016065	NP_057149	Coding	chr10:73252693 minus strand	913864
MSMB	NM_002443	NP_002434	Coding	chr10:46046269 minus strand	913865
MSMB	NM_138634	NP_619540	Coding	chr10:46046269 minus strand	913865
MSRB2	NM_012228	NP_036360	Coding	chr10:23095497 plus strand	913866
MSS51	NM_001024593	NP_001019764	Coding	chr10:73433561 minus strand	913867
MTG1	NM_138384	NP_612393	Coding	chr10:133394116 plus strand	913868
MTPAP	NM_018109	NP_060579	Coding	chr10:30349338 minus	913869

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				strand	
MTRNR2L5	NM_001190478	NP_001177407	Coding	chr10:55598989 plus strand	913870
MTRNR2L7	NM_001190489	NP_001177418	Coding	chr10:37602931 minus strand	913871
MXI1	NM_001008541	NP_001008541	Coding	chr10:110210230 plus strand	913872
MXI1	NM_005962	NP_005953	Coding	chr10:110226003 plus strand	913873
MXI1	NM_130439	NP_569157	Coding	chr10:110207604 plus strand	913874
MYO3A	NM_017433	NP_059129	Coding	chr10:25934072 plus strand	913875
MYOF	NM_013451	NP_038479	Coding	chr10:93482317 minus strand	913876
MYOF	NM_133337	NP_579899	Coding	chr10:93482317 minus strand	913876
MYOZ1	NM_021245	NP_067068	Coding	chr10:73641757 minus strand	913877
MYPN	NM_001256267	NP_001243196	Coding	chr10:68106116 plus strand	913878
MYPN	NM_001256268	NP_001243197	Coding	chr10:68109432 plus strand	913879
MYPN	NM_032578	NP_115967	Coding	chr10:68109432 plus strand	913879
NANOS1	NM_199461	NP_955631	Coding	chr10:119029715 plus strand	913880
NCOA4	NM_001145260	NP_001138732	Coding	chr10:46030714 minus strand	913881
NCOA4	NM_001145261	NP_001138733	Coding	chr10:46030714 minus strand	913881
NCOA4	NM_001145262	NP_001138734	Coding	chr10:46019537 minus strand	913882
NCOA4	NM_001145263	NP_001138735	Coding	chr10:46030714 minus strand	913881
NCOA4	NM_005437	NP_005428	Coding	chr10:46023458 minus strand	913883
NDST2	NM_003635	NP_003626	Coding	chr10:73811831 minus strand	913884
NDUFB8	NM_001284367	NP_001271296	Coding	chr10:100529923 minus strand	913885
NDUFB8	NM_001284368	NP_001271297	Coding	chr10:100529923 minus strand	913885
NDUFB8	NM_005004	NP_004995	Coding	chr10:100529923 minus strand	913885
NEBL	NM_001173484	NP_001166955	Coding	chr10:21174187 minus strand	913886
NEBL	NM_006393	NP_006384	Coding	chr10:20897602 minus strand	913887
NEBL	NM_213569	NP_998734	Coding	chr10:21174187 minus strand	913886
NET1	NM_001047160	NP_001040625	Coding	chr10:5412550 plus strand	913888
NET1	NM_005863	NP_005854	Coding	chr10:5446550 plus strand	913889

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NEURL1	NM_004210	NP_004201	Coding	chr10:103493977 plus strand	913890
NEUROG3	NM_020999	NP_066279	Coding	chr10:69573454 minus strand	913891
NFKB2	NM_001077494	NP_001070962	Coding	chr10:102394577 plus strand	913892
NFKB2	NM_001261403	NP_001248332	Coding	chr10:102395595 plus strand	913893
NFKB2	NM_001288724	NP_001275653	Coding	chr10:102394109 plus strand	913894
NFKB2	NM_002502	NP_002493	Coding	chr10:102395595 plus strand	913893
NHLRC2	NM_198514	NP_940916	Coding	chr10:113854631 plus strand	913895
NKX1-2	NM_001146340	NP_001139812	Coding	chr10:124449981 minus strand	913896
NKX2-3	NM_145285	NP_660328	Coding	chr10:99532932 plus strand	913897
NKX6-2	NM_177400	NP_796374	Coding	chr10:132786033 minus strand	913898
NMT2	NM_004808	NP_004799	Coding	chr10:15168696 minus strand	913899
NOC3L	NM_022451	NP_071896	Coding	chr10:94362926 minus strand	913900
NODAL	NM_018055	NP_060525	Coding	chr10:70441709 minus strand	913901
NOLC1	NM_001284388	NP_001271317	Coding	chr10:102152175 plus strand	913902
NOLC1	NM_001284389	NP_001271318	Coding	chr10:102152175 plus strand	913902
NOLC1	NM_004741	NP_004732	Coding	chr10:102152175 plus strand	913902
NPFFR1	NM_022146	NP_071429	Coding	chr10:70283694 minus strand	913903
NPM3	NM_006993	NP_008924	Coding	chr10:101783413 minus strand	913904
NPS	NM_001030013	NP_001025184	Coding	chr10:127549348 plus strand	913905
NPY4R	NM_001278794	NP_001265723	Coding	chr10:46465881 minus strand	913906
NPY4R	NM_001278794	NP_001265723	Coding	chr10:47918738 plus strand	913907
NPY4R	NM_005972	NP_005963	Coding	chr10:46465881 minus strand	913906
NRAP	NM_001261463	NP_001248392	Coding	chr10:113664070 minus strand	913908
NRAP	NM_006175	NP_006166	Coding	chr10:113664070 minus strand	913908
NRAP	NM_198060	NP_932326	Coding	chr10:113664070 minus strand	913908
NRBF2	NM_001282405	NP_001269334	Coding	chr10:63133246 plus strand	913909
NRBF2	NM_030759	NP_110386	Coding	chr10:63133246 plus strand	913909

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NRG3	NM_001010848	NP_001010848	Coding	chr10:81875313 plus strand	913910
NRG3	NM_001165972	NP_001159444	Coding	chr10:81875313 plus strand	913910
NRG3	NM_001165973	NP_001159445	Coding	chr10:81877686 plus strand	913911
NRP1	NM_001024628	NP_001019799	Coding	chr10:33334905 minus strand	913912
NRP1	NM_001024629	NP_001019800	Coding	chr10:33334905 minus strand	913912
NRP1	NM_001244972	NP_001231901	Coding	chr10:33334905 minus strand	913912
NRP1	NM_001244973	NP_001231902	Coding	chr10:33334905 minus strand	913912
NRP1	NM_003873	NP_003864	Coding	chr10:33334905 minus strand	913912
NSMCE4A	NM_001167865	NP_001161337	Coding	chr10:121975228 minus strand	913913
NSMCE4A	NM_017615	NP_060085	Coding	chr10:121975228 minus strand	913913
NSUN6	NM_182543	NP_872349	Coding	chr10:18651637 minus strand	913914
NT5C2	NM_001134373	NP_001127845	Coding	chr10:103193306 minus strand	913915
NT5C2	NM_012229	NP_036361	Coding	chr10:103193306 minus strand	913915
NUDT13	NM_001283014	NP_001269943	Coding	chr10:73110374 plus strand	913916
NUDT13	NM_001283015	NP_001269944	Coding	chr10:73110374 plus strand	913916
NUDT13	NM_001283016	NP_001269945	Coding	chr10:73110374 plus strand	913916
NUDT13	NM_001283017	NP_001269946	Coding	chr10:73110374 plus strand	913916
NUDT13	NM_001283019	NP_001269948	Coding	chr10:73110374 plus strand	913916
NUDT13	NM_015901	NP_056985	Coding	chr10:73110374 plus strand	913916
NUDT5	NM_014142	NP_054861	Coding	chr10:12196144 minus strand	913917
NUTM2A	NM_001099338	NP_001092808	Coding	chr10:87225447 plus strand	913918
NUTM2B	NM_001278495	NP_001265424	Coding	chr10:79703226 plus strand	913919
OAT	NM_000274	NP_000265	Coding	chr10:124418976 minus strand	913920
OAT	NM_001171814	NP_001165285	Coding	chr10:124418976 minus strand	913920
OBFC1	NM_024928	NP_079204	Coding	chr10:103918287 minus strand	913921
OGDHL	NM_001143996	NP_001137468	Coding	chr10:49762379 minus strand	913922
OGDHL	NM_001143997	NP_001137469	Coding	chr10:49762379 minus strand	913922

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OGDHL	NM_018245	NP_060715	Coding	chr10:49762379 minus strand	913922
OIT3	NM_152635	NP_689848	Coding	chr10:72893580 plus strand	913923
OLAH	NM_001039702	NP_001034791	Coding	chr10:15043895 plus strand	913924
OLAH	NM_018324	NP_060794	Coding	chr10:15043895 plus strand	913924
OPALIN	NM_001040102	NP_001035191	Coding	chr10:96359365 minus strand	913925
OPALIN	NM_001040103	NP_001035192	Coding	chr10:96359365 minus strand	913925
OPALIN	NM_001284320	NP_001271249	Coding	chr10:96359365 minus strand	913925
OPALIN	NM_001284321	NP_001271250	Coding	chr10:96359365 minus strand	913925
OPALIN	NM_001284322	NP_001271251	Coding	chr10:96359365 minus strand	913925
OPALIN	NM_001284323	NP_001271252	Coding	chr10:96357159 minus strand	913926
OPALIN	NM_001284324	NP_001271253	Coding	chr10:96357159 minus strand	913926
OPALIN	NM_001284326	NP_001271255	Coding	chr10:96357159 minus strand	913926
OPALIN	NM_001284327	NP_001271256	Coding	chr10:96357159 minus strand	913926
OPALIN	NM_033207	NP_149984	Coding	chr10:96359365 minus strand	913925
OPN4	NM_001030015	NP_001025186	Coding	chr10:86654556 plus strand	913927
OPN4	NM_033282	NP_150598	Coding	chr10:86654556 plus strand	913927
OPTN	NM_001008211	NP_001008212	Coding	chr10:13100081 plus strand	913928
OPTN	NM_001008212	NP_001008213	Coding	chr10:13100081 plus strand	913928
OPTN	NM_001008213	NP_001008214	Coding	chr10:13100081 plus strand	913928
OPTN	NM_021980	NP_068815	Coding	chr10:13100081 plus strand	913928
OR13A1	NM_001004297	NP_001004297	Coding	chr10:45315608 minus strand	913929
OTUD1	NM_001145373	NP_001138845	Coding	chr10:23439268 plus strand	913930
P4HA1	NM_000917	NP_000908	Coding	chr10:73096974 minus strand	913931
P4HA1	NM_001017962	NP_001017962	Coding	chr10:73096974 minus strand	913931
P4HA1	NM_001142595	NP_001136067	Coding	chr10:73096974 minus strand	913931
P4HA1	NM_001142596	NP_001136068	Coding	chr10:73096974 minus strand	913931
PALD1	NM_014431	NP_055246	Coding	chr10:70478807 plus strand	913932

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PANK1	NM_138316	NP_612189	Coding	chr10:89643891 minus strand	913933
PANK1	NM_148977	NP_683878	Coding	chr10:89645572 minus strand	913934
PANK1	NM_148978	NP_683879	Coding	chr10:89643891 minus strand	913933
PAOX	NM_152911	NP_690875	Coding	chr10:133379236 plus strand	913935
PAOX	NM_207127	NP_997010	Coding	chr10:133379236 plus strand	913935
PAOX	NM_207128	NP_997011	Coding	chr10:133379236 plus strand	913935
PAPSS2	NM_001015880	NP_001015880	Coding	chr10:87659718 plus strand	913936
PAPSS2	NM_004670	NP_004661	Coding	chr10:87659718 plus strand	913936
PARD3	NM_001184785	NP_001171714	Coding	chr10:34815325 minus strand	913937
PARD3	NM_001184786	NP_001171715	Coding	chr10:34815325 minus strand	913937
PARD3	NM_001184787	NP_001171716	Coding	chr10:34815325 minus strand	913937
PARD3	NM_001184788	NP_001171717	Coding	chr10:34815325 minus strand	913937
PARD3	NM_001184789	NP_001171718	Coding	chr10:34815325 minus strand	913937
PARD3	NM_001184790	NP_001171719	Coding	chr10:34815325 minus strand	913937
PARD3	NM_001184791	NP_001171720	Coding	chr10:34815325 minus strand	913937
PARD3	NM_001184792	NP_001171721	Coding	chr10:34815325 minus strand	913937
PARD3	NM_001184793	NP_001171722	Coding	chr10:34815325 minus strand	913937
PARD3	NM_001184794	NP_001171723	Coding	chr10:34815325 minus strand	913937
PARD3	NM_019619	NP_062565	Coding	chr10:34815325 minus strand	913937
PARG	NM_003631	NP_003622	Coding	chr10:49941985 minus strand	913938
PAX2	NM_000278	NP_000269	Coding	chr10:100745710 plus strand	913939
PAX2	NM_003987	NP_003978	Coding	chr10:100745710 plus strand	913939
PAX2	NM_003988	NP_003979	Coding	chr10:100745710 plus strand	913939
PAX2	NM_003989	NP_003980	Coding	chr10:100745710 plus strand	913939
PAX2	NM_003990	NP_003981	Coding	chr10:100745710 plus strand	913939
PBLD	NM_001033083	NP_001028255	Coding	chr10:68332927 minus strand	913940
PBLD	NM_022129	NP_071412	Coding	chr10:68332927 minus strand	913940

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PCBD1	NM_000281	NP_000272	Coding	chr10:70888786 minus strand	913941
PCBD1	NM_001289797	NP_001276726	Coding	chr10:70888254 minus strand	913942
PCDH15	NM_001142763	NP_001136235	Coding	chr10:54801291 minus strand	913943
PCDH15	NM_001142764	NP_001136236	Coding	chr10:54801291 minus strand	913943
PCDH15	NM_001142765	NP_001136237	Coding	chr10:54801291 minus strand	913943
PCDH15	NM_001142766	NP_001136238	Coding	chr10:54801291 minus strand	913943
PCDH15	NM_001142767	NP_001136239	Coding	chr10:54801291 minus strand	913943
PCDH15	NM_001142768	NP_001136240	Coding	chr10:54801291 minus strand	913943
PCDH15	NM_001142769	NP_001136241	Coding	chr10:54801291 minus strand	913943
PCDH15	NM_001142770	NP_001136242	Coding	chr10:54801291 minus strand	913943
PCDH15	NM_001142771	NP_001136243	Coding	chr10:54801291 minus strand	913943
PCDH15	NM_001142772	NP_001136244	Coding	chr10:54801291 minus strand	913943
PCDH15	NM_001142773	NP_001136245	Coding	chr10:54801291 minus strand	913943
PCDH15	NM_033056	NP_149045	Coding	chr10:54801291 minus strand	913943
PCGF5	NM_001256549	NP_001243478	Coding	chr10:91220150 plus strand	913944
PCGF5	NM_001257101	NP_001244030	Coding	chr10:91163011 plus strand	913945
PCGF5	NM_032373	NP_115749	Coding	chr10:91220601 plus strand	913946
PCGF6	NM_001011663	NP_001011663	Coding	chr10:103351134 minus strand	913947
PCGF6	NM_032154	NP_115530	Coding	chr10:103351134 minus strand	913947
PDCD11	NM_014976	NP_055791	Coding	chr10:103396654 plus strand	913948
PDCD4	NM_001199492	NP_001186421	Coding	chr10:110871794 plus strand	913949
PDCD4	NM_014456	NP_055271	Coding	chr10:110871794 plus strand	913949
PDCD4	NM_145341	NP_663314	Coding	chr10:110871794 plus strand	913949
PDE6C	NM_006204	NP_006195	Coding	chr10:93612587 plus strand	913950
PDLIM1	NM_020992	NP_066272	Coding	chr10:95291148 minus strand	913951
PDSS1	NM_014317	NP_055132	Coding	chr10:26697665 plus strand	913952
PDZD7	NM_001195263	NP_001182192	Coding	chr10:101031157 minus strand	913953

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PDZD7	NM_024895	NP_079171	Coding	chr10:101031157 minus strand	913953
PDZD8	NM_173791	NP_776152	Coding	chr10:117375426 minus strand	913954
PFKFB3	NM_001145443	NP_001138915	Coding	chr10:6144879 plus strand	913955
PFKFB3	NM_001282630	NP_001269559	Coding	chr10:6146315 plus strand	913956
PFKFB3	NM_004566	NP_004557	Coding	chr10:6202876 plus strand	913957
PFKP	NM_001242339	NP_001229268	Coding	chr10:3068626 plus strand	913958
PFKP	NM_002627	NP_002618	Coding	chr10:3067519 plus strand	913959
PGAM1	NM_002629	NP_002620	Coding	chr10:97426269 plus strand	913960
PGBD3	NM_170753	NP_736609	Coding	chr10:49524281 minus strand	913961
PHYH	NM_001037537	NP_001032626	Coding	chr10:13299746 minus strand	913962
PHYH	NM_006214	NP_006205	Coding	chr10:13300130 minus strand	913963
PHYHIPL	NM_001143774	NP_001137246	Coding	chr10:59177466 plus strand	913964
PHYHIPL	NM_032439	NP_115815	Coding	chr10:59176587 plus strand	913965
PI4K2A	NM_018425	NP_060895	Coding	chr10:97640685 plus strand	913966
PIK3AP1	NM_152309	NP_689522	Coding	chr10:96720522 minus strand	913967
PIP4K2A	NM_005028	NP_005019	Coding	chr10:22714574 minus strand	913968
PITRM1	NM_001242307	NP_001229236	Coding	chr10:3172841 minus strand	913969
PITRM1	NM_001242309	NP_001229238	Coding	chr10:3172841 minus strand	913969
PITRM1	NM_014889	NP_055704	Coding	chr10:3172841 minus strand	913969
PITX3	NM_005029	NP_005020	Coding	chr10:102241474 minus strand	913970
PKD2L1	NM_001253837	NP_001240766	Coding	chr10:100330486 minus strand	913971
PKD2L1	NM_016112	NP_057196	Coding	chr10:100330486 minus strand	913971
PLA2G12B	NM_032562	NP_115951	Coding	chr10:72954752 minus strand	913972
PLAC9	NM_001012973	NP_001012991	Coding	chr10:80132501 plus strand	913973
PLAU	NM_001145031	NP_001138503	Coding	chr10:73911103 plus strand	913974
PLAU	NM_002658	NP_002649	Coding	chr10:73911103 plus strand	913974
PLCE1	NM_001165979	NP_001159451	Coding	chr10:94089025 plus strand	913975
PLCE1	NM_001288989	NP_001275918	Coding	chr10:93993988 plus strand	913976
PLCE1	NM_016341	NP_057425	Coding	chr10:93993988 plus strand	913976

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PLEKHA1	NM_001001974	NP_001001974	Coding	chr10:122374577 plus strand	913977
PLEKHA1	NM_001195608	NP_001182537	Coding	chr10:122386068 plus strand	913978
PLEKHA1	NM_021622	NP_067635	Coding	chr10:122392302 plus strand	913979
PLEKHS1	NM_001193434	NP_001180363	Coding	chr10:113751453 plus strand	913980
PLEKHS1	NM_001193435	NP_001180364	Coding	chr10:113751453 plus strand	913980
PLEKHS1	NM_024889	NP_079165	Coding	chr10:113751453 plus strand	913980
PLEKHS1	NM_182601	NP_872407	Coding	chr10:113764818 plus strand	913981
PLXDC2	NM_001282736	NP_001269665	Coding	chr10:19816442 plus strand	913982
PLXDC2	NM_032812	NP_116201	Coding	chr10:19816442 plus strand	913982
PNLIP	NM_000936	NP_000927	Coding	chr10:116545915 plus strand	913983
PNLIPRP1	NM_006229	NP_006220	Coding	chr10:116590977 plus strand	913984
PNLIPRP2	NM_005396	NP_005387	Coding	chr10:116620952 plus strand	913985
PNLIPRP3	NM_001011709	NP_001011709	Coding	chr10:116427911 plus strand	913986
POLL	NM_001174084	NP_001167555	Coding	chr10:101588270 minus strand	913987
POLL	NM_001174085	NP_001167556	Coding	chr10:101588270 minus strand	913987
POLL	NM_013274	NP_037406	Coding	chr10:101588270 minus strand	913987
POLR3A	NM_007055	NP_008986	Coding	chr10:78029540 minus strand	913988
PPA1	NM_021129	NP_066952	Coding	chr10:70233434 minus strand	913989
PPAPDC1A	NM_001030059	NP_001025230	Coding	chr10:120456953 plus strand	913990
PPIF	NM_005729	NP_005720	Coding	chr10:79347463 plus strand	913991
PPP1R3C	NM_005398	NP_005389	Coding	chr10:91633101 minus strand	913992
PPP2R2D	NM_001291310	NP_001278239	Coding	chr10:131900643 plus strand	913993
PPP2R2D	NM_018461	NP_060931	Coding	chr10:131900643 plus strand	913993
PPP3CB	NM_001142353	NP_001135825	Coding	chr10:73496024 minus strand	913994
PPP3CB	NM_001142354	NP_001135826	Coding	chr10:73496024 minus strand	913994
PPP3CB	NM_001289968	NP_001276897	Coding	chr10:73496024 minus strand	913994
PPP3CB	NM_001289969	NP_001276898	Coding	chr10:73496024 minus strand	913994

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PPP3CB	NM_021132	NP_066955	Coding	chr10:73496024 minus strand	913994
PPRC1	NM_001288727	NP_001275656	Coding	chr10:102132993 plus strand	913995
PPRC1	NM_001288728	NP_001275657	Coding	chr10:102132993 plus strand	913995
PPRC1	NM_015062	NP_055877	Coding	chr10:102132993 plus strand	913995
PRAP1	NM_001145201	NP_001138673	Coding	chr10:133347339 plus strand	913996
PRAP1	NM_145202	NP_660203	Coding	chr10:133347339 plus strand	913996
PRDX3	NM_001302272	NP_001289201	Coding	chr10:119178865 minus strand	913997
PRDX3	NM_006793	NP_006784	Coding	chr10:119178865 minus strand	913997
PRF1	NM_001083116	NP_001076585	Coding	chr10:70602775 minus strand	913998
PRF1	NM_005041	NP_005032	Coding	chr10:70602775 minus strand	913998
PRKCQ	NM_001242413	NP_001229342	Coding	chr10:6580301 minus strand	913999
PRKCQ	NM_001282644	NP_001269573	Coding	chr10:6580301 minus strand	913999
PRKCQ	NM_001282645	NP_001269574	Coding	chr10:6580301 minus strand	913999
PRKCQ	NM_006257	NP_006248	Coding	chr10:6580301 minus strand	913999
PRKG1	NM_001098512	NP_001091982	Coding	chr10:50991150 plus strand	914000
PRKG1	NM_006258	NP_006249	Coding	chr10:51074473 plus strand	914001
PRLHR	NM_004248	NP_004239	Coding	chr10:118595648 minus strand	914002
PROSER2	NM_153256	NP_694988	Coding	chr10:11823397 plus strand	914003
PRPF18	NM_003675	NP_003666	Coding	chr10:13586938 plus strand	914004
PRTFDC1	NM_001282786	NP_001269715	Coding	chr10:24952644 minus strand	914005
PRTFDC1	NM_020200	NP_064585	Coding	chr10:24952644 minus strand	914005
PSAP	NM_001042465	NP_001035930	Coding	chr10:71851325 minus strand	914006
PSAP	NM_001042466	NP_001035931	Coding	chr10:71851325 minus strand	914006
PSAP	NM_002778	NP_002769	Coding	chr10:71851325 minus strand	914006
PSD	NM_001270965	NP_001257894	Coding	chr10:102419934 minus strand	914007
PSD	NM_001270966	NP_001257895	Coding	chr10:102419727 minus strand	914008
PSD	NM_002779	NP_002770	Coding	chr10:102419144 minus strand	914009

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PSTK	NM_153336	NP_699167	Coding	chr10:122980039 plus strand	914010
PTCHD3	NM_001034842	NP_001030014	Coding	chr10:27414368 minus strand	914011
PTEN	NM_000314	NP_000305	Coding	chr10:87863437 plus strand	914012
PTER	NM_001001484	NP_001001484	Coding	chr10:16436942 plus strand	914013
PTER	NM_001261836	NP_001248765	Coding	chr10:16436942 plus strand	914013
PTER	NM_001261837	NP_001248766	Coding	chr10:16436942 plus strand	914013
PTER	NM_001261838	NP_001248767	Coding	chr10:16436942 plus strand	914013
PTER	NM_030664	NP_109589	Coding	chr10:16436942 plus strand	914013
PTF1A	NM_178161	NP_835455	Coding	chr10:23192530 plus strand	914014
PTPLA	NM_014241	NP_055056	Coding	chr10:17617374 minus strand	914015
PTPN20B	NM_001042357	NP_001035816	Coding	chr10:46932376 plus strand	914016
PTPN20B	NM_001042358	NP_001035817	Coding	chr10:46911780 plus strand	914017
PTPN20B	NM_001042359	NP_001035818	Coding	chr10:46911780 plus strand	914017
PTPN20B	NM_001042360	NP_001035819	Coding	chr10:46911780 plus strand	914017
PTPN20B	NM_001042361	NP_001035820	Coding	chr10:46911780 plus strand	914017
PTPN20B	NM_001042362	NP_001035821	Coding	chr10:46911780 plus strand	914017
PTPN20B	NM_001042363	NP_001035822	Coding	chr10:46911437 plus strand	914018
PTPN20B	NM_001042364	NP_001035823	Coding	chr10:46911437 plus strand	914018
PTPN20B	NM_001042365	NP_001035824	Coding	chr10:46911437 plus strand	914018
PTPN20B	NM_015605	NP_056420	Coding	chr10:46911437 plus strand	914018
PTPRE	NM_006504	NP_006495	Coding	chr10:127907060 plus strand	914019
PTPRE	NM_130435	NP_569119	Coding	chr10:128047548 plus strand	914020
PWWP2B	NM_001098637	NP_001092107	Coding	chr10:132397197 plus strand	914021
PWWP2B	NM_138499	NP_612508	Coding	chr10:132397197 plus strand	914021
PYROXD2	NM_032709	NP_116098	Coding	chr10:98415221 minus strand	914022
R3HCC1L	NM_001256619	NP_001243548	Coding	chr10:98134623 plus strand	914023
R3HCC1L	NM_001256620	NP_001243549	Coding	chr10:98134623 plus strand	914023

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R3HCC1L	NM_001256621	NP_001243550	Coding	chr10:98134623 plus strand	914023
R3HCC1L	NM_014472	NP_055287	Coding	chr10:98134623 plus strand	914023
R3HCC1L	NM_138469	NP_612478	Coding	chr10:98134623 plus strand	914023
RAB11FIP2	NM_014904	NP_055719	Coding	chr10:118046603 minus strand	914024
RAB18	NM_001256410	NP_001243339	Coding	chr10:27504173 plus strand	914025
RAB18	NM_001256411	NP_001243340	Coding	chr10:27504173 plus strand	914025
RAB18	NM_001256412	NP_001243341	Coding	chr10:27504173 plus strand	914025
RAB18	NM_001256415	NP_001243344	Coding	chr10:27504173 plus strand	914025
RAB18	NM_021252	NP_067075	Coding	chr10:27504173 plus strand	914025
RASGEF1A	NM_001282862	NP_001269791	Coding	chr10:43229739 minus strand	914026
RASGEF1A	NM_145313	NP_660356	Coding	chr10:43266919 minus strand	914027
RASSF4	NM_032023	NP_114412	Coding	chr10:44959770 plus strand	914028
RBM17	NM_001145547	NP_001139019	Coding	chr10:6089345 plus strand	914029
RBM17	NM_032905	NP_116294	Coding	chr10:6088985 plus strand	914030
RBM20	NM_001134363	NP_001127835	Coding	chr10:110644396 plus strand	914031
RBP3	NM_002900	NP_002891	Coding	chr10:47348370 plus strand	914032
RBP4	NM_006744	NP_006735	Coding	chr10:93601236 minus strand	914033
REEP3	NM_001001330	NP_001001330	Coding	chr10:63521362 plus strand	914034
RET	NM_020630	NP_065681	Coding	chr10:43077068 plus strand	914035
RET	NM_020975	NP_066124	Coding	chr10:43077068 plus strand	914035
RGR	NM_001012720	NP_001012738	Coding	chr10:84245052 plus strand	914036
RGR	NM_001012722	NP_001012740	Coding	chr10:84245052 plus strand	914036
RGR	NM_002921	NP_002912	Coding	chr10:84245052 plus strand	914036
RGS10	NM_001005339	NP_001005339	Coding	chr10:119542710 minus strand	914037
RGS10	NM_002925	NP_002916	Coding	chr10:119536533 minus strand	914038
RHOBTB1	NM_001242359	NP_001229288	Coding	chr10:60944275 minus strand	914039
RHOBTB1	NM_014836	NP_055651	Coding	chr10:60944275 minus strand	914039
RNLS	NM_001031709	NP_001026879	Coding	chr10:88583325 minus strand	914040

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RNLS	NM_018363	NP_060833	Coding	chr10:88583325 minus strand	914040
RPEL1	NM_001143909	NP_001137381	Coding	chr10:103245886 plus strand	914041
RPL21	NM_000982	NP_000973	Coding	chr10:120355223 minus strand	914042
RPP30	NM_001104546	NP_001098016	Coding	chr10:90871951 plus strand	914043
RPP30	NM_006413	NP_006404	Coding	chr10:90871951 plus strand	914043
RPP38	NM_001097590	NP_001091059	Coding	chr10:15097179 plus strand	914044
RPP38	NM_001265601	NP_001252530	Coding	chr10:15097179 plus strand	914044
RPP38	NM_006414	NP_006405	Coding	chr10:15097179 plus strand	914044
RPP38	NM_183005	NP_892117	Coding	chr10:15097179 plus strand	914044
RPS24	NM_001026	NP_001017	Coding	chr10:78033759 plus strand	914045
RPS24	NM_001142282	NP_001135754	Coding	chr10:78033759 plus strand	914045
RPS24	NM_001142283	NP_001135755	Coding	chr10:78033759 plus strand	914045
RPS24	NM_001142284	NP_001135756	Coding	chr10:78033759 plus strand	914045
RPS24	NM_001142285	NP_001135757	Coding	chr10:78033759 plus strand	914045
RPS24	NM_033022	NP_148982	Coding	chr10:78033759 plus strand	914045
RRP12	NM_001145114	NP_001138586	Coding	chr10:97401370 minus strand	914046
RRP12	NM_001284337	NP_001271266	Coding	chr10:97401370 minus strand	914046
RRP12	NM_015179	NP_055994	Coding	chr10:97401370 minus strand	914046
RSU1	NM_012425	NP_036557	Coding	chr10:16817454 minus strand	914047
RSU1	NM_152724	NP_689937	Coding	chr10:16817454 minus strand	914047
RTKN2	NM_001282941	NP_001269870	Coding	chr10:62268863 minus strand	914048
RTKN2	NM_145307	NP_660350	Coding	chr10:62268863 minus strand	914048
RUFY2	NM_001042417	NP_001035882	Coding	chr10:68407294 minus strand	914049
RUFY2	NM_001278225	NP_001265154	Coding	chr10:68407294 minus strand	914049
RUFY2	NM_017987	NP_060457	Coding	chr10:68407189 minus strand	914050
SAMD8	NM_001174156	NP_001167627	Coding	chr10:75111634 plus strand	914051
SAMD8	NM_144660	NP_653261	Coding	chr10:75111634 plus strand	914051

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SAR1A	NM_001142648	NP_001136120	Coding	chr10:70170529 minus strand	914052
SAR1A	NM_020150	NP_064535	Coding	chr10:70170529 minus strand	914052
SCD	NM_005063	NP_005054	Coding	chr10:100347014 plus strand	914053
SEC23IP	NM_007190	NP_009121	Coding	chr10:119892572 plus strand	914054
SEC24C	NM_004922	NP_004913	Coding	chr10:73744372 plus strand	914055
SEC24C	NM_198597	NP_940999	Coding	chr10:73744372 plus strand	914055
SEC31B	NM_015490	NP_056305	Coding	chr10:100519838 minus strand	914056
SEC61A2	NM_001142627	NP_001136099	Coding	chr10:12129640 plus strand	914057
SEC61A2	NM_001142628	NP_001136100	Coding	chr10:12129640 plus strand	914057
SEC61A2	NM_018144	NP_060614	Coding	chr10:12129640 plus strand	914057
SEMA4G	NM_001203244	NP_001190173	Coding	chr10:100972528 plus strand	914058
SEMA4G	NM_017893	NP_060363	Coding	chr10:100972528 plus strand	914058
SEPHS1	NM_001195602	NP_001182531	Coding	chr10:13348298 minus strand	914059
SEPHS1	NM_001195604	NP_001182533	Coding	chr10:13348298 minus strand	914059
SEPHS1	NM_012247	NP_036379	Coding	chr10:13348298 minus strand	914059
SFMBT2	NM_001018039	NP_001018049	Coding	chr10:7409341 minus strand	914060
SFMBT2	NM_001029880	NP_001025051	Coding	chr10:7411486 minus strand	914061
SFRI	NM_001002759	NP_001002759	Coding	chr10:104122170 plus strand	914062
SFRI	NM_145247	NP_660290	Coding	chr10:104122057 plus strand	914063
SFRP5	NM_003015	NP_003006	Coding	chr10:97771999 minus strand	914064
SFTPA1	NM_001093770	NP_001087239	Coding	chr10:79610938 plus strand	914065
SFTPA1	NM_001164644	NP_001158116	Coding	chr10:79610938 plus strand	914065
SFTPA1	NM_001164645	NP_001158117	Coding	chr10:79610938 plus strand	914065
SFTPA1	NM_001164646	NP_001158118	Coding	chr10:79610938 plus strand	914065
SFTPA1	NM_001164647	NP_001158119	Coding	chr10:79610938 plus strand	914065
SFTPA1	NM_005411	NP_005402	Coding	chr10:79610938 plus strand	914065
SFTPA2	NM_001098668	NP_001092138	Coding	chr10:79560407 minus strand	914066

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SFTPD	NM_003019	NP_003010	Coding	chr10:79949105 minus strand	914067
SFXN2	NM_178858	NP_849189	Coding	chr10:102714540 plus strand	914068
SFXN3	NM_030971	NP_112233	Coding	chr10:101031238 plus strand	914069
SFXN4	NM_213649	NP_998814	Coding	chr10:119165692 minus strand	914070
SGMS1	NM_147156	NP_671512	Coding	chr10:50623977 minus strand	914071
SGPL1	NM_003901	NP_003892	Coding	chr10:70815947 plus strand	914072
SH2D4B	NM_001145719	NP_001139191	Coding	chr10:80540818 plus strand	914073
SH2D4B	NM_207372	NP_997255	Coding	chr10:80537901 plus strand	914074
SH3PXD2A	NM_014631	NP_055446	Coding	chr10:103855406 minus strand	914075
SHOC2	NM_001269039	NP_001255968	Coding	chr10:110964124 plus strand	914076
SHOC2	NM_007373	NP_031399	Coding	chr10:110919542 plus strand	914077
SIRT1	NM_001142498	NP_001135970	Coding	chr10:67885180 plus strand	914078
SIRT1	NM_012238	NP_036370	Coding	chr10:67884668 plus strand	914079
SKIDA1	NM_207371	NP_997254	Coding	chr10:21525682 minus strand	914080
SLC16A12	NM_213606	NP_998771	Coding	chr10:89535556 minus strand	914081
SLC16A9	NM_194298	NP_919274	Coding	chr10:59709891 minus strand	914082
SLC18A2	NM_003054	NP_003045	Coding	chr10:117241072 plus strand	914083
SLC18A3	NM_003055	NP_003046	Coding	chr10:49610300 plus strand	914084
SLC25A16	NM_152707	NP_689920	Coding	chr10:68527523 minus strand	914085
SLC25A28	NM_031212	NP_112489	Coding	chr10:99620464 minus strand	914086
SLC29A3	NM_001174098	NP_001167569	Coding	chr10:71319252 plus strand	914087
SLC29A3	NM_018344	NP_060814	Coding	chr10:71319252 plus strand	914087
SLC35G1	NM_001134658	NP_001128130	Coding	chr10:93893972 plus strand	914088
SLC35G1	NM_153226	NP_694958	Coding	chr10:93893972 plus strand	914088
SLC39A12	NM_001145195	NP_001138667	Coding	chr10:17951838 plus strand	914089
SLC39A12	NM_001282733	NP_001269662	Coding	chr10:17951838 plus strand	914089
SLC39A12	NM_001282734	NP_001269663	Coding	chr10:17951838 plus strand	914089

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SLC39A12	NM_152725	NP_689938	Coding	chr10:17951838 plus strand	914089
SLIT1	NM_003061	NP_003052	Coding	chr10:97185926 minus strand	914090
SLK	NM_014720	NP_055535	Coding	chr10:103967711 plus strand	914091
SMC3	NM_005445	NP_005436	Coding	chr10:110567690 plus strand	914092
SMNDC1	NM_005871	NP_005862	Coding	chr10:110304949 minus strand	914093
SNCG	NM_003087	NP_003078	Coding	chr10:86958530 plus strand	914094
SORBS1	NM_001034954	NP_001030126	Coding	chr10:95441180 minus strand	914095
SORBS1	NM_001034955	NP_001030127	Coding	chr10:95441180 minus strand	914095
SORBS1	NM_001034956	NP_001030128	Coding	chr10:95441180 minus strand	914095
SORBS1	NM_001034957	NP_001030129	Coding	chr10:95441180 minus strand	914095
SORBS1	NM_001290294	NP_001277223	Coding	chr10:95561420 minus strand	914096
SORBS1	NM_001290295	NP_001277224	Coding	chr10:95561420 minus strand	914096
SORBS1	NM_001290296	NP_001277225	Coding	chr10:95441180 minus strand	914095
SORBS1	NM_001290297	NP_001277226	Coding	chr10:95441180 minus strand	914095
SORBS1	NM_001290298	NP_001277227	Coding	chr10:95441180 minus strand	914095
SORBS1	NM_006434	NP_006425	Coding	chr10:95441180 minus strand	914095
SORBS1	NM_015385	NP_056200	Coding	chr10:95561420 minus strand	914096
SORBS1	NM_024991	NP_079267	Coding	chr10:95561420 minus strand	914096
SORCS1	NM_001013031	NP_001013049	Coding	chr10:107164708 minus strand	914097
SORCS1	NM_001206569	NP_001193498	Coding	chr10:107164708 minus strand	914097
SORCS1	NM_001206570	NP_001193499	Coding	chr10:107164708 minus strand	914097
SORCS1	NM_001206571	NP_001193500	Coding	chr10:107164708 minus strand	914097
SORCS1	NM_001206572	NP_001193501	Coding	chr10:107164708 minus strand	914097
SORCS1	NM_052918	NP_443150	Coding	chr10:107164708 minus strand	914097
SORCS3	NM_014978	NP_055793	Coding	chr10:104641100 plus strand	914098
SPAG6	NM_001253854	NP_001240783	Coding	chr10:22345444 plus strand	914099
SPAG6	NM_001253855	NP_001240784	Coding	chr10:22345444 plus strand	914099

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SPAG6	NM_012443	NP_036575	Coding	chr10:22345444 plus strand	914099
SPAG6	NM_172242	NP_758442	Coding	chr10:22345444 plus strand	914099
SPOCK2	NM_001134434	NP_001127906	Coding	chr10:72089032 minus strand	914100
SPOCK2	NM_001244950	NP_001231879	Coding	chr10:72088773 minus strand	914101
SPOCK2	NM_014767	NP_055582	Coding	chr10:72089032 minus strand	914100
SPRN	NM_001012508	NP_001012526	Coding	chr10:133424617 minus strand	914102
SRGN	NM_002727	NP_002718	Coding	chr10:69088071 plus strand	914103
ST8SIA6	NM_001004470	NP_001004470	Coding	chr10:17454255 minus strand	914104
STAM	NM_003473	NP_003464	Coding	chr10:17644124 plus strand	914105
STAMBPL1	NM_020799	NP_065850	Coding	chr10:88880186 plus strand	914106
STK32C	NM_173575	NP_775846	Coding	chr10:132307973 minus strand	914107
STOX1	NM_001130159	NP_001123631	Coding	chr10:68827536 plus strand	914108
STOX1	NM_001130160	NP_001123632	Coding	chr10:68827536 plus strand	914108
STOX1	NM_001130161	NP_001123633	Coding	chr10:68827536 plus strand	914108
STOX1	NM_152709	NP_689922	Coding	chr10:68827536 plus strand	914108
SUFU	NM_001178133	NP_001171604	Coding	chr10:102503961 plus strand	914109
SUFU	NM_016169	NP_057253	Coding	chr10:102503961 plus strand	914109
SUPV3L1	NM_001301683	NP_001288612	Coding	chr10:69180203 plus strand	914110
SUPV3L1	NM_003171	NP_003162	Coding	chr10:69180203 plus strand	914110
SUV39H2	NM_001193424	NP_001180353	Coding	chr10:14878782 plus strand	914111
SUV39H2	NM_001193425	NP_001180354	Coding	chr10:14878865 plus strand	914112
SUV39H2	NM_001193426	NP_001180355	Coding	chr10:14878782 plus strand	914111
SUV39H2	NM_001193427	NP_001180356	Coding	chr10:14878865 plus strand	914112
SUV39H2	NM_024670	NP_078946	Coding	chr10:14878899 plus strand	914113
SVIL	NM_003174	NP_003165	Coding	chr10:29735801 minus strand	914114
SVIL	NM_021738	NP_068506	Coding	chr10:29634972 minus strand	914115
SYCE1	NM_001143763	NP_001137235	Coding	chr10:133565634 minus strand	914116

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SYCE1	NM_001143764	NP_001137236	Coding	chr10:133565634 minus strand	914116
SYCE1	NM_130784	NP_570140	Coding	chr10:133569372 minus strand	914117
SYNPO2L	NM_001114133	NP_001107605	Coding	chr10:73656105 minus strand	914118
SYNPO2L	NM_024875	NP_079151	Coding	chr10:73651039 minus strand	914119
SYT15	NM_031912	NP_114118	Coding	chr10:46579015 plus strand	914120
SYT15	NM_031912	NP_114118	Coding	chr10:47762793 minus strand	914121
SYT15	NM_181519	NP_852660	Coding	chr10:46579015 plus strand	914120
SYT15	NM_181519	NP_852660	Coding	chr10:47762793 minus strand	914121
TACC2	NM_001291876	NP_001278805	Coding	chr10:121989173 plus strand	914122
TACC2	NM_001291877	NP_001278806	Coding	chr10:121989173 plus strand	914122
TACC2	NM_001291878	NP_001278807	Coding	chr10:122163425 plus strand	914123
TACC2	NM_001291879	NP_001278808	Coding	chr10:122113038 plus strand	914124
TACC2	NM_006997	NP_008928	Coding	chr10:122163425 plus strand	914123
TACC2	NM_206860	NP_996742	Coding	chr10:122163425 plus strand	914123
TACC2	NM_206861	NP_996743	Coding	chr10:121989173 plus strand	914122
TACC2	NM_206862	NP_996744	Coding	chr10:121989173 plus strand	914122
TACR2	NM_001057	NP_001048	Coding	chr10:69416918 minus strand	914125
TAF3	NM_031923	NP_114129	Coding	chr10:7818503 plus strand	914126
TAF5	NM_006951	NP_008882	Coding	chr10:103367966 plus strand	914127
TBATA	NM_152710	NP_689923	Coding	chr10:70785401 minus strand	914128
TBC1D12	NM_015188	NP_056003	Coding	chr10:94402428 plus strand	914129
TCERG1L	NM_174937	NP_777597	Coding	chr10:131311721 minus strand	914130
TCF7L2	NM_001146274	NP_001139746	Coding	chr10:112950249 plus strand	914131
TCF7L2	NM_001146283	NP_001139755	Coding	chr10:112950249 plus strand	914131
TCF7L2	NM_001146284	NP_001139756	Coding	chr10:112950249 plus strand	914131
TCF7L2	NM_001146285	NP_001139757	Coding	chr10:112950249 plus strand	914131
TCF7L2	NM_001146286	NP_001139758	Coding	chr10:112950249 plus strand	914131
TCF7L2	NM_001198525	NP_001185454	Coding	chr10:112950249 plus	914131

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				strand	
TCF7L2	NM_001198526	NP_001185455	Coding	chr10:112950249 plus strand	914131
TCF7L2	NM_001198527	NP_001185456	Coding	chr10:112950249 plus strand	914131
TCF7L2	NM_001198528	NP_001185457	Coding	chr10:112950249 plus strand	914131
TCF7L2	NM_001198529	NP_001185458	Coding	chr10:112950249 plus strand	914131
TCF7L2	NM_001198530	NP_001185459	Coding	chr10:112950249 plus strand	914131
TCF7L2	NM_001198531	NP_001185460	Coding	chr10:112950249 plus strand	914131
TCF7L2	NM_030756	NP_110383	Coding	chr10:112950249 plus strand	914131
TCTN3	NM_001143973	NP_001137445	Coding	chr10:95694143 minus strand	914132
TCTN3	NM_015631	NP_056446	Coding	chr10:95694143 minus strand	914132
TDRD1	NM_198795	NP_942090	Coding	chr10:114179269 plus strand	914133
TECTB	NM_058222	NP_478129	Coding	chr10:112283655 plus strand	914134
TET1	NM_030625	NP_085128	Coding	chr10:68560359 plus strand	914135
TEX36	NM_001128202	NP_001121674	Coding	chr10:125683144 minus strand	914136
TFAM	NM_001270782	NP_001257711	Coding	chr10:58385142 plus strand	914137
TFAM	NM_003201	NP_003192	Coding	chr10:58385142 plus strand	914137
THNSL1	NM_024838	NP_079114	Coding	chr10:25016578 plus strand	914138
TIAL1	NM_001033925	NP_001029097	Coding	chr10:119597029 minus strand	914139
TIAL1	NM_003252	NP_003243	Coding	chr10:119597029 minus strand	914139
TIMM23	NM_006327	NP_006318	Coding	chr10:45972452 plus strand	914140
TIMM23B	NM_001290117	NP_001277046	Coding	chr10:49942032 plus strand	914141
TIMM23B	NM_001290118	NP_001277047	Coding	chr10:49942032 plus strand	914141
TLL2	NM_012465	NP_036597	Coding	chr10:96513926 minus strand	914142
TLX1	NM_001195517	NP_001182446	Coding	chr10:101131303 plus strand	914143
TLX1	NM_005521	NP_005512	Coding	chr10:101131303 plus strand	914143
TLX1NB	NM_001085398	NP_001078867	Coding	chr10:101131146 minus strand	914144
TM9SF3	NM_020123	NP_064508	Coding	chr10:96587052 minus strand	914145
TMEM180	NM_024789	NP_079065	Coding	chr10:102461412 plus	914146

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				strand	
TMEM236	NM_001098844	NP_001092314	Coding	chr10:17752260 plus strand	914147
TMEM254	NM_001270367	NP_001257296	Coding	chr10:80079022 plus strand	914148
TMEM254	NM_001270368	NP_001257297	Coding	chr10:80079022 plus strand	914148
TMEM254	NM_001270369	NP_001257298	Coding	chr10:80079022 plus strand	914148
TMEM254	NM_001270370	NP_001257299	Coding	chr10:80078645 plus strand	914149
TMEM254	NM_001270371	NP_001257300	Coding	chr10:80078645 plus strand	914149
TMEM254	NM_001270372	NP_001257301	Coding	chr10:80078645 plus strand	914149
TMEM254	NM_001270373	NP_001257302	Coding	chr10:80078645 plus strand	914149
TMEM254	NM_001270374	NP_001257303	Coding	chr10:80079244 plus strand	914150
TMEM254	NM_025125	NP_079401	Coding	chr10:80078645 plus strand	914149
TMEM26	NM_178505	NP_848600	Coding	chr10:61453450 minus strand	914151
TMEM72	NM_001123376	NP_001116848	Coding	chr10:44911315 plus strand	914152
TNKS2	NM_025235	NP_079511	Coding	chr10:91798393 plus strand	914153
TRDMT1	NM_004412	NP_004403	Coding	chr10:17202071 minus strand	914154
TRIM8	NM_030912	NP_112174	Coding	chr10:102644494 plus strand	914155
TRUB1	NM_139169	NP_631908	Coding	chr10:114938192 plus strand	914156
TSPAN14	NM_001128309	NP_001121781	Coding	chr10:80454281 plus strand	914157
TSPAN14	NM_030927	NP_112189	Coding	chr10:80454281 plus strand	914157
TSPAN15	NM_012339	NP_036471	Coding	chr10:69451469 plus strand	914158
TUBAL3	NM_001171864	NP_001165335	Coding	chr10:5404830 minus strand	914159
TUBAL3	NM_024803	NP_079079	Coding	chr10:5404830 minus strand	914159
TUBB8	NM_177987	NP_817124	Coding	chr10:49238 minus strand	914160
TUBGCP2	NM_001256617	NP_001243546	Coding	chr10:133309156 minus strand	914161
TUBGCP2	NM_001256618	NP_001243547	Coding	chr10:133309156 minus strand	914161
TUBGCP2	NM_006659	NP_006650	Coding	chr10:133309156 minus strand	914161
TYSND1	NM_001040273	NP_001035363	Coding	chr10:70146740 minus strand	914162
TYSND1	NM_173555	NP_775826	Coding	chr10:70146740 minus strand	914162

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UBE2D1	NM_001204880	NP_001191809	Coding	chr10:58334978 plus strand	914163
UBE2D1	NM_003338	NP_003329	Coding	chr10:58334978 plus strand	914163
UBTD1	NM_024954	NP_079230	Coding	chr10:97498881 plus strand	914164
UCMA	NM_145314	NP_660357	Coding	chr10:13234328 minus strand	914165
UCN3	NM_053049	NP_444277	Coding	chr10:5365012 plus strand	914166
UNC5B	NM_001244889	NP_001231818	Coding	chr10:71212534 plus strand	914167
UNC5B	NM_170744	NP_734465	Coding	chr10:71212534 plus strand	914167
UPF2	NM_015542	NP_056357	Coding	chr10:12042841 minus strand	914168
UPF2	NM_080599	NP_542166	Coding	chr10:12043170 minus strand	914169
UROS	NM_000375	NP_000366	Coding	chr10:125823268 minus strand	914170
USMG5	NM_001206426	NP_001193355	Coding	chr10:103396513 minus strand	914171
USMG5	NM_001206427	NP_001193356	Coding	chr10:103396513 minus strand	914171
USMG5	NM_032747	NP_116136	Coding	chr10:103396513 minus strand	914171
USP54	NM_152586	NP_689799	Coding	chr10:73575675 minus strand	914172
USP6NL	NM_001080491	NP_001073960	Coding	chr10:11532280 minus strand	914173
USP6NL	NM_014688	NP_055503	Coding	chr10:11611789 minus strand	914174
UTF1	NM_003577	NP_003568	Coding	chr10:133230273 plus strand	914175
VAX1	NM_001112704	NP_001106175	Coding	chr10:117138301 minus strand	914176
VAX1	NM_199131	NP_954582	Coding	chr10:117138301 minus strand	914176
VCL	NM_003373	NP_003364	Coding	chr10:73998113 plus strand	914177
VCL	NM_014000	NP_054706	Coding	chr10:73998113 plus strand	914177
VDAC2	NM_001184783	NP_001171712	Coding	chr10:75210541 plus strand	914178
VDAC2	NM_001184823	NP_001171752	Coding	chr10:75210153 plus strand	914179
VDAC2	NM_003375	NP_003366	Coding	chr10:75210541 plus strand	914178
VENTX	NM_014468	NP_055283	Coding	chr10:133237903 plus strand	914180
VIM	NM_003380	NP_003371	Coding	chr10:17228258 plus strand	914181
VPS26A	NM_001035260	NP_001030337	Coding	chr10:69124151 plus strand	914182
VPS26A	NM_004896	NP_004887	Coding	chr10:69124151 plus	914182

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				strand	
VSTM4	NM_001031746	NP_001026916	Coding	chr10:49115532 minus strand	914183
VSTM4	NM_144984	NP_659421	Coding	chr10:49115532 minus strand	914183
VTI1A	NM_145206	NP_660207	Coding	chr10:112446997 plus strand	914184
VWA2	NM_001272046	NP_001258975	Coding	chr10:114239253 plus strand	914185
WAC	NM_016628	NP_057712	Coding	chr10:28533491 plus strand	914186
WAC	NM_100264	NP_567822	Coding	chr10:28532587 plus strand	914187
WAC	NM_100486	NP_567823	Coding	chr10:28533491 plus strand	914186
WAPAL	NM_015045	NP_055860	Coding	chr10:86521784 minus strand	914188
WBP1L	NM_001083913	NP_001077382	Coding	chr10:102743969 plus strand	914189
WBP1L	NM_017787	NP_060257	Coding	chr10:102776130 plus strand	914190
WDFY4	NM_020945	NP_065996	Coding	chr10:48685472 plus strand	914191
WDR11	NM_018117	NP_060587	Coding	chr10:120851174 plus strand	914192
WDR37	NM_014023	NP_054742	Coding	chr10:1056835 plus strand	914193
WNT8B	NM_003393	NP_003384	Coding	chr10:100463054 plus strand	914194
XPNPEP1	NM_001167604	NP_001161076	Coding	chr10:109923553 minus strand	914195
XPNPEP1	NM_020383	NP_065116	Coding	chr10:109923553 minus strand	914195
YME1L1	NM_001253866	NP_001240795	Coding	chr10:27154420 minus strand	914196
YME1L1	NM_014263	NP_055078	Coding	chr10:27154420 minus strand	914196
YME1L1	NM_139312	NP_647473	Coding	chr10:27154420 minus strand	914196
ZCCHC24	NM_153367	NP_699198	Coding	chr10:79445627 minus strand	914197
ZDHHC16	NM_001287803	NP_001274732	Coding	chr10:97446130 plus strand	914198
ZDHHC16	NM_001287804	NP_001274733	Coding	chr10:97446130 plus strand	914198
ZDHHC16	NM_032327	NP_115703	Coding	chr10:97446130 plus strand	914198
ZDHHC16	NM_198043	NP_932160	Coding	chr10:97446130 plus strand	914198
ZDHHC16	NM_198044	NP_932161	Coding	chr10:97446130 plus strand	914198
ZDHHC16	NM_198045	NP_932162	Coding	chr10:97446130 plus strand	914198
ZDHHC16	NM_198046	NP_932163	Coding	chr10:97446130 plus strand	914198

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ZDHHC6	NM_022494	NP_071939	Coding	chr10:112446914 minus strand	914199
ZEB1	NM_001128128	NP_001121600	Coding	chr10:31321134 plus strand	914200
ZEB1	NM_001174093	NP_001167564	Coding	chr10:31319171 plus strand	914201
ZEB1	NM_001174094	NP_001167565	Coding	chr10:31321134 plus strand	914200
ZEB1	NM_001174095	NP_001167566	Coding	chr10:31319171 plus strand	914201
ZEB1	NM_001174096	NP_001167567	Coding	chr10:31319171 plus strand	914201
ZEB1	NM_030751	NP_110378	Coding	chr10:31319171 plus strand	914201
ZFAND4	NM_001128324	NP_001121796	Coding	chr10:45672813 minus strand	914202
ZFAND4	NM_001282905	NP_001269834	Coding	chr10:45672732 minus strand	914203
ZFAND4	NM_001282906	NP_001269835	Coding	chr10:45672813 minus strand	914202
ZFAND4	NM_174890	NP_777550	Coding	chr10:45672732 minus strand	914203
ZFYVE27	NM_001002261	NP_001002261	Coding	chr10:97738476 plus strand	914204
ZFYVE27	NM_001002262	NP_001002262	Coding	chr10:97737120 plus strand	914205
ZFYVE27	NM_001174119	NP_001167590	Coding	chr10:97737120 plus strand	914205
ZFYVE27	NM_001174120	NP_001167591	Coding	chr10:97737120 plus strand	914205
ZFYVE27	NM_001174121	NP_001167592	Coding	chr10:97737120 plus strand	914205
ZFYVE27	NM_001174122	NP_001167593	Coding	chr10:97737120 plus strand	914205
ZFYVE27	NM_144588	NP_653189	Coding	chr10:97737120 plus strand	914205
ZMIZ1	NM_020338	NP_065071	Coding	chr10:79069034 plus strand	914206
ZMYND11	NM_001202464	NP_001189393	Coding	chr10:135483 plus strand	914207
ZMYND11	NM_001202465	NP_001189394	Coding	chr10:134483 plus strand	914208
ZMYND11	NM_001202466	NP_001189395	Coding	chr10:134483 plus strand	914208
ZMYND11	NM_001202467	NP_001189396	Coding	chr10:179993 plus strand	914209
ZMYND11	NM_001202468	NP_001189397	Coding	chr10:179993 plus strand	914209
ZMYND11	NM_006624	NP_006615	Coding	chr10:134464 plus strand	914210
ZMYND11	NM_212479	NP_997644	Coding	chr10:134483 plus strand	914208
ZNF22	NM_006963	NP_008894	Coding	chr10:45000824 plus strand	914211
ZNF239	NM_001099282	NP_001092752	Coding	chr10:43574617 minus strand	914212
ZNF239	NM_001099283	NP_001092753	Coding	chr10:43574618 minus strand	914213
ZNF239	NM_001099284	NP_001092754	Coding	chr10:43574618 minus	914213

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				strand	
ZNF239	NM_005674	NP_005665	Coding	chr10:43568459 minus strand	914214
ZNF248	NM_001267597	NP_001254526	Coding	chr10:37858084 minus strand	914215
ZNF248	NM_001267605	NP_001254534	Coding	chr10:37857636 minus strand	914216
ZNF248	NM_001267606	NP_001254535	Coding	chr10:37857636 minus strand	914216
ZNF248	NM_001267607	NP_001254536	Coding	chr10:37857636 minus strand	914216
ZNF248	NM_021045	NP_066383	Coding	chr10:37857636 minus strand	914216
ZNF25	NM_145011	NP_659448	Coding	chr10:37976525 minus strand	914217
ZNF32	NM_001005368	NP_001005368	Coding	chr10:43648704 minus strand	914218
ZNF32	NM_006973	NP_008904	Coding	chr10:43648878 minus strand	914219
ZNF33A	NM_001278170	NP_001265099	Coding	chr10:38010649 plus strand	914220
ZNF33A	NM_001278171	NP_001265100	Coding	chr10:38010649 plus strand	914220
ZNF33A	NM_001278173	NP_001265102	Coding	chr10:38010649 plus strand	914220
ZNF33A	NM_001278174	NP_001265103	Coding	chr10:38010649 plus strand	914220
ZNF33A	NM_001278175	NP_001265104	Coding	chr10:38010649 plus strand	914220
ZNF33A	NM_001278176	NP_001265105	Coding	chr10:38010649 plus strand	914220
ZNF33A	NM_001278177	NP_001265106	Coding	chr10:38010649 plus strand	914220
ZNF33A	NM_001278178	NP_001265107	Coding	chr10:38010649 plus strand	914220
ZNF33A	NM_001278179	NP_001265108	Coding	chr10:38010649 plus strand	914220
ZNF33A	NM_006954	NP_008885	Coding	chr10:38010649 plus strand	914220
ZNF33A	NM_006974	NP_008905	Coding	chr10:38010649 plus strand	914220
ZNF33B	NM_006955	NP_008886	Coding	chr10:42638544 minus strand	914221
ZNF365	NM_014951	NP_055766	Coding	chr10:62374156 plus strand	914222
ZNF365	NM_199450	NP_955522	Coding	chr10:62374156 plus strand	914222
ZNF365	NM_199451	NP_955523	Coding	chr10:62374156 plus strand	914222
ZNF365	NM_199452	NP_955524	Coding	chr10:62520447 plus strand	914223
ZNF37A	NM_001007094	NP_001007095	Coding	chr10:38094335 plus strand	914224
ZNF37A	NM_001178101	NP_001171572	Coding	chr10:38094335 plus	914224

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				strand	
ZNF37A	NM_003421	NP_003412	Coding	chr10:38094335 plus strand	914224
ZNF438	NM_001143766	NP_001137238	Coding	chr10:31031937 minus strand	914225
ZNF438	NM_001143767	NP_001137239	Coding	chr10:31031937 minus strand	914225
ZNF438	NM_001143768	NP_001137240	Coding	chr10:31031937 minus strand	914225
ZNF438	NM_001143769	NP_001137241	Coding	chr10:30999517 minus strand	914226
ZNF438	NM_001143770	NP_001137242	Coding	chr10:31031937 minus strand	914225
ZNF438	NM_001143771	NP_001137243	Coding	chr10:31031937 minus strand	914225
ZNF438	NM_182755	NP_877432	Coding	chr10:31031937 minus strand	914225
ZNF485	NM_145312	NP_660355	Coding	chr10:43606406 plus strand	914227
ZNF488	NM_153034	NP_694579	Coding	chr10:47384273 minus strand	914228
ZNF503	NM_032772	NP_116161	Coding	chr10:75401894 minus strand	914229
ZNF511	NM_145806	NP_665805	Coding	chr10:133308918 plus strand	914230
ZNF518A	NM_001278524	NP_001265453	Coding	chr10:96129714 plus strand	914231
ZNF518A	NM_001278525	NP_001265454	Coding	chr10:96130055 plus strand	914232
ZNF518A	NM_001278526	NP_001265455	Coding	chr10:96129714 plus strand	914231
ZNF518A	NM_014803	NP_055618	Coding	chr10:96129714 plus strand	914231
ZRANB1	NM_017580	NP_060050	Coding	chr10:124942122 plus strand	914233
ZSWIM8	NM_001242487	NP_001229416	Coding	chr10:73785623 plus strand	914234
ZSWIM8	NM_001242488	NP_001229417	Coding	chr10:73785623 plus strand	914234
ZSWIM8	NM_015037	NP_055852	Coding	chr10:73785623 plus strand	914234
ZWINT	NM_001005413	NP_001005413	Coding	chr10:56361273 minus strand	914235
ZWINT	NM_007057	NP_008988	Coding	chr10:56361273 minus strand	914235
ZWINT	NM_032997	NP_127490	Coding	chr10:56361273 minus strand	914235
AAMDC	NM_024684	NP_078960	Coding	chr11:77821161 plus strand	914236
AASDHPPT	NM_015423	NP_056238	Coding	chr11:106077564 plus strand	914237
ABCC8	NM_000352	NP_000343	Coding	chr11:17476845 minus strand	914238
ABCC8	NM_001287174	NP_001274103	Coding	chr11:17476845 minus	914238

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				strand	
ABCG4	NM_001142505	NP_001135977	Coding	chr11:119149588 plus strand	914239
ABCG4	NM_022169	NP_071452	Coding	chr11:119149039 plus strand	914240
ABTB2	NM_145804	NP_665803	Coding	chr11:34358008 minus strand	914241
ACAD8	NM_014384	NP_055199	Coding	chr11:134253539 plus strand	914242
ACAT1	NM_000019	NP_000010	Coding	chr11:108121530 plus strand	914243
ACCS	NM_001127219	NP_001120691	Coding	chr11:44066178 plus strand	914244
ACCS	NM_032592	NP_115981	Coding	chr11:44066261 plus strand	914245
ACCSL	NM_001031854	NP_001027025	Coding	chr11:44047980 plus strand	914246
ACER3	NM_001300953	NP_001287882	Coding	chr11:76860872 plus strand	914247
ACER3	NM_001300954	NP_001287883	Coding	chr11:76860872 plus strand	914247
ACER3	NM_001300955	NP_001287884	Coding	chr11:76860872 plus strand	914247
ACER3	NM_018367	NP_060837	Coding	chr11:76860872 plus strand	914247
ACP2	NM_001302489	NP_001289418	Coding	chr11:47248628 minus strand	914248
ACP2	NM_001302490	NP_001289419	Coding	chr11:47248847 minus strand	914249
ACP2	NM_001302491	NP_001289420	Coding	chr11:47248847 minus strand	914249
ACP2	NM_001302492	NP_001289421	Coding	chr11:47248847 minus strand	914249
ACP2	NM_001610	NP_001601	Coding	chr11:47248847 minus strand	914249
ACRV1	NM_001612	NP_001603	Coding	chr11:125680898 minus strand	914250
ACRV1	NM_020069	NP_064454	Coding	chr11:125680898 minus strand	914250
ACRV1	NM_020107	NP_064492	Coding	chr11:125680898 minus strand	914250
ACRV1	NM_020108	NP_064493	Coding	chr11:125680898 minus strand	914250
ACTN3	NM_001104	NP_001095	Coding	chr11:66546840 plus strand	914251
ACTN3	NM_001258371	NP_001245300	Coding	chr11:66546394 plus strand	914252
ACY3	NM_080658	NP_542389	Coding	chr11:67650659 minus strand	914253
ADAMTS15	NM_139055	NP_620686	Coding	chr11:130448973 plus strand	914254
ADAMTS8	NM_007037	NP_008968	Coding	chr11:130428644 minus strand	914255
ADM	NM_001124	NP_001115	Coding	chr11:10304979 plus	914256

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				strand	
ADRBK1	NM_001619	NP_001610	Coding	chr11:67266433 plus strand	914257
AGBL2	NM_024783	NP_079059	Coding	chr11:47715376 minus strand	914258
AHNAK	NM_001620	NP_001611	Coding	chr11:62546860 minus strand	914259
AHNAK	NM_024060	NP_076965	Coding	chr11:62546860 minus strand	914259
AIP	NM_001302959	NP_001289888	Coding	chr11:67483515 plus strand	914260
AIP	NM_001302960	NP_001289889	Coding	chr11:67483028 plus strand	914261
AIP	NM_003977	NP_003968	Coding	chr11:67483028 plus strand	914261
AKIP1	NM_001206646	NP_001193575	Coding	chr11:8911153 plus strand	914262
AKIP1	NM_001206647	NP_001193576	Coding	chr11:8911153 plus strand	914262
AKIP1	NM_001206648	NP_001193577	Coding	chr11:8911153 plus strand	914262
AKIP1	NM_020642	NP_065693	Coding	chr11:8911153 plus strand	914262
ALDH3B1	NM_000694	NP_000685	Coding	chr11:68010304 plus strand	914263
ALDH3B1	NM_001030010	NP_001025181	Coding	chr11:68010304 plus strand	914263
ALDH3B1	NM_001161473	NP_001154945	Coding	chr11:68008546 plus strand	914264
ALDH3B1	NM_001290058	NP_001276987	Coding	chr11:68010304 plus strand	914263
ALDH3B1	NM_001290059	NP_001276988	Coding	chr11:68010304 plus strand	914263
ALDH3B2	NM_000695	NP_000686	Coding	chr11:67674631 minus strand	914265
ALDH3B2	NM_001031615	NP_001026786	Coding	chr11:67681214 minus strand	914266
ALG8	NM_001007027	NP_001007028	Coding	chr11:78139653 minus strand	914267
ALG8	NM_024079	NP_076984	Coding	chr11:78139653 minus strand	914267
ALG9	NM_001077690	NP_001071158	Coding	chr11:111871581 minus strand	914268
ALG9	NM_001077691	NP_001071159	Coding	chr11:111871281 minus strand	914269
ALG9	NM_001077692	NP_001071160	Coding	chr11:111871281 minus strand	914269
ALG9	NM_024740	NP_079016	Coding	chr11:111871581 minus strand	914268
ALKBH3	NM_139178	NP_631917	Coding	chr11:43880806 plus strand	914270
ALKBH8	NM_001301010	NP_001287939	Coding	chr11:107565735 minus strand	914271
ALKBH8	NM_138775	NP_620130	Coding	chr11:107565735 minus strand	914271
ALX4	NM_021926	NP_068745	Coding	chr11:44310166 minus strand	914272

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AMBRA1	NM_001267782	NP_001254711	Coding	chr11:46594069 minus strand	914273
AMBRA1	NM_001267783	NP_001254712	Coding	chr11:46594069 minus strand	914273
AMBRA1	NM_001300731	NP_001287660	Coding	chr11:46594069 minus strand	914273
AMBRA1	NM_017749	NP_060219	Coding	chr11:46591364 minus strand	914274
AMICA1	NM_001098526	NP_001091996	Coding	chr11:118225094 minus strand	914275
AMICA1	NM_001286570	NP_001273499	Coding	chr11:118225094 minus strand	914275
AMICA1	NM_001286571	NP_001273500	Coding	chr11:118213359 minus strand	914276
AMICA1	NM_153206	NP_694938	Coding	chr11:118213359 minus strand	914276
AMOTL1	NM_001301007	NP_001287936	Coding	chr11:94768341 plus strand	914277
AMOTL1	NM_130847	NP_570899	Coding	chr11:94768341 plus strand	914277
AMPD3	NM_000480	NP_000471	Coding	chr11:10450676 plus strand	914278
AMPD3	NM_001025389	NP_001020560	Coding	chr11:10455118 plus strand	914279
AMPD3	NM_001025390	NP_001020561	Coding	chr11:10455933 plus strand	914280
AMPD3	NM_001172430	NP_001165901	Coding	chr11:10461130 plus strand	914281
AMPD3	NM_001172431	NP_001165902	Coding	chr11:10450320 plus strand	914282
ANAPC15	NM_001278485	NP_001265414	Coding	chr11:72112776 minus strand	914283
ANAPC15	NM_001278486	NP_001265415	Coding	chr11:72112776 minus strand	914283
ANAPC15	NM_001278487	NP_001265416	Coding	chr11:72112776 minus strand	914283
ANAPC15	NM_001278488	NP_001265417	Coding	chr11:72112776 minus strand	914283
ANAPC15	NM_001278489	NP_001265418	Coding	chr11:72112776 minus strand	914283
ANAPC15	NM_001278490	NP_001265419	Coding	chr11:72112776 minus strand	914283
ANAPC15	NM_001278491	NP_001265420	Coding	chr11:72112298 minus strand	914284
ANAPC15	NM_001278492	NP_001265421	Coding	chr11:72112272 minus strand	914285
ANAPC15	NM_001278493	NP_001265422	Coding	chr11:72112272 minus strand	914285
ANAPC15	NM_001278494	NP_001265423	Coding	chr11:72112232 minus strand	914286
ANAPC15	NM_014042	NP_054761	Coding	chr11:72112776 minus strand	914283
ANGPTL5	NM_178127	NP_835228	Coding	chr11:101916522 minus strand	914287

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ANKK1	NM_178510	NP_848605	Coding	chr11:113387790 plus strand	914288
ANKRD13D	NM_207354	NP_997237	Coding	chr11:67289290 plus strand	914289
ANKRD42	NM_001300972	NP_001287901	Coding	chr11:83193738 plus strand	914290
ANKRD42	NM_001300973	NP_001287902	Coding	chr11:83193738 plus strand	914290
ANKRD42	NM_001300975	NP_001287904	Coding	chr11:83193738 plus strand	914290
ANKRD42	NM_001300976	NP_001287905	Coding	chr11:83193738 plus strand	914290
ANKRD42	NM_001300977	NP_001287906	Coding	chr11:83193738 plus strand	914290
ANKRD42	NM_182603	NP_872409	Coding	chr11:83193738 plus strand	914290
ANKRD49	NM_017704	NP_060174	Coding	chr11:94493986 plus strand	914291
ANO1	NM_018043	NP_060513	Coding	chr11:70078301 plus strand	914292
ANO3	NM_031418	NP_113606	Coding	chr11:26332130 plus strand	914293
ANO5	NM_001142649	NP_001136121	Coding	chr11:22193175 plus strand	914294
ANO5	NM_213599	NP_998764	Coding	chr11:22193175 plus strand	914294
ANO9	NM_001012302	NP_001012302	Coding	chr11:442011 minus strand	914295
AP2A2	NM_001242837	NP_001229766	Coding	chr11:925808 plus strand	914296
AP2A2	NM_012305	NP_036437	Coding	chr11:925808 plus strand	914296
AP5B1	NM_138368	NP_612377	Coding	chr11:65780591 minus strand	914297
APBB1	NM_001164	NP_001155	Coding	chr11:6419111 minus strand	914298
APBB1	NM_001257319	NP_001244248	Coding	chr11:6404933 minus strand	914299
APBB1	NM_001257320	NP_001244249	Coding	chr11:6405663 minus strand	914300
APBB1	NM_001257321	NP_001244250	Coding	chr11:6405417 minus strand	914301
APBB1	NM_001257323	NP_001244252	Coding	chr11:6404933 minus strand	914299
APBB1	NM_001257325	NP_001244254	Coding	chr11:6404691 minus strand	914302
APBB1	NM_001257326	NP_001244255	Coding	chr11:6405417 minus strand	914301
APBB1	NM_145689	NP_663722	Coding	chr11:6419472 minus strand	914303
API5	NM_001142930	NP_001136402	Coding	chr11:43311954 plus strand	914304
API5	NM_001142931	NP_001136403	Coding	chr11:43311954 plus strand	914304
API5	NM_001243747	NP_001230676	Coding	chr11:43311954 plus strand	914304

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API5	NM_006595	NP_006586	Coding	chr11:43311954 plus strand	914304
APIP	NM_015957	NP_057041	Coding	chr11:34916411 minus strand	914305
APLNR	NM_005161	NP_005152	Coding	chr11:57237453 minus strand	914306
APLP2	NM_001142276	NP_001135748	Coding	chr11:130069820 plus strand	914307
APLP2	NM_001142277	NP_001135749	Coding	chr11:130069820 plus strand	914307
APLP2	NM_001142278	NP_001135750	Coding	chr11:130069820 plus strand	914307
APLP2	NM_001243299	NP_001230228	Coding	chr11:130070567 plus strand	914308
APLP2	NM_001642	NP_001633	Coding	chr11:130069820 plus strand	914307
APOA1	NM_000039	NP_000030	Coding	chr11:116837622 minus strand	914309
APOA4	NM_000482	NP_000473	Coding	chr11:116823295 minus strand	914310
APOA5	NM_001166598	NP_001160070	Coding	chr11:116792420 minus strand	914311
APOA5	NM_052968	NP_443200	Coding	chr11:116792420 minus strand	914311
APOC3	NM_000040	NP_000031	Coding	chr11:116829907 plus strand	914312
AQP11	NM_173039	NP_766627	Coding	chr11:77589634 plus strand	914313
ARAP1	NM_001040118	NP_001035207	Coding	chr11:72752389 minus strand	914314
ARAP1	NM_001135190	NP_001128662	Coding	chr11:72722358 minus strand	914315
ARAP1	NM_015242	NP_056057	Coding	chr11:72722358 minus strand	914315
ARCN1	NM_001142281	NP_001135753	Coding	chr11:118572386 plus strand	914316
ARCN1	NM_001655	NP_001646	Coding	chr11:118572386 plus strand	914316
ARFGAP2	NM_001242832	NP_001229761	Coding	chr11:47177125 minus strand	914317
ARFGAP2	NM_032389	NP_115765	Coding	chr11:47177125 minus strand	914317
ARFIP2	NM_001242854	NP_001229783	Coding	chr11:6481479 minus strand	914318
ARFIP2	NM_001242855	NP_001229784	Coding	chr11:6481479 minus strand	914318
ARFIP2	NM_001242856	NP_001229785	Coding	chr11:6481479 minus strand	914318
ARFIP2	NM_012402	NP_036534	Coding	chr11:6481479 minus strand	914318
ARHGAP1	NM_004308	NP_004299	Coding	chr11:46700665 minus strand	914319
ARHGAP20	NM_001258415	NP_001245344	Coding	chr11:110712050 minus strand	914320

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ARHGAP20	NM_001258416	NP_001245345	Coding	chr11:110713189 minus strand	914321
ARHGAP20	NM_001258417	NP_001245346	Coding	chr11:110712728 minus strand	914322
ARHGAP20	NM_001258418	NP_001245347	Coding	chr11:110713189 minus strand	914321
ARHGAP20	NM_020809	NP_065860	Coding	chr11:110712728 minus strand	914322
ARHGAP32	NM_001142685	NP_001136157	Coding	chr11:129192198 minus strand	914323
ARHGAP32	NM_014715	NP_055530	Coding	chr11:129024193 minus strand	914324
ARHGAP42	NM_152432	NP_689645	Coding	chr11:100687675 plus strand	914325
ARHGEF12	NM_001198665	NP_001185594	Coding	chr11:120336908 plus strand	914326
ARHGEF12	NM_001301084	NP_001288013	Coding	chr11:120385293 plus strand	914327
ARHGEF12	NM_015313	NP_056128	Coding	chr11:120336908 plus strand	914326
ARHGEF17	NM_014786	NP_055601	Coding	chr11:73308617 plus strand	914328
ARL14EP	NM_152316	NP_689529	Coding	chr11:30323098 plus strand	914329
ARL2	NM_001199745	NP_001186674	Coding	chr11:65014112 plus strand	914330
ARL2	NM_001667	NP_001658	Coding	chr11:65014112 plus strand	914330
ARNTL	NM_001030272	NP_001025443	Coding	chr11:13277726 plus strand	914331
ARNTL	NM_001030273	NP_001025444	Coding	chr11:13277726 plus strand	914331
ARNTL	NM_001178	NP_001169	Coding	chr11:13277726 plus strand	914331
ARNTL	NM_001297719	NP_001284648	Coding	chr11:13277726 plus strand	914331
ARNTL	NM_001297722	NP_001284651	Coding	chr11:13277726 plus strand	914331
ARNTL	NM_001297724	NP_001284653	Coding	chr11:13277726 plus strand	914331
ARRB1	NM_004041	NP_004032	Coding	chr11:75351831 minus strand	914332
ARRB1	NM_020251	NP_064647	Coding	chr11:75351831 minus strand	914332
ART1	NM_004314	NP_004305	Coding	chr11:3645130 plus strand	914333
ART5	NM_001079536	NP_001073004	Coding	chr11:3642316 minus strand	914334
ART5	NM_001297668	NP_001284597	Coding	chr11:3642316 minus strand	914334
ART5	NM_053017	NP_443750	Coding	chr11:3642316 minus strand	914334
ASCL2	NM_005170	NP_005161	Coding	chr11:2270952 minus strand	914335
ASCL3	NM_020646	NP_065697	Coding	chr11:8943033 minus	914336

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				strand	
ASRGL1	NM_001083926	NP_001077395	Coding	chr11:62337301 plus strand	914337
ASRGL1	NM_025080	NP_079356	Coding	chr11:62337301 plus strand	914337
ATG13	NM_001142673	NP_001136145	Coding	chr11:46617275 plus strand	914338
ATG13	NM_001205119	NP_001192048	Coding	chr11:46617275 plus strand	914338
ATG13	NM_001205120	NP_001192049	Coding	chr11:46617275 plus strand	914338
ATG13	NM_001205121	NP_001192050	Coding	chr11:46617275 plus strand	914338
ATG13	NM_001205122	NP_001192051	Coding	chr11:46617275 plus strand	914338
ATG13	NM_014741	NP_055556	Coding	chr11:46617275 plus strand	914338
ATG16L2	NM_033388	NP_203746	Coding	chr11:72814405 plus strand	914339
ATG2A	NM_015104	NP_055919	Coding	chr11:64917250 minus strand	914340
ATHL1	NM_025092	NP_079368	Coding	chr11:289137 plus strand	914341
ATL3	NM_001290048	NP_001276977	Coding	chr11:63671974 minus strand	914342
ATL3	NM_015459	NP_056274	Coding	chr11:63671730 minus strand	914343
ATM	NM_000051	NP_000042	Coding	chr11:108222831 plus strand	914344
ATP5L	NM_006476	NP_006467	Coding	chr11:118401388 plus strand	914345
B3GAT1	NM_018644	NP_061114	Coding	chr11:134411918 minus strand	914346
B3GAT1	NM_054025	NP_473366	Coding	chr11:134411918 minus strand	914346
B3GAT3	NM_001288721	NP_001275650	Coding	chr11:62622175 minus strand	914347
B3GAT3	NM_001288722	NP_001275651	Coding	chr11:62622175 minus strand	914347
B3GAT3	NM_001288723	NP_001275652	Coding	chr11:62622175 minus strand	914347
B3GAT3	NM_012200	NP_036332	Coding	chr11:62622175 minus strand	914347
B3GNT1	NM_006876	NP_006867	Coding	chr11:66347690 minus strand	914348
B3GNT6	NM_138706	NP_619651	Coding	chr11:77034340 plus strand	914349
B4GALNT4	NM_178537	NP_848632	Coding	chr11:369794 plus strand	914350
BACE1	NM_001207048	NP_001193977	Coding	chr11:117295670 minus strand	914351
BACE1	NM_001207049	NP_001193978	Coding	chr11:117295670 minus strand	914351
BACE1	NM_012104	NP_036236	Coding	chr11:117316256 minus strand	914352

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BACE1	NM_138971	NP_620427	Coding	chr11:117316256 minus strand	914352
BACE1	NM_138972	NP_620428	Coding	chr11:117316256 minus strand	914352
BACE1	NM_138973	NP_620429	Coding	chr11:117316256 minus strand	914352
BAD	NM_004322	NP_004313	Coding	chr11:64284704 minus strand	914353
BAD	NM_032989	NP_116784	Coding	chr11:64284704 minus strand	914353
BANF1	NM_001143985	NP_001137457	Coding	chr11:66002078 plus strand	914354
BANF1	NM_003860	NP_003851	Coding	chr11:66002078 plus strand	914354
BARX2	NM_003658	NP_003649	Coding	chr11:129375985 plus strand	914355
BATF2	NM_001300807	NP_001287736	Coding	chr11:64990277 minus strand	914356
BATF2	NM_001300808	NP_001287737	Coding	chr11:64990277 minus strand	914356
BATF2	NM_138456	NP_612465	Coding	chr11:64997045 minus strand	914357
BBOX1	NM_003986	NP_003977	Coding	chr11:27040961 plus strand	914358
BBS1	NM_024649	NP_078925	Coding	chr11:66510647 plus strand	914359
BCL9L	NM_182557	NP_872363	Coding	chr11:118910904 minus strand	914360
BCO2	NM_001037290	NP_001032367	Coding	chr11:112176365 plus strand	914361
BCO2	NM_001256397	NP_001243326	Coding	chr11:112176365 plus strand	914361
BCO2	NM_001256398	NP_001243327	Coding	chr11:112175484 plus strand	914362
BCO2	NM_001256400	NP_001243329	Coding	chr11:112176365 plus strand	914361
BCO2	NM_031938	NP_114144	Coding	chr11:112175484 plus strand	914362
BDNF	NM_001143805	NP_001137277	Coding	chr11:27720779 minus strand	914363
BDNF	NM_001143806	NP_001137278	Coding	chr11:27720779 minus strand	914363
BDNF	NM_001143807	NP_001137279	Coding	chr11:27719747 minus strand	914364
BDNF	NM_001143808	NP_001137280	Coding	chr11:27701053 minus strand	914365
BDNF	NM_001143809	NP_001137281	Coding	chr11:27701053 minus strand	914365
BDNF	NM_001143810	NP_001137282	Coding	chr11:27701053 minus strand	914365
BDNF	NM_001143811	NP_001137283	Coding	chr11:27701053 minus strand	914365
BDNF	NM_001143812	NP_001137284	Coding	chr11:27700900 minus strand	914366

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BDNF	NM_001143813	NP_001137285	Coding	chr11:27700488 minus strand	914367
BDNF	NM_001143814	NP_001137286	Coding	chr11:27700488 minus strand	914367
BDNF	NM_001143816	NP_001137288	Coding	chr11:27659649 minus strand	914368
BDNF	NM_001709	NP_001700	Coding	chr11:27700488 minus strand	914367
BDNF	NM_170731	NP_733927	Coding	chr11:27722058 minus strand	914369
BDNF	NM_170732	NP_733928	Coding	chr11:27720779 minus strand	914363
BDNF	NM_170733	NP_733929	Coding	chr11:27701633 minus strand	914370
BDNF	NM_170734	NP_733930	Coding	chr11:27699667 minus strand	914371
BDNF	NM_170735	NP_733931	Coding	chr11:27659649 minus strand	914368
BEST1	NM_001139443	NP_001132915	Coding	chr11:61949883 plus strand	914372
BEST1	NM_001300786	NP_001287715	Coding	chr11:61949883 plus strand	914372
BEST1	NM_001300787	NP_001287716	Coding	chr11:61949883 plus strand	914372
BEST1	NM_004183	NP_004174	Coding	chr11:61949883 plus strand	914372
BET1L	NM_001098787	NP_001092257	Coding	chr11:207422 minus strand	914373
BET1L	NM_016526	NP_057610	Coding	chr11:207422 minus strand	914373
BIRC2	NM_001166	NP_001157	Coding	chr11:102347181 plus strand	914374
BIRC2	NM_001256163	NP_001243092	Coding	chr11:102347373 plus strand	914375
BIRC2	NM_001256166	NP_001243095	Coding	chr11:102347181 plus strand	914374
BIRC3	NM_001165	NP_001156	Coding	chr11:102317449 plus strand	914376
BIRC3	NM_182962	NP_892007	Coding	chr11:102317449 plus strand	914376
BLID	NM_001001786	NP_001001786	Coding	chr11:122116215 minus strand	914377
BRMS1	NM_001024957	NP_001020128	Coding	chr11:66345111 minus strand	914378
BRMS1	NM_015399	NP_056214	Coding	chr11:66345111 minus strand	914378
BRSK2	NM_001256627	NP_001243556	Coding	chr11:1389898 plus strand	914379
BRSK2	NM_001256629	NP_001243558	Coding	chr11:1389898 plus strand	914379
BRSK2	NM_001256630	NP_001243559	Coding	chr11:1411151 plus strand	914380
BRSK2	NM_001282218	NP_001269147	Coding	chr11:1410442 plus strand	914381
BRSK2	NM_003957	NP_003948	Coding	chr11:1389898 plus strand	914379
BSCL2	NM_001122955	NP_001116427	Coding	chr11:62707707 minus strand	914382
BSCL2	NM_001130702	NP_001124174	Coding	chr11:62706315 minus	914383

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				strand	
BSCL2	NM_032667	NP_116056	Coding	chr11:62706315 minus strand	914383
BSX	NM_001098169	NP_001091639	Coding	chr11:122981671 minus strand	914384
BTBD10	NM_001297741	NP_001284670	Coding	chr11:13463297 minus strand	914385
BTBD10	NM_001297742	NP_001284671	Coding	chr11:13440279 minus strand	914386
BTBD10	NM_032320	NP_115696	Coding	chr11:13463297 minus strand	914385
BTBD18	NM_001145101	NP_001138573	Coding	chr11:57751781 minus strand	914387
BTG4	NM_017589	NP_060059	Coding	chr11:111512354 minus strand	914388
BUD13	NM_001159736	NP_001153208	Coding	chr11:116772998 minus strand	914389
BUD13	NM_032725	NP_116114	Coding	chr11:116772998 minus strand	914389
C11orf1	NM_022761	NP_073598	Coding	chr11:111879223 plus strand	914390
C11orf16	NM_020643	NP_065694	Coding	chr11:8933006 minus strand	914391
C11orf21	NM_001142946	NP_001136418	Coding	chr11:2301913 minus strand	914392
C11orf24	NM_001300913	NP_001287842	Coding	chr11:68272001 minus strand	914393
C11orf24	NM_022338	NP_071733	Coding	chr11:68272001 minus strand	914393
C11orf30	NM_001300942	NP_001287871	Coding	chr11:76445024 plus strand	914394
C11orf30	NM_001300943	NP_001287872	Coding	chr11:76445024 plus strand	914394
C11orf30	NM_001300944	NP_001287873	Coding	chr11:76445024 plus strand	914394
C11orf30	NM_020193	NP_064578	Coding	chr11:76445024 plus strand	914394
C11orf31	NM_170746	NP_734467	Coding	chr11:57741249 plus strand	914395
C11orf40	NM_144663	NP_653264	Coding	chr11:4577820 minus strand	914396
C11orf42	NM_173525	NP_775796	Coding	chr11:6205567 plus strand	914397
C11orf44	NM_001271983	NP_001258912	Coding	chr11:130672955 plus strand	914398
C11orf45	NM_001256088	NP_001243017	Coding	chr11:128906069 minus strand	914399
C11orf45	NM_145013	NP_659450	Coding	chr11:128905697 minus strand	914400
C11orf49	NM_001003676	NP_001003676	Coding	chr11:46936688 plus strand	914401
C11orf49	NM_001003677	NP_001003677	Coding	chr11:46936688 plus strand	914401
C11orf49	NM_001003678	NP_001003678	Coding	chr11:46936688 plus strand	914401

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C11orf49	NM_001278222	NP_001265151	Coding	chr11:46936688 plus strand	914401
C11orf49	NM_024113	NP_077018	Coding	chr11:46936688 plus strand	914401
C11orf52	NM_080659	NP_542390	Coding	chr11:111918876 plus strand	914402
C11orf53	NM_198498	NP_940900	Coding	chr11:111255981 plus strand	914403
C11orf54	NM_001286067	NP_001272996	Coding	chr11:93741593 plus strand	914404
C11orf54	NM_001286068	NP_001272997	Coding	chr11:93741593 plus strand	914404
C11orf54	NM_001286069	NP_001272998	Coding	chr11:93741593 plus strand	914404
C11orf54	NM_001286070	NP_001272999	Coding	chr11:93741593 plus strand	914404
C11orf54	NM_001286071	NP_001273000	Coding	chr11:93741593 plus strand	914404
C11orf54	NM_014039	NP_054758	Coding	chr11:93741593 plus strand	914404
C11orf57	NM_001082969	NP_001076438	Coding	chr11:112074243 plus strand	914405
C11orf57	NM_001082970	NP_001076439	Coding	chr11:112074243 plus strand	914405
C11orf57	NM_001301017	NP_001287946	Coding	chr11:112074243 plus strand	914405
C11orf57	NM_001301019	NP_001287948	Coding	chr11:112074243 plus strand	914405
C11orf57	NM_001301021	NP_001287950	Coding	chr11:112074243 plus strand	914405
C11orf57	NM_018195	NP_060665	Coding	chr11:112074243 plus strand	914405
C11orf58	NM_014267	NP_055082	Coding	chr11:16738600 plus strand	914406
C11orf63	NM_024806	NP_079082	Coding	chr11:122882527 plus strand	914407
C11orf63	NM_199124	NP_954575	Coding	chr11:122882527 plus strand	914407
C11orf65	NM_152587	NP_689800	Coding	chr11:108467531 minus strand	914408
C11orf68	NM_001135635	NP_001129107	Coding	chr11:65919060 minus strand	914409
C11orf68	NM_031450	NP_113638	Coding	chr11:65919060 minus strand	914409
C11orf70	NM_001195005	NP_001181934	Coding	chr11:102047437 plus strand	914410
C11orf70	NM_032930	NP_116319	Coding	chr11:102047437 plus strand	914410
C11orf71	NM_001271562	NP_001258491	Coding	chr11:114400550 minus strand	914411
C11orf71	NM_019021	NP_061894	Coding	chr11:114400550 minus strand	914411
C11orf73	NM_016401	NP_057485	Coding	chr11:86302210 plus strand	914412

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C11orf74	NM_001276722	NP_001263651	Coding	chr11:36594492 plus strand	914413
C11orf74	NM_001276723	NP_001263652	Coding	chr11:36594492 plus strand	914413
C11orf74	NM_001276724	NP_001263653	Coding	chr11:36594771 plus strand	914414
C11orf74	NM_001276725	NP_001263654	Coding	chr11:36594492 plus strand	914413
C11orf74	NM_001276726	NP_001263655	Coding	chr11:36594492 plus strand	914413
C11orf74	NM_001276727	NP_001263656	Coding	chr11:36594492 plus strand	914413
C11orf74	NM_138787	NP_620142	Coding	chr11:36594492 plus strand	914413
C11orf80	NM_001302084	NP_001289013	Coding	chr11:66744735 plus strand	914415
C11orf80	NM_024650	NP_078926	Coding	chr11:66744735 plus strand	914415
C11orf84	NM_138471	NP_612480	Coding	chr11:63813450 plus strand	914416
C11orf85	NM_001037225	NP_001032302	Coding	chr11:64972091 minus strand	914417
C11orf85	NM_001300803	NP_001287732	Coding	chr11:64972091 minus strand	914417
C11orf86	NM_001136485	NP_001129957	Coding	chr11:66975282 plus strand	914418
C11orf87	NM_207645	NP_997528	Coding	chr11:109422119 plus strand	914419
C11orf88	NM_001100388	NP_001093858	Coding	chr11:111514784 plus strand	914420
C11orf88	NM_207430	NP_997313	Coding	chr11:111514784 plus strand	914420
C11orf91	NM_001166692	NP_001160164	Coding	chr11:33700740 minus strand	914421
C11orf94	NM_001080446	NP_001073915	Coding	chr11:45907282 minus strand	914422
C11orf95	NM_001144936	NP_001138408	Coding	chr11:63768641 minus strand	914423
C11orf96	NM_001145033	NP_001138505	Coding	chr11:43942555 plus strand	914424
C11orf97	NM_001190462	NP_001177391	Coding	chr11:94512528 plus strand	914425
C11orf98	NM_001286086	NP_001273015	Coding	chr11:62665216 minus strand	914426
C1QTNF4	NM_031909	NP_114115	Coding	chr11:47594409 minus strand	914427
C1QTNF5	NM_001278431	NP_001265360	Coding	chr11:119340883 minus strand	914428
C1QTNF5	NM_015645	NP_056460	Coding	chr11:119346673 minus strand	914429
C2CD2L	NM_001290474	NP_001277403	Coding	chr11:119107349 plus strand	914430
C2CD2L	NM_014807	NP_055622	Coding	chr11:119107349 plus strand	914430

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C2CD3	NM_001286577	NP_001273506	Coding	chr11:74171019 minus strand	914431
C2CD3	NM_015531	NP_056346	Coding	chr11:74171019 minus strand	914431
CABP2	NM_016366	NP_057450	Coding	chr11:67523428 minus strand	914432
CABP4	NM_001300895	NP_001287824	Coding	chr11:67455346 plus strand	914433
CABP4	NM_001300896	NP_001287825	Coding	chr11:67452414 plus strand	914434
CABP4	NM_145200	NP_660201	Coding	chr11:67455346 plus strand	914433
CADM1	NM_001098517	NP_001091987	Coding	chr11:115504523 minus strand	914435
CADM1	NM_001301043	NP_001287972	Coding	chr11:115504523 minus strand	914435
CADM1	NM_001301044	NP_001287973	Coding	chr11:115504523 minus strand	914435
CADM1	NM_001301045	NP_001287974	Coding	chr11:115504523 minus strand	914435
CADM1	NM_014333	NP_055148	Coding	chr11:115504523 minus strand	914435
CALCA	NM_001033952	NP_001029124	Coding	chr11:14972286 minus strand	914436
CALCA	NM_001033953	NP_001029125	Coding	chr11:14972286 minus strand	914436
CALCA	NM_001741	NP_001732	Coding	chr11:14972286 minus strand	914436
CALCB	NM_000728	NP_000719	Coding	chr11:15073599 plus strand	914437
CAPN1	NM_001198868	NP_001185797	Coding	chr11:65181214 plus strand	914438
CAPN1	NM_001198869	NP_001185798	Coding	chr11:65181678 plus strand	914439
CAPN1	NM_005186	NP_005177	Coding	chr11:65181832 plus strand	914440
CAPN5	NM_004055	NP_004046	Coding	chr11:77066944 plus strand	914441
CAPRIN1	NM_005898	NP_005889	Coding	chr11:34051682 plus strand	914442
CAPRIN1	NM_203364	NP_976240	Coding	chr11:34051682 plus strand	914442
CARD16	NM_001017534	NP_001017534	Coding	chr11:105045324 minus strand	914443
CARD16	NM_052889	NP_443121	Coding	chr11:105045324 minus strand	914443
CARD17	NM_001007232	NP_001007233	Coding	chr11:105101431 minus strand	914444
CARD18	NM_021571	NP_067546	Coding	chr11:105139734 minus strand	914445
CARNS1	NM_001166222	NP_001159694	Coding	chr11:67415677 plus strand	914446
CARNS1	NM_020811	NP_065862	Coding	chr11:67415677 plus strand	914446

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CARS	NM_001014437	NP_001014437	Coding	chr11:3057451 minus strand	914447
CARS	NM_001194997	NP_001181926	Coding	chr11:3057451 minus strand	914447
CARS	NM_001751	NP_001742	Coding	chr11:3057451 minus strand	914447
CARS	NM_139273	NP_644802	Coding	chr11:3057451 minus strand	914447
CASP1	NM_001223	NP_001214	Coding	chr11:105035157 minus strand	914448
CASP1	NM_001257118	NP_001244047	Coding	chr11:105035157 minus strand	914448
CASP1	NM_001257119	NP_001244048	Coding	chr11:105035157 minus strand	914448
CASP1	NM_033292	NP_150634	Coding	chr11:105035157 minus strand	914448
CASP1	NM_033293	NP_150635	Coding	chr11:105035157 minus strand	914448
CASP1	NM_033294	NP_150636	Coding	chr11:105035157 minus strand	914448
CASP1	NM_033295	NP_150637	Coding	chr11:105035157 minus strand	914448
CASP12	NM_001191016	NP_001177945	Coding	chr11:104898670 minus strand	914449
CASP4	NM_001225	NP_001216	Coding	chr11:104968598 minus strand	914450
CASP4	NM_033306	NP_150649	Coding	chr11:104956695 minus strand	914451
CASP5	NM_001136109	NP_001129581	Coding	chr11:105023168 minus strand	914452
CASP5	NM_001136110	NP_001129582	Coding	chr11:105023168 minus strand	914452
CASP5	NM_001136112	NP_001129584	Coding	chr11:105023168 minus strand	914452
CASP5	NM_004347	NP_004338	Coding	chr11:105023168 minus strand	914452
CAT	NM_001752	NP_001743	Coding	chr11:34438924 plus strand	914453
CATSPER1	NM_053054	NP_444282	Coding	chr11:66026517 minus strand	914454
CBL	NM_005188	NP_005179	Coding	chr11:119206275 plus strand	914455
CCDC15	NM_025004	NP_079280	Coding	chr11:124954120 plus strand	914456
CCDC153	NM_001145018	NP_001138490	Coding	chr11:119195874 minus strand	914457
CCDC179	NM_001195637	NP_001182566	Coding	chr11:22860426 minus strand	914458
CCDC34	NM_030771	NP_110398	Coding	chr11:27363248 minus strand	914459
CCDC34	NM_080654	NP_542385	Coding	chr11:27363248 minus strand	914459
CCDC67	NM_181645	NP_857596	Coding	chr11:93330716 plus strand	914460

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CCDC73	NM_001008391	NP_001008392	Coding	chr11:32794658 minus strand	914461
CCDC81	NM_001156474	NP_001149946	Coding	chr11:86374735 plus strand	914462
CCDC81	NM_021827	NP_068599	Coding	chr11:86374735 plus strand	914462
CCDC82	NM_024725	NP_079001	Coding	chr11:96389919 minus strand	914463
CCDC83	NM_001286159	NP_001273088	Coding	chr11:85855100 plus strand	914464
CCDC83	NM_173556	NP_775827	Coding	chr11:85855100 plus strand	914464
CCDC84	NM_198489	NP_940891	Coding	chr11:118998132 plus strand	914465
CCDC85B	NM_006848	NP_006839	Coding	chr11:65890403 plus strand	914466
CCDC86	NM_024098	NP_077003	Coding	chr11:60841955 plus strand	914467
CCDC87	NM_018219	NP_060689	Coding	chr11:66593083 minus strand	914468
CCDC88B	NM_032251	NP_115627	Coding	chr11:64340217 plus strand	914469
CCDC89	NM_152723	NP_689936	Coding	chr11:85686277 minus strand	914470
CCDC90B	NM_001286116	NP_001273045	Coding	chr11:83286407 minus strand	914471
CCDC90B	NM_001286117	NP_001273046	Coding	chr11:83286407 minus strand	914471
CCDC90B	NM_001286118	NP_001273047	Coding	chr11:83286407 minus strand	914471
CCDC90B	NM_001286119	NP_001273048	Coding	chr11:83286407 minus strand	914471
CCDC90B	NM_001286120	NP_001273049	Coding	chr11:83286407 minus strand	914471
CCDC90B	NM_021825	NP_068597	Coding	chr11:83286407 minus strand	914471
CCKBR	NM_176875	NP_795344	Coding	chr11:6259673 plus strand	914472
CCND1	NM_053056	NP_444284	Coding	chr11:69641104 plus strand	914473
CCS	NM_005125	NP_005116	Coding	chr11:66593218 plus strand	914474
CD151	NM_001039490	NP_001034579	Coding	chr11:832951 plus strand	914475
CD151	NM_004357	NP_004348	Coding	chr11:832951 plus strand	914475
CD151	NM_139029	NP_620598	Coding	chr11:832951 plus strand	914475
CD151	NM_139030	NP_620599	Coding	chr11:832951 plus strand	914475
CD248	NM_020404	NP_065137	Coding	chr11:66317044 minus strand	914476
CD3D	NM_000732	NP_000723	Coding	chr11:118342744 minus strand	914477
CD3D	NM_001040651	NP_001035741	Coding	chr11:118342744 minus strand	914477
CD3E	NM_000733	NP_000724	Coding	chr11:118304579 plus strand	914478

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CD3G	NM_000073	NP_000064	Coding	chr11:118344343 plus strand	914479
CD44	NM_000610	NP_000601	Coding	chr11:35138869 plus strand	914480
CD44	NM_001001389	NP_001001389	Coding	chr11:35138869 plus strand	914480
CD44	NM_001001390	NP_001001390	Coding	chr11:35138869 plus strand	914480
CD44	NM_001001391	NP_001001391	Coding	chr11:35138869 plus strand	914480
CD44	NM_001001392	NP_001001392	Coding	chr11:35138869 plus strand	914480
CD44	NM_001202555	NP_001189484	Coding	chr11:35138869 plus strand	914480
CD44	NM_001202556	NP_001189485	Coding	chr11:35138869 plus strand	914480
CD44	NM_001202557	NP_001189486	Coding	chr11:35138869 plus strand	914480
CD5	NM_014207	NP_055022	Coding	chr11:61102457 plus strand	914481
CD59	NM_000611	NP_000602	Coding	chr11:33736479 minus strand	914482
CD59	NM_001127223	NP_001120695	Coding	chr11:33722727 minus strand	914483
CD59	NM_001127225	NP_001120697	Coding	chr11:33722727 minus strand	914483
CD59	NM_001127226	NP_001120698	Coding	chr11:33722727 minus strand	914483
CD59	NM_001127227	NP_001120699	Coding	chr11:33722952 minus strand	914484
CD59	NM_203329	NP_976074	Coding	chr11:33736479 minus strand	914482
CD59	NM_203330	NP_976075	Coding	chr11:33736479 minus strand	914482
CD59	NM_203331	NP_976076	Coding	chr11:33736479 minus strand	914482
CD6	NM_001254750	NP_001241679	Coding	chr11:60971640 plus strand	914485
CD6	NM_001254751	NP_001241680	Coding	chr11:60971640 plus strand	914485
CD6	NM_006725	NP_006716	Coding	chr11:60971640 plus strand	914485
CD81	NM_001297649	NP_001284578	Coding	chr11:2376176 plus strand	914486
CD81	NM_004356	NP_004347	Coding	chr11:2377316 plus strand	914487
CD82	NM_001024844	NP_001020015	Coding	chr11:44565590 plus strand	914488
CD82	NM_002231	NP_002222	Coding	chr11:44565590 plus strand	914488
CDC42BPG	NM_017525	NP_059995	Coding	chr11:64844569 minus strand	914489
CDC42EP2	NM_006779	NP_006770	Coding	chr11:65314817 plus strand	914490
CDCA5	NM_080668	NP_542399	Coding	chr11:65084143 minus strand	914491

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CDHR5	NM_001171968	NP_001165439	Coding	chr11:625067 minus strand	914492
CDHR5	NM_021924	NP_068743	Coding	chr11:625067 minus strand	914492
CDHR5	NM_031264	NP_112554	Coding	chr11:625067 minus strand	914492
CDK2AP2	NM_001271849	NP_001258778	Coding	chr11:67508187 minus strand	914493
CDK2AP2	NM_005851	NP_005842	Coding	chr11:67508728 minus strand	914494
CDKN1C	NM_000076	NP_000067	Coding	chr11:2885765 minus strand	914495
CDKN1C	NM_001122630	NP_001116102	Coding	chr11:2885765 minus strand	914495
CDKN1C	NM_001122631	NP_001116103	Coding	chr11:2885765 minus strand	914495
CDON	NM_001243597	NP_001230526	Coding	chr11:126063292 minus strand	914496
CDON	NM_016952	NP_058648	Coding	chr11:126063292 minus strand	914496
CELF1	NM_001025596	NP_001020767	Coding	chr11:47489024 minus strand	914497
CELF1	NM_001172639	NP_001166110	Coding	chr11:47523988 minus strand	914498
CELF1	NM_001172640	NP_001166111	Coding	chr11:47489024 minus strand	914497
CELF1	NM_006560	NP_006551	Coding	chr11:47553240 minus strand	914499
CELF1	NM_198700	NP_941989	Coding	chr11:47494521 minus strand	914500
CEND1	NM_016564	NP_057648	Coding	chr11:790126 minus strand	914501
CEP164	NM_001271933	NP_001258862	Coding	chr11:117321777 plus strand	914502
CEP164	NM_014956	NP_055771	Coding	chr11:117327854 plus strand	914503
CEP295	NM_033395	NP_203753	Coding	chr11:93661649 plus strand	914504
CEP57	NM_001243776	NP_001230705	Coding	chr11:95790460 plus strand	914505
CEP57	NM_001243777	NP_001230706	Coding	chr11:95790460 plus strand	914505
CEP57	NM_014679	NP_055494	Coding	chr11:95790460 plus strand	914505
CFL1	NM_005507	NP_005498	Coding	chr11:65858333 minus strand	914506
CHEK1	NM_001114121	NP_001107593	Coding	chr11:125625135 plus strand	914507
CHEK1	NM_001114122	NP_001107594	Coding	chr11:125625135 plus strand	914507
CHEK1	NM_001244846	NP_001231775	Coding	chr11:125625135 plus strand	914507
CHEK1	NM_001274	NP_001265	Coding	chr11:125626355 plus strand	914508
CHID1	NM_001142674	NP_001136146	Coding	chr11:910874 minus strand	914509
CHID1	NM_001142675	NP_001136147	Coding	chr11:915058 minus strand	914510

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CHID1	NM_001142676	NP_001136148	Coding	chr11:910874 minus strand	914509
CHID1	NM_001142677	NP_001136149	Coding	chr11:910874 minus strand	914509
CHID1	NM_023947	NP_076436	Coding	chr11:910874 minus strand	914509
CHKA	NM_001277	NP_001268	Coding	chr11:68121391 minus strand	914511
CHKA	NM_212469	NP_997634	Coding	chr11:68121391 minus strand	914511
CHORDC1	NM_001144073	NP_001137545	Coding	chr11:90223364 minus strand	914512
CHORDC1	NM_012124	NP_036256	Coding	chr11:90223364 minus strand	914512
CHRDL2	NM_001278473	NP_001265402	Coding	chr11:74731182 minus strand	914513
CHRDL2	NM_015424	NP_056239	Coding	chr11:74731182 minus strand	914513
CHRM1	NM_000738	NP_000729	Coding	chr11:62921540 minus strand	914514
CHRM4	NM_000741	NP_000732	Coding	chr11:46386557 minus strand	914515
CHRNA10	NM_020402	NP_065135	Coding	chr11:3671384 minus strand	914516
CHST1	NM_003654	NP_003645	Coding	chr11:45665656 minus strand	914517
CKAP5	NM_001008938	NP_001008938	Coding	chr11:46846308 minus strand	914518
CKAP5	NM_014756	NP_055571	Coding	chr11:46846308 minus strand	914518
CLCF1	NM_001166212	NP_001159684	Coding	chr11:67374177 minus strand	914519
CLCF1	NM_013246	NP_037378	Coding	chr11:67373735 minus strand	914520
CLDN25	NM_001101389	NP_001094859	Coding	chr11:113779795 plus strand	914521
CLMP	NM_024769	NP_079045	Coding	chr11:123195299 minus strand	914522
CLNS1A	NM_001293	NP_001284	Coding	chr11:77637806 minus strand	914523
CLP1	NM_001142597	NP_001136069	Coding	chr11:57657743 plus strand	914524
CLP1	NM_006831	NP_006822	Coding	chr11:57657743 plus strand	914524
CLPB	NM_001258392	NP_001245321	Coding	chr11:72434680 minus strand	914525
CLPB	NM_001258393	NP_001245322	Coding	chr11:72434680 minus strand	914525
CLPB	NM_001258394	NP_001245323	Coding	chr11:72434680 minus strand	914525
CLPB	NM_030813	NP_110440	Coding	chr11:72434680 minus strand	914525
CNGA4	NM_001037329	NP_001032406	Coding	chr11:6239091 plus strand	914526
CNIH2	NM_182553	NP_872359	Coding	chr11:66278200 plus strand	914527
CNTF	NM_000614	NP_000605	Coding	chr11:58622672 plus	914528

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				strand	
CNTN5	NM_001243270	NP_001230199	Coding	chr11:99020975 plus strand	914529
CNTN5	NM_001243271	NP_001230200	Coding	chr11:99020975 plus strand	914529
CNTN5	NM_014361	NP_055176	Coding	chr11:99020975 plus strand	914529
CNTN5	NM_175566	NP_780775	Coding	chr11:99556144 plus strand	914530
COA4	NM_016565	NP_057649	Coding	chr11:73876845 minus strand	914531
COLCA1	NM_001302644	NP_001289573	Coding	chr11:111305048 minus strand	914532
COLCA1	NM_001302645	NP_001289574	Coding	chr11:111300232 minus strand	914533
COLCA1	NM_001302646	NP_001289575	Coding	chr11:111299253 minus strand	914534
COLCA1	NM_001302647	NP_001289576	Coding	chr11:111300036 minus strand	914535
COLCA1	NM_001302648	NP_001289577	Coding	chr11:111300036 minus strand	914535
COLCA1	NM_207429	NP_997312	Coding	chr11:111299896 minus strand	914536
COLCA2	NM_001136105	NP_001129577	Coding	chr11:111299250 plus strand	914537
COLCA2	NM_001271457	NP_001258386	Coding	chr11:111298839 plus strand	914538
COLCA2	NM_001271458	NP_001258387	Coding	chr11:111298545 plus strand	914539
COMMD9	NM_001101653	NP_001095123	Coding	chr11:36289449 minus strand	914540
COMMD9	NM_014186	NP_054905	Coding	chr11:36289449 minus strand	914540
COPB1	NM_001144061	NP_001137533	Coding	chr11:14499895 minus strand	914541
COPB1	NM_001144062	NP_001137534	Coding	chr11:14499869 minus strand	914542
COPB1	NM_016451	NP_057535	Coding	chr11:14499858 minus strand	914543
CORO1B	NM_001018070	NP_001018080	Coding	chr11:67443821 minus strand	914544
CORO1B	NM_020441	NP_065174	Coding	chr11:67443512 minus strand	914545
COX8A	NM_004074	NP_004065	Coding	chr11:63974606 plus strand	914546
CPSF7	NM_001136040	NP_001129512	Coding	chr11:61429992 minus strand	914547
CPSF7	NM_001142565	NP_001136037	Coding	chr11:61429992 minus strand	914547
CPSF7	NM_024811	NP_079087	Coding	chr11:61429911 minus strand	914548
CPT1A	NM_001031847	NP_001027017	Coding	chr11:68841931 minus strand	914549
CPT1A	NM_001876	NP_001867	Coding	chr11:68841931 minus	914549

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				strand	
CRACR2B	NM_001286606	NP_001273535	Coding	chr11:828259 plus strand	914550
CRACR2B	NM_173584	NP_775855	Coding	chr11:828259 plus strand	914550
CREB3L1	NM_052854	NP_443086	Coding	chr11:46277637 plus strand	914551
CREBZF	NM_001039618	NP_001034707	Coding	chr11:85665138 minus strand	914552
CRTAM	NM_019604	NP_062550	Coding	chr11:122838546 plus strand	914553
CRY2	NM_001127457	NP_001120929	Coding	chr11:45847117 plus strand	914554
CRY2	NM_021117	NP_066940	Coding	chr11:45847405 plus strand	914555
CRYAB	NM_001289807	NP_001276736	Coding	chr11:111913213 minus strand	914556
CRYAB	NM_001289808	NP_001276737	Coding	chr11:111912026 minus strand	914557
CRYAB	NM_001885	NP_001876	Coding	chr11:111913213 minus strand	914556
CSNK2A3	NM_001256686	NP_001243615	Coding	chr11:11353357 minus strand	914558
CSRP3	NM_003476	NP_003467	Coding	chr11:19210571 minus strand	914559
CST6	NM_001323	NP_001314	Coding	chr11:66011990 plus strand	914560
CSTF3	NM_001033505	NP_001028677	Coding	chr11:33161491 minus strand	914561
CSTF3	NM_001033506	NP_001028678	Coding	chr11:33161491 minus strand	914561
CSTF3	NM_001326	NP_001317	Coding	chr11:33161491 minus strand	914561
CTNND1	NM_001085458	NP_001078927	Coding	chr11:57761761 plus strand	914562
CTNND1	NM_001085459	NP_001078928	Coding	chr11:57761761 plus strand	914562
CTNND1	NM_001085460	NP_001078929	Coding	chr11:57761761 plus strand	914562
CTNND1	NM_001085461	NP_001078930	Coding	chr11:57761761 plus strand	914562
CTNND1	NM_001085462	NP_001078931	Coding	chr11:57761761 plus strand	914562
CTNND1	NM_001085463	NP_001078932	Coding	chr11:57761761 plus strand	914562
CTNND1	NM_001085464	NP_001078933	Coding	chr11:57761761 plus strand	914562
CTNND1	NM_001085465	NP_001078934	Coding	chr11:57761761 plus strand	914562
CTNND1	NM_001085466	NP_001078935	Coding	chr11:57761761 plus strand	914562
CTNND1	NM_001085467	NP_001078936	Coding	chr11:57761761 plus strand	914562
CTNND1	NM_001085468	NP_001078937	Coding	chr11:57761761 plus strand	914562

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CTNND1	NM_001085469	NP_001078938	Coding	chr11:57761761 plus strand	914562
CTNND1	NM_001206883	NP_001193812	Coding	chr11:57761761 plus strand	914562
CTNND1	NM_001206884	NP_001193813	Coding	chr11:57761761 plus strand	914562
CTNND1	NM_001206885	NP_001193814	Coding	chr11:57761761 plus strand	914562
CTNND1	NM_001206886	NP_001193815	Coding	chr11:57761761 plus strand	914562
CTNND1	NM_001206887	NP_001193816	Coding	chr11:57761761 plus strand	914562
CTNND1	NM_001206888	NP_001193817	Coding	chr11:57761761 plus strand	914562
CTNND1	NM_001206889	NP_001193818	Coding	chr11:57761761 plus strand	914562
CTNND1	NM_001206890	NP_001193819	Coding	chr11:57761761 plus strand	914562
CTNND1	NM_001206891	NP_001193820	Coding	chr11:57761761 plus strand	914562
CTNND1	NM_001331	NP_001322	Coding	chr11:57761761 plus strand	914562
CTR9	NM_014633	NP_055448	Coding	chr11:10750986 plus strand	914563
CTSC	NM_001114173	NP_001107645	Coding	chr11:88337773 minus strand	914564
CTSC	NM_001814	NP_001805	Coding	chr11:88337773 minus strand	914564
CTSC	NM_148170	NP_680475	Coding	chr11:88337773 minus strand	914564
CTSD	NM_001909	NP_001900	Coding	chr11:1763992 minus strand	914565
CTSF	NM_003793	NP_003784	Coding	chr11:66568576 minus strand	914566
CTSW	NM_001335	NP_001326	Coding	chr11:65879812 plus strand	914567
CTTN	NM_001184740	NP_001171669	Coding	chr11:70398505 plus strand	914568
CTTN	NM_005231	NP_005222	Coding	chr11:70398505 plus strand	914568
CTTN	NM_138565	NP_612632	Coding	chr11:70398505 plus strand	914568
CUL5	NM_003478	NP_003469	Coding	chr11:108008681 plus strand	914569
CWC15	NM_016403	NP_057487	Coding	chr11:94973612 minus strand	914570
CWF19L2	NM_152434	NP_689647	Coding	chr11:107457846 minus strand	914571
CXCR5	NM_001716	NP_001707	Coding	chr11:118883765 plus strand	914572
CXCR5	NM_032966	NP_116743	Coding	chr11:118893391 plus strand	914573
CYB561A3	NM_001161452	NP_001154924	Coding	chr11:61356889 minus strand	914574

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CYB561A3	NM_001161454	NP_001154926	Coding	chr11:61362283 minus strand	914575
CYB561A3	NM_001300763	NP_001287692	Coding	chr11:61362283 minus strand	914575
CYB561A3	NM_153611	NP_705839	Coding	chr11:61362283 minus strand	914575
CYB5R2	NM_001302826	NP_001289755	Coding	chr11:7674243 minus strand	914576
CYB5R2	NM_001302827	NP_001289756	Coding	chr11:7672891 minus strand	914577
CYB5R2	NM_016229	NP_057313	Coding	chr11:7673598 minus strand	914578
CYP2R1	NM_024514	NP_078790	Coding	chr11:14892205 minus strand	914579
DAGLA	NM_006133	NP_006124	Coding	chr11:61680432 plus strand	914580
DAK	NM_015533	NP_056348	Coding	chr11:61333181 plus strand	914581
DBX1	NM_001029865	NP_001025036	Coding	chr11:20160324 minus strand	914582
DCDC1	NM_181807	NP_861523	Coding	chr11:31369810 minus strand	914583
DCDC5	NM_020869	NP_065920	Coding	chr11:30992686 minus strand	914584
DCHS1	NM_003737	NP_003728	Coding	chr11:6655849 minus strand	914585
DCPS	NM_014026	NP_054745	Coding	chr11:126303751 plus strand	914586
DCUN1D5	NM_032299	NP_115675	Coding	chr11:103092215 minus strand	914587
DDB1	NM_001923	NP_001914	Coding	chr11:61333212 minus strand	914588
DDB2	NM_000107	NP_000098	Coding	chr11:47214941 plus strand	914589
DDB2	NM_001300734	NP_001287663	Coding	chr11:47214941 plus strand	914589
DDI1	NM_001001711	NP_001001711	Coding	chr11:104036579 plus strand	914590
DDIAS	NM_145018	NP_659455	Coding	chr11:82901694 plus strand	914591
DDX10	NM_004398	NP_004389	Coding	chr11:108665024 plus strand	914592
DDX25	NM_013264	NP_037396	Coding	chr11:125904365 plus strand	914593
DDX6	NM_001257191	NP_001244120	Coding	chr11:118790948 minus strand	914594
DDX6	NM_004397	NP_004388	Coding	chr11:118791263 minus strand	914595
DEAF1	NM_001293634	NP_001280563	Coding	chr11:695754 minus strand	914596
DEAF1	NM_021008	NP_066288	Coding	chr11:695754 minus strand	914596
DEFB108B	NM_001002035	NP_001002035	Coding	chr11:71833199 plus strand	914597
DENND5A	NM_001243254	NP_001230183	Coding	chr11:9265326 minus strand	914598

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DENND5A	NM_015213	NP_056028	Coding	chr11:9265326 minus strand	914598
DEPDC7	NM_001077242	NP_001070710	Coding	chr11:33015863 plus strand	914599
DEPDC7	NM_139160	NP_631899	Coding	chr11:33016181 plus strand	914600
DGAT2	NM_001253891	NP_001240820	Coding	chr11:75768732 plus strand	914601
DGAT2	NM_032564	NP_115953	Coding	chr11:75768732 plus strand	914601
DGKZ	NM_001105540	NP_001099010	Coding	chr11:46361594 plus strand	914602
DGKZ	NM_001199266	NP_001186195	Coding	chr11:46347405 plus strand	914603
DGKZ	NM_001199267	NP_001186196	Coding	chr11:46347405 plus strand	914603
DGKZ	NM_001199268	NP_001186197	Coding	chr11:46347405 plus strand	914603
DGKZ	NM_003646	NP_003637	Coding	chr11:46347405 plus strand	914603
DGKZ	NM_201532	NP_963290	Coding	chr11:46332904 plus strand	914604
DGKZ	NM_201533	NP_963291	Coding	chr11:46345266 plus strand	914605
DHCR7	NM_001163817	NP_001157289	Coding	chr11:71448431 minus strand	914606
DHCR7	NM_001360	NP_001351	Coding	chr11:71448431 minus strand	914606
DIXDC1	NM_001037954	NP_001033043	Coding	chr11:111937202 plus strand	914607
DIXDC1	NM_001278542	NP_001265471	Coding	chr11:111927143 plus strand	914608
DIXDC1	NM_033425	NP_219493	Coding	chr11:111977308 plus strand	914609
DKK3	NM_001018057	NP_001018067	Coding	chr11:12008639 minus strand	914610
DKK3	NM_013253	NP_037385	Coding	chr11:12009370 minus strand	914611
DKK3	NM_015881	NP_056965	Coding	chr11:12009082 minus strand	914612
DLAT	NM_001931	NP_001922	Coding	chr11:112024813 plus strand	914613
DLG2	NM_001142699	NP_001136171	Coding	chr11:85627270 minus strand	914614
DLG2	NM_001142700	NP_001136172	Coding	chr11:84273280 minus strand	914615
DLG2	NM_001142702	NP_001136174	Coding	chr11:83682425 minus strand	914616
DLG2	NM_001206769	NP_001193698	Coding	chr11:84317339 minus strand	914617
DLG2	NM_001300983	NP_001287912	Coding	chr11:84923421 minus strand	914618
DLG2	NM_001364	NP_001355	Coding	chr11:84923421 minus strand	914618

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DNAJB13	NM_153614	NP_705842	Coding	chr11:73950318 plus strand	914619
DNAJC24	NM_181706	NP_859057	Coding	chr11:31369829 plus strand	914620
DNAJC4	NM_005528	NP_005519	Coding	chr11:64230280 plus strand	914621
DNHD1	NM_144666	NP_653267	Coding	chr11:6497295 plus strand	914622
DNHD1	NM_173589	NP_775860	Coding	chr11:6497295 plus strand	914622
DPAGT1	NM_001382	NP_001373	Coding	chr11:119102075 minus strand	914623
DPF2	NM_006268	NP_006259	Coding	chr11:65333753 plus strand	914624
DPP3	NM_001256670	NP_001243599	Coding	chr11:66480012 plus strand	914625
DPP3	NM_005700	NP_005691	Coding	chr11:66480012 plus strand	914625
DPP3	NM_130443	NP_569710	Coding	chr11:66480012 plus strand	914625
DRAP1	NM_006442	NP_006433	Coding	chr11:65919256 plus strand	914626
DRD2	NM_000795	NP_000786	Coding	chr11:113475279 minus strand	914627
DRD2	NM_016574	NP_057658	Coding	chr11:113475279 minus strand	914627
DRD4	NM_000797	NP_000788	Coding	chr11:637304 plus strand	914628
DSCAML1	NM_020693	NP_065744	Coding	chr11:117797261 minus strand	914629
DTX4	NM_001300727	NP_001287656	Coding	chr11:59171429 plus strand	914630
DTX4	NM_015177	NP_055992	Coding	chr11:59172338 plus strand	914631
DUSP8	NM_004420	NP_004411	Coding	chr11:1571920 minus strand	914632
DYNC2H1	NM_001080463	NP_001073932	Coding	chr11:103109430 plus strand	914633
DYNC2H1	NM_001377	NP_001368	Coding	chr11:103109430 plus strand	914633
E2F8	NM_001256371	NP_001243300	Coding	chr11:19241620 minus strand	914634
E2F8	NM_001256372	NP_001243301	Coding	chr11:19241655 minus strand	914635
E2F8	NM_024680	NP_078956	Coding	chr11:19240960 minus strand	914636
EED	NM_003797	NP_003788	Coding	chr11:86244763 plus strand	914637
EED	NM_152991	NP_694536	Coding	chr11:86244763 plus strand	914637
EEF1G	NM_001404	NP_001395	Coding	chr11:62573988 minus strand	914638
EFEMP2	NM_016938	NP_058634	Coding	chr11:65872934 minus strand	914639
EHBP1L1	NM_001099409	NP_001092879	Coding	chr11:65576037 plus strand	914640

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EHD1	NM_001282444	NP_001269373	Coding	chr11:64879713 minus strand	914641
EHD1	NM_001282445	NP_001269374	Coding	chr11:64879713 minus strand	914641
EHD1	NM_006795	NP_006786	Coding	chr11:64878768 minus strand	914642
EHF	NM_001206615	NP_001193544	Coding	chr11:34621040 plus strand	914643
EHF	NM_001206616	NP_001193545	Coding	chr11:34632463 plus strand	914644
EHF	NM_012153	NP_036285	Coding	chr11:34621040 plus strand	914643
EI24	NM_001290135	NP_001277064	Coding	chr11:125569386 plus strand	914645
EI24	NM_004879	NP_004870	Coding	chr11:125569386 plus strand	914645
EIF1AD	NM_001242481	NP_001229410	Coding	chr11:66002166 minus strand	914646
EIF1AD	NM_001242482	NP_001229411	Coding	chr11:66002166 minus strand	914646
EIF1AD	NM_001242483	NP_001229412	Coding	chr11:66002166 minus strand	914646
EIF1AD	NM_001242484	NP_001229413	Coding	chr11:66002166 minus strand	914646
EIF1AD	NM_001242485	NP_001229414	Coding	chr11:66002166 minus strand	914646
EIF1AD	NM_001242486	NP_001229415	Coding	chr11:66002166 minus strand	914646
EIF1AD	NM_032325	NP_115701	Coding	chr11:66002166 minus strand	914646
EIF3F	NM_003754	NP_003745	Coding	chr11:7987319 plus strand	914647
EIF3M	NM_006360	NP_006351	Coding	chr11:32583766 plus strand	914648
EIF4G2	NM_001042559	NP_001036024	Coding	chr11:10809035 minus strand	914649
EIF4G2	NM_001172705	NP_001166176	Coding	chr11:10807996 minus strand	914650
EIF4G2	NM_001418	NP_001409	Coding	chr11:10809035 minus strand	914649
ELF5	NM_001243080	NP_001230009	Coding	chr11:34513800 minus strand	914651
ELF5	NM_001243081	NP_001230010	Coding	chr11:34511799 minus strand	914652
ELF5	NM_001422	NP_001413	Coding	chr11:34513800 minus strand	914651
ELF5	NM_198381	NP_938195	Coding	chr11:34511799 minus strand	914652
ELMOD1	NM_001130037	NP_001123509	Coding	chr11:107591090 plus strand	914653
ELMOD1	NM_018712	NP_061182	Coding	chr11:107591090 plus strand	914653
ELP4	NM_001288725	NP_001275654	Coding	chr11:31509728 plus strand	914654
ELP4	NM_001288726	NP_001275655	Coding	chr11:31509728 plus	914654

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				strand	
ELP4	NM_019040	NP_061913	Coding	chr11:31509728 plus strand	914654
EML3	NM_001300793	NP_001287722	Coding	chr11:62612765 minus strand	914655
EML3	NM_001300794	NP_001287723	Coding	chr11:62612765 minus strand	914655
EML3	NM_153265	NP_694997	Coding	chr11:62612765 minus strand	914655
ENDOD1	NM_015036	NP_055851	Coding	chr11:95089809 plus strand	914656
EPS8L2	NM_022772	NP_073609	Coding	chr11:706119 plus strand	914657
ESAM	NM_138961	NP_620411	Coding	chr11:124762327 minus strand	914658
ESRRA	NM_001282450	NP_001269379	Coding	chr11:64306226 plus strand	914659
ESRRA	NM_001282451	NP_001269380	Coding	chr11:64305527 plus strand	914660
ESRRA	NM_004451	NP_004442	Coding	chr11:64305527 plus strand	914660
ETS1	NM_001143820	NP_001137292	Coding	chr11:128587558 minus strand	914661
ETS1	NM_001162422	NP_001155894	Coding	chr11:128522310 minus strand	914662
ETS1	NM_005238	NP_005229	Coding	chr11:128522310 minus strand	914662
EXPH5	NM_015065	NP_055880	Coding	chr11:108593647 minus strand	914663
EXT2	NM_000401	NP_000392	Coding	chr11:44096196 plus strand	914664
EXT2	NM_001178083	NP_001171554	Coding	chr11:44095548 plus strand	914665
EXT2	NM_207122	NP_997005	Coding	chr11:44095548 plus strand	914665
F2	NM_000506	NP_000497	Coding	chr11:46719192 plus strand	914666
FADD	NM_003824	NP_003815	Coding	chr11:70203162 plus strand	914667
FADS1	NM_013402	NP_037534	Coding	chr11:61817057 minus strand	914668
FADS2	NM_001281501	NP_001268430	Coding	chr11:61816202 plus strand	914669
FADS2	NM_001281502	NP_001268431	Coding	chr11:61816403 plus strand	914670
FADS2	NM_004265	NP_004256	Coding	chr11:61828032 plus strand	914671
FADS3	NM_021727	NP_068373	Coding	chr11:61891545 minus strand	914672
FAM111A	NM_001142519	NP_001135991	Coding	chr11:59142844 plus strand	914673
FAM111A	NM_001142520	NP_001135992	Coding	chr11:59142844 plus strand	914673
FAM111A	NM_001142521	NP_001135993	Coding	chr11:59142844 plus strand	914673

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FAM111A	NM_022074	NP_071357	Coding	chr11:59144778 plus strand	914674
FAM111A	NM_198847	NP_942144	Coding	chr11:59144778 plus strand	914674
FAM111B	NM_001142703	NP_001136175	Coding	chr11:59107184 plus strand	914675
FAM111B	NM_001142704	NP_001136176	Coding	chr11:59107184 plus strand	914675
FAM111B	NM_198947	NP_945185	Coding	chr11:59107184 plus strand	914675
FAM118B	NM_024556	NP_078832	Coding	chr11:126211723 plus strand	914676
FAM160A2	NM_001098794	NP_001092264	Coding	chr11:6234711 minus strand	914677
FAM160A2	NM_032127	NP_115503	Coding	chr11:6234711 minus strand	914677
FAM168A	NM_001286050	NP_001272979	Coding	chr11:73598189 minus strand	914678
FAM168A	NM_001286051	NP_001272980	Coding	chr11:73598189 minus strand	914678
FAM168A	NM_015159	NP_055974	Coding	chr11:73598189 minus strand	914678
FAM180B	NM_001164379	NP_001157851	Coding	chr11:47586677 plus strand	914679
FAM181B	NM_175885	NP_787081	Coding	chr11:82733864 minus strand	914680
FAM76B	NM_144664	NP_653265	Coding	chr11:95789790 minus strand	914681
FAM86C1	NM_001099653	NP_001093123	Coding	chr11:71787510 plus strand	914682
FAM86C1	NM_018172	NP_060642	Coding	chr11:71787510 plus strand	914682
FAM86C1	NM_152563	NP_689776	Coding	chr11:71787510 plus strand	914682
FAM89B	NM_001098784	NP_001092254	Coding	chr11:65572348 plus strand	914683
FAM89B	NM_001098785	NP_001092255	Coding	chr11:65572348 plus strand	914683
FAM89B	NM_152832	NP_690045	Coding	chr11:65572348 plus strand	914683
FANCF	NM_022725	NP_073562	Coding	chr11:22625841 minus strand	914684
FAR1	NM_032228	NP_115604	Coding	chr11:13668658 plus strand	914685
FAT3	NM_001008781	NP_001008781	Coding	chr11:92352095 plus strand	914686
FAU	NM_001997	NP_001988	Coding	chr11:65122200 minus strand	914687
FBXO3	NM_012175	NP_036307	Coding	chr11:33774525 minus strand	914688
FBXO3	NM_033406	NP_208385	Coding	chr11:33774525 minus strand	914688
FCHSD2	NM_014824	NP_055639	Coding	chr11:73142098 minus strand	914689

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FDX1	NM_004109	NP_004100	Coding	chr11:110429936 plus strand	914690
FDXACB1	NM_138378	NP_612387	Coding	chr11:111879457 minus strand	914691
FEN1	NM_004111	NP_004102	Coding	chr11:61792636 plus strand	914692
FERMT3	NM_031471	NP_113659	Coding	chr11:64206679 plus strand	914693
FERMT3	NM_178443	NP_848537	Coding	chr11:64206679 plus strand	914693
FEZ1	NM_005103	NP_005094	Coding	chr11:125496310 minus strand	914694
FEZ1	NM_022549	NP_072043	Coding	chr11:125496310 minus strand	914694
FGF19	NM_005117	NP_005108	Coding	chr11:69704338 minus strand	914695
FGF3	NM_005247	NP_005238	Coding	chr11:69819424 minus strand	914696
FGF4	NM_002007	NP_001998	Coding	chr11:69775403 minus strand	914697
FIBIN	NM_203371	NP_976249	Coding	chr11:26994080 plus strand	914698
FIBP	NM_004214	NP_004205	Coding	chr11:65888539 minus strand	914699
FIBP	NM_198897	NP_942600	Coding	chr11:65888539 minus strand	914699
FJX1	NM_014344	NP_055159	Coding	chr11:35618186 plus strand	914700
FKBP2	NM_001135208	NP_001128680	Coding	chr11:64241131 plus strand	914701
FKBP2	NM_004470	NP_004461	Coding	chr11:64240940 plus strand	914702
FKBP2	NM_057092	NP_476433	Coding	chr11:64242115 plus strand	914703
FLI1	NM_001167681	NP_001161153	Coding	chr11:128693915 plus strand	914704
FLI1	NM_001271010	NP_001257939	Coding	chr11:128693915 plus strand	914704
FLI1	NM_001271012	NP_001257941	Coding	chr11:128686534 plus strand	914705
FLI1	NM_002017	NP_002008	Coding	chr11:128693915 plus strand	914704
FLRT1	NM_013280	NP_037412	Coding	chr11:64103889 plus strand	914706
FNBP4	NM_015308	NP_056123	Coding	chr11:47767441 minus strand	914707
FOLH1	NM_001014986	NP_001014986	Coding	chr11:49208670 minus strand	914708
FOLH1	NM_001193471	NP_001180400	Coding	chr11:49208670 minus strand	914708
FOLH1	NM_001193472	NP_001180401	Coding	chr11:49208670 minus strand	914708
FOLH1	NM_001193473	NP_001180402	Coding	chr11:49208670 minus strand	914708

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FOLH1	NM_004476	NP_004467	Coding	chr11:49208670 minus strand	914708
FOLH1B	NM_153696	NP_710163	Coding	chr11:89659296 plus strand	914709
FOLR1	NM_000802	NP_000793	Coding	chr11:72189914 plus strand	914710
FOLR1	NM_016724	NP_057936	Coding	chr11:72189557 plus strand	914711
FOLR1	NM_016725	NP_057937	Coding	chr11:72189557 plus strand	914711
FOLR1	NM_016729	NP_057941	Coding	chr11:72192128 plus strand	914712
FOLR2	NM_000803	NP_000794	Coding	chr11:72216774 plus strand	914713
FOLR2	NM_001113534	NP_001107006	Coding	chr11:72216774 plus strand	914713
FOLR2	NM_001113535	NP_001107007	Coding	chr11:72216774 plus strand	914713
FOLR2	NM_001113536	NP_001107008	Coding	chr11:72216774 plus strand	914713
FOLR3	NM_000804	NP_000795	Coding	chr11:72135724 plus strand	914714
FOSL1	NM_001300844	NP_001287773	Coding	chr11:65900526 minus strand	914715
FOSL1	NM_001300855	NP_001287784	Coding	chr11:65900526 minus strand	914715
FOSL1	NM_001300856	NP_001287785	Coding	chr11:65900526 minus strand	914715
FOSL1	NM_001300857	NP_001287786	Coding	chr11:65900526 minus strand	914715
FOSL1	NM_005438	NP_005429	Coding	chr11:65900526 minus strand	914715
FOXR1	NM_181721	NP_859072	Coding	chr11:118971706 plus strand	914716
FOXRED1	NM_017547	NP_060017	Coding	chr11:126269039 plus strand	914717
FRMD8	NM_001300832	NP_001287761	Coding	chr11:65386569 plus strand	914718
FRMD8	NM_001300833	NP_001287762	Coding	chr11:65386569 plus strand	914718
FRMD8	NM_031904	NP_114110	Coding	chr11:65386569 plus strand	914718
FSHB	NM_000510	NP_000501	Coding	chr11:30231015 plus strand	914719
FSHB	NM_001018080	NP_001018090	Coding	chr11:30231015 plus strand	914719
FTH1	NM_002032	NP_002023	Coding	chr11:61967660 minus strand	914720
FUT4	NM_002033	NP_002024	Coding	chr11:94543850 plus strand	914721
FXYD2	NM_001680	NP_001671	Coding	chr11:117824744 minus strand	914722
FXYD2	NM_021603	NP_067614	Coding	chr11:117828092 minus strand	914723

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FXYD6	NM_001164831	NP_001158303	Coding	chr11:117877486 minus strand	914724
FXYD6	NM_001164832	NP_001158304	Coding	chr11:117877031 minus strand	914725
FXYD6	NM_001164836	NP_001158308	Coding	chr11:117877031 minus strand	914725
FXYD6	NM_001164837	NP_001158309	Coding	chr11:117877031 minus strand	914725
FXYD6	NM_022003	NP_071286	Coding	chr11:117877031 minus strand	914725
FXYD6-FXYD2	NM_001204268	NP_001191197	Coding	chr11:117877031 minus strand	914726
FXYD6-FXYD2	NM_001243598	NP_001230527	Coding	chr11:117877031 minus strand	914726
FZD4	NM_012193	NP_036325	Coding	chr11:86955398 minus strand	914727
GAB2	NM_012296	NP_036428	Coding	chr11:78341880 minus strand	914728
GAB2	NM_080491	NP_536739	Coding	chr11:78417822 minus strand	914729
GAL	NM_015973	NP_057057	Coding	chr11:68684514 plus strand	914730
GAL3ST3	NM_033036	NP_149025	Coding	chr11:66049180 minus strand	914731
GALNT18	NM_198516	NP_940918	Coding	chr11:11622014 minus strand	914732
GANAB	NM_001278192	NP_001265121	Coding	chr11:62646726 minus strand	914733
GANAB	NM_001278193	NP_001265122	Coding	chr11:62646726 minus strand	914733
GANAB	NM_001278194	NP_001265123	Coding	chr11:62646726 minus strand	914733
GANAB	NM_198334	NP_938148	Coding	chr11:62646726 minus strand	914733
GANAB	NM_198335	NP_938149	Coding	chr11:62646726 minus strand	914733
GAS2	NM_001143830	NP_001137302	Coding	chr11:22666613 plus strand	914734
GAS2	NM_005256	NP_005247	Coding	chr11:22674772 plus strand	914735
GAS2	NM_177553	NP_808221	Coding	chr11:22668107 plus strand	914736
GDPD4	NM_182833	NP_878253	Coding	chr11:77287418 minus strand	914737
GDPD5	NM_030792	NP_110419	Coding	chr11:75525554 minus strand	914738
GIF	NM_005142	NP_005133	Coding	chr11:59845501 minus strand	914739
GLB1L2	NM_138342	NP_612351	Coding	chr11:134331873 plus strand	914740
GLB1L3	NM_001080407	NP_001073876	Coding	chr11:134276380 plus strand	914741
GLYAT	NM_005838	NP_005829	Coding	chr11:58731974 minus strand	914742

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GLYAT	NM_201648	NP_964011	Coding	chr11:58731974 minus strand	914742
GLYATL1	NM_001220494	NP_001207423	Coding	chr11:58927628 plus strand	914743
GLYATL1	NM_001220496	NP_001207425	Coding	chr11:58943248 plus strand	914744
GLYATL1	NM_080661	NP_542392	Coding	chr11:58943248 plus strand	914744
GLYATL2	NM_145016	NP_659453	Coding	chr11:58844524 minus strand	914745
GNG3	NM_012202	NP_036334	Coding	chr11:62707593 plus strand	914746
GPHA2	NM_130769	NP_570125	Coding	chr11:64935888 minus strand	914747
GPR137	NM_001170726	NP_001164197	Coding	chr11:64284338 plus strand	914748
GPR137	NM_001170880	NP_001164351	Coding	chr11:64286109 plus strand	914749
GPR137	NM_001170881	NP_001164352	Coding	chr11:64284812 plus strand	914750
GPR137	NM_001177358	NP_001170829	Coding	chr11:64284810 plus strand	914751
GPR137	NM_020155	NP_064540	Coding	chr11:64286109 plus strand	914749
GPR152	NM_206997	NP_996880	Coding	chr11:67452729 minus strand	914752
GPR83	NM_016540	NP_057624	Coding	chr11:94401419 minus strand	914753
GRAMD1B	NM_001286563	NP_001273492	Coding	chr11:123525635 plus strand	914754
GRAMD1B	NM_001286564	NP_001273493	Coding	chr11:123560261 plus strand	914755
GRAMD1B	NM_020716	NP_065767	Coding	chr11:123525635 plus strand	914754
GRIA4	NM_000829	NP_000820	Coding	chr11:105610072 plus strand	914756
GRIA4	NM_001077243	NP_001070711	Coding	chr11:105610072 plus strand	914756
GRIA4	NM_001077244	NP_001070712	Coding	chr11:105610072 plus strand	914756
GRIA4	NM_001112812	NP_001106283	Coding	chr11:105610683 plus strand	914757
GRIK4	NM_001282470	NP_001269399	Coding	chr11:120564435 plus strand	914758
GRIK4	NM_001282473	NP_001269402	Coding	chr11:120564435 plus strand	914758
GRIK4	NM_014619	NP_055434	Coding	chr11:120511745 plus strand	914759
GRM5	NM_000842	NP_000833	Coding	chr11:89063678 minus strand	914760
GRM5	NM_001143831	NP_001137303	Coding	chr11:89048072 minus strand	914761
GSTP1	NM_000852	NP_000843	Coding	chr11:67583594 plus strand	914762

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GTF2H1	NM_001142307	NP_001135779	Coding	chr11:18322268 plus strand	914763
GTF2H1	NM_005316	NP_005307	Coding	chr11:18322268 plus strand	914763
GUCY1A2	NM_000855	NP_000846	Coding	chr11:107018445 minus strand	914764
GUCY1A2	NM_001256424	NP_001243353	Coding	chr11:107018445 minus strand	914764
GYLTL1B	NM_001300721	NP_001287650	Coding	chr11:45922675 plus strand	914765
GYLTL1B	NM_001300722	NP_001287651	Coding	chr11:45921620 plus strand	914766
GYLTL1B	NM_152312	NP_689525	Coding	chr11:45921620 plus strand	914766
H2AFX	NM_002105	NP_002096	Coding	chr11:119095467 minus strand	914767
HARBI1	NM_173811	NP_776172	Coding	chr11:46617227 minus strand	914768
HBB	NM_000518	NP_000509	Coding	chr11:5227071 minus strand	914769
HBD	NM_000519	NP_000510	Coding	chr11:5234628 minus strand	914770
HBE1	NM_005330	NP_005321	Coding	chr11:5270143 minus strand	914771
HBG1	NM_000559	NP_000550	Coding	chr11:5249857 minus strand	914772
HBG2	NM_000184	NP_000175	Coding	chr11:5254781 minus strand	914773
HEPACAM	NM_152722	NP_689935	Coding	chr11:124936412 minus strand	914774
HEPHL1	NM_001098672	NP_001092142	Coding	chr11:94021211 plus strand	914775
HEPN1	NM_001037558	NP_001032647	Coding	chr11:124919249 plus strand	914776
HINFP	NM_001243259	NP_001230188	Coding	chr11:119121522 plus strand	914777
HINFP	NM_015517	NP_056332	Coding	chr11:119121522 plus strand	914777
HINFP	NM_198971	NP_945322	Coding	chr11:119121522 plus strand	914777
HIPK3	NM_001048200	NP_001041665	Coding	chr11:33257321 plus strand	914778
HIPK3	NM_001278162	NP_001265091	Coding	chr11:33258330 plus strand	914779
HIPK3	NM_001278163	NP_001265092	Coding	chr11:33256671 plus strand	914780
HIPK3	NM_005734	NP_005725	Coding	chr11:33257321 plus strand	914778
HMBS	NM_000190	NP_000181	Coding	chr11:119084876 plus strand	914781
HMBS	NM_001024382	NP_001019553	Coding	chr11:119087986 plus strand	914782
HMBS	NM_001258208	NP_001245137	Coding	chr11:119084876 plus strand	914781

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HMBS	NM_001258209	NP_001245138	Coding	chr11:119084876 plus strand	914781
HNRNPUL2	NM_001079559	NP_001073027	Coding	chr11:62727385 minus strand	914783
HOTS	NM_001293171	NP_001280100	Coding	chr11:1995176 plus strand	914784
HPS5	NM_007216	NP_009147	Coding	chr11:18322174 minus strand	914785
HPS5	NM_181507	NP_852608	Coding	chr11:18322174 minus strand	914785
HPS5	NM_181508	NP_852609	Coding	chr11:18322174 minus strand	914785
HPX	NM_000613	NP_000604	Coding	chr11:6441024 minus strand	914786
HRAS	NM_001130442	NP_001123914	Coding	chr11:535550 minus strand	914787
HRAS	NM_005343	NP_005334	Coding	chr11:535550 minus strand	914787
HRAS	NM_176795	NP_789765	Coding	chr11:535550 minus strand	914787
HRASLS2	NM_017878	NP_060348	Coding	chr11:63563383 minus strand	914788
HRASLS5	NM_001146728	NP_001140200	Coding	chr11:63491208 minus strand	914789
HRASLS5	NM_001146729	NP_001140201	Coding	chr11:63491208 minus strand	914789
HRASLS5	NM_054108	NP_473449	Coding	chr11:63491208 minus strand	914789
HSD17B12	NM_016142	NP_057226	Coding	chr11:43680592 plus strand	914790
HSPA8	NM_006597	NP_006588	Coding	chr11:123062335 minus strand	914791
HSPA8	NM_153201	NP_694881	Coding	chr11:123062335 minus strand	914791
HSPB2	NM_001541	NP_001532	Coding	chr11:111912735 plus strand	914792
HTATIP2	NM_001098520	NP_001091990	Coding	chr11:20363742 plus strand	914793
HTATIP2	NM_001098521	NP_001091991	Coding	chr11:20363700 plus strand	914794
HTATIP2	NM_001098522	NP_001091992	Coding	chr11:20363856 plus strand	914795
HTATIP2	NM_001098523	NP_001091993	Coding	chr11:20364140 plus strand	914796
HTATIP2	NM_006410	NP_006401	Coding	chr11:20363684 plus strand	914797
HTR3A	NM_000869	NP_000860	Coding	chr11:113975074 plus strand	914798
HTR3A	NM_001161772	NP_001155244	Coding	chr11:113977499 plus strand	914799
HTR3A	NM_213621	NP_998786	Coding	chr11:113975074 plus strand	914798
HTR3B	NM_006028	NP_006019	Coding	chr11:113904795 plus strand	914800
HYLS1	NM_001134793	NP_001128265	Coding	chr11:125887059 plus strand	914801
HYLS1	NM_145014	NP_659451	Coding	chr11:125883613 plus	914802

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				strand	
HYOU1	NM_001130991	NP_001124463	Coding	chr11:119057246 minus strand	914803
HYOU1	NM_006389	NP_006380	Coding	chr11:119057246 minus strand	914803
IFITM1	NM_003641	NP_003632	Coding	chr11:313990 plus strand	914804
IFITM10	NM_001170820	NP_001164291	Coding	chr11:1750594 minus strand	914805
IFITM2	NM_006435	NP_006426	Coding	chr11:308106 plus strand	914806
IFITM3	NM_021034	NP_066362	Coding	chr11:320914 minus strand	914807
IFITM5	NM_001025295	NP_001020466	Coding	chr11:299526 minus strand	914808
IFT46	NM_001168618	NP_001162089	Coding	chr11:118566076 minus strand	914809
IFT46	NM_020153	NP_064538	Coding	chr11:118566076 minus strand	914809
IGF2	NM_000612	NP_000603	Coding	chr11:2138974 minus strand	914810
IGF2	NM_001007139	NP_001007140	Coding	chr11:2149603 minus strand	914811
IGF2	NM_001127598	NP_001121070	Coding	chr11:2141124 minus strand	914812
IGF2	NM_001291861	NP_001278790	Coding	chr11:2137288 minus strand	914813
IGF2	NM_001291862	NP_001278791	Coding	chr11:2141124 minus strand	914812
IGHMBP2	NM_002180	NP_002171	Coding	chr11:68903850 plus strand	914814
IGSF22	NM_173588	NP_775859	Coding	chr11:18726230 minus strand	914815
IGSF9B	NM_001277285	NP_001264214	Coding	chr11:133956754 minus strand	914816
IL10RA	NM_001558	NP_001549	Coding	chr11:117986390 plus strand	914817
IL18	NM_001243211	NP_001230140	Coding	chr11:112164117 minus strand	914818
IL18	NM_001562	NP_001553	Coding	chr11:112164117 minus strand	914818
IL18BP	NM_001039659	NP_001034748	Coding	chr11:71998911 plus strand	914819
IL18BP	NM_001039660	NP_001034749	Coding	chr11:71998911 plus strand	914819
IL18BP	NM_001145055	NP_001138527	Coding	chr11:71999926 plus strand	914820
IL18BP	NM_001145057	NP_001138529	Coding	chr11:71999616 plus strand	914821
IL18BP	NM_005699	NP_005690	Coding	chr11:71999062 plus strand	914822
IL18BP	NM_173042	NP_766630	Coding	chr11:71999062 plus strand	914822
IL18BP	NM_173044	NP_766632	Coding	chr11:71998911 plus strand	914819
ILK	NM_001014794	NP_001014794	Coding	chr11:6603707 plus strand	914823

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ILK	NM_001014795	NP_001014795	Coding	chr11:6603809 plus strand	914824
ILK	NM_001278441	NP_001265370	Coding	chr11:6603707 plus strand	914823
ILK	NM_001278442	NP_001265371	Coding	chr11:6603707 plus strand	914823
ILK	NM_004517	NP_004508	Coding	chr11:6603707 plus strand	914823
IMMP1L	NM_144981	NP_659418	Coding	chr11:31509622 minus strand	914825
INCENP	NM_001040694	NP_001035784	Coding	chr11:62123972 plus strand	914826
INCENP	NM_020238	NP_064623	Coding	chr11:62123972 plus strand	914826
INPPL1	NM_001567	NP_001558	Coding	chr11:72224837 plus strand	914827
INS	NM_000207	NP_000198	Coding	chr11:2161209 minus strand	914828
INS	NM_001185097	NP_001172026	Coding	chr11:2161209 minus strand	914828
INS	NM_001185098	NP_001172027	Coding	chr11:2161209 minus strand	914828
INS	NM_001291897	NP_001278826	Coding	chr11:2161209 minus strand	914828
INSC	NM_001031853	NP_001027024	Coding	chr11:15112423 plus strand	914829
INSC	NM_001042536	NP_001036001	Coding	chr11:15114937 plus strand	914830
INSC	NM_001278313	NP_001265242	Coding	chr11:15149101 plus strand	914831
INSC	NM_001278314	NP_001265243	Coding	chr11:15149101 plus strand	914831
INSC	NM_001278315	NP_001265244	Coding	chr11:15149101 plus strand	914831
INSC	NM_001278316	NP_001265245	Coding	chr11:15149101 plus strand	914831
INS-IGF2	NM_001042376	NP_001035835	Coding	chr11:2161209 minus strand	914832
INTS4	NM_033547	NP_291025	Coding	chr11:77994671 minus strand	914833
INTS5	NM_030628	NP_085131	Coding	chr11:62653302 minus strand	914834
IPO7	NM_006391	NP_006382	Coding	chr11:9384621 plus strand	914835
IRF7	NM_001572	NP_001563	Coding	chr11:615999 minus strand	914836
IRF7	NM_004029	NP_004020	Coding	chr11:615999 minus strand	914836
IRF7	NM_004031	NP_004022	Coding	chr11:615728 minus strand	914837
IZUMO1R	NM_001199206	NP_001186135	Coding	chr11:94305636 plus strand	914838
JAM3	NM_001205329	NP_001192258	Coding	chr11:134068924 plus strand	914839
JAM3	NM_032801	NP_116190	Coding	chr11:134068924 plus strand	914839
JRKL	NM_001261833	NP_001248762	Coding	chr11:96389993 plus strand	914840
JRKL	NM_003772	NP_003763	Coding	chr11:96389993 plus strand	914840

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KAT5	NM_001206833	NP_001193762	Coding	chr11:65712001 plus strand	914841
KAT5	NM_006388	NP_006379	Coding	chr11:65712001 plus strand	914841
KAT5	NM_182709	NP_874368	Coding	chr11:65712001 plus strand	914841
KAT5	NM_182710	NP_874369	Coding	chr11:65712001 plus strand	914841
KBTBD3	NM_152433	NP_689646	Coding	chr11:106077738 minus strand	914842
KBTBD3	NM_198439	NP_940841	Coding	chr11:106077738 minus strand	914842
KBTBD4	NM_016506	NP_057590	Coding	chr11:47578969 minus strand	914843
KBTBD4	NM_018095	NP_060565	Coding	chr11:47579015 minus strand	914844
KCNA4	NM_002233	NP_002224	Coding	chr11:30017030 minus strand	914845
KCNC1	NM_001112741	NP_001106212	Coding	chr11:17735947 plus strand	914846
KCNC1	NM_004976	NP_004967	Coding	chr11:17735947 plus strand	914846
KCNE3	NM_005472	NP_005463	Coding	chr11:74467555 minus strand	914847
KCNJ1	NM_000220	NP_000211	Coding	chr11:128842534 minus strand	914848
KCNJ1	NM_153764	NP_722448	Coding	chr11:128867373 minus strand	914849
KCNJ1	NM_153765	NP_722449	Coding	chr11:128867373 minus strand	914849
KCNJ1	NM_153766	NP_722450	Coding	chr11:128867373 minus strand	914849
KCNJ1	NM_153767	NP_722451	Coding	chr11:128867373 minus strand	914849
KCNJ11	NM_000525	NP_000516	Coding	chr11:17388659 minus strand	914850
KCNJ11	NM_001166290	NP_001159762	Coding	chr11:17389331 minus strand	914851
KCNJ5	NM_000890	NP_000881	Coding	chr11:128891417 plus strand	914852
KCNK4	NM_033310	NP_201567	Coding	chr11:64291320 plus strand	914853
KCNK7	NM_005714	NP_005705	Coding	chr11:65595996 minus strand	914854
KCNK7	NM_033347	NP_203133	Coding	chr11:65595996 minus strand	914854
KCNK7	NM_033348	NP_203134	Coding	chr11:65595996 minus strand	914854
KCNK7	NM_033455	NP_258416	Coding	chr11:65595996 minus strand	914854
KCNQ1	NM_000218	NP_000209	Coding	chr11:2444990 plus strand	914855
KCNQ1	NM_181798	NP_861463	Coding	chr11:2461453 plus strand	914856
KCTD14	NM_001282406	NP_001269335	Coding	chr11:78046191 minus strand	914857

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KCTD14	NM_023930	NP_076419	Coding	chr11:78023274 minus strand	914858
KCTD21	NM_001029859	NP_001025030	Coding	chr11:78188618 minus strand	914859
KDELC2	NM_153705	NP_714916	Coding	chr11:108498432 minus strand	914860
KDM2A	NM_001256405	NP_001243334	Coding	chr11:67240034 plus strand	914861
KDM2A	NM_012308	NP_036440	Coding	chr11:67119268 plus strand	914862
KDM4D	NM_018039	NP_060509	Coding	chr11:94973680 plus strand	914863
KDM4E	NM_001161630	NP_001155102	Coding	chr11:95025257 plus strand	914864
KIAA1377	NM_020802	NP_065853	Coding	chr11:101915014 plus strand	914865
KIAA1549L	NM_012194	NP_036326	Coding	chr11:33542330 plus strand	914866
KIF18A	NM_031217	NP_112494	Coding	chr11:28108199 minus strand	914867
KIRREL3	NM_001161707	NP_001155179	Coding	chr11:127000870 minus strand	914868
KIRREL3	NM_001301097	NP_001288026	Coding	chr11:127000870 minus strand	914868
KIRREL3	NM_032531	NP_115920	Coding	chr11:127000870 minus strand	914868
KLC2	NM_001134774	NP_001128246	Coding	chr11:66257702 plus strand	914869
KLC2	NM_001134775	NP_001128247	Coding	chr11:66257293 plus strand	914870
KLC2	NM_001134776	NP_001128248	Coding	chr11:66257619 plus strand	914871
KLC2	NM_022822	NP_073733	Coding	chr11:66257702 plus strand	914869
KLHL35	NM_001039548	NP_001034637	Coding	chr11:75430629 minus strand	914872
KMT2A	NM_001197104	NP_001184033	Coding	chr11:118436489 plus strand	914873
KMT2A	NM_005933	NP_005924	Coding	chr11:118436489 plus strand	914873
KRTAP5-1	NM_001005922	NP_001005922	Coding	chr11:1585283 minus strand	914874
KRTAP5-10	NM_001012710	NP_001012728	Coding	chr11:71565562 plus strand	914875
KRTAP5-11	NM_001005405	NP_001005405	Coding	chr11:71582875 minus strand	914876
KRTAP5-2	NM_001004325	NP_001004325	Coding	chr11:1598294 minus strand	914877
KRTAP5-3	NM_001012708	NP_001012726	Coding	chr11:1608463 minus strand	914878
KRTAP5-4	NM_001012709	NP_001012727	Coding	chr11:1622138 minus strand	914879
KRTAP5-5	NM_001001480	NP_001001480	Coding	chr11:1629802 plus strand	914880
KRTAP5-6	NM_001012416	NP_001012416	Coding	chr11:1697194 plus strand	914881

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KRTAP5-7	NM_001012503	NP_001012521	Coding	chr11:71527266 plus strand	914882
KRTAP5-8	NM_021046	NP_066384	Coding	chr11:71538024 plus strand	914883
KRTAP5-9	NM_005553	NP_005544	Coding	chr11:71548419 plus strand	914884
LAMTOR1	NM_017907	NP_060377	Coding	chr11:72103387 minus strand	914885
LAYN	NM_001258390	NP_001245319	Coding	chr11:111540507 plus strand	914886
LAYN	NM_001258391	NP_001245320	Coding	chr11:111540507 plus strand	914886
LAYN	NM_178834	NP_849156	Coding	chr11:111540507 plus strand	914886
LBHD1	NM_024099	NP_077004	Coding	chr11:62671769 minus strand	914887
LDHA	NM_001135239	NP_001128711	Coding	chr11:18394388 plus strand	914888
LDHA	NM_001165414	NP_001158886	Coding	chr11:18396265 plus strand	914889
LDHA	NM_001165415	NP_001158887	Coding	chr11:18394388 plus strand	914888
LDHA	NM_001165416	NP_001158888	Coding	chr11:18394388 plus strand	914888
LDHA	NM_005566	NP_005557	Coding	chr11:18394388 plus strand	914888
LDHAL6A	NM_001144071	NP_001137543	Coding	chr11:18455826 plus strand	914890
LDHAL6A	NM_144972	NP_659409	Coding	chr11:18455826 plus strand	914890
LDHC	NM_002301	NP_002292	Coding	chr11:18412305 plus strand	914891
LDHC	NM_017448	NP_059144	Coding	chr11:18412305 plus strand	914891
LDLRAD3	NM_174902	NP_777562	Coding	chr11:35944061 plus strand	914892
LGALS12	NM_001142535	NP_001136007	Coding	chr11:63506051 plus strand	914893
LGALS12	NM_001142536	NP_001136008	Coding	chr11:63506051 plus strand	914893
LGALS12	NM_001142537	NP_001136009	Coding	chr11:63507986 plus strand	914894
LGALS12	NM_001142538	NP_001136010	Coding	chr11:63507986 plus strand	914894
LGALS12	NM_033101	NP_149092	Coding	chr11:63506051 plus strand	914893
LGR4	NM_018490	NP_060960	Coding	chr11:27472787 minus strand	914895
LIN7C	NM_018362	NP_060832	Coding	chr11:27506779 minus strand	914896
LIPT2	NM_001144869	NP_001138341	Coding	chr11:74493710 minus strand	914897
LMNTD2	NM_173573	NP_775844	Coding	chr11:560779 minus strand	914898
LMO1	NM_001270428	NP_001257357	Coding	chr11:8268635 minus	914899

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				strand	
LMO1	NM_002315	NP_002306	Coding	chr11:8263878 minus strand	914900
LMO2	NM_001142315	NP_001135787	Coding	chr11:33869963 minus strand	914901
LMO2	NM_001142316	NP_001135788	Coding	chr11:33869825 minus strand	914902
LMO2	NM_005574	NP_005565	Coding	chr11:33892289 minus strand	914903
LOC100129216	NM_001242853	NP_001229782	Coding	chr11:71878452 plus strand	914904
LOC100506127	NM_001282456	NP_001269385	Coding	chr11:76381324 plus strand	914905
LOC102724957	NM_001293172	NP_001280101	Coding	chr11:15643884 plus strand	914906
LOC403312	NM_001301851	NP_001288780	Coding	chr11:125495213 plus strand	914907
LPXN	NM_001143995	NP_001137467	Coding	chr11:58578166 minus strand	914908
LPXN	NM_004811	NP_004802	Coding	chr11:58575917 minus strand	914909
LRFN4	NM_024036	NP_076941	Coding	chr11:66857404 plus strand	914910
LRP4	NM_002334	NP_002325	Coding	chr11:46918622 minus strand	914911
LRP5	NM_001291902	NP_001278831	Coding	chr11:68312608 plus strand	914912
LRP5	NM_002335	NP_002326	Coding	chr11:68312608 plus strand	914912
LRRC10B	NM_001145077	NP_001138549	Coding	chr11:61508799 plus strand	914913
LRRC32	NM_001128922	NP_001122394	Coding	chr11:76670747 minus strand	914914
LRRC32	NM_005512	NP_005503	Coding	chr11:76670000 minus strand	914915
LRRC4C	NM_001258419	NP_001245348	Coding	chr11:41459636 minus strand	914916
LRRC4C	NM_020929	NP_065980	Coding	chr11:41459636 minus strand	914916
LRRC55	NM_001005210	NP_001005210	Coding	chr11:57181746 plus strand	914917
LRRC56	NM_198075	NP_932341	Coding	chr11:537521 plus strand	914918
LRRN4CL	NM_203422	NP_981967	Coding	chr11:62689899 minus strand	914919
LRTOMT	NM_001145307	NP_001138779	Coding	chr11:72080330 plus strand	914920
LRTOMT	NM_001145308	NP_001138780	Coding	chr11:72080330 plus strand	914920
LRTOMT	NM_001145309	NP_001138781	Coding	chr11:72080330 plus strand	914920
LRTOMT	NM_001145310	NP_001138782	Coding	chr11:72080330 plus strand	914920
LRTOMT	NM_001205138	NP_001192067	Coding	chr11:72080330 plus strand	914920

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LRTOMT	NM_001271471	NP_001258400	Coding	chr11:72080330 plus strand	914920
LRTOMT	NM_145309	NP_660352	Coding	chr11:72080330 plus strand	914920
LSP1	NM_001013253	NP_001013271	Coding	chr11:1868672 plus strand	914921
LSP1	NM_001013254	NP_001013272	Coding	chr11:1870868 plus strand	914922
LSP1	NM_001013255	NP_001013273	Coding	chr11:1870923 plus strand	914923
LSP1	NM_001242932	NP_001229861	Coding	chr11:1865164 plus strand	914924
LSP1	NM_001289005	NP_001275934	Coding	chr11:1870251 plus strand	914925
LSP1	NM_002339	NP_002330	Coding	chr11:1852969 plus strand	914926
LTBP3	NM_001130144	NP_001123616	Coding	chr11:65558228 minus strand	914927
LTBP3	NM_001164266	NP_001157738	Coding	chr11:65558228 minus strand	914927
LTBP3	NM_021070	NP_066548	Coding	chr11:65558228 minus strand	914927
LUZP2	NM_001009909	NP_001009909	Coding	chr11:24496969 plus strand	914928
LUZP2	NM_001252008	NP_001238937	Coding	chr11:24496969 plus strand	914928
LUZP2	NM_001252010	NP_001238939	Coding	chr11:24496969 plus strand	914928
LYVE1	NM_006691	NP_006682	Coding	chr11:10568818 minus strand	914929
MACROD1	NM_014067	NP_054786	Coding	chr11:64166113 minus strand	914930
MADD	NM_001135943	NP_001129415	Coding	chr11:47270119 plus strand	914931
MADD	NM_001135944	NP_001129416	Coding	chr11:47269647 plus strand	914932
MADD	NM_003682	NP_003673	Coding	chr11:47269647 plus strand	914932
MADD	NM_130470	NP_569826	Coding	chr11:47269375 plus strand	914933
MADD	NM_130471	NP_569827	Coding	chr11:47269647 plus strand	914932
MADD	NM_130472	NP_569828	Coding	chr11:47269647 plus strand	914932
MADD	NM_130473	NP_569829	Coding	chr11:47269647 plus strand	914932
MADD	NM_130474	NP_569830	Coding	chr11:47269647 plus strand	914932
MADD	NM_130475	NP_569831	Coding	chr11:47270119 plus strand	914931
MADD	NM_130476	NP_569832	Coding	chr11:47270119 plus strand	914931
MAML2	NM_032427	NP_115803	Coding	chr11:96343180 minus strand	914934
MAP3K11	NM_002419	NP_002410	Coding	chr11:65614249 minus strand	914935
MAP4K2	NM_004579	NP_004570	Coding	chr11:64803241 minus strand	914936

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MAP6	NM_033063	NP_149052	Coding	chr11:75668434 minus strand	914937
MAP6	NM_207577	NP_997460	Coding	chr11:75668434 minus strand	914937
MAPK8IP1	NM_005456	NP_005447	Coding	chr11:45885495 plus strand	914938
MARK2	NM_001039469	NP_001034558	Coding	chr11:63838927 plus strand	914939
MARK2	NM_001163296	NP_001156768	Coding	chr11:63838927 plus strand	914939
MARK2	NM_001163297	NP_001156769	Coding	chr11:63838927 plus strand	914939
MARK2	NM_004954	NP_004945	Coding	chr11:63838927 plus strand	914939
MARK2	NM_017490	NP_059672	Coding	chr11:63888514 plus strand	914940
MCAM	NM_006500	NP_006491	Coding	chr11:119317130 minus strand	914941
MDK	NM_001012333	NP_001012333	Coding	chr11:46381710 plus strand	914942
MDK	NM_001012334	NP_001012334	Coding	chr11:46381067 plus strand	914943
MDK	NM_001270550	NP_001257479	Coding	chr11:46380783 plus strand	914944
MDK	NM_001270551	NP_001257480	Coding	chr11:46381710 plus strand	914942
MDK	NM_001270552	NP_001257481	Coding	chr11:46381654 plus strand	914945
MDK	NM_002391	NP_002382	Coding	chr11:46381654 plus strand	914945
ME3	NM_001014811	NP_001014811	Coding	chr11:86672198 minus strand	914946
ME3	NM_001161586	NP_001155058	Coding	chr11:86672636 minus strand	914947
ME3	NM_006680	NP_006671	Coding	chr11:86672385 minus strand	914948
MED17	NM_004268	NP_004259	Coding	chr11:93784238 plus strand	914949
MED19	NM_153450	NP_703151	Coding	chr11:57712201 minus strand	914950
MEN1	NM_000244	NP_000235	Coding	chr11:64810716 minus strand	914951
MEN1	NM_130799	NP_570711	Coding	chr11:64810716 minus strand	914951
MEN1	NM_130800	NP_570712	Coding	chr11:64810563 minus strand	914952
MEN1	NM_130801	NP_570713	Coding	chr11:64810563 minus strand	914952
MEN1	NM_130802	NP_570714	Coding	chr11:64810741 minus strand	914953
MEN1	NM_130803	NP_570715	Coding	chr11:64811294 minus strand	914954
MEN1	NM_130804	NP_570716	Coding	chr11:64811294 minus strand	914954

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METTL12	NM_001043229	NP_001036694	Coding	chr11:62665306 plus strand	914955
METTL15	NM_001113528	NP_001107000	Coding	chr11:28108250 plus strand	914956
METTL15	NM_001297775	NP_001284704	Coding	chr11:28108250 plus strand	914956
METTL15	NM_152636	NP_689849	Coding	chr11:28108250 plus strand	914956
MFRP	NM_031433	NP_113621	Coding	chr11:119346673 minus strand	914957
MICAL2	NM_001282663	NP_001269592	Coding	chr11:12110575 plus strand	914958
MICAL2	NM_001282664	NP_001269593	Coding	chr11:12138389 plus strand	914959
MICAL2	NM_001282665	NP_001269594	Coding	chr11:12138389 plus strand	914959
MICAL2	NM_001282666	NP_001269595	Coding	chr11:12162078 plus strand	914960
MICAL2	NM_001282667	NP_001269596	Coding	chr11:12162078 plus strand	914960
MICAL2	NM_001282668	NP_001269597	Coding	chr11:12110575 plus strand	914958
MICAL2	NM_014632	NP_055447	Coding	chr11:12110575 plus strand	914958
MICALCL	NM_032867	NP_116256	Coding	chr11:12286899 plus strand	914961
MMP1	NM_001145938	NP_001139410	Coding	chr11:102798235 minus strand	914962
MMP1	NM_002421	NP_002412	Coding	chr11:102798235 minus strand	914962
MMP10	NM_002425	NP_002416	Coding	chr11:102780628 minus strand	914963
MMP12	NM_002426	NP_002417	Coding	chr11:102875034 minus strand	914964
MMP13	NM_002427	NP_002418	Coding	chr11:102955734 minus strand	914965
MMP20	NM_004771	NP_004762	Coding	chr11:102625332 minus strand	914966
MMP26	NM_021801	NP_068573	Coding	chr11:4988193 plus strand	914967
MMP27	NM_022122	NP_071405	Coding	chr11:102705737 minus strand	914968
MMP3	NM_002422	NP_002413	Coding	chr11:102843611 minus strand	914969
MMP7	NM_002423	NP_002414	Coding	chr11:102530747 minus strand	914970
MMP8	NM_002424	NP_002415	Coding	chr11:102724954 minus strand	914971
MOB2	NM_001172223	NP_001165694	Coding	chr11:1486779 minus strand	914972
MOB2	NM_053005	NP_443731	Coding	chr11:1480886 minus strand	914973
MOGAT2	NM_025098	NP_079374	Coding	chr11:75717888 plus strand	914974
MPEG1	NM_001039396	NP_001034485	Coding	chr11:59213021 minus	914975

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				strand	
MPPED2	NM_001145399	NP_001138871	Coding	chr11:30586383 minus strand	914976
MPPED2	NM_001584	NP_001575	Coding	chr11:30580493 minus strand	914977
MPZL2	NM_005797	NP_005788	Coding	chr11:118264536 minus strand	914978
MPZL2	NM_144765	NP_658911	Coding	chr11:118264536 minus strand	914978
MPZL3	NM_001286152	NP_001273081	Coding	chr11:118252368 minus strand	914979
MPZL3	NM_198275	NP_938016	Coding	chr11:118252368 minus strand	914979
MRE11A	NM_005590	NP_005581	Coding	chr11:94493874 minus strand	914980
MRE11A	NM_005591	NP_005582	Coding	chr11:94493874 minus strand	914980
MRGPRD	NM_198923	NP_944605	Coding	chr11:68980986 minus strand	914981
MRGPRE	NM_001039165	NP_001034254	Coding	chr11:3232386 minus strand	914982
MRGPRF	NM_001098515	NP_001091985	Coding	chr11:69013382 minus strand	914983
MRGPRF	NM_145015	NP_659452	Coding	chr11:69013382 minus strand	914983
MRGPRG	NM_001164377	NP_001157849	Coding	chr11:3218813 minus strand	914984
MRGPRX1	NM_147199	NP_671732	Coding	chr11:18935002 minus strand	914985
MRGPRX2	NM_054030	NP_473371	Coding	chr11:19060681 minus strand	914986
MRGPRX3	NM_054031	NP_473372	Coding	chr11:18120954 plus strand	914987
MRGPRX4	NM_054032	NP_473373	Coding	chr11:18172836 plus strand	914988
MRPL11	NM_016050	NP_057134	Coding	chr11:66438848 minus strand	914989
MRPL11	NM_170738	NP_733934	Coding	chr11:66438848 minus strand	914989
MRPL11	NM_170739	NP_733935	Coding	chr11:66438848 minus strand	914989
MRPL16	NM_017840	NP_060310	Coding	chr11:59810872 minus strand	914990
MRPL17	NM_022061	NP_071344	Coding	chr11:6683401 minus strand	914991
MRPL21	NM_181514	NP_852615	Coding	chr11:68903835 minus strand	914992
MRPL21	NM_181515	NP_852616	Coding	chr11:68903835 minus strand	914992
MRPL23	NM_021134	NP_066957	Coding	chr11:1947271 plus strand	914993
MRPL48	NM_016055	NP_057139	Coding	chr11:73787871 plus strand	914994
MRPL49	NM_004927	NP_004918	Coding	chr11:65122243 plus strand	914995

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MRVI1	NM_001098579	NP_001092049	Coding	chr11:10652301 minus strand	914996
MRVI1	NM_001100163	NP_001093633	Coding	chr11:10693988 minus strand	914997
MRVI1	NM_001100167	NP_001093637	Coding	chr11:10693574 minus strand	914998
MRVI1	NM_001206880	NP_001193809	Coding	chr11:10693988 minus strand	914997
MRVI1	NM_001206881	NP_001193810	Coding	chr11:10693988 minus strand	914997
MRVI1	NM_130385	NP_569056	Coding	chr11:10693988 minus strand	914997
MS4A1	NM_021950	NP_068769	Coding	chr11:60455808 plus strand	914999
MS4A1	NM_152866	NP_690605	Coding	chr11:60455808 plus strand	914999
MS4A10	NM_206893	NP_996776	Coding	chr11:60785347 plus strand	915000
MS4A12	NM_001164470	NP_001157942	Coding	chr11:60492777 plus strand	915001
MS4A12	NM_017716	NP_060186	Coding	chr11:60492777 plus strand	915001
MS4A13	NM_001012417	NP_001012417	Coding	chr11:60515412 plus strand	915002
MS4A13	NM_001100909	NP_001094379	Coding	chr11:60515412 plus strand	915002
MS4A13	NM_001278320	NP_001265249	Coding	chr11:60515412 plus strand	915002
MS4A14	NM_001079692	NP_001073160	Coding	chr11:60396013 plus strand	915003
MS4A14	NM_001261827	NP_001248756	Coding	chr11:60396013 plus strand	915003
MS4A14	NM_001261828	NP_001248757	Coding	chr11:60396013 plus strand	915003
MS4A14	NM_032597	NP_115986	Coding	chr11:60396013 plus strand	915003
MS4A15	NM_001098835	NP_001092305	Coding	chr11:60756866 plus strand	915004
MS4A15	NM_001278242	NP_001265171	Coding	chr11:60756866 plus strand	915004
MS4A15	NM_152717	NP_689930	Coding	chr11:60756866 plus strand	915004
MS4A2	NM_000139	NP_000130	Coding	chr11:60088663 plus strand	915005
MS4A2	NM_001256916	NP_001243845	Coding	chr11:60088663 plus strand	915005
MS4A3	NM_001031666	NP_001026836	Coding	chr11:60056627 plus strand	915006
MS4A3	NM_001031809	NP_001026979	Coding	chr11:60056627 plus strand	915006
MS4A3	NM_006138	NP_006129	Coding	chr11:60056627 plus strand	915006
MS4A4A	NM_001243266	NP_001230195	Coding	chr11:60280540 plus strand	915007

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MS4A4A	NM_024021	NP_076926	Coding	chr11:60280540 plus strand	915007
MS4A4A	NM_148975	NP_683876	Coding	chr11:60280540 plus strand	915007
MS4A5	NM_023945	NP_076434	Coding	chr11:60429588 plus strand	915008
MS4A6A	NM_001247999	NP_001234928	Coding	chr11:60184666 minus strand	915009
MS4A6A	NM_022349	NP_071744	Coding	chr11:60183331 minus strand	915010
MS4A6A	NM_152851	NP_690590	Coding	chr11:60183331 minus strand	915010
MS4A6A	NM_152852	NP_690591	Coding	chr11:60184666 minus strand	915009
MS4A6E	NM_139249	NP_640342	Coding	chr11:60334881 plus strand	915011
MS4A7	NM_021201	NP_067024	Coding	chr11:60378484 plus strand	915012
MS4A7	NM_206938	NP_996821	Coding	chr11:60378484 plus strand	915012
MS4A7	NM_206939	NP_996822	Coding	chr11:60378484 plus strand	915012
MS4A7	NM_206940	NP_996823	Coding	chr11:60378484 plus strand	915012
MS4A8	NM_031457	NP_113645	Coding	chr11:60699573 plus strand	915013
MSANTD2	NM_001301087	NP_001288016	Coding	chr11:124800403 minus strand	915014
MSANTD2	NM_024631	NP_078907	Coding	chr11:124800403 minus strand	915014
MSANTD4	NM_032424	NP_115800	Coding	chr11:106022227 minus strand	915015
MTA2	NM_004739	NP_004730	Coding	chr11:62601840 minus strand	915016
MTCH2	NM_014342	NP_055157	Coding	chr11:47642654 minus strand	915017
MTL5	NM_001039656	NP_001034745	Coding	chr11:68751520 minus strand	915018
MTL5	NM_004923	NP_004914	Coding	chr11:68751520 minus strand	915018
MTMR2	NM_001243571	NP_001230500	Coding	chr11:95924207 minus strand	915019
MTMR2	NM_016156	NP_057240	Coding	chr11:95924207 minus strand	915019
MTMR2	NM_201278	NP_958435	Coding	chr11:95924207 minus strand	915019
MTMR2	NM_201281	NP_958438	Coding	chr11:95924207 minus strand	915019
MTNR1B	NM_005959	NP_005950	Coding	chr11:92969622 plus strand	915020
MTRNR2L8	NM_001190702	NP_001177631	Coding	chr11:10509176 minus strand	915021
MUC15	NM_001135091	NP_001128563	Coding	chr11:26572268 minus strand	915022

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MUC15	NM_001135092	NP_001128564	Coding	chr11:26572268 minus strand	915022
MUC15	NM_145650	NP_663625	Coding	chr11:26572268 minus strand	915022
MUC2	NM_002457	NP_002448	Coding	chr11:1074874 plus strand	915023
MUC5B	NM_002458	NP_002449	Coding	chr11:1223064 plus strand	915024
MUC6	NM_005961	NP_005952	Coding	chr11:1036706 minus strand	915025
MUS81	NM_025128	NP_079404	Coding	chr11:65860400 plus strand	915026
MYBPC3	NM_000256	NP_000247	Coding	chr11:47352702 minus strand	915027
MYEOV	NM_001293291	NP_001280220	Coding	chr11:69294137 plus strand	915028
MYEOV	NM_001293294	NP_001280223	Coding	chr11:69294137 plus strand	915028
MYEOV	NM_001293296	NP_001280225	Coding	chr11:69294137 plus strand	915028
MYEOV	NM_001300923	NP_001287852	Coding	chr11:69294137 plus strand	915028
MYEOV	NM_001300924	NP_001287853	Coding	chr11:69294137 plus strand	915028
MYEOV	NM_138768	NP_620123	Coding	chr11:69294137 plus strand	915028
MYO7A	NM_000260	NP_000251	Coding	chr11:77128263 plus strand	915029
MYO7A	NM_001127179	NP_001120651	Coding	chr11:77128263 plus strand	915029
MYO7A	NM_001127180	NP_001120652	Coding	chr11:77128269 plus strand	915030
MYOD1	NM_002478	NP_002469	Coding	chr11:17719562 plus strand	915031
MYRF	NM_001127392	NP_001120864	Coding	chr11:61752636 plus strand	915032
MYRF	NM_013279	NP_037411	Coding	chr11:61755388 plus strand	915033
NAA40	NM_001300800	NP_001287729	Coding	chr11:63939330 plus strand	915034
NAA40	NM_024771	NP_079047	Coding	chr11:63938969 plus strand	915035
NAALAD2	NM_001300930	NP_001287859	Coding	chr11:90134649 plus strand	915036
NAALAD2	NM_005467	NP_005458	Coding	chr11:90134649 plus strand	915036
NAALADL1	NM_005468	NP_005459	Coding	chr11:65058537 minus strand	915037
NADSYN1	NM_018161	NP_060631	Coding	chr11:71453170 plus strand	915038
NAP1L4	NM_005969	NP_005960	Coding	chr11:2992377 minus strand	915039
NARS2	NM_001243251	NP_001230180	Coding	chr11:78574864 minus strand	915040
NARS2	NM_024678	NP_078954	Coding	chr11:78574864 minus strand	915040

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NAT10	NM_001144030	NP_001137502	Coding	chr11:34105563 plus strand	915041
NAT10	NM_024662	NP_078938	Coding	chr11:34105563 plus strand	915041
NAV2	NM_001111018	NP_001104488	Coding	chr11:19350723 plus strand	915042
NAV2	NM_001111019	NP_001104489	Coding	chr11:20022555 plus strand	915043
NAV2	NM_001244963	NP_001231892	Coding	chr11:19713334 plus strand	915044
NAV2	NM_145117	NP_660093	Coding	chr11:19713334 plus strand	915044
NAV2	NM_182964	NP_892009	Coding	chr11:19713334 plus strand	915044
NCAM1	NM_000615	NP_000606	Coding	chr11:112961246 plus strand	915045
NCAM1	NM_001076682	NP_001070150	Coding	chr11:112961246 plus strand	915045
NCAM1	NM_001242607	NP_001229536	Coding	chr11:112961246 plus strand	915045
NCAM1	NM_001242608	NP_001229537	Coding	chr11:112961246 plus strand	915045
NCAM1	NM_181351	NP_851996	Coding	chr11:112961246 plus strand	915045
NCAPD3	NM_015261	NP_056076	Coding	chr11:134224532 minus strand	915046
NCR3LG1	NM_001202439	NP_001189368	Coding	chr11:17351761 plus strand	915047
NDUFC2	NM_001204054	NP_001190983	Coding	chr11:78080219 minus strand	915048
NDUFC2	NM_001204055	NP_001190984	Coding	chr11:78080219 minus strand	915048
NDUFC2	NM_004549	NP_004540	Coding	chr11:78080219 minus strand	915048
NDUFC2-KCTD14	NM_001203260	NP_001190189	Coding	chr11:78080219 minus strand	915049
NDUFC2-KCTD14	NM_001203261	NP_001190190	Coding	chr11:78080219 minus strand	915049
NDUFC2-KCTD14	NM_001203262	NP_001190191	Coding	chr11:78080219 minus strand	915049
NDUFS3	NM_004551	NP_004542	Coding	chr11:47579009 plus strand	915050
NDUFS8	NM_002496	NP_002487	Coding	chr11:68030616 plus strand	915051
NDUFV1	NM_001166102	NP_001159574	Coding	chr11:67606851 plus strand	915052
NDUFV1	NM_007103	NP_009034	Coding	chr11:67606851 plus strand	915052
NELL1	NM_001288713	NP_001275642	Coding	chr11:20669550 plus strand	915053
NELL1	NM_001288714	NP_001275643	Coding	chr11:20669550 plus strand	915053
NELL1	NM_006157	NP_006148	Coding	chr11:20669550 plus strand	915053

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NELL1	NM_201551	NP_963845	Coding	chr11:20669550 plus strand	915053
NEU3	NM_006656	NP_006647	Coding	chr11:74988904 plus strand	915054
NFRKB	NM_001143835	NP_001137307	Coding	chr11:129895595 minus strand	915055
NFRKB	NM_006165	NP_006156	Coding	chr11:129893009 minus strand	915056
NLRP10	NM_176821	NP_789791	Coding	chr11:7963512 minus strand	915057
NLRP14	NM_176822	NP_789792	Coding	chr11:7020468 plus strand	915058
NLRP6	NM_001276700	NP_001263629	Coding	chr11:278569 plus strand	915059
NLRP6	NM_138329	NP_612202	Coding	chr11:278569 plus strand	915059
NLRX1	NM_001282143	NP_001269072	Coding	chr11:119168712 plus strand	915060
NLRX1	NM_001282144	NP_001269073	Coding	chr11:119168712 plus strand	915060
NLRX1	NM_001282358	NP_001269287	Coding	chr11:119168333 plus strand	915061
NLRX1	NM_024618	NP_078894	Coding	chr11:119168712 plus strand	915060
NNMT	NM_006169	NP_006160	Coding	chr11:114295812 plus strand	915062
NOX4	NM_001143836	NP_001137308	Coding	chr11:89491565 minus strand	915063
NOX4	NM_001143837	NP_001137309	Coding	chr11:89589611 minus strand	915064
NOX4	NM_001291926	NP_001278855	Coding	chr11:89491565 minus strand	915063
NOX4	NM_001291927	NP_001278856	Coding	chr11:89490978 minus strand	915065
NOX4	NM_001291929	NP_001278858	Coding	chr11:89490741 minus strand	915066
NOX4	NM_001300995	NP_001287924	Coding	chr11:89492219 minus strand	915067
NOX4	NM_016931	NP_058627	Coding	chr11:89491565 minus strand	915063
NPAS4	NM_178864	NP_849195	Coding	chr11:66421003 plus strand	915068
NPAT	NM_002519	NP_002510	Coding	chr11:108222638 minus strand	915069
NR1H3	NM_001130101	NP_001123573	Coding	chr11:47257916 plus strand	915070
NR1H3	NM_001130102	NP_001123574	Coding	chr11:47248897 plus strand	915071
NR1H3	NM_001251934	NP_001238863	Coding	chr11:47248299 plus strand	915072
NR1H3	NM_001251935	NP_001238864	Coding	chr11:47248299 plus strand	915072
NR1H3	NM_005693	NP_005684	Coding	chr11:47257916 plus strand	915070
NRGN	NM_001126181	NP_001119653	Coding	chr11:124739932 plus strand	915073

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NRGN	NM_006176	NP_006167	Coding	chr11:124739932 plus strand	915073
NRIP3	NM_020645	NP_065696	Coding	chr11:9004049 minus strand	915074
NRXN2	NM_015080	NP_055895	Coding	chr11:64723188 minus strand	915075
NRXN2	NM_138732	NP_620060	Coding	chr11:64723188 minus strand	915075
NRXN2	NM_138734	NP_620063	Coding	chr11:64643315 minus strand	915076
NTM	NM_001048209	NP_001041674	Coding	chr11:131370475 plus strand	915077
NTM	NM_001144058	NP_001137530	Coding	chr11:131910817 plus strand	915078
NTM	NM_001144059	NP_001137531	Coding	chr11:131910817 plus strand	915078
NTM	NM_016522	NP_057606	Coding	chr11:131910817 plus strand	915078
NUCB2	NM_005013	NP_005004	Coding	chr11:17276738 plus strand	915079
NUDT22	NM_001128612	NP_001122084	Coding	chr11:64226257 plus strand	915080
NUDT22	NM_001128613	NP_001122085	Coding	chr11:64226273 plus strand	915081
NUDT22	NM_001271831	NP_001258760	Coding	chr11:64226257 plus strand	915080
NUDT22	NM_032344	NP_115720	Coding	chr11:64226273 plus strand	915081
NUDT8	NM_001243750	NP_001230679	Coding	chr11:67629937 minus strand	915082
NUDT8	NM_181843	NP_862826	Coding	chr11:67629937 minus strand	915082
NUMA1	NM_001286561	NP_001273490	Coding	chr11:72080693 minus strand	915083
NUMA1	NM_006185	NP_006176	Coding	chr11:72080693 minus strand	915083
NUP160	NM_015231	NP_056046	Coding	chr11:47848505 minus strand	915084
NUP98	NM_005387	NP_005378	Coding	chr11:3797792 minus strand	915085
NUP98	NM_016320	NP_057404	Coding	chr11:3797792 minus strand	915085
NUP98	NM_139131	NP_624357	Coding	chr11:3797792 minus strand	915085
NUP98	NM_139132	NP_624358	Coding	chr11:3797792 minus strand	915085
NXF1	NM_001081491	NP_001074960	Coding	chr11:62805492 minus strand	915086
NXF1	NM_006362	NP_006353	Coding	chr11:62805492 minus strand	915086
NXPE1	NM_152315	NP_689528	Coding	chr11:114559895 minus strand	915087
NXPE2	NM_182495	NP_872301	Coding	chr11:114678477 plus strand	915088

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NXPE4	NM_001077639	NP_001071107	Coding	chr11:114595762 minus strand	915089
NXPE4	NM_017678	NP_060148	Coding	chr11:114595762 minus strand	915089
OAF	NM_178507	NP_848602	Coding	chr11:120211038 plus strand	915090
ODF3	NM_001286136	NP_001273065	Coding	chr11:196760 plus strand	915091
ODF3	NM_053280	NP_444510	Coding	chr11:196760 plus strand	915091
OLFML1	NM_198474	NP_940876	Coding	chr11:7485368 plus strand	915092
OMP	NM_006189	NP_006180	Coding	chr11:77102839 plus strand	915093
OOSP2	NM_173801	NP_776162	Coding	chr11:60040274 plus strand	915094
OPCML	NM_001012393	NP_001012393	Coding	chr11:133532508 minus strand	915095
OPCML	NM_002545	NP_002536	Coding	chr11:132943142 minus strand	915096
OR10A2	NM_001004460	NP_001004460	Coding	chr11:6869754 plus strand	915097
OR10A3	NM_001003745	NP_001003745	Coding	chr11:7939520 minus strand	915098
OR10A4	NM_207186	NP_997069	Coding	chr11:6876624 plus strand	915099
OR10A5	NM_178168	NP_835462	Coding	chr11:6845682 plus strand	915100
OR10A6	NM_001004461	NP_001004461	Coding	chr11:7928662 minus strand	915101
OR10AG1	NM_001005491	NP_001005491	Coding	chr11:55968463 minus strand	915102
OR10G4	NM_001004462	NP_001004462	Coding	chr11:124015574 plus strand	915103
OR10G7	NM_001004463	NP_001004463	Coding	chr11:124039001 minus strand	915104
OR10G8	NM_001004464	NP_001004464	Coding	chr11:124029622 plus strand	915105
OR10G9	NM_001001953	NP_001001953	Coding	chr11:124023012 plus strand	915106
OR10Q1	NM_001004471	NP_001004471	Coding	chr11:58228918 minus strand	915107
OR10S1	NM_001004474	NP_001004474	Coding	chr11:123977691 minus strand	915108
OR10V1	NM_001005324	NP_001005324	Coding	chr11:59713845 minus strand	915109
OR10W1	NM_207374	NP_997257	Coding	chr11:58268260 minus strand	915110
OR1S1	NM_001004458	NP_001004458	Coding	chr11:58214744 plus strand	915111
OR1S2	NM_001004459	NP_001004459	Coding	chr11:58204181 minus strand	915112
OR2AG1	NM_001004489	NP_001004489	Coding	chr11:6785016 plus strand	915113
OR2AG2	NM_001004490	NP_001004490	Coding	chr11:6768957 minus strand	915114
OR2AT4	NM_001005285	NP_001005285	Coding	chr11:75089713 minus strand	915115
OR2D2	NM_003700	NP_003691	Coding	chr11:6892500 minus	915116

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				strand	
OR2D3	NM_001004684	NP_001004684	Coding	chr11:6921001 plus strand	915117
OR4A15	NM_001005275	NP_001005275	Coding	chr11:55367883 plus strand	915118
OR4A16	NM_001005274	NP_001005274	Coding	chr11:55343200 plus strand	915119
OR4A47	NM_001005512	NP_001005512	Coding	chr11:48488792 plus strand	915120
OR4A5	NM_001005272	NP_001005272	Coding	chr11:54706831 plus strand	915121
OR4B1	NM_001005470	NP_001005470	Coding	chr11:48216809 plus strand	915122
OR4C11	NM_001004700	NP_001004700	Coding	chr11:55604398 minus strand	915123
OR4C12	NM_001005270	NP_001005270	Coding	chr11:49982535 minus strand	915124
OR4C13	NM_001001955	NP_001001955	Coding	chr11:49952390 plus strand	915125
OR4C15	NM_001001920	NP_001001920	Coding	chr11:55554306 plus strand	915126
OR4C16	NM_001004701	NP_001004701	Coding	chr11:55572127 plus strand	915127
OR4C3	NM_001004702	NP_001004702	Coding	chr11:48324940 plus strand	915128
OR4C45	NM_001005513	NP_001005513	Coding	chr11:50032873 plus strand	915129
OR4C46	NM_001004703	NP_001004703	Coding	chr11:54603998 minus strand	915130
OR4C6	NM_001004704	NP_001004704	Coding	chr11:55665166 plus strand	915131
OR4D10	NM_001004705	NP_001004705	Coding	chr11:59477429 plus strand	915132
OR4D11	NM_001004706	NP_001004706	Coding	chr11:59503575 plus strand	915133
OR4D5	NM_001001965	NP_001001965	Coding	chr11:123939616 plus strand	915134
OR4D6	NM_001004708	NP_001004708	Coding	chr11:59456960 plus strand	915135
OR4D9	NM_001004711	NP_001004711	Coding	chr11:59514912 plus strand	915136
OR4P4	NM_001004124	NP_001004124	Coding	chr11:55638357 plus strand	915137
OR4S1	NM_001004725	NP_001004725	Coding	chr11:48306222 plus strand	915138
OR4S2	NM_001004059	NP_001004059	Coding	chr11:55650903 plus strand	915139
OR4X1	NM_001004726	NP_001004726	Coding	chr11:48263860 plus strand	915140
OR4X2	NM_001004727	NP_001004727	Coding	chr11:48245103 plus strand	915141
OR51A2	NM_001004748	NP_001004748	Coding	chr11:4955713 minus strand	915142
OR51A4	NM_001005329	NP_001005329	Coding	chr11:4947100 minus strand	915143

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OR51A7	NM_001004749	NP_001004749	Coding	chr11:4907369 plus strand	915144
OR51B2	NM_033180	NP_149420	Coding	chr11:5324352 minus strand	915145
OR51B4	NM_033179	NP_149419	Coding	chr11:5301946 minus strand	915146
OR51B5	NM_001005567	NP_001005567	Coding	chr11:5505652 minus strand	915147
OR51B6	NM_001004750	NP_001004750	Coding	chr11:5351507 plus strand	915148
OR51D1	NM_001004751	NP_001004751	Coding	chr11:4639714 plus strand	915149
OR51E1	NM_152430	NP_689643	Coding	chr11:4643925 plus strand	915150
OR51E2	NM_030774	NP_110401	Coding	chr11:4697846 minus strand	915151
OR51F1	NM_001004752	NP_001004752	Coding	chr11:4769917 minus strand	915152
OR51F2	NM_001004753	NP_001004753	Coding	chr11:4821385 plus strand	915153
OR51G1	NM_001005237	NP_001005237	Coding	chr11:4924339 minus strand	915154
OR51G2	NM_001005238	NP_001005238	Coding	chr11:4915663 minus strand	915155
OR51I1	NM_001005288	NP_001005288	Coding	chr11:5441553 minus strand	915156
OR51I2	NM_001004754	NP_001004754	Coding	chr11:5453407 plus strand	915157
OR51L1	NM_001004755	NP_001004755	Coding	chr11:4998982 plus strand	915158
OR51M1	NM_001004756	NP_001004756	Coding	chr11:5389376 plus strand	915159
OR51Q1	NM_001004757	NP_001004757	Coding	chr11:5422110 plus strand	915160
OR51S1	NM_001004758	NP_001004758	Coding	chr11:4849208 minus strand	915161
OR51T1	NM_001004759	NP_001004759	Coding	chr11:4881818 plus strand	915162
OR51V1	NM_001004760	NP_001004760	Coding	chr11:5200700 minus strand	915163
OR52A1	NM_012375	NP_036507	Coding	chr11:5152369 minus strand	915164
OR52A5	NM_001005160	NP_001005160	Coding	chr11:5132642 minus strand	915165
OR52B2	NM_001004052	NP_001004052	Coding	chr11:6170326 minus strand	915166
OR52B4	NM_001005161	NP_001005161	Coding	chr11:4368386 minus strand	915167
OR52B6	NM_001005162	NP_001005162	Coding	chr11:5580876 plus strand	915168
OR52D1	NM_001005163	NP_001005163	Coding	chr11:5488684 plus strand	915169
OR52E2	NM_001005164	NP_001005164	Coding	chr11:5059627 minus strand	915170
OR52E4	NM_001005165	NP_001005165	Coding	chr11:5884292 plus strand	915171
OR52E6	NM_001005167	NP_001005167	Coding	chr11:5841897 minus strand	915172
OR52E8	NM_001005168	NP_001005168	Coding	chr11:5857702 minus strand	915173
OR52H1	NM_001005289	NP_001005289	Coding	chr11:5545523 minus strand	915174
OR52I1	NM_001005169	NP_001005169	Coding	chr11:4594038 plus strand	915175

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OR52I2	NM_001005170	NP_001005170	Coding	chr11:4586790 plus strand	915176
OR52J3	NM_001001916	NP_001001916	Coding	chr11:5046525 plus strand	915177
OR52K1	NM_001005171	NP_001005171	Coding	chr11:4488878 plus strand	915178
OR52K2	NM_001005172	NP_001005172	Coding	chr11:4449294 plus strand	915179
OR52L1	NM_001005173	NP_001005173	Coding	chr11:5986985 minus strand	915180
OR52M1	NM_001004137	NP_001004137	Coding	chr11:4545190 plus strand	915181
OR52N1	NM_001001913	NP_001001913	Coding	chr11:5788816 minus strand	915182
OR52N2	NM_001005174	NP_001005174	Coding	chr11:5820335 plus strand	915183
OR52N4	NM_001005175	NP_001005175	Coding	chr11:5754692 plus strand	915184
OR52N5	NM_001001922	NP_001001922	Coding	chr11:5778667 minus strand	915185
OR52R1	NM_001005177	NP_001005177	Coding	chr11:4804380 minus strand	915186
OR52W1	NM_001005178	NP_001005178	Coding	chr11:6199223 plus strand	915187
OR56A1	NM_001001917	NP_001001917	Coding	chr11:6027741 minus strand	915188
OR56A3	NM_001003443	NP_001003443	Coding	chr11:5947346 plus strand	915189
OR56A4	NM_001005179	NP_001005179	Coding	chr11:6003148 minus strand	915190
OR56A5	NM_001146033	NP_001139505	Coding	chr11:5968494 minus strand	915191
OR56B1	NM_001005180	NP_001005180	Coding	chr11:5736447 plus strand	915192
OR56B4	NM_001005181	NP_001005181	Coding	chr11:6107778 plus strand	915193
OR5A1	NM_001004728	NP_001004728	Coding	chr11:59443168 plus strand	915194
OR5A2	NM_001001954	NP_001001954	Coding	chr11:59422953 minus strand	915195
OR5AK2	NM_001005323	NP_001005323	Coding	chr11:56988913 plus strand	915196
OR5AN1	NM_001004729	NP_001004729	Coding	chr11:59364458 plus strand	915197
OR5AP2	NM_001002925	NP_001002925	Coding	chr11:56642439 minus strand	915198
OR5AR1	NM_001004730	NP_001004730	Coding	chr11:56663685 plus strand	915199
OR5AS1	NM_001001921	NP_001001921	Coding	chr11:56030418 plus strand	915200
OR5B12	NM_001004733	NP_001004733	Coding	chr11:58440173 minus strand	915201
OR5B17	NM_001005489	NP_001005489	Coding	chr11:58359069 minus strand	915202
OR5B2	NM_001005566	NP_001005566	Coding	chr11:58423313 minus strand	915203
OR5B21	NM_001005218	NP_001005218	Coding	chr11:58508105 minus strand	915204
OR5B3	NM_001005469	NP_001005469	Coding	chr11:58403409 minus strand	915205
OR5D13	NM_001001967	NP_001001967	Coding	chr11:55773437 plus strand	915206

【０８１１】

OR5D14	NM_001004735	NP_001004735	Coding	chr11:55795555 plus strand	915207
OR5D16	NM_001005496	NP_001005496	Coding	chr11:55838751 plus strand	915208
OR5D18	NM_001001952	NP_001001952	Coding	chr11:55819629 plus strand	915209
OR5F1	NM_003697	NP_003688	Coding	chr11:55994625 minus strand	915210
OR5I1	NM_006637	NP_006628	Coding	chr11:55936400 minus strand	915211
OR5J2	NM_001005492	NP_001005492	Coding	chr11:56176617 plus strand	915212
OR5L1	NM_001004738	NP_001004738	Coding	chr11:55811466 plus strand	915213
OR5L2	NM_001004739	NP_001004739	Coding	chr11:55827218 plus strand	915214
OR5M1	NM_001004740	NP_001004740	Coding	chr11:56613502 minus strand	915215
OR5M10	NM_001004741	NP_001004741	Coding	chr11:56577721 minus strand	915216
OR5M11	NM_001005245	NP_001005245	Coding	chr11:56543257 minus strand	915217
OR5M3	NM_001004742	NP_001004742	Coding	chr11:56470538 minus strand	915218
OR5M8	NM_001005282	NP_001005282	Coding	chr11:56491370 minus strand	915219
OR5M9	NM_001004743	NP_001004743	Coding	chr11:56463401 minus strand	915220
OR5P2	NM_153444	NP_703145	Coding	chr11:7796942 minus strand	915221
OR5P3	NM_153445	NP_703146	Coding	chr11:7825972 minus strand	915222
OR5R1	NM_001004744	NP_001004744	Coding	chr11:56418232 minus strand	915223
OR5T1	NM_001004745	NP_001004745	Coding	chr11:56275638 plus strand	915224
OR5T2	NM_001004746	NP_001004746	Coding	chr11:56233185 minus strand	915225
OR5T3	NM_001004747	NP_001004747	Coding	chr11:56252199 plus strand	915226
OR5W2	NM_001001960	NP_001001960	Coding	chr11:55914582 minus strand	915227
OR6A2	NM_003696	NP_003687	Coding	chr11:6795908 minus strand	915228
OR6M1	NM_001005325	NP_001005325	Coding	chr11:123806349 minus strand	915229
OR6Q1	NM_001005186	NP_001005186	Coding	chr11:58030952 plus strand	915230
OR6T1	NM_001005187	NP_001005187	Coding	chr11:123943838 minus strand	915231
OR6X1	NM_001005188	NP_001005188	Coding	chr11:123754518 minus strand	915232
OR8A1	NM_001005194	NP_001005194	Coding	chr11:124570068 plus strand	915233

【０８１２】

OR8B12	NM_001005195	NP_001005195	Coding	chr11:124543654 minus strand	915234
OR8B2	NM_001005468	NP_001005468	Coding	chr11:124383343 minus strand	915235
OR8B3	NM_001005467	NP_001005467	Coding	chr11:124397351 minus strand	915236
OR8B4	NM_001005196	NP_001005196	Coding	chr11:124424871 minus strand	915237
OR8B8	NM_012378	NP_036510	Coding	chr11:124441085 minus strand	915238
OR8D1	NM_001002917	NP_001002917	Coding	chr11:124310766 minus strand	915239
OR8D2	NM_001002918	NP_001002918	Coding	chr11:124320197 minus strand	915240
OR8D4	NM_001005197	NP_001005197	Coding	chr11:123906431 plus strand	915241
OR8G1	NM_001002905	NP_001002905	Coding	chr11:124249675 plus strand	915242
OR8G2	NM_001291438	NP_001278367	Coding	chr11:124224638 plus strand	915243
OR8G5	NM_001005198	NP_001005198	Coding	chr11:124264826 plus strand	915244
OR8H1	NM_001005199	NP_001005199	Coding	chr11:56291062 minus strand	915245
OR8H2	NM_001005200	NP_001005200	Coding	chr11:56105042 plus strand	915246
OR8H3	NM_001005201	NP_001005201	Coding	chr11:56122372 plus strand	915247
OR8I2	NM_001003750	NP_001003750	Coding	chr11:56093307 plus strand	915248
OR8J1	NM_001005205	NP_001005205	Coding	chr11:56360214 plus strand	915249
OR8J3	NM_001004064	NP_001004064	Coding	chr11:56137718 minus strand	915250
OR8K1	NM_001002907	NP_001002907	Coding	chr11:56346038 plus strand	915251
OR8K3	NM_001005202	NP_001005202	Coding	chr11:56318306 plus strand	915252
OR8K5	NM_001004058	NP_001004058	Coding	chr11:56160317 minus strand	915253
OR8U1	NM_001005204	NP_001005204	Coding	chr11:56375623 plus strand	915254
OR8U8	NM_001013356	NP_001013374	Coding	chr11:56375623 plus strand	915255
OR9G1	NM_001005213	NP_001005213	Coding	chr11:56700387 plus strand	915256
OR9G4	NM_001005284	NP_001005284	Coding	chr11:56743811 minus strand	915257
OR9G9	NM_001013358	NP_001013376	Coding	chr11:56700387 plus strand	915258
OR9I1	NM_001005211	NP_001005211	Coding	chr11:58119444 minus strand	915259
OR9Q1	NM_001005212	NP_001005212	Coding	chr11:58023880 plus strand	915260

【０８１３】

OR9Q2	NM_001005283	NP_001005283	Coding	chr11:58190433 plus strand	915261
ORAOV1	NM_153451	NP_703152	Coding	chr11:69675397 minus strand	915262
OSBP	NM_002556	NP_002547	Coding	chr11:59616144 minus strand	915263
OSBPL5	NM_001144063	NP_001137535	Coding	chr11:3165352 minus strand	915264
OSBPL5	NM_020896	NP_065947	Coding	chr11:3165352 minus strand	915264
OSBPL5	NM_145638	NP_663613	Coding	chr11:3165352 minus strand	915264
OTOG	NM_001277269	NP_001264198	Coding	chr11:17547372 plus strand	915265
OTOG	NM_001292063	NP_001278992	Coding	chr11:17547372 plus strand	915265
OTUB1	NM_017670	NP_060140	Coding	chr11:63985852 plus strand	915266
OVCH2	NM_198185	NP_937828	Coding	chr11:7706394 minus strand	915267
OVOL1	NM_004561	NP_004552	Coding	chr11:65787033 plus strand	915268
P2RX3	NM_002559	NP_002550	Coding	chr11:57338366 plus strand	915269
P2RY2	NM_002564	NP_002555	Coding	chr11:73218297 plus strand	915270
P2RY2	NM_176071	NP_788085	Coding	chr11:73218456 plus strand	915271
P2RY2	NM_176072	NP_788086	Coding	chr11:73218297 plus strand	915270
P2RY6	NM_001277204	NP_001264133	Coding	chr11:73272141 plus strand	915272
P2RY6	NM_001277205	NP_001264134	Coding	chr11:73264504 plus strand	915273
P2RY6	NM_001277206	NP_001264135	Coding	chr11:73265235 plus strand	915274
P2RY6	NM_001277207	NP_001264136	Coding	chr11:73264551 plus strand	915275
P2RY6	NM_001277208	NP_001264137	Coding	chr11:73272141 plus strand	915272
P2RY6	NM_176796	NP_789766	Coding	chr11:73264504 plus strand	915273
P2RY6	NM_176797	NP_789767	Coding	chr11:73264504 plus strand	915273
P2RY6	NM_176798	NP_789768	Coding	chr11:73269893 plus strand	915276
P4HA3	NM_001288748	NP_001275677	Coding	chr11:74311676 minus strand	915277
P4HA3	NM_182904	NP_878907	Coding	chr11:74311676 minus strand	915277
PAAF1	NM_001267803	NP_001254732	Coding	chr11:73876968 plus strand	915278
PAAF1	NM_001267804	NP_001254733	Coding	chr11:73876968 plus strand	915278

【０８１４】

PAAF1	NM_001267805	NP_001254734	Coding	chr11:73876968 plus strand	915278
PAAF1	NM_001267806	NP_001254735	Coding	chr11:73876698 plus strand	915279
PAAF1	NM_025155	NP_079431	Coding	chr11:73876968 plus strand	915278
PACS1	NM_018026	NP_060496	Coding	chr11:66070352 plus strand	915280
PACSIN3	NM_001184974	NP_001171903	Coding	chr11:47186459 minus strand	915281
PACSIN3	NM_001184975	NP_001171904	Coding	chr11:47185881 minus strand	915282
PACSIN3	NM_016223	NP_057307	Coding	chr11:47186459 minus strand	915281
PAFAH1B2	NM_001184746	NP_001171675	Coding	chr11:117144283 plus strand	915283
PAFAH1B2	NM_001184747	NP_001171676	Coding	chr11:117144283 plus strand	915283
PAFAH1B2	NM_001184748	NP_001171677	Coding	chr11:117144283 plus strand	915283
PAFAH1B2	NM_002572	NP_002563	Coding	chr11:117144283 plus strand	915283
PAK1	NM_001128620	NP_001122092	Coding	chr11:77474063 minus strand	915284
PAK1	NM_002576	NP_002567	Coding	chr11:77474063 minus strand	915284
PAMR1	NM_001001991	NP_001001991	Coding	chr11:35526031 minus strand	915285
PAMR1	NM_001282675	NP_001269604	Coding	chr11:35530300 minus strand	915286
PAMR1	NM_001282676	NP_001269605	Coding	chr11:35526031 minus strand	915285
PAMR1	NM_015430	NP_056245	Coding	chr11:35526031 minus strand	915285
PANO1	NM_001293167	NP_001280096	Coding	chr11:797510 plus strand	915287
PANX1	NM_015368	NP_056183	Coding	chr11:94128927 plus strand	915288
PANX3	NM_052959	NP_443191	Coding	chr11:124611556 plus strand	915289
PARVA	NM_018222	NP_060692	Coding	chr11:12377478 plus strand	915290
PATE1	NM_138294	NP_612151	Coding	chr11:125746292 plus strand	915291
PATE2	NM_212555	NP_997720	Coding	chr11:125778819 minus strand	915292
PATE3	NM_001129883	NP_001123355	Coding	chr11:125788110 plus strand	915293
PATE4	NM_001144874	NP_001138346	Coding	chr11:125833315 plus strand	915294
PATL1	NM_152716	NP_689929	Coding	chr11:59669038 minus strand	915295
PAX6	NM_000280	NP_000271	Coding	chr11:31811353 minus strand	915296
PAX6	NM_001127612	NP_001121084	Coding	chr11:31817961 minus	915297

【０８１５】

				strand	
PAX6	NM_001258462	NP_001245391	Coding	chr11:31817961 minus strand	915297
PAX6	NM_001258463	NP_001245392	Coding	chr11:31812183 minus strand	915298
PAX6	NM_001258464	NP_001245393	Coding	chr11:31811353 minus strand	915296
PAX6	NM_001258465	NP_001245394	Coding	chr11:31811142 minus strand	915299
PAX6	NM_001604	NP_001595	Coding	chr11:31811353 minus strand	915296
PC	NM_000920	NP_000911	Coding	chr11:66958376 minus strand	915300
PC	NM_001040716	NP_001035806	Coding	chr11:66958376 minus strand	915300
PC	NM_022172	NP_071504	Coding	chr11:66907869 minus strand	915301
PCF11	NM_015885	NP_056969	Coding	chr11:83157094 plus strand	915302
PCNXL3	NM_032223	NP_115599	Coding	chr11:65616311 plus strand	915303
PCSK7	NM_004716	NP_004707	Coding	chr11:117232525 minus strand	915304
PDDC1	NM_182612	NP_872418	Coding	chr11:777487 minus strand	915305
PDE2A	NM_001143839	NP_001137311	Coding	chr11:72642460 minus strand	915306
PDE2A	NM_001146209	NP_001139681	Coding	chr11:72669064 minus strand	915307
PDE2A	NM_001243784	NP_001230713	Coding	chr11:72642460 minus strand	915306
PDE2A	NM_002599	NP_002590	Coding	chr11:72674453 minus strand	915308
PDE3B	NM_000922	NP_000913	Coding	chr11:14643722 plus strand	915309
PDGFD	NM_025208	NP_079484	Coding	chr11:104164299 minus strand	915310
PDGFD	NM_033135	NP_149126	Coding	chr11:104164299 minus strand	915310
PDHX	NM_001135024	NP_001128496	Coding	chr11:34916129 plus strand	915311
PDHX	NM_001166158	NP_001159630	Coding	chr11:34916129 plus strand	915311
PDHX	NM_003477	NP_003468	Coding	chr11:34916129 plus strand	915311
PDZD3	NM_001168468	NP_001161940	Coding	chr11:119185456 plus strand	915312
PDZD3	NM_024791	NP_079067	Coding	chr11:119185456 plus strand	915312
PELI3	NM_001098510	NP_001091980	Coding	chr11:66466864 plus strand	915313
PELI3	NM_001243135	NP_001230064	Coding	chr11:66466326 plus strand	915314
PELI3	NM_001243136	NP_001230065	Coding	chr11:66466864 plus strand	915313

【０８１６】

PELI3	NM_145065	NP_659502	Coding	chr11:66466864 plus strand	915313
PEX16	NM_004813	NP_004804	Coding	chr11:45918123 minus strand	915315
PEX16	NM_057174	NP_476515	Coding	chr11:45918123 minus strand	915315
PGA3	NM_001079807	NP_001073275	Coding	chr11:61203494 plus strand	915316
PGA4	NM_001079808	NP_001073276	Coding	chr11:61222330 plus strand	915317
PGA5	NM_014224	NP_055039	Coding	chr11:61241156 plus strand	915318
PGAP2	NM_001145438	NP_001138910	Coding	chr11:3797818 plus strand	915319
PGAP2	NM_001256235	NP_001243164	Coding	chr11:3797723 plus strand	915320
PGAP2	NM_001256236	NP_001243165	Coding	chr11:3797818 plus strand	915319
PGAP2	NM_001256237	NP_001243166	Coding	chr11:3797818 plus strand	915319
PGAP2	NM_001256238	NP_001243167	Coding	chr11:3808009 plus strand	915321
PGAP2	NM_001256239	NP_001243168	Coding	chr11:3808535 plus strand	915322
PGAP2	NM_001256240	NP_001243169	Coding	chr11:3808535 plus strand	915322
PGAP2	NM_001283038	NP_001269967	Coding	chr11:3797818 plus strand	915319
PGAP2	NM_001283039	NP_001269968	Coding	chr11:3797818 plus strand	915319
PGAP2	NM_001283040	NP_001269969	Coding	chr11:3797818 plus strand	915319
PGAP2	NM_014489	NP_055304	Coding	chr11:3808535 plus strand	915322
PGM2L1	NM_173582	NP_775853	Coding	chr11:74398457 minus strand	915323
PGR	NM_000926	NP_000917	Coding	chr11:101129813 minus strand	915324
PGR	NM_001202474	NP_001189403	Coding	chr11:101129063 minus strand	915325
PGR	NM_001271161	NP_001258090	Coding	chr11:101129063 minus strand	915325
PGR	NM_001271162	NP_001258091	Coding	chr11:101129727 minus strand	915326
PHF21A	NM_001101802	NP_001095272	Coding	chr11:46121434 minus strand	915327
PHF21A	NM_016621	NP_057705	Coding	chr11:46121434 minus strand	915327
PHLDA2	NM_003311	NP_003302	Coding	chr11:2929420 minus strand	915328
PHLDB1	NM_001144758	NP_001138230	Coding	chr11:118607590 plus strand	915329
PHLDB1	NM_001144759	NP_001138231	Coding	chr11:118607590 plus strand	915329
PHLDB1	NM_015157	NP_055972	Coding	chr11:118606497 plus strand	915330
PHOX2A	NM_005169	NP_005160	Coding	chr11:72244176 minus strand	915331
PHRF1	NM_001286581	NP_001273510	Coding	chr11:576445 plus strand	915332
PHRF1	NM_001286582	NP_001273511	Coding	chr11:576445 plus strand	915332
PHRF1	NM_001286583	NP_001273512	Coding	chr11:576445 plus strand	915332

【０８１７】

PHRF1	NM_020901	NP_065952	Coding	chr11:576445 plus strand	915332
PICALM	NM_001008660	NP_001008660	Coding	chr11:86069097 minus strand	915333
PICALM	NM_001206946	NP_001193875	Coding	chr11:86069097 minus strand	915333
PICALM	NM_001206947	NP_001193876	Coding	chr11:86069881 minus strand	915334
PICALM	NM_007166	NP_009097	Coding	chr11:86069097 minus strand	915333
PIDD1	NM_145886	NP_665893	Coding	chr11:805250 minus strand	915335
PIDD1	NM_145887	NP_665894	Coding	chr11:805250 minus strand	915335
PIH1D2	NM_001082619	NP_001076088	Coding	chr11:112074171 minus strand	915336
PIH1D2	NM_138789	NP_620144	Coding	chr11:112074171 minus strand	915336
PIK3C2A	NM_002645	NP_002636	Coding	chr11:17169807 minus strand	915337
PITPNM1	NM_001130848	NP_001124320	Coding	chr11:67505372 minus strand	915338
PITPNM1	NM_004910	NP_004901	Coding	chr11:67505372 minus strand	915338
PIWIL4	NM_152431	NP_689644	Coding	chr11:94567307 plus strand	915339
PKNOX2	NM_022062	NP_071345	Coding	chr11:125164662 plus strand	915340
PKP3	NM_007183	NP_009114	Coding	chr11:394216 plus strand	915341
PLA2G16	NM_001128203	NP_001121675	Coding	chr11:63614469 minus strand	915342
PLA2G16	NM_007069	NP_009000	Coding	chr11:63614437 minus strand	915343
PLCB3	NM_000932	NP_000923	Coding	chr11:64251522 plus strand	915344
PLCB3	NM_001184883	NP_001171812	Coding	chr11:64251522 plus strand	915344
PLEKHA7	NM_175058	NP_778228	Coding	chr11:17014416 minus strand	915345
PLEKHB1	NM_001130033	NP_001123505	Coding	chr11:73646177 plus strand	915346
PLEKHB1	NM_001130034	NP_001123506	Coding	chr11:73647548 plus strand	915347
PLEKHB1	NM_001130035	NP_001123507	Coding	chr11:73647548 plus strand	915347
PLEKHB1	NM_001130036	NP_001123508	Coding	chr11:73648689 plus strand	915348
PLEKHB1	NM_021200	NP_067023	Coding	chr11:73646177 plus strand	915346
PLET1	NM_001145024	NP_001138496	Coding	chr11:112260860 minus strand	915349
PNPLA2	NM_020376	NP_065109	Coding	chr11:818900 plus strand	915350
POLA2	NM_002689	NP_002680	Coding	chr11:65261960 plus strand	915351
POLD3	NM_006591	NP_006582	Coding	chr11:74592529 plus strand	915352

【０８１８】

POLD4	NM_001256870	NP_001243799	Coding	chr11:67353596 minus strand	915353
POLD4	NM_021173	NP_066996	Coding	chr11:67353596 minus strand	915353
POLR2G	NM_002696	NP_002687	Coding	chr11:62761538 plus strand	915354
POLR2L	NM_021128	NP_066951	Coding	chr11:842529 minus strand	915355
POU2AF1	NM_006235	NP_006226	Coding	chr11:111379432 minus strand	915356
POU2F3	NM_001244682	NP_001231611	Coding	chr11:120236639 plus strand	915357
POU2F3	NM_014352	NP_055167	Coding	chr11:120240193 plus strand	915358
PPFIA1	NM_003626	NP_003617	Coding	chr11:70270699 plus strand	915359
PPFIA1	NM_177423	NP_803172	Coding	chr11:70270699 plus strand	915359
PPFIBP2	NM_001256568	NP_001243497	Coding	chr11:7597185 plus strand	915360
PPFIBP2	NM_001256569	NP_001243498	Coding	chr11:7605733 plus strand	915361
PPFIBP2	NM_003621	NP_003612	Coding	chr11:7513764 plus strand	915362
PPME1	NM_001271593	NP_001258522	Coding	chr11:74171062 plus strand	915363
PPME1	NM_016147	NP_057231	Coding	chr11:74171062 plus strand	915363
PPP1CA	NM_001008709	NP_001008709	Coding	chr11:67401905 minus strand	915364
PPP1CA	NM_002708	NP_002699	Coding	chr11:67401905 minus strand	915364
PPP1CA	NM_206873	NP_996756	Coding	chr11:67401905 minus strand	915364
PPP1R14B	NM_138689	NP_619634	Coding	chr11:64246941 minus strand	915365
PPP1R32	NM_001170753	NP_001164224	Coding	chr11:61481112 plus strand	915366
PPP1R32	NM_145017	NP_659454	Coding	chr11:61481112 plus strand	915366
PPP2R1B	NM_001177562	NP_001171033	Coding	chr11:111766445 minus strand	915367
PPP2R1B	NM_001177563	NP_001171034	Coding	chr11:111766445 minus strand	915367
PPP2R1B	NM_002716	NP_002707	Coding	chr11:111766445 minus strand	915367
PPP2R1B	NM_181699	NP_859050	Coding	chr11:111766445 minus strand	915367
PPP2R1B	NM_181700	NP_859051	Coding	chr11:111766445 minus strand	915367
PPP2R5B	NM_006244	NP_006235	Coding	chr11:64924670 plus strand	915368
PPP6R3	NM_001164160	NP_001157632	Coding	chr11:68460717 plus strand	915369
PPP6R3	NM_001164161	NP_001157633	Coding	chr11:68460717 plus strand	915369
PPP6R3	NM_001164162	NP_001157634	Coding	chr11:68460717 plus	915369

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				strand	
PPP6R3	NM_001164163	NP_001157635	Coding	chr11:68460717 plus strand	915369
PPP6R3	NM_001164164	NP_001157636	Coding	chr11:68460717 plus strand	915369
PPP6R3	NM_018312	NP_060782	Coding	chr11:68460717 plus strand	915369
PRCP	NM_005040	NP_005031	Coding	chr11:82900515 minus strand	915370
PRCP	NM_199418	NP_955450	Coding	chr11:82900515 minus strand	915370
PRDM10	NM_020228	NP_064613	Coding	chr11:130002835 minus strand	915371
PRDM10	NM_199437	NP_955469	Coding	chr11:130002835 minus strand	915371
PRDM10	NM_199438	NP_955470	Coding	chr11:129947622 minus strand	915372
PRDM10	NM_199439	NP_955471	Coding	chr11:129947622 minus strand	915372
PRDM11	NM_001256695	NP_001243624	Coding	chr11:45147342 plus strand	915373
PRDM11	NM_001256696	NP_001243625	Coding	chr11:45147342 plus strand	915373
PRDX5	NM_012094	NP_036226	Coding	chr11:64318087 plus strand	915374
PRDX5	NM_181651	NP_857634	Coding	chr11:64318087 plus strand	915374
PRDX5	NM_181652	NP_857635	Coding	chr11:64318087 plus strand	915374
PRG2	NM_001243245	NP_001230174	Coding	chr11:57390657 minus strand	915375
PRG2	NM_001302926	NP_001289855	Coding	chr11:57390657 minus strand	915375
PRG2	NM_001302927	NP_001289856	Coding	chr11:57390657 minus strand	915375
PRG2	NM_002728	NP_002719	Coding	chr11:57390657 minus strand	915375
PRG3	NM_006093	NP_006084	Coding	chr11:57381150 minus strand	915376
PRKCDBP	NM_145040	NP_659477	Coding	chr11:6320510 minus strand	915377
PRKRIR	NM_004705	NP_004696	Coding	chr11:76380836 minus strand	915378
PRMT3	NM_001145166	NP_001138638	Coding	chr11:20387529 plus strand	915379
PRMT3	NM_001145167	NP_001138639	Coding	chr11:20387529 plus strand	915379
PRMT3	NM_005788	NP_005779	Coding	chr11:20387529 plus strand	915379
PRPF19	NM_014502	NP_055317	Coding	chr11:60906589 minus strand	915380
PRR5L	NM_001160167	NP_001153639	Coding	chr11:36296174 plus strand	915381
PRR5L	NM_001160168	NP_001153640	Coding	chr11:36375984 plus	915382

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				strand	
PRR5L	NM_001160169	NP_001153641	Coding	chr11:36400996 plus strand	915383
PRR5L	NM_024841	NP_079117	Coding	chr11:36375984 plus strand	915382
PRRG4	NM_024081	NP_076986	Coding	chr11:32829934 plus strand	915384
PRSS23	NM_001293178	NP_001280107	Coding	chr11:86800239 plus strand	915385
PRSS23	NM_001293179	NP_001280108	Coding	chr11:86800239 plus strand	915385
PRSS23	NM_001293180	NP_001280109	Coding	chr11:86791058 plus strand	915386
PRSS23	NM_007173	NP_009104	Coding	chr11:86800239 plus strand	915385
PSMA1	NM_001143937	NP_001137409	Coding	chr11:14520445 minus strand	915387
PSMA1	NM_002786	NP_002777	Coding	chr11:14520445 minus strand	915387
PSMA1	NM_148976	NP_683877	Coding	chr11:14643634 minus strand	915388
PSMC3	NM_002804	NP_002795	Coding	chr11:47426473 minus strand	915389
PSMD13	NM_002817	NP_002808	Coding	chr11:236807 plus strand	915390
PSMD13	NM_175932	NP_787128	Coding	chr11:236807 plus strand	915390
PTDSS2	NM_030783	NP_110410	Coding	chr11:450279 plus strand	915391
PTGDR2	NM_004778	NP_004769	Coding	chr11:60855971 minus strand	915392
PTH	NM_000315	NP_000306	Coding	chr11:13496020 minus strand	915393
PTPMT1	NM_001143984	NP_001137456	Coding	chr11:47565429 plus strand	915394
PTPMT1	NM_175732	NP_783859	Coding	chr11:47565429 plus strand	915394
PTPN5	NM_001039970	NP_001035059	Coding	chr11:18791842 minus strand	915395
PTPN5	NM_001278236	NP_001265165	Coding	chr11:18792721 minus strand	915396
PTPN5	NM_001278238	NP_001265167	Coding	chr11:18791842 minus strand	915395
PTPN5	NM_001278239	NP_001265168	Coding	chr11:18791842 minus strand	915395
PTPN5	NM_006906	NP_008837	Coding	chr11:18791842 minus strand	915395
PTPN5	NM_032781	NP_116170	Coding	chr11:18791842 minus strand	915395
PTPRCAP	NM_005608	NP_005599	Coding	chr11:67437682 minus strand	915397
PTPRJ	NM_001098503	NP_001091973	Coding	chr11:47980557 plus strand	915398
PTPRJ	NM_002843	NP_002834	Coding	chr11:47980557 plus strand	915398
PTS	NM_000317	NP_000308	Coding	chr11:112226364 plus	915399

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				strand	
PUS3	NM_001271985	NP_001258914	Coding	chr11:125903221 minus strand	915400
PUS3	NM_031307	NP_112597	Coding	chr11:125903221 minus strand	915400
PVRL1	NM_002855	NP_002846	Coding	chr11:119728725 minus strand	915401
PVRL1	NM_203285	NP_976030	Coding	chr11:119728725 minus strand	915401
PVRL1	NM_203286	NP_976031	Coding	chr11:119728725 minus strand	915401
PYGM	NM_001164716	NP_001158188	Coding	chr11:64760715 minus strand	915402
PYGM	NM_005609	NP_005600	Coding	chr11:64760715 minus strand	915402
QSER1	NM_001076786	NP_001070254	Coding	chr11:32893177 plus strand	915403
RAB1B	NM_030981	NP_112243	Coding	chr11:66268584 plus strand	915404
RAB30	NM_001286059	NP_001272988	Coding	chr11:83034569 minus strand	915405
RAB30	NM_001286060	NP_001272989	Coding	chr11:83071923 minus strand	915406
RAB30	NM_001286061	NP_001272990	Coding	chr11:83071462 minus strand	915407
RAB30	NM_014488	NP_055303	Coding	chr11:83071923 minus strand	915406
RAB38	NM_022337	NP_071732	Coding	chr11:88175467 minus strand	915408
RAB39A	NM_017516	NP_059986	Coding	chr11:107928550 plus strand	915409
RAB3IL1	NM_001271686	NP_001258615	Coding	chr11:61920269 minus strand	915410
RAB3IL1	NM_013401	NP_037533	Coding	chr11:61917609 minus strand	915411
RAB6A	NM_001243718	NP_001230647	Coding	chr11:73761156 minus strand	915412
RAB6A	NM_001243719	NP_001230648	Coding	chr11:73760093 minus strand	915413
RAB6A	NM_002869	NP_002860	Coding	chr11:73761156 minus strand	915412
RAB6A	NM_198896	NP_942599	Coding	chr11:73761156 minus strand	915412
RAD9A	NM_001243224	NP_001230153	Coding	chr11:67393304 plus strand	915414
RAD9A	NM_004584	NP_004575	Coding	chr11:67391951 plus strand	915415
RAG1	NM_000448	NP_000439	Coding	chr11:36568012 plus strand	915416
RAG2	NM_000536	NP_000527	Coding	chr11:36598279 minus strand	915417
RAG2	NM_001243785	NP_001230714	Coding	chr11:36598279 minus strand	915417
RAG2	NM_001243786	NP_001230715	Coding	chr11:36598279 minus	915417

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				strand	
RAPSN	NM_005055	NP_005046	Coding	chr11:47449178 minus strand	915418
RAPSN	NM_032645	NP_116034	Coding	chr11:47449178 minus strand	915418
RARRES3	NM_004585	NP_004576	Coding	chr11:63536800 plus strand	915419
RASGRP2	NM_001098670	NP_001092140	Coding	chr11:64744857 minus strand	915420
RASGRP2	NM_001098671	NP_001092141	Coding	chr11:64744158 minus strand	915421
RASGRP2	NM_153819	NP_722541	Coding	chr11:64745456 minus strand	915422
RASSF10	NM_001080521	NP_001073990	Coding	chr11:13009422 plus strand	915423
RASSF7	NM_001143993	NP_001137465	Coding	chr11:560970 plus strand	915424
RASSF7	NM_001143994	NP_001137466	Coding	chr11:561449 plus strand	915425
RASSF7	NM_003475	NP_003466	Coding	chr11:561449 plus strand	915425
RBM14	NM_001198836	NP_001185765	Coding	chr11:66616581 plus strand	915426
RBM14	NM_001198837	NP_001185766	Coding	chr11:66616581 plus strand	915426
RBM14	NM_006328	NP_006319	Coding	chr11:66616581 plus strand	915426
RBM14-RBM4	NM_001198845	NP_001185774	Coding	chr11:66616581 plus strand	915427
RBM14-RBM4	NM_001198846	NP_001185775	Coding	chr11:66616581 plus strand	915427
RBM4	NM_001198843	NP_001185772	Coding	chr11:66638616 plus strand	915428
RBM4	NM_001198844	NP_001185773	Coding	chr11:66638616 plus strand	915428
RBM4	NM_002896	NP_002887	Coding	chr11:66638616 plus strand	915428
RBM4B	NM_001286135	NP_001273064	Coding	chr11:66677921 minus strand	915429
RBM4B	NM_031492	NP_113680	Coding	chr11:66677921 minus strand	915429
RBM7	NM_001286045	NP_001272974	Coding	chr11:114400528 plus strand	915430
RBM7	NM_001286046	NP_001272975	Coding	chr11:114400528 plus strand	915430
RBM7	NM_001286047	NP_001272976	Coding	chr11:114400528 plus strand	915430
RBM7	NM_001286048	NP_001272977	Coding	chr11:114400528 plus strand	915430
RBM7	NM_016090	NP_057174	Coding	chr11:114400528 plus strand	915430
RBMXL2	NM_014469	NP_055284	Coding	chr11:7088933 plus strand	915431
RCE1	NM_001032279	NP_001027450	Coding	chr11:66843411 plus strand	915432
RCE1	NM_005133	NP_005124	Coding	chr11:66843411 plus strand	915432

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RCN1	NM_002901	NP_002892	Coding	chr11:32090930 plus strand	915433
RCOR2	NM_173587	NP_775858	Coding	chr11:63916844 minus strand	915434
RDX	NM_001260492	NP_001247421	Coding	chr11:110296712 minus strand	915435
RDX	NM_001260493	NP_001247422	Coding	chr11:110296712 minus strand	915435
RDX	NM_001260494	NP_001247423	Coding	chr11:110296712 minus strand	915435
RDX	NM_001260495	NP_001247424	Coding	chr11:110296712 minus strand	915435
RDX	NM_001260496	NP_001247425	Coding	chr11:110296712 minus strand	915435
RDX	NM_002906	NP_002897	Coding	chr11:110296712 minus strand	915435
RELA	NM_001145138	NP_001138610	Coding	chr11:65662972 minus strand	915436
RELA	NM_001243984	NP_001230913	Coding	chr11:65662972 minus strand	915436
RELA	NM_001243985	NP_001230914	Coding	chr11:65662972 minus strand	915436
RELA	NM_021975	NP_068810	Coding	chr11:65662972 minus strand	915436
RELT	NM_032871	NP_116260	Coding	chr11:73376667 plus strand	915437
RELT	NM_152222	NP_689408	Coding	chr11:73376359 plus strand	915438
REXO2	NM_015523	NP_056338	Coding	chr11:114439385 plus strand	915439
RHOD	NM_001300886	NP_001287815	Coding	chr11:67056817 plus strand	915440
RHOD	NM_014578	NP_055393	Coding	chr11:67056817 plus strand	915440
RHOG	NM_001665	NP_001656	Coding	chr11:3840983 minus strand	915441
RIC3	NM_001135109	NP_001128581	Coding	chr11:8169043 minus strand	915442
RIC3	NM_001206671	NP_001193600	Coding	chr11:8169043 minus strand	915442
RIC3	NM_001206672	NP_001193601	Coding	chr11:8169043 minus strand	915442
RIC3	NM_024557	NP_078833	Coding	chr11:8169043 minus strand	915442
RIC8A	NM_001286134	NP_001273063	Coding	chr11:207510 plus strand	915443
RIC8A	NM_021932	NP_068751	Coding	chr11:207510 plus strand	915443
RIN1	NM_004292	NP_004283	Coding	chr11:66336529 minus strand	915444
RNASEH2C	NM_032193	NP_115569	Coding	chr11:65720938 minus strand	915445
RNF121	NM_001300926	NP_001287855	Coding	chr11:71928721 plus strand	915446
RNF121	NM_018320	NP_060790	Coding	chr11:71928721 plus strand	915446

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RNF141	NM_016422	NP_057506	Coding	chr11:10541227 minus strand	915447
RNF169	NM_001098638	NP_001092108	Coding	chr11:74748867 plus strand	915448
RNF214	NM_001077239	NP_001070707	Coding	chr11:117232735 plus strand	915449
RNF214	NM_001278249	NP_001265178	Coding	chr11:117232735 plus strand	915449
RNF214	NM_207343	NP_997226	Coding	chr11:117232624 plus strand	915450
RNF26	NM_032015	NP_114404	Coding	chr11:119334499 plus strand	915451
RNH1	NM_002939	NP_002930	Coding	chr11:506821 minus strand	915452
RNH1	NM_203383	NP_976317	Coding	chr11:506821 minus strand	915452
RNH1	NM_203384	NP_976318	Coding	chr11:506821 minus strand	915452
RNH1	NM_203385	NP_976319	Coding	chr11:506821 minus strand	915452
RNH1	NM_203386	NP_976320	Coding	chr11:507283 minus strand	915453
RNH1	NM_203387	NP_976321	Coding	chr11:507283 minus strand	915453
RNH1	NM_203388	NP_976322	Coding	chr11:507283 minus strand	915453
RNH1	NM_203389	NP_976323	Coding	chr11:507283 minus strand	915453
ROBO3	NM_022370	NP_071765	Coding	chr11:124865408 plus strand	915454
ROBO4	NM_001301088	NP_001288017	Coding	chr11:124897935 minus strand	915455
ROBO4	NM_019055	NP_061928	Coding	chr11:124897935 minus strand	915455
ROM1	NM_000327	NP_000318	Coding	chr11:62612740 plus strand	915456
RPL27A	NM_000990	NP_000981	Coding	chr11:8682447 plus strand	915457
RPLP2	NM_001004	NP_000995	Coding	chr11:809935 plus strand	915458
RPS13	NM_001017	NP_001008	Coding	chr11:17077673 minus strand	915459
RPS25	NM_001028	NP_001019	Coding	chr11:119018347 minus strand	915460
RPS3	NM_001005	NP_000996	Coding	chr11:75399490 plus strand	915461
RPS3	NM_001256802	NP_001243731	Coding	chr11:75399490 plus strand	915461
RPS3	NM_001260506	NP_001247435	Coding	chr11:75399490 plus strand	915461
RPS3	NM_001260507	NP_001247436	Coding	chr11:75399490 plus strand	915461
RPS6KA4	NM_001006944	NP_001006945	Coding	chr11:64359152 plus strand	915462
RPS6KA4	NM_001300802	NP_001287731	Coding	chr11:64359152 plus strand	915462
RPS6KA4	NM_003942	NP_003933	Coding	chr11:64359152 plus strand	915462
RPS6KB2	NM_003952	NP_003943	Coding	chr11:67428463 plus strand	915463
RPUSD4	NM_001144827	NP_001138299	Coding	chr11:126211692 minus	915464

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				strand	
RPUSD4	NM_032795	NP_116184	Coding	chr11:126211692 minus strand	915464
RRAS2	NM_001102669	NP_001096139	Coding	chr11:14358527 minus strand	915465
RRAS2	NM_001177314	NP_001170785	Coding	chr11:14364506 minus strand	915466
RRAS2	NM_001177315	NP_001170786	Coding	chr11:14358485 minus strand	915467
RRAS2	NM_012250	NP_036382	Coding	chr11:14359184 minus strand	915468
RRM1	NM_001033	NP_001024	Coding	chr11:4094693 plus strand	915469
RRP8	NM_015324	NP_056139	Coding	chr11:6603650 minus strand	915470
RSF1	NM_016578	NP_057662	Coding	chr11:77820834 minus strand	915471
RTN3	NM_001265589	NP_001252518	Coding	chr11:63681449 plus strand	915472
RTN3	NM_001265590	NP_001252519	Coding	chr11:63681449 plus strand	915472
RTN3	NM_001265591	NP_001252520	Coding	chr11:63681449 plus strand	915472
RTN3	NM_006054	NP_006045	Coding	chr11:63681449 plus strand	915472
RTN3	NM_201428	NP_958831	Coding	chr11:63681449 plus strand	915472
RTN3	NM_201429	NP_958832	Coding	chr11:63681449 plus strand	915472
RTN3	NM_201430	NP_958833	Coding	chr11:63681449 plus strand	915472
RTN4RL2	NM_178570	NP_848665	Coding	chr11:57460536 plus strand	915473
SAA1	NM_000331	NP_000322	Coding	chr11:18266260 plus strand	915474
SAA1	NM_001178006	NP_001171477	Coding	chr11:18266260 plus strand	915474
SAA1	NM_199161	NP_954630	Coding	chr11:18266260 plus strand	915474
SAA2	NM_001127380	NP_001120852	Coding	chr11:18248674 minus strand	915475
SAA2	NM_030754	NP_110381	Coding	chr11:18248674 minus strand	915475
SAA2-SAA4	NM_001199744	NP_001186673	Coding	chr11:18248674 minus strand	915476
SAA4	NM_006512	NP_006503	Coding	chr11:18236837 minus strand	915477
SAAL1	NM_138421	NP_612430	Coding	chr11:18106091 minus strand	915478
SAC3D1	NM_013299	NP_037431	Coding	chr11:65040903 plus strand	915479
SART1	NM_005146	NP_005137	Coding	chr11:65961688 plus strand	915480
SBF2	NM_030962	NP_112224	Coding	chr11:10294207 minus strand	915481

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SC5D	NM_001024956	NP_001020127	Coding	chr11:121292867 plus strand	915482
SC5D	NM_006918	NP_008849	Coding	chr11:121292678 plus strand	915483
SCGB1A1	NM_003357	NP_003348	Coding	chr11:62419034 plus strand	915484
SCGB1C1	NM_145651	NP_663626	Coding	chr11:193079 plus strand	915485
SCGB1D1	NM_006552	NP_006543	Coding	chr11:62190237 plus strand	915486
SCGB1D2	NM_006551	NP_006542	Coding	chr11:62242251 plus strand	915487
SCGB1D4	NM_206998	NP_996881	Coding	chr11:62299064 minus strand	915488
SCGB2A1	NM_002407	NP_002398	Coding	chr11:62208667 plus strand	915489
SCGB2A2	NM_002411	NP_002402	Coding	chr11:62270154 plus strand	915490
SCN2B	NM_004588	NP_004579	Coding	chr11:118176622 minus strand	915491
SCN3B	NM_001040151	NP_001035241	Coding	chr11:123654607 minus strand	915492
SCN3B	NM_018400	NP_060870	Coding	chr11:123654607 minus strand	915492
SCN4B	NM_001142348	NP_001135820	Coding	chr11:118152915 minus strand	915493
SCN4B	NM_001142349	NP_001135821	Coding	chr11:118145469 minus strand	915494
SCN4B	NM_174934	NP_777594	Coding	chr11:118152915 minus strand	915493
SCT	NM_021920	NP_068739	Coding	chr11:627173 minus strand	915495
SCUBE2	NM_001170690	NP_001164161	Coding	chr11:9091603 minus strand	915496
SCUBE2	NM_020974	NP_066025	Coding	chr11:9091603 minus strand	915496
SCYL1	NM_001048218	NP_001041683	Coding	chr11:65525076 plus strand	915497
SCYL1	NM_020680	NP_065731	Coding	chr11:65525076 plus strand	915497
SDHAF2	NM_017841	NP_060311	Coding	chr11:61430124 plus strand	915498
SDHD	NM_001276503	NP_001263432	Coding	chr11:112086823 plus strand	915499
SDHD	NM_001276504	NP_001263433	Coding	chr11:112086823 plus strand	915499
SDHD	NM_001276506	NP_001263435	Coding	chr11:112086823 plus strand	915499
SDHD	NM_003002	NP_002993	Coding	chr11:112086823 plus strand	915499
SERGEF	NM_012139	NP_036271	Coding	chr11:18013162 minus strand	915500
SERPING1	NM_000062	NP_000053	Coding	chr11:57597553 plus strand	915501
SERPING1	NM_001032295	NP_001027466	Coding	chr11:57598231 plus strand	915502

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SERPINH1	NM_001207014	NP_001193943	Coding	chr11:75562055 plus strand	915503
SERPINH1	NM_001235	NP_001226	Coding	chr11:75562055 plus strand	915503
SESN3	NM_001271594	NP_001258523	Coding	chr11:95232541 minus strand	915504
SESN3	NM_144665	NP_653266	Coding	chr11:95231082 minus strand	915505
SF1	NM_001178030	NP_001171501	Coding	chr11:64778466 minus strand	915506
SF1	NM_001178031	NP_001171502	Coding	chr11:64777760 minus strand	915507
SF1	NM_004630	NP_004621	Coding	chr11:64778844 minus strand	915508
SF1	NM_201995	NP_973724	Coding	chr11:64778844 minus strand	915508
SF1	NM_201997	NP_973726	Coding	chr11:64778844 minus strand	915508
SF1	NM_201998	NP_973727	Coding	chr11:64778844 minus strand	915508
SF3B2	NM_006842	NP_006833	Coding	chr11:66052344 plus strand	915509
SHANK2	NM_012309	NP_036441	Coding	chr11:71224796 minus strand	915510
SHANK2	NM_133266	NP_573573	Coding	chr11:70661840 minus strand	915511
SIAE	NM_001199922	NP_001186851	Coding	chr11:124676303 minus strand	915512
SIAE	NM_170601	NP_733746	Coding	chr11:124673881 minus strand	915513
SIDT2	NM_001040455	NP_001035545	Coding	chr11:117179222 plus strand	915514
SIGIRR	NM_001135053	NP_001128525	Coding	chr11:417397 minus strand	915515
SIGIRR	NM_001135054	NP_001128526	Coding	chr11:414999 minus strand	915516
SIGIRR	NM_021805	NP_068577	Coding	chr11:417397 minus strand	915515
SIK2	NM_015191	NP_056006	Coding	chr11:111602445 plus strand	915517
SIK3	NM_001281748	NP_001268677	Coding	chr11:117098415 minus strand	915518
SIK3	NM_001281749	NP_001268678	Coding	chr11:117098415 minus strand	915518
SIK3	NM_025164	NP_079440	Coding	chr11:117098415 minus strand	915518
SIPA1	NM_006747	NP_006738	Coding	chr11:65638106 plus strand	915519
SIPA1	NM_153253	NP_694985	Coding	chr11:65640120 plus strand	915520
SIRT3	NM_001017524	NP_001017524	Coding	chr11:236362 minus strand	915521
SIRT3	NM_012239	NP_036371	Coding	chr11:236362 minus strand	915521
SLC15A3	NM_016582	NP_057666	Coding	chr11:60951785 minus strand	915522
SLC17A6	NM_020346	NP_065079	Coding	chr11:22338120 plus strand	915523

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SLC1A2	NM_001195728	NP_001182657	Coding	chr11:35420063 minus strand	915524
SLC1A2	NM_001252652	NP_001239581	Coding	chr11:35420063 minus strand	915524
SLC1A2	NM_004171	NP_004162	Coding	chr11:35419558 minus strand	915525
SLC22A10	NM_001039752	NP_001034841	Coding	chr11:63289957 plus strand	915526
SLC22A11	NM_018484	NP_060954	Coding	chr11:64555625 plus strand	915527
SLC22A12	NM_001276326	NP_001263255	Coding	chr11:64590809 plus strand	915528
SLC22A12	NM_001276327	NP_001263256	Coding	chr11:64590809 plus strand	915528
SLC22A12	NM_144585	NP_653186	Coding	chr11:64590809 plus strand	915528
SLC22A12	NM_153378	NP_700357	Coding	chr11:64590809 plus strand	915528
SLC22A18	NM_002555	NP_002546	Coding	chr11:2902281 plus strand	915529
SLC22A18	NM_183233	NP_899056	Coding	chr11:2899720 plus strand	915530
SLC22A18AS	NM_001302862	NP_001289791	Coding	chr11:2903945 minus strand	915531
SLC22A18AS	NM_007105	NP_009036	Coding	chr11:2903945 minus strand	915531
SLC22A20	NM_001004326	NP_001004326	Coding	chr11:65213839 plus strand	915532
SLC22A24	NM_001136506	NP_001129978	Coding	chr11:63144221 minus strand	915533
SLC22A24	NM_173586	NP_775857	Coding	chr11:63144221 minus strand	915533
SLC22A25	NM_199352	NP_955384	Coding	chr11:63229652 minus strand	915534
SLC22A6	NM_004790	NP_004781	Coding	chr11:62985023 minus strand	915535
SLC22A6	NM_153276	NP_695008	Coding	chr11:62985023 minus strand	915535
SLC22A6	NM_153277	NP_695009	Coding	chr11:62985023 minus strand	915535
SLC22A6	NM_153278	NP_695010	Coding	chr11:62985023 minus strand	915535
SLC22A8	NM_001184732	NP_001171661	Coding	chr11:63015845 minus strand	915536
SLC22A8	NM_001184733	NP_001171662	Coding	chr11:63015845 minus strand	915536
SLC22A8	NM_001184736	NP_001171665	Coding	chr11:63015845 minus strand	915536
SLC22A8	NM_004254	NP_004245	Coding	chr11:63015845 minus strand	915536
SLC22A9	NM_080866	NP_543142	Coding	chr11:63369788 plus strand	915537
SLC25A22	NM_001191060	NP_001177989	Coding	chr11:797995 minus strand	915538
SLC25A22	NM_001191061	NP_001177990	Coding	chr11:798269 minus strand	915539
SLC25A22	NM_024698	NP_078974	Coding	chr11:796263 minus strand	915540

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SLC25A45	NM_001077241	NP_001070709	Coding	chr11:65382674 minus strand	915541
SLC25A45	NM_001278250	NP_001265179	Coding	chr11:65382386 minus strand	915542
SLC25A45	NM_001278251	NP_001265180	Coding	chr11:65383701 minus strand	915543
SLC25A45	NM_001300820	NP_001287749	Coding	chr11:65382386 minus strand	915542
SLC25A45	NM_182556	NP_872362	Coding	chr11:65382674 minus strand	915541
SLC29A2	NM_001300868	NP_001287797	Coding	chr11:66372476 minus strand	915544
SLC29A2	NM_001300869	NP_001287798	Coding	chr11:66372476 minus strand	915544
SLC29A2	NM_001532	NP_001523	Coding	chr11:66371820 minus strand	915545
SLC35C1	NM_001145265	NP_001138737	Coding	chr11:45804071 plus strand	915546
SLC35C1	NM_001145266	NP_001138738	Coding	chr11:45804071 plus strand	915546
SLC35C1	NM_018389	NP_060859	Coding	chr11:45805089 plus strand	915547
SLC35F2	NM_017515	NP_059985	Coding	chr11:107859188 minus strand	915548
SLC36A4	NM_001286139	NP_001273068	Coding	chr11:93197455 minus strand	915549
SLC36A4	NM_152313	NP_689526	Coding	chr11:93197975 minus strand	915550
SLC37A2	NM_001145290	NP_001138762	Coding	chr11:125063116 plus strand	915551
SLC37A2	NM_198277	NP_938018	Coding	chr11:125063116 plus strand	915551
SLC37A4	NM_001164277	NP_001157749	Coding	chr11:119030906 minus strand	915552
SLC37A4	NM_001164278	NP_001157750	Coding	chr11:119030906 minus strand	915552
SLC37A4	NM_001164279	NP_001157751	Coding	chr11:119030906 minus strand	915552
SLC37A4	NM_001164280	NP_001157752	Coding	chr11:119029568 minus strand	915553
SLC37A4	NM_001467	NP_001458	Coding	chr11:119030906 minus strand	915552
SLC39A13	NM_001128225	NP_001121697	Coding	chr11:47408494 plus strand	915554
SLC39A13	NM_152264	NP_689477	Coding	chr11:47408494 plus strand	915554
SLC3A2	NM_001012662	NP_001012680	Coding	chr11:62856011 plus strand	915555
SLC3A2	NM_001012664	NP_001012682	Coding	chr11:62856011 plus strand	915555
SLC3A2	NM_001013251	NP_001013269	Coding	chr11:62880871 plus strand	915556
SLC3A2	NM_002394	NP_002385	Coding	chr11:62856011 plus strand	915555

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SLC43A1	NM_001198810	NP_001185739	Coding	chr11:57514885 minus strand	915557
SLC43A1	NM_003627	NP_003618	Coding	chr11:57515719 minus strand	915558
SLC43A3	NM_001278201	NP_001265130	Coding	chr11:57427148 minus strand	915559
SLC43A3	NM_001278206	NP_001265135	Coding	chr11:57427148 minus strand	915559
SLC43A3	NM_014096	NP_054815	Coding	chr11:57427087 minus strand	915560
SLC43A3	NM_017611	NP_060081	Coding	chr11:57427580 minus strand	915561
SLC43A3	NM_199329	NP_955361	Coding	chr11:57427148 minus strand	915559
SLC5A12	NM_178498	NP_848593	Coding	chr11:26722027 minus strand	915562
SLC6A5	NM_004211	NP_004202	Coding	chr11:20599399 plus strand	915563
SLCO2B1	NM_001145211	NP_001138683	Coding	chr11:75159798 plus strand	915564
SLCO2B1	NM_001145212	NP_001138684	Coding	chr11:75150986 plus strand	915565
SLCO2B1	NM_007256	NP_009187	Coding	chr11:75150986 plus strand	915565
SLN	NM_003063	NP_003054	Coding	chr11:107712061 minus strand	915566
SMCO4	NM_020179	NP_064564	Coding	chr11:93543380 minus strand	915567
SMPD1	NM_000543	NP_000534	Coding	chr11:6390413 plus strand	915568
SMPD1	NM_001007593	NP_001007594	Coding	chr11:6390413 plus strand	915568
SMTNL1	NM_001105565	NP_001099035	Coding	chr11:57542640 plus strand	915569
SNX15	NM_013306	NP_037438	Coding	chr11:65027407 plus strand	915570
SNX15	NM_147777	NP_680086	Coding	chr11:65027407 plus strand	915570
SNX19	NM_001301089	NP_001288018	Coding	chr11:130916487 minus strand	915571
SNX19	NM_014758	NP_055573	Coding	chr11:130916487 minus strand	915571
SNX32	NM_152760	NP_689973	Coding	chr11:65833938 plus strand	915572
SORL1	NM_003105	NP_003096	Coding	chr11:121452202 plus strand	915573
SOX6	NM_001145811	NP_001139283	Coding	chr11:16408884 minus strand	915574
SOX6	NM_001145819	NP_001139291	Coding	chr11:16402867 minus strand	915575
SOX6	NM_017508	NP_059978	Coding	chr11:16402867 minus strand	915575
SOX6	NM_033326	NP_201583	Coding	chr11:16476388 minus strand	915576
SPA17	NM_017425	NP_059121	Coding	chr11:124673843 plus strand	915577

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SPATA19	NM_001291992	NP_001278921	Coding	chr11:133845538 minus strand	915578
SPATA19	NM_174927	NP_777587	Coding	chr11:133845538 minus strand	915578
SPCS2	NM_014752	NP_055567	Coding	chr11:74949246 plus strand	915579
SPDYC	NM_001008778	NP_001008778	Coding	chr11:65170235 plus strand	915580
SPI1	NM_001080547	NP_001074016	Coding	chr11:47378576 minus strand	915581
SPI1	NM_003120	NP_003111	Coding	chr11:47378576 minus strand	915581
SPON1	NM_006108	NP_006099	Coding	chr11:13962636 plus strand	915582
SPTBN2	NM_006946	NP_008877	Coding	chr11:66721399 minus strand	915583
SPTY2D1	NM_194285	NP_919261	Coding	chr11:18634473 minus strand	915584
SRPR	NM_001177842	NP_001171313	Coding	chr11:126268982 minus strand	915585
SRPR	NM_003139	NP_003130	Coding	chr11:126268982 minus strand	915585
SRSF8	NM_032102	NP_115285	Coding	chr11:95066876 plus strand	915586
SSH3	NM_017857	NP_060327	Coding	chr11:67303447 plus strand	915587
SSRP1	NM_003146	NP_003137	Coding	chr11:57335877 minus strand	915588
SSSCA1	NM_001303024	NP_001289953	Coding	chr11:65570458 plus strand	915589
SSSCA1	NM_006396	NP_006387	Coding	chr11:65570471 plus strand	915590
ST14	NM_021978	NP_068813	Coding	chr11:130159786 plus strand	915591
ST3GAL4	NM_001254757	NP_001241686	Coding	chr11:126355644 plus strand	915592
ST3GAL4	NM_001254758	NP_001241687	Coding	chr11:126403415 plus strand	915593
ST3GAL4	NM_001254759	NP_001241688	Coding	chr11:126406181 plus strand	915594
ST3GAL4	NM_006278	NP_006269	Coding	chr11:126355893 plus strand	915595
ST5	NM_005418	NP_005409	Coding	chr11:8910951 minus strand	915596
ST5	NM_139157	NP_631896	Coding	chr11:8811335 minus strand	915597
ST5	NM_213618	NP_998783	Coding	chr11:8810677 minus strand	915598
STARD10	NM_006645	NP_006636	Coding	chr11:72793705 minus strand	915599
STIM1	NM_001277961	NP_001264890	Coding	chr11:3855702 plus strand	915600
STIM1	NM_001277962	NP_001264891	Coding	chr11:3855702 plus strand	915600
STIM1	NM_003156	NP_003147	Coding	chr11:3855702 plus strand	915600

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STIP1	NM_001282652	NP_001269581	Coding	chr11:64185271 plus strand	915601
STIP1	NM_001282653	NP_001269582	Coding	chr11:64186114 plus strand	915602
STIP1	NM_006819	NP_006810	Coding	chr11:64186114 plus strand	915602
STK33	NM_001289058	NP_001275987	Coding	chr11:8594289 minus strand	915603
STK33	NM_001289059	NP_001275988	Coding	chr11:8594289 minus strand	915603
STK33	NM_001289061	NP_001275990	Coding	chr11:8594008 minus strand	915604
STK33	NM_030906	NP_112168	Coding	chr11:8594008 minus strand	915604
STT3A	NM_001278503	NP_001265432	Coding	chr11:125592794 plus strand	915605
STT3A	NM_001278504	NP_001265433	Coding	chr11:125592794 plus strand	915605
STT3A	NM_152713	NP_689926	Coding	chr11:125592794 plus strand	915605
STX3	NM_001178040	NP_001171511	Coding	chr11:59755058 plus strand	915606
STX3	NM_004177	NP_004168	Coding	chr11:59755058 plus strand	915606
STX5	NM_001244666	NP_001231595	Coding	chr11:62832091 minus strand	915607
STX5	NM_003164	NP_003155	Coding	chr11:62832091 minus strand	915607
SUV420H1	NM_001300907	NP_001287836	Coding	chr11:68213345 minus strand	915608
SUV420H1	NM_001300908	NP_001287837	Coding	chr11:68213772 minus strand	915609
SUV420H1	NM_001300909	NP_001287838	Coding	chr11:68213772 minus strand	915609
SUV420H1	NM_016028	NP_057112	Coding	chr11:68213317 minus strand	915610
SUV420H1	NM_017635	NP_060105	Coding	chr11:68213345 minus strand	915608
SVIP	NM_148893	NP_683691	Coding	chr11:22829836 minus strand	915611
SWAP70	NM_001297714	NP_001284643	Coding	chr11:9664076 plus strand	915612
SWAP70	NM_015055	NP_055870	Coding	chr11:9664076 plus strand	915612
SYT12	NM_001177880	NP_001171351	Coding	chr11:67022718 plus strand	915613
SYT12	NM_177963	NP_808878	Coding	chr11:67023344 plus strand	915614
SYT13	NM_001247987	NP_001234916	Coding	chr11:45286333 minus strand	915615
SYT13	NM_020826	NP_065877	Coding	chr11:45286333 minus strand	915615
SYT7	NM_001252065	NP_001238994	Coding	chr11:61580872 minus strand	915616
SYT7	NM_001300773	NP_001287702	Coding	chr11:61580872 minus strand	915616

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SYT7	NM_004200	NP_004191	Coding	chr11:61580872 minus strand	915616
SYT8	NM_001290332	NP_001277261	Coding	chr11:1834309 plus strand	915617
SYT8	NM_001290333	NP_001277262	Coding	chr11:1834309 plus strand	915617
SYT8	NM_001290334	NP_001277263	Coding	chr11:1834309 plus strand	915617
SYT8	NM_138567	NP_612634	Coding	chr11:1834309 plus strand	915617
SYT9	NM_175733	NP_783860	Coding	chr11:7251949 plus strand	915618
SYTL2	NM_001162951	NP_001156423	Coding	chr11:85758069 minus strand	915619
SYTL2	NM_001162952	NP_001156424	Coding	chr11:85719350 minus strand	915620
SYTL2	NM_001162953	NP_001156425	Coding	chr11:85758069 minus strand	915619
SYTL2	NM_001289608	NP_001276537	Coding	chr11:85811159 minus strand	915621
SYTL2	NM_001289609	NP_001276538	Coding	chr11:85719350 minus strand	915620
SYTL2	NM_001289610	NP_001276539	Coding	chr11:85719180 minus strand	915622
SYTL2	NM_032943	NP_116561	Coding	chr11:85811159 minus strand	915621
SYTL2	NM_206929	NP_996812	Coding	chr11:85719180 minus strand	915622
SYTL2	NM_206930	NP_996813	Coding	chr11:85719350 minus strand	915620
SYVN1	NM_032431	NP_115807	Coding	chr11:65134532 minus strand	915623
SYVN1	NM_172230	NP_757385	Coding	chr11:65134532 minus strand	915623
TAF10	NM_006284	NP_006275	Coding	chr11:6612244 minus strand	915624
TAF1D	NM_024116	NP_077021	Coding	chr11:93741537 minus strand	915625
TAF6L	NM_006473	NP_006464	Coding	chr11:62771302 plus strand	915626
TAGLN	NM_001001522	NP_001001522	Coding	chr11:117199323 plus strand	915627
TAGLN	NM_003186	NP_003177	Coding	chr11:117199323 plus strand	915627
TALDO1	NM_006755	NP_006746	Coding	chr11:747431 plus strand	915628
TBC1D10C	NM_001256508	NP_001243437	Coding	chr11:67403912 plus strand	915629
TBC1D10C	NM_198517	NP_940919	Coding	chr11:67403912 plus strand	915629
TBCEL	NM_001130047	NP_001123519	Coding	chr11:121024093 plus strand	915630
TBCEL	NM_152715	NP_689928	Coding	chr11:121024103 plus strand	915631
TBRG1	NM_032811	NP_116200	Coding	chr11:124622845 plus strand	915632
TBX10	NM_005995	NP_005986	Coding	chr11:67639560 minus strand	915633

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TCIRG1	NM_006019	NP_006010	Coding	chr11:68038994 plus strand	915634
TCIRG1	NM_006053	NP_006044	Coding	chr11:68042979 plus strand	915635
TCN1	NM_001062	NP_001053	Coding	chr11:59866568 minus strand	915636
TCP11L1	NM_001145541	NP_001139013	Coding	chr11:33040014 plus strand	915637
TCP11L1	NM_018393	NP_060863	Coding	chr11:33039416 plus strand	915638
TEAD1	NM_021961	NP_068780	Coding	chr11:12674421 plus strand	915639
TECTA	NM_005422	NP_005413	Coding	chr11:121102665 plus strand	915640
TENM4	NM_001098816	NP_001092286	Coding	chr11:79440651 minus strand	915641
TEX12	NM_031275	NP_112565	Coding	chr11:112167371 plus strand	915642
TEX40	NM_001039496	NP_001034585	Coding	chr11:64300390 plus strand	915643
TH	NM_000360	NP_000351	Coding	chr11:2171805 minus strand	915644
TH	NM_199292	NP_954986	Coding	chr11:2171805 minus strand	915644
TH	NM_199293	NP_954987	Coding	chr11:2171805 minus strand	915644
THRSP	NM_003251	NP_003242	Coding	chr11:78063860 plus strand	915645
THY1	NM_006288	NP_006279	Coding	chr11:119423536 minus strand	915646
THYN1	NM_001037304	NP_001032381	Coding	chr11:134253366 minus strand	915647
THYN1	NM_001037305	NP_001032382	Coding	chr11:134253366 minus strand	915647
THYN1	NM_014174	NP_054893	Coding	chr11:134253366 minus strand	915647
THYN1	NM_199297	NP_954994	Coding	chr11:134253366 minus strand	915647
THYN1	NM_199298	NP_954995	Coding	chr11:134253366 minus strand	915647
TIGD3	NM_145719	NP_663771	Coding	chr11:65354810 plus strand	915648
TIMM10	NM_012456	NP_036588	Coding	chr11:57530759 minus strand	915649
TIMM10B	NM_012192	NP_036324	Coding	chr11:6481446 plus strand	915650
TIMM8B	NM_012459	NP_036591	Coding	chr11:112086798 minus strand	915651
TIRAP	NM_001039661	NP_001034750	Coding	chr11:126283086 plus strand	915652
TIRAP	NM_148910	NP_683708	Coding	chr11:126283086 plus strand	915652
TM7SF2	NM_001277233	NP_001264162	Coding	chr11:65111853 plus strand	915653
TM7SF2	NM_003273	NP_003264	Coding	chr11:65111853 plus	915653

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				strand	
TMEM109	NM_024092	NP_076997	Coding	chr11:60913898 plus strand	915654
TMEM123	NM_052932	NP_443164	Coding	chr11:102453044 minus strand	915655
TMEM126A	NM_001244735	NP_001231664	Coding	chr11:85647918 plus strand	915656
TMEM126A	NM_032273	NP_115649	Coding	chr11:85647918 plus strand	915656
TMEM126B	NM_001193537	NP_001180466	Coding	chr11:85628572 plus strand	915657
TMEM126B	NM_001193538	NP_001180467	Coding	chr11:85628572 plus strand	915657
TMEM126B	NM_001256546	NP_001243475	Coding	chr11:85628572 plus strand	915657
TMEM126B	NM_001256547	NP_001243476	Coding	chr11:85628572 plus strand	915657
TMEM126B	NM_018480	NP_060950	Coding	chr11:85628572 plus strand	915657
TMEM132A	NM_017870	NP_060340	Coding	chr11:60924440 plus strand	915658
TMEM132A	NM_178031	NP_821174	Coding	chr11:60924440 plus strand	915658
TMEM133	NM_032021	NP_114410	Coding	chr11:100992079 plus strand	915659
TMEM134	NM_001078650	NP_001072118	Coding	chr11:67469277 minus strand	915660
TMEM134	NM_001078651	NP_001072119	Coding	chr11:67469277 minus strand	915660
TMEM134	NM_025124	NP_079400	Coding	chr11:67469277 minus strand	915660
TMEM135	NM_001168724	NP_001162195	Coding	chr11:87037843 plus strand	915661
TMEM135	NM_022918	NP_075069	Coding	chr11:87037843 plus strand	915661
TMEM136	NM_001198670	NP_001185599	Coding	chr11:120325128 plus strand	915662
TMEM136	NM_001198671	NP_001185600	Coding	chr11:120325128 plus strand	915662
TMEM136	NM_001198672	NP_001185601	Coding	chr11:120325128 plus strand	915662
TMEM136	NM_001198673	NP_001185602	Coding	chr11:120325128 plus strand	915662
TMEM136	NM_001198674	NP_001185603	Coding	chr11:120325128 plus strand	915662
TMEM136	NM_001198675	NP_001185604	Coding	chr11:120325128 plus strand	915662
TMEM136	NM_174926	NP_777586	Coding	chr11:120325128 plus strand	915662
TMEM138	NM_016464	NP_057548	Coding	chr11:61362000 plus strand	915663
TMEM151A	NM_153266	NP_694998	Coding	chr11:66291901 plus strand	915664
TMEM179B	NM_199337	NP_955369	Coding	chr11:62787401 plus	915665

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				strand	
TMEM216	NM_001173990	NP_001167461	Coding	chr11:61392359 plus strand	915666
TMEM216	NM_001173991	NP_001167462	Coding	chr11:61392359 plus strand	915666
TMEM216	NM_016499	NP_057583	Coding	chr11:61392392 plus strand	915667
TMEM218	NM_001080546	NP_001074015	Coding	chr11:125111708 minus strand	915668
TMEM218	NM_001258238	NP_001245167	Coding	chr11:125111763 minus strand	915669
TMEM218	NM_001258239	NP_001245168	Coding	chr11:125111763 minus strand	915669
TMEM218	NM_001258240	NP_001245169	Coding	chr11:125111763 minus strand	915669
TMEM218	NM_001258241	NP_001245170	Coding	chr11:125111763 minus strand	915669
TMEM218	NM_001258242	NP_001245171	Coding	chr11:125111708 minus strand	915668
TMEM218	NM_001258243	NP_001245172	Coding	chr11:125111708 minus strand	915668
TMEM218	NM_001258244	NP_001245173	Coding	chr11:125111708 minus strand	915668
TMEM218	NM_001258245	NP_001245174	Coding	chr11:125111708 minus strand	915668
TMEM218	NM_001258246	NP_001245175	Coding	chr11:125111708 minus strand	915668
TMEM218	NM_001258247	NP_001245176	Coding	chr11:125111708 minus strand	915668
TMEM223	NM_001080501	NP_001073970	Coding	chr11:62792014 minus strand	915670
TMEM225	NM_001013743	NP_001013765	Coding	chr11:123885642 minus strand	915671
TMEM25	NM_001144034	NP_001137506	Coding	chr11:118531087 plus strand	915672
TMEM25	NM_001144035	NP_001137507	Coding	chr11:118531087 plus strand	915672
TMEM25	NM_001144036	NP_001137508	Coding	chr11:118531087 plus strand	915672
TMEM25	NM_001144037	NP_001137509	Coding	chr11:118531087 plus strand	915672
TMEM25	NM_001144038	NP_001137510	Coding	chr11:118531087 plus strand	915672
TMEM25	NM_032780	NP_116169	Coding	chr11:118531087 plus strand	915672
TMEM258	NM_014206	NP_055021	Coding	chr11:61792613 minus strand	915673
TMEM262	NM_001242631	NP_001229560	Coding	chr11:65089109 minus strand	915674
TMEM262	NM_001282448	NP_001269377	Coding	chr11:65089109 minus strand	915674
TMEM41B	NM_001165030	NP_001158502	Coding	chr11:9314768 minus strand	915675
TMEM41B	NM_015012	NP_055827	Coding	chr11:9314768 minus	915675

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				strand	
TMEM45B	NM_138788	NP_620143	Coding	chr11:129815845 plus strand	915676
TMEM80	NM_001042463	NP_001035928	Coding	chr11:695590 plus strand	915677
TMEM80	NM_001276253	NP_001263182	Coding	chr11:695590 plus strand	915677
TMEM80	NM_001276274	NP_001263203	Coding	chr11:695590 plus strand	915677
TMEM80	NM_174940	NP_777600	Coding	chr11:695590 plus strand	915677
TMEM86A	NM_153347	NP_699178	Coding	chr11:18698803 plus strand	915678
TMEM9B	NM_001286094	NP_001273023	Coding	chr11:8964773 minus strand	915679
TMEM9B	NM_001286095	NP_001273024	Coding	chr11:8965011 minus strand	915680
TMEM9B	NM_020644	NP_065695	Coding	chr11:8964773 minus strand	915679
TMPRSS13	NM_001077263	NP_001070731	Coding	chr11:117929453 minus strand	915681
TMPRSS13	NM_001206789	NP_001193718	Coding	chr11:117929453 minus strand	915681
TMPRSS13	NM_001206790	NP_001193719	Coding	chr11:117929453 minus strand	915681
TMPRSS13	NM_001244995	NP_001231924	Coding	chr11:117929453 minus strand	915681
TMPRSS4	NM_001083947	NP_001077416	Coding	chr11:118077011 plus strand	915682
TMPRSS4	NM_001173551	NP_001167022	Coding	chr11:118077011 plus strand	915682
TMPRSS4	NM_001173552	NP_001167023	Coding	chr11:118077011 plus strand	915682
TMPRSS4	NM_001290094	NP_001277023	Coding	chr11:118077011 plus strand	915682
TMPRSS4	NM_001290096	NP_001277025	Coding	chr11:118077011 plus strand	915682
TMPRSS4	NM_019894	NP_063947	Coding	chr11:118077011 plus strand	915682
TMPRSS5	NM_001288749	NP_001275678	Coding	chr11:113706373 minus strand	915683
TMPRSS5	NM_001288750	NP_001275679	Coding	chr11:113706373 minus strand	915683
TMPRSS5	NM_001288751	NP_001275680	Coding	chr11:113706373 minus strand	915683
TMPRSS5	NM_001288752	NP_001275681	Coding	chr11:113706373 minus strand	915683
TMPRSS5	NM_030770	NP_110397	Coding	chr11:113706373 minus strand	915683
TMX2	NM_001144012	NP_001137484	Coding	chr11:57712522 plus strand	915684
TMX2	NM_015959	NP_057043	Coding	chr11:57712522 plus strand	915684
TNKS1BP1	NM_033396	NP_203754	Coding	chr11:57324939 minus strand	915685
TNNI2	NM_001145829	NP_001139301	Coding	chr11:1839488 plus strand	915686

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TNNI2	NM_001145841	NP_001139313	Coding	chr11:1840201 plus strand	915687
TNNI2	NM_003282	NP_003273	Coding	chr11:1839002 plus strand	915688
TNNT3	NM_001042780	NP_001036245	Coding	chr11:1919568 plus strand	915689
TNNT3	NM_001042781	NP_001036246	Coding	chr11:1919568 plus strand	915689
TNNT3	NM_001042782	NP_001036247	Coding	chr11:1919568 plus strand	915689
TNNT3	NM_001297646	NP_001284575	Coding	chr11:1919568 plus strand	915689
TNNT3	NM_006757	NP_006748	Coding	chr11:1919568 plus strand	915689
TOLLIP	NM_019009	NP_061882	Coding	chr11:1309662 minus strand	915690
TP53AIP1	NM_001195194	NP_001182123	Coding	chr11:128937834 minus strand	915691
TP53AIP1	NM_001195195	NP_001182124	Coding	chr11:128943399 minus strand	915692
TP53AIP1	NM_001251964	NP_001238893	Coding	chr11:128943399 minus strand	915692
TP53AIP1	NM_022112	NP_071395	Coding	chr11:128943399 minus strand	915692
TP53I11	NM_001258320	NP_001245249	Coding	chr11:44950208 minus strand	915693
TP53I11	NM_001258321	NP_001245250	Coding	chr11:44951306 minus strand	915694
TP53I11	NM_001258322	NP_001245251	Coding	chr11:44951306 minus strand	915694
TP53I11	NM_001258323	NP_001245252	Coding	chr11:44951057 minus strand	915695
TP53I11	NM_001258324	NP_001245253	Coding	chr11:44951306 minus strand	915694
TP53I11	NM_006034	NP_006025	Coding	chr11:44951057 minus strand	915695
TPBGL	NM_001195528	NP_001182457	Coding	chr11:75240904 plus strand	915696
TPCN2	NM_139075	NP_620714	Coding	chr11:69048881 plus strand	915697
TPH1	NM_004179	NP_004170	Coding	chr11:18040788 minus strand	915698
TPP1	NM_000391	NP_000382	Coding	chr11:6619461 minus strand	915699
TRAF6	NM_004620	NP_004611	Coding	chr11:36510313 minus strand	915700
TRAF6	NM_145803	NP_665802	Coding	chr11:36510313 minus strand	915700
TRAPPC4	NM_016146	NP_057230	Coding	chr11:119018530 plus strand	915701
TREH	NM_001301065	NP_001287994	Coding	chr11:118679672 minus strand	915702
TREH	NM_007180	NP_009111	Coding	chr11:118679672 minus strand	915702
TRIM21	NM_003141	NP_003132	Coding	chr11:4393696 minus strand	915703
TRIM22	NM_001199573	NP_001186502	Coding	chr11:5689586 plus strand	915704
TRIM22	NM_006074	NP_006065	Coding	chr11:5689586 plus strand	915704

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TRIM29	NM_012101	NP_036233	Coding	chr11:120138155 minus strand	915705
TRIM3	NM_001248006	NP_001234935	Coding	chr11:6474459 minus strand	915706
TRIM3	NM_001248007	NP_001234936	Coding	chr11:6473984 minus strand	915707
TRIM3	NM_006458	NP_006449	Coding	chr11:6473984 minus strand	915707
TRIM3	NM_033278	NP_150594	Coding	chr11:6473984 minus strand	915707
TRIM34	NM_001003827	NP_001003827	Coding	chr11:5619943 plus strand	915708
TRIM34	NM_021616	NP_067629	Coding	chr11:5624976 plus strand	915709
TRIM34	NM_130390	NP_569074	Coding	chr11:5632254 plus strand	915710
TRIM44	NM_017583	NP_060053	Coding	chr11:35662751 plus strand	915711
TRIM48	NM_024114	NP_077019	Coding	chr11:55262181 plus strand	915712
TRIM49	NM_020358	NP_065091	Coding	chr11:89808575 minus strand	915713
TRIM49B	NM_001206626	NP_001193555	Coding	chr11:49031599 plus strand	915714
TRIM49C	NM_001195234	NP_001182163	Coding	chr11:90031105 plus strand	915715
TRIM49D1	NM_001206627	NP_001193556	Coding	chr11:89917710 minus strand	915716
TRIM49D1	NM_001206627	NP_001193556	Coding	chr11:89926761 plus strand	915717
TRIM49D2P	NM_001105522	NP_001098992	Coding	chr11:89920408 minus strand	915718
TRIM49D2P	NM_001105522	NP_001098992	Coding	chr11:89924063 plus strand	915719
TRIM5	NM_033034	NP_149023	Coding	chr11:5685109 minus strand	915720
TRIM5	NM_033092	NP_149083	Coding	chr11:5685109 minus strand	915720
TRIM5	NM_033093	NP_149084	Coding	chr11:5685109 minus strand	915720
TRIM51	NM_032681	NP_116070	Coding	chr11:55883296 plus strand	915721
TRIM6	NM_001003818	NP_001003818	Coding	chr11:5596634 plus strand	915722
TRIM6	NM_001198644	NP_001185573	Coding	chr11:5596634 plus strand	915722
TRIM6	NM_001198645	NP_001185574	Coding	chr11:5596634 plus strand	915722
TRIM6	NM_058166	NP_477514	Coding	chr11:5596100 plus strand	915723
TRIM64	NM_001136486	NP_001129958	Coding	chr11:89968503 plus strand	915724
TRIM64B	NM_001164397	NP_001157869	Coding	chr11:89876017 minus strand	915725
TRIM64C	NM_001206631	NP_001193560	Coding	chr11:49059112 minus strand	915726
TRIM66	NM_014818	NP_055633	Coding	chr11:8658836 minus strand	915727
TRIM68	NM_018073	NP_060543	Coding	chr11:4608259 minus	915728

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				strand	
TRIM6-TRIM34	NM_001003819	NP_001003819	Coding	chr11:5596634 plus strand	915729
TRIM77	NM_001146162	NP_001139634	Coding	chr11:89710298 plus strand	915730
TRIM77	NM_001271942	NP_001258871	Coding	chr11:89710298 plus strand	915730
TRMT112	NM_001286082	NP_001273011	Coding	chr11:64318084 minus strand	915731
TRMT112	NM_001286084	NP_001273013	Coding	chr11:64318084 minus strand	915731
TRMT112	NM_016404	NP_057488	Coding	chr11:64318084 minus strand	915731
TRPC6	NM_004621	NP_004612	Coding	chr11:101583928 minus strand	915732
TRPM5	NM_014555	NP_055370	Coding	chr11:2423045 minus strand	915733
TRPT1	NM_001033678	NP_001028850	Coding	chr11:64226254 minus strand	915734
TRPT1	NM_001160389	NP_001153861	Coding	chr11:64226254 minus strand	915734
TRPT1	NM_001160390	NP_001153862	Coding	chr11:64226254 minus strand	915734
TRPT1	NM_001160392	NP_001153864	Coding	chr11:64226254 minus strand	915734
TRPT1	NM_001160393	NP_001153865	Coding	chr11:64225869 minus strand	915735
TRPT1	NM_031472	NP_113660	Coding	chr11:64226254 minus strand	915734
TSG101	NM_006292	NP_006283	Coding	chr11:18526956 minus strand	915736
TSGA10IP	NM_152762	NP_689975	Coding	chr11:65945643 plus strand	915737
TSKU	NM_001258210	NP_001245139	Coding	chr11:76782312 plus strand	915738
TSKU	NM_015516	NP_056331	Coding	chr11:76783240 plus strand	915739
TSPAN18	NM_130783	NP_570139	Coding	chr11:44764425 plus strand	915740
TSPAN32	NM_139022	NP_620591	Coding	chr11:2302012 plus strand	915741
TSPAN4	NM_001025234	NP_001020405	Coding	chr11:844080 plus strand	915742
TSPAN4	NM_001025235	NP_001020406	Coding	chr11:842940 plus strand	915743
TSPAN4	NM_001025236	NP_001020407	Coding	chr11:842940 plus strand	915743
TSPAN4	NM_001025237	NP_001020408	Coding	chr11:844445 plus strand	915744
TSPAN4	NM_001025238	NP_001020409	Coding	chr11:842823 plus strand	915745
TSPAN4	NM_001025239	NP_001020410	Coding	chr11:842823 plus strand	915745
TSPAN4	NM_003271	NP_003262	Coding	chr11:842823 plus strand	915745
TSSC4	NM_001297658	NP_001284587	Coding	chr11:2400487 plus strand	915746
TSSC4	NM_001297659	NP_001284588	Coding	chr11:2401017 plus strand	915747
TSSC4	NM_001297660	NP_001284589	Coding	chr11:2400487 plus strand	915746
TSSC4	NM_001297661	NP_001284590	Coding	chr11:2400487 plus strand	915746

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TSSC4	NM_005706	NP_005697	Coding	chr11:2400487 plus strand	915746
TTC12	NM_017868	NP_060338	Coding	chr11:113314528 plus strand	915748
TTC17	NM_018259	NP_060729	Coding	chr11:43358884 plus strand	915749
TTC36	NM_001080441	NP_001073910	Coding	chr11:118527494 plus strand	915750
TTC9C	NM_173810	NP_776171	Coding	chr11:62728479 plus strand	915751
TUB	NM_003320	NP_003311	Coding	chr11:8038632 plus strand	915752
TUB	NM_177972	NP_813977	Coding	chr11:8081361 plus strand	915753
TUT1	NM_022830	NP_073741	Coding	chr11:62591637 minus strand	915754
TYR	NM_000372	NP_000363	Coding	chr11:89177871 plus strand	915755
UBASH3B	NM_032873	NP_116262	Coding	chr11:122655689 plus strand	915756
UBE2L6	NM_004223	NP_004214	Coding	chr11:57567707 minus strand	915757
UBE2L6	NM_198183	NP_937826	Coding	chr11:57568330 minus strand	915758
UBE4A	NM_001204077	NP_001191006	Coding	chr11:118359580 plus strand	915759
UBE4A	NM_004788	NP_004779	Coding	chr11:118359580 plus strand	915759
UBQLN3	NM_017481	NP_059509	Coding	chr11:5509923 minus strand	915760
UBQLNL	NM_145053	NP_659490	Coding	chr11:5516726 minus strand	915761
UBTFL1	NM_001143975	NP_001137447	Coding	chr11:90085949 plus strand	915762
UBXN1	NM_001286077	NP_001273006	Coding	chr11:62679117 minus strand	915763
UBXN1	NM_001286078	NP_001273007	Coding	chr11:62679117 minus strand	915763
UBXN1	NM_015853	NP_056937	Coding	chr11:62679117 minus strand	915763
UCP2	NM_003355	NP_003346	Coding	chr11:73982844 minus strand	915764
UCP3	NM_003356	NP_003347	Coding	chr11:74009237 minus strand	915765
UCP3	NM_022803	NP_073714	Coding	chr11:74009237 minus strand	915765
UEVLD	NM_001040697	NP_001035787	Coding	chr11:18588746 minus strand	915766
UEVLD	NM_001261382	NP_001248311	Coding	chr11:18588746 minus strand	915766
UEVLD	NM_001261383	NP_001248312	Coding	chr11:18588746 minus strand	915766
UEVLD	NM_001261384	NP_001248313	Coding	chr11:18588746 minus strand	915766
UEVLD	NM_001261385	NP_001248314	Coding	chr11:18579518 minus strand	915767

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UEVLD	NM_001261386	NP_001248315	Coding	chr11:18588746 minus strand	915766
UEVLD	NM_001297771	NP_001284700	Coding	chr11:18588746 minus strand	915766
UEVLD	NM_018314	NP_060784	Coding	chr11:18588746 minus strand	915766
UNC93B1	NM_030930	NP_112192	Coding	chr11:68004125 minus strand	915768
UPK2	NM_006760	NP_006751	Coding	chr11:118956297 plus strand	915769
UQCC3	NM_001085372	NP_001078841	Coding	chr11:62671653 plus strand	915770
USH1C	NM_001297764	NP_001284693	Coding	chr11:17544416 minus strand	915771
USH1C	NM_005709	NP_005700	Coding	chr11:17544416 minus strand	915771
USH1C	NM_153676	NP_710142	Coding	chr11:17544416 minus strand	915771
USP2	NM_001243759	NP_001230688	Coding	chr11:119381726 minus strand	915772
USP2	NM_004205	NP_004196	Coding	chr11:119381726 minus strand	915772
USP2	NM_171997	NP_741994	Coding	chr11:119364182 minus strand	915773
USP28	NM_001301029	NP_001287958	Coding	chr11:113875570 minus strand	915774
USP28	NM_020886	NP_065937	Coding	chr11:113875570 minus strand	915774
USP35	NM_020798	NP_065849	Coding	chr11:78188811 plus strand	915775
USP47	NM_001282659	NP_001269588	Coding	chr11:11841422 plus strand	915776
USP47	NM_017944	NP_060414	Coding	chr11:11841422 plus strand	915776
UVRAG	NM_003369	NP_003360	Coding	chr11:75815166 plus strand	915777
VEGFB	NM_001243733	NP_001230662	Coding	chr11:64234583 plus strand	915778
VEGFB	NM_003377	NP_003368	Coding	chr11:64234583 plus strand	915778
VPS11	NM_001290185	NP_001277114	Coding	chr11:119067751 plus strand	915779
VPS11	NM_021729	NP_068375	Coding	chr11:119067751 plus strand	915779
VPS26B	NM_052875	NP_443107	Coding	chr11:134224666 plus strand	915780
VPS37C	NM_017966	NP_060436	Coding	chr11:61161444 minus strand	915781
VPS51	NM_013265	NP_037397	Coding	chr11:65096114 plus strand	915782
VSIG2	NM_014312	NP_055127	Coding	chr11:124752213 minus strand	915783
VSTM5	NM_001144871	NP_001138343	Coding	chr11:93850502 minus strand	915784

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VWA5A	NM_001130142	NP_001123614	Coding	chr11:124115403 plus strand	915785
VWA5A	NM_014622	NP_055437	Coding	chr11:124115403 plus strand	915785
VWA5A	NM_198315	NP_938057	Coding	chr11:124115403 plus strand	915785
VWCE	NM_152718	NP_689931	Coding	chr11:61295316 minus strand	915786
WDR74	NM_018093	NP_060563	Coding	chr11:62840156 minus strand	915787
WEE1	NM_001143976	NP_001137448	Coding	chr11:9574686 plus strand	915788
WEE1	NM_003390	NP_003381	Coding	chr11:9573680 plus strand	915789
WNT11	NM_004626	NP_004617	Coding	chr11:76206530 minus strand	915790
WT1	NM_000378	NP_000369	Coding	chr11:32435535 minus strand	915791
WT1	NM_001198551	NP_001185480	Coding	chr11:32430817 minus strand	915792
WT1	NM_001198552	NP_001185481	Coding	chr11:32430817 minus strand	915792
WT1	NM_024424	NP_077742	Coding	chr11:32435535 minus strand	915791
WT1	NM_024426	NP_077744	Coding	chr11:32435535 minus strand	915791
XRRA1	NM_001270380	NP_001257309	Coding	chr11:74949187 minus strand	915793
XRRA1	NM_001270381	NP_001257310	Coding	chr11:74949187 minus strand	915793
XRRA1	NM_182969	NP_892014	Coding	chr11:74949187 minus strand	915793
YAP1	NM_001130145	NP_001123617	Coding	chr11:102110460 plus strand	915794
YAP1	NM_001195044	NP_001181973	Coding	chr11:102110460 plus strand	915794
YAP1	NM_001195045	NP_001181974	Coding	chr11:102112439 plus strand	915795
YAP1	NM_001282097	NP_001269026	Coding	chr11:102110460 plus strand	915794
YAP1	NM_001282098	NP_001269027	Coding	chr11:102110460 plus strand	915794
YAP1	NM_001282099	NP_001269028	Coding	chr11:102110460 plus strand	915794
YAP1	NM_001282100	NP_001269029	Coding	chr11:102110460 plus strand	915794
YAP1	NM_001282101	NP_001269030	Coding	chr11:102110460 plus strand	915794
YAP1	NM_006106	NP_006097	Coding	chr11:102110460 plus strand	915794
YIF1A	NM_001300861	NP_001287790	Coding	chr11:66289167 minus strand	915796
YIF1A	NM_020470	NP_065203	Coding	chr11:66289167 minus strand	915796
YPEL4	NM_145008	NP_659445	Coding	chr11:57649944 minus strand	915797

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ZBED5	NM_001143667	NP_001137139	Coding	chr11:10858073 minus strand	915798
ZBED5	NM_021211	NP_067034	Coding	chr11:10858073 minus strand	915798
ZBTB16	NM_001018011	NP_001018011	Coding	chr11:114060565 plus strand	915799
ZBTB16	NM_006006	NP_005997	Coding	chr11:114059708 plus strand	915800
ZBTB3	NM_024784	NP_079060	Coding	chr11:62754184 minus strand	915801
ZBTB44	NM_001301098	NP_001288027	Coding	chr11:130314712 minus strand	915802
ZBTB44	NM_001301099	NP_001288028	Coding	chr11:130314712 minus strand	915802
ZBTB44	NM_014155	NP_054874	Coding	chr11:130314712 minus strand	915802
ZC3H12C	NM_033390	NP_203748	Coding	chr11:110093360 plus strand	915803
ZDHHC13	NM_001001483	NP_001001483	Coding	chr11:19117144 plus strand	915804
ZDHHC13	NM_019028	NP_061901	Coding	chr11:19117144 plus strand	915804
ZDHHC24	NM_207340	NP_997223	Coding	chr11:66546200 minus strand	915805
ZDHHC5	NM_015457	NP_056272	Coding	chr11:57668001 plus strand	915806
ZFP91	NM_001197051	NP_001183980	Coding	chr11:58579113 plus strand	915807
ZFP91	NM_053023	NP_444251	Coding	chr11:58579113 plus strand	915807
ZFPL1	NM_006782	NP_006773	Coding	chr11:65084221 plus strand	915808
ZNF143	NM_001282656	NP_001269585	Coding	chr11:9460964 plus strand	915809
ZNF143	NM_001282657	NP_001269586	Coding	chr11:9460964 plus strand	915809
ZNF143	NM_003442	NP_003433	Coding	chr11:9460964 plus strand	915809
ZNF195	NM_001130519	NP_001123991	Coding	chr11:3379222 minus strand	915810
ZNF195	NM_001130520	NP_001123992	Coding	chr11:3379222 minus strand	915810
ZNF195	NM_001242841	NP_001229770	Coding	chr11:3379222 minus strand	915810
ZNF195	NM_001242842	NP_001229771	Coding	chr11:3379222 minus strand	915810
ZNF195	NM_001242843	NP_001229772	Coding	chr11:3379222 minus strand	915810
ZNF195	NM_001256823	NP_001243752	Coding	chr11:3379222 minus strand	915810
ZNF195	NM_001256824	NP_001243753	Coding	chr11:3379222 minus strand	915810
ZNF195	NM_001256825	NP_001243754	Coding	chr11:3379222 minus strand	915810
ZNF195	NM_007152	NP_009083	Coding	chr11:3379222 minus strand	915810

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ZNF202	NM_001301779	NP_001288708	Coding	chr11:123741683 minus strand	915811
ZNF202	NM_001301780	NP_001288709	Coding	chr11:123741683 minus strand	915811
ZNF202	NM_001301819	NP_001288748	Coding	chr11:123730985 minus strand	915812
ZNF202	NM_003455	NP_003446	Coding	chr11:123741683 minus strand	915811
ZNF214	NM_013249	NP_037381	Coding	chr11:7020355 minus strand	915813
ZNF215	NM_013250	NP_037382	Coding	chr11:6926422 plus strand	915814
ZNF408	NM_001184751	NP_001171680	Coding	chr11:46701093 plus strand	915815
ZNF408	NM_024741	NP_079017	Coding	chr11:46700766 plus strand	915816
ZNF705E	NM_001278713	NP_001265642	Coding	chr11:71821547 minus strand	915817
ZNHIT2	NM_014205	NP_055020	Coding	chr11:65117738 minus strand	915818
ZP1	NM_207341	NP_997224	Coding	chr11:60867541 plus strand	915819
ZPR1	NM_003904	NP_003895	Coding	chr11:116788023 minus strand	915820
ZW10	NM_004724	NP_004715	Coding	chr11:113773763 minus strand	915821
A2M	NM_000014	NP_000005	Coding	chr12:9115962 minus strand	915822
A2ML1	NM_001282424	NP_001269353	Coding	chr12:8845003 plus strand	915823
A2ML1	NM_144670	NP_653271	Coding	chr12:8822553 plus strand	915824
AAAS	NM_001173466	NP_001166937	Coding	chr12:53321628 minus strand	915825
AAAS	NM_015665	NP_056480	Coding	chr12:53321628 minus strand	915825
AACS	NM_023928	NP_076417	Coding	chr12:125065378 plus strand	915826
ABCB9	NM_001243013	NP_001229942	Coding	chr12:122966509 minus strand	915827
ABCB9	NM_001243014	NP_001229943	Coding	chr12:122966509 minus strand	915827
ABCB9	NM_019624	NP_062570	Coding	chr12:122966509 minus strand	915827
ABCB9	NM_019625	NP_062571	Coding	chr12:122966509 minus strand	915827
ABCB9	NM_203444	NP_982269	Coding	chr12:122966509 minus strand	915827
ABCC9	NM_005691	NP_005682	Coding	chr12:21936694 minus strand	915828
ABCC9	NM_020297	NP_064693	Coding	chr12:21936694 minus strand	915828
ABCD2	NM_005164	NP_005155	Coding	chr12:39620041 minus strand	915829
ACACB	NM_001093	NP_001084	Coding	chr12:109139396 plus strand	915830

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ACAD10	NM_001136538	NP_001130010	Coding	chr12:111686052 plus strand	915831
ACAD10	NM_025247	NP_079523	Coding	chr12:111686052 plus strand	915831
ACADS	NM_000017	NP_000008	Coding	chr12:120725737 plus strand	915832
ACADS	NM_001302554	NP_001289483	Coding	chr12:120725737 plus strand	915832
ACRBP	NM_032489	NP_115878	Coding	chr12:6647414 minus strand	915833
ACSM4	NM_001080454	NP_001073923	Coding	chr12:7304331 plus strand	915834
ACSS3	NM_024560	NP_078836	Coding	chr12:81078029 plus strand	915835
ACTR6	NM_022496	NP_071941	Coding	chr12:100200086 plus strand	915836
ACVR1B	NM_004302	NP_004293	Coding	chr12:51951666 plus strand	915837
ACVR1B	NM_020327	NP_064732	Coding	chr12:51953379 plus strand	915838
ACVR1B	NM_020328	NP_064733	Coding	chr12:51951666 plus strand	915837
ACVRL1	NM_000020	NP_000011	Coding	chr12:51907417 plus strand	915839
ACVRL1	NM_001077401	NP_001070869	Coding	chr12:51912328 plus strand	915840
ADAMTS20	NM_025003	NP_079279	Coding	chr12:43551921 minus strand	915841
ADCY6	NM_015270	NP_056085	Coding	chr12:48784094 minus strand	915842
ADCY6	NM_020983	NP_066193	Coding	chr12:48789037 minus strand	915843
ADIPOR2	NM_024551	NP_078827	Coding	chr12:1691080 plus strand	915844
AEBP2	NM_001114176	NP_001107648	Coding	chr12:19439673 plus strand	915845
AEBP2	NM_001267043	NP_001253972	Coding	chr12:19440580 plus strand	915846
AEBP2	NM_153207	NP_694939	Coding	chr12:19439673 plus strand	915845
AGAP2	NM_001122772	NP_001116244	Coding	chr12:57738246 minus strand	915847
AGAP2	NM_014770	NP_055585	Coding	chr12:57742161 minus strand	915848
AICDA	NM_020661	NP_065712	Coding	chr12:8612846 minus strand	915849
AKAP3	NM_001278309	NP_001265238	Coding	chr12:4649047 minus strand	915850
AKAP3	NM_006422	NP_006413	Coding	chr12:4649047 minus strand	915850
ALDH1L2	NM_001034173	NP_001029345	Coding	chr12:105084563 minus strand	915851
ALDH2	NM_000690	NP_000681	Coding	chr12:111766886 plus strand	915852
ALDH2	NM_001204889	NP_001191818	Coding	chr12:111766886 plus strand	915852

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ALG10	NM_032834	NP_116223	Coding	chr12:34022280 plus strand	915853
ALG10B	NM_001013620	NP_001013642	Coding	chr12:38316754 plus strand	915854
ALKBH2	NM_001001655	NP_001001655	Coding	chr12:109093488 minus strand	915855
ALKBH2	NM_001145374	NP_001138846	Coding	chr12:109093488 minus strand	915855
ALKBH2	NM_001145375	NP_001138847	Coding	chr12:109093488 minus strand	915855
ALKBH2	NM_001205179	NP_001192108	Coding	chr12:109093488 minus strand	915855
ALKBH2	NM_001205180	NP_001192109	Coding	chr12:109093488 minus strand	915855
ALX1	NM_006982	NP_008913	Coding	chr12:85280257 plus strand	915856
AMDHD1	NM_152435	NP_689648	Coding	chr12:95943292 plus strand	915857
AMHR2	NM_001164690	NP_001158162	Coding	chr12:53423854 plus strand	915858
AMHR2	NM_001164691	NP_001158163	Coding	chr12:53423854 plus strand	915858
AMHR2	NM_020547	NP_065434	Coding	chr12:53423854 plus strand	915858
AMIGO2	NM_001143668	NP_001137140	Coding	chr12:47079951 minus strand	915859
AMIGO2	NM_181847	NP_862830	Coding	chr12:47079951 minus strand	915859
AMN1	NM_001113402	NP_001106873	Coding	chr12:31729174 minus strand	915860
AMN1	NM_001278411	NP_001265340	Coding	chr12:31729174 minus strand	915860
AMN1	NM_001278412	NP_001265341	Coding	chr12:31729174 minus strand	915860
ANAPC5	NM_001137559	NP_001131031	Coding	chr12:121354209 minus strand	915861
ANAPC5	NM_016237	NP_057321	Coding	chr12:121352462 minus strand	915862
ANAPC7	NM_001137664	NP_001131136	Coding	chr12:110403730 minus strand	915863
ANAPC7	NM_016238	NP_057322	Coding	chr12:110403730 minus strand	915863
ANHX	NM_001191054	NP_001177983	Coding	chr12:133235836 minus strand	915864
ANKLE2	NM_015114	NP_055929	Coding	chr12:132761888 minus strand	915865
ANKRD13A	NM_033121	NP_149112	Coding	chr12:109999429 plus strand	915866
ANKRD33	NM_001130015	NP_001123487	Coding	chr12:51888008 plus strand	915867
ANKRD33	NM_182608	NP_872414	Coding	chr12:51888008 plus strand	915867
ANKRD52	NM_173595	NP_775866	Coding	chr12:56258359 minus strand	915868

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ANKS1B	NM_001204065	NP_001190994	Coding	chr12:98894896 minus strand	915869
ANKS1B	NM_001204066	NP_001190995	Coding	chr12:99154867 minus strand	915870
ANKS1B	NM_001204067	NP_001190996	Coding	chr12:99155090 minus strand	915871
ANKS1B	NM_001204068	NP_001190997	Coding	chr12:99154799 minus strand	915872
ANKS1B	NM_001204069	NP_001190998	Coding	chr12:99154799 minus strand	915872
ANKS1B	NM_001204070	NP_001190999	Coding	chr12:99154799 minus strand	915872
ANKS1B	NM_001204079	NP_001191008	Coding	chr12:98894896 minus strand	915869
ANKS1B	NM_001204080	NP_001191009	Coding	chr12:98894896 minus strand	915869
ANKS1B	NM_001204081	NP_001191010	Coding	chr12:98894896 minus strand	915869
ANKS1B	NM_020140	NP_064525	Coding	chr12:99154799 minus strand	915872
ANKS1B	NM_152788	NP_690001	Coding	chr12:99984654 minus strand	915873
ANKS1B	NM_181670	NP_858056	Coding	chr12:99154799 minus strand	915872
ANO2	NM_001278596	NP_001265525	Coding	chr12:5945259 minus strand	915874
ANO2	NM_001278597	NP_001265526	Coding	chr12:5946232 minus strand	915875
ANO4	NM_001286615	NP_001273544	Coding	chr12:100794595 plus strand	915876
ANO4	NM_001286616	NP_001273545	Coding	chr12:100901645 plus strand	915877
ANO4	NM_178826	NP_849148	Coding	chr12:100794595 plus strand	915876
ANO6	NM_001025356	NP_001020527	Coding	chr12:45215986 plus strand	915878
ANO6	NM_001142678	NP_001136150	Coding	chr12:45292682 plus strand	915879
ANO6	NM_001142679	NP_001136151	Coding	chr12:45215986 plus strand	915878
ANO6	NM_001204803	NP_001191732	Coding	chr12:45215986 plus strand	915878
ANP32D	NM_012404	NP_036536	Coding	chr12:48472664 plus strand	915880
APAF1	NM_001160	NP_001151	Coding	chr12:98645299 plus strand	915881
APAF1	NM_013229	NP_037361	Coding	chr12:98645299 plus strand	915881
APAF1	NM_181861	NP_863651	Coding	chr12:98645299 plus strand	915881
APAF1	NM_181868	NP_863658	Coding	chr12:98645299 plus strand	915881
APAF1	NM_181869	NP_863659	Coding	chr12:98645299 plus strand	915881

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APOBEC1	NM_001644	NP_001635	Coding	chr12:7665906 minus strand	915882
APOF	NM_001638	NP_001629	Coding	chr12:56362799 minus strand	915883
APOLD1	NM_001130415	NP_001123887	Coding	chr12:12725916 plus strand	915884
APOLD1	NM_030817	NP_110444	Coding	chr12:12785606 plus strand	915885
APPL2	NM_001251904	NP_001238833	Coding	chr12:105236230 minus strand	915886
APPL2	NM_001251905	NP_001238834	Coding	chr12:105233405 minus strand	915887
APPL2	NM_018171	NP_060641	Coding	chr12:105236230 minus strand	915886
AQP2	NM_000486	NP_000477	Coding	chr12:49950740 plus strand	915888
AQP5	NM_001651	NP_001642	Coding	chr12:49961495 plus strand	915889
AQP6	NM_001652	NP_001643	Coding	chr12:49972836 plus strand	915890
ARF3	NM_001659	NP_001650	Coding	chr12:48957469 minus strand	915891
ARHGAP9	NM_001080156	NP_001073625	Coding	chr12:57477945 minus strand	915892
ARHGAP9	NM_001080157	NP_001073626	Coding	chr12:57479641 minus strand	915893
ARHGAP9	NM_032496	NP_115885	Coding	chr12:57479850 minus strand	915894
ARHGDIB	NM_001175	NP_001166	Coding	chr12:14961628 minus strand	915895
ARHGEF25	NM_001111270	NP_001104740	Coding	chr12:57610179 plus strand	915896
ARHGEF25	NM_182947	NP_891992	Coding	chr12:57611434 plus strand	915897
ARID2	NM_152641	NP_689854	Coding	chr12:45729836 plus strand	915898
ARL1	NM_001177	NP_001168	Coding	chr12:101407820 minus strand	915899
ARL1	NM_001301068	NP_001287997	Coding	chr12:101407820 minus strand	915899
ARL6IP4	NM_001002251	NP_001002251	Coding	chr12:122980059 plus strand	915900
ARL6IP4	NM_001002252	NP_001002252	Coding	chr12:122980059 plus strand	915900
ARL6IP4	NM_001278378	NP_001265307	Coding	chr12:122980059 plus strand	915900
ARL6IP4	NM_001278379	NP_001265308	Coding	chr12:122980059 plus strand	915900
ARL6IP4	NM_001278380	NP_001265309	Coding	chr12:122980059 plus strand	915900
ARL6IP4	NM_016638	NP_057722	Coding	chr12:122980059 plus strand	915900
ARL6IP4	NM_018694	NP_061164	Coding	chr12:122980059 plus strand	915900

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ARNTL2	NM_001248002	NP_001234931	Coding	chr12:27332853 plus strand	915901
ARNTL2	NM_001248003	NP_001234932	Coding	chr12:27332853 plus strand	915901
ARNTL2	NM_001248004	NP_001234933	Coding	chr12:27332853 plus strand	915901
ARNTL2	NM_001248005	NP_001234934	Coding	chr12:27332853 plus strand	915901
ARNTL2	NM_020183	NP_064568	Coding	chr12:27332853 plus strand	915901
ARPC3	NM_001278556	NP_001265485	Coding	chr12:110450411 minus strand	915902
ARPC3	NM_001287222	NP_001274151	Coding	chr12:110450411 minus strand	915902
ART4	NM_021071	NP_066549	Coding	chr12:14843479 minus strand	915903
ASB8	NM_024095	NP_077000	Coding	chr12:48157594 minus strand	915904
ASCL1	NM_004316	NP_004307	Coding	chr12:102957673 plus strand	915905
ASCL4	NM_203436	NP_982260	Coding	chr12:107774384 plus strand	915906
ASIC1	NM_001095	NP_001086	Coding	chr12:50057636 plus strand	915907
ASIC1	NM_001256830	NP_001243759	Coding	chr12:50073584 plus strand	915908
ASIC1	NM_020039	NP_064423	Coding	chr12:50057636 plus strand	915907
ASUN	NM_018164	NP_060634	Coding	chr12:26938321 minus strand	915909
ATF1	NM_005171	NP_005162	Coding	chr12:50764005 plus strand	915910
ATF7	NM_001130060	NP_001123532	Coding	chr12:53626415 minus strand	915911
ATF7	NM_001206682	NP_001193611	Coding	chr12:53626415 minus strand	915911
ATF7	NM_001206683	NP_001193612	Coding	chr12:53625996 minus strand	915912
ATF7	NM_006856	NP_006847	Coding	chr12:53626415 minus strand	915911
ATF7IP	NM_001286514	NP_001273443	Coding	chr12:14365631 plus strand	915913
ATF7IP	NM_001286515	NP_001273444	Coding	chr12:14365631 plus strand	915913
ATF7IP	NM_018179	NP_060649	Coding	chr12:14365631 plus strand	915913
ATF7IP	NM_181352	NP_851997	Coding	chr12:14385063 plus strand	915914
ATG101	NM_001098673	NP_001092143	Coding	chr12:52069973 plus strand	915915
ATG101	NM_021934	NP_068753	Coding	chr12:52069973 plus strand	915915
ATN1	NM_001007026	NP_001007027	Coding	chr12:6924462 plus strand	915916
ATN1	NM_001940	NP_001931	Coding	chr12:6928316 plus strand	915917

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ATP2A2	NM_001681	NP_001672	Coding	chr12:110281226 plus strand	915918
ATP2A2	NM_170665	NP_733765	Coding	chr12:110281226 plus strand	915918
ATP2B1	NM_001001323	NP_001001323	Coding	chr12:89656067 minus strand	915919
ATP2B1	NM_001682	NP_001673	Coding	chr12:89656067 minus strand	915919
ATP5B	NM_001686	NP_001677	Coding	chr12:56646068 minus strand	915920
ATP5G2	NM_001002031	NP_001002031	Coding	chr12:53676728 minus strand	915921
ATP5G2	NM_005176	NP_005167	Coding	chr12:53676325 minus strand	915922
ATP6V0A2	NM_012463	NP_036595	Coding	chr12:123712317 plus strand	915923
ATXN2	NM_002973	NP_002964	Coding	chr12:111599676 minus strand	915924
ATXN7L3B	NM_001136262	NP_001129734	Coding	chr12:74537770 plus strand	915925
AVIL	NM_006576	NP_006567	Coding	chr12:57816069 minus strand	915926
AVPR1A	NM_000706	NP_000697	Coding	chr12:63152810 minus strand	915927
B3GNT4	NM_030765	NP_110392	Coding	chr12:122203680 plus strand	915928
B4GALNT1	NM_001276468	NP_001263397	Coding	chr12:57632681 minus strand	915929
B4GALNT1	NM_001276469	NP_001263398	Coding	chr12:57633239 minus strand	915930
B4GALNT1	NM_001478	NP_001469	Coding	chr12:57633239 minus strand	915930
B4GALNT3	NM_173593	NP_775864	Coding	chr12:460376 plus strand	915931
BAZ2A	NM_001300905	NP_001287834	Coding	chr12:56630331 minus strand	915932
BAZ2A	NM_013449	NP_038477	Coding	chr12:56636379 minus strand	915933
BBS10	NM_024685	NP_078961	Coding	chr12:76348442 minus strand	915934
BCAT1	NM_001178091	NP_001171562	Coding	chr12:24949459 minus strand	915935
BCAT1	NM_001178092	NP_001171563	Coding	chr12:24949459 minus strand	915935
BCAT1	NM_001178093	NP_001171564	Coding	chr12:24903075 minus strand	915936
BCAT1	NM_001178094	NP_001171565	Coding	chr12:24902388 minus strand	915937
BCAT1	NM_005504	NP_005495	Coding	chr12:24949459 minus strand	915935
BCDIN3D	NM_181708	NP_859059	Coding	chr12:49843129 minus strand	915938
BCL2L14	NM_030766	NP_110393	Coding	chr12:12071467 plus strand	915939
BCL2L14	NM_138722	NP_620048	Coding	chr12:12071467 plus	915939

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				strand	
BCL2L14	NM_138723	NP_620049	Coding	chr12:12070943 plus strand	915940
BCL7A	NM_001024808	NP_001019979	Coding	chr12:122021954 plus strand	915941
BCL7A	NM_020993	NP_066273	Coding	chr12:122021954 plus strand	915941
BEST3	NM_001282613	NP_001269542	Coding	chr12:69699416 minus strand	915942
BEST3	NM_001282614	NP_001269543	Coding	chr12:69699416 minus strand	915942
BEST3	NM_001282615	NP_001269544	Coding	chr12:69699416 minus strand	915942
BEST3	NM_001282616	NP_001269545	Coding	chr12:69699416 minus strand	915942
BEST3	NM_032735	NP_116124	Coding	chr12:69699416 minus strand	915942
BEST3	NM_152439	NP_689652	Coding	chr12:69689277 minus strand	915943
BHLHE41	NM_030762	NP_110389	Coding	chr12:26125070 minus strand	915944
BICD1	NM_001003398	NP_001003398	Coding	chr12:32107250 plus strand	915945
BICD1	NM_001714	NP_001705	Coding	chr12:32107250 plus strand	915945
BIN2	NM_001290007	NP_001276936	Coding	chr12:51324680 minus strand	915946
BIN2	NM_001290008	NP_001276937	Coding	chr12:51324198 minus strand	915947
BIN2	NM_001290009	NP_001276938	Coding	chr12:51324198 minus strand	915947
BIN2	NM_016293	NP_057377	Coding	chr12:51324198 minus strand	915947
BLOC1S1	NM_001487	NP_001478	Coding	chr12:55716033 plus strand	915948
BRAP	NM_006768	NP_006759	Coding	chr12:111685996 minus strand	915949
BRI3BP	NM_080626	NP_542193	Coding	chr12:124993647 plus strand	915950
BTBD11	NM_001017523	NP_001017523	Coding	chr12:107580856 plus strand	915951
BTBD11	NM_001018072	NP_001018082	Coding	chr12:107318419 plus strand	915952
BTG1	NM_001731	NP_001722	Coding	chr12:92145897 minus strand	915953
C12orf10	NM_021640	NP_067653	Coding	chr12:53299685 plus strand	915954
C12orf29	NM_001009894	NP_001009894	Coding	chr12:88035490 plus strand	915955
C12orf4	NM_020374	NP_065107	Coding	chr12:4538471 minus strand	915956
C12orf40	NM_001031748	NP_001026918	Coding	chr12:39626169 plus strand	915957
C12orf42	NM_001099336	NP_001092806	Coding	chr12:103496010 minus	915958

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				strand	
C12orf42	NM_001278419	NP_001265348	Coding	chr12:103496010 minus strand	915958
C12orf42	NM_001278420	NP_001265349	Coding	chr12:103496010 minus strand	915958
C12orf42	NM_198521	NP_940923	Coding	chr12:103496010 minus strand	915958
C12orf43	NM_001286191	NP_001273120	Coding	chr12:121016502 minus strand	915959
C12orf43	NM_001286192	NP_001273121	Coding	chr12:121016502 minus strand	915959
C12orf43	NM_001286195	NP_001273124	Coding	chr12:121016502 minus strand	915959
C12orf43	NM_001286196	NP_001273125	Coding	chr12:121016502 minus strand	915959
C12orf43	NM_001286197	NP_001273126	Coding	chr12:121016502 minus strand	915959
C12orf43	NM_001286198	NP_001273127	Coding	chr12:121016502 minus strand	915959
C12orf43	NM_022895	NP_075046	Coding	chr12:121016502 minus strand	915959
C12orf45	NM_152318	NP_689531	Coding	chr12:104986319 plus strand	915960
C12orf49	NM_024738	NP_079014	Coding	chr12:116738038 minus strand	915961
C12orf5	NM_020375	NP_065108	Coding	chr12:4321192 plus strand	915962
C12orf50	NM_152589	NP_689802	Coding	chr12:88029399 minus strand	915963
C12orf54	NM_152319	NP_689532	Coding	chr12:48482502 plus strand	915964
C12orf56	NM_001099676	NP_001093146	Coding	chr12:64390565 minus strand	915965
C12orf56	NM_001170633	NP_001164104	Coding	chr12:64390565 minus strand	915965
C12orf57	NM_001301834	NP_001288763	Coding	chr12:6943501 plus strand	915966
C12orf57	NM_001301836	NP_001288765	Coding	chr12:6943437 plus strand	915967
C12orf57	NM_001301837	NP_001288766	Coding	chr12:6943816 plus strand	915968
C12orf57	NM_001301838	NP_001288767	Coding	chr12:6943816 plus strand	915968
C12orf57	NM_138425	NP_612434	Coding	chr12:6943816 plus strand	915968
C12orf60	NM_175874	NP_787070	Coding	chr12:14803571 plus strand	915969
C12orf65	NM_001143905	NP_001137377	Coding	chr12:123233743 plus strand	915970
C12orf65	NM_001194995	NP_001181924	Coding	chr12:123233480 plus strand	915971
C12orf65	NM_152269	NP_689482	Coding	chr12:123233296 plus strand	915972
C12orf66	NM_001300940	NP_001287869	Coding	chr12:64222296 minus strand	915973
C12orf66	NM_001300941	NP_001287870	Coding	chr12:64222296 minus strand	915973
C12orf66	NM_152440	NP_689653	Coding	chr12:64222296 minus	915973

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				strand	
C12orf71	NM_001080406	NP_001073875	Coding	chr12:27082522 minus strand	915974
C12orf73	NM_001135570	NP_001129042	Coding	chr12:103957215 minus strand	915975
C12orf74	NM_001037671	NP_001032760	Coding	chr12:92702842 plus strand	915976
C12orf74	NM_001178097	NP_001171568	Coding	chr12:92702842 plus strand	915976
C12orf75	NM_001145199	NP_001138671	Coding	chr12:105330635 plus strand	915977
C12orf76	NM_207435	NP_997318	Coding	chr12:110067695 minus strand	915978
C12orf77	NM_001101339	NP_001094809	Coding	chr12:24997439 minus strand	915979
C12orf79	NM_001256373	NP_001243302	Coding	chr12:92142671 minus strand	915980
C12orf79	NM_001256374	NP_001243303	Coding	chr12:92142671 minus strand	915980
C12orf79	NM_001256375	NP_001243304	Coding	chr12:92142671 minus strand	915980
C12orf80	NM_001242696	NP_001229625	Coding	chr12:52210855 minus strand	915981
C1QL4	NM_001008223	NP_001008224	Coding	chr12:49337188 minus strand	915982
C1R	NM_001733	NP_001724	Coding	chr12:7092447 minus strand	915983
C1RL	NM_001297640	NP_001284569	Coding	chr12:7109278 minus strand	915984
C1RL	NM_001297642	NP_001284571	Coding	chr12:7109278 minus strand	915984
C1RL	NM_001297643	NP_001284572	Coding	chr12:7109278 minus strand	915984
C1RL	NM_016546	NP_057630	Coding	chr12:7109278 minus strand	915984
C1S	NM_001734	NP_001725	Coding	chr12:7060675 plus strand	915985
C1S	NM_201442	NP_958850	Coding	chr12:7060675 plus strand	915985
C2CD5	NM_001286173	NP_001273102	Coding	chr12:22544546 minus strand	915986
C2CD5	NM_001286174	NP_001273103	Coding	chr12:22544546 minus strand	915986
C2CD5	NM_001286175	NP_001273104	Coding	chr12:22544546 minus strand	915986
C2CD5	NM_001286176	NP_001273105	Coding	chr12:22544546 minus strand	915986
C2CD5	NM_001286177	NP_001273106	Coding	chr12:22544546 minus strand	915986
C2CD5	NM_014802	NP_055617	Coding	chr12:22544546 minus strand	915986
C3AR1	NM_004054	NP_004045	Coding	chr12:8066359 minus strand	915987
CABP1	NM_001033677	NP_001028849	Coding	chr12:120640618 plus strand	915988

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CABP1	NM_004276	NP_004267	Coding	chr12:120650506 plus strand	915989
CABP1	NM_031205	NP_112482	Coding	chr12:120650506 plus strand	915989
CACNA1C	NM_000719	NP_000710	Coding	chr12:2053249 plus strand	915990
CACNA1C	NM_001129827	NP_001123299	Coding	chr12:2053249 plus strand	915990
CACNA1C	NM_001129829	NP_001123301	Coding	chr12:2053249 plus strand	915990
CACNA1C	NM_001129830	NP_001123302	Coding	chr12:2053284 plus strand	915991
CACNA1C	NM_001129831	NP_001123303	Coding	chr12:2053249 plus strand	915990
CACNA1C	NM_001129832	NP_001123304	Coding	chr12:2053249 plus strand	915990
CACNA1C	NM_001129833	NP_001123305	Coding	chr12:2053249 plus strand	915990
CACNA1C	NM_001129834	NP_001123306	Coding	chr12:2053249 plus strand	915990
CACNA1C	NM_001129835	NP_001123307	Coding	chr12:2053249 plus strand	915990
CACNA1C	NM_001129836	NP_001123308	Coding	chr12:2053249 plus strand	915990
CACNA1C	NM_001129837	NP_001123309	Coding	chr12:2053249 plus strand	915990
CACNA1C	NM_001129838	NP_001123310	Coding	chr12:2053249 plus strand	915990
CACNA1C	NM_001129839	NP_001123311	Coding	chr12:2053249 plus strand	915990
CACNA1C	NM_001129840	NP_001123312	Coding	chr12:2053249 plus strand	915990
CACNA1C	NM_001129841	NP_001123313	Coding	chr12:2053249 plus strand	915990
CACNA1C	NM_001129842	NP_001123314	Coding	chr12:2053249 plus strand	915990
CACNA1C	NM_001129843	NP_001123315	Coding	chr12:2053249 plus strand	915990
CACNA1C	NM_001129844	NP_001123316	Coding	chr12:2053249 plus strand	915990
CACNA1C	NM_001129846	NP_001123318	Coding	chr12:2053249 plus strand	915990
CACNA1C	NM_001167623	NP_001161095	Coding	chr12:2053249 plus strand	915990
CACNA1C	NM_001167624	NP_001161096	Coding	chr12:2053284 plus strand	915991
CACNA1C	NM_001167625	NP_001161097	Coding	chr12:2053249 plus strand	915990
CACNA1C	NM_199460	NP_955630	Coding	chr12:2053284 plus strand	915991
CACNA2D4	NM_172364	NP_758952	Coding	chr12:1918704 minus strand	915992
CACNB3	NM_000725	NP_000716	Coding	chr12:48818470 plus strand	915993
CACNB3	NM_001206915	NP_001193844	Coding	chr12:48818470 plus strand	915993
CACNB3	NM_001206916	NP_001193845	Coding	chr12:48815573 plus strand	915994
CACNB3	NM_001206917	NP_001193846	Coding	chr12:48814431 plus strand	915995
CALCOCO1	NM_001143682	NP_001137154	Coding	chr12:53727523 minus strand	915996
CALCOCO1	NM_020898	NP_065949	Coding	chr12:53727523 minus strand	915996
CAMKK2	NM_001270485	NP_001257414	Coding	chr12:121296753 minus strand	915997
CAMKK2	NM_001270486	NP_001257415	Coding	chr12:121274585 minus strand	915998
CAMKK2	NM_006549	NP_006540	Coding	chr12:121298308 minus strand	915999

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CAMKK2	NM_153499	NP_705719	Coding	chr12:121298308 minus strand	915999
CAMKK2	NM_153500	NP_705720	Coding	chr12:121298308 minus strand	915999
CAMKK2	NM_172214	NP_757363	Coding	chr12:121298308 minus strand	915999
CAMKK2	NM_172215	NP_757364	Coding	chr12:121298308 minus strand	915999
CAMKK2	NM_172216	NP_757365	Coding	chr12:121298308 minus strand	915999
CAMKK2	NM_172226	NP_757380	Coding	chr12:121296753 minus strand	915997
CAND1	NM_018448	NP_060918	Coding	chr12:67269280 plus strand	916000
CAPRIN2	NM_001002259	NP_001002259	Coding	chr12:30754514 minus strand	916001
CAPRIN2	NM_001206856	NP_001193785	Coding	chr12:30754514 minus strand	916001
CAPRIN2	NM_023925	NP_076414	Coding	chr12:30754514 minus strand	916001
CAPRIN2	NM_032156	NP_115532	Coding	chr12:30754514 minus strand	916001
CAPS2	NM_001286547	NP_001273476	Coding	chr12:75330056 minus strand	916002
CAPS2	NM_001286548	NP_001273477	Coding	chr12:75390922 minus strand	916003
CAPS2	NM_001286549	NP_001273478	Coding	chr12:75390922 minus strand	916003
CAPS2	NM_032606	NP_115995	Coding	chr12:75330056 minus strand	916002
CAPZA3	NM_033328	NP_201585	Coding	chr12:18738110 plus strand	916004
CASC1	NM_001082972	NP_001076441	Coding	chr12:25195160 minus strand	916005
CASC1	NM_001082973	NP_001076442	Coding	chr12:25195160 minus strand	916005
CASC1	NM_001204101	NP_001191030	Coding	chr12:25195160 minus strand	916005
CASC1	NM_001204102	NP_001191031	Coding	chr12:25195160 minus strand	916005
CASC1	NM_018272	NP_060742	Coding	chr12:25195160 minus strand	916005
CBX5	NM_001127321	NP_001120793	Coding	chr12:54259586 minus strand	916006
CBX5	NM_001127322	NP_001120794	Coding	chr12:54259545 minus strand	916007
CBX5	NM_012117	NP_036249	Coding	chr12:54280131 minus strand	916008
CCDC184	NM_001013635	NP_001013657	Coding	chr12:48183582 plus strand	916009
CCDC38	NM_182496	NP_872302	Coding	chr12:95942650 minus strand	916010
CCDC42B	NM_001144872	NP_001138344	Coding	chr12:113149857 plus strand	916011

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CCDC53	NM_001301107	NP_001288036	Coding	chr12:102062124 minus strand	916012
CCDC53	NM_016053	NP_057137	Coding	chr12:102062124 minus strand	916012
CCDC59	NM_014167	NP_054886	Coding	chr12:82358420 minus strand	916013
CCDC60	NM_178499	NP_848594	Coding	chr12:119334711 plus strand	916014
CCDC62	NM_201435	NP_958843	Coding	chr12:122774508 plus strand	916015
CCDC63	NM_001286243	NP_001273172	Coding	chr12:110846959 plus strand	916016
CCDC63	NM_001286244	NP_001273173	Coding	chr12:110846959 plus strand	916016
CCDC63	NM_152591	NP_689804	Coding	chr12:110846959 plus strand	916016
CCDC64	NM_207311	NP_997194	Coding	chr12:119989843 plus strand	916017
CCDC65	NM_001286957	NP_001273886	Coding	chr12:48904109 plus strand	916018
CCDC65	NM_033124	NP_149115	Coding	chr12:48904109 plus strand	916018
CCDC77	NM_001130146	NP_001123618	Coding	chr12:401574 plus strand	916019
CCDC77	NM_001130147	NP_001123619	Coding	chr12:389349 plus strand	916020
CCDC77	NM_001130148	NP_001123620	Coding	chr12:389349 plus strand	916020
CCDC77	NM_032358	NP_115734	Coding	chr12:401574 plus strand	916019
CCDC91	NM_018318	NP_060788	Coding	chr12:28257199 plus strand	916021
CCDC92	NM_025140	NP_079416	Coding	chr12:123972616 minus strand	916022
CCER1	NM_152638	NP_689851	Coding	chr12:90955176 minus strand	916023
CCND2	NM_001759	NP_001750	Coding	chr12:4273735 plus strand	916024
CCNT1	NM_001240	NP_001231	Coding	chr12:48716998 minus strand	916025
CCNT1	NM_001277842	NP_001264771	Coding	chr12:48716998 minus strand	916025
CCT2	NM_001198842	NP_001185771	Coding	chr12:69585681 plus strand	916026
CCT2	NM_006431	NP_006422	Coding	chr12:69585427 plus strand	916027
CD163	NM_004244	NP_004235	Coding	chr12:7503818 minus strand	916028
CD163	NM_203416	NP_981961	Coding	chr12:7503818 minus strand	916028
CD163L1	NM_001297650	NP_001284579	Coding	chr12:7444185 minus strand	916029
CD163L1	NM_174941	NP_777601	Coding	chr12:7444185 minus strand	916029
CD27	NM_001242	NP_001233	Coding	chr12:6444884 plus strand	916030
CD4	NM_000616	NP_000607	Coding	chr12:6789471 plus strand	916031
CD4	NM_001195014	NP_001181943	Coding	chr12:6789471 plus strand	916031

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CD4	NM_001195015	NP_001181944	Coding	chr12:6789471 plus strand	916031
CD4	NM_001195016	NP_001181945	Coding	chr12:6789471 plus strand	916031
CD4	NM_001195017	NP_001181946	Coding	chr12:6789471 plus strand	916031
CD63	NM_001257389	NP_001244318	Coding	chr12:55729673 minus strand	916032
CD63	NM_001257390	NP_001244319	Coding	chr12:55728650 minus strand	916033
CD63	NM_001257391	NP_001244320	Coding	chr12:55728482 minus strand	916034
CD63	NM_001257392	NP_001244321	Coding	chr12:55728352 minus strand	916035
CD63	NM_001257400	NP_001244329	Coding	chr12:55727900 minus strand	916036
CD63	NM_001257401	NP_001244330	Coding	chr12:55727788 minus strand	916037
CD63	NM_001267698	NP_001254627	Coding	chr12:55728977 minus strand	916038
CD63	NM_001780	NP_001771	Coding	chr12:55729138 minus strand	916039
CD69	NM_001781	NP_001772	Coding	chr12:9760901 minus strand	916040
CD9	NM_001769	NP_001760	Coding	chr12:6200315 plus strand	916041
CDCA3	NM_001297602	NP_001284531	Coding	chr12:6852066 minus strand	916042
CDCA3	NM_001297603	NP_001284532	Coding	chr12:6852066 minus strand	916042
CDCA3	NM_001297604	NP_001284533	Coding	chr12:6852066 minus strand	916042
CDCA3	NM_031299	NP_112589	Coding	chr12:6852066 minus strand	916042
CDK17	NM_001170464	NP_001163935	Coding	chr12:96400588 minus strand	916043
CDK17	NM_002595	NP_002586	Coding	chr12:96400588 minus strand	916043
CDK2	NM_001290230	NP_001277159	Coding	chr12:55966768 plus strand	916044
CDK2	NM_001798	NP_001789	Coding	chr12:55966768 plus strand	916044
CDK2	NM_052827	NP_439892	Coding	chr12:55966768 plus strand	916044
CDK2AP1	NM_001270433	NP_001257362	Coding	chr12:123270234 minus strand	916045
CDK2AP1	NM_001270434	NP_001257363	Coding	chr12:123268254 minus strand	916046
CDK2AP1	NM_004642	NP_004633	Coding	chr12:123272140 minus strand	916047
CDK4	NM_000075	NP_000066	Coding	chr12:57752447 minus strand	916048
CDKN1B	NM_004064	NP_004055	Coding	chr12:12717269 plus strand	916049
CELA1	NM_001971	NP_001962	Coding	chr12:51346679 minus strand	916050
CEP290	NM_025114	NP_079390	Coding	chr12:88142216 minus	916051

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				strand	
CEP83	NM_001042399	NP_001035858	Coding	chr12:94459988 minus strand	916052
CEP83	NM_016122	NP_057206	Coding	chr12:94459988 minus strand	916052
CERS5	NM_001281731	NP_001268660	Coding	chr12:50167533 minus strand	916053
CERS5	NM_147190	NP_671723	Coding	chr12:50167533 minus strand	916053
CHD4	NM_001273	NP_001264	Coding	chr12:6607433 minus strand	916054
CHD4	NM_001297553	NP_001284482	Coding	chr12:6606451 minus strand	916055
CHFR	NM_001161344	NP_001154816	Coding	chr12:132887618 minus strand	916056
CHFR	NM_001161345	NP_001154817	Coding	chr12:132887618 minus strand	916056
CHFR	NM_001161346	NP_001154818	Coding	chr12:132887618 minus strand	916056
CHFR	NM_001161347	NP_001154819	Coding	chr12:132887618 minus strand	916056
CHFR	NM_018223	NP_060693	Coding	chr12:132887618 minus strand	916056
CHPT1	NM_020244	NP_064629	Coding	chr12:101697638 plus strand	916057
CHST11	NM_001173982	NP_001167453	Coding	chr12:104456913 plus strand	916058
CHST11	NM_018413	NP_060883	Coding	chr12:104456913 plus strand	916058
CIT	NM_001206999	NP_001193928	Coding	chr12:119877291 minus strand	916059
CIT	NM_007174	NP_009105	Coding	chr12:119877291 minus strand	916059
CKAP4	NM_006825	NP_006816	Coding	chr12:106247935 minus strand	916060
CLEC12A	NM_001207010	NP_001193939	Coding	chr12:9951315 plus strand	916061
CLEC12A	NM_001300730	NP_001287659	Coding	chr12:9971408 plus strand	916062
CLEC12A	NM_138337	NP_612210	Coding	chr12:9971408 plus strand	916062
CLEC12A	NM_201623	NP_963917	Coding	chr12:9971408 plus strand	916062
CLEC12B	NM_001129998	NP_001123470	Coding	chr12:10010631 plus strand	916063
CLEC12B	NM_205852	NP_995324	Coding	chr12:10010631 plus strand	916063
CLEC1A	NM_001297748	NP_001284677	Coding	chr12:10099065 minus strand	916064
CLEC1A	NM_001297749	NP_001284678	Coding	chr12:10099065 minus strand	916064
CLEC1A	NM_001297750	NP_001284679	Coding	chr12:10099065 minus strand	916064
CLEC1A	NM_001297751	NP_001284680	Coding	chr12:10099065 minus strand	916064
CLEC1A	NM_016511	NP_057595	Coding	chr12:10099065 minus strand	916064

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CLEC1B	NM_001099431	NP_001092901	Coding	chr12:9999300 minus strand	916065
CLEC1B	NM_016509	NP_057593	Coding	chr12:9999300 minus strand	916065
CLEC2A	NM_001130711	NP_001124183	Coding	chr12:9932381 minus strand	916066
CLEC2A	NM_207375	NP_997258	Coding	chr12:9932381 minus strand	916066
CLEC2B	NM_005127	NP_005118	Coding	chr12:9869859 minus strand	916067
CLEC2D	NM_001004419	NP_001004419	Coding	chr12:9669707 plus strand	916068
CLEC2D	NM_001197317	NP_001184246	Coding	chr12:9669707 plus strand	916068
CLEC2D	NM_001197318	NP_001184247	Coding	chr12:9669707 plus strand	916068
CLEC2D	NM_001197319	NP_001184248	Coding	chr12:9669707 plus strand	916068
CLEC2D	NM_013269	NP_037401	Coding	chr12:9669707 plus strand	916068
CLEC4A	NM_016184	NP_057268	Coding	chr12:8123631 plus strand	916069
CLEC4A	NM_194447	NP_919429	Coding	chr12:8123631 plus strand	916069
CLEC4A	NM_194448	NP_919430	Coding	chr12:8123631 plus strand	916069
CLEC4A	NM_194450	NP_919432	Coding	chr12:8123631 plus strand	916069
CLEC4C	NM_130441	NP_569708	Coding	chr12:7749473 minus strand	916070
CLEC4C	NM_203503	NP_987099	Coding	chr12:7749473 minus strand	916070
CLEC4D	NM_080387	NP_525126	Coding	chr12:8513539 plus strand	916071
CLEC4E	NM_014358	NP_055173	Coding	chr12:8540962 minus strand	916072
CLEC6A	NM_001007033	NP_001007034	Coding	chr12:8455994 plus strand	916073
CLEC7A	NM_022570	NP_072092	Coding	chr12:10130269 minus strand	916074
CLEC7A	NM_197947	NP_922938	Coding	chr12:10130269 minus strand	916074
CLEC7A	NM_197948	NP_922939	Coding	chr12:10130269 minus strand	916074
CLEC7A	NM_197949	NP_922940	Coding	chr12:10130269 minus strand	916074
CLEC7A	NM_197950	NP_922941	Coding	chr12:10130269 minus strand	916074
CLEC7A	NM_197954	NP_922945	Coding	chr12:10130269 minus strand	916074
CLEC9A	NM_207345	NP_997228	Coding	chr12:10030676 plus strand	916075
CLECL1	NM_001253750	NP_001240679	Coding	chr12:9733299 minus strand	916076
CLECL1	NM_001267701	NP_001254630	Coding	chr12:9733299 minus strand	916076
CLECL1	NM_172004	NP_742001	Coding	chr12:9733299 minus strand	916076
CLIP1	NM_001247997	NP_001234926	Coding	chr12:122422569 minus strand	916077
CLIP1	NM_002956	NP_002947	Coding	chr12:122422569 minus strand	916077

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CLIP1	NM_198240	NP_937883	Coding	chr12:122422569 minus strand	916077
CLLU1	NM_001025233	NP_001020404	Coding	chr12:92423958 plus strand	916078
CLLU1OS	NM_001025232	NP_001020403	Coding	chr12:92428148 minus strand	916079
CLSTN3	NM_014718	NP_055533	Coding	chr12:7130370 plus strand	916080
CMAS	NM_018686	NP_061156	Coding	chr12:22046175 plus strand	916081
CMKLR1	NM_001142343	NP_001135815	Coding	chr12:108339317 minus strand	916082
CMKLR1	NM_001142344	NP_001135816	Coding	chr12:108339317 minus strand	916082
CMKLR1	NM_001142345	NP_001135817	Coding	chr12:108320662 minus strand	916083
CMKLR1	NM_004072	NP_004063	Coding	chr12:108339317 minus strand	916082
CNOT2	NM_001199302	NP_001186231	Coding	chr12:70243029 plus strand	916084
CNOT2	NM_001199303	NP_001186232	Coding	chr12:70243713 plus strand	916085
CNOT2	NM_014515	NP_055330	Coding	chr12:70242993 plus strand	916086
CNPY2	NM_001190991	NP_001177920	Coding	chr12:56316344 minus strand	916087
CNPY2	NM_014255	NP_055070	Coding	chr12:56316344 minus strand	916087
CNTN1	NM_001256063	NP_001242992	Coding	chr12:40692441 plus strand	916088
CNTN1	NM_001256064	NP_001242993	Coding	chr12:40827937 plus strand	916089
CNTN1	NM_001843	NP_001834	Coding	chr12:40692441 plus strand	916088
CNTN1	NM_175038	NP_778203	Coding	chr12:40908356 plus strand	916090
COL2A1	NM_001844	NP_001835	Coding	chr12:48004502 minus strand	916091
COL2A1	NM_033150	NP_149162	Coding	chr12:48004502 minus strand	916091
COPS7A	NM_001164093	NP_001157565	Coding	chr12:6724282 plus strand	916092
COPS7A	NM_001164094	NP_001157566	Coding	chr12:6723983 plus strand	916093
COPS7A	NM_001164095	NP_001157567	Coding	chr12:6723983 plus strand	916093
COPS7A	NM_016319	NP_057403	Coding	chr12:6723983 plus strand	916093
COPZ1	NM_001271734	NP_001258663	Coding	chr12:54325089 plus strand	916094
COPZ1	NM_001271735	NP_001258664	Coding	chr12:54325089 plus strand	916094
COPZ1	NM_001271736	NP_001258665	Coding	chr12:54325089 plus strand	916094
COPZ1	NM_016057	NP_057141	Coding	chr12:54325089 plus strand	916094
COQ10A	NM_001099337	NP_001092807	Coding	chr12:56267282 plus strand	916095

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COQ10A	NM_144576	NP_653177	Coding	chr12:56266857 plus strand	916096
COQ5	NM_032314	NP_115690	Coding	chr12:120529161 minus strand	916097
CORO1C	NM_001105237	NP_001098707	Coding	chr12:108702998 minus strand	916098
CORO1C	NM_001276471	NP_001263400	Coding	chr12:108730843 minus strand	916099
CORO1C	NM_014325	NP_055140	Coding	chr12:108731550 minus strand	916100
COX14	NM_001257133	NP_001244062	Coding	chr12:50111980 plus strand	916101
COX14	NM_001257134	NP_001244063	Coding	chr12:50111980 plus strand	916101
COX14	NM_032901	NP_116290	Coding	chr12:50111980 plus strand	916101
COX6A1	NM_004373	NP_004364	Coding	chr12:120438089 plus strand	916102
CPM	NM_001005502	NP_001005502	Coding	chr12:68933199 minus strand	916103
CPM	NM_001874	NP_001865	Coding	chr12:68963240 minus strand	916104
CPM	NM_198320	NP_938079	Coding	chr12:68933199 minus strand	916103
CPNE8	NM_153634	NP_705898	Coding	chr12:38905618 minus strand	916105
CPSF6	NM_001300947	NP_001287876	Coding	chr12:69239536 plus strand	916106
CPSF6	NM_007007	NP_008938	Coding	chr12:69239536 plus strand	916106
CRACR2A	NM_001144958	NP_001138430	Coding	chr12:3753200 minus strand	916107
CRACR2A	NM_032680	NP_116069	Coding	chr12:3753200 minus strand	916107
CRADD	NM_003805	NP_003796	Coding	chr12:93677374 plus strand	916108
CREBL2	NM_001310	NP_001301	Coding	chr12:12611832 plus strand	916109
CRY1	NM_004075	NP_004066	Coding	chr12:107093857 minus strand	916110
CS	NM_004077	NP_004068	Coding	chr12:56300391 minus strand	916111
CSAD	NM_001244705	NP_001231634	Coding	chr12:53180909 minus strand	916112
CSAD	NM_001244706	NP_001231635	Coding	chr12:53164493 minus strand	916113
CSAD	NM_015989	NP_057073	Coding	chr12:53180646 minus strand	916114
CSRNP2	NM_030809	NP_110436	Coding	chr12:51083671 minus strand	916115
CSRP2	NM_001300965	NP_001287894	Coding	chr12:76879040 minus strand	916116
CSRP2	NM_001321	NP_001312	Coding	chr12:76879040 minus strand	916116

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CTDSP2	NM_005730	NP_005721	Coding	chr12:57846964 minus strand	916117
CUX2	NM_015267	NP_056082	Coding	chr12:111034023 plus strand	916118
CYP27B1	NM_000785	NP_000776	Coding	chr12:57767193 minus strand	916119
DAO	NM_001917	NP_001908	Coding	chr12:108880080 plus strand	916120
DAZAP2	NM_001136264	NP_001129736	Coding	chr12:51238723 plus strand	916121
DAZAP2	NM_001136266	NP_001129738	Coding	chr12:51238723 plus strand	916121
DAZAP2	NM_001136267	NP_001129739	Coding	chr12:51238723 plus strand	916121
DAZAP2	NM_001136268	NP_001129740	Coding	chr12:51238723 plus strand	916121
DAZAP2	NM_001136269	NP_001129741	Coding	chr12:51238723 plus strand	916121
DAZAP2	NM_014764	NP_055579	Coding	chr12:51238723 plus strand	916121
DBX2	NM_001004329	NP_001004329	Coding	chr12:45051099 minus strand	916122
DCD	NM_001300854	NP_001287783	Coding	chr12:54648493 minus strand	916123
DCD	NM_053283	NP_444513	Coding	chr12:54648493 minus strand	916123
DCN	NM_001920	NP_001911	Coding	chr12:91183029 minus strand	916124
DCN	NM_133503	NP_598010	Coding	chr12:91179582 minus strand	916125
DCN	NM_133504	NP_598011	Coding	chr12:91178552 minus strand	916126
DCN	NM_133505	NP_598012	Coding	chr12:91178552 minus strand	916126
DCN	NM_133506	NP_598013	Coding	chr12:91178552 minus strand	916126
DCN	NM_133507	NP_598014	Coding	chr12:91178552 minus strand	916126
DCP1B	NM_152640	NP_689853	Coding	chr12:2004511 minus strand	916127
DCTN2	NM_001261412	NP_001248341	Coding	chr12:57547331 minus strand	916128
DCTN2	NM_001261413	NP_001248342	Coding	chr12:57547331 minus strand	916128
DCTN2	NM_006400	NP_006391	Coding	chr12:57547331 minus strand	916128
DDIT3	NM_001195053	NP_001181982	Coding	chr12:57520517 minus strand	916129
DDIT3	NM_001195054	NP_001181983	Coding	chr12:57520517 minus strand	916129
DDIT3	NM_001195055	NP_001181984	Coding	chr12:57520517 minus strand	916129
DDIT3	NM_001195056	NP_001181985	Coding	chr12:57520517 minus strand	916129

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DDIT3	NM_001195057	NP_001181986	Coding	chr12:57520517 minus strand	916129
DDIT3	NM_004083	NP_004074	Coding	chr12:57520517 minus strand	916129
DDN	NM_015086	NP_055901	Coding	chr12:48999305 minus strand	916130
DDX11	NM_001257144	NP_001244073	Coding	chr12:31073844 plus strand	916131
DDX11	NM_001257145	NP_001244074	Coding	chr12:31073844 plus strand	916131
DDX11	NM_004399	NP_004390	Coding	chr12:31073844 plus strand	916131
DDX11	NM_030653	NP_085911	Coding	chr12:31073844 plus strand	916131
DDX11	NM_152438	NP_689651	Coding	chr12:31073844 plus strand	916131
DDX23	NM_004818	NP_004809	Coding	chr12:48852174 minus strand	916132
DDX47	NM_016355	NP_057439	Coding	chr12:12813345 plus strand	916133
DDX47	NM_201224	NP_957518	Coding	chr12:12813345 plus strand	916133
DDX51	NM_175066	NP_778236	Coding	chr12:132144335 minus strand	916134
DDX54	NM_001111322	NP_001104792	Coding	chr12:113185479 minus strand	916135
DDX54	NM_024072	NP_076977	Coding	chr12:113185479 minus strand	916135
DDX55	NM_020936	NP_065987	Coding	chr12:123602124 plus strand	916136
DENND5B	NM_144973	NP_659410	Coding	chr12:31591018 minus strand	916137
DENR	NM_003677	NP_003668	Coding	chr12:122752823 plus strand	916138
DEPDC4	NM_152317	NP_689530	Coding	chr12:100267079 minus strand	916139
DERA	NM_001300779	NP_001287708	Coding	chr12:15911171 plus strand	916140
DERA	NM_015954	NP_057038	Coding	chr12:15911171 plus strand	916140
DGKA	NM_001345	NP_001336	Coding	chr12:55931161 plus strand	916141
DGKA	NM_201444	NP_958852	Coding	chr12:55932027 plus strand	916142
DGKA	NM_201445	NP_958853	Coding	chr12:55932027 plus strand	916142
DGKA	NM_201554	NP_963848	Coding	chr12:55932027 plus strand	916142
DHH	NM_021044	NP_066382	Coding	chr12:49094819 minus strand	916143
DHX37	NM_032656	NP_116045	Coding	chr12:124989121 minus strand	916144
DIABLO	NM_001278302	NP_001265231	Coding	chr12:122226568 minus strand	916145

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DIABLO	NM_001278303	NP_001265232	Coding	chr12:122226568 minus strand	916145
DIABLO	NM_001278304	NP_001265233	Coding	chr12:122225850 minus strand	916146
DIABLO	NM_001278342	NP_001265271	Coding	chr12:122226568 minus strand	916145
DIABLO	NM_019887	NP_063940	Coding	chr12:122227534 minus strand	916147
DIABLO	NM_138930	NP_620308	Coding	chr12:122226568 minus strand	916145
DIP2B	NM_173602	NP_775873	Coding	chr12:50504984 plus strand	916148
DNAH10	NM_207437	NP_997320	Coding	chr12:123762494 plus strand	916149
DNAJC14	NM_032364	NP_115740	Coding	chr12:55829636 minus strand	916150
DNAJC22	NM_024902	NP_079178	Coding	chr12:49347257 plus strand	916151
DNM1L	NM_001278463	NP_001265392	Coding	chr12:32679199 plus strand	916152
DNM1L	NM_001278464	NP_001265393	Coding	chr12:32679199 plus strand	916152
DNM1L	NM_001278465	NP_001265394	Coding	chr12:32679199 plus strand	916152
DNM1L	NM_001278466	NP_001265395	Coding	chr12:32679199 plus strand	916152
DNM1L	NM_005690	NP_005681	Coding	chr12:32679199 plus strand	916152
DNM1L	NM_012062	NP_036192	Coding	chr12:32679199 plus strand	916152
DNM1L	NM_012063	NP_036193	Coding	chr12:32679199 plus strand	916152
DPPA3	NM_199286	NP_954980	Coding	chr12:7711492 plus strand	916153
DPY19L2	NM_173812	NP_776173	Coding	chr12:63668574 minus strand	916154
DRAM1	NM_018370	NP_060840	Coding	chr12:101877326 plus strand	916155
DTX1	NM_004416	NP_004407	Coding	chr12:113057856 plus strand	916156
DTX3	NM_001286245	NP_001273174	Coding	chr12:57604621 plus strand	916157
DTX3	NM_001286246	NP_001273175	Coding	chr12:57604621 plus strand	916157
DTX3	NM_178502	NP_848597	Coding	chr12:57604621 plus strand	916157
DUSP16	NM_030640	NP_085143	Coding	chr12:12562514 minus strand	916158
DUSP6	NM_001946	NP_001937	Coding	chr12:89352859 minus strand	916159
DUSP6	NM_022652	NP_073143	Coding	chr12:89352859 minus strand	916159
DYNLL1	NM_001037494	NP_001032583	Coding	chr12:120469856 plus strand	916160
DYNLL1	NM_001037495	NP_001032584	Coding	chr12:120496055 plus	916161

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				strand	
DYNLL1	NM_003746	NP_003737	Coding	chr12:120496055 plus strand	916161
DYRK2	NM_003583	NP_003574	Coding	chr12:67648731 plus strand	916162
DYRK2	NM_006482	NP_006473	Coding	chr12:67648731 plus strand	916162
DYRK4	NM_001282285	NP_001269214	Coding	chr12:4604862 plus strand	916163
DYRK4	NM_001282286	NP_001269215	Coding	chr12:4604862 plus strand	916163
DYRK4	NM_003845	NP_003836	Coding	chr12:4590071 plus strand	916164
E2F7	NM_203394	NP_976328	Coding	chr12:77065580 minus strand	916165
EEA1	NM_003566	NP_003557	Coding	chr12:92929331 minus strand	916166
EID3	NM_001008394	NP_001008395	Coding	chr12:104303731 plus strand	916167
EIF2B1	NM_001414	NP_001405	Coding	chr12:123633776 minus strand	916168
EIF4B	NM_001300821	NP_001287750	Coding	chr12:53006257 plus strand	916169
EIF4B	NM_001417	NP_001408	Coding	chr12:53006257 plus strand	916169
ELK3	NM_005230	NP_005221	Coding	chr12:96194428 plus strand	916170
EMG1	NM_006331	NP_006322	Coding	chr12:6970780 plus strand	916171
EMP1	NM_001423	NP_001414	Coding	chr12:13196667 plus strand	916172
ENDOU	NM_001172439	NP_001165910	Coding	chr12:47725572 minus strand	916173
ENDOU	NM_001172440	NP_001165911	Coding	chr12:47725572 minus strand	916173
ENDOU	NM_006025	NP_006016	Coding	chr12:47725572 minus strand	916173
ENO2	NM_001975	NP_001966	Coding	chr12:6914449 plus strand	916174
EP400	NM_015409	NP_056224	Coding	chr12:131949919 plus strand	916175
EPS8	NM_004447	NP_004438	Coding	chr12:15789576 minus strand	916176
EPYC	NM_004950	NP_004941	Coding	chr12:91005026 minus strand	916177
ERBB3	NM_001005915	NP_001005915	Coding	chr12:56080107 plus strand	916178
ERBB3	NM_001982	NP_001973	Coding	chr12:56080024 plus strand	916179
ERC1	NM_001301248	NP_001288177	Coding	chr12:1027747 plus strand	916180
ERC1	NM_178039	NP_829883	Coding	chr12:991207 plus strand	916181
ERC1	NM_178040	NP_829884	Coding	chr12:991207 plus strand	916181
ERGIC2	NM_016570	NP_057654	Coding	chr12:29381210 minus strand	916182
ERP27	NM_001300784	NP_001287713	Coding	chr12:14929125 minus strand	916183

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ERP27	NM_152321	NP_689534	Coding	chr12:14938549 minus strand	916184
ERP29	NM_001034025	NP_001029197	Coding	chr12:112013347 plus strand	916185
ERP29	NM_006817	NP_006808	Coding	chr12:112013347 plus strand	916185
ESPL1	NM_012291	NP_036423	Coding	chr12:53268298 plus strand	916186
ESYT1	NM_001184796	NP_001171725	Coding	chr12:56128201 plus strand	916187
ESYT1	NM_015292	NP_056107	Coding	chr12:56128201 plus strand	916187
ETNK1	NM_001039481	NP_001034570	Coding	chr12:22625141 plus strand	916188
ETNK1	NM_018638	NP_061108	Coding	chr12:22625141 plus strand	916188
ETV6	NM_001987	NP_001978	Coding	chr12:11649853 plus strand	916189
FAIM2	NM_012306	NP_036438	Coding	chr12:49903977 minus strand	916190
FAM101A	NM_181709	NP_859060	Coding	chr12:124289163 plus strand	916191
FAM109A	NM_001177996	NP_001171467	Coding	chr12:111369121 minus strand	916192
FAM109A	NM_001177997	NP_001171468	Coding	chr12:111369121 minus strand	916192
FAM109A	NM_144671	NP_653272	Coding	chr12:111369121 minus strand	916192
FAM186A	NM_001145475	NP_001138947	Coding	chr12:50396622 minus strand	916193
FAM186B	NM_032130	NP_115506	Coding	chr12:49605650 minus strand	916194
FAM19A2	NM_178539	NP_848634	Coding	chr12:62192839 minus strand	916195
FAM216A	NM_013300	NP_037432	Coding	chr12:110468426 plus strand	916196
FAM222A	NM_032829	NP_116218	Coding	chr12:109714381 plus strand	916197
FAM60A	NM_001135811	NP_001129283	Coding	chr12:31326187 minus strand	916198
FAM60A	NM_001135812	NP_001129284	Coding	chr12:31326225 minus strand	916199
FAM60A	NM_021238	NP_067061	Coding	chr12:31326187 minus strand	916198
FAM71C	NM_153364	NP_699195	Coding	chr12:99647749 plus strand	916200
FAM90A1	NM_018088	NP_060558	Coding	chr12:8227618 minus strand	916201
FAR2	NM_001271783	NP_001258712	Coding	chr12:29149002 plus strand	916202
FAR2	NM_001271784	NP_001258713	Coding	chr12:29223622 plus strand	916203
FAR2	NM_018099	NP_060569	Coding	chr12:29223622 plus strand	916203

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FBRSL1	NM_001142641	NP_001136113	Coding	chr12:132490570 plus strand	916204
FBXL14	NM_152441	NP_689654	Coding	chr12:1594165 minus strand	916205
FBXO21	NM_015002	NP_055817	Coding	chr12:117190495 minus strand	916206
FBXO21	NM_033624	NP_296373	Coding	chr12:117190495 minus strand	916206
FBXW8	NM_012174	NP_036306	Coding	chr12:116910955 plus strand	916207
FBXW8	NM_153348	NP_699179	Coding	chr12:116910955 plus strand	916207
FGD4	NM_139241	NP_640334	Coding	chr12:32502106 plus strand	916208
FGD6	NM_018351	NP_060821	Coding	chr12:95217464 minus strand	916209
FGF23	NM_020638	NP_065689	Coding	chr12:4379728 minus strand	916210
FGF6	NM_020996	NP_066276	Coding	chr12:4445614 minus strand	916211
FGFR1OP2	NM_001171887	NP_001165358	Coding	chr12:26938371 plus strand	916212
FGFR1OP2	NM_001171888	NP_001165359	Coding	chr12:26938371 plus strand	916212
FGFR1OP2	NM_015633	NP_056448	Coding	chr12:26938371 plus strand	916212
FICD	NM_007076	NP_009007	Coding	chr12:108515273 plus strand	916213
FIGNL2	NM_001013690	NP_001013712	Coding	chr12:51831917 minus strand	916214
FKBP11	NM_001143781	NP_001137253	Coding	chr12:48924881 minus strand	916215
FKBP11	NM_001143782	NP_001137254	Coding	chr12:48925547 minus strand	916216
FKBP11	NM_016594	NP_057678	Coding	chr12:48925547 minus strand	916216
FKBP4	NM_002014	NP_002005	Coding	chr12:2794941 plus strand	916217
FMNL3	NM_175736	NP_783863	Coding	chr12:49707414 minus strand	916218
FMNL3	NM_198900	NP_944489	Coding	chr12:49707414 minus strand	916218
FOXJ2	NM_018416	NP_060886	Coding	chr12:8032762 plus strand	916219
FOXM1	NM_001243088	NP_001230017	Coding	chr12:2877155 minus strand	916220
FOXM1	NM_001243089	NP_001230018	Coding	chr12:2877155 minus strand	916220
FOXM1	NM_021953	NP_068772	Coding	chr12:2877155 minus strand	916220
FOXM1	NM_202002	NP_973731	Coding	chr12:2877155 minus strand	916220
FOXM1	NM_202003	NP_973732	Coding	chr12:2877155 minus strand	916220
FOXN4	NM_213596	NP_998761	Coding	chr12:109309220 minus strand	916221

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FRS2	NM_001042555	NP_001036020	Coding	chr12:69470348 plus strand	916222
FRS2	NM_001278351	NP_001265280	Coding	chr12:69470348 plus strand	916222
FRS2	NM_001278353	NP_001265282	Coding	chr12:69470348 plus strand	916222
FRS2	NM_001278354	NP_001265283	Coding	chr12:69470348 plus strand	916222
FRS2	NM_001278355	NP_001265284	Coding	chr12:69470348 plus strand	916222
FRS2	NM_001278356	NP_001265285	Coding	chr12:69470348 plus strand	916222
FRS2	NM_001278357	NP_001265286	Coding	chr12:69470348 plus strand	916222
FRS2	NM_006654	NP_006645	Coding	chr12:69470348 plus strand	916222
FZD10	NM_007197	NP_009128	Coding	chr12:130162458 plus strand	916223
GABARAPL1	NM_031412	NP_113600	Coding	chr12:10212889 plus strand	916224
GALNT4	NM_003774	NP_003765	Coding	chr12:89524806 minus strand	916225
GALNT6	NM_007210	NP_009141	Coding	chr12:51391416 minus strand	916226
GALNT8	NM_017417	NP_059113	Coding	chr12:4720585 plus strand	916227
GALNT9	NM_001122636	NP_001116108	Coding	chr12:132329319 minus strand	916228
GALNT9	NM_021808	NP_068580	Coding	chr12:132206028 minus strand	916229
GAPDH	NM_001256799	NP_001243728	Coding	chr12:6535218 plus strand	916230
GAPDH	NM_001289745	NP_001276674	Coding	chr12:6534404 plus strand	916231
GAPDH	NM_001289746	NP_001276675	Coding	chr12:6534658 plus strand	916232
GAPDH	NM_002046	NP_002037	Coding	chr12:6534404 plus strand	916231
GAS2L3	NM_174942	NP_777602	Coding	chr12:100573710 plus strand	916233
GATC	NM_176818	NP_789788	Coding	chr12:120446437 plus strand	916234
GCN1L1	NM_006836	NP_006827	Coding	chr12:120194710 minus strand	916235
GDF11	NM_005811	NP_005802	Coding	chr12:55743279 plus strand	916236
GDF3	NM_020634	NP_065685	Coding	chr12:7695764 minus strand	916237
GIT2	NM_001135213	NP_001128685	Coding	chr12:109996389 minus strand	916238
GIT2	NM_001135214	NP_001128686	Coding	chr12:109996389 minus strand	916238
GIT2	NM_014776	NP_055591	Coding	chr12:109996389 minus strand	916238
GIT2	NM_057169	NP_476510	Coding	chr12:109996389 minus strand	916238
GIT2	NM_057170	NP_476511	Coding	chr12:109996389 minus strand	916238

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GIT2	NM_139201	NP_631940	Coding	chr12:109996389 minus strand	916238
GLI1	NM_001160045	NP_001153517	Coding	chr12:57460134 plus strand	916239
GLI1	NM_001167609	NP_001161081	Coding	chr12:57460150 plus strand	916240
GLI1	NM_005269	NP_005260	Coding	chr12:57460150 plus strand	916240
GLIPR1	NM_006851	NP_006842	Coding	chr12:75480732 plus strand	916241
GLIPR1L1	NM_152779	NP_689992	Coding	chr12:75334682 plus strand	916242
GLIPR1L2	NM_001270396	NP_001257325	Coding	chr12:75391069 plus strand	916243
GLIPR1L2	NM_152436	NP_689649	Coding	chr12:75391069 plus strand	916243
GLS2	NM_001280796	NP_001267725	Coding	chr12:56488414 minus strand	916244
GLS2	NM_001280797	NP_001267726	Coding	chr12:56488414 minus strand	916244
GLS2	NM_001280798	NP_001267727	Coding	chr12:56488414 minus strand	916244
GLS2	NM_013267	NP_037399	Coding	chr12:56488414 minus strand	916244
GLT1D1	NM_144669	NP_653270	Coding	chr12:128853535 plus strand	916245
GLT8D2	NM_031302	NP_112592	Coding	chr12:104050137 minus strand	916246
GLTP	NM_016433	NP_057517	Coding	chr12:109880488 minus strand	916247
GNB3	NM_001297571	NP_001284500	Coding	chr12:6840853 plus strand	916248
GNB3	NM_002075	NP_002066	Coding	chr12:6840853 plus strand	916248
GNPTAB	NM_024312	NP_077288	Coding	chr12:101830867 minus strand	916249
GNS	NM_002076	NP_002067	Coding	chr12:64759446 minus strand	916250
GOLGA3	NM_001172557	NP_001166028	Coding	chr12:132828840 minus strand	916251
GOLGA3	NM_005895	NP_005886	Coding	chr12:132828702 minus strand	916252
GOLT1B	NM_016072	NP_057156	Coding	chr12:21501764 plus strand	916253
GPD1	NM_001257199	NP_001244128	Coding	chr12:50103818 plus strand	916254
GPD1	NM_005276	NP_005267	Coding	chr12:50103818 plus strand	916254
GPN3	NM_001164372	NP_001157844	Coding	chr12:110468721 minus strand	916255
GPN3	NM_001164373	NP_001157845	Coding	chr12:110468284 minus strand	916256
GPN3	NM_016301	NP_057385	Coding	chr12:110468284 minus strand	916256
GPR133	NM_198827	NP_942122	Coding	chr12:130953906 plus strand	916257

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GPR162	NM_014449	NP_055264	Coding	chr12:6821796 plus strand	916258
GPR162	NM_019858	NP_062832	Coding	chr12:6821796 plus strand	916258
GPR182	NM_007264	NP_009195	Coding	chr12:56994570 plus strand	916259
GPR19	NM_006143	NP_006134	Coding	chr12:12696187 minus strand	916260
GPR84	NM_020370	NP_065103	Coding	chr12:54364486 minus strand	916261
GPRC5A	NM_003979	NP_003970	Coding	chr12:12891021 plus strand	916262
GPRC5D	NM_018654	NP_061124	Coding	chr12:12950384 minus strand	916263
GRASP	NM_001271856	NP_001258785	Coding	chr12:52010491 plus strand	916264
GRASP	NM_181711	NP_859062	Coding	chr12:52006944 plus strand	916265
GRIN2B	NM_000834	NP_000825	Coding	chr12:13980088 minus strand	916266
GRIP1	NM_001178074	NP_001171545	Coding	chr12:66679145 minus strand	916267
GRIP1	NM_021150	NP_066973	Coding	chr12:66679145 minus strand	916267
GSG1	NM_001080554	NP_001074023	Coding	chr12:13103696 minus strand	916268
GSG1	NM_001080555	NP_001074024	Coding	chr12:13103696 minus strand	916268
GSG1	NM_001206842	NP_001193771	Coding	chr12:13103696 minus strand	916268
GSG1	NM_001206843	NP_001193772	Coding	chr12:13095806 minus strand	916269
GSG1	NM_001206845	NP_001193774	Coding	chr12:13095806 minus strand	916269
GSG1	NM_031289	NP_112579	Coding	chr12:13095806 minus strand	916269
GSG1	NM_153823	NP_722545	Coding	chr12:13095806 minus strand	916269
GTF2H3	NM_001271866	NP_001258795	Coding	chr12:123633738 plus strand	916270
GTF2H3	NM_001271867	NP_001258796	Coding	chr12:123633738 plus strand	916270
GTF2H3	NM_001271868	NP_001258797	Coding	chr12:123633738 plus strand	916270
GTF2H3	NM_001516	NP_001507	Coding	chr12:123633738 plus strand	916270
GTSF1	NM_144594	NP_653195	Coding	chr12:54473602 minus strand	916271
GUCY2C	NM_004963	NP_004954	Coding	chr12:14696585 minus strand	916272
GXYLT1	NM_001099650	NP_001093120	Coding	chr12:42144871 minus strand	916273
GXYLT1	NM_173601	NP_775872	Coding	chr12:42144871 minus strand	916273
GYS2	NM_021957	NP_068776	Coding	chr12:21604847 minus strand	916274

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H1FNT	NM_181788	NP_861453	Coding	chr12:48328979 plus strand	916275
H2AFJ	NM_177925	NP_808760	Coding	chr12:14774335 plus strand	916276
H3F3C	NM_001013699	NP_001013721	Coding	chr12:31792241 minus strand	916277
HAL	NM_001258333	NP_001245262	Coding	chr12:95996365 minus strand	916278
HAL	NM_001258334	NP_001245263	Coding	chr12:95996365 minus strand	916278
HAL	NM_002108	NP_002099	Coding	chr12:95996365 minus strand	916278
HCAR1	NM_032554	NP_115943	Coding	chr12:122730582 minus strand	916279
HCAR2	NM_177551	NP_808219	Coding	chr12:122703357 minus strand	916280
HCAR3	NM_006018	NP_006009	Coding	chr12:122716892 minus strand	916281
HCFC2	NM_013320	NP_037452	Coding	chr12:104064457 plus strand	916282
HDAC7	NM_001098416	NP_001091886	Coding	chr12:47819980 minus strand	916283
HDAC7	NM_015401	NP_056216	Coding	chr12:47819980 minus strand	916283
HEBP1	NM_015987	NP_057071	Coding	chr12:13000309 minus strand	916284
HECTD4	NM_001109662	NP_001103132	Coding	chr12:112382092 minus strand	916285
HELB	NM_033647	NP_387467	Coding	chr12:66302554 plus strand	916286
HIGD1C	NM_001109619	NP_001103089	Coding	chr12:50953998 plus strand	916287
HIP1R	NM_003959	NP_003950	Coding	chr12:122835491 plus strand	916288
HIST4H4	NM_175054	NP_778224	Coding	chr12:14771131 minus strand	916289
HMGA2	NM_001300918	NP_001287847	Coding	chr12:65824459 plus strand	916290
HMGA2	NM_001300919	NP_001287848	Coding	chr12:65824459 plus strand	916290
HMGA2	NM_003483	NP_003474	Coding	chr12:65824459 plus strand	916290
HMGA2	NM_003484	NP_003475	Coding	chr12:65824459 plus strand	916290
HNF1A	NM_000545	NP_000536	Coding	chr12:120978745 plus strand	916291
HNRNPA1	NM_002136	NP_002127	Coding	chr12:54280703 plus strand	916292
HNRNPA1	NM_031157	NP_112420	Coding	chr12:54280703 plus strand	916292
HOXC10	NM_017409	NP_059105	Coding	chr12:53985161 plus strand	916293
HOXC11	NM_014212	NP_055027	Coding	chr12:53973125 plus strand	916294

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HOXC12	NM_173860	NP_776272	Coding	chr12:53954929 plus strand	916295
HOXC13	NM_017410	NP_059106	Coding	chr12:53938791 plus strand	916296
HOXC4	NM_014620	NP_055435	Coding	chr12:54016851 plus strand	916297
HOXC4	NM_153633	NP_705897	Coding	chr12:54053876 plus strand	916298
HOXC5	NM_018953	NP_061826	Coding	chr12:54033047 plus strand	916299
HOXC6	NM_004503	NP_004494	Coding	chr12:54028409 plus strand	916300
HOXC6	NM_153693	NP_710160	Coding	chr12:54016851 plus strand	916301
HOXC8	NM_022658	NP_073149	Coding	chr12:54009105 plus strand	916302
HOXC9	NM_006897	NP_008828	Coding	chr12:54000092 plus strand	916303
HPD	NM_001171993	NP_001165464	Coding	chr12:121888611 minus strand	916304
HPD	NM_002150	NP_002141	Coding	chr12:121858863 minus strand	916305
HRK	NM_003806	NP_003797	Coding	chr12:116881427 minus strand	916306
HSD17B6	NM_003725	NP_003716	Coding	chr12:56763217 plus strand	916307
HSP90B1	NM_003299	NP_003290	Coding	chr12:103930333 plus strand	916308
HSPB8	NM_014365	NP_055180	Coding	chr12:119178789 plus strand	916309
HVCN1	NM_001040107	NP_001035196	Coding	chr12:110689812 minus strand	916310
HVCN1	NM_001256413	NP_001243342	Coding	chr12:110689812 minus strand	916310
HVCN1	NM_032369	NP_115745	Coding	chr12:110689157 minus strand	916311
IAPP	NM_000415	NP_000406	Coding	chr12:21372867 plus strand	916312
IFFO1	NM_001039670	NP_001034759	Coding	chr12:6556083 minus strand	916313
IFFO1	NM_001193457	NP_001180386	Coding	chr12:6556083 minus strand	916313
IFFO1	NM_080730	NP_542768	Coding	chr12:6556083 minus strand	916313
IFNG	NM_000619	NP_000610	Coding	chr12:68159741 minus strand	916314
IFT81	NM_001143779	NP_001137251	Coding	chr12:110124334 plus strand	916315
IFT81	NM_014055	NP_054774	Coding	chr12:110124334 plus strand	916315
IFT81	NM_031473	NP_113661	Coding	chr12:110124334 plus strand	916315
IGF1	NM_000618	NP_000609	Coding	chr12:102480600 minus strand	916316

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IGF1	NM_001111283	NP_001104753	Coding	chr12:102480600 minus strand	916316
IGF1	NM_001111284	NP_001104754	Coding	chr12:102478651 minus strand	916317
IGF1	NM_001111285	NP_001104755	Coding	chr12:102480600 minus strand	916316
IGFBP6	NM_002178	NP_002169	Coding	chr12:53097651 plus strand	916318
IKBIP	NM_153687	NP_710154	Coding	chr12:98645051 minus strand	916319
IKBIP	NM_201612	NP_963906	Coding	chr12:98645051 minus strand	916319
IKBIP	NM_201613	NP_963907	Coding	chr12:98645051 minus strand	916319
IKZF4	NM_022465	NP_071910	Coding	chr12:56020904 plus strand	916320
IL22	NM_020525	NP_065386	Coding	chr12:68253501 minus strand	916321
IL23A	NM_016584	NP_057668	Coding	chr12:56338878 plus strand	916322
IL26	NM_018402	NP_060872	Coding	chr12:68225791 minus strand	916323
IL31	NM_001014336	NP_001014358	Coding	chr12:122174199 minus strand	916324
ING4	NM_001127582	NP_001121054	Coding	chr12:6663142 minus strand	916325
ING4	NM_001127583	NP_001121055	Coding	chr12:6663142 minus strand	916325
ING4	NM_001127584	NP_001121056	Coding	chr12:6663142 minus strand	916325
ING4	NM_001127585	NP_001121057	Coding	chr12:6663142 minus strand	916325
ING4	NM_001127586	NP_001121058	Coding	chr12:6663142 minus strand	916325
ING4	NM_016162	NP_057246	Coding	chr12:6663142 minus strand	916325
INHBC	NM_005538	NP_005529	Coding	chr12:57434684 plus strand	916326
INHBE	NM_031479	NP_113667	Coding	chr12:57455312 plus strand	916327
IPO8	NM_001190995	NP_001177924	Coding	chr12:30677244 minus strand	916328
IPO8	NM_006390	NP_006381	Coding	chr12:30695995 minus strand	916329
IQCD	NM_138451	NP_612460	Coding	chr12:113221094 minus strand	916330
IQSEC3	NM_001170738	NP_001164209	Coding	chr12:66882 plus strand	916331
IQSEC3	NM_015232	NP_056047	Coding	chr12:77375 plus strand	916332
IRAK3	NM_001142523	NP_001135995	Coding	chr12:66189197 plus strand	916333
IRAK3	NM_007199	NP_009130	Coding	chr12:66189197 plus strand	916333
IRAK4	NM_001114182	NP_001107654	Coding	chr12:43758943 plus strand	916334

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IRAK4	NM_001145256	NP_001138728	Coding	chr12:43758943 plus strand	916334
IRAK4	NM_001145257	NP_001138729	Coding	chr12:43758943 plus strand	916334
IRAK4	NM_001145258	NP_001138730	Coding	chr12:43758943 plus strand	916334
IRAK4	NM_016123	NP_057207	Coding	chr12:43758943 plus strand	916334
ISCU	NM_001301140	NP_001288069	Coding	chr12:108561462 plus strand	916335
ISCU	NM_001301141	NP_001288070	Coding	chr12:108561462 plus strand	916335
ISCU	NM_014301	NP_055116	Coding	chr12:108561462 plus strand	916335
ISCU	NM_213595	NP_998760	Coding	chr12:108561462 plus strand	916335
ITFG2	NM_018463	NP_060933	Coding	chr12:2812620 plus strand	916336
ITGA5	NM_002205	NP_002196	Coding	chr12:54419266 minus strand	916337
ITGA7	NM_001144996	NP_001138468	Coding	chr12:55707902 minus strand	916338
ITGA7	NM_001144997	NP_001138469	Coding	chr12:55712305 minus strand	916339
ITGA7	NM_002206	NP_002197	Coding	chr12:55707902 minus strand	916338
ITGB7	NM_000889	NP_000880	Coding	chr12:53207307 minus strand	916340
ITPR2	NM_002223	NP_002214	Coding	chr12:26833198 minus strand	916341
KANSL2	NM_017822	NP_060292	Coding	chr12:48682252 minus strand	916342
KCNA1	NM_000217	NP_000208	Coding	chr12:4909906 plus strand	916343
KCNA5	NM_002234	NP_002225	Coding	chr12:5043918 plus strand	916344
KCNA6	NM_002235	NP_002226	Coding	chr12:4809175 plus strand	916345
KCNC2	NM_001260497	NP_001247426	Coding	chr12:75209748 minus strand	916346
KCNC2	NM_001260498	NP_001247427	Coding	chr12:75209748 minus strand	916346
KCNC2	NM_001260499	NP_001247428	Coding	chr12:75209748 minus strand	916346
KCNC2	NM_139136	NP_631874	Coding	chr12:75209748 minus strand	916346
KCNC2	NM_139137	NP_631875	Coding	chr12:75209748 minus strand	916346
KCNC2	NM_153748	NP_715624	Coding	chr12:75209748 minus strand	916346
KCNH3	NM_012284	NP_036416	Coding	chr12:49539156 plus strand	916347
KCNJ8	NM_004982	NP_004973	Coding	chr12:21774821 minus strand	916348
KCNMB4	NM_014505	NP_055320	Coding	chr12:70366281 plus strand	916349
KCTD10	NM_031954	NP_114160	Coding	chr12:109477350 minus	916350

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				strand	
KDM2B	NM_001005366	NP_001005366	Coding	chr12:121580459 minus strand	916351
KDM2B	NM_032590	NP_115979	Coding	chr12:121581015 minus strand	916352
KDM5A	NM_001042603	NP_001036068	Coding	chr12:389455 minus strand	916353
KERA	NM_007035	NP_008966	Coding	chr12:91058354 minus strand	916354
KIAA1033	NM_001293640	NP_001280569	Coding	chr12:105107713 plus strand	916355
KIAA1033	NM_015275	NP_056090	Coding	chr12:105107713 plus strand	916355
KIAA1467	NM_020853	NP_065904	Coding	chr12:13044380 plus strand	916356
KIAA1551	NM_018169	NP_060639	Coding	chr12:31959418 plus strand	916357
KIF21A	NM_001173463	NP_001166934	Coding	chr12:39443390 minus strand	916358
KIF21A	NM_001173464	NP_001166935	Coding	chr12:39443390 minus strand	916358
KIF21A	NM_001173465	NP_001166936	Coding	chr12:39443390 minus strand	916358
KIF21A	NM_017641	NP_060111	Coding	chr12:39443390 minus strand	916358
KIF5A	NM_004984	NP_004975	Coding	chr12:57550063 plus strand	916359
KITLG	NM_000899	NP_000890	Coding	chr12:88580473 minus strand	916360
KITLG	NM_003994	NP_003985	Coding	chr12:88580473 minus strand	916360
KLHL42	NM_020782	NP_065833	Coding	chr12:27780253 plus strand	916361
KLRB1	NM_002258	NP_002249	Coding	chr12:9607901 minus strand	916362
KLRC1	NM_002259	NP_002250	Coding	chr12:10453380 minus strand	916363
KLRC1	NM_007328	NP_015567	Coding	chr12:10453380 minus strand	916363
KLRC1	NM_213657	NP_998822	Coding	chr12:10454616 minus strand	916364
KLRC1	NM_213658	NP_998823	Coding	chr12:10454616 minus strand	916364
KLRC2	NM_002260	NP_002251	Coding	chr12:10435993 minus strand	916365
KLRC3	NM_002261	NP_002252	Coding	chr12:10420595 minus strand	916366
KLRC3	NM_007333	NP_031359	Coding	chr12:10420595 minus strand	916366
KLRC4	NM_013431	NP_038459	Coding	chr12:10409757 minus strand	916367
KLRC4-KLRK1	NM_001199805	NP_001186734	Coding	chr12:10410146 minus strand	916368
KLRD1	NM_001114396	NP_001107868	Coding	chr12:10304450 plus strand	916369

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KLRD1	NM_002262	NP_002253	Coding	chr12:10307817 plus strand	916370
KLRD1	NM_007334	NP_031360	Coding	chr12:10307817 plus strand	916370
KLRF1	NM_001291822	NP_001278751	Coding	chr12:9827480 plus strand	916371
KLRF1	NM_001291823	NP_001278752	Coding	chr12:9827480 plus strand	916371
KLRF1	NM_016523	NP_057607	Coding	chr12:9827480 plus strand	916371
KLRF2	NM_001190765	NP_001177694	Coding	chr12:9881488 plus strand	916372
KLRG1	NM_005810	NP_005801	Coding	chr12:8989624 plus strand	916373
KLRK1	NM_007360	NP_031386	Coding	chr12:10390054 minus strand	916374
KMT2D	NM_003482	NP_003473	Coding	chr12:49055324 minus strand	916375
KNTC1	NM_014708	NP_055523	Coding	chr12:122527261 plus strand	916376
KRAS	NM_004985	NP_004976	Coding	chr12:25250931 minus strand	916377
KRAS	NM_033360	NP_203524	Coding	chr12:25250931 minus strand	916377
KRR1	NM_007043	NP_008974	Coding	chr12:75511638 minus strand	916378
KRT1	NM_006121	NP_006112	Coding	chr12:52680407 minus strand	916379
KRT18	NM_000224	NP_000215	Coding	chr12:52949058 plus strand	916380
KRT18	NM_199187	NP_954657	Coding	chr12:52948870 plus strand	916381
KRT2	NM_000423	NP_000414	Coding	chr12:52652175 minus strand	916382
KRT3	NM_057088	NP_476429	Coding	chr12:52796108 minus strand	916383
KRT4	NM_002272	NP_002263	Coding	chr12:52814116 minus strand	916384
KRT5	NM_000424	NP_000415	Coding	chr12:52520459 minus strand	916385
KRT6A	NM_005554	NP_005545	Coding	chr12:52493397 minus strand	916386
KRT6B	NM_005555	NP_005546	Coding	chr12:52452126 minus strand	916387
KRT6C	NM_173086	NP_775109	Coding	chr12:52473785 minus strand	916388
KRT7	NM_005556	NP_005547	Coding	chr12:52233169 plus strand	916389
KRT71	NM_033448	NP_258259	Coding	chr12:52553147 minus strand	916390
KRT72	NM_001146225	NP_001139697	Coding	chr12:52601538 minus strand	916391
KRT72	NM_001146226	NP_001139698	Coding	chr12:52601538 minus strand	916391
KRT72	NM_080747	NP_542785	Coding	chr12:52601538 minus strand	916391
KRT73	NM_175068	NP_778238	Coding	chr12:52618559 minus strand	916392

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KRT74	NM_175053	NP_778223	Coding	chr12:52573825 minus strand	916393
KRT75	NM_004693	NP_004684	Coding	chr12:52434326 minus strand	916394
KRT76	NM_015848	NP_056932	Coding	chr12:52777345 minus strand	916395
KRT77	NM_175078	NP_778253	Coding	chr12:52703463 minus strand	916396
KRT78	NM_001300814	NP_001287743	Coding	chr12:52848283 minus strand	916397
KRT78	NM_173352	NP_775487	Coding	chr12:52848994 minus strand	916398
KRT79	NM_175834	NP_787028	Coding	chr12:52834293 minus strand	916399
KRT8	NM_001256282	NP_001243211	Coding	chr12:52926469 minus strand	916400
KRT8	NM_001256293	NP_001243222	Coding	chr12:52949866 minus strand	916401
KRT8	NM_002273	NP_002264	Coding	chr12:52905084 minus strand	916402
KRT80	NM_001081492	NP_001074961	Coding	chr12:52192000 minus strand	916403
KRT80	NM_182507	NP_872313	Coding	chr12:52192000 minus strand	916403
KRT81	NM_002281	NP_002272	Coding	chr12:52291515 minus strand	916404
KRT82	NM_033033	NP_149022	Coding	chr12:52406392 minus strand	916405
KRT83	NM_002282	NP_002273	Coding	chr12:52321398 minus strand	916406
KRT84	NM_033045	NP_149034	Coding	chr12:52385633 minus strand	916407
KRT85	NM_001300810	NP_001287739	Coding	chr12:52364622 minus strand	916408
KRT85	NM_002283	NP_002274	Coding	chr12:52367525 minus strand	916409
KRT86	NM_002284	NP_002275	Coding	chr12:52301864 plus strand	916410
KSR2	NM_173598	NP_775869	Coding	chr12:117968223 minus strand	916411
LACRT	NM_033277	NP_150593	Coding	chr12:54634879 minus strand	916412
LAG3	NM_002286	NP_002277	Coding	chr12:6772503 plus strand	916413
LALBA	NM_002289	NP_002280	Coding	chr12:48570046 minus strand	916414
LARP4	NM_001170803	NP_001164274	Coding	chr12:50400808 plus strand	916415
LARP4	NM_001170804	NP_001164275	Coding	chr12:50400808 plus strand	916415
LARP4	NM_001170808	NP_001164279	Coding	chr12:50400808 plus strand	916415
LARP4	NM_052879	NP_443111	Coding	chr12:50400808 plus strand	916415
LARP4	NM_199188	NP_954658	Coding	chr12:50400808 plus	916415

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				strand	
LARP4	NM_199190	NP_954660	Coding	chr12:50400808 plus strand	916415
LDHB	NM_001174097	NP_001167568	Coding	chr12:21657794 minus strand	916416
LDHB	NM_002300	NP_002291	Coding	chr12:21657855 minus strand	916417
LEMD3	NM_001167614	NP_001161086	Coding	chr12:65169570 plus strand	916418
LEMD3	NM_014319	NP_055134	Coding	chr12:65169570 plus strand	916418
LEPREL2	NM_014262	NP_055077	Coding	chr12:6828372 plus strand	916419
LETMD1	NM_001243689	NP_001230618	Coding	chr12:51048298 plus strand	916420
LETMD1	NM_001300765	NP_001287694	Coding	chr12:51048298 plus strand	916420
LETMD1	NM_015416	NP_056231	Coding	chr12:51048298 plus strand	916420
LGR5	NM_001277226	NP_001264155	Coding	chr12:71439769 plus strand	916421
LGR5	NM_001277227	NP_001264156	Coding	chr12:71439769 plus strand	916421
LGR5	NM_003667	NP_003658	Coding	chr12:71439769 plus strand	916421
LHX5	NM_022363	NP_071758	Coding	chr12:113472072 minus strand	916422
LIMA1	NM_001113546	NP_001107018	Coding	chr12:50283570 minus strand	916423
LIMA1	NM_001113547	NP_001107019	Coding	chr12:50222705 minus strand	916424
LIMA1	NM_001243775	NP_001230704	Coding	chr12:50201533 minus strand	916425
LIMA1	NM_016357	NP_057441	Coding	chr12:50283570 minus strand	916423
LIN7A	NM_004664	NP_004655	Coding	chr12:80937915 minus strand	916426
LLPH	NM_032338	NP_115714	Coding	chr12:66130753 minus strand	916427
LMBR1L	NM_001300750	NP_001287679	Coding	chr12:49110900 minus strand	916428
LMBR1L	NM_001300751	NP_001287680	Coding	chr12:49110900 minus strand	916428
LMBR1L	NM_018113	NP_060583	Coding	chr12:49110900 minus strand	916428
LMNTD1	NM_001145727	NP_001139199	Coding	chr12:25648562 minus strand	916429
LMNTD1	NM_001145728	NP_001139200	Coding	chr12:25553283 minus strand	916430
LMNTD1	NM_001145729	NP_001139201	Coding	chr12:25553283 minus strand	916430
LMNTD1	NM_001256266	NP_001243195	Coding	chr12:25553283 minus strand	916430
LMNTD1	NM_152590	NP_689803	Coding	chr12:25553283 minus strand	916430

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LMO3	NM_001001395	NP_001001395	Coding	chr12:16608214 minus strand	916431
LMO3	NM_001243609	NP_001230538	Coding	chr12:16608214 minus strand	916431
LMO3	NM_001243610	NP_001230539	Coding	chr12:16606800 minus strand	916432
LMO3	NM_001243611	NP_001230540	Coding	chr12:16605379 minus strand	916433
LMO3	NM_001243612	NP_001230541	Coding	chr12:16605970 minus strand	916434
LMO3	NM_001243613	NP_001230542	Coding	chr12:16607150 minus strand	916435
LMO3	NM_018640	NP_061110	Coding	chr12:16606602 minus strand	916436
LOC100129361	NM_001271592	NP_001258521	Coding	chr12:11171180 plus strand	916437
LOC100129940	NM_001292023	NP_001278952	Coding	chr12:65882167 minus strand	916438
LOC100129940	NM_001292024	NP_001278953	Coding	chr12:65882167 minus strand	916438
LOH12CR1	NM_001300742	NP_001287671	Coding	chr12:12357078 plus strand	916439
LOH12CR1	NM_058169	NP_477517	Coding	chr12:12357078 plus strand	916439
LPAR5	NM_001142961	NP_001136433	Coding	chr12:6631649 minus strand	916440
LPAR5	NM_020400	NP_065133	Coding	chr12:6636131 minus strand	916441
LPCAT3	NM_005768	NP_005759	Coding	chr12:7018538 minus strand	916442
LRCOL1	NM_001195520	NP_001182449	Coding	chr12:132610451 minus strand	916443
LRIG3	NM_001136051	NP_001129523	Coding	chr12:58919546 minus strand	916444
LRIG3	NM_153377	NP_700356	Coding	chr12:58920538 minus strand	916445
LRMP	NM_001204126	NP_001191055	Coding	chr12:25052246 plus strand	916446
LRMP	NM_001204127	NP_001191056	Coding	chr12:25052246 plus strand	916446
LRMP	NM_006152	NP_006143	Coding	chr12:25052246 plus strand	916446
LRP1	NM_002332	NP_002323	Coding	chr12:57128498 plus strand	916447
LRP6	NM_002336	NP_002327	Coding	chr12:12266877 minus strand	916448
LRRC10	NM_201550	NP_963844	Coding	chr12:69611162 minus strand	916449
LRRC23	NM_001135217	NP_001128689	Coding	chr12:6904732 plus strand	916450
LRRC23	NM_006992	NP_008923	Coding	chr12:6904732 plus strand	916450
LRRC23	NM_201650	NP_964013	Coding	chr12:6904732 plus strand	916450
LRRC43	NM_001098519	NP_001091989	Coding	chr12:122183119 plus strand	916451

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LRRC43	NM_152759	NP_689972	Coding	chr12:122167718 plus strand	916452
LRRIQ1	NM_001079910	NP_001073379	Coding	chr12:85036320 plus strand	916453
LRRK2	NM_198578	NP_940980	Coding	chr12:40225010 plus strand	916454
LRTM2	NM_001039029	NP_001034118	Coding	chr12:1820266 plus strand	916455
LRTM2	NM_001163925	NP_001157397	Coding	chr12:1820266 plus strand	916455
LRTM2	NM_001163926	NP_001157398	Coding	chr12:1820266 plus strand	916455
LTA4H	NM_000895	NP_000886	Coding	chr12:96035661 minus strand	916456
LTA4H	NM_001256643	NP_001243572	Coding	chr12:96043520 minus strand	916457
LTA4H	NM_001256644	NP_001243573	Coding	chr12:96043520 minus strand	916457
LTBR	NM_001270987	NP_001257916	Coding	chr12:6375367 plus strand	916458
LTBR	NM_002342	NP_002333	Coding	chr12:6384032 plus strand	916459
LUM	NM_002345	NP_002336	Coding	chr12:91111765 minus strand	916460
LYRM5	NM_001001660	NP_001001660	Coding	chr12:25195215 plus strand	916461
LYZ	NM_000239	NP_000230	Coding	chr12:69348353 plus strand	916462
M6PR	NM_001207024	NP_001193953	Coding	chr12:8949761 minus strand	916463
M6PR	NM_002355	NP_002346	Coding	chr12:8949761 minus strand	916463
MAGOHB	NM_001300739	NP_001287668	Coding	chr12:10612978 minus strand	916464
MAGOHB	NM_018048	NP_060518	Coding	chr12:10613609 minus strand	916465
MANSC1	NM_018050	NP_060520	Coding	chr12:12350235 minus strand	916466
MANSC4	NM_001146221	NP_001139693	Coding	chr12:27771276 minus strand	916467
MAP1LC3B2	NM_001085481	NP_001078950	Coding	chr12:116559380 plus strand	916468
MAP3K12	NM_001193511	NP_001180440	Coding	chr12:53499660 minus strand	916469
MAP3K12	NM_006301	NP_006292	Coding	chr12:53499660 minus strand	916469
MAPKAPK5	NM_003668	NP_003659	Coding	chr12:111842227 plus strand	916470
MAPKAPK5	NM_139078	NP_620777	Coding	chr12:111842227 plus strand	916470
MARCH9	NM_138396	NP_612405	Coding	chr12:57755097 plus strand	916471
MARS	NM_004990	NP_004981	Coding	chr12:57487952 plus strand	916472
MBD6	NM_052897	NP_443129	Coding	chr12:57522875 plus strand	916473
MCRS1	NM_001012300	NP_001012300	Coding	chr12:49566439 minus strand	916474

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MCRS1	NM_001278341	NP_001265270	Coding	chr12:49568145 minus strand	916475
MCRS1	NM_006337	NP_006328	Coding	chr12:49568145 minus strand	916475
MDM1	NM_001205028	NP_001191957	Coding	chr12:68332381 minus strand	916476
MDM1	NM_001205029	NP_001191958	Coding	chr12:68332381 minus strand	916476
MDM1	NM_017440	NP_059136	Coding	chr12:68332381 minus strand	916476
MDM1	NM_020128	NP_064513	Coding	chr12:68332381 minus strand	916476
MDM2	NM_001145337	NP_001138809	Coding	chr12:68809016 plus strand	916477
MDM2	NM_001145339	NP_001138811	Coding	chr12:68808171 plus strand	916478
MDM2	NM_001145340	NP_001138812	Coding	chr12:68809016 plus strand	916477
MDM2	NM_001278462	NP_001265391	Coding	chr12:68809016 plus strand	916477
MDM2	NM_002392	NP_002383	Coding	chr12:68808171 plus strand	916478
MED13L	NM_015335	NP_056150	Coding	chr12:116277186 minus strand	916479
MED21	NM_001271811	NP_001258740	Coding	chr12:27022521 plus strand	916480
MED21	NM_004264	NP_004255	Coding	chr12:27022521 plus strand	916480
METAP2	NM_006838	NP_006829	Coding	chr12:95474045 plus strand	916481
METTL1	NM_005371	NP_005362	Coding	chr12:57772131 minus strand	916482
METTL1	NM_023033	NP_075422	Coding	chr12:57772131 minus strand	916482
METTL20	NM_001135863	NP_001129335	Coding	chr12:31659674 plus strand	916483
METTL20	NM_001135864	NP_001129336	Coding	chr12:31647159 plus strand	916484
METTL20	NM_173802	NP_776163	Coding	chr12:31659186 plus strand	916485
METTL21B	NM_015433	NP_056248	Coding	chr12:57772599 plus strand	916486
METTL21B	NM_206914	NP_996797	Coding	chr12:57772599 plus strand	916486
METTL25	NM_032230	NP_115606	Coding	chr12:82358496 plus strand	916487
METTL7A	NM_014033	NP_054752	Coding	chr12:50924750 plus strand	916488
METTL7B	NM_152637	NP_689850	Coding	chr12:55681545 plus strand	916489
MFAP5	NM_001297709	NP_001284638	Coding	chr12:8662888 minus strand	916490
MFAP5	NM_001297710	NP_001284639	Coding	chr12:8662888 minus strand	916490

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MFAP5	NM_001297711	NP_001284640	Coding	chr12:8662888 minus strand	916490
MFAP5	NM_001297712	NP_001284641	Coding	chr12:8662888 minus strand	916490
MFAP5	NM_003480	NP_003471	Coding	chr12:8662888 minus strand	916490
MFSD5	NM_001170790	NP_001164261	Coding	chr12:53251585 plus strand	916491
MFSD5	NM_032889	NP_116278	Coding	chr12:53252091 plus strand	916492
MGAT4C	NM_013244	NP_037376	Coding	chr12:86838904 minus strand	916493
MGP	NM_000900	NP_000891	Coding	chr12:14885919 minus strand	916494
MGP	NM_001190839	NP_001177768	Coding	chr12:14885919 minus strand	916494
MGST1	NM_001260511	NP_001247440	Coding	chr12:16347642 plus strand	916495
MGST1	NM_001260512	NP_001247441	Coding	chr12:16347642 plus strand	916495
MGST1	NM_001267598	NP_001254527	Coding	chr12:16347642 plus strand	916495
MGST1	NM_020300	NP_064696	Coding	chr12:16347642 plus strand	916495
MGST1	NM_145764	NP_665707	Coding	chr12:16353416 plus strand	916496
MGST1	NM_145791	NP_665734	Coding	chr12:16347777 plus strand	916497
MGST1	NM_145792	NP_665735	Coding	chr12:16347141 plus strand	916498
MIP	NM_012064	NP_036196	Coding	chr12:56454651 minus strand	916499
MLEC	NM_014730	NP_055545	Coding	chr12:120687145 plus strand	916500
MLF2	NM_005439	NP_005430	Coding	chr12:6752916 minus strand	916501
MLXIP	NM_014938	NP_055753	Coding	chr12:122078727 plus strand	916502
MMAB	NM_052845	NP_443077	Coding	chr12:109573553 minus strand	916503
MMP17	NM_016155	NP_057239	Coding	chr12:131828395 plus strand	916504
MMP19	NM_001272101	NP_001259030	Coding	chr12:55842983 minus strand	916505
MMP19	NM_002429	NP_002420	Coding	chr12:55842983 minus strand	916505
MON2	NM_001278469	NP_001265398	Coding	chr12:62466816 plus strand	916506
MON2	NM_001278470	NP_001265399	Coding	chr12:62466816 plus strand	916506
MON2	NM_001278471	NP_001265400	Coding	chr12:62466816 plus strand	916506
MON2	NM_001278472	NP_001265401	Coding	chr12:62466816 plus strand	916506

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MON2	NM_015026	NP_055841	Coding	chr12:62466816 plus strand	916506
MORN3	NM_173855	NP_776254	Coding	chr12:121669654 minus strand	916507
MPHOSPH9	NM_022782	NP_073619	Coding	chr12:123233238 minus strand	916508
MRPL42	NM_014050	NP_054769	Coding	chr12:93467489 plus strand	916509
MRPL42	NM_172177	NP_751917	Coding	chr12:93467489 plus strand	916509
MRPL51	NM_016497	NP_057581	Coding	chr12:6493305 minus strand	916510
MRPS35	NM_001190864	NP_001177793	Coding	chr12:27710772 plus strand	916511
MRPS35	NM_021821	NP_068593	Coding	chr12:27710772 plus strand	916511
MSI1	NM_002442	NP_002433	Coding	chr12:120369180 minus strand	916512
MSRB3	NM_001031679	NP_001026849	Coding	chr12:65278642 plus strand	916513
MSRB3	NM_001193460	NP_001180389	Coding	chr12:65278642 plus strand	916513
MSRB3	NM_001193461	NP_001180390	Coding	chr12:65278986 plus strand	916514
MSRB3	NM_198080	NP_932346	Coding	chr12:65278642 plus strand	916513
MTERF2	NM_001033050	NP_001028222	Coding	chr12:106987166 minus strand	916515
MTERF2	NM_025198	NP_079474	Coding	chr12:106987166 minus strand	916515
MUC19	NM_173600	NP_775871	Coding	chr12:40393393 plus strand	916516
MUCL1	NM_058173	NP_477521	Coding	chr12:54854514 plus strand	916517
MVK	NM_000431	NP_000422	Coding	chr12:109573694 plus strand	916518
MVK	NM_001114185	NP_001107657	Coding	chr12:109573694 plus strand	916518
MVK	NM_001301182	NP_001288111	Coding	chr12:109573694 plus strand	916518
MYBPC1	NM_001254718	NP_001241647	Coding	chr12:101594930 plus strand	916519
MYBPC1	NM_001254719	NP_001241648	Coding	chr12:101594930 plus strand	916519
MYBPC1	NM_001254720	NP_001241649	Coding	chr12:101594930 plus strand	916519
MYBPC1	NM_001254721	NP_001241650	Coding	chr12:101594930 plus strand	916519
MYBPC1	NM_001254722	NP_001241651	Coding	chr12:101594930 plus strand	916519
MYBPC1	NM_001254723	NP_001241652	Coding	chr12:101594930 plus strand	916519
MYBPC1	NM_002465	NP_002456	Coding	chr12:101594930 plus strand	916519

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MYBPC1	NM_206819	NP_996555	Coding	chr12:101594930 plus strand	916519
MYBPC1	NM_206820	NP_996556	Coding	chr12:101594930 plus strand	916519
MYBPC1	NM_206821	NP_996557	Coding	chr12:101594930 plus strand	916519
MYF5	NM_005593	NP_005584	Coding	chr12:80716928 plus strand	916520
MYF6	NM_002469	NP_002460	Coding	chr12:80707628 plus strand	916521
MYL2	NM_000432	NP_000423	Coding	chr12:110920600 minus strand	916522
MYL6	NM_021019	NP_066299	Coding	chr12:56158260 plus strand	916523
MYL6	NM_079423	NP_524147	Coding	chr12:56158260 plus strand	916523
MYL6B	NM_001199629	NP_001186558	Coding	chr12:56152419 plus strand	916524
MYL6B	NM_002475	NP_002466	Coding	chr12:56152419 plus strand	916524
MYO1A	NM_001256041	NP_001242970	Coding	chr12:57050765 minus strand	916525
MYO1A	NM_005379	NP_005370	Coding	chr12:57050117 minus strand	916526
MYO1H	NM_001101421	NP_001094891	Coding	chr12:109388718 plus strand	916527
NAA25	NM_024953	NP_079229	Coding	chr12:112108831 minus strand	916528
NAB2	NM_005967	NP_005958	Coding	chr12:57088893 plus strand	916529
NABP2	NM_024068	NP_076973	Coding	chr12:56224340 plus strand	916530
NACA	NM_001113202	NP_001106673	Coding	chr12:56725542 minus strand	916531
NACA	NM_001113203	NP_001106674	Coding	chr12:56725542 minus strand	916531
NANOG	NM_001297698	NP_001284627	Coding	chr12:7789395 plus strand	916532
NANOG	NM_024865	NP_079141	Coding	chr12:7789395 plus strand	916532
NANOGNB	NM_001145465	NP_001138937	Coding	chr12:7765215 plus strand	916533
NAP1L1	NM_004537	NP_004528	Coding	chr12:76084958 minus strand	916534
NAP1L1	NM_139207	NP_631946	Coding	chr12:76084958 minus strand	916534
NAV3	NM_001024383	NP_001019554	Coding	chr12:77831288 plus strand	916535
NAV3	NM_014903	NP_055718	Coding	chr12:77831288 plus strand	916535
NCAPD2	NM_014865	NP_055680	Coding	chr12:6494131 plus strand	916536
NCKAP1L	NM_001184976	NP_001171905	Coding	chr12:54498783 plus strand	916537
NCKAP1L	NM_005337	NP_005328	Coding	chr12:54497710 plus strand	916538
NCKAP5L	NM_001037806	NP_001032895	Coding	chr12:49828425 minus	916539

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				strand	
NCOR2	NM_001077261	NP_001070729	Coding	chr12:124567464 minus strand	916540
NCOR2	NM_001206654	NP_001193583	Coding	chr12:124567464 minus strand	916540
NCOR2	NM_006312	NP_006303	Coding	chr12:124567464 minus strand	916540
NDUFA12	NM_001258338	NP_001245267	Coding	chr12:95003713 minus strand	916541
NDUFA12	NM_018838	NP_061326	Coding	chr12:95003713 minus strand	916541
NDUFA4L2	NM_020142	NP_064527	Coding	chr12:57240692 minus strand	916542
NDUFA9	NM_005002	NP_004993	Coding	chr12:4649097 plus strand	916543
NECAP1	NM_015509	NP_056324	Coding	chr12:8082210 plus strand	916544
NEDD1	NM_001135175	NP_001128647	Coding	chr12:96907465 plus strand	916545
NEDD1	NM_001135176	NP_001128648	Coding	chr12:96907222 plus strand	916546
NEDD1	NM_001135177	NP_001128649	Coding	chr12:96907222 plus strand	916546
NEDD1	NM_152905	NP_690869	Coding	chr12:96907222 plus strand	916546
NELL2	NM_001145107	NP_001138579	Coding	chr12:44876850 minus strand	916547
NELL2	NM_001145108	NP_001138580	Coding	chr12:44876464 minus strand	916548
NELL2	NM_001145109	NP_001138581	Coding	chr12:44875661 minus strand	916549
NELL2	NM_001145110	NP_001138582	Coding	chr12:44913928 minus strand	916550
NELL2	NM_006159	NP_006150	Coding	chr12:44876464 minus strand	916548
NEUROD4	NM_021191	NP_067014	Coding	chr12:55019944 plus strand	916551
NFE2	NM_001136023	NP_001129495	Coding	chr12:54301037 minus strand	916552
NFE2	NM_001261461	NP_001248390	Coding	chr12:54301037 minus strand	916552
NFE2	NM_006163	NP_006154	Coding	chr12:54295779 minus strand	916553
NFYB	NM_006166	NP_006157	Coding	chr12:104138262 minus strand	916554
NINJ2	NM_001294345	NP_001281274	Coding	chr12:610413 minus strand	916555
NINJ2	NM_001294346	NP_001281275	Coding	chr12:643685 minus strand	916556
NINJ2	NM_016533	NP_057617	Coding	chr12:663741 minus strand	916557
NOC4L	NM_024078	NP_076983	Coding	chr12:132144447 plus strand	916558
NOP2	NM_001033714	NP_001028886	Coding	chr12:6568332 minus strand	916559
NOP2	NM_001258308	NP_001245237	Coding	chr12:6568332 minus strand	916559

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NOP2	NM_001258309	NP_001245238	Coding	chr12:6568332 minus strand	916559
NOP2	NM_001258310	NP_001245239	Coding	chr12:6568332 minus strand	916559
NOP2	NM_006170	NP_006161	Coding	chr12:6568332 minus strand	916559
NOS1	NM_000620	NP_000611	Coding	chr12:117361802 minus strand	916560
NOS1	NM_001204213	NP_001191142	Coding	chr12:117305052 minus strand	916561
NOS1	NM_001204214	NP_001191143	Coding	chr12:117309410 minus strand	916562
NOS1	NM_001204218	NP_001191147	Coding	chr12:117361802 minus strand	916560
NPFF	NM_003717	NP_003708	Coding	chr12:53507638 minus strand	916563
NR1H4	NM_001206977	NP_001193906	Coding	chr12:100473772 plus strand	916564
NR1H4	NM_001206978	NP_001193907	Coding	chr12:100473772 plus strand	916564
NR1H4	NM_001206979	NP_001193908	Coding	chr12:100473772 plus strand	916564
NR1H4	NM_001206992	NP_001193921	Coding	chr12:100503359 plus strand	916565
NR1H4	NM_001206993	NP_001193922	Coding	chr12:100503359 plus strand	916565
NR1H4	NM_005123	NP_005114	Coding	chr12:100473772 plus strand	916564
NR2C1	NM_001032287	NP_001027458	Coding	chr12:95073628 minus strand	916566
NR2C1	NM_001127362	NP_001120834	Coding	chr12:95073628 minus strand	916566
NR2C1	NM_003297	NP_003288	Coding	chr12:95073628 minus strand	916566
NR4A1	NM_001202233	NP_001189162	Coding	chr12:52022831 plus strand	916567
NR4A1	NM_001202234	NP_001189163	Coding	chr12:52037714 plus strand	916568
NR4A1	NM_002135	NP_002126	Coding	chr12:52051401 plus strand	916569
NR4A1	NM_173157	NP_775180	Coding	chr12:52051401 plus strand	916569
NRIP2	NM_031474	NP_113662	Coding	chr12:2835055 minus strand	916570
NT5DC3	NM_001031701	NP_001026871	Coding	chr12:103841197 minus strand	916571
NTF3	NM_001102654	NP_001096124	Coding	chr12:5432113 plus strand	916572
NTF3	NM_002527	NP_002518	Coding	chr12:5494131 plus strand	916573
NTN4	NM_021229	NP_067052	Coding	chr12:95790758 minus strand	916574
NTS	NM_006183	NP_006174	Coding	chr12:85874294 plus strand	916575
NUAK1	NM_014840	NP_055655	Coding	chr12:106140033 minus strand	916576

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NUDT4	NM_001301022	NP_001287951	Coding	chr12:93378549 plus strand	916577
NUDT4	NM_001301023	NP_001287952	Coding	chr12:93378549 plus strand	916577
NUDT4	NM_001301024	NP_001287953	Coding	chr12:93378549 plus strand	916577
NUDT4	NM_019094	NP_061967	Coding	chr12:93377922 plus strand	916578
NUDT4	NM_199040	NP_950241	Coding	chr12:93377922 plus strand	916578
NUP107	NM_020401	NP_065134	Coding	chr12:68686950 plus strand	916579
NUP37	NM_024057	NP_076962	Coding	chr12:102118583 minus strand	916580
NXPH4	NM_007224	NP_009155	Coding	chr12:57216794 plus strand	916581
OAS1	NM_001032409	NP_001027581	Coding	chr12:112906933 plus strand	916582
OAS1	NM_002534	NP_002525	Coding	chr12:112906933 plus strand	916582
OAS1	NM_016816	NP_058132	Coding	chr12:112906933 plus strand	916582
OAS2	NM_001032731	NP_001027903	Coding	chr12:112978468 plus strand	916583
OAS2	NM_002535	NP_002526	Coding	chr12:112978468 plus strand	916583
OAS2	NM_016817	NP_058197	Coding	chr12:112978468 plus strand	916583
OAS3	NM_006187	NP_006178	Coding	chr12:112938443 plus strand	916584
OASL	NM_001261825	NP_001248754	Coding	chr12:121039242 minus strand	916585
OASL	NM_003733	NP_003724	Coding	chr12:121039242 minus strand	916585
OASL	NM_198213	NP_937856	Coding	chr12:121039242 minus strand	916585
OGFOD2	NM_024623	NP_078899	Coding	chr12:122974806 plus strand	916586
OLR1	NM_001172632	NP_001166103	Coding	chr12:10172191 minus strand	916587
OLR1	NM_001172633	NP_001166104	Coding	chr12:10172191 minus strand	916587
OLR1	NM_002543	NP_002534	Coding	chr12:10172191 minus strand	916587
OR10A7	NM_001005280	NP_001005280	Coding	chr12:55221024 plus strand	916588
OR10AD1	NM_001004134	NP_001004134	Coding	chr12:48203292 minus strand	916589
OR10P1	NM_206899	NP_996782	Coding	chr12:55636891 plus strand	916590
OR2AP1	NM_001258285	NP_001245214	Coding	chr12:55574414 plus strand	916591
OR6C1	NM_001005182	NP_001005182	Coding	chr12:55320599 plus strand	916592

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OR6C2	NM_054105	NP_473446	Coding	chr12:55452213 plus strand	916593
OR6C3	NM_054104	NP_473445	Coding	chr12:55331700 plus strand	916594
OR6C4	NM_001005494	NP_001005494	Coding	chr12:55551226 plus strand	916595
OR6C6	NM_001005493	NP_001005493	Coding	chr12:55295232 minus strand	916596
OR6C65	NM_001005518	NP_001005518	Coding	chr12:55400528 plus strand	916597
OR6C68	NM_001005519	NP_001005519	Coding	chr12:55492377 plus strand	916598
OR6C70	NM_001005499	NP_001005499	Coding	chr12:55470138 minus strand	916599
OR6C74	NM_001005490	NP_001005490	Coding	chr12:55247287 plus strand	916600
OR6C75	NM_001005497	NP_001005497	Coding	chr12:55365110 plus strand	916601
OR6C76	NM_001005183	NP_001005183	Coding	chr12:55426253 plus strand	916602
OR8S1	NM_001005203	NP_001005203	Coding	chr12:48525631 plus strand	916603
OR9K2	NM_001005243	NP_001005243	Coding	chr12:55129768 plus strand	916604
ORAI1	NM_032790	NP_116179	Coding	chr12:121626549 plus strand	916605
ORMDL2	NM_014182	NP_054901	Coding	chr12:55818021 plus strand	916606
OS9	NM_001017956	NP_001017956	Coding	chr12:57693954 plus strand	916607
OS9	NM_001017957	NP_001017957	Coding	chr12:57693954 plus strand	916607
OS9	NM_001017958	NP_001017958	Coding	chr12:57693954 plus strand	916607
OS9	NM_001261420	NP_001248349	Coding	chr12:57693954 plus strand	916607
OS9	NM_001261421	NP_001248350	Coding	chr12:57693954 plus strand	916607
OS9	NM_001261422	NP_001248351	Coding	chr12:57693954 plus strand	916607
OS9	NM_001261423	NP_001248352	Coding	chr12:57693954 plus strand	916607
OS9	NM_006812	NP_006803	Coding	chr12:57693954 plus strand	916607
OSBPL8	NM_001003712	NP_001003712	Coding	chr12:76559809 minus strand	916608
OSBPL8	NM_020841	NP_065892	Coding	chr12:76559809 minus strand	916608
OTOGL	NM_173591	NP_775862	Coding	chr12:80209452 plus strand	916609
OVCH1	NM_183378	NP_899234	Coding	chr12:29497686 minus strand	916610
P2RX2	NM_001282164	NP_001269093	Coding	chr12:132618779 plus strand	916611

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P2RX2	NM_001282165	NP_001269094	Coding	chr12:132618779 plus strand	916611
P2RX2	NM_012226	NP_036358	Coding	chr12:132618779 plus strand	916611
P2RX2	NM_016318	NP_057402	Coding	chr12:132618779 plus strand	916611
P2RX2	NM_170682	NP_733782	Coding	chr12:132618779 plus strand	916611
P2RX2	NM_170683	NP_733783	Coding	chr12:132618779 plus strand	916611
P2RX2	NM_174872	NP_777361	Coding	chr12:132618779 plus strand	916611
P2RX2	NM_174873	NP_777362	Coding	chr12:132618779 plus strand	916611
P2RX4	NM_001256796	NP_001243725	Coding	chr12:121209860 plus strand	916612
P2RX4	NM_001261397	NP_001248326	Coding	chr12:121209860 plus strand	916612
P2RX4	NM_001261398	NP_001248327	Coding	chr12:121209860 plus strand	916612
P2RX4	NM_002560	NP_002551	Coding	chr12:121209860 plus strand	916612
P2RX7	NM_002562	NP_002553	Coding	chr12:121132827 plus strand	916613
PA2G4	NM_006191	NP_006182	Coding	chr12:56104318 plus strand	916614
PAH	NM_000277	NP_000268	Coding	chr12:102917603 minus strand	916615
PAN2	NM_001127460	NP_001120932	Coding	chr12:56333749 minus strand	916616
PAN2	NM_001166279	NP_001159751	Coding	chr12:56334053 minus strand	916617
PAN2	NM_014871	NP_055686	Coding	chr12:56334053 minus strand	916617
PARP11	NM_001286521	NP_001273450	Coding	chr12:3873448 minus strand	916618
PARP11	NM_001286522	NP_001273451	Coding	chr12:3873448 minus strand	916618
PARP11	NM_020367	NP_065100	Coding	chr12:3873448 minus strand	916618
PARPBP	NM_017915	NP_060385	Coding	chr12:102120177 plus strand	916619
PAWR	NM_002583	NP_002574	Coding	chr12:79691010 minus strand	916620
PCBP2	NM_001098620	NP_001092090	Coding	chr12:53452101 plus strand	916621
PCBP2	NM_001128911	NP_001122383	Coding	chr12:53452101 plus strand	916621
PCBP2	NM_001128912	NP_001122384	Coding	chr12:53452101 plus strand	916621
PCBP2	NM_001128913	NP_001122385	Coding	chr12:53452101 plus strand	916621
PCBP2	NM_001128914	NP_001122386	Coding	chr12:53452101 plus strand	916621

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PCBP2	NM_005016	NP_005007	Coding	chr12:53452101 plus strand	916621
PCBP2	NM_031989	NP_114366	Coding	chr12:53452101 plus strand	916621
PCED1B	NM_001281429	NP_001268358	Coding	chr12:47079602 plus strand	916622
PCED1B	NM_138371	NP_612380	Coding	chr12:47079602 plus strand	916622
PDE1B	NM_000924	NP_000915	Coding	chr12:54549392 plus strand	916623
PDE1B	NM_001165975	NP_001159447	Coding	chr12:54561443 plus strand	916624
PDE1B	NM_001288768	NP_001275697	Coding	chr12:54549392 plus strand	916623
PDE1B	NM_001288769	NP_001275698	Coding	chr12:54550079 plus strand	916625
PDE3A	NM_000921	NP_000912	Coding	chr12:20369244 plus strand	916626
PDE3A	NM_001244683	NP_001231612	Coding	chr12:20571863 plus strand	916627
PDE6H	NM_006205	NP_006196	Coding	chr12:14973021 plus strand	916628
PDZRN4	NM_001164595	NP_001158067	Coding	chr12:41188447 plus strand	916629
PDZRN4	NM_013377	NP_037509	Coding	chr12:41437738 plus strand	916630
PEBP1	NM_002567	NP_002558	Coding	chr12:118136064 plus strand	916631
PEX5	NM_000319	NP_000310	Coding	chr12:7190361 plus strand	916632
PEX5	NM_001131023	NP_001124495	Coding	chr12:7189685 plus strand	916633
PEX5	NM_001131024	NP_001124496	Coding	chr12:7189685 plus strand	916633
PEX5	NM_001131025	NP_001124497	Coding	chr12:7189685 plus strand	916633
PEX5	NM_001131026	NP_001124498	Coding	chr12:7189162 plus strand	916634
PEX5	NM_001300789	NP_001287718	Coding	chr12:7189844 plus strand	916635
PFDN5	NM_002624	NP_002615	Coding	chr12:53295450 plus strand	916636
PFDN5	NM_145897	NP_665904	Coding	chr12:53295450 plus strand	916636
PFKM	NM_000289	NP_000280	Coding	chr12:48119229 plus strand	916637
PFKM	NM_001166686	NP_001160158	Coding	chr12:48105872 plus strand	916638
PFKM	NM_001166687	NP_001160159	Coding	chr12:48122646 plus strand	916639
PFKM	NM_001166688	NP_001160160	Coding	chr12:48122646 plus strand	916639
PGAM5	NM_001170543	NP_001164014	Coding	chr12:132710806 plus strand	916640
PGAM5	NM_001170544	NP_001164015	Coding	chr12:132710806 plus strand	916640
PGAM5	NM_138575	NP_612642	Coding	chr12:132710806 plus strand	916640

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PHB2	NM_001144831	NP_001138303	Coding	chr12:6970753 minus strand	916641
PHB2	NM_001267700	NP_001254629	Coding	chr12:6970753 minus strand	916641
PHC1	NM_004426	NP_004417	Coding	chr12:8914719 plus strand	916642
PHLDA1	NM_007350	NP_031376	Coding	chr12:76031776 minus strand	916643
PIANP	NM_001244014	NP_001230943	Coding	chr12:6700843 minus strand	916644
PIANP	NM_001244015	NP_001230944	Coding	chr12:6700430 minus strand	916645
PIANP	NM_153685	NP_710152	Coding	chr12:6700843 minus strand	916644
PIK3C2G	NM_001288772	NP_001275701	Coding	chr12:18261539 plus strand	916646
PIK3C2G	NM_001288774	NP_001275703	Coding	chr12:18261539 plus strand	916646
PIK3C2G	NM_004570	NP_004561	Coding	chr12:18261539 plus strand	916646
PIP4K2C	NM_001146258	NP_001139730	Coding	chr12:57591158 plus strand	916647
PIP4K2C	NM_001146259	NP_001139731	Coding	chr12:57591158 plus strand	916647
PIP4K2C	NM_001146260	NP_001139732	Coding	chr12:57591158 plus strand	916647
PIP4K2C	NM_024779	NP_079055	Coding	chr12:57591158 plus strand	916647
PITPNM2	NM_001300801	NP_001287730	Coding	chr12:123110489 minus strand	916648
PITPNM2	NM_020845	NP_065896	Coding	chr12:123110428 minus strand	916649
PIWIL1	NM_001190971	NP_001177900	Coding	chr12:130337887 plus strand	916650
PIWIL1	NM_004764	NP_004755	Coding	chr12:130337887 plus strand	916650
PKP2	NM_001005242	NP_001005242	Coding	chr12:32896846 minus strand	916651
PKP2	NM_004572	NP_004563	Coding	chr12:32896846 minus strand	916651
PLA2G1B	NM_000928	NP_000919	Coding	chr12:120327789 minus strand	916652
PLBD1	NM_024829	NP_079105	Coding	chr12:14567857 minus strand	916653
PLBD2	NM_001159727	NP_001153199	Coding	chr12:113358565 plus strand	916654
PLBD2	NM_173542	NP_775813	Coding	chr12:113358565 plus strand	916654
PLCZ1	NM_033123	NP_149114	Coding	chr12:18738059 minus strand	916655
PLEKHA5	NM_001143821	NP_001137293	Coding	chr12:19129691 plus strand	916656
PLEKHA5	NM_001190860	NP_001177789	Coding	chr12:19129691 plus strand	916656
PLEKHA5	NM_001256470	NP_001243399	Coding	chr12:19129691 plus	916656

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				strand	
PLEKHA5	NM_001256787	NP_001243716	Coding	chr12:19205324 plus strand	916657
PLEKHA5	NM_019012	NP_061885	Coding	chr12:19129691 plus strand	916656
PLEKHG6	NM_001144856	NP_001138328	Coding	chr12:6310932 plus strand	916658
PLEKHG6	NM_001144857	NP_001138329	Coding	chr12:6312650 plus strand	916659
PLEKHG6	NM_018173	NP_060643	Coding	chr12:6310435 plus strand	916660
PLEKHG7	NM_001004330	NP_001004330	Coding	chr12:92736488 plus strand	916661
PLXNC1	NM_005761	NP_005752	Coding	chr12:94148722 plus strand	916662
PMCH	NM_002674	NP_002665	Coding	chr12:102197836 minus strand	916663
PMEL	NM_001200053	NP_001186982	Coding	chr12:55966062 minus strand	916664
PMEL	NM_001200054	NP_001186983	Coding	chr12:55966062 minus strand	916664
PMEL	NM_006928	NP_008859	Coding	chr12:55966712 minus strand	916665
POC1B	NM_001199777	NP_001186706	Coding	chr12:89525567 minus strand	916666
POC1B	NM_172240	NP_758440	Coding	chr12:89526262 minus strand	916667
POC1B-GALNT4	NM_001199781	NP_001186710	Coding	chr12:89526262 minus strand	916668
POC1B-GALNT4	NM_001199782	NP_001186711	Coding	chr12:89526262 minus strand	916668
POLE	NM_006231	NP_006222	Coding	chr12:132687524 minus strand	916669
POLR3B	NM_001160708	NP_001154180	Coding	chr12:106358081 plus strand	916670
POLR3B	NM_018082	NP_060552	Coding	chr12:106357657 plus strand	916671
POP5	NM_015918	NP_057002	Coding	chr12:120581394 minus strand	916672
POP5	NM_198202	NP_937845	Coding	chr12:120581398 minus strand	916673
POU6F1	NM_002702	NP_002693	Coding	chr12:51198167 minus strand	916674
PPFIA2	NM_001220473	NP_001207402	Coding	chr12:81758695 minus strand	916675
PPFIA2	NM_001220474	NP_001207403	Coding	chr12:81758695 minus strand	916675
PPFIA2	NM_001220475	NP_001207404	Coding	chr12:81758507 minus strand	916676
PPFIA2	NM_001220476	NP_001207405	Coding	chr12:81758507 minus strand	916676
PPFIA2	NM_001220477	NP_001207406	Coding	chr12:81598371 minus strand	916677
PPFIA2	NM_001220478	NP_001207407	Coding	chr12:81598371 minus strand	916677
PPFIA2	NM_001220479	NP_001207408	Coding	chr12:81369414 minus	916678

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				strand	
PPFIA2	NM_001220480	NP_001207409	Coding	chr12:81369414 minus strand	916678
PPFIA2	NM_001282536	NP_001269465	Coding	chr12:81512391 minus strand	916679
PPFIA2	NM_003625	NP_003616	Coding	chr12:81759330 minus strand	916680
PPFIBP1	NM_001198915	NP_001185844	Coding	chr12:27524111 plus strand	916681
PPFIBP1	NM_001198916	NP_001185845	Coding	chr12:27524111 plus strand	916681
PPFIBP1	NM_003622	NP_003613	Coding	chr12:27524111 plus strand	916681
PPFIBP1	NM_177444	NP_803193	Coding	chr12:27524111 plus strand	916681
PPHLN1	NM_001143787	NP_001137259	Coding	chr12:42326144 plus strand	916682
PPHLN1	NM_001143788	NP_001137260	Coding	chr12:42326144 plus strand	916682
PPHLN1	NM_001143789	NP_001137261	Coding	chr12:42326144 plus strand	916682
PPHLN1	NM_016488	NP_057572	Coding	chr12:42326144 plus strand	916682
PPHLN1	NM_201438	NP_958846	Coding	chr12:42326144 plus strand	916682
PPHLN1	NM_201439	NP_958847	Coding	chr12:42326144 plus strand	916682
PPHLN1	NM_201440	NP_958848	Coding	chr12:42326144 plus strand	916682
PPHLN1	NM_201515	NP_958923	Coding	chr12:42326144 plus strand	916682
PPM1H	NM_020700	NP_065751	Coding	chr12:62934885 minus strand	916683
PPP1CC	NM_001244974	NP_001231903	Coding	chr12:110742978 minus strand	916684
PPP1CC	NM_002710	NP_002701	Coding	chr12:110742978 minus strand	916684
PPP1R12A	NM_001143885	NP_001137357	Coding	chr12:79935455 minus strand	916685
PPP1R12A	NM_001143886	NP_001137358	Coding	chr12:79913911 minus strand	916686
PPP1R12A	NM_001244990	NP_001231919	Coding	chr12:79935455 minus strand	916685
PPP1R12A	NM_001244992	NP_001231921	Coding	chr12:79934951 minus strand	916687
PPP1R12A	NM_002480	NP_002471	Coding	chr12:79935198 minus strand	916688
PPP1R1A	NM_006741	NP_006732	Coding	chr12:54588659 minus strand	916689
PPTC7	NM_139283	NP_644812	Coding	chr12:110583259 minus strand	916690
PRB1	NM_005039	NP_005030	Coding	chr12:11355590 minus strand	916691
PRB1	NM_199353	NP_955385	Coding	chr12:11355590 minus	916691

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				strand	
PRB1	NM_199354	NP_955386	Coding	chr12:11355590 minus strand	916691
PRB2	NM_006248	NP_006239	Coding	chr12:11395564 minus strand	916692
PRB3	NM_006249	NP_006240	Coding	chr12:11269707 minus strand	916693
PRB4	NM_001261399	NP_001248328	Coding	chr12:11310435 minus strand	916694
PRB4	NM_002723	NP_002714	Coding	chr12:11310435 minus strand	916694
PRDM4	NM_012406	NP_036538	Coding	chr12:107761137 minus strand	916695
PRH1	NM_001291314	NP_001278243	Coding	chr12:11171623 minus strand	916696
PRH1	NM_001291315	NP_001278244	Coding	chr12:11171623 minus strand	916696
PRH2	NM_001110213	NP_001103683	Coding	chr12:10929235 plus strand	916697
PRH2	NM_005042	NP_005033	Coding	chr12:10929234 plus strand	916698
PRICKLE1	NM_001144881	NP_001138353	Coding	chr12:42483614 minus strand	916699
PRICKLE1	NM_001144882	NP_001138354	Coding	chr12:42483995 minus strand	916700
PRICKLE1	NM_001144883	NP_001138355	Coding	chr12:42483995 minus strand	916700
PRICKLE1	NM_153026	NP_694571	Coding	chr12:42589770 minus strand	916701
PRIM1	NM_000946	NP_000937	Coding	chr12:56752362 minus strand	916702
PRKAB1	NM_006253	NP_006244	Coding	chr12:119667955 plus strand	916703
PRKAG1	NM_001206709	NP_001193638	Coding	chr12:49018846 minus strand	916704
PRKAG1	NM_001206710	NP_001193639	Coding	chr12:49018748 minus strand	916705
PRKAG1	NM_002733	NP_002724	Coding	chr12:49018846 minus strand	916704
PRMT8	NM_001256536	NP_001243465	Coding	chr12:3381348 plus strand	916706
PRMT8	NM_019854	NP_062828	Coding	chr12:3491197 plus strand	916707
PRPF40B	NM_001031698	NP_001026868	Coding	chr12:49623413 plus strand	916708
PRPF40B	NM_012272	NP_036404	Coding	chr12:49623619 plus strand	916709
PRPH	NM_006262	NP_006253	Coding	chr12:49295125 plus strand	916710
PRR13	NM_001005354	NP_001005354	Coding	chr12:53441648 plus strand	916711
PRR13	NM_018457	NP_060927	Coding	chr12:53441648 plus strand	916711
PRR4	NM_001098538	NP_001092008	Coding	chr12:10849476 minus strand	916712

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PRR4	NM_007244	NP_009175	Coding	chr12:10849476 minus strand	916712
PSMD9	NM_001261400	NP_001248329	Coding	chr12:121888730 plus strand	916713
PSMD9	NM_002813	NP_002804	Coding	chr12:121888730 plus strand	916713
PTGES3	NM_001282601	NP_001269530	Coding	chr12:56688408 minus strand	916714
PTGES3	NM_001282602	NP_001269531	Coding	chr12:56688408 minus strand	916714
PTGES3	NM_001282603	NP_001269532	Coding	chr12:56688408 minus strand	916714
PTGES3	NM_001282604	NP_001269533	Coding	chr12:56688408 minus strand	916714
PTGES3	NM_001282605	NP_001269534	Coding	chr12:56688408 minus strand	916714
PTGES3	NM_006601	NP_006592	Coding	chr12:56688408 minus strand	916714
PTHLH	NM_002820	NP_002811	Coding	chr12:27971983 minus strand	916715
PTHLH	NM_198964	NP_945315	Coding	chr12:27969961 minus strand	916716
PTHLH	NM_198965	NP_945316	Coding	chr12:27971983 minus strand	916715
PTHLH	NM_198966	NP_945317	Coding	chr12:27969961 minus strand	916716
PTMS	NM_002824	NP_002815	Coding	chr12:6766374 plus strand	916717
PTPN11	NM_002834	NP_002825	Coding	chr12:112418731 plus strand	916718
PTPN11	NM_080601	NP_542168	Coding	chr12:112418731 plus strand	916718
PTPN6	NM_002831	NP_002822	Coding	chr12:6951270 plus strand	916719
PTPN6	NM_080548	NP_536858	Coding	chr12:6946576 plus strand	916720
PTPN6	NM_080549	NP_536859	Coding	chr12:6951270 plus strand	916719
PTPRB	NM_001109754	NP_001103224	Coding	chr12:70637440 minus strand	916721
PTPRB	NM_001206971	NP_001193900	Coding	chr12:70609844 minus strand	916722
PTPRB	NM_001206972	NP_001193901	Coding	chr12:70609844 minus strand	916722
PTPRB	NM_002837	NP_002828	Coding	chr12:70609844 minus strand	916722
PTPRO	NM_002848	NP_002839	Coding	chr12:15322256 plus strand	916723
PTPRO	NM_030667	NP_109592	Coding	chr12:15322256 plus strand	916723
PTPRO	NM_030668	NP_109593	Coding	chr12:15546343 plus strand	916724
PTPRO	NM_030669	NP_109594	Coding	chr12:15546343 plus strand	916724
PTPRO	NM_030670	NP_109595	Coding	chr12:15546343 plus strand	916724
PTPRO	NM_030671	NP_109596	Coding	chr12:15546343 plus	916724

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				strand	
PTPRQ	NM_001145026	NP_001138498	Coding	chr12:80444345 plus strand	916725
PTPRR	NM_001207015	NP_001193944	Coding	chr12:70788930 minus strand	916726
PTPRR	NM_001207016	NP_001193945	Coding	chr12:70754759 minus strand	916727
PTPRR	NM_002849	NP_002840	Coding	chr12:70920804 minus strand	916728
PTPRR	NM_130846	NP_570897	Coding	chr12:70754608 minus strand	916729
PUS1	NM_001002019	NP_001002019	Coding	chr12:131929252 plus strand	916730
PUS1	NM_001002020	NP_001002020	Coding	chr12:131929199 plus strand	916731
PUS1	NM_025215	NP_079491	Coding	chr12:131929267 plus strand	916732
PUS7L	NM_001098614	NP_001092084	Coding	chr12:43758773 minus strand	916733
PUS7L	NM_001098615	NP_001092085	Coding	chr12:43758758 minus strand	916734
PUS7L	NM_001271826	NP_001258755	Coding	chr12:43758817 minus strand	916735
PUS7L	NM_031292	NP_112582	Coding	chr12:43758817 minus strand	916735
PWP1	NM_007062	NP_008993	Coding	chr12:107685812 plus strand	916736
PXMP2	NM_018663	NP_061133	Coding	chr12:132687605 plus strand	916737
PXN	NM_001080855	NP_001074324	Coding	chr12:120265771 minus strand	916738
PXN	NM_001243756	NP_001230685	Coding	chr12:120265771 minus strand	916738
PXN	NM_002859	NP_002850	Coding	chr12:120265771 minus strand	916738
PXN	NM_025157	NP_079433	Coding	chr12:120250161 minus strand	916739
PYROXD1	NM_024854	NP_079130	Coding	chr12:21437603 plus strand	916740
PZP	NM_002864	NP_002855	Coding	chr12:9208370 minus strand	916741
R3HDM2	NM_014925	NP_055740	Coding	chr12:57310463 minus strand	916742
RAB21	NM_014999	NP_055814	Coding	chr12:71754877 plus strand	916743
RAB35	NM_001167606	NP_001161078	Coding	chr12:120116839 minus strand	916744
RAB35	NM_006861	NP_006852	Coding	chr12:120116839 minus strand	916744
RAB3IP	NM_001024647	NP_001019818	Coding	chr12:69778951 plus strand	916745
RAB3IP	NM_001278402	NP_001265331	Coding	chr12:69778951 plus strand	916745
RAB3IP	NM_022456	NP_071901	Coding	chr12:69738685 plus	916746

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				strand	
RAB3IP	NM_175623	NP_783322	Coding	chr12:69739389 plus strand	916747
RAB3IP	NM_175624	NP_783323	Coding	chr12:69738685 plus strand	916746
RAB3IP	NM_175625	NP_783324	Coding	chr12:69739389 plus strand	916747
RAB5B	NM_001252036	NP_001238965	Coding	chr12:55973912 plus strand	916748
RAB5B	NM_001252037	NP_001238966	Coding	chr12:55974010 plus strand	916749
RAB5B	NM_002868	NP_002859	Coding	chr12:55974010 plus strand	916749
RACGAP1	NM_001126103	NP_001119575	Coding	chr12:50025524 minus strand	916750
RACGAP1	NM_001126104	NP_001119576	Coding	chr12:50025524 minus strand	916750
RACGAP1	NM_013277	NP_037409	Coding	chr12:50025524 minus strand	916750
RAD51AP1	NM_001130862	NP_001124334	Coding	chr12:4538783 plus strand	916751
RAD51AP1	NM_006479	NP_006470	Coding	chr12:4538783 plus strand	916751
RAD52	NM_001297419	NP_001284348	Coding	chr12:990041 minus strand	916752
RAD52	NM_001297420	NP_001284349	Coding	chr12:933076 minus strand	916753
RAD52	NM_001297421	NP_001284350	Coding	chr12:949722 minus strand	916754
RAD52	NM_001297422	NP_001284351	Coding	chr12:949722 minus strand	916754
RAD52	NM_134424	NP_602296	Coding	chr12:949722 minus strand	916754
RAD9B	NM_001286531	NP_001273460	Coding	chr12:110502199 plus strand	916755
RAD9B	NM_001286532	NP_001273461	Coding	chr12:110502199 plus strand	916755
RAD9B	NM_001286533	NP_001273462	Coding	chr12:110502199 plus strand	916755
RAD9B	NM_001286534	NP_001273463	Coding	chr12:110502342 plus strand	916756
RAD9B	NM_001286535	NP_001273464	Coding	chr12:110502199 plus strand	916755
RAD9B	NM_001286536	NP_001273465	Coding	chr12:110502199 plus strand	916755
RAD9B	NM_152442	NP_689655	Coding	chr12:110502199 plus strand	916755
RAN	NM_001300796	NP_001287725	Coding	chr12:130871993 plus strand	916757
RAN	NM_001300797	NP_001287726	Coding	chr12:130871993 plus strand	916757
RAN	NM_006325	NP_006316	Coding	chr12:130871993 plus strand	916757
RAP1B	NM_001010942	NP_001010942	Coding	chr12:68610838 plus strand	916758
RAP1B	NM_001251917	NP_001238846	Coding	chr12:68610838 plus strand	916758
RAP1B	NM_001251918	NP_001238847	Coding	chr12:68610838 plus strand	916758

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RAP1B	NM_001251921	NP_001238850	Coding	chr12:68610838 plus strand	916758
RAP1B	NM_001251922	NP_001238851	Coding	chr12:68610838 plus strand	916758
RAP1B	NM_015646	NP_056461	Coding	chr12:68610838 plus strand	916758
RAPGEF3	NM_001098531	NP_001092001	Coding	chr12:47759106 minus strand	916759
RAPGEF3	NM_001098532	NP_001092002	Coding	chr12:47758398 minus strand	916760
RAPGEF3	NM_006105	NP_006096	Coding	chr12:47758461 minus strand	916761
RARG	NM_000966	NP_000957	Coding	chr12:53232256 minus strand	916762
RARG	NM_001042728	NP_001036193	Coding	chr12:53220413 minus strand	916763
RARG	NM_001243730	NP_001230659	Coding	chr12:53232256 minus strand	916762
RARG	NM_001243731	NP_001230660	Coding	chr12:53232256 minus strand	916762
RARG	NM_001243732	NP_001230661	Coding	chr12:53220413 minus strand	916763
RASAL1	NM_001193520	NP_001180449	Coding	chr12:113136239 minus strand	916764
RASAL1	NM_001193521	NP_001180450	Coding	chr12:113135754 minus strand	916765
RASAL1	NM_001301202	NP_001288131	Coding	chr12:113135599 minus strand	916766
RASAL1	NM_004658	NP_004649	Coding	chr12:113136239 minus strand	916764
RASSF3	NM_178169	NP_835463	Coding	chr12:64610512 plus strand	916767
RASSF8	NM_001164746	NP_001158218	Coding	chr12:26052557 plus strand	916768
RASSF8	NM_001164747	NP_001158219	Coding	chr12:25973754 plus strand	916769
RASSF8	NM_001164748	NP_001158220	Coding	chr12:25959030 plus strand	916770
RASSF8	NM_007211	NP_009142	Coding	chr12:25959030 plus strand	916770
RASSF9	NM_005447	NP_005438	Coding	chr12:85836540 minus strand	916771
RBM19	NM_001146698	NP_001140170	Coding	chr12:113966371 minus strand	916772
RBM19	NM_001146699	NP_001140171	Coding	chr12:113966371 minus strand	916772
RBM19	NM_016196	NP_057280	Coding	chr12:113966371 minus strand	916772
RBMS2	NM_002898	NP_002889	Coding	chr12:56521824 plus strand	916773
RBP5	NM_031491	NP_113679	Coding	chr12:7128870 minus strand	916774
RDH16	NM_003708	NP_003699	Coding	chr12:56957634 minus strand	916775

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RDH5	NM_001199771	NP_001186700	Coding	chr12:55720366 plus strand	916776
RDH5	NM_002905	NP_002896	Coding	chr12:55720366 plus strand	916776
RECQL	NM_002907	NP_002898	Coding	chr12:21501669 minus strand	916777
RECQL	NM_032941	NP_116559	Coding	chr12:21501669 minus strand	916777
REP15	NM_001029874	NP_001025045	Coding	chr12:27696494 plus strand	916778
RERG	NM_001190726	NP_001177655	Coding	chr12:15221477 minus strand	916779
RERG	NM_032918	NP_116307	Coding	chr12:15221477 minus strand	916779
RERGL	NM_001286201	NP_001273130	Coding	chr12:18090193 minus strand	916780
RERGL	NM_024730	NP_079006	Coding	chr12:18090193 minus strand	916780
RFC5	NM_001130112	NP_001123584	Coding	chr12:118016700 plus strand	916781
RFC5	NM_001206801	NP_001193730	Coding	chr12:118016700 plus strand	916781
RFC5	NM_007370	NP_031396	Coding	chr12:118016700 plus strand	916781
RFC5	NM_181578	NP_853556	Coding	chr12:118016700 plus strand	916781
RFX4	NM_001206691	NP_001193620	Coding	chr12:106601136 plus strand	916782
RFX4	NM_032491	NP_115880	Coding	chr12:106684698 plus strand	916783
RFX4	NM_213594	NP_998759	Coding	chr12:106582906 plus strand	916784
RHEBL1	NM_144593	NP_653194	Coding	chr12:49069992 minus strand	916785
RHNO1	NM_001252499	NP_001239428	Coding	chr12:2877198 plus strand	916786
RHNO1	NM_001252500	NP_001239429	Coding	chr12:2877198 plus strand	916786
RHNO1	NM_001257097	NP_001244026	Coding	chr12:2877198 plus strand	916786
RHNO1	NM_001257098	NP_001244027	Coding	chr12:2877198 plus strand	916786
RHOF	NM_019034	NP_061907	Coding	chr12:121793688 minus strand	916787
RIC8B	NM_018157	NP_060627	Coding	chr12:106774620 plus strand	916788
RILPL1	NM_178314	NP_847884	Coding	chr12:123533718 minus strand	916789
RILPL2	NM_145058	NP_659495	Coding	chr12:123436717 minus strand	916790
RIMBP2	NM_015347	NP_056162	Coding	chr12:130517865 minus strand	916791
RIMKLB	NM_001297776	NP_001284705	Coding	chr12:8697899 plus strand	916792
RIMKLB	NM_020734	NP_065785	Coding	chr12:8699784 plus strand	916793
RITA1	NM_001286215	NP_001273144	Coding	chr12:113185525 plus strand	916794

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RITA1	NM_032848	NP_116237	Coding	chr12:113185525 plus strand	916794
RND1	NM_014470	NP_055285	Coding	chr12:48865870 minus strand	916795
RNF10	NM_014868	NP_055683	Coding	chr12:120534328 plus strand	916796
RNF34	NM_001256858	NP_001243787	Coding	chr12:121400082 plus strand	916797
RNF34	NM_025126	NP_079402	Coding	chr12:121400082 plus strand	916797
RNF34	NM_194271	NP_919247	Coding	chr12:121400117 plus strand	916798
RNF41	NM_001242826	NP_001229755	Coding	chr12:56221701 minus strand	916799
RNF41	NM_005785	NP_005776	Coding	chr12:56221931 minus strand	916800
RNF41	NM_194358	NP_919339	Coding	chr12:56221931 minus strand	916800
RNF41	NM_194359	NP_919340	Coding	chr12:56221969 minus strand	916801
RNFT2	NM_001109903	NP_001103373	Coding	chr12:116738290 plus strand	916802
RNFT2	NM_032814	NP_116203	Coding	chr12:116738290 plus strand	916802
RPAP3	NM_001146075	NP_001139547	Coding	chr12:47706061 minus strand	916803
RPAP3	NM_001146076	NP_001139548	Coding	chr12:47706061 minus strand	916803
RPAP3	NM_024604	NP_078880	Coding	chr12:47706061 minus strand	916803
RPH3A	NM_001143854	NP_001137326	Coding	chr12:112791743 plus strand	916804
RPH3A	NM_014954	NP_055769	Coding	chr12:112791743 plus strand	916804
RPL41	NM_001035267	NP_001030344	Coding	chr12:56116589 plus strand	916805
RPL41	NM_021104	NP_066927	Coding	chr12:56116589 plus strand	916805
RPL6	NM_000970	NP_000961	Coding	chr12:112409639 minus strand	916806
RPL6	NM_001024662	NP_001019833	Coding	chr12:112409639 minus strand	916806
RPLP0	NM_001002	NP_000993	Coding	chr12:120201211 minus strand	916807
RPLP0	NM_053275	NP_444505	Coding	chr12:120201211 minus strand	916807
RPS26	NM_001029	NP_001020	Coding	chr12:56041901 plus strand	916808
RSRC2	NM_023012	NP_075388	Coding	chr12:122527013 minus strand	916809
SARNP	NM_033082	NP_149073	Coding	chr12:55817756 minus strand	916810
SART3	NM_014706	NP_055521	Coding	chr12:108561389 minus strand	916811

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SBNO1	NM_001167856	NP_001161328	Coding	chr12:123350441 minus strand	916812
SBNO1	NM_018183	NP_060653	Coding	chr12:123350441 minus strand	916812
SCAF11	NM_004719	NP_004710	Coding	chr12:45990618 minus strand	916813
SCARB1	NM_001082959	NP_001076428	Coding	chr12:124863973 minus strand	916814
SCARB1	NM_005505	NP_005496	Coding	chr12:124863973 minus strand	916814
SCN8A	NM_001177984	NP_001171455	Coding	chr12:51591235 plus strand	916815
SCN8A	NM_014191	NP_055006	Coding	chr12:51591235 plus strand	916815
SCNN1A	NM_001038	NP_001029	Coding	chr12:6375739 minus strand	916816
SCNN1A	NM_001159575	NP_001153047	Coding	chr12:6377357 minus strand	916817
SCNN1A	NM_001159576	NP_001153048	Coding	chr12:6375224 minus strand	916818
SCYL2	NM_017988	NP_060458	Coding	chr12:100267770 plus strand	916819
SDR9C7	NM_148897	NP_683695	Coding	chr12:56934405 minus strand	916820
SDS	NM_006843	NP_006834	Coding	chr12:113403887 minus strand	916821
SDSL	NM_138432	NP_612441	Coding	chr12:113422410 plus strand	916822
SELPLG	NM_001206609	NP_001193538	Coding	chr12:108632078 minus strand	916823
SELPLG	NM_003006	NP_002997	Coding	chr12:108633894 minus strand	916824
SENP1	NM_001267594	NP_001254523	Coding	chr12:48106308 minus strand	916825
SENP1	NM_001267595	NP_001254524	Coding	chr12:48105992 minus strand	916826
SETD1B	NM_015048	NP_055863	Coding	chr12:121804731 plus strand	916827
SETD8	NM_020382	NP_065115	Coding	chr12:123384156 plus strand	916828
SFSWAP	NM_001261411	NP_001248340	Coding	chr12:131711086 plus strand	916829
SFSWAP	NM_004592	NP_004583	Coding	chr12:131711086 plus strand	916829
SH2B3	NM_001291424	NP_001278353	Coding	chr12:111434861 plus strand	916830
SH2B3	NM_005475	NP_005466	Coding	chr12:111405947 plus strand	916831
SHMT2	NM_001166356	NP_001159828	Coding	chr12:57229572 plus strand	916832
SHMT2	NM_001166357	NP_001159829	Coding	chr12:57230359 plus strand	916833
SHMT2	NM_001166358	NP_001159830	Coding	chr12:57230044 plus strand	916834

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SHMT2	NM_001166359	NP_001159831	Coding	chr12:57230327 plus strand	916835
SHMT2	NM_005412	NP_005403	Coding	chr12:57229572 plus strand	916832
SIRT4	NM_012240	NP_036372	Coding	chr12:120302320 plus strand	916836
SLC11A2	NM_000617	NP_000608	Coding	chr12:51026416 minus strand	916837
SLC11A2	NM_001174125	NP_001167596	Coding	chr12:51028275 minus strand	916838
SLC11A2	NM_001174126	NP_001167597	Coding	chr12:51026416 minus strand	916837
SLC11A2	NM_001174127	NP_001167598	Coding	chr12:51026416 minus strand	916837
SLC11A2	NM_001174128	NP_001167599	Coding	chr12:51026416 minus strand	916837
SLC11A2	NM_001174129	NP_001167600	Coding	chr12:51026141 minus strand	916839
SLC11A2	NM_001174130	NP_001167601	Coding	chr12:51009270 minus strand	916840
SLC15A4	NM_145648	NP_663623	Coding	chr12:128823996 minus strand	916841
SLC15A5	NM_001170798	NP_001164269	Coding	chr12:16277685 minus strand	916842
SLC16A7	NM_001270622	NP_001257551	Coding	chr12:59596039 plus strand	916843
SLC16A7	NM_001270623	NP_001257552	Coding	chr12:59596039 plus strand	916843
SLC16A7	NM_004731	NP_004722	Coding	chr12:59689336 plus strand	916844
SLC17A8	NM_001145288	NP_001138760	Coding	chr12:100357078 plus strand	916845
SLC17A8	NM_139319	NP_647480	Coding	chr12:100357078 plus strand	916845
SLC25A3	NM_002635	NP_002626	Coding	chr12:98593624 plus strand	916846
SLC25A3	NM_005888	NP_005879	Coding	chr12:98593624 plus strand	916846
SLC25A3	NM_213611	NP_998776	Coding	chr12:98593624 plus strand	916846
SLC26A10	NM_133489	NP_597996	Coding	chr12:57619909 plus strand	916847
SLC2A13	NM_052885	NP_443117	Coding	chr12:40105859 minus strand	916848
SLC2A14	NM_001286233	NP_001273162	Coding	chr12:7873039 minus strand	916849
SLC2A14	NM_001286234	NP_001273163	Coding	chr12:7873039 minus strand	916849
SLC2A14	NM_001286235	NP_001273164	Coding	chr12:7873039 minus strand	916849
SLC2A14	NM_001286236	NP_001273165	Coding	chr12:7873039 minus strand	916849
SLC2A14	NM_001286237	NP_001273166	Coding	chr12:7891196 minus strand	916850

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SLC2A14	NM_153449	NP_703150	Coding	chr12:7873039 minus strand	916849
SLC2A3	NM_006931	NP_008862	Coding	chr12:7936296 minus strand	916851
SLC35E3	NM_018656	NP_061126	Coding	chr12:68746155 plus strand	916852
SLC38A1	NM_001077484	NP_001070952	Coding	chr12:46269425 minus strand	916853
SLC38A1	NM_001278387	NP_001265316	Coding	chr12:46269425 minus strand	916853
SLC38A1	NM_001278388	NP_001265317	Coding	chr12:46269425 minus strand	916853
SLC38A1	NM_001278389	NP_001265318	Coding	chr12:46266495 minus strand	916854
SLC38A1	NM_001278390	NP_001265319	Coding	chr12:46267987 minus strand	916855
SLC38A1	NM_030674	NP_109599	Coding	chr12:46269425 minus strand	916853
SLC38A2	NM_018976	NP_061849	Coding	chr12:46372862 minus strand	916856
SLC38A4	NM_001143824	NP_001137296	Coding	chr12:46825997 minus strand	916857
SLC38A4	NM_018018	NP_060488	Coding	chr12:46825997 minus strand	916857
SLC39A5	NM_001135195	NP_001128667	Coding	chr12:56230716 plus strand	916858
SLC39A5	NM_173596	NP_775867	Coding	chr12:56230035 plus strand	916859
SLC41A2	NM_032148	NP_115524	Coding	chr12:104928694 minus strand	916860
SLC48A1	NM_017842	NP_060312	Coding	chr12:47773183 plus strand	916861
SLC4A8	NM_001039960	NP_001035049	Coding	chr12:51424809 plus strand	916862
SLC4A8	NM_001258401	NP_001245330	Coding	chr12:51391316 plus strand	916863
SLC4A8	NM_001258402	NP_001245331	Coding	chr12:51424809 plus strand	916862
SLC4A8	NM_001258403	NP_001245332	Coding	chr12:51425116 plus strand	916864
SLC4A8	NM_001267615	NP_001254544	Coding	chr12:51391316 plus strand	916863
SLC5A8	NM_145913	NP_666018	Coding	chr12:101210238 minus strand	916865
SLC6A12	NM_001122847	NP_001116319	Coding	chr12:213697 minus strand	916866
SLC6A12	NM_001122848	NP_001116320	Coding	chr12:214205 minus strand	916867
SLC6A12	NM_001206931	NP_001193860	Coding	chr12:214205 minus strand	916867
SLC6A12	NM_003044	NP_003035	Coding	chr12:213447 minus strand	916868
SLC6A13	NM_001190997	NP_001177926	Coding	chr12:262873 minus strand	916869
SLC6A13	NM_001243392	NP_001230321	Coding	chr12:262873 minus strand	916869
SLC6A13	NM_016615	NP_057699	Coding	chr12:262873 minus strand	916869
SLC6A15	NM_001146335	NP_001139807	Coding	chr12:84912829 minus	916870

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				strand	
SLC6A15	NM_018057	NP_060527	Coding	chr12:84912829 minus strand	916870
SLC6A15	NM_182767	NP_877499	Coding	chr12:84912829 minus strand	916870
SLC8B1	NM_024959	NP_079235	Coding	chr12:113335120 minus strand	916871
SLCO1A2	NM_021094	NP_066580	Coding	chr12:21334898 minus strand	916872
SLCO1A2	NM_134431	NP_602307	Coding	chr12:21395437 minus strand	916873
SLCO1B1	NM_006446	NP_006437	Coding	chr12:21131193 plus strand	916874
SLCO1B3	NM_019844	NP_062818	Coding	chr12:20810703 plus strand	916875
SLCO1B7	NM_001009562	NP_001009562	Coding	chr12:21015695 plus strand	916876
SLCO1C1	NM_001145944	NP_001139416	Coding	chr12:20695464 plus strand	916877
SLCO1C1	NM_001145945	NP_001139417	Coding	chr12:20695354 plus strand	916878
SLCO1C1	NM_001145946	NP_001139418	Coding	chr12:20695354 plus strand	916878
SLCO1C1	NM_017435	NP_059131	Coding	chr12:20695464 plus strand	916877
SMAGP	NM_001031628	NP_001026798	Coding	chr12:51270418 minus strand	916879
SMAGP	NM_001033873	NP_001029045	Coding	chr12:51270210 minus strand	916880
SMARCC2	NM_001130420	NP_001123892	Coding	chr12:56189567 minus strand	916881
SMARCC2	NM_003075	NP_003066	Coding	chr12:56189567 minus strand	916881
SMARCC2	NM_139067	NP_620706	Coding	chr12:56189567 minus strand	916881
SMARCD1	NM_003076	NP_003067	Coding	chr12:50085199 plus strand	916882
SMARCD1	NM_139071	NP_620710	Coding	chr12:50085199 plus strand	916882
SMCO2	NM_001145010	NP_001138482	Coding	chr12:27466809 plus strand	916883
SMCO3	NM_001013698	NP_001013720	Coding	chr12:14814182 minus strand	916884
SMUG1	NM_001243787	NP_001230716	Coding	chr12:54188994 minus strand	916885
SMUG1	NM_001243788	NP_001230717	Coding	chr12:54188994 minus strand	916885
SMUG1	NM_001243789	NP_001230718	Coding	chr12:54188957 minus strand	916886
SMUG1	NM_001243790	NP_001230719	Coding	chr12:54188957 minus strand	916886
SMUG1	NM_001243791	NP_001230720	Coding	chr12:54188994 minus strand	916885
SMUG1	NM_014311	NP_055126	Coding	chr12:54188994 minus	916885

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				strand	
SNRNP35	NM_022717	NP_073208	Coding	chr12:123458103 plus strand	916887
SNRNP35	NM_180699	NP_851030	Coding	chr12:123459703 plus strand	916888
SNRPF	NM_003095	NP_003086	Coding	chr12:95858930 plus strand	916889
SOAT2	NM_003578	NP_003569	Coding	chr12:53103489 plus strand	916890
SOCS2	NM_001270467	NP_001257396	Coding	chr12:93570398 plus strand	916891
SOCS2	NM_001270468	NP_001257397	Coding	chr12:93570980 plus strand	916892
SOCS2	NM_001270469	NP_001257398	Coding	chr12:93571680 plus strand	916893
SOCS2	NM_001270470	NP_001257399	Coding	chr12:93571680 plus strand	916893
SOCS2	NM_001270471	NP_001257400	Coding	chr12:93572525 plus strand	916894
SOCS2	NM_003877	NP_003868	Coding	chr12:93569821 plus strand	916895
SOX5	NM_001261414	NP_001248343	Coding	chr12:24562449 minus strand	916896
SOX5	NM_001261415	NP_001248344	Coding	chr12:23951032 minus strand	916897
SOX5	NM_006940	NP_008871	Coding	chr12:23949703 minus strand	916898
SOX5	NM_152989	NP_694534	Coding	chr12:24562449 minus strand	916896
SOX5	NM_178010	NP_821078	Coding	chr12:23584612 minus strand	916899
SP1	NM_001251825	NP_001238754	Coding	chr12:53380194 plus strand	916900
SP1	NM_003109	NP_003100	Coding	chr12:53380643 plus strand	916901
SP1	NM_138473	NP_612482	Coding	chr12:53380194 plus strand	916900
SP7	NM_001173467	NP_001166938	Coding	chr12:53336383 minus strand	916902
SP7	NM_001300837	NP_001287766	Coding	chr12:53344793 minus strand	916903
SP7	NM_152860	NP_690599	Coding	chr12:53335753 minus strand	916904
SPATS2	NM_001293285	NP_001280214	Coding	chr12:49366904 plus strand	916905
SPATS2	NM_001293286	NP_001280215	Coding	chr12:49366904 plus strand	916905
SPATS2	NM_023071	NP_075559	Coding	chr12:49366904 plus strand	916905
SPIC	NM_152323	NP_689536	Coding	chr12:101476878 plus strand	916906
SPPL3	NM_139015	NP_620584	Coding	chr12:120904352 minus strand	916907
SPRYD3	NM_032840	NP_116229	Coding	chr12:53079420 minus	916908

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				strand	
SPRYD4	NM_207344	NP_997227	Coding	chr12:56468516 plus strand	916909
SPSB2	NM_001146316	NP_001139788	Coding	chr12:6873285 minus strand	916910
SPSB2	NM_032641	NP_116030	Coding	chr12:6873357 minus strand	916911
SPX	NM_030572	NP_085049	Coding	chr12:21526321 plus strand	916912
SRGAP1	NM_020762	NP_065813	Coding	chr12:63844760 plus strand	916913
SRRM4	NM_194286	NP_919262	Coding	chr12:118981494 plus strand	916914
SRSF9	NM_003769	NP_003760	Coding	chr12:120469755 minus strand	916915
SSH1	NM_001161330	NP_001154802	Coding	chr12:108857583 minus strand	916916
SSH1	NM_001161331	NP_001154803	Coding	chr12:108827551 minus strand	916917
SSH1	NM_018984	NP_061857	Coding	chr12:108857583 minus strand	916916
SSPN	NM_001135823	NP_001129295	Coding	chr12:26195335 plus strand	916918
SSPN	NM_005086	NP_005077	Coding	chr12:26195572 plus strand	916919
ST8SIA1	NM_003034	NP_003025	Coding	chr12:22334714 minus strand	916920
STAB2	NM_017564	NP_060034	Coding	chr12:103587290 plus strand	916921
STAC3	NM_001286256	NP_001273185	Coding	chr12:57251193 minus strand	916922
STAC3	NM_001286257	NP_001273186	Coding	chr12:57251193 minus strand	916922
STAC3	NM_145064	NP_659501	Coding	chr12:57251193 minus strand	916922
STAT2	NM_005419	NP_005410	Coding	chr12:56360253 minus strand	916923
STAT2	NM_198332	NP_938146	Coding	chr12:56360253 minus strand	916923
STAT6	NM_001178078	NP_001171549	Coding	chr12:57111413 minus strand	916924
STAT6	NM_001178079	NP_001171550	Coding	chr12:57110306 minus strand	916925
STAT6	NM_001178080	NP_001171551	Coding	chr12:57111413 minus strand	916924
STAT6	NM_001178081	NP_001171552	Coding	chr12:57111413 minus strand	916924
STAT6	NM_003153	NP_003144	Coding	chr12:57111413 minus strand	916924
STK38L	NM_015000	NP_055815	Coding	chr12:27244144 plus strand	916926
STRAP	NM_007178	NP_009109	Coding	chr12:15882353 plus strand	916927
STX2	NM_001980	NP_001971	Coding	chr12:130839274 minus	916928

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				strand	
STX2	NM_194356	NP_919337	Coding	chr12:130839274 minus strand	916928
STYK1	NM_018423	NP_060893	Coding	chr12:10674292 minus strand	916929
SUDS3	NM_022491	NP_071936	Coding	chr12:118376552 plus strand	916930
SUOX	NM_000456	NP_000447	Coding	chr12:55997258 plus strand	916931
SUOX	NM_001032386	NP_001027558	Coding	chr12:55997258 plus strand	916931
SUOX	NM_001032387	NP_001027559	Coding	chr12:55997258 plus strand	916931
SVOP	NM_018711	NP_061181	Coding	chr12:109021240 minus strand	916932
SYCP3	NM_001177948	NP_001171419	Coding	chr12:101739472 minus strand	916933
SYCP3	NM_001177949	NP_001171420	Coding	chr12:101739472 minus strand	916933
SYCP3	NM_153694	NP_710161	Coding	chr12:101739472 minus strand	916933
SYT1	NM_001135805	NP_001129277	Coding	chr12:78863992 plus strand	916934
SYT1	NM_001135806	NP_001129278	Coding	chr12:79045652 plus strand	916935
SYT1	NM_001291901	NP_001278830	Coding	chr12:78864668 plus strand	916936
SYT1	NM_005639	NP_005630	Coding	chr12:78864668 plus strand	916936
SYT10	NM_198992	NP_945343	Coding	chr12:33439819 minus strand	916937
TAC3	NM_001178054	NP_001171525	Coding	chr12:57016560 minus strand	916938
TAC3	NM_013251	NP_037383	Coding	chr12:57016560 minus strand	916938
TAOK3	NM_016281	NP_057365	Coding	chr12:118372945 minus strand	916939
TAPBPL	NM_018009	NP_060479	Coding	chr12:6452010 plus strand	916940
TARBP2	NM_004178	NP_004169	Coding	chr12:53500920 plus strand	916941
TARBP2	NM_134323	NP_599150	Coding	chr12:53500920 plus strand	916941
TARBP2	NM_134324	NP_599151	Coding	chr12:53501592 plus strand	916942
TAS2R10	NM_023921	NP_076410	Coding	chr12:10826269 minus strand	916943
TAS2R13	NM_023920	NP_076409	Coding	chr12:10909562 minus strand	916944
TAS2R14	NM_023922	NP_076411	Coding	chr12:10939207 minus strand	916945
TAS2R19	NM_176888	NP_795369	Coding	chr12:11022571 minus strand	916946
TAS2R20	NM_176889	NP_795370	Coding	chr12:10997875 minus strand	916947

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TAS2R30	NM_001097643	NP_001091112	Coding	chr12:11134244 minus strand	916948
TAS2R31	NM_176885	NP_795366	Coding	chr12:11031407 minus strand	916949
TAS2R42	NM_181429	NP_852094	Coding	chr12:11186937 minus strand	916950
TAS2R43	NM_176884	NP_795365	Coding	chr12:11092313 minus strand	916951
TAS2R46	NM_176887	NP_795368	Coding	chr12:11062294 minus strand	916952
TAS2R50	NM_176890	NP_795371	Coding	chr12:10986912 minus strand	916953
TAS2R7	NM_023919	NP_076408	Coding	chr12:10802627 minus strand	916954
TAS2R8	NM_023918	NP_076407	Coding	chr12:10806980 minus strand	916955
TAS2R9	NM_023917	NP_076406	Coding	chr12:10810168 minus strand	916956
TBC1D15	NM_001146213	NP_001139685	Coding	chr12:71839706 plus strand	916957
TBC1D15	NM_001146214	NP_001139686	Coding	chr12:71839706 plus strand	916957
TBC1D15	NM_022771	NP_073608	Coding	chr12:71839706 plus strand	916957
TBC1D30	NM_015279	NP_056094	Coding	chr12:64824571 plus strand	916958
TBK1	NM_013254	NP_037386	Coding	chr12:64452059 plus strand	916959
TBX3	NM_005996	NP_005987	Coding	chr12:114684164 minus strand	916960
TBX3	NM_016569	NP_057653	Coding	chr12:114684164 minus strand	916960
TBX5	NM_000192	NP_000183	Coding	chr12:114408442 minus strand	916961
TBX5	NM_080717	NP_542448	Coding	chr12:114408442 minus strand	916961
TBX5	NM_181486	NP_852259	Coding	chr12:114406163 minus strand	916962
TCHP	NM_001143852	NP_001137324	Coding	chr12:109900273 plus strand	916963
TCHP	NM_032300	NP_115676	Coding	chr12:109900517 plus strand	916964
TCP11L2	NM_001286262	NP_001273191	Coding	chr12:106302790 plus strand	916965
TCP11L2	NM_152772	NP_689985	Coding	chr12:106302790 plus strand	916965
TCTN1	NM_001082537	NP_001076006	Coding	chr12:110614026 plus strand	916966
TCTN1	NM_001082538	NP_001076007	Coding	chr12:110614026 plus strand	916966
TCTN1	NM_001173975	NP_001167446	Coding	chr12:110614106 plus strand	916967
TCTN1	NM_001173976	NP_001167447	Coding	chr12:110614026 plus strand	916966

【０９１０】

TCTN1	NM_024549	NP_078825	Coding	chr12:110614026 plus strand	916966
TCTN2	NM_001143850	NP_001137322	Coding	chr12:123671112 plus strand	916968
TCTN2	NM_024809	NP_079085	Coding	chr12:123671112 plus strand	916968
TDG	NM_003211	NP_003202	Coding	chr12:103965814 plus strand	916969
TEAD4	NM_003213	NP_003204	Coding	chr12:2959311 plus strand	916970
TEAD4	NM_201441	NP_958849	Coding	chr12:2959311 plus strand	916970
TEAD4	NM_201443	NP_958851	Coding	chr12:2959581 plus strand	916971
TENC1	NM_015319	NP_056134	Coding	chr12:53048948 plus strand	916972
TENC1	NM_170754	NP_736610	Coding	chr12:53050050 plus strand	916973
TENC1	NM_198316	NP_938072	Coding	chr12:53047025 plus strand	916974
TESC	NM_001168325	NP_001161797	Coding	chr12:117099446 minus strand	916975
TESC	NM_017899	NP_060369	Coding	chr12:117099446 minus strand	916975
TESPA1	NM_001098815	NP_001092285	Coding	chr12:54981838 minus strand	916976
TESPA1	NM_001136030	NP_001129502	Coding	chr12:54984746 minus strand	916977
TESPA1	NM_001261844	NP_001248773	Coding	chr12:54973732 minus strand	916978
TESPA1	NM_014796	NP_055611	Coding	chr12:54973732 minus strand	916978
TFCP2	NM_001173452	NP_001166923	Coding	chr12:51173143 minus strand	916979
TFCP2	NM_001173453	NP_001166924	Coding	chr12:51173143 minus strand	916979
TFCP2	NM_005653	NP_005644	Coding	chr12:51173143 minus strand	916979
THAP2	NM_031435	NP_113623	Coding	chr12:71663896 plus strand	916980
TIMELESS	NM_003920	NP_003911	Coding	chr12:56449416 minus strand	916981
TM7SF3	NM_016551	NP_057635	Coding	chr12:27014406 minus strand	916982
TMBIM4	NM_001282606	NP_001269535	Coding	chr12:66170072 minus strand	916983
TMBIM4	NM_001282609	NP_001269538	Coding	chr12:66170072 minus strand	916983
TMBIM4	NM_001282610	NP_001269539	Coding	chr12:66170072 minus strand	916983
TMBIM4	NM_016056	NP_057140	Coding	chr12:66170072 minus strand	916983
TMBIM6	NM_001098576	NP_001092046	Coding	chr12:49741808 plus strand	916984
TMBIM6	NM_003217	NP_003208	Coding	chr12:49741509 plus strand	916985

【０９１１】

TMCC3	NM_001301036	NP_001287965	Coding	chr12:94616151 minus strand	916986
TMCC3	NM_020698	NP_065749	Coding	chr12:94650562 minus strand	916987
TMED2	NM_006815	NP_006806	Coding	chr12:123584528 plus strand	916988
TMEM106C	NM_001143841	NP_001137313	Coding	chr12:47963546 plus strand	916989
TMEM106C	NM_001143842	NP_001137314	Coding	chr12:47963546 plus strand	916989
TMEM106C	NM_001143843	NP_001137315	Coding	chr12:47963546 plus strand	916989
TMEM106C	NM_024056	NP_076961	Coding	chr12:47963546 plus strand	916989
TMEM116	NM_001193453	NP_001180382	Coding	chr12:112013219 minus strand	916990
TMEM116	NM_001193531	NP_001180460	Coding	chr12:112013219 minus strand	916990
TMEM116	NM_001294314	NP_001281243	Coding	chr12:112013219 minus strand	916990
TMEM116	NM_138341	NP_612350	Coding	chr12:112013219 minus strand	916990
TMEM117	NM_001286211	NP_001273140	Coding	chr12:43835860 plus strand	916991
TMEM117	NM_001286212	NP_001273141	Coding	chr12:43835860 plus strand	916991
TMEM117	NM_001286213	NP_001273142	Coding	chr12:43835860 plus strand	916991
TMEM117	NM_032256	NP_115632	Coding	chr12:43835860 plus strand	916991
TMEM119	NM_181724	NP_859075	Coding	chr12:108598118 minus strand	916992
TMEM120B	NM_001080825	NP_001074294	Coding	chr12:121712751 plus strand	916993
TMEM132B	NM_001286219	NP_001273148	Coding	chr12:125622451 plus strand	916994
TMEM132B	NM_052907	NP_443139	Coding	chr12:125326615 plus strand	916995
TMEM132C	NM_001136103	NP_001129575	Coding	chr12:128267402 plus strand	916996
TMEM132D	NM_133448	NP_597705	Coding	chr12:129903667 minus strand	916997
TMEM19	NM_018279	NP_060749	Coding	chr12:71686097 plus strand	916998
TMEM194A	NM_001130963	NP_001124435	Coding	chr12:57078791 minus strand	916999
TMEM194A	NM_015257	NP_056072	Coding	chr12:57078791 minus strand	916999
TMEM233	NM_001136534	NP_001130006	Coding	chr12:119593458 plus strand	917000
TMEM263	NM_152261	NP_689474	Coding	chr12:106955765 plus strand	917001
TMEM5	NM_001278237	NP_001265166	Coding	chr12:63780125 plus strand	917002

【０９１２】

TMEM5	NM_014254	NP_055069	Coding	chr12:63779802 plus strand	917003
TMEM52B	NM_001079815	NP_001073283	Coding	chr12:10170598 plus strand	917004
TMEM52B	NM_153022	NP_694567	Coding	chr12:10178957 plus strand	917005
TMPO	NM_001032283	NP_001027454	Coding	chr12:98515572 plus strand	917006
TMPO	NM_001032284	NP_001027455	Coding	chr12:98515572 plus strand	917006
TMPO	NM_003276	NP_003267	Coding	chr12:98515572 plus strand	917006
TMPRSS12	NM_182559	NP_872365	Coding	chr12:50842917 plus strand	917007
TMTC1	NM_001193451	NP_001180380	Coding	chr12:29783810 minus strand	917008
TMTC1	NM_175861	NP_787057	Coding	chr12:29784759 minus strand	917009
TMTC2	NM_152588	NP_689801	Coding	chr12:82687154 plus strand	917010
TMTC3	NM_181783	NP_861448	Coding	chr12:88142295 plus strand	917011
TNFRSF1A	NM_001065	NP_001056	Coding	chr12:6342117 minus strand	917012
TPCN1	NM_001143819	NP_001137291	Coding	chr12:113221437 plus strand	917013
TPCN1	NM_001301214	NP_001288143	Coding	chr12:113244260 plus strand	917014
TPCN1	NM_017901	NP_060371	Coding	chr12:113221437 plus strand	917013
TPH2	NM_173353	NP_775489	Coding	chr12:71938845 plus strand	917015
TPI1	NM_000365	NP_000356	Coding	chr12:6867528 plus strand	917016
TPI1	NM_001159287	NP_001152759	Coding	chr12:6867419 plus strand	917017
TPI1	NM_001258026	NP_001244955	Coding	chr12:6868113 plus strand	917018
TRAFD1	NM_001143906	NP_001137378	Coding	chr12:112125544 plus strand	917019
TRAFD1	NM_006700	NP_006691	Coding	chr12:112125544 plus strand	917019
TRHDE	NM_013381	NP_037513	Coding	chr12:72272748 plus strand	917020
TRIAP1	NM_016399	NP_057483	Coding	chr12:120446412 minus strand	917021
TROAP	NM_001100620	NP_001094090	Coding	chr12:49323187 plus strand	917022
TROAP	NM_001278324	NP_001265253	Coding	chr12:49323187 plus strand	917022
TROAP	NM_005480	NP_005471	Coding	chr12:49323187 plus strand	917022
TRPV4	NM_001177428	NP_001170899	Coding	chr12:109814827 minus strand	917023
TRPV4	NM_001177431	NP_001170902	Coding	chr12:109814796 minus strand	917024

【０９１３】

TRPV4	NM_001177433	NP_001170904	Coding	chr12:109814827 minus strand	917023
TRPV4	NM_021625	NP_067638	Coding	chr12:109833407 minus strand	917025
TRPV4	NM_147204	NP_671737	Coding	chr12:109814827 minus strand	917023
TSFM	NM_001172695	NP_001166166	Coding	chr12:57782744 plus strand	917026
TSFM	NM_001172696	NP_001166167	Coding	chr12:57782744 plus strand	917026
TSFM	NM_001172697	NP_001166168	Coding	chr12:57782744 plus strand	917026
TSFM	NM_005726	NP_005717	Coding	chr12:57782744 plus strand	917026
TSPAN11	NM_001080509	NP_001073978	Coding	chr12:30926903 plus strand	917027
TSPAN19	NM_001100917	NP_001094387	Coding	chr12:85036277 minus strand	917028
TSPAN31	NM_005981	NP_005972	Coding	chr12:57745000 plus strand	917029
TSPAN8	NM_004616	NP_004607	Coding	chr12:71157999 minus strand	917030
TSPAN9	NM_001168320	NP_001161792	Coding	chr12:3077354 plus strand	917031
TSPAN9	NM_006675	NP_006666	Coding	chr12:3077354 plus strand	917031
TUBA1A	NM_001270399	NP_001257328	Coding	chr12:49189324 minus strand	917032
TUBA1A	NM_001270400	NP_001257329	Coding	chr12:49189324 minus strand	917032
TUBA1A	NM_006009	NP_006000	Coding	chr12:49189324 minus strand	917032
TUBA1B	NM_006082	NP_006073	Coding	chr12:49131521 minus strand	917033
TUBA1C	NM_032704	NP_116093	Coding	chr12:49265081 plus strand	917034
TULP3	NM_001160408	NP_001153880	Coding	chr12:2890866 plus strand	917035
TULP3	NM_003324	NP_003315	Coding	chr12:2890866 plus strand	917035
TWF1	NM_001242397	NP_001229326	Coding	chr12:43806375 minus strand	917036
TWF1	NM_002822	NP_002813	Coding	chr12:43806375 minus strand	917036
TXNRD1	NM_001093771	NP_001087240	Coding	chr12:104215778 plus strand	917037
TXNRD1	NM_001261445	NP_001248374	Coding	chr12:104286681 plus strand	917038
TXNRD1	NM_001261446	NP_001248375	Coding	chr12:104286681 plus strand	917038
TXNRD1	NM_003330	NP_003321	Coding	chr12:104286681 plus strand	917038
TXNRD1	NM_182729	NP_877393	Coding	chr12:104286681 plus strand	917038
TXNRD1	NM_182742	NP_877419	Coding	chr12:104286681 plus strand	917038
TXNRD1	NM_182743	NP_877420	Coding	chr12:104286681 plus	917038

【０９１４】

				strand	
UBC	NM_021009	NP_066289	Coding	chr12:124915041 minus strand	917039
UBE2N	NM_003348	NP_003339	Coding	chr12:93442250 minus strand	917040
UBE3B	NM_001270449	NP_001257378	Coding	chr12:109477622 plus strand	917041
UBE3B	NM_001270450	NP_001257379	Coding	chr12:109477622 plus strand	917041
UBE3B	NM_001270451	NP_001257380	Coding	chr12:109477622 plus strand	917041
UBE3B	NM_130466	NP_569733	Coding	chr12:109477622 plus strand	917041
UBE3B	NM_183415	NP_904324	Coding	chr12:109477622 plus strand	917041
UHRF1BP1L	NM_001006947	NP_001006948	Coding	chr12:100142864 minus strand	917042
UHRF1BP1L	NM_015054	NP_055869	Coding	chr12:100142864 minus strand	917042
ULK1	NM_003565	NP_003556	Coding	chr12:131894733 plus strand	917043
UNC119B	NM_001080533	NP_001074002	Coding	chr12:120710434 plus strand	917044
UNG	NM_003362	NP_003353	Coding	chr12:109098117 plus strand	917045
UNG	NM_080911	NP_550433	Coding	chr12:109097593 plus strand	917046
USP15	NM_001252078	NP_001239007	Coding	chr12:62260339 plus strand	917047
USP15	NM_001252079	NP_001239008	Coding	chr12:62260339 plus strand	917047
USP15	NM_006313	NP_006304	Coding	chr12:62260339 plus strand	917047
USP30	NM_001301175	NP_001288104	Coding	chr12:109023088 plus strand	917048
USP30	NM_032663	NP_116052	Coding	chr12:109052569 plus strand	917049
USP44	NM_001042403	NP_001035862	Coding	chr12:95548844 minus strand	917050
USP44	NM_001278393	NP_001265322	Coding	chr12:95548272 minus strand	917051
USP44	NM_032147	NP_115523	Coding	chr12:95551490 minus strand	917052
USP5	NM_001098536	NP_001092006	Coding	chr12:6852120 plus strand	917053
USP5	NM_003481	NP_003472	Coding	chr12:6852126 plus strand	917054
UTP20	NM_014503	NP_055318	Coding	chr12:101280126 plus strand	917055
VAMP1	NM_001297438	NP_001284367	Coding	chr12:6470899 minus strand	917056
VAMP1	NM_014231	NP_055046	Coding	chr12:6470899 minus strand	917056
VAMP1	NM_016830	NP_058439	Coding	chr12:6470899 minus strand	917056

【０９１５】

VAMP1	NM_199245	NP_954740	Coding	chr12:6470899 minus strand	917056
VDR	NM_000376	NP_000367	Coding	chr12:47905031 minus strand	917057
VDR	NM_001017535	NP_001017535	Coding	chr12:47905031 minus strand	917057
VDR	NM_001017536	NP_001017536	Coding	chr12:47905031 minus strand	917057
VEZT	NM_017599	NP_060069	Coding	chr12:95217745 plus strand	917058
VPS29	NM_001282150	NP_001269079	Coding	chr12:110502140 minus strand	917059
VPS29	NM_001282151	NP_001269080	Coding	chr12:110502140 minus strand	917059
VPS29	NM_016226	NP_057310	Coding	chr12:110502140 minus strand	917059
VPS29	NM_057180	NP_476528	Coding	chr12:110502140 minus strand	917059
VPS33A	NM_022916	NP_075067	Coding	chr12:122266521 minus strand	917060
VPS37B	NM_024667	NP_078943	Coding	chr12:122896165 minus strand	917061
VSIG10	NM_019086	NP_061959	Coding	chr12:118104005 minus strand	917062
VWF	NM_000552	NP_000543	Coding	chr12:6124670 minus strand	917063
WBP11	NM_016312	NP_057396	Coding	chr12:14803467 minus strand	917064
WDR66	NM_001178003	NP_001171474	Coding	chr12:121918556 plus strand	917065
WDR66	NM_144668	NP_653269	Coding	chr12:121918556 plus strand	917065
WIBG	NM_001143853	NP_001137325	Coding	chr12:55927125 minus strand	917066
WIBG	NM_032345	NP_115721	Coding	chr12:55927913 minus strand	917067
WIF1	NM_007191	NP_009122	Coding	chr12:65121566 minus strand	917068
WNK1	NM_001184985	NP_001171914	Coding	chr12:752922 plus strand	917069
WNK1	NM_014823	NP_055638	Coding	chr12:752922 plus strand	917069
WNK1	NM_018979	NP_061852	Coding	chr12:752922 plus strand	917069
WNK1	NM_213655	NP_998820	Coding	chr12:752922 plus strand	917069
WNT1	NM_005430	NP_005421	Coding	chr12:48978452 plus strand	917070
WNT10B	NM_003394	NP_003385	Coding	chr12:48971858 minus strand	917071
WNT5B	NM_030775	NP_110402	Coding	chr12:1617055 plus strand	917072
WNT5B	NM_032642	NP_116031	Coding	chr12:1629245 plus strand	917073
WSB2	NM_001278557	NP_001265486	Coding	chr12:118062174 minus strand	917074
WSB2	NM_001278558	NP_001265487	Coding	chr12:118061211 minus strand	917075

【０９１６】

WSB2	NM_018639	NP_061109	Coding	chr12:118061211 minus strand	917075
WSCD2	NM_014653	NP_055468	Coding	chr12:108129733 plus strand	917076
XPOT	NM_007235	NP_009166	Coding	chr12:64404372 plus strand	917077
XRCC6BP1	NM_033276	NP_150592	Coding	chr12:57941661 plus strand	917078
YAF2	NM_001190977	NP_001177906	Coding	chr12:42238287 minus strand	917079
YAF2	NM_001190979	NP_001177908	Coding	chr12:42238349 minus strand	917080
YAF2	NM_001190980	NP_001177909	Coding	chr12:42238349 minus strand	917080
YAF2	NM_005748	NP_005739	Coding	chr12:42238352 minus strand	917081
YARS2	NM_001040436	NP_001035526	Coding	chr12:32755953 minus strand	917082
YBX3	NM_001145426	NP_001138898	Coding	chr12:10723354 minus strand	917083
YBX3	NM_003651	NP_003642	Coding	chr12:10723354 minus strand	917083
YEATS4	NM_001300950	NP_001287879	Coding	chr12:69359709 plus strand	917084
YEATS4	NM_006530	NP_006521	Coding	chr12:69359709 plus strand	917084
ZBTB39	NM_014830	NP_055645	Coding	chr12:57006513 minus strand	917085
ZC3H10	NM_032786	NP_116175	Coding	chr12:56118245 plus strand	917086
ZCCHC8	NM_017612	NP_060082	Coding	chr12:122501073 minus strand	917087
ZCRB1	NM_033114	NP_149105	Coding	chr12:42326130 minus strand	917088
ZDHHC17	NM_015336	NP_056151	Coding	chr12:76764073 plus strand	917089
ZFC3H1	NM_144982	NP_659419	Coding	chr12:71663969 minus strand	917090
ZNF10	NM_015394	NP_056209	Coding	chr12:133130627 plus strand	917091
ZNF140	NM_001300776	NP_001287705	Coding	chr12:133080202 plus strand	917092
ZNF140	NM_001300777	NP_001287706	Coding	chr12:133080202 plus strand	917092
ZNF140	NM_001300778	NP_001287707	Coding	chr12:133080202 plus strand	917092
ZNF140	NM_003440	NP_003431	Coding	chr12:133080202 plus strand	917092
ZNF26	NM_001256279	NP_001243208	Coding	chr12:132986347 plus strand	917093
ZNF26	NM_001256280	NP_001243209	Coding	chr12:132986347 plus strand	917093
ZNF26	NM_019591	NP_062537	Coding	chr12:132986347 plus strand	917093

【０９１７】

ZNF268	NM_001165881	NP_001159353	Coding	chr12:133181473 plus strand	917094
ZNF268	NM_001165882	NP_001159354	Coding	chr12:133181473 plus strand	917094
ZNF268	NM_001165883	NP_001159355	Coding	chr12:133181408 plus strand	917095
ZNF268	NM_001165884	NP_001159356	Coding	chr12:133181408 plus strand	917095
ZNF268	NM_001165885	NP_001159357	Coding	chr12:133181408 plus strand	917095
ZNF268	NM_001165886	NP_001159358	Coding	chr12:133181408 plus strand	917095
ZNF268	NM_001165887	NP_001159359	Coding	chr12:133181408 plus strand	917095
ZNF268	NM_003415	NP_003406	Coding	chr12:133181408 plus strand	917095
ZNF268	NM_152943	NP_694422	Coding	chr12:133181408 plus strand	917095
ZNF384	NM_001039920	NP_001035009	Coding	chr12:6689572 minus strand	917096
ZNF384	NM_001135734	NP_001129206	Coding	chr12:6689572 minus strand	917096
ZNF384	NM_133476	NP_597733	Coding	chr12:6689375 minus strand	917097
ZNF385A	NM_001130967	NP_001124439	Coding	chr12:54391305 minus strand	917098
ZNF385A	NM_001130968	NP_001124440	Coding	chr12:54391305 minus strand	917098
ZNF385A	NM_001290001	NP_001276930	Coding	chr12:54384730 minus strand	917099
ZNF385A	NM_001290002	NP_001276931	Coding	chr12:54385789 minus strand	917100
ZNF385A	NM_001290004	NP_001276933	Coding	chr12:54385789 minus strand	917100
ZNF385A	NM_015481	NP_056296	Coding	chr12:54384730 minus strand	917099
ZNF605	NM_001164715	NP_001158187	Coding	chr12:132956306 minus strand	917101
ZNF605	NM_183238	NP_899061	Coding	chr12:132956282 minus strand	917102
ZNF641	NM_001172681	NP_001166152	Coding	chr12:48350891 minus strand	917103
ZNF641	NM_001172682	NP_001166153	Coding	chr12:48351246 minus strand	917104
ZNF641	NM_152320	NP_689533	Coding	chr12:48350891 minus strand	917103
ZNF664	NM_001204298	NP_001191227	Coding	chr12:123973214 plus strand	917105
ZNF664	NM_152437	NP_689650	Coding	chr12:123973214 plus strand	917105
ZNF664-FAM101A	NM_001204299	NP_001191228	Coding	chr12:123973214 plus strand	917106
ZNF705A	NM_001004328	NP_001004328	Coding	chr12:8172553 plus strand	917107
ZNF740	NM_001004304	NP_001004304	Coding	chr12:53180750 plus	917108

【０９１８】

				strand	
ZNF84	NM_001127372	NP_001120844	Coding	chr12:133037285 plus strand	917109
ZNF84	NM_001289971	NP_001276900	Coding	chr12:133037285 plus strand	917109
ZNF84	NM_001289972	NP_001276901	Coding	chr12:133037581 plus strand	917110
ZNF84	NM_003428	NP_003419	Coding	chr12:133037285 plus strand	917109
ZNF891	NM_001277291	NP_001264220	Coding	chr12:133130473 minus strand	917111
ABCC4	NM_001105515	NP_001098985	Coding	chr13:95301446 minus strand	917112
ABCC4	NM_001301829	NP_001288758	Coding	chr13:95301446 minus strand	917112
ABCC4	NM_001301830	NP_001288759	Coding	chr13:95301446 minus strand	917112
ABCC4	NM_005845	NP_005836	Coding	chr13:95301446 minus strand	917112
ABHD13	NM_032859	NP_116248	Coding	chr13:108218414 plus strand	917113
ADPRHL1	NM_138430	NP_612439	Coding	chr13:113453524 minus strand	917114
ADPRHL1	NM_199162	NP_954631	Coding	chr13:113449142 minus strand	917115
AKAP11	NM_016248	NP_057332	Coding	chr13:42272152 plus strand	917116
ALG11	NM_001004127	NP_001004127	Coding	chr13:52012386 plus strand	917117
ALG5	NM_001142364	NP_001135836	Coding	chr13:36999367 minus strand	917118
ALG5	NM_013338	NP_037470	Coding	chr13:36999367 minus strand	917118
ALOX5AP	NM_001204406	NP_001191335	Coding	chr13:30713477 plus strand	917119
ALOX5AP	NM_001629	NP_001620	Coding	chr13:30735507 plus strand	917120
AMER2	NM_152704	NP_689917	Coding	chr13:25172283 minus strand	917121
AMER2	NM_199138	NP_954589	Coding	chr13:25172167 minus strand	917122
ANKRD10	NM_001286721	NP_001273650	Coding	chr13:110915107 minus strand	917123
ANKRD10	NM_017664	NP_060134	Coding	chr13:110915107 minus strand	917123
ARGLU1	NM_018011	NP_060481	Coding	chr13:106568166 minus strand	917124
ARHGEF7	NM_001113511	NP_001106983	Coding	chr13:111115276 plus strand	917125
ARHGEF7	NM_001113512	NP_001106984	Coding	chr13:111115276 plus strand	917125
ARHGEF7	NM_001113513	NP_001106985	Coding	chr13:111186825 plus strand	917126
ARHGEF7	NM_003899	NP_003890	Coding	chr13:111153713 plus	917127

【０９１９】

				strand	
ARHGEF7	NM_145735	NP_663788	Coding	chr13:111115276 plus strand	917125
ARL11	NM_138450	NP_612459	Coding	chr13:49628298 plus strand	917128
ATP11A	NM_015205	NP_056020	Coding	chr13:112690328 plus strand	917129
ATP11A	NM_032189	NP_115565	Coding	chr13:112690328 plus strand	917129
ATP11AUN	NM_207440	NP_997323	Coding	chr13:112647043 plus strand	917130
ATP12A	NM_001185085	NP_001172014	Coding	chr13:24680410 plus strand	917131
ATP12A	NM_001676	NP_001667	Coding	chr13:24680410 plus strand	917131
ATP4B	NM_000705	NP_000696	Coding	chr13:113658198 minus strand	917132
ATP7B	NM_000053	NP_000044	Coding	chr13:52011494 minus strand	917133
ATP7B	NM_001005918	NP_001005918	Coding	chr13:52011494 minus strand	917133
ATP7B	NM_001243182	NP_001230111	Coding	chr13:52011494 minus strand	917133
ATP8A2	NM_016529	NP_057613	Coding	chr13:25372070 plus strand	917134
B3GALTL	NM_194318	NP_919299	Coding	chr13:31199974 plus strand	917135
BIVM	NM_001159596	NP_001153068	Coding	chr13:102799048 plus strand	917136
BIVM	NM_017693	NP_060163	Coding	chr13:102799048 plus strand	917136
BIVM-ERCC5	NM_001204425	NP_001191354	Coding	chr13:102807145 plus strand	917137
BORA	NM_001286746	NP_001273675	Coding	chr13:72727903 plus strand	917138
BORA	NM_001286747	NP_001273676	Coding	chr13:72727748 plus strand	917139
BORA	NM_024808	NP_079084	Coding	chr13:72727748 plus strand	917139
BRCA2	NM_000059	NP_000050	Coding	chr13:32315479 plus strand	917140
C1QTNF9	NM_178540	NP_848635	Coding	chr13:24309577 plus strand	917141
C1QTNF9B	NM_001007537	NP_001007538	Coding	chr13:23897006 minus strand	917142
C1QTNF9B-AS1	NM_001014442	NP_001014442	Coding	chr13:23888888 plus strand	917143
C1QTNF9B-AS1	NM_001135816	NP_001129288	Coding	chr13:23889452 plus strand	917144
CAB39L	NM_001079670	NP_001073138	Coding	chr13:49444126 minus strand	917145
CAB39L	NM_001287337	NP_001274266	Coding	chr13:49444126 minus strand	917145
CAB39L	NM_001287338	NP_001274267	Coding	chr13:49413751 minus	917146

【０９２０】

				strand	
CAB39L	NM_001287339	NP_001274268	Coding	chr13:49413751 minus strand	917146
CAB39L	NM_030925	NP_112187	Coding	chr13:49401538 minus strand	917147
CARKD	NM_001242881	NP_001229810	Coding	chr13:110615583 plus strand	917148
CARKD	NM_001242882	NP_001229811	Coding	chr13:110615459 plus strand	917149
CARKD	NM_001242883	NP_001229812	Coding	chr13:110615459 plus strand	917149
CARKD	NM_018210	NP_060680	Coding	chr13:110615583 plus strand	917148
CARS2	NM_024537	NP_078813	Coding	chr13:110706133 minus strand	917150
CCDC122	NM_144974	NP_659411	Coding	chr13:43879690 minus strand	917151
CCDC168	NM_001146197	NP_001139669	Coding	chr13:102759072 minus strand	917152
CCDC169	NM_001144981	NP_001138453	Coding	chr13:36297855 minus strand	917153
CCDC169	NM_001144982	NP_001138454	Coding	chr13:36297855 minus strand	917153
CCDC169	NM_001144983	NP_001138455	Coding	chr13:36297855 minus strand	917153
CCDC169	NM_001144984	NP_001138456	Coding	chr13:36297855 minus strand	917153
CCDC169	NM_001144985	NP_001138457	Coding	chr13:36297855 minus strand	917153
CCDC169	NM_001144986	NP_001138458	Coding	chr13:36297855 minus strand	917153
CCDC169	NM_001198908	NP_001185837	Coding	chr13:36297855 minus strand	917153
CCDC169-SOHLH2	NM_001198910	NP_001185839	Coding	chr13:36297855 minus strand	917154
CCDC70	NM_031290	NP_112580	Coding	chr13:51861980 plus strand	917155
CCNA1	NM_001111045	NP_001104515	Coding	chr13:36432271 plus strand	917156
CCNA1	NM_001111046	NP_001104516	Coding	chr13:36431829 plus strand	917157
CCNA1	NM_001111047	NP_001104517	Coding	chr13:36431829 plus strand	917157
CCNA1	NM_003914	NP_003905	Coding	chr13:36432271 plus strand	917156
CDADC1	NM_001193478	NP_001180407	Coding	chr13:49247910 plus strand	917158
CDADC1	NM_030911	NP_112173	Coding	chr13:49247910 plus strand	917158
CDC16	NM_001078645	NP_001072113	Coding	chr13:114234886 plus strand	917159
CDC16	NM_003903	NP_003894	Coding	chr13:114234886 plus strand	917159
CDK8	NM_001260	NP_001251	Coding	chr13:26254618 plus	917160

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				strand	
CDX2	NM_001265	NP_001256	Coding	chr13:27969368 minus strand	917161
CENPJ	NM_018451	NP_060921	Coding	chr13:24922889 minus strand	917162
CHAMP1	NM_001164144	NP_001157616	Coding	chr13:114314489 plus strand	917163
CHAMP1	NM_001164145	NP_001157617	Coding	chr13:114314489 plus strand	917163
CHAMP1	NM_032436	NP_115812	Coding	chr13:114314489 plus strand	917163
CKAP2	NM_001098525	NP_001091995	Coding	chr13:52455359 plus strand	917164
CKAP2	NM_001286686	NP_001273615	Coding	chr13:52455971 plus strand	917165
CKAP2	NM_001286687	NP_001273616	Coding	chr13:52455359 plus strand	917164
CKAP2	NM_018204	NP_060674	Coding	chr13:52455359 plus strand	917164
CLDN10	NM_001160100	NP_001153572	Coding	chr13:95433598 plus strand	917166
CLDN10	NM_006984	NP_008915	Coding	chr13:95552692 plus strand	917167
CLDN10	NM_182848	NP_878268	Coding	chr13:95433598 plus strand	917166
CLN5	NM_006493	NP_006484	Coding	chr13:76991923 plus strand	917168
CLYBL	NM_206808	NP_996531	Coding	chr13:99606663 plus strand	917169
COG3	NM_031431	NP_113619	Coding	chr13:45464894 plus strand	917170
COG6	NM_001145079	NP_001138551	Coding	chr13:39655626 plus strand	917171
COG6	NM_020751	NP_065802	Coding	chr13:39655626 plus strand	917171
COL4A1	NM_001845	NP_001836	Coding	chr13:110307149 minus strand	917172
COL4A2	NM_001846	NP_001837	Coding	chr13:110307283 plus strand	917173
COMMD6	NM_001287392	NP_001274321	Coding	chr13:75537872 minus strand	917174
COMMD6	NM_001287393	NP_001274322	Coding	chr13:75537872 minus strand	917174
COMMD6	NM_001287394	NP_001274323	Coding	chr13:75549439 minus strand	917175
COMMD6	NM_203495	NP_987091	Coding	chr13:75537872 minus strand	917174
COMMD6	NM_203497	NP_987093	Coding	chr13:75537872 minus strand	917174
CPB2	NM_001278541	NP_001265470	Coding	chr13:46105076 minus strand	917176
CPB2	NM_001872	NP_001863	Coding	chr13:46105076 minus strand	917176
CRYL1	NM_015974	NP_057058	Coding	chr13:20525873 minus	917177

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				strand	
CSNK1A1L	NM_145203	NP_660204	Coding	chr13:37105664 minus strand	917178
CUL4A	NM_001008895	NP_001008895	Coding	chr13:113209504 plus strand	917179
CUL4A	NM_001278513	NP_001265442	Coding	chr13:113208192 plus strand	917180
CUL4A	NM_001278514	NP_001265443	Coding	chr13:113208693 plus strand	917181
CUL4A	NM_003589	NP_003580	Coding	chr13:113208771 plus strand	917182
CYSLTR2	NM_020377	NP_065110	Coding	chr13:48706814 plus strand	917183
DACH1	NM_004392	NP_004383	Coding	chr13:71867192 minus strand	917184
DACH1	NM_080759	NP_542937	Coding	chr13:71867192 minus strand	917184
DACH1	NM_080760	NP_542938	Coding	chr13:71867192 minus strand	917184
DAOA	NM_001161812	NP_001155284	Coding	chr13:105466215 plus strand	917185
DAOA	NM_001161814	NP_001155286	Coding	chr13:105465866 plus strand	917186
DAOA	NM_172370	NP_758958	Coding	chr13:105466215 plus strand	917185
DCLK1	NM_001195415	NP_001182344	Coding	chr13:35855861 minus strand	917187
DCLK1	NM_001195416	NP_001182345	Coding	chr13:35855861 minus strand	917187
DCLK1	NM_001195430	NP_001182359	Coding	chr13:35855861 minus strand	917187
DCLK1	NM_004734	NP_004725	Coding	chr13:36131377 minus strand	917188
DCT	NM_001129889	NP_001123361	Coding	chr13:94479682 minus strand	917189
DCT	NM_001922	NP_001913	Coding	chr13:94479682 minus strand	917189
DCUN1D2	NM_001014283	NP_001014305	Coding	chr13:113490708 minus strand	917190
DGKH	NM_001204504	NP_001191433	Coding	chr13:42040035 plus strand	917191
DGKH	NM_001204505	NP_001191434	Coding	chr13:42138041 plus strand	917192
DGKH	NM_001204506	NP_001191435	Coding	chr13:42138041 plus strand	917192
DGKH	NM_001297429	NP_001284358	Coding	chr13:42138041 plus strand	917192
DGKH	NM_152910	NP_690874	Coding	chr13:42048707 plus strand	917193
DGKH	NM_178009	NP_821077	Coding	chr13:42048707 plus strand	917193
DHRS12	NM_001031719	NP_001026889	Coding	chr13:51804162 minus strand	917194
DHRS12	NM_001270424	NP_001257353	Coding	chr13:51804162 minus	917194

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				strand	
DHRS12	NM_024705	NP_078981	Coding	chr13:51804162 minus strand	917194
DIAPH3	NM_001042517	NP_001035982	Coding	chr13:60163985 minus strand	917195
DIAPH3	NM_001258366	NP_001245295	Coding	chr13:60163985 minus strand	917195
DIAPH3	NM_001258367	NP_001245296	Coding	chr13:60163985 minus strand	917195
DIAPH3	NM_001258368	NP_001245297	Coding	chr13:60163985 minus strand	917195
DIAPH3	NM_001258369	NP_001245298	Coding	chr13:60163985 minus strand	917195
DIAPH3	NM_001258370	NP_001245299	Coding	chr13:60013209 minus strand	917196
DIAPH3	NM_030932	NP_112194	Coding	chr13:60013209 minus strand	917196
DIS3	NM_001128226	NP_001121698	Coding	chr13:72782128 minus strand	917197
DIS3	NM_014953	NP_055768	Coding	chr13:72782128 minus strand	917197
DLEU7	NM_198989	NP_945340	Coding	chr13:50843749 minus strand	917198
DNAJC15	NM_013238	NP_037370	Coding	chr13:43023225 plus strand	917199
DNAJC3	NM_006260	NP_006251	Coding	chr13:95677138 plus strand	917200
DOCK9	NM_001130048	NP_001123520	Coding	chr13:98978084 minus strand	917201
DOCK9	NM_001130049	NP_001123521	Coding	chr13:99086406 minus strand	917202
DOCK9	NM_001130050	NP_001123522	Coding	chr13:98978084 minus strand	917201
DOCK9	NM_015296	NP_056111	Coding	chr13:99086406 minus strand	917202
DZIP1	NM_014934	NP_055749	Coding	chr13:95644706 minus strand	917203
DZIP1	NM_198968	NP_945319	Coding	chr13:95644706 minus strand	917203
EBPL	NM_001278636	NP_001265565	Coding	chr13:49691487 minus strand	917204
EBPL	NM_032565	NP_115954	Coding	chr13:49691487 minus strand	917204
EDNRB	NM_000115	NP_000106	Coding	chr13:77975529 minus strand	917205
EDNRB	NM_001122659	NP_001116131	Coding	chr13:77918831 minus strand	917206
EDNRB	NM_001201397	NP_001188326	Coding	chr13:77919768 minus strand	917207
EDNRB	NM_003991	NP_003982	Coding	chr13:77918831 minus strand	917206
EFNB2	NM_004093	NP_004084	Coding	chr13:106535040 minus strand	917208
ELF1	NM_001145353	NP_001138825	Coding	chr13:40982282 minus	917209

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				strand	
ELF1	NM_172373	NP_758961	Coding	chr13:41019372 minus strand	917210
ENOX1	NM_001127615	NP_001121087	Coding	chr13:43629477 minus strand	917211
ENOX1	NM_001242863	NP_001229792	Coding	chr13:43786980 minus strand	917212
ENOX1	NM_017993	NP_060463	Coding	chr13:43786980 minus strand	917212
EPSTI1	NM_001002264	NP_001002264	Coding	chr13:42992271 minus strand	917213
EPSTI1	NM_033255	NP_150280	Coding	chr13:42992271 minus strand	917213
ERCC5	NM_000123	NP_000114	Coding	chr13:102845840 plus strand	917214
ERICH6B	NM_182542	NP_872348	Coding	chr13:45615739 minus strand	917215
ESD	NM_001984	NP_001975	Coding	chr13:46797232 minus strand	917216
EXOSC8	NM_181503	NP_852480	Coding	chr13:37000540 plus strand	917217
F10	NM_000504	NP_000495	Coding	chr13:113122798 plus strand	917218
F7	NM_000131	NP_000122	Coding	chr13:113105787 plus strand	917219
F7	NM_001267554	NP_001254483	Coding	chr13:113105787 plus strand	917219
F7	NM_019616	NP_062562	Coding	chr13:113105787 plus strand	917219
FAM124A	NM_001242312	NP_001229241	Coding	chr13:51222333 plus strand	917220
FAM124A	NM_145019	NP_659456	Coding	chr13:51222333 plus strand	917220
FAM155A	NM_001080396	NP_001073865	Coding	chr13:107867112 minus strand	917221
FAM216B	NM_182508	NP_872314	Coding	chr13:42781549 plus strand	917222
FARP1	NM_001001715	NP_001001715	Coding	chr13:98143097 plus strand	917223
FARP1	NM_001286839	NP_001273768	Coding	chr13:98142561 plus strand	917224
FARP1	NM_005766	NP_005757	Coding	chr13:98143097 plus strand	917223
FBXL3	NM_012158	NP_036290	Coding	chr13:77027196 minus strand	917225
FGF14	NM_004115	NP_004106	Coding	chr13:101916645 minus strand	917226
FGF14	NM_175929	NP_787125	Coding	chr13:102401774 minus strand	917227
FGF9	NM_002010	NP_002001	Coding	chr13:21671075 plus strand	917228
FLT1	NM_001159920	NP_001153392	Coding	chr13:28495128 minus strand	917229
FLT1	NM_001160030	NP_001153502	Coding	chr13:28495128 minus	917229

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				strand	
FLT1	NM_001160031	NP_001153503	Coding	chr13:28495128 minus strand	917229
FLT1	NM_002019	NP_002010	Coding	chr13:28495128 minus strand	917229
FLT3	NM_004119	NP_004110	Coding	chr13:28100592 minus strand	917230
FNDC3A	NM_001079673	NP_001073141	Coding	chr13:48975911 plus strand	917231
FNDC3A	NM_001278438	NP_001265367	Coding	chr13:48976608 plus strand	917232
FNDC3A	NM_014923	NP_055738	Coding	chr13:49110302 plus strand	917233
FOXO1	NM_002015	NP_002006	Coding	chr13:40666597 minus strand	917234
FREM2	NM_207361	NP_997244	Coding	chr13:38687035 plus strand	917235
FRY	NM_023037	NP_075463	Coding	chr13:32031299 plus strand	917236
GAS6	NM_000820	NP_000811	Coding	chr13:113864103 minus strand	917237
GGACT	NM_001195087	NP_001182016	Coding	chr13:100588792 minus strand	917238
GGACT	NM_033110	NP_149101	Coding	chr13:100533802 minus strand	917239
GJA3	NM_021954	NP_068773	Coding	chr13:20161044 minus strand	917240
GJB2	NM_004004	NP_003995	Coding	chr13:20192975 minus strand	917241
GJB6	NM_001110219	NP_001103689	Coding	chr13:20232395 minus strand	917242
GJB6	NM_001110220	NP_001103690	Coding	chr13:20232395 minus strand	917242
GJB6	NM_001110221	NP_001103691	Coding	chr13:20232395 minus strand	917242
GJB6	NM_006783	NP_006774	Coding	chr13:20231233 minus strand	917243
GPALPP1	NM_018559	NP_061029	Coding	chr13:44989551 plus strand	917244
GPC5	NM_004466	NP_004457	Coding	chr13:91398618 plus strand	917245
GPC6	NM_005708	NP_005699	Coding	chr13:93226824 plus strand	917246
GPR12	NM_005288	NP_005279	Coding	chr13:26760785 minus strand	917247
GPR18	NM_001098200	NP_001091670	Coding	chr13:99258428 minus strand	917248
GPR18	NM_005292	NP_005283	Coding	chr13:99258428 minus strand	917248
GPR180	NM_180989	NP_851320	Coding	chr13:94601849 plus strand	917249
GPR183	NM_004951	NP_004942	Coding	chr13:99307495 minus strand	917250
GRK1	NM_002929	NP_002920	Coding	chr13:113667281 plus	917251

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				strand	
GRTP1	NM_001286732	NP_001273661	Coding	chr13:113364148 minus strand	917252
GRTP1	NM_001286733	NP_001273662	Coding	chr13:113364148 minus strand	917252
GRTP1	NM_024719	NP_078995	Coding	chr13:113364148 minus strand	917252
GSX1	NM_145657	NP_663632	Coding	chr13:27792642 plus strand	917253
GTF2F2	NM_004128	NP_004119	Coding	chr13:45120495 plus strand	917254
GTF3A	NM_002097	NP_002088	Coding	chr13:27424543 plus strand	917255
HMGB1	NM_002128	NP_002119	Coding	chr13:30465944 minus strand	917256
HNRNPA1L2	NM_001011724	NP_001011724	Coding	chr13:52617469 plus strand	917257
HNRNPA1L2	NM_001011725	NP_001011725	Coding	chr13:52617469 plus strand	917257
HS6ST3	NM_153456	NP_703157	Coding	chr13:96090838 plus strand	917258
HSPH1	NM_001286503	NP_001273432	Coding	chr13:31162021 minus strand	917259
HSPH1	NM_001286504	NP_001273433	Coding	chr13:31162388 minus strand	917260
HSPH1	NM_001286505	NP_001273434	Coding	chr13:31162388 minus strand	917260
HSPH1	NM_006644	NP_006635	Coding	chr13:31162021 minus strand	917259
HTR2A	NM_000621	NP_000612	Coding	chr13:46897076 minus strand	917261
HTR2A	NM_001165947	NP_001159419	Coding	chr13:46897076 minus strand	917261
IFT88	NM_006531	NP_006522	Coding	chr13:20567068 plus strand	917262
IFT88	NM_175605	NP_783195	Coding	chr13:20567068 plus strand	917262
IL17D	NM_138284	NP_612141	Coding	chr13:20703342 plus strand	917263
ING1	NM_001267728	NP_001254657	Coding	chr13:110715436 plus strand	917264
ING1	NM_005537	NP_005528	Coding	chr13:110715011 plus strand	917265
ING1	NM_198217	NP_937860	Coding	chr13:110712622 plus strand	917266
ING1	NM_198218	NP_937861	Coding	chr13:110713262 plus strand	917267
ING1	NM_198219	NP_937862	Coding	chr13:110713262 plus strand	917267
INTS6	NM_001039937	NP_001035026	Coding	chr13:51453139 minus strand	917268
INTS6	NM_001039938	NP_001035027	Coding	chr13:51453139 minus strand	917268
INTS6	NM_012141	NP_036273	Coding	chr13:51453139 minus	917268

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				strand	
IPO5	NM_002271	NP_002262	Coding	chr13:97953674 plus strand	917269
IRG1	NM_001258406	NP_001245335	Coding	chr13:76952488 plus strand	917270
IRS2	NM_003749	NP_003740	Coding	chr13:109786567 minus strand	917271
ITGBL1	NM_001271754	NP_001258683	Coding	chr13:101452592 plus strand	917272
ITGBL1	NM_001271755	NP_001258684	Coding	chr13:101452592 plus strand	917272
ITGBL1	NM_001271756	NP_001258685	Coding	chr13:101489951 plus strand	917273
ITGBL1	NM_004791	NP_004782	Coding	chr13:101452592 plus strand	917272
ITM2B	NM_021999	NP_068839	Coding	chr13:48233137 plus strand	917274
KATNAL1	NM_001014380	NP_001014402	Coding	chr13:30307054 minus strand	917275
KATNAL1	NM_032116	NP_115492	Coding	chr13:30307487 minus strand	917276
KBTBD6	NM_152903	NP_690867	Coding	chr13:41132800 minus strand	917277
KBTBD7	NM_032138	NP_115514	Coding	chr13:41194566 minus strand	917278
KCNRG	NM_173605	NP_775876	Coding	chr13:50015253 plus strand	917279
KCNRG	NM_199464	NP_955751	Coding	chr13:50015253 plus strand	917279
KCTD12	NM_138444	NP_612453	Coding	chr13:76886405 minus strand	917280
KCTD4	NM_198404	NP_940686	Coding	chr13:45201040 minus strand	917281
KDELC1	NM_024089	NP_076994	Coding	chr13:102799054 minus strand	917282
KIAA0226L	NM_001286761	NP_001273690	Coding	chr13:46390042 minus strand	917283
KIAA0226L	NM_001286762	NP_001273691	Coding	chr13:46387500 minus strand	917284
KIAA0226L	NM_001286763	NP_001273692	Coding	chr13:46387500 minus strand	917284
KIAA0226L	NM_001286764	NP_001273693	Coding	chr13:46387500 minus strand	917284
KIAA0226L	NM_001286765	NP_001273694	Coding	chr13:46387500 minus strand	917284
KIAA0226L	NM_001286766	NP_001273695	Coding	chr13:46387500 minus strand	917284
KIAA0226L	NM_025113	NP_079389	Coding	chr13:46387500 minus strand	917284
KL	NM_004795	NP_004786	Coding	chr13:33016432 plus strand	917285
KLF12	NM_007249	NP_009180	Coding	chr13:74133929 minus strand	917286
KLF5	NM_001286818	NP_001273747	Coding	chr13:73054975 plus	917287

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				strand	
KLF5	NM_001730	NP_001721	Coding	chr13:73058791 plus strand	917288
KLHL1	NM_001286725	NP_001273654	Coding	chr13:70108493 minus strand	917289
KLHL1	NM_020866	NP_065917	Coding	chr13:70108493 minus strand	917289
KPNA3	NM_002267	NP_002258	Coding	chr13:49792921 minus strand	917290
LACC1	NM_001128303	NP_001121775	Coding	chr13:43879283 plus strand	917291
LACC1	NM_153218	NP_694950	Coding	chr13:43879832 plus strand	917292
LAMP1	NM_005561	NP_005552	Coding	chr13:113297153 plus strand	917293
LATS2	NM_014572	NP_055387	Coding	chr13:21061583 minus strand	917294
LCP1	NM_002298	NP_002289	Coding	chr13:46182324 minus strand	917295
LECT1	NM_001011705	NP_001011705	Coding	chr13:52739812 minus strand	917296
LECT1	NM_007015	NP_008946	Coding	chr13:52739812 minus strand	917296
LHFP	NM_005780	NP_005771	Coding	chr13:39603219 minus strand	917297
LIG4	NM_001098268	NP_001091738	Coding	chr13:108218368 minus strand	917298
LIG4	NM_002312	NP_002303	Coding	chr13:108214782 minus strand	917299
LIG4	NM_206937	NP_996820	Coding	chr13:108215534 minus strand	917300
LINC00452	NM_001278674	NP_001265603	Coding	chr13:113895102 plus strand	917301
LMO7	NM_005358	NP_005349	Coding	chr13:75620433 plus strand	917302
LMO7	NM_015842	NP_056667	Coding	chr13:75760660 plus strand	917303
LMO7DN	NM_001257995	NP_001244924	Coding	chr13:75871037 plus strand	917304
LNX2	NM_153371	NP_699202	Coding	chr13:27620583 minus strand	917305
LPAR6	NM_001162497	NP_001155969	Coding	chr13:48426907 minus strand	917306
LPAR6	NM_001162498	NP_001155970	Coding	chr13:48413517 minus strand	917307
LPAR6	NM_005767	NP_005758	Coding	chr13:48444704 minus strand	917308
LRCH1	NM_001164211	NP_001157683	Coding	chr13:46553160 plus strand	917309
LRCH1	NM_001164213	NP_001157685	Coding	chr13:46553160 plus strand	917309
LRCH1	NM_015116	NP_055931	Coding	chr13:46553160 plus strand	917309
LRRC63	NM_001282460	NP_001269389	Coding	chr13:46211942 plus	917310

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				strand	
MAB21L1	NM_005584	NP_005575	Coding	chr13:35476695 minus strand	917311
MBNL2	NM_144778	NP_659002	Coding	chr13:97222295 plus strand	917312
MBNL2	NM_207304	NP_997187	Coding	chr13:97222295 plus strand	917312
MCF2L	NM_001112732	NP_001106203	Coding	chr13:112969220 plus strand	917313
MCF2L	NM_024979	NP_079255	Coding	chr13:113001713 plus strand	917314
MED4	NM_001270629	NP_001257558	Coding	chr13:48095141 minus strand	917315
MED4	NM_014166	NP_054885	Coding	chr13:48095141 minus strand	917315
MEDAG	NM_032849	NP_116238	Coding	chr13:30906174 plus strand	917316
METTL21C	NM_001010977	NP_001010977	Coding	chr13:102694521 minus strand	917317
MICU2	NM_152726	NP_689939	Coding	chr13:21604216 minus strand	917318
MIPEP	NM_005932	NP_005923	Coding	chr13:23889448 minus strand	917319
MLNR	NM_001507	NP_001498	Coding	chr13:49220337 plus strand	917320
MPHOSPH8	NM_017520	NP_059990	Coding	chr13:19633647 plus strand	917321
MRPL57	NM_024026	NP_076931	Coding	chr13:21176232 plus strand	917322
MRPS31	NM_005830	NP_005821	Coding	chr13:40771211 minus strand	917323
MTIF3	NM_001166261	NP_001159733	Coding	chr13:27450197 minus strand	917324
MTIF3	NM_001166262	NP_001159734	Coding	chr13:27450189 minus strand	917325
MTIF3	NM_001166263	NP_001159735	Coding	chr13:27450602 minus strand	917326
MTIF3	NM_152912	NP_690876	Coding	chr13:27450602 minus strand	917326
MTMR6	NM_004685	NP_004676	Coding	chr13:25287566 minus strand	917327
MTRF1	NM_004294	NP_004285	Coding	chr13:41263577 minus strand	917328
MTUS2	NM_001033602	NP_001028774	Coding	chr13:29024610 plus strand	917329
MTUS2	NM_015233	NP_056048	Coding	chr13:29428639 plus strand	917330
MYCBP2	NM_015057	NP_055872	Coding	chr13:77327042 minus strand	917331
MYO16	NM_001198950	NP_001185879	Coding	chr13:108629222 plus strand	917332
MYO16	NM_015011	NP_055826	Coding	chr13:108596151 plus strand	917333
MZT1	NM_001071775	NP_001065243	Coding	chr13:72727800 minus	917334

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				strand	
N4BP2L1	NM_001079691	NP_001073159	Coding	chr13:32428178 minus strand	917335
N4BP2L1	NM_001286459	NP_001273388	Coding	chr13:32428178 minus strand	917335
N4BP2L1	NM_001286460	NP_001273389	Coding	chr13:32428178 minus strand	917335
N4BP2L1	NM_001286461	NP_001273390	Coding	chr13:32428178 minus strand	917335
N4BP2L1	NM_052818	NP_438169	Coding	chr13:32428178 minus strand	917335
N4BP2L2	NM_001278432	NP_001265361	Coding	chr13:32538885 minus strand	917336
N4BP2L2	NM_014887	NP_055702	Coding	chr13:32538795 minus strand	917337
N4BP2L2	NM_033111	NP_149102	Coding	chr13:32538885 minus strand	917336
N6AMT2	NM_174928	NP_777588	Coding	chr13:20773918 minus strand	917338
NAA16	NM_001110798	NP_001104268	Coding	chr13:41311204 plus strand	917339
NAA16	NM_018527	NP_060997	Coding	chr13:41311204 plus strand	917339
NAA16	NM_024561	NP_078837	Coding	chr13:41311204 plus strand	917339
NALCN	NM_052867	NP_443099	Coding	chr13:101416462 minus strand	917340
NBEA	NM_001204197	NP_001191126	Coding	chr13:35476748 plus strand	917341
NBEA	NM_015678	NP_056493	Coding	chr13:34942286 plus strand	917342
NDFIP2	NM_001161407	NP_001154879	Coding	chr13:79481123 plus strand	917343
NDFIP2	NM_019080	NP_061953	Coding	chr13:79481123 plus strand	917343
NEK3	NM_001146099	NP_001139571	Coding	chr13:52159861 minus strand	917344
NEK3	NM_002498	NP_002489	Coding	chr13:52159861 minus strand	917344
NEK3	NM_152720	NP_689933	Coding	chr13:52159535 minus strand	917345
NEK5	NM_199289	NP_954983	Coding	chr13:52129078 minus strand	917346
NHLRC3	NM_001012754	NP_001012772	Coding	chr13:39038310 plus strand	917347
NHLRC3	NM_001017370	NP_001017370	Coding	chr13:39038310 plus strand	917347
NUDT15	NM_018283	NP_060753	Coding	chr13:48037566 plus strand	917348
NUFIP1	NM_012345	NP_036477	Coding	chr13:44989478 minus strand	917349
NUPL1	NM_001008564	NP_001008564	Coding	chr13:25301527 plus strand	917350
NUPL1	NM_014089	NP_054808	Coding	chr13:25301527 plus	917350

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				strand	
OLFM4	NM_006418	NP_006409	Coding	chr13:53028740 plus strand	917351
OXGR1	NM_080818	NP_543008	Coding	chr13:96994350 minus strand	917352
PABPC3	NM_030979	NP_112241	Coding	chr13:25096137 plus strand	917353
PAN3	NM_175854	NP_787050	Coding	chr13:28138505 plus strand	917354
PARP4	NM_006437	NP_006428	Coding	chr13:24512810 minus strand	917355
PCCA	NM_000282	NP_000273	Coding	chr13:100089014 plus strand	917356
PCCA	NM_001127692	NP_001121164	Coding	chr13:100089014 plus strand	917356
PCCA	NM_001178004	NP_001171475	Coding	chr13:100089014 plus strand	917356
PCDH17	NM_001040429	NP_001035519	Coding	chr13:57631654 plus strand	917357
PCDH20	NM_022843	NP_073754	Coding	chr13:61415522 minus strand	917358
PCDH8	NM_002590	NP_002581	Coding	chr13:52848640 minus strand	917359
PCDH8	NM_032949	NP_116567	Coding	chr13:52848640 minus strand	917359
PCDH9	NM_020403	NP_065136	Coding	chr13:67230336 minus strand	917360
PCDH9	NM_203487	NP_982354	Coding	chr13:67230336 minus strand	917360
PCID2	NM_001127202	NP_001120674	Coding	chr13:113208715 minus strand	917361
PCID2	NM_001127203	NP_001120675	Coding	chr13:113208715 minus strand	917361
PCID2	NM_001258212	NP_001245141	Coding	chr13:113208715 minus strand	917361
PCID2	NM_001258213	NP_001245142	Coding	chr13:113208648 minus strand	917362
PCID2	NM_018386	NP_060856	Coding	chr13:113208715 minus strand	917361
PDS5B	NM_015032	NP_055847	Coding	chr13:32586426 plus strand	917363
PDX1	NM_000209	NP_000200	Coding	chr13:27920030 plus strand	917364
PHF11	NM_001040443	NP_001035533	Coding	chr13:49495664 plus strand	917365
PHF11	NM_001040444	NP_001035534	Coding	chr13:49496391 plus strand	917366
PIBF1	NM_006346	NP_006337	Coding	chr13:72782091 plus strand	917367
POLR1D	NM_001206559	NP_001193488	Coding	chr13:27620742 plus strand	917368
POLR1D	NM_015972	NP_057056	Coding	chr13:27621778 plus strand	917369
POLR1D	NM_152705	NP_689918	Coding	chr13:27621778 plus	917369

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				strand	
POMP	NM_015932	NP_057016	Coding	chr13:28659003 plus strand	917370
POSTN	NM_001135934	NP_001129406	Coding	chr13:37598844 minus strand	917371
POSTN	NM_001135935	NP_001129407	Coding	chr13:37598844 minus strand	917371
POSTN	NM_001135936	NP_001129408	Coding	chr13:37598844 minus strand	917371
POSTN	NM_001286665	NP_001273594	Coding	chr13:37598844 minus strand	917371
POSTN	NM_001286666	NP_001273595	Coding	chr13:37598844 minus strand	917371
POSTN	NM_001286667	NP_001273596	Coding	chr13:37598844 minus strand	917371
POSTN	NM_006475	NP_006466	Coding	chr13:37598844 minus strand	917371
POU4F1	NM_006237	NP_006228	Coding	chr13:78603560 minus strand	917372
PROSER1	NM_025138	NP_079414	Coding	chr13:39038076 minus strand	917373
PROZ	NM_001256134	NP_001243063	Coding	chr13:113158653 plus strand	917374
PROZ	NM_003891	NP_003882	Coding	chr13:113158653 plus strand	917374
PRR20A	NM_198441	NP_940843	Coding	chr13:57140917 plus strand	917375
PRR20A	NM_198441	NP_940843	Coding	chr13:57147487 plus strand	917376
PRR20A	NM_198441	NP_940843	Coding	chr13:57154060 plus strand	917377
PRR20A	NM_198441	NP_940843	Coding	chr13:57167196 plus strand	917378
PRR20A	NM_198441	NP_940843	Coding	chr13:57160631 plus strand	917379
PRR20B	NM_001130404	NP_001123876	Coding	chr13:57140917 plus strand	917380
PRR20B	NM_001130404	NP_001123876	Coding	chr13:57147487 plus strand	917381
PRR20B	NM_001130404	NP_001123876	Coding	chr13:57160631 plus strand	917382
PRR20B	NM_001130404	NP_001123876	Coding	chr13:57154060 plus strand	917383
PRR20B	NM_001130404	NP_001123876	Coding	chr13:57167196 plus strand	917384
PRR20C	NM_001130405	NP_001123877	Coding	chr13:57140917 plus strand	917385
PRR20C	NM_001130405	NP_001123877	Coding	chr13:57167196 plus strand	917386
PRR20C	NM_001130405	NP_001123877	Coding	chr13:57147487 plus strand	917387
PRR20C	NM_001130405	NP_001123877	Coding	chr13:57154060 plus strand	917388
PRR20C	NM_001130405	NP_001123877	Coding	chr13:57160631 plus	917389

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				strand	
PRR20D	NM_001130406	NP_001123878	Coding	chr13:57140917 plus strand	917390
PRR20D	NM_001130406	NP_001123878	Coding	chr13:57147487 plus strand	917391
PRR20D	NM_001130406	NP_001123878	Coding	chr13:57154060 plus strand	917392
PRR20D	NM_001130406	NP_001123878	Coding	chr13:57160631 plus strand	917393
PRR20D	NM_001130406	NP_001123878	Coding	chr13:57167196 plus strand	917394
PRR20E	NM_001130407	NP_001123879	Coding	chr13:57140917 plus strand	917395
PRR20E	NM_001130407	NP_001123879	Coding	chr13:57147487 plus strand	917396
PRR20E	NM_001130407	NP_001123879	Coding	chr13:57160631 plus strand	917397
PRR20E	NM_001130407	NP_001123879	Coding	chr13:57167196 plus strand	917398
PRR20E	NM_001130407	NP_001123879	Coding	chr13:57154060 plus strand	917399
PSPC1	NM_001042414	NP_001035879	Coding	chr13:19783019 minus strand	917400
RAB20	NM_017817	NP_060287	Coding	chr13:110561724 minus strand	917401
RAP2A	NM_021033	NP_066361	Coding	chr13:97434220 plus strand	917402
RASA3	NM_007368	NP_031394	Coding	chr13:114132620 minus strand	917403
RASL11A	NM_206827	NP_996563	Coding	chr13:27270326 plus strand	917404
RB1	NM_000321	NP_000312	Coding	chr13:48303746 plus strand	917405
RBM26	NM_001286631	NP_001273560	Coding	chr13:79406221 minus strand	917406
RBM26	NM_001286632	NP_001273561	Coding	chr13:79406221 minus strand	917406
RBM26	NM_022118	NP_071401	Coding	chr13:79406221 minus strand	917406
RCBTB1	NM_018191	NP_060661	Coding	chr13:49585583 minus strand	917407
RCBTB2	NM_001268	NP_001259	Coding	chr13:48533256 minus strand	917408
RCBTB2	NM_001286830	NP_001273759	Coding	chr13:48533256 minus strand	917408
RCBTB2	NM_001286831	NP_001273760	Coding	chr13:48533256 minus strand	917408
RCBTB2	NM_001286832	NP_001273761	Coding	chr13:48533256 minus strand	917408
RFC3	NM_002915	NP_002906	Coding	chr13:33818068 plus strand	917409
RFC3	NM_181558	NP_853536	Coding	chr13:33818068 plus strand	917409
RFXAP	NM_000538	NP_000529	Coding	chr13:36819201 plus	917410

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				strand	
RGCC	NM_014059	NP_054778	Coding	chr13:41457405 plus strand	917411
RNASEH2B	NM_001142279	NP_001135751	Coding	chr13:50909677 plus strand	917412
RNASEH2B	NM_024570	NP_078846	Coding	chr13:50909677 plus strand	917412
RNF113B	NM_178861	NP_849192	Coding	chr13:98177267 minus strand	917413
RNF17	NM_001184993	NP_001171922	Coding	chr13:24764162 plus strand	917414
RNF17	NM_031277	NP_112567	Coding	chr13:24764162 plus strand	917414
RNF219	NM_024546	NP_078822	Coding	chr13:78659179 minus strand	917415
RNF6	NM_005977	NP_005968	Coding	chr13:26222371 minus strand	917416
RNF6	NM_183043	NP_898864	Coding	chr13:26221891 minus strand	917417
RNF6	NM_183044	NP_898865	Coding	chr13:26221757 minus strand	917418
RPL21	NM_000982	NP_000973	Coding	chr13:27251554 plus strand	917419
RXFP2	NM_001166058	NP_001159530	Coding	chr13:31739541 plus strand	917420
RXFP2	NM_130806	NP_570718	Coding	chr13:31739541 plus strand	917420
SACS	NM_001278055	NP_001264984	Coding	chr13:23375543 minus strand	917421
SACS	NM_014363	NP_055178	Coding	chr13:23433728 minus strand	917422
SAP18	NM_005870	NP_005861	Coding	chr13:21140513 plus strand	917423
SCEL	NM_001160706	NP_001154178	Coding	chr13:77535673 plus strand	917424
SCEL	NM_003843	NP_003834	Coding	chr13:77535673 plus strand	917424
SCEL	NM_144777	NP_659001	Coding	chr13:77535673 plus strand	917424
SERP2	NM_001010897	NP_001010897	Coding	chr13:44373841 plus strand	917425
SERPINE3	NM_001101320	NP_001094790	Coding	chr13:51341031 plus strand	917426
SERTM1	NM_203451	NP_982276	Coding	chr13:36673911 plus strand	917427
SETDB2	NM_001160308	NP_001153780	Coding	chr13:49451551 plus strand	917428
SETDB2	NM_031915	NP_114121	Coding	chr13:49444292 plus strand	917429
SGCG	NM_000231	NP_000222	Coding	chr13:23180920 plus strand	917430
SHISA2	NM_001007538	NP_001007539	Coding	chr13:26051060 minus strand	917431
SIAH3	NM_198849	NP_942146	Coding	chr13:45851711 minus	917432

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				strand	
SKA3	NM_001166017	NP_001159489	Coding	chr13:21176602 minus strand	917433
SKA3	NM_145061	NP_659498	Coding	chr13:21176602 minus strand	917433
SLAIN1	NM_001040153	NP_001035243	Coding	chr13:77698880 plus strand	917434
SLAIN1	NM_001242868	NP_001229797	Coding	chr13:77697853 plus strand	917435
SLAIN1	NM_001242869	NP_001229798	Coding	chr13:77741159 plus strand	917436
SLAIN1	NM_001242870	NP_001229799	Coding	chr13:77741159 plus strand	917436
SLAIN1	NM_001242871	NP_001229800	Coding	chr13:77741159 plus strand	917436
SLAIN1	NM_144595	NP_653196	Coding	chr13:77741159 plus strand	917436
SLC10A2	NM_000452	NP_000443	Coding	chr13:103066846 minus strand	917437
SLC15A1	NM_005073	NP_005064	Coding	chr13:98752675 minus strand	917438
SLC25A15	NM_014252	NP_055067	Coding	chr13:40789410 plus strand	917439
SLC25A30	NM_001010875	NP_001010875	Coding	chr13:45418455 minus strand	917440
SLC25A30	NM_001286806	NP_001273735	Coding	chr13:45418455 minus strand	917440
SLC25A30	NM_001286807	NP_001273736	Coding	chr13:45418455 minus strand	917440
SLC46A3	NM_001135919	NP_001129391	Coding	chr13:28719013 minus strand	917441
SLC46A3	NM_181785	NP_861450	Coding	chr13:28719013 minus strand	917441
SLC7A1	NM_003045	NP_003036	Coding	chr13:29595688 minus strand	917442
SLITRK1	NM_001281503	NP_001268432	Coding	chr13:83882393 minus strand	917443
SLITRK1	NM_052910	NP_443142	Coding	chr13:83882393 minus strand	917443
SLITRK5	NM_015567	NP_056382	Coding	chr13:87672614 plus strand	917444
SLITRK6	NM_032229	NP_115605	Coding	chr13:85799348 minus strand	917445
SMAD9	NM_001127217	NP_001120689	Coding	chr13:36920272 minus strand	917446
SMAD9	NM_005905	NP_005896	Coding	chr13:36920272 minus strand	917446
SMIM2	NM_024058	NP_076963	Coding	chr13:44161257 minus strand	917447
SOHLH2	NM_001282147	NP_001269076	Coding	chr13:36214615 minus strand	917448
SOHLH2	NM_017826	NP_060296	Coding	chr13:36214615 minus strand	917448
SOX1	NM_005986	NP_005977	Coding	chr13:112067598 plus	917449

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				strand	
SOX21	NM_007084	NP_009015	Coding	chr13:94712135 minus strand	917450
SPACA7	NM_145248	NP_660291	Coding	chr13:112376336 plus strand	917451
SPATA13	NM_001166271	NP_001159743	Coding	chr13:24160715 plus strand	917452
SPATA13	NM_001286792	NP_001273721	Coding	chr13:23979625 plus strand	917453
SPATA13	NM_001286793	NP_001273722	Coding	chr13:24270686 plus strand	917454
SPATA13	NM_001286794	NP_001273723	Coding	chr13:24270686 plus strand	917454
SPATA13	NM_001286795	NP_001273724	Coding	chr13:24270686 plus strand	917454
SPATA13	NM_153023	NP_694568	Coding	chr13:24160715 plus strand	917452
SPERT	NM_001286341	NP_001273270	Coding	chr13:45702303 plus strand	917455
SPERT	NM_001286342	NP_001273271	Coding	chr13:45702468 plus strand	917456
SPERT	NM_152719	NP_689932	Coding	chr13:45702303 plus strand	917455
SPG20	NM_001142294	NP_001135766	Coding	chr13:36370180 minus strand	917457
SPG20	NM_001142295	NP_001135767	Coding	chr13:36346797 minus strand	917458
SPG20	NM_001142296	NP_001135768	Coding	chr13:36346509 minus strand	917459
SPG20	NM_015087	NP_055902	Coding	chr13:36346509 minus strand	917459
SPRY2	NM_005842	NP_005833	Coding	chr13:80340951 minus strand	917460
SPRYD7	NM_001127482	NP_001120954	Coding	chr13:49936489 minus strand	917461
SPRYD7	NM_020456	NP_065189	Coding	chr13:49936489 minus strand	917461
STARD13	NM_001243466	NP_001230395	Coding	chr13:33186079 minus strand	917462
STARD13	NM_001243474	NP_001230403	Coding	chr13:33206050 minus strand	917463
STARD13	NM_001243476	NP_001230405	Coding	chr13:33676835 minus strand	917464
STARD13	NM_052851	NP_443083	Coding	chr13:33206050 minus strand	917463
STARD13	NM_178006	NP_821074	Coding	chr13:33285764 minus strand	917465
STARD13	NM_178007	NP_821075	Coding	chr13:33186079 minus strand	917462
STK24	NM_001032296	NP_001027467	Coding	chr13:98577151 minus strand	917466
STK24	NM_001286649	NP_001273578	Coding	chr13:98577151 minus strand	917466
STK24	NM_003576	NP_003567	Coding	chr13:98522125 minus	917467

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				strand	
STOML3	NM_001144033	NP_001137505	Coding	chr13:38990859 minus strand	917468
STOML3	NM_145286	NP_660329	Coding	chr13:38990859 minus strand	917468
SUCLA2	NM_003850	NP_003841	Coding	chr13:48001326 minus strand	917469
SUGT1	NM_001130912	NP_001124384	Coding	chr13:52652695 plus strand	917470
SUGT1	NM_006704	NP_006695	Coding	chr13:52652695 plus strand	917470
SUPT20H	NM_001014286	NP_001014308	Coding	chr13:37059713 minus strand	917471
SUPT20H	NM_001278480	NP_001265409	Coding	chr13:37059713 minus strand	917471
SUPT20H	NM_001278481	NP_001265410	Coding	chr13:37059713 minus strand	917471
SUPT20H	NM_001278482	NP_001265411	Coding	chr13:37059487 minus strand	917472
SUPT20H	NM_017569	NP_060039	Coding	chr13:37059713 minus strand	917471
TBC1D4	NM_001286658	NP_001273587	Coding	chr13:75482114 minus strand	917473
TBC1D4	NM_001286659	NP_001273588	Coding	chr13:75482114 minus strand	917473
TBC1D4	NM_014832	NP_055647	Coding	chr13:75482114 minus strand	917473
TDRD3	NM_001146070	NP_001139542	Coding	chr13:60397292 plus strand	917474
TDRD3	NM_001146071	NP_001139543	Coding	chr13:60396456 plus strand	917475
TDRD3	NM_030794	NP_110421	Coding	chr13:60396456 plus strand	917475
TEX26	NM_152325	NP_689538	Coding	chr13:30932696 plus strand	917476
TEX29	NM_152324	NP_689537	Coding	chr13:111320667 plus strand	917477
TEX30	NM_001286775	NP_001273704	Coding	chr13:102773821 minus strand	917478
TEX30	NM_001286776	NP_001273705	Coding	chr13:102773821 minus strand	917478
TEX30	NM_138779	NP_620134	Coding	chr13:102773821 minus strand	917478
TFDP1	NM_007111	NP_009042	Coding	chr13:113584740 plus strand	917479
TGDS	NM_014305	NP_055120	Coding	chr13:94596257 minus strand	917480
THSD1	NM_018676	NP_061146	Coding	chr13:52406494 minus strand	917481
THSD1	NM_199263	NP_954872	Coding	chr13:52406494 minus strand	917481
TM9SF2	NM_004800	NP_004791	Coding	chr13:99501373 plus strand	917482
TMCO3	NM_017905	NP_060375	Coding	chr13:113490992 plus	917483

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				strand	
TMEM255B	NM_182614	NP_872420	Coding	chr13:113759242 plus strand	917484
TMTC4	NM_001079669	NP_001073137	Coding	chr13:100674935 minus strand	917485
TMTC4	NM_001286453	NP_001273382	Coding	chr13:100674935 minus strand	917485
TMTC4	NM_032813	NP_116202	Coding	chr13:100674935 minus strand	917485
TNFRSF19	NM_001204458	NP_001191387	Coding	chr13:23579359 plus strand	917486
TNFRSF19	NM_001204459	NP_001191388	Coding	chr13:23570369 plus strand	917487
TNFRSF19	NM_018647	NP_061117	Coding	chr13:23579359 plus strand	917486
TNFRSF19	NM_148957	NP_683760	Coding	chr13:23570369 plus strand	917487
TNFSF11	NM_003701	NP_003692	Coding	chr13:42574154 plus strand	917488
TNFSF11	NM_033012	NP_143026	Coding	chr13:42562735 plus strand	917489
TNFSF13B	NM_001145645	NP_001139117	Coding	chr13:108269628 plus strand	917490
TNFSF13B	NM_006573	NP_006564	Coding	chr13:108269628 plus strand	917490
TPP2	NM_003291	NP_003282	Coding	chr13:102596935 plus strand	917491
TPT1	NM_001286272	NP_001273201	Coding	chr13:45341284 minus strand	917492
TPT1	NM_001286273	NP_001273202	Coding	chr13:45341284 minus strand	917492
TPT1	NM_003295	NP_003286	Coding	chr13:45341284 minus strand	917492
TPTE2	NM_001141968	NP_001135440	Coding	chr13:19536763 minus strand	917493
TPTE2	NM_001271850	NP_001258779	Coding	chr13:19438475 minus strand	917494
TPTE2	NM_130785	NP_570141	Coding	chr13:19536763 minus strand	917493
TPTE2	NM_199254	NP_954863	Coding	chr13:19536763 minus strand	917493
TRIM13	NM_001007278	NP_001007279	Coding	chr13:49997006 plus strand	917495
TRIM13	NM_005798	NP_005789	Coding	chr13:49997006 plus strand	917495
TRIM13	NM_052811	NP_434698	Coding	chr13:49997006 plus strand	917495
TRIM13	NM_213590	NP_998755	Coding	chr13:49997006 plus strand	917495
TRPC4	NM_001135955	NP_001129427	Coding	chr13:37869802 minus strand	917496
TRPC4	NM_001135956	NP_001129428	Coding	chr13:37869802 minus strand	917496
TRPC4	NM_001135957	NP_001129429	Coding	chr13:37869802 minus	917496

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				strand	
TRPC4	NM_001135958	NP_001129430	Coding	chr13:37869802 minus strand	917496
TRPC4	NM_003306	NP_003297	Coding	chr13:37869802 minus strand	917496
TRPC4	NM_016179	NP_057263	Coding	chr13:37869802 minus strand	917496
TSC22D1	NM_001243797	NP_001230726	Coding	chr13:44437254 minus strand	917497
TSC22D1	NM_001243798	NP_001230727	Coding	chr13:44474301 minus strand	917498
TSC22D1	NM_001243799	NP_001230728	Coding	chr13:44576565 minus strand	917499
TSC22D1	NM_006022	NP_006013	Coding	chr13:44436924 minus strand	917500
TSC22D1	NM_183422	NP_904358	Coding	chr13:44576565 minus strand	917499
TUBA3C	NM_006001	NP_005992	Coding	chr13:19181852 minus strand	917501
TUBGCP3	NM_001286277	NP_001273206	Coding	chr13:112588185 minus strand	917502
TUBGCP3	NM_001286278	NP_001273207	Coding	chr13:112588185 minus strand	917502
TUBGCP3	NM_001286279	NP_001273208	Coding	chr13:112588185 minus strand	917502
TUBGCP3	NM_006322	NP_006313	Coding	chr13:112588185 minus strand	917502
UBAC2	NM_001144072	NP_001137544	Coding	chr13:99200424 plus strand	917503
UBAC2	NM_177967	NP_808882	Coding	chr13:99200908 plus strand	917504
UBL3	NM_007106	NP_009037	Coding	chr13:29850683 minus strand	917505
UCHL3	NM_001270952	NP_001257881	Coding	chr13:75549479 plus strand	917506
UCHL3	NM_006002	NP_005993	Coding	chr13:75549749 plus strand	917507
UFM1	NM_001286703	NP_001273632	Coding	chr13:38349770 plus strand	917508
UFM1	NM_001286704	NP_001273633	Coding	chr13:38349770 plus strand	917508
UFM1	NM_001286705	NP_001273634	Coding	chr13:38349770 plus strand	917508
UFM1	NM_001286706	NP_001273635	Coding	chr13:38349770 plus strand	917508
UFM1	NM_016617	NP_057701	Coding	chr13:38349770 plus strand	917508
UGGT2	NM_020121	NP_064506	Coding	chr13:96053482 minus strand	917509
UPF3A	NM_023011	NP_075387	Coding	chr13:114281583 plus strand	917510
UPF3A	NM_080687	NP_542418	Coding	chr13:114281583 plus strand	917510
URAD	NM_001105577	NP_001099047	Coding	chr13:27988637 minus	917511

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				strand	
USP12	NM_182488	NP_872294	Coding	chr13:27171896 minus strand	917512
USPL1	NM_005800	NP_005791	Coding	chr13:30617692 plus strand	917513
UTP14C	NM_021645	NP_067677	Coding	chr13:52024690 plus strand	917514
VPS36	NM_001282168	NP_001269097	Coding	chr13:52450678 minus strand	917515
VPS36	NM_001282169	NP_001269098	Coding	chr13:52450244 minus strand	917516
VPS36	NM_016075	NP_057159	Coding	chr13:52450678 minus strand	917515
VWA8	NM_001009814	NP_001009814	Coding	chr13:41961085 minus strand	917517
VWA8	NM_015058	NP_055873	Coding	chr13:41961085 minus strand	917517
WASF3	NM_001291965	NP_001278894	Coding	chr13:26557702 plus strand	917518
WASF3	NM_006646	NP_006637	Coding	chr13:26557702 plus strand	917518
WBP4	NM_007187	NP_009118	Coding	chr13:41061560 plus strand	917519
WDFY2	NM_052950	NP_443182	Coding	chr13:51584347 plus strand	917520
XPO4	NM_022459	NP_071904	Coding	chr13:20902774 minus strand	917521
ZAR1L	NM_001136571	NP_001130043	Coding	chr13:32311954 minus strand	917522
ZC3H13	NM_015070	NP_055885	Coding	chr13:46052761 minus strand	917523
ZDHHC20	NM_001286638	NP_001273567	Coding	chr13:21459370 minus strand	917524
ZDHHC20	NM_153251	NP_694983	Coding	chr13:21459369 minus strand	917525
ZIC2	NM_007129	NP_009060	Coding	chr13:99981771 plus strand	917526
ZIC5	NM_033132	NP_149123	Coding	chr13:99971924 minus strand	917527
ZMYM2	NM_001190964	NP_001177893	Coding	chr13:19958707 plus strand	917528
ZMYM2	NM_001190965	NP_001177894	Coding	chr13:19958833 plus strand	917529
ZMYM2	NM_003453	NP_003444	Coding	chr13:19958669 plus strand	917530
ZMYM2	NM_197968	NP_932072	Coding	chr13:19958669 plus strand	917530
ZMYM5	NM_001039649	NP_001034738	Coding	chr13:19863636 minus strand	917531
ZMYM5	NM_001039650	NP_001034739	Coding	chr13:19863636 minus strand	917531
ZMYM5	NM_001142684	NP_001136156	Coding	chr13:19863636 minus strand	917531
ABCD4	NM_005050	NP_005041	Coding	chr14:74303064 minus	1241080

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				strand	
ABHD12B	NM_001206673	NP_001193602	Coding	chr14:50872159 plus strand	1241081
ABHD12B	NM_181814	NP_861535	Coding	chr14:50872159 plus strand	1241081
ABHD4	NM_022060	NP_071343	Coding	chr14:22598237 plus strand	1241082
ACIN1	NM_001164814	NP_001158286	Coding	chr14:23095614 minus strand	1241083
ACIN1	NM_001164815	NP_001158287	Coding	chr14:23095614 minus strand	1241083
ACIN1	NM_001164816	NP_001158288	Coding	chr14:23071570 minus strand	1241084
ACIN1	NM_001164817	NP_001158289	Coding	chr14:23071570 minus strand	1241084
ACIN1	NM_014977	NP_055792	Coding	chr14:23095614 minus strand	1241083
ACOT1	NM_001037161	NP_001032238	Coding	chr14:73537223 plus strand	1241085
ACOT2	NM_006821	NP_006812	Coding	chr14:73569058 plus strand	1241086
ACOT4	NM_152331	NP_689544	Coding	chr14:73591705 plus strand	1241087
ACOT6	NM_001037162	NP_001032239	Coding	chr14:73616843 plus strand	1241088
ACTN1	NM_001102	NP_001093	Coding	chr14:68979366 minus strand	1241089
ACTN1	NM_001130004	NP_001123476	Coding	chr14:68979366 minus strand	1241089
ACTN1	NM_001130005	NP_001123477	Coding	chr14:68979366 minus strand	1241089
ACTR10	NM_018477	NP_060947	Coding	chr14:58200114 plus strand	1241090
ACYP1	NM_001107	NP_001098	Coding	chr14:75064049 minus strand	1241091
ACYP1	NM_001302616	NP_001289545	Coding	chr14:75064049 minus strand	1241091
ACYP1	NM_001302617	NP_001289546	Coding	chr14:75069483 minus strand	1241092
ADAM20	NM_003814	NP_003805	Coding	chr14:70535015 minus strand	1241093
ADAM21	NM_003813	NP_003804	Coding	chr14:70452156 plus strand	1241094
ADCK1	NM_001142545	NP_001136017	Coding	chr14:77800082 plus strand	1241095
ADCK1	NM_020421	NP_065154	Coding	chr14:77800082 plus strand	1241095
ADCY4	NM_001198568	NP_001185497	Coding	chr14:24335071 minus strand	1241096
ADCY4	NM_001198592	NP_001185521	Coding	chr14:24335071 minus strand	1241096
ADCY4	NM_139247	NP_640340	Coding	chr14:24335071 minus strand	1241096
ADSSL1	NM_152328	NP_689541	Coding	chr14:104724196 plus	1241097

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				strand	
ADSSL1	NM_199165	NP_954634	Coding	chr14:104729890 plus strand	1241098
AHNAK2	NM_138420	NP_612429	Coding	chr14:104978357 minus strand	1241099
AHSA1	NM_012111	NP_036243	Coding	chr14:77458029 plus strand	1241100
AJUBA	NM_001289097	NP_001276026	Coding	chr14:22982642 minus strand	1241101
AJUBA	NM_032876	NP_116265	Coding	chr14:22982642 minus strand	1241101
AJUBA	NM_198086	NP_932352	Coding	chr14:22977223 minus strand	1241102
AK7	NM_152327	NP_689540	Coding	chr14:96392110 plus strand	1241103
AKAP5	NM_004857	NP_004848	Coding	chr14:64465498 plus strand	1241104
AKAP6	NM_004274	NP_004265	Coding	chr14:32329272 plus strand	1241105
AKT1	NM_001014431	NP_001014431	Coding	chr14:104795743 minus strand	1241106
AKT1	NM_001014432	NP_001014432	Coding	chr14:104795743 minus strand	1241106
AKT1	NM_005163	NP_005154	Coding	chr14:104793601 minus strand	1241107
ALDH6A1	NM_001278593	NP_001265522	Coding	chr14:74084493 minus strand	1241108
ALDH6A1	NM_001278594	NP_001265523	Coding	chr14:74084493 minus strand	1241108
ALDH6A1	NM_005589	NP_005580	Coding	chr14:74084493 minus strand	1241108
ALKBH1	NM_006020	NP_006011	Coding	chr14:77708013 minus strand	1241109
AMN	NM_030943	NP_112205	Coding	chr14:102922655 plus strand	1241110
ANG	NM_001097577	NP_001091046	Coding	chr14:20688772 plus strand	1241111
ANG	NM_001145	NP_001136	Coding	chr14:20684176 plus strand	1241112
ANGEL1	NM_015305	NP_056120	Coding	chr14:76812940 minus strand	1241113
ANKRD9	NM_152326	NP_689539	Coding	chr14:102509791 minus strand	1241114
AP1G2	NM_001282474	NP_001269403	Coding	chr14:23567836 minus strand	1241115
AP1G2	NM_001282475	NP_001269404	Coding	chr14:23567524 minus strand	1241116
AP1G2	NM_003917	NP_003908	Coding	chr14:23567836 minus strand	1241115
AP4S1	NM_001128126	NP_001121598	Coding	chr14:31025469 plus strand	1241117
AP4S1	NM_001254726	NP_001241655	Coding	chr14:31025469 plus strand	1241117
AP4S1	NM_001254727	NP_001241656	Coding	chr14:31025469 plus	1241117

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				strand	
AP4S1	NM_001254728	NP_001241657	Coding	chr14:31026642 plus strand	1241118
AP4S1	NM_001254729	NP_001241658	Coding	chr14:31025105 plus strand	1241119
AP4S1	NM_007077	NP_009008	Coding	chr14:31025469 plus strand	1241117
AP5M1	NM_018229	NP_060699	Coding	chr14:57268887 plus strand	1241120
APEX1	NM_001244249	NP_001231178	Coding	chr14:20455130 plus strand	1241121
APEX1	NM_001641	NP_001632	Coding	chr14:20455130 plus strand	1241121
APEX1	NM_080648	NP_542379	Coding	chr14:20455130 plus strand	1241121
APEX1	NM_080649	NP_542380	Coding	chr14:20455130 plus strand	1241121
APOPT1	NM_001302652	NP_001289581	Coding	chr14:103562956 plus strand	1241122
APOPT1	NM_001302653	NP_001289582	Coding	chr14:103562956 plus strand	1241122
APOPT1	NM_001302654	NP_001289583	Coding	chr14:103562956 plus strand	1241122
APOPT1	NM_032374	NP_115750	Coding	chr14:103562956 plus strand	1241122
AREL1	NM_001039479	NP_001034568	Coding	chr14:74713104 minus strand	1241123
ARF6	NM_001663	NP_001654	Coding	chr14:49893017 plus strand	1241124
ARG2	NM_001172	NP_001163	Coding	chr14:67619861 plus strand	1241125
ARHGAP5	NM_001030055	NP_001025226	Coding	chr14:32077288 plus strand	1241126
ARHGAP5	NM_001173	NP_001164	Coding	chr14:32077288 plus strand	1241126
ARHGEF40	NM_001278529	NP_001265458	Coding	chr14:21070259 plus strand	1241127
ARHGEF40	NM_001278530	NP_001265459	Coding	chr14:21070259 plus strand	1241127
ARHGEF40	NM_018071	NP_060541	Coding	chr14:21070259 plus strand	1241127
ARID4A	NM_002892	NP_002883	Coding	chr14:58298503 plus strand	1241128
ARID4A	NM_023000	NP_075376	Coding	chr14:58298503 plus strand	1241128
ARID4A	NM_023001	NP_075377	Coding	chr14:58298503 plus strand	1241128
ASB2	NM_001202429	NP_001189358	Coding	chr14:93976730 minus strand	1241129
ASB2	NM_016150	NP_057234	Coding	chr14:93957421 minus strand	1241130
ASPG	NM_001080464	NP_001073933	Coding	chr14:104085685 plus strand	1241131
ATG14	NM_014924	NP_055739	Coding	chr14:55411858 minus	1241132

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				strand	
ATG2B	NM_018036	NP_060506	Coding	chr14:96363341 minus strand	1241133
ATL1	NM_001127713	NP_001121185	Coding	chr14:50533081 plus strand	1241134
ATL1	NM_015915	NP_056999	Coding	chr14:50560024 plus strand	1241135
ATL1	NM_181598	NP_853629	Coding	chr14:50560024 plus strand	1241135
ATP5S	NM_001003803	NP_001003803	Coding	chr14:50312328 plus strand	1241136
ATP5S	NM_001003805	NP_001003805	Coding	chr14:50312328 plus strand	1241136
ATP5S	NM_015684	NP_056499	Coding	chr14:50312328 plus strand	1241136
ATP6V1D	NM_015994	NP_057078	Coding	chr14:67360003 minus strand	1241137
ATXN3	NM_001127696	NP_001121168	Coding	chr14:92106621 minus strand	1241138
ATXN3	NM_001127697	NP_001121169	Coding	chr14:92106621 minus strand	1241138
ATXN3	NM_001164774	NP_001158246	Coding	chr14:92106621 minus strand	1241138
ATXN3	NM_001164776	NP_001158248	Coding	chr14:92106621 minus strand	1241138
ATXN3	NM_001164777	NP_001158249	Coding	chr14:92106621 minus strand	1241138
ATXN3	NM_001164778	NP_001158250	Coding	chr14:92106621 minus strand	1241138
ATXN3	NM_001164779	NP_001158251	Coding	chr14:92106621 minus strand	1241138
ATXN3	NM_001164780	NP_001158252	Coding	chr14:92106621 minus strand	1241138
ATXN3	NM_001164781	NP_001158253	Coding	chr14:92106621 minus strand	1241138
ATXN3	NM_001164782	NP_001158254	Coding	chr14:92106621 minus strand	1241138
ATXN3	NM_004993	NP_004984	Coding	chr14:92106621 minus strand	1241138
ATXN3	NM_030660	NP_109376	Coding	chr14:92106621 minus strand	1241138
BAG5	NM_001015048	NP_001015048	Coding	chr14:103562814 minus strand	1241139
BAG5	NM_001015049	NP_001015049	Coding	chr14:103562318 minus strand	1241140
BAG5	NM_004873	NP_004864	Coding	chr14:103562318 minus strand	1241140
BATF	NM_006399	NP_006390	Coding	chr14:75522440 plus strand	1241141
BAZ1A	NM_013448	NP_038476	Coding	chr14:34875647 minus strand	1241142
BAZ1A	NM_182648	NP_872589	Coding	chr14:34875647 minus strand	1241142
BCL11B	NM_001282237	NP_001269166	Coding	chr14:99271713 minus	1241143

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				strand	
BCL11B	NM_001282238	NP_001269167	Coding	chr14:99271713 minus strand	1241143
BCL11B	NM_022898	NP_075049	Coding	chr14:99271713 minus strand	1241143
BCL11B	NM_138576	NP_612808	Coding	chr14:99271713 minus strand	1241143
BCL2L2	NM_001199839	NP_001186768	Coding	chr14:23306859 plus strand	1241144
BCL2L2	NM_004050	NP_004041	Coding	chr14:23306761 plus strand	1241145
BCL2L2-PABPN1	NM_001199864	NP_001186793	Coding	chr14:23306761 plus strand	1241146
BDKRB1	NM_000710	NP_000701	Coding	chr14:96256209 plus strand	1241147
BDKRB2	NM_000623	NP_000614	Coding	chr14:96204797 plus strand	1241148
BEGAIN	NM_001159531	NP_001153003	Coding	chr14:100568070 minus strand	1241149
BEGAIN	NM_020836	NP_065887	Coding	chr14:100569794 minus strand	1241150
BMP4	NM_001202	NP_001193	Coding	chr14:53956836 minus strand	1241151
BMP4	NM_130850	NP_570911	Coding	chr14:53956836 minus strand	1241151
BMP4	NM_130851	NP_570912	Coding	chr14:53954552 minus strand	1241152
BRF1	NM_001242786	NP_001229715	Coding	chr14:105315577 minus strand	1241153
BRF1	NM_001242787	NP_001229716	Coding	chr14:105315577 minus strand	1241153
BRF1	NM_001242788	NP_001229717	Coding	chr14:105300992 minus strand	1241154
BRF1	NM_001242789	NP_001229718	Coding	chr14:105249404 minus strand	1241155
BRF1	NM_001242790	NP_001229719	Coding	chr14:105300992 minus strand	1241154
BRF1	NM_001519	NP_001510	Coding	chr14:105300992 minus strand	1241154
BRF1	NM_145685	NP_663718	Coding	chr14:105247885 minus strand	1241156
BRMS1L	NM_032352	NP_115728	Coding	chr14:35826390 plus strand	1241157
BTBD6	NM_033271	NP_150374	Coding	chr14:105248541 plus strand	1241158
BTBD7	NM_001002860	NP_001002860	Coding	chr14:93333092 minus strand	1241159
BTBD7	NM_001289133	NP_001276062	Coding	chr14:93333092 minus strand	1241159
BTBD7	NM_018167	NP_060637	Coding	chr14:93333092 minus strand	1241159
C14orf1	NM_007176	NP_009107	Coding	chr14:75661195 minus strand	1241160
C14orf105	NM_001283056	NP_001269985	Coding	chr14:57493863 minus	1241161

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				strand	
C14orf105	NM_001283057	NP_001269986	Coding	chr14:57493863 minus strand	1241161
C14orf105	NM_001283058	NP_001269987	Coding	chr14:57493863 minus strand	1241161
C14orf105	NM_001283059	NP_001269988	Coding	chr14:57493863 minus strand	1241161
C14orf105	NM_001283060	NP_001269989	Coding	chr14:57493863 minus strand	1241161
C14orf105	NM_018168	NP_060638	Coding	chr14:57493863 minus strand	1241161
C14orf119	NM_017924	NP_060394	Coding	chr14:23095473 plus strand	1241162
C14orf132	NM_001252507	NP_001239436	Coding	chr14:96039323 plus strand	1241163
C14orf132	NM_001282463	NP_001269392	Coding	chr14:96039323 plus strand	1241163
C14orf132	NM_001282464	NP_001269393	Coding	chr14:96039323 plus strand	1241163
C14orf132	NM_001289139	NP_001276068	Coding	chr14:96039323 plus strand	1241163
C14orf142	NM_032490	NP_115879	Coding	chr14:93207114 minus strand	1241164
C14orf159	NM_001102366	NP_001095836	Coding	chr14:91114012 plus strand	1241165
C14orf159	NM_001102367	NP_001095837	Coding	chr14:91114634 plus strand	1241166
C14orf159	NM_001102368	NP_001095838	Coding	chr14:91114012 plus strand	1241165
C14orf159	NM_001102369	NP_001095839	Coding	chr14:91114012 plus strand	1241165
C14orf159	NM_001286470	NP_001273399	Coding	chr14:91114012 plus strand	1241165
C14orf159	NM_001286471	NP_001273400	Coding	chr14:91114699 plus strand	1241167
C14orf159	NM_001286472	NP_001273401	Coding	chr14:91114012 plus strand	1241165
C14orf159	NM_001286473	NP_001273402	Coding	chr14:91114012 plus strand	1241165
C14orf159	NM_024952	NP_079228	Coding	chr14:91114012 plus strand	1241165
C14orf166	NM_016039	NP_057123	Coding	chr14:51989509 plus strand	1241168
C14orf169	NM_024644	NP_078920	Coding	chr14:73490933 plus strand	1241169
C14orf177	NM_182560	NP_872366	Coding	chr14:98711612 plus strand	1241170
C14orf178	NM_001173978	NP_001167449	Coding	chr14:77760829 plus strand	1241171
C14orf178	NM_174943	NP_777603	Coding	chr14:77760829 plus strand	1241171
C14orf180	NM_001008404	NP_001008404	Coding	chr14:104579683 plus strand	1241172
C14orf180	NM_001286399	NP_001273328	Coding	chr14:104579683 plus	1241172

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				strand	
C14orf180	NM_001286400	NP_001273329	Coding	chr14:104581140 plus strand	1241173
C14orf182	NM_001012706	NP_001012724	Coding	chr14:50007520 minus strand	1241174
C14orf183	NM_001014830	NP_001014830	Coding	chr14:50092643 minus strand	1241175
C14orf2	NM_001127393	NP_001120865	Coding	chr14:103921566 minus strand	1241176
C14orf2	NM_004894	NP_004885	Coding	chr14:103921566 minus strand	1241176
C14orf28	NM_001017923	NP_001017923	Coding	chr14:44897303 plus strand	1241177
C14orf37	NM_001001872	NP_001001872	Coding	chr14:58152129 minus strand	1241178
C14orf39	NM_174978	NP_777638	Coding	chr14:60486046 minus strand	1241179
C14orf79	NM_174891	NP_777551	Coding	chr14:104986278 plus strand	1241180
C14orf80	NM_001134875	NP_001128347	Coding	chr14:105491248 plus strand	1241181
C14orf80	NM_001134876	NP_001128348	Coding	chr14:105491248 plus strand	1241181
C14orf80	NM_001134877	NP_001128349	Coding	chr14:105490182 plus strand	1241182
C14orf80	NM_001198983	NP_001185912	Coding	chr14:105489854 plus strand	1241183
C14orf93	NM_001130706	NP_001124178	Coding	chr14:23010201 minus strand	1241184
C14orf93	NM_001130708	NP_001124180	Coding	chr14:23010201 minus strand	1241184
C14orf93	NM_001282968	NP_001269897	Coding	chr14:23010201 minus strand	1241184
C14orf93	NM_001282969	NP_001269898	Coding	chr14:23001037 minus strand	1241185
C14orf93	NM_001282970	NP_001269899	Coding	chr14:23010201 minus strand	1241184
C14orf93	NM_021944	NP_068763	Coding	chr14:23010201 minus strand	1241184
CALM1	NM_006888	NP_008819	Coding	chr14:90396982 plus strand	1241186
CATSPERB	NM_024764	NP_079040	Coding	chr14:91732069 minus strand	1241187
CBLN3	NM_001039771	NP_001034860	Coding	chr14:24429525 minus strand	1241188
CCDC175	NM_001164399	NP_001157871	Coding	chr14:59576831 minus strand	1241189
CCDC176	NM_025057	NP_079333	Coding	chr14:74019355 plus strand	1241190
CCDC177	NM_001271507	NP_001258436	Coding	chr14:69574883 minus strand	1241191
CCDC85C	NM_001144995	NP_001138467	Coding	chr14:99604390 minus strand	1241192
CCDC88C	NM_001080414	NP_001073883	Coding	chr14:91417844 minus	1241193

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				strand	
CCNB1IP1	NM_021178	NP_067001	Coding	chr14:20333312 minus strand	1241194
CCNB1IP1	NM_182849	NP_878269	Coding	chr14:20333312 minus strand	1241194
CCNB1IP1	NM_182852	NP_878272	Coding	chr14:20333312 minus strand	1241194
CCNK	NM_001099402	NP_001092872	Coding	chr14:99481401 plus strand	1241195
CDC42BPB	NM_006035	NP_006026	Coding	chr14:103057405 minus strand	1241196
CDCA4	NM_017955	NP_060425	Coding	chr14:105021088 minus strand	1241197
CDCA4	NM_145701	NP_663747	Coding	chr14:105021088 minus strand	1241197
CDH24	NM_022478	NP_071923	Coding	chr14:23057538 minus strand	1241198
CDH24	NM_144985	NP_659422	Coding	chr14:23057538 minus strand	1241198
CDKL1	NM_001282236	NP_001269165	Coding	chr14:50397404 minus strand	1241199
CDKL1	NM_004196	NP_004187	Coding	chr14:50395924 minus strand	1241200
CDKN3	NM_001130851	NP_001124323	Coding	chr14:54396954 plus strand	1241201
CDKN3	NM_005192	NP_005183	Coding	chr14:54396954 plus strand	1241201
CEBPE	NM_001805	NP_001796	Coding	chr14:23119611 minus strand	1241202
CEP128	NM_152446	NP_689659	Coding	chr14:80939540 minus strand	1241203
CEP170B	NM_001112726	NP_001106197	Coding	chr14:104865312 plus strand	1241204
CEP170B	NM_015005	NP_055820	Coding	chr14:104865312 plus strand	1241204
CFL2	NM_001243645	NP_001230574	Coding	chr14:34714555 minus strand	1241205
CFL2	NM_021914	NP_068733	Coding	chr14:34713817 minus strand	1241206
CFL2	NM_138638	NP_619579	Coding	chr14:34714823 minus strand	1241207
CGRRF1	NM_006568	NP_006559	Coding	chr14:54509868 plus strand	1241208
CHD8	NM_001170629	NP_001164100	Coding	chr14:21431708 minus strand	1241209
CHD8	NM_020920	NP_065971	Coding	chr14:21437298 minus strand	1241210
CHGA	NM_001275	NP_001266	Coding	chr14:92923099 plus strand	1241211
CHGA	NM_001301690	NP_001288619	Coding	chr14:92923099 plus strand	1241211
CHMP4A	NM_014169	NP_054888	Coding	chr14:24213830 minus strand	1241212
CHURC1	NM_001204063	NP_001190992	Coding	chr14:64914360 plus	1241213

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				strand	
CHURC1	NM_001204064	NP_001190993	Coding	chr14:64914360 plus strand	1241213
CHURC1	NM_145165	NP_660148	Coding	chr14:64914360 plus strand	1241213
CHURC1-FNTB	NM_001202558	NP_001189487	Coding	chr14:64914360 plus strand	1241214
CHURC1-FNTB	NM_001202559	NP_001189488	Coding	chr14:64914360 plus strand	1241214
CIDEB	NM_014430	NP_055245	Coding	chr14:24311370 minus strand	1241215
CINP	NM_032630	NP_116019	Coding	chr14:102362916 minus strand	1241216
CIPC	NM_033426	NP_219494	Coding	chr14:77098234 plus strand	1241217
CKB	NM_001823	NP_001814	Coding	chr14:103522859 minus strand	1241218
CLEC14A	NM_175060	NP_778230	Coding	chr14:38256370 minus strand	1241219
CLMN	NM_024734	NP_079010	Coding	chr14:95319908 minus strand	1241220
CMA1	NM_001836	NP_001827	Coding	chr14:24508265 minus strand	1241221
CMTM5	NM_001037288	NP_001032365	Coding	chr14:23376807 plus strand	1241222
CMTM5	NM_001288744	NP_001275673	Coding	chr14:23376807 plus strand	1241222
CMTM5	NM_001288745	NP_001275674	Coding	chr14:23376807 plus strand	1241222
CMTM5	NM_001288746	NP_001275675	Coding	chr14:23376807 plus strand	1241222
CMTM5	NM_138460	NP_612469	Coding	chr14:23376807 plus strand	1241222
CNIH1	NM_005776	NP_005767	Coding	chr14:54441430 minus strand	1241223
COCH	NM_001135058	NP_001128530	Coding	chr14:30874534 plus strand	1241224
COCH	NM_004086	NP_004077	Coding	chr14:30874534 plus strand	1241224
COQ6	NM_182476	NP_872282	Coding	chr14:73950251 plus strand	1241225
COQ6	NM_182480	NP_872286	Coding	chr14:73949933 plus strand	1241226
COX16	NM_001204090	NP_001191019	Coding	chr14:70359731 minus strand	1241227
COX16	NM_016468	NP_057552	Coding	chr14:70359731 minus strand	1241227
COX8C	NM_182971	NP_892016	Coding	chr14:93347190 plus strand	1241228
CPNE6	NM_001280558	NP_001267487	Coding	chr14:24070836 plus strand	1241229
CPNE6	NM_006032	NP_006023	Coding	chr14:24071346 plus strand	1241230
CPSF2	NM_017437	NP_059133	Coding	chr14:92121953 plus	1241231

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				strand	
CRIP1	NM_001311	NP_001302	Coding	chr14:105486919 plus strand	1241232
CRIP2	NM_001270837	NP_001257766	Coding	chr14:105472937 plus strand	1241233
CRIP2	NM_001270841	NP_001257770	Coding	chr14:105474774 plus strand	1241234
CRIP2	NM_001312	NP_001303	Coding	chr14:105474774 plus strand	1241234
CTAGE5	NM_001247988	NP_001234917	Coding	chr14:39266297 plus strand	1241235
CTAGE5	NM_001247989	NP_001234918	Coding	chr14:39267123 plus strand	1241236
CTAGE5	NM_001247990	NP_001234919	Coding	chr14:39267123 plus strand	1241236
CTAGE5	NM_005930	NP_005921	Coding	chr14:39267123 plus strand	1241236
CTAGE5	NM_203354	NP_976229	Coding	chr14:39265271 plus strand	1241237
CTAGE5	NM_203355	NP_976230	Coding	chr14:39267123 plus strand	1241236
CTAGE5	NM_203356	NP_976231	Coding	chr14:39266297 plus strand	1241235
CTSG	NM_001911	NP_001902	Coding	chr14:24576260 minus strand	1241238
CYP46A1	NM_006668	NP_006659	Coding	chr14:99684417 plus strand	1241239
DAAM1	NM_001270520	NP_001257449	Coding	chr14:59188662 plus strand	1241240
DAAM1	NM_014992	NP_055807	Coding	chr14:59263440 plus strand	1241241
DACT1	NM_001079520	NP_001072988	Coding	chr14:58638038 plus strand	1241242
DACT1	NM_016651	NP_057735	Coding	chr14:58638038 plus strand	1241242
DAD1	NM_001344	NP_001335	Coding	chr14:22589237 minus strand	1241243
DCAF11	NM_001163484	NP_001156956	Coding	chr14:24114696 plus strand	1241244
DCAF11	NM_025230	NP_079506	Coding	chr14:24114776 plus strand	1241245
DCAF11	NM_181357	NP_852002	Coding	chr14:24115284 plus strand	1241246
DCAF4	NM_001163508	NP_001156980	Coding	chr14:72926331 plus strand	1241247
DCAF4	NM_001163509	NP_001156981	Coding	chr14:72926331 plus strand	1241247
DCAF4	NM_015604	NP_056419	Coding	chr14:72926331 plus strand	1241247
DCAF4	NM_181340	NP_851937	Coding	chr14:72926331 plus strand	1241247
DCAF4	NM_181341	NP_851938	Coding	chr14:72926331 plus strand	1241247
DCAF5	NM_001284206	NP_001271135	Coding	chr14:69153197 minus	1241248

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				strand	
DCAF5	NM_001284207	NP_001271136	Coding	chr14:69152599 minus strand	1241249
DCAF5	NM_001284208	NP_001271137	Coding	chr14:69153197 minus strand	1241248
DCAF5	NM_003861	NP_003852	Coding	chr14:69153197 minus strand	1241248
DDHD1	NM_001160147	NP_001153619	Coding	chr14:53153328 minus strand	1241250
DDHD1	NM_001160148	NP_001153620	Coding	chr14:53153328 minus strand	1241250
DDHD1	NM_030637	NP_085140	Coding	chr14:53153328 minus strand	1241250
DDX24	NM_020414	NP_065147	Coding	chr14:94081212 minus strand	1241251
DEGS2	NM_206918	NP_996801	Coding	chr14:100159675 minus strand	1241252
DHRS1	NM_001136050	NP_001129522	Coding	chr14:24299833 minus strand	1241253
DHRS1	NM_138452	NP_612461	Coding	chr14:24299460 minus strand	1241254
DHRS2	NM_005794	NP_005785	Coding	chr14:23636363 plus strand	1241255
DHRS2	NM_182908	NP_878912	Coding	chr14:23636363 plus strand	1241255
DHRS4	NM_001282987	NP_001269916	Coding	chr14:23953734 plus strand	1241256
DHRS4	NM_001282988	NP_001269917	Coding	chr14:23953734 plus strand	1241256
DHRS4	NM_001282989	NP_001269918	Coding	chr14:23953734 plus strand	1241256
DHRS4	NM_001282990	NP_001269919	Coding	chr14:23953734 plus strand	1241256
DHRS4	NM_001282991	NP_001269920	Coding	chr14:23953734 plus strand	1241256
DHRS4	NM_021004	NP_066284	Coding	chr14:23953734 plus strand	1241256
DHRS4L1	NM_001277864	NP_001264793	Coding	chr14:24007008 plus strand	1241257
DHRS4L2	NM_001193635	NP_001180564	Coding	chr14:23970014 plus strand	1241258
DHRS4L2	NM_001193636	NP_001180565	Coding	chr14:23969873 plus strand	1241259
DHRS4L2	NM_001193637	NP_001180566	Coding	chr14:23969873 plus strand	1241259
DHRS4L2	NM_198083	NP_932349	Coding	chr14:23988817 plus strand	1241260
DHRS7	NM_016029	NP_057113	Coding	chr14:60165493 minus strand	1241261
DICER1	NM_001195573	NP_001182502	Coding	chr14:95133503 minus strand	1241262
DICER1	NM_001271282	NP_001258211	Coding	chr14:95136810 minus strand	1241263
DICER1	NM_001291628	NP_001278557	Coding	chr14:95158010 minus	1241264

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				strand	
DICER1	NM_030621	NP_085124	Coding	chr14:95158010 minus strand	1241264
DICER1	NM_177438	NP_803187	Coding	chr14:95157422 minus strand	1241265
DIO2	NM_000793	NP_000784	Coding	chr14:80231054 minus strand	1241266
DIO2	NM_001007023	NP_001007024	Coding	chr14:80211521 minus strand	1241267
DIO2	NM_001242502	NP_001229431	Coding	chr14:80211521 minus strand	1241267
DIO2	NM_001242503	NP_001229432	Coding	chr14:80211521 minus strand	1241267
DIO2	NM_013989	NP_054644	Coding	chr14:80211627 minus strand	1241268
DIO3	NM_001362	NP_001353	Coding	chr14:101561350 plus strand	1241269
DLGAP5	NM_001146015	NP_001139487	Coding	chr14:55191678 minus strand	1241270
DLGAP5	NM_014750	NP_055565	Coding	chr14:55191678 minus strand	1241270
DLK1	NM_003836	NP_003827	Coding	chr14:100726864 plus strand	1241271
DLST	NM_001244883	NP_001231812	Coding	chr14:74881890 plus strand	1241272
DLST	NM_001933	NP_001924	Coding	chr14:74881890 plus strand	1241272
DNAAF2	NM_001083908	NP_001077377	Coding	chr14:49635230 minus strand	1241273
DNAAF2	NM_018139	NP_060609	Coding	chr14:49635230 minus strand	1241273
DNAL1	NM_001201366	NP_001188295	Coding	chr14:73644874 plus strand	1241274
DNAL1	NM_031427	NP_113615	Coding	chr14:73644874 plus strand	1241274
DPF3	NM_001280542	NP_001267471	Coding	chr14:72894116 minus strand	1241275
DPF3	NM_001280543	NP_001267472	Coding	chr14:72894116 minus strand	1241275
DPF3	NM_001280544	NP_001267473	Coding	chr14:72892649 minus strand	1241276
DPF3	NM_012074	NP_036206	Coding	chr14:72894116 minus strand	1241275
DTD2	NM_080664	NP_542395	Coding	chr14:31457474 minus strand	1241277
DYNC1H1	NM_001376	NP_001367	Coding	chr14:101964527 plus strand	1241278
EAPP	NM_018453	NP_060923	Coding	chr14:34539737 minus strand	1241279
EDDM3A	NM_006683	NP_006674	Coding	chr14:20745939 plus strand	1241280
EDDM3B	NM_022360	NP_071755	Coding	chr14:20768426 plus strand	1241281
EFCAB11	NM_001284266	NP_001271195	Coding	chr14:89954777 minus	1241282

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				strand	
EFCAB11	NM_001284267	NP_001271196	Coding	chr14:89954777 minus strand	1241282
EFCAB11	NM_001284268	NP_001271197	Coding	chr14:89954557 minus strand	1241283
EFCAB11	NM_001284269	NP_001271198	Coding	chr14:89954557 minus strand	1241283
EFCAB11	NM_145231	NP_660274	Coding	chr14:89954777 minus strand	1241282
EFS	NM_001277174	NP_001264103	Coding	chr14:23365633 minus strand	1241284
EFS	NM_005864	NP_005855	Coding	chr14:23365633 minus strand	1241284
EFS	NM_032459	NP_115835	Coding	chr14:23365633 minus strand	1241284
EGLN3	NM_022073	NP_071356	Coding	chr14:33951078 minus strand	1241285
EIF2B2	NM_014239	NP_055054	Coding	chr14:75002908 plus strand	1241286
EIF2S1	NM_004094	NP_004085	Coding	chr14:67360316 plus strand	1241287
EIF5	NM_001969	NP_001960	Coding	chr14:103334001 plus strand	1241288
EIF5	NM_183004	NP_892116	Coding	chr14:103334860 plus strand	1241289
ELMSAN1	NM_001043318	NP_001036783	Coding	chr14:73787258 minus strand	1241290
ELMSAN1	NM_194278	NP_919254	Coding	chr14:73760298 minus strand	1241291
EMC9	NM_016049	NP_057133	Coding	chr14:24141588 minus strand	1241292
EML1	NM_001008707	NP_001008707	Coding	chr14:99793407 plus strand	1241293
EML1	NM_004434	NP_004425	Coding	chr14:99793407 plus strand	1241293
EML5	NM_183387	NP_899243	Coding	chr14:88792752 minus strand	1241294
ENTPD5	NM_001249	NP_001240	Coding	chr14:74019323 minus strand	1241295
ERH	NM_004450	NP_004441	Coding	chr14:69398304 minus strand	1241296
ERO1L	NM_014584	NP_055399	Coding	chr14:52695701 minus strand	1241297
ESR2	NM_001040275	NP_001035365	Coding	chr14:64294410 minus strand	1241298
ESR2	NM_001214902	NP_001201831	Coding	chr14:64283075 minus strand	1241299
ESR2	NM_001271876	NP_001258805	Coding	chr14:64283075 minus strand	1241299
ESR2	NM_001271877	NP_001258806	Coding	chr14:64283075 minus strand	1241299
ESR2	NM_001291712	NP_001278641	Coding	chr14:64338550 minus strand	1241300
ESR2	NM_001291723	NP_001278652	Coding	chr14:64338550 minus	1241300

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				strand	
ESR2	NM_001437	NP_001428	Coding	chr14:64294410 minus strand	1241298
ESRRB	NM_004452	NP_004443	Coding	chr14:76371346 plus strand	1241301
EVL	NM_016337	NP_057421	Coding	chr14:100065413 plus strand	1241302
EXD2	NM_001193360	NP_001180289	Coding	chr14:69191476 plus strand	1241303
EXD2	NM_001193361	NP_001180290	Coding	chr14:69191476 plus strand	1241303
EXD2	NM_001193362	NP_001180291	Coding	chr14:69191765 plus strand	1241304
EXD2	NM_001193363	NP_001180292	Coding	chr14:69191765 plus strand	1241304
EXD2	NM_018199	NP_060669	Coding	chr14:69191476 plus strand	1241303
EXOC3L4	NM_001077594	NP_001071062	Coding	chr14:103100143 plus strand	1241305
EXOC5	NM_006544	NP_006535	Coding	chr14:57268899 minus strand	1241306
FAM161B	NM_152445	NP_689658	Coding	chr14:73950414 minus strand	1241307
FAM177A1	NM_001079519	NP_001072987	Coding	chr14:35044906 plus strand	1241308
FAM177A1	NM_001289022	NP_001275951	Coding	chr14:35046252 plus strand	1241309
FAM177A1	NM_173607	NP_775878	Coding	chr14:35046403 plus strand	1241310
FAM179B	NM_015091	NP_055906	Coding	chr14:44962212 plus strand	1241311
FAM181A	NM_001207071	NP_001194000	Coding	chr14:93918893 plus strand	1241312
FAM181A	NM_001207072	NP_001194001	Coding	chr14:93927384 plus strand	1241313
FAM181A	NM_001207073	NP_001194002	Coding	chr14:93927342 plus strand	1241314
FAM181A	NM_001207074	NP_001194003	Coding	chr14:93927341 plus strand	1241315
FAM181A	NM_138344	NP_612353	Coding	chr14:93918893 plus strand	1241312
FAM71D	NM_173526	NP_775797	Coding	chr14:67189392 plus strand	1241316
FANCM	NM_020937	NP_065988	Coding	chr14:45135932 plus strand	1241317
FBLN5	NM_006329	NP_006320	Coding	chr14:91947702 minus strand	1241318
FBXO33	NM_203301	NP_976046	Coding	chr14:39432500 minus strand	1241319
FBXO34	NM_017943	NP_060413	Coding	chr14:55271302 plus strand	1241320
FBXO34	NM_152231	NP_689417	Coding	chr14:55272153 plus strand	1241321
FCF1	NM_015962	NP_057046	Coding	chr14:74713146 plus	1241322

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				strand	
FERMT2	NM_001134999	NP_001128471	Coding	chr14:52951097 minus strand	1241323
FERMT2	NM_001135000	NP_001128472	Coding	chr14:52951097 minus strand	1241323
FERMT2	NM_006832	NP_006823	Coding	chr14:52951097 minus strand	1241323
FITM1	NM_203402	NP_981947	Coding	chr14:24131465 plus strand	1241324
FKBP3	NM_002013	NP_002004	Coding	chr14:45134529 minus strand	1241325
FLRT2	NM_013231	NP_037363	Coding	chr14:85530143 plus strand	1241326
FLVCR2	NM_001195283	NP_001182212	Coding	chr14:75605461 plus strand	1241327
FLVCR2	NM_017791	NP_060261	Coding	chr14:75578596 plus strand	1241328
FNTB	NM_002028	NP_002019	Coding	chr14:64986788 plus strand	1241329
FOS	NM_005252	NP_005243	Coding	chr14:75278777 plus strand	1241330
FOXA1	NM_004496	NP_004487	Coding	chr14:37595120 minus strand	1241331
FOXG1	NM_005249	NP_005240	Coding	chr14:28767071 plus strand	1241332
FOXN3	NM_001085471	NP_001078940	Coding	chr14:89619150 minus strand	1241333
FOXN3	NM_005197	NP_005188	Coding	chr14:89417110 minus strand	1241334
FRMD6	NM_001042481	NP_001035946	Coding	chr14:51489120 plus strand	1241335
FRMD6	NM_001267046	NP_001253975	Coding	chr14:51651857 plus strand	1241336
FRMD6	NM_001267047	NP_001253976	Coding	chr14:51717282 plus strand	1241337
FRMD6	NM_152330	NP_689543	Coding	chr14:51651857 plus strand	1241336
FSCB	NM_032135	NP_115511	Coding	chr14:44507296 minus strand	1241338
FUT8	NM_004480	NP_004471	Coding	chr14:65410591 plus strand	1241339
FUT8	NM_178155	NP_835368	Coding	chr14:65410591 plus strand	1241339
FUT8	NM_178156	NP_835369	Coding	chr14:65410591 plus strand	1241339
G2E3	NM_017769	NP_060239	Coding	chr14:30559122 plus strand	1241340
GALC	NM_000153	NP_000144	Coding	chr14:87993271 minus strand	1241341
GALC	NM_001201401	NP_001188330	Coding	chr14:87993271 minus strand	1241341
GALC	NM_001201402	NP_001188331	Coding	chr14:87993665 minus strand	1241342
GALNT16	NM_001168368	NP_001161840	Coding	chr14:69259963 plus	1241343

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				strand	
GALNT16	NM_020692	NP_065743	Coding	chr14:69259963 plus strand	1241343
GCH1	NM_000161	NP_000152	Coding	chr14:54902824 minus strand	1241344
GCH1	NM_001024024	NP_001019195	Coding	chr14:54902824 minus strand	1241344
GCH1	NM_001024070	NP_001019241	Coding	chr14:54902824 minus strand	1241344
GCH1	NM_001024071	NP_001019242	Coding	chr14:54902824 minus strand	1241344
GEMIN2	NM_001009182	NP_001009182	Coding	chr14:39114283 plus strand	1241345
GEMIN2	NM_001009183	NP_001009183	Coding	chr14:39114283 plus strand	1241345
GEMIN2	NM_003616	NP_003607	Coding	chr14:39114283 plus strand	1241345
GLRX5	NM_016417	NP_057501	Coding	chr14:95534985 plus strand	1241346
GMFB	NM_004124	NP_004115	Coding	chr14:54489026 minus strand	1241347
GMPR2	NM_001002000	NP_001002000	Coding	chr14:24232421 plus strand	1241348
GMPR2	NM_001002001	NP_001002001	Coding	chr14:24232421 plus strand	1241348
GMPR2	NM_001002002	NP_001002002	Coding	chr14:24232871 plus strand	1241349
GMPR2	NM_001283021	NP_001269950	Coding	chr14:24232421 plus strand	1241348
GMPR2	NM_001283022	NP_001269951	Coding	chr14:24232871 plus strand	1241349
GMPR2	NM_001283023	NP_001269952	Coding	chr14:24232871 plus strand	1241349
GMPR2	NM_016576	NP_057660	Coding	chr14:24232871 plus strand	1241349
GNG2	NM_001243773	NP_001230702	Coding	chr14:51860303 plus strand	1241350
GNG2	NM_001243774	NP_001230703	Coding	chr14:51860303 plus strand	1241350
GNG2	NM_053064	NP_444292	Coding	chr14:51860303 plus strand	1241350
GNPNAT1	NM_198066	NP_932332	Coding	chr14:52791668 minus strand	1241351
GOLGA5	NM_005113	NP_005104	Coding	chr14:92794230 plus strand	1241352
GPATCH2L	NM_017926	NP_060396	Coding	chr14:76151884 plus strand	1241353
GPATCH2L	NM_017972	NP_060442	Coding	chr14:76154353 plus strand	1241354
GPHB5	NM_145171	NP_660154	Coding	chr14:63318879 minus strand	1241355
GPHN	NM_001024218	NP_001019389	Coding	chr14:66507406 plus strand	1241356
GPHN	NM_020806	NP_065857	Coding	chr14:66507406 plus	1241356

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				strand	
GPR132	NM_001278694	NP_001265623	Coding	chr14:105065550 minus strand	1241357
GPR132	NM_001278695	NP_001265624	Coding	chr14:105065550 minus strand	1241357
GPR132	NM_001278696	NP_001265625	Coding	chr14:105065550 minus strand	1241357
GPR132	NM_013345	NP_037477	Coding	chr14:105065550 minus strand	1241357
GPR135	NM_022571	NP_072093	Coding	chr14:59465341 minus strand	1241358
GPR137C	NM_001099652	NP_001093122	Coding	chr14:52553147 plus strand	1241359
GPR33	NM_001197184	NP_001184113	Coding	chr14:31487945 minus strand	1241360
GPR65	NM_003608	NP_003599	Coding	chr14:88005123 plus strand	1241361
GPR68	NM_001177676	NP_001171147	Coding	chr14:91244508 minus strand	1241362
GPR68	NM_003485	NP_003476	Coding	chr14:91253880 minus strand	1241363
GPX2	NM_002083	NP_002074	Coding	chr14:64942905 minus strand	1241364
GSC	NM_173849	NP_776248	Coding	chr14:94770162 minus strand	1241365
GSKIP	NM_001271904	NP_001258833	Coding	chr14:96364735 plus strand	1241366
GSKIP	NM_001271905	NP_001258834	Coding	chr14:96363451 plus strand	1241367
GSKIP	NM_001271906	NP_001258835	Coding	chr14:96363451 plus strand	1241367
GSKIP	NM_016472	NP_057556	Coding	chr14:96363451 plus strand	1241367
GSTZ1	NM_001513	NP_001504	Coding	chr14:77321362 plus strand	1241368
GSTZ1	NM_145870	NP_665877	Coding	chr14:77320886 plus strand	1241369
GSTZ1	NM_145871	NP_665878	Coding	chr14:77320886 plus strand	1241369
GTF2A1	NM_001278940	NP_001265869	Coding	chr14:81220952 minus strand	1241370
GTF2A1	NM_015859	NP_056943	Coding	chr14:81220952 minus strand	1241370
GTF2A1	NM_201595	NP_963889	Coding	chr14:81221231 minus strand	1241371
GZMB	NM_004131	NP_004122	Coding	chr14:24634226 minus strand	1241372
GZMH	NM_001270780	NP_001257709	Coding	chr14:24609720 minus strand	1241373
GZMH	NM_001270781	NP_001257710	Coding	chr14:24609720 minus strand	1241373
GZMH	NM_033423	NP_219491	Coding	chr14:24609720 minus strand	1241373
HAUS4	NM_001166269	NP_001159741	Coding	chr14:22957142 minus	1241374

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				strand	
HAUS4	NM_001166270	NP_001159742	Coding	chr14:22957142 minus strand	1241374
HAUS4	NM_017815	NP_060285	Coding	chr14:22957142 minus strand	1241374
HEATR4	NM_001220484	NP_001207413	Coding	chr14:73558947 minus strand	1241375
HEATR4	NM_203309	NP_976054	Coding	chr14:73558947 minus strand	1241375
HEATR5A	NM_015473	NP_056288	Coding	chr14:31420582 minus strand	1241376
HECTD1	NM_015382	NP_056197	Coding	chr14:31207523 minus strand	1241377
HHIPL1	NM_001127258	NP_001120730	Coding	chr14:99645142 plus strand	1241378
HHIPL1	NM_032425	NP_115801	Coding	chr14:99645142 plus strand	1241378
HIF1A	NM_001243084	NP_001230013	Coding	chr14:61697621 plus strand	1241379
HIF1A	NM_001530	NP_001521	Coding	chr14:61695400 plus strand	1241380
HIF1A	NM_181054	NP_851397	Coding	chr14:61695400 plus strand	1241380
HNRNPC	NM_001077442	NP_001070910	Coding	chr14:21269479 minus strand	1241381
HNRNPC	NM_001077443	NP_001070911	Coding	chr14:21269479 minus strand	1241381
HNRNPC	NM_004500	NP_004491	Coding	chr14:21269479 minus strand	1241381
HNRNPC	NM_031314	NP_112604	Coding	chr14:21269479 minus strand	1241381
HOMEZ	NM_020834	NP_065885	Coding	chr14:23286100 minus strand	1241382
HSP90AA1	NM_001017963	NP_001017963	Coding	chr14:102139749 minus strand	1241383
HSP90AA1	NM_005348	NP_005339	Coding	chr14:102087175 minus strand	1241384
HSPA2	NM_021979	NP_068814	Coding	chr14:64540467 plus strand	1241385
IFI27	NM_001130080	NP_001123552	Coding	chr14:94110732 plus strand	1241386
IFI27	NM_001288952	NP_001275881	Coding	chr14:94110732 plus strand	1241386
IFI27	NM_001288954	NP_001275883	Coding	chr14:94110732 plus strand	1241386
IFI27	NM_001288956	NP_001275885	Coding	chr14:94110732 plus strand	1241386
IFI27	NM_001288957	NP_001275886	Coding	chr14:94110814 plus strand	1241387
IFI27	NM_001288958	NP_001275887	Coding	chr14:94110732 plus strand	1241386
IFI27	NM_001288959	NP_001275888	Coding	chr14:94110732 plus strand	1241386
IFI27	NM_001288960	NP_001275889	Coding	chr14:94110732 plus	1241386

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				strand	
IFI27	NM_001288995	NP_001275924	Coding	chr14:94110732 plus strand	1241386
IFI27	NM_005532	NP_005523	Coding	chr14:94110732 plus strand	1241386
IFI27L1	NM_145249	NP_660292	Coding	chr14:94081292 plus strand	1241388
IFI27L1	NM_206949	NP_996832	Coding	chr14:94081292 plus strand	1241388
IFI27L2	NM_032036	NP_114425	Coding	chr14:94129620 minus strand	1241389
IFT43	NM_001102564	NP_001096034	Coding	chr14:75985752 plus strand	1241390
IFT43	NM_001255995	NP_001242924	Coding	chr14:75985752 plus strand	1241390
IFT43	NM_052873	NP_443105	Coding	chr14:75985752 plus strand	1241390
IL25	NM_022789	NP_073626	Coding	chr14:23372860 plus strand	1241391
IL25	NM_172314	NP_758525	Coding	chr14:23372808 plus strand	1241392
INF2	NM_001031714	NP_001026884	Coding	chr14:104689605 plus strand	1241393
INF2	NM_022489	NP_071934	Coding	chr14:104689605 plus strand	1241393
INF2	NM_032714	NP_116103	Coding	chr14:104689605 plus strand	1241393
INSM2	NM_032594	NP_115983	Coding	chr14:35534041 plus strand	1241394
IPO4	NM_024658	NP_078934	Coding	chr14:24188918 minus strand	1241395
IRF2BPL	NM_024496	NP_078772	Coding	chr14:77028699 minus strand	1241396
IRF9	NM_006084	NP_006075	Coding	chr14:24161212 plus strand	1241397
ISCA2	NM_001272007	NP_001258936	Coding	chr14:74493719 plus strand	1241398
ISCA2	NM_194279	NP_919255	Coding	chr14:74493719 plus strand	1241398
ISM2	NM_182509	NP_872315	Coding	chr14:77498867 minus strand	1241399
ISM2	NM_199296	NP_954993	Coding	chr14:77498867 minus strand	1241399
ITPK1	NM_001142593	NP_001136065	Coding	chr14:93115918 minus strand	1241400
ITPK1	NM_001142594	NP_001136066	Coding	chr14:93115918 minus strand	1241400
ITPK1	NM_014216	NP_055031	Coding	chr14:93115918 minus strand	1241400
JAG2	NM_002226	NP_002217	Coding	chr14:105168824 minus strand	1241401
JAG2	NM_145159	NP_660142	Coding	chr14:105168824 minus strand	1241401
JDP2	NM_001135047	NP_001128519	Coding	chr14:75427805 plus	1241402

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				strand	
JDP2	NM_001135048	NP_001128520	Coding	chr14:75428216 plus strand	1241403
JDP2	NM_001135049	NP_001128521	Coding	chr14:75432133 plus strand	1241404
JDP2	NM_130469	NP_569736	Coding	chr14:75428356 plus strand	1241405
JKAMP	NM_001098625	NP_001092095	Coding	chr14:59484442 plus strand	1241406
JKAMP	NM_001284201	NP_001271130	Coding	chr14:59484442 plus strand	1241406
JKAMP	NM_001284202	NP_001271131	Coding	chr14:59484442 plus strand	1241406
JKAMP	NM_001284203	NP_001271132	Coding	chr14:59484442 plus strand	1241406
JKAMP	NM_001284204	NP_001271133	Coding	chr14:59484442 plus strand	1241406
JKAMP	NM_016475	NP_057559	Coding	chr14:59484442 plus strand	1241406
JPH4	NM_001146028	NP_001139500	Coding	chr14:23578800 minus strand	1241407
JPH4	NM_032452	NP_115828	Coding	chr14:23578800 minus strand	1241407
KCNH5	NM_139318	NP_647479	Coding	chr14:63045238 minus strand	1241408
KCNH5	NM_172375	NP_758963	Coding	chr14:63045238 minus strand	1241408
KCNK10	NM_021161	NP_066984	Coding	chr14:88326912 minus strand	1241409
KCNK10	NM_138317	NP_612190	Coding	chr14:88323249 minus strand	1241410
KCNK10	NM_138318	NP_612191	Coding	chr14:88270911 minus strand	1241411
KCNK13	NM_022054	NP_071337	Coding	chr14:90061764 plus strand	1241412
KHNYN	NM_001290256	NP_001277185	Coding	chr14:24429285 plus strand	1241413
KHNYN	NM_001290257	NP_001277186	Coding	chr14:24429934 plus strand	1241414
KHNYN	NM_015299	NP_056114	Coding	chr14:24429934 plus strand	1241414
KIAA0391	NM_001256678	NP_001243607	Coding	chr14:35122320 plus strand	1241415
KIAA0391	NM_001256679	NP_001243608	Coding	chr14:35122320 plus strand	1241415
KIAA0391	NM_001256680	NP_001243609	Coding	chr14:35122551 plus strand	1241416
KIAA0391	NM_001256681	NP_001243610	Coding	chr14:35122551 plus strand	1241416
KIAA0391	NM_014672	NP_055487	Coding	chr14:35122320 plus strand	1241415
KIAA0586	NM_001244189	NP_001231118	Coding	chr14:58427384 plus strand	1241417
KIAA0586	NM_001244190	NP_001231119	Coding	chr14:58427384 plus	1241417

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				strand	
KIAA0586	NM_001244191	NP_001231120	Coding	chr14:58427384 plus strand	1241417
KIAA0586	NM_001244192	NP_001231121	Coding	chr14:58427384 plus strand	1241417
KIAA0586	NM_001244193	NP_001231122	Coding	chr14:58439680 plus strand	1241418
KIAA0586	NM_014749	NP_055564	Coding	chr14:58427991 plus strand	1241419
KIF26A	NM_015656	NP_056471	Coding	chr14:104138722 plus strand	1241420
KLC1	NM_001130107	NP_001123579	Coding	chr14:103629187 plus strand	1241421
KLC1	NM_005552	NP_005543	Coding	chr14:103629187 plus strand	1241421
KLC1	NM_182923	NP_891553	Coding	chr14:103629187 plus strand	1241421
KLHDC1	NM_172193	NP_751943	Coding	chr14:49693104 plus strand	1241422
KLHDC2	NM_014315	NP_055130	Coding	chr14:49768068 plus strand	1241423
KLHL28	NM_017658	NP_060128	Coding	chr14:44961976 minus strand	1241424
KLHL33	NM_001109997	NP_001103467	Coding	chr14:20435642 minus strand	1241425
KTN1	NM_001079521	NP_001072989	Coding	chr14:55580206 plus strand	1241426
KTN1	NM_001079522	NP_001072990	Coding	chr14:55580206 plus strand	1241426
KTN1	NM_001271014	NP_001257943	Coding	chr14:55580206 plus strand	1241426
KTN1	NM_004986	NP_004977	Coding	chr14:55580206 plus strand	1241426
L2HGDH	NM_024884	NP_079160	Coding	chr14:50312229 minus strand	1241427
L3HYPDH	NM_144581	NP_653182	Coding	chr14:59484355 minus strand	1241428
LGALS3	NM_001177388	NP_001170859	Coding	chr14:55129216 plus strand	1241429
LGALS3	NM_002306	NP_002297	Coding	chr14:55129216 plus strand	1241429
LGMN	NM_001008530	NP_001008530	Coding	chr14:92748702 minus strand	1241430
LGMN	NM_005606	NP_005597	Coding	chr14:92748702 minus strand	1241430
LIN52	NM_001024674	NP_001019845	Coding	chr14:74084952 plus strand	1241431
LRFN5	NM_152447	NP_689660	Coding	chr14:41607560 plus strand	1241432
LRP10	NM_014045	NP_054764	Coding	chr14:22871750 plus strand	1241433
LRR1	NM_152329	NP_689542	Coding	chr14:49598696 plus strand	1241434
LRR1	NM_203467	NP_982292	Coding	chr14:49598696 plus	1241434

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				strand	
LRRC16B	NM_138360	NP_612369	Coding	chr14:24051996 plus strand	1241435
LRRC74A	NM_194287	NP_919263	Coding	chr14:76826381 plus strand	1241436
LTB4R	NM_001143919	NP_001137391	Coding	chr14:24311498 plus strand	1241437
LTB4R	NM_181657	NP_858043	Coding	chr14:24313106 plus strand	1241438
LTB4R2	NM_001164692	NP_001158164	Coding	chr14:24310150 plus strand	1241439
LTB4R2	NM_019839	NP_062813	Coding	chr14:24310150 plus strand	1241439
LTBP2	NM_000428	NP_000419	Coding	chr14:74612331 minus strand	1241440
MAP3K9	NM_001284230	NP_001271159	Coding	chr14:70809171 minus strand	1241441
MAP3K9	NM_001284231	NP_001271160	Coding	chr14:70783452 minus strand	1241442
MAP3K9	NM_001284232	NP_001271161	Coding	chr14:70783452 minus strand	1241442
MAP3K9	NM_033141	NP_149132	Coding	chr14:70809171 minus strand	1241441
MAP4K5	NM_006575	NP_006566	Coding	chr14:50532658 minus strand	1241443
MAP4K5	NM_198794	NP_942089	Coding	chr14:50532658 minus strand	1241443
MAPK1IP1L	NM_144578	NP_653179	Coding	chr14:55051643 plus strand	1241444
MARK3	NM_001128918	NP_001122390	Coding	chr14:103385363 plus strand	1241445
MARK3	NM_001128919	NP_001122391	Coding	chr14:103385363 plus strand	1241445
MARK3	NM_001128920	NP_001122392	Coding	chr14:103385363 plus strand	1241445
MARK3	NM_001128921	NP_001122393	Coding	chr14:103385363 plus strand	1241445
MARK3	NM_002376	NP_002367	Coding	chr14:103385363 plus strand	1241445
MAX	NM_001271068	NP_001257997	Coding	chr14:65102544 minus strand	1241446
MAX	NM_001271069	NP_001257998	Coding	chr14:65102544 minus strand	1241446
MAX	NM_002382	NP_002373	Coding	chr14:65102544 minus strand	1241446
MAX	NM_145112	NP_660087	Coding	chr14:65102544 minus strand	1241446
MAX	NM_145113	NP_660088	Coding	chr14:65102544 minus strand	1241446
MAX	NM_145114	NP_660089	Coding	chr14:65102544 minus strand	1241446
MAX	NM_197957	NP_932061	Coding	chr14:65102544 minus strand	1241446
MBIP	NM_001144891	NP_001138363	Coding	chr14:36320676 minus	1241447

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				strand	
MBIP	NM_016586	NP_057670	Coding	chr14:36320676 minus strand	1241447
MDGA2	NM_001113498	NP_001106970	Coding	chr14:47674954 minus strand	1241448
MDGA2	NM_182830	NP_878250	Coding	chr14:47343246 minus strand	1241449
MDP1	NM_001199821	NP_001186750	Coding	chr14:24216070 minus strand	1241450
MDP1	NM_001199822	NP_001186751	Coding	chr14:24216070 minus strand	1241450
MDP1	NM_138476	NP_612485	Coding	chr14:24216070 minus strand	1241450
MED6	NM_001284209	NP_001271138	Coding	chr14:70600690 minus strand	1241451
MED6	NM_001284210	NP_001271139	Coding	chr14:70600690 minus strand	1241451
MED6	NM_001284211	NP_001271140	Coding	chr14:70600690 minus strand	1241451
MED6	NM_005466	NP_005457	Coding	chr14:70600690 minus strand	1241451
METTL17	NM_001029991	NP_001025162	Coding	chr14:20989805 plus strand	1241452
METTL17	NM_022734	NP_073571	Coding	chr14:20989805 plus strand	1241452
METTL3	NM_019852	NP_062826	Coding	chr14:21511315 minus strand	1241453
MGAT2	NM_002408	NP_002399	Coding	chr14:49620770 plus strand	1241454
MIA2	NM_054024	NP_473365	Coding	chr14:39233920 plus strand	1241455
MIPOL1	NM_001195296	NP_001182225	Coding	chr14:37197912 plus strand	1241456
MIPOL1	NM_001195297	NP_001182226	Coding	chr14:37197912 plus strand	1241456
MIPOL1	NM_138731	NP_620059	Coding	chr14:37197912 plus strand	1241456
MIS18BP1	NM_018353	NP_060823	Coding	chr14:45253402 minus strand	1241457
MLH3	NM_001040108	NP_001035197	Coding	chr14:75051532 minus strand	1241458
MLH3	NM_014381	NP_055196	Coding	chr14:75051532 minus strand	1241458
MMP14	NM_004995	NP_004986	Coding	chr14:22836532 plus strand	1241459
MNAT1	NM_001177963	NP_001171434	Coding	chr14:60734740 plus strand	1241460
MNAT1	NM_002431	NP_002422	Coding	chr14:60734740 plus strand	1241460
MOAP1	NM_022151	NP_071434	Coding	chr14:93184904 minus strand	1241461
MOK	NM_001272011	NP_001258940	Coding	chr14:102305200 minus strand	1241462
MOK	NM_014226	NP_055041	Coding	chr14:102305200 minus	1241462

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				strand	
MPP5	NM_001256550	NP_001243479	Coding	chr14:67241294 plus strand	1241463
MPP5	NM_022474	NP_071919	Coding	chr14:67241294 plus strand	1241463
MRPL52	NM_178336	NP_848026	Coding	chr14:22829882 plus strand	1241464
MRPL52	NM_180982	NP_851313	Coding	chr14:22829882 plus strand	1241464
MRPL52	NM_181304	NP_851821	Coding	chr14:22829882 plus strand	1241464
MRPL52	NM_181305	NP_851822	Coding	chr14:22829882 plus strand	1241464
MRPL52	NM_181306	NP_851823	Coding	chr14:22829882 plus strand	1241464
MRPL52	NM_181307	NP_851824	Coding	chr14:22829882 plus strand	1241464
MTA1	NM_001203258	NP_001190187	Coding	chr14:105419848 plus strand	1241465
MTA1	NM_004689	NP_004680	Coding	chr14:105419848 plus strand	1241465
MTHFD1	NM_005956	NP_005947	Coding	chr14:64388040 plus strand	1241466
MYH6	NM_002471	NP_002462	Coding	chr14:23408277 minus strand	1241467
MYH7	NM_000257	NP_000248	Coding	chr14:23435686 minus strand	1241468
NAA30	NM_001011713	NP_001011713	Coding	chr14:57390552 plus strand	1241469
NDRG2	NM_001282211	NP_001269140	Coding	chr14:21070872 minus strand	1241470
NDRG2	NM_001282212	NP_001269141	Coding	chr14:21025645 minus strand	1241471
NDRG2	NM_001282213	NP_001269142	Coding	chr14:21025105 minus strand	1241472
NDRG2	NM_001282214	NP_001269143	Coding	chr14:21025026 minus strand	1241473
NDRG2	NM_001282215	NP_001269144	Coding	chr14:21025776 minus strand	1241474
NDRG2	NM_001282216	NP_001269145	Coding	chr14:21025105 minus strand	1241472
NDRG2	NM_016250	NP_057334	Coding	chr14:21025776 minus strand	1241474
NDRG2	NM_201535	NP_963293	Coding	chr14:21025776 minus strand	1241474
NDRG2	NM_201536	NP_963294	Coding	chr14:21025776 minus strand	1241474
NDRG2	NM_201537	NP_963831	Coding	chr14:21025776 minus strand	1241474
NDRG2	NM_201538	NP_963832	Coding	chr14:21025105 minus strand	1241472
NDRG2	NM_201539	NP_963833	Coding	chr14:21025105 minus strand	1241472
NDRG2	NM_201540	NP_963834	Coding	chr14:21025105 minus	1241472

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				strand	
NDRG2	NM_201541	NP_963835	Coding	chr14:21025105 minus strand	1241472
NDUFB1	NM_004545	NP_004536	Coding	chr14:92121809 minus strand	1241475
NEDD8	NM_006156	NP_006147	Coding	chr14:24232370 minus strand	1241476
NEDD8-MDP1	NM_001199823	NP_001186752	Coding	chr14:24232370 minus strand	1241477
NEK9	NM_033116	NP_149107	Coding	chr14:75127075 minus strand	1241478
NEMF	NM_001301732	NP_001288661	Coding	chr14:49853073 minus strand	1241479
NEMF	NM_004713	NP_004704	Coding	chr14:49853073 minus strand	1241479
NFATC4	NM_001136022	NP_001129494	Coding	chr14:24366910 plus strand	1241480
NFATC4	NM_001198965	NP_001185894	Coding	chr14:24368019 plus strand	1241481
NFATC4	NM_001198966	NP_001185895	Coding	chr14:24369081 plus strand	1241482
NFATC4	NM_001198967	NP_001185896	Coding	chr14:24366910 plus strand	1241480
NFATC4	NM_001288802	NP_001275731	Coding	chr14:24369152 plus strand	1241483
NFATC4	NM_004554	NP_004545	Coding	chr14:24368019 plus strand	1241481
NFKBIA	NM_020529	NP_065390	Coding	chr14:35404754 minus strand	1241484
NGB	NM_021257	NP_067080	Coding	chr14:77271312 minus strand	1241485
NGDN	NM_001042635	NP_001036100	Coding	chr14:23469688 plus strand	1241486
NGDN	NM_015514	NP_056329	Coding	chr14:23469688 plus strand	1241486
NID2	NM_007361	NP_031387	Coding	chr14:52069228 minus strand	1241487
NIN	NM_016350	NP_057434	Coding	chr14:50831121 minus strand	1241488
NIN	NM_020921	NP_065972	Coding	chr14:50831121 minus strand	1241488
NIN	NM_182944	NP_891989	Coding	chr14:50831121 minus strand	1241488
NIN	NM_182946	NP_891991	Coding	chr14:50831121 minus strand	1241488
NKX2-1	NM_001079668	NP_001073136	Coding	chr14:36520225 minus strand	1241489
NKX2-1	NM_003317	NP_003308	Coding	chr14:36519698 minus strand	1241490
NKX2-8	NM_014360	NP_055175	Coding	chr14:36582581 minus strand	1241491
NOP9	NM_001286367	NP_001273296	Coding	chr14:24299853 plus strand	1241492
NOP9	NM_174913	NP_777573	Coding	chr14:24299853 plus	1241492

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				strand	
NOVA1	NM_002515	NP_002506	Coding	chr14:26597754 minus strand	1241493
NOVA1	NM_006489	NP_006480	Coding	chr14:26597754 minus strand	1241493
NOVA1	NM_006491	NP_006482	Coding	chr14:26597754 minus strand	1241493
NOXRED1	NM_001113475	NP_001106946	Coding	chr14:77423056 minus strand	1241494
NPAS3	NM_001164749	NP_001158221	Coding	chr14:32939252 plus strand	1241495
NPAS3	NM_001165893	NP_001159365	Coding	chr14:32939252 plus strand	1241495
NPAS3	NM_022123	NP_071406	Coding	chr14:32939252 plus strand	1241495
NPAS3	NM_173159	NP_775182	Coding	chr14:32939252 plus strand	1241495
NPC2	NM_006432	NP_006423	Coding	chr14:74493381 minus strand	1241496
NRDE2	NM_017970	NP_060440	Coding	chr14:90332137 minus strand	1241497
NRL	NM_006177	NP_006168	Coding	chr14:24084623 minus strand	1241498
NRXN3	NM_001105250	NP_001098720	Coding	chr14:79279338 plus strand	1241499
NRXN3	NM_001272020	NP_001258949	Coding	chr14:79279338 plus strand	1241499
NRXN3	NM_004796	NP_004787	Coding	chr14:78403730 plus strand	1241500
NRXN3	NM_138970	NP_620426	Coding	chr14:79279338 plus strand	1241499
NUBPL	NM_001201573	NP_001188502	Coding	chr14:31577915 plus strand	1241501
NUBPL	NM_001201574	NP_001188503	Coding	chr14:31714568 plus strand	1241502
NUBPL	NM_025152	NP_079428	Coding	chr14:31561384 plus strand	1241503
NUDT14	NM_177533	NP_803877	Coding	chr14:105181323 minus strand	1241504
NUMB	NM_001005743	NP_001005743	Coding	chr14:73458580 minus strand	1241505
NUMB	NM_001005744	NP_001005744	Coding	chr14:73458580 minus strand	1241505
NUMB	NM_001005745	NP_001005745	Coding	chr14:73458580 minus strand	1241505
NUMB	NM_003744	NP_003735	Coding	chr14:73458580 minus strand	1241505
NYNRIN	NM_025081	NP_079357	Coding	chr14:24398785 plus strand	1241506
OR10G2	NM_001005466	NP_001005466	Coding	chr14:21634940 minus strand	1241507
OR10G3	NM_001005465	NP_001005465	Coding	chr14:21570744 minus strand	1241508
OR11G2	NM_001005503	NP_001005503	Coding	chr14:20197335 plus	1241509

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				strand	
OR11H12	NM_001013354	NP_001013372	Coding	chr14:18601116 plus strand	1241510
OR11H2	NM_001197287	NP_001184216	Coding	chr14:19714332 minus strand	1241511
OR11H4	NM_001004479	NP_001004479	Coding	chr14:20242791 plus strand	1241512
OR11H6	NM_001004480	NP_001004480	Coding	chr14:20223709 plus strand	1241513
OR4E2	NM_001001912	NP_001001912	Coding	chr14:21665082 plus strand	1241514
OR4K1	NM_001004063	NP_001004063	Coding	chr14:19935607 plus strand	1241515
OR4K13	NM_001004714	NP_001004714	Coding	chr14:20034758 minus strand	1241516
OR4K14	NM_001004712	NP_001004712	Coding	chr14:20015193 minus strand	1241517
OR4K15	NM_001005486	NP_001005486	Coding	chr14:19975518 plus strand	1241518
OR4K17	NM_001004715	NP_001004715	Coding	chr14:20117406 plus strand	1241519
OR4K2	NM_001005501	NP_001005501	Coding	chr14:19876267 plus strand	1241520
OR4K5	NM_001005483	NP_001005483	Coding	chr14:19920606 plus strand	1241521
OR4L1	NM_001004717	NP_001004717	Coding	chr14:20060044 plus strand	1241522
OR4M1	NM_001005500	NP_001005500	Coding	chr14:19780322 plus strand	1241523
OR4N2	NM_001004723	NP_001004723	Coding	chr14:19803769 plus strand	1241524
OR4N5	NM_001004724	NP_001004724	Coding	chr14:20143735 plus strand	1241525
OR4Q3	NM_172194	NP_751944	Coding	chr14:19747427 plus strand	1241526
OR5AU1	NM_001004731	NP_001004731	Coding	chr14:21156025 minus strand	1241527
OR6S1	NM_001001968	NP_001001968	Coding	chr14:20641691 minus strand	1241528
OSGEP	NM_017807	NP_060277	Coding	chr14:20455108 minus strand	1241529
OTUB2	NM_023112	NP_075601	Coding	chr14:94026377 plus strand	1241530
OTX2	NM_001270523	NP_001257452	Coding	chr14:56810476 minus strand	1241531
OTX2	NM_001270524	NP_001257453	Coding	chr14:56810476 minus strand	1241531
OTX2	NM_001270525	NP_001257454	Coding	chr14:56805663 minus strand	1241532
OTX2	NM_021728	NP_068374	Coding	chr14:56810476 minus strand	1241531
OTX2	NM_172337	NP_758840	Coding	chr14:56805663 minus strand	1241532
OXA1L	NM_005015	NP_005006	Coding	chr14:22766521 plus	1241533

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				strand	
PABPN1	NM_004643	NP_004634	Coding	chr14:23320187 plus strand	1241534
PACS2	NM_001100913	NP_001094383	Coding	chr14:105314414 plus strand	1241535
PACS2	NM_001243127	NP_001230056	Coding	chr14:105300810 plus strand	1241536
PACS2	NM_015197	NP_056012	Coding	chr14:105314414 plus strand	1241535
PAPLN	NM_173462	NP_775733	Coding	chr14:73237496 plus strand	1241537
PAPOLA	NM_001252006	NP_001238935	Coding	chr14:96502375 plus strand	1241538
PAPOLA	NM_001252007	NP_001238936	Coding	chr14:96502375 plus strand	1241538
PAPOLA	NM_001293627	NP_001280556	Coding	chr14:96502375 plus strand	1241538
PAPOLA	NM_001293628	NP_001280557	Coding	chr14:96502864 plus strand	1241539
PAPOLA	NM_001293632	NP_001280561	Coding	chr14:96502375 plus strand	1241538
PAPOLA	NM_032632	NP_116021	Coding	chr14:96502375 plus strand	1241538
PARP2	NM_001042618	NP_001036083	Coding	chr14:20343613 plus strand	1241540
PARP2	NM_005484	NP_005475	Coding	chr14:20343613 plus strand	1241540
PAX9	NM_006194	NP_006185	Coding	chr14:36657567 plus strand	1241541
PCK2	NM_001018073	NP_001018083	Coding	chr14:24094130 plus strand	1241542
PCK2	NM_001291556	NP_001278485	Coding	chr14:24094130 plus strand	1241542
PCK2	NM_004563	NP_004554	Coding	chr14:24094130 plus strand	1241542
PCNX	NM_014982	NP_055797	Coding	chr14:70907404 plus strand	1241543
PCNXL4	NM_022495	NP_071940	Coding	chr14:60091910 plus strand	1241544
PELI2	NM_021255	NP_067078	Coding	chr14:56118374 plus strand	1241545
PGF	NM_001207012	NP_001193941	Coding	chr14:74955764 minus strand	1241546
PGF	NM_001293643	NP_001280572	Coding	chr14:74955764 minus strand	1241546
PGF	NM_002632	NP_002623	Coding	chr14:74955764 minus strand	1241546
PIGH	NM_004569	NP_004560	Coding	chr14:67600300 minus strand	1241547
PLD4	NM_138790	NP_620145	Coding	chr14:104924849 plus strand	1241548
PLEK2	NM_016445	NP_057529	Coding	chr14:67412111 minus strand	1241549
PLEKHD1	NM_001161498	NP_001154970	Coding	chr14:69484753 plus	1241550

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				strand	
PLEKHG3	NM_015549	NP_056364	Coding	chr14:64704474 plus strand	1241551
PLEKHH1	NM_020715	NP_065766	Coding	chr14:67533290 plus strand	1241552
PNMA1	NM_006029	NP_006020	Coding	chr14:73714425 minus strand	1241553
PNN	NM_002687	NP_002678	Coding	chr14:39175182 plus strand	1241554
PNP	NM_000270	NP_000261	Coding	chr14:20469378 plus strand	1241555
POLE2	NM_001197330	NP_001184259	Coding	chr14:49688380 minus strand	1241556
POLE2	NM_001197331	NP_001184260	Coding	chr14:49688380 minus strand	1241556
POLE2	NM_002692	NP_002683	Coding	chr14:49688380 minus strand	1241556
POMT2	NM_013382	NP_037514	Coding	chr14:77320882 minus strand	1241557
POTEG	NM_001005356	NP_001005356	Coding	chr14:19434341 minus strand	1241558
POTEM	NM_001145442	NP_001138914	Coding	chr14:18967433 plus strand	1241559
PPM1A	NM_021003	NP_066283	Coding	chr14:60249247 plus strand	1241560
PPM1A	NM_177951	NP_808820	Coding	chr14:60249247 plus strand	1241560
PPM1A	NM_177952	NP_808821	Coding	chr14:60245751 plus strand	1241561
PPP1R13B	NM_015316	NP_056131	Coding	chr14:103847590 minus strand	1241562
PPP1R36	NM_172365	NP_758953	Coding	chr14:64549901 plus strand	1241563
PPP1R3E	NM_001276318	NP_001263247	Coding	chr14:23302848 minus strand	1241564
PPP2R3C	NM_017917	NP_060387	Coding	chr14:35122313 minus strand	1241565
PPP2R5C	NM_001161725	NP_001155197	Coding	chr14:101761797 plus strand	1241566
PPP2R5C	NM_001161726	NP_001155198	Coding	chr14:101761797 plus strand	1241566
PPP2R5C	NM_002719	NP_002710	Coding	chr14:101809802 plus strand	1241567
PPP2R5C	NM_178586	NP_848701	Coding	chr14:101809802 plus strand	1241567
PPP2R5C	NM_178587	NP_848702	Coding	chr14:101809802 plus strand	1241567
PPP2R5E	NM_001282179	NP_001269108	Coding	chr14:63543361 minus strand	1241568
PPP2R5E	NM_001282180	NP_001269109	Coding	chr14:63543361 minus strand	1241568
PPP2R5E	NM_001282181	NP_001269110	Coding	chr14:63508238 minus strand	1241569
PPP2R5E	NM_001282182	NP_001269111	Coding	chr14:63508238 minus	1241569

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				strand	
PPP2R5E	NM_006246	NP_006237	Coding	chr14:63543361 minus strand	1241568
PPP4R4	NM_020958	NP_066009	Coding	chr14:94174311 plus strand	1241570
PPP4R4	NM_058237	NP_478144	Coding	chr14:94174311 plus strand	1241570
PRIMA1	NM_178013	NP_821092	Coding	chr14:93788420 minus strand	1241571
PRKCH	NM_006255	NP_006246	Coding	chr14:61321442 plus strand	1241572
PRKD1	NM_002742	NP_002733	Coding	chr14:29927693 minus strand	1241573
PRMT5	NM_001039619	NP_001034708	Coding	chr14:22929585 minus strand	1241574
PRMT5	NM_001282953	NP_001269882	Coding	chr14:22929585 minus strand	1241574
PRMT5	NM_001282954	NP_001269883	Coding	chr14:22929585 minus strand	1241574
PRMT5	NM_001282955	NP_001269884	Coding	chr14:22929585 minus strand	1241574
PRMT5	NM_001282956	NP_001269885	Coding	chr14:22929585 minus strand	1241574
PRMT5	NM_006109	NP_006100	Coding	chr14:22929585 minus strand	1241574
PROX2	NM_001080408	NP_001073877	Coding	chr14:74863834 minus strand	1241575
PROX2	NM_001243007	NP_001229936	Coding	chr14:74863834 minus strand	1241575
PRPF39	NM_017922	NP_060392	Coding	chr14:45084098 plus strand	1241576
PSEN1	NM_000021	NP_000012	Coding	chr14:73136434 plus strand	1241577
PSEN1	NM_007318	NP_015557	Coding	chr14:73136434 plus strand	1241577
PSMA3	NM_002788	NP_002779	Coding	chr14:58244804 plus strand	1241578
PSMA3	NM_152132	NP_687033	Coding	chr14:58244804 plus strand	1241578
PSMA6	NM_001282232	NP_001269161	Coding	chr14:35292316 plus strand	1241579
PSMA6	NM_001282233	NP_001269162	Coding	chr14:35292316 plus strand	1241579
PSMA6	NM_001282234	NP_001269163	Coding	chr14:35278557 plus strand	1241580
PSMA6	NM_002791	NP_002782	Coding	chr14:35292316 plus strand	1241579
PSMB11	NM_001099780	NP_001093250	Coding	chr14:23042166 plus strand	1241581
PSMB5	NM_001130725	NP_001124197	Coding	chr14:23035220 minus strand	1241582
PSMB5	NM_001144932	NP_001138404	Coding	chr14:23035145 minus strand	1241583
PSMB5	NM_002797	NP_002788	Coding	chr14:23035145 minus	1241583

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				strand	
PSMC1	NM_002802	NP_002793	Coding	chr14:90256549 plus strand	1241584
PSMC6	NM_002806	NP_002797	Coding	chr14:52707177 plus strand	1241585
PSME1	NM_001281528	NP_001268457	Coding	chr14:24136157 plus strand	1241586
PSME1	NM_001281529	NP_001268458	Coding	chr14:24136157 plus strand	1241586
PSME1	NM_006263	NP_006254	Coding	chr14:24136157 plus strand	1241586
PSME1	NM_176783	NP_788955	Coding	chr14:24136157 plus strand	1241586
PSME2	NM_002818	NP_002809	Coding	chr14:24146646 minus strand	1241587
PTGDR	NM_000953	NP_000944	Coding	chr14:52267712 plus strand	1241588
PTGDR	NM_001281469	NP_001268398	Coding	chr14:52267712 plus strand	1241588
PTGER2	NM_000956	NP_000947	Coding	chr14:52314297 plus strand	1241589
PTGR2	NM_001146154	NP_001139626	Coding	chr14:73851830 plus strand	1241590
PTGR2	NM_001146155	NP_001139627	Coding	chr14:73851843 plus strand	1241591
PTGR2	NM_152444	NP_689657	Coding	chr14:73851917 plus strand	1241592
PTPN21	NM_007039	NP_008970	Coding	chr14:88554779 minus strand	1241593
PYGL	NM_001163940	NP_001157412	Coding	chr14:50944530 minus strand	1241594
PYGL	NM_002863	NP_002854	Coding	chr14:50944530 minus strand	1241594
RAB15	NM_198686	NP_941959	Coding	chr14:64972157 minus strand	1241595
RAB2B	NM_001163380	NP_001156852	Coding	chr14:21476673 minus strand	1241596
RAB2B	NM_032846	NP_116235	Coding	chr14:21476973 minus strand	1241597
RABGGTA	NM_004581	NP_004572	Coding	chr14:24271627 minus strand	1241598
RABGGTA	NM_182836	NP_878256	Coding	chr14:24271627 minus strand	1241598
RAD51B	NM_002877	NP_002868	Coding	chr14:67819778 plus strand	1241599
RAD51B	NM_133509	NP_598193	Coding	chr14:67819778 plus strand	1241599
RAD51B	NM_133510	NP_598194	Coding	chr14:67819778 plus strand	1241599
RALGAPA1	NM_001283043	NP_001269972	Coding	chr14:35809226 minus strand	1241600
RALGAPA1	NM_001283044	NP_001269973	Coding	chr14:35809226 minus strand	1241600
RALGAPA1	NM_014990	NP_055805	Coding	chr14:35809226 minus	1241600

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				strand	
RALGAPA1	NM_194301	NP_919277	Coding	chr14:35809226 minus strand	1241600
RBM23	NM_001077351	NP_001070819	Coding	chr14:22919187 minus strand	1241601
RBM23	NM_001077352	NP_001070820	Coding	chr14:22919187 minus strand	1241601
RBM23	NM_018107	NP_060577	Coding	chr14:22919187 minus strand	1241601
RBM25	NM_021239	NP_067062	Coding	chr14:73058512 plus strand	1241602
RCOR1	NM_015156	NP_055971	Coding	chr14:102592658 plus strand	1241603
RD3L	NM_001257268	NP_001244197	Coding	chr14:103942308 minus strand	1241604
RDH11	NM_001252650	NP_001239579	Coding	chr14:67695793 minus strand	1241605
RDH11	NM_016026	NP_057110	Coding	chr14:67695793 minus strand	1241605
RDH12	NM_152443	NP_689656	Coding	chr14:67701885 plus strand	1241606
REC8	NM_001048205	NP_001041670	Coding	chr14:24172024 plus strand	1241607
REC8	NM_005132	NP_005123	Coding	chr14:24172024 plus strand	1241607
REM2	NM_173527	NP_775798	Coding	chr14:22883222 plus strand	1241608
RGS6	NM_001204416	NP_001191345	Coding	chr14:71933068 plus strand	1241609
RGS6	NM_001204417	NP_001191346	Coding	chr14:71933068 plus strand	1241609
RGS6	NM_001204418	NP_001191347	Coding	chr14:71933068 plus strand	1241609
RGS6	NM_001204419	NP_001191348	Coding	chr14:71933068 plus strand	1241609
RGS6	NM_001204420	NP_001191349	Coding	chr14:71933068 plus strand	1241609
RGS6	NM_001204421	NP_001191350	Coding	chr14:71933068 plus strand	1241609
RGS6	NM_001204422	NP_001191351	Coding	chr14:71933068 plus strand	1241609
RGS6	NM_001204423	NP_001191352	Coding	chr14:71932099 plus strand	1241610
RGS6	NM_001204424	NP_001191353	Coding	chr14:71932438 plus strand	1241611
RGS6	NM_004296	NP_004287	Coding	chr14:71933068 plus strand	1241609
RHOJ	NM_020663	NP_065714	Coding	chr14:63204383 plus strand	1241612
RIN3	NM_024832	NP_079108	Coding	chr14:92513780 plus strand	1241613
RIPK3	NM_006871	NP_006862	Coding	chr14:24340036 minus strand	1241614
RNASE1	NM_002933	NP_002924	Coding	chr14:20802877 minus	1241615

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				strand	
RNASE1	NM_198232	NP_937875	Coding	chr14:20802399 minus strand	1241616
RNASE1	NM_198234	NP_937877	Coding	chr14:20802877 minus strand	1241615
RNASE1	NM_198235	NP_937878	Coding	chr14:20802877 minus strand	1241615
RNASE10	NM_001012975	NP_001012993	Coding	chr14:20510471 plus strand	1241617
RNASE11	NM_145250	NP_660293	Coding	chr14:20590258 minus strand	1241618
RNASE12	NM_001024822	NP_001019993	Coding	chr14:20590823 minus strand	1241619
RNASE13	NM_001012264	NP_001012264	Coding	chr14:21034785 minus strand	1241620
RNASE2	NM_002934	NP_002925	Coding	chr14:20955470 plus strand	1241621
RNASE3	NM_002935	NP_002926	Coding	chr14:20891402 plus strand	1241622
RNASE4	NM_001282192	NP_001269121	Coding	chr14:20684212 plus strand	1241623
RNASE4	NM_001282193	NP_001269122	Coding	chr14:20684212 plus strand	1241623
RNASE4	NM_002937	NP_002928	Coding	chr14:20684212 plus strand	1241623
RNASE4	NM_194431	NP_919412	Coding	chr14:20688776 plus strand	1241624
RNASE6	NM_005615	NP_005606	Coding	chr14:20781050 plus strand	1241625
RNASE7	NM_032572	NP_115961	Coding	chr14:21042225 plus strand	1241626
RNASE8	NM_138331	NP_612204	Coding	chr14:21057821 plus strand	1241627
RNASE9	NM_001001673	NP_001001673	Coding	chr14:20560931 minus strand	1241628
RNASE9	NM_001110356	NP_001103826	Coding	chr14:20560931 minus strand	1241628
RNASE9	NM_001110357	NP_001103827	Coding	chr14:20560931 minus strand	1241628
RNASE9	NM_001110358	NP_001103828	Coding	chr14:20560931 minus strand	1241628
RNASE9	NM_001110359	NP_001103829	Coding	chr14:20560931 minus strand	1241628
RNASE9	NM_001110360	NP_001103830	Coding	chr14:20560931 minus strand	1241628
RNASE9	NM_001110361	NP_001103831	Coding	chr14:20560931 minus strand	1241628
RNASE9	NM_001289110	NP_001276039	Coding	chr14:20560931 minus strand	1241628
RNF212B	NM_001282322	NP_001269251	Coding	chr14:23237917 plus strand	1241629
RNF31	NM_017999	NP_060469	Coding	chr14:24147449 plus strand	1241630
RPGRIP1	NM_020366	NP_065099	Coding	chr14:21287976 plus	1241631

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				strand	
RPL10L	NM_080746	NP_542784	Coding	chr14:46651825 minus strand	1241632
RPL36AL	NM_001001	NP_000992	Coding	chr14:49620685 minus strand	1241633
RPS29	NM_001030001	NP_001025172	Coding	chr14:49586416 minus strand	1241634
RPS29	NM_001032	NP_001023	Coding	chr14:49586416 minus strand	1241634
RPS6KA5	NM_004755	NP_004746	Coding	chr14:91060649 minus strand	1241635
RPS6KA5	NM_182398	NP_872198	Coding	chr14:91060649 minus strand	1241635
RPS6KL1	NM_031464	NP_113652	Coding	chr14:74922442 minus strand	1241636
RTL1	NM_001134888	NP_001128360	Coding	chr14:100884847 minus strand	1241637
RTN1	NM_021136	NP_066959	Coding	chr14:59870839 minus strand	1241638
RTN1	NM_206852	NP_996734	Coding	chr14:59630814 minus strand	1241639
SALL2	NM_001291446	NP_001278375	Coding	chr14:21537216 minus strand	1241640
SALL2	NM_001291447	NP_001278376	Coding	chr14:21526408 minus strand	1241641
SALL2	NM_005407	NP_005398	Coding	chr14:21537216 minus strand	1241640
SAMD15	NM_001010860	NP_001010860	Coding	chr14:77377418 plus strand	1241642
SAMD4A	NM_001161576	NP_001155048	Coding	chr14:54567611 plus strand	1241643
SAMD4A	NM_001161577	NP_001155049	Coding	chr14:54754787 plus strand	1241644
SAMD4A	NM_015589	NP_056404	Coding	chr14:54567611 plus strand	1241643
SAV1	NM_021818	NP_068590	Coding	chr14:50668353 minus strand	1241645
SCFD1	NM_001257376	NP_001244305	Coding	chr14:30622318 plus strand	1241646
SCFD1	NM_001283031	NP_001269960	Coding	chr14:30622253 plus strand	1241647
SCFD1	NM_001283032	NP_001269961	Coding	chr14:30622253 plus strand	1241647
SCFD1	NM_001283033	NP_001269962	Coding	chr14:30622253 plus strand	1241647
SCFD1	NM_016106	NP_057190	Coding	chr14:30622253 plus strand	1241647
SCFD1	NM_182835	NP_878255	Coding	chr14:30622253 plus strand	1241647
SDR39U1	NM_001290292	NP_001277221	Coding	chr14:24442905 minus strand	1241648
SDR39U1	NM_001290293	NP_001277222	Coding	chr14:24442453 minus strand	1241649
SDR39U1	NM_020195	NP_064580	Coding	chr14:24442801 minus	1241650

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				strand	
SEC23A	NM_006364	NP_006355	Coding	chr14:39103233 minus strand	1241651
SEL1L	NM_001244984	NP_001231913	Coding	chr14:81533861 minus strand	1241652
SEL1L	NM_005065	NP_005056	Coding	chr14:81533861 minus strand	1241652
SERPINA1	NM_000295	NP_000286	Coding	chr14:94388816 minus strand	1241653
SERPINA1	NM_001002235	NP_001002235	Coding	chr14:94390692 minus strand	1241654
SERPINA1	NM_001002236	NP_001002236	Coding	chr14:94390692 minus strand	1241654
SERPINA1	NM_001127700	NP_001121172	Coding	chr14:94390692 minus strand	1241654
SERPINA1	NM_001127701	NP_001121173	Coding	chr14:94390692 minus strand	1241654
SERPINA1	NM_001127702	NP_001121174	Coding	chr14:94390692 minus strand	1241654
SERPINA1	NM_001127703	NP_001121175	Coding	chr14:94390692 minus strand	1241654
SERPINA1	NM_001127704	NP_001121176	Coding	chr14:94390692 minus strand	1241654
SERPINA1	NM_001127705	NP_001121177	Coding	chr14:94390692 minus strand	1241654
SERPINA1	NM_001127706	NP_001121178	Coding	chr14:94390692 minus strand	1241654
SERPINA1	NM_001127707	NP_001121179	Coding	chr14:94390692 minus strand	1241654
SERPINA10	NM_001100607	NP_001094077	Coding	chr14:94293271 minus strand	1241655
SERPINA10	NM_016186	NP_057270	Coding	chr14:94293024 minus strand	1241656
SERPINA11	NM_001080451	NP_001073920	Coding	chr14:94452785 minus strand	1241657
SERPINA12	NM_173850	NP_776249	Coding	chr14:94517844 minus strand	1241658
SERPINA2	NM_006220	NP_006211	Coding	chr14:94366702 minus strand	1241659
SERPINA3	NM_001085	NP_001076	Coding	chr14:94612376 plus strand	1241660
SERPINA4	NM_001289032	NP_001275961	Coding	chr14:94561419 plus strand	1241661
SERPINA4	NM_001289033	NP_001275962	Coding	chr14:94561419 plus strand	1241661
SERPINA4	NM_006215	NP_006206	Coding	chr14:94561419 plus strand	1241661
SERPINA5	NM_000624	NP_000615	Coding	chr14:94581368 plus strand	1241662
SERPINA6	NM_001756	NP_001747	Coding	chr14:94323351 minus strand	1241663
SERPINA9	NM_001042518	NP_001035983	Coding	chr14:94476333 minus strand	1241664
SERPINA9	NM_001284275	NP_001271204	Coding	chr14:94476333 minus	1241664

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				strand	
SERPINA9	NM_001284276	NP_001271205	Coding	chr14:94476333 minus strand	1241664
SERPINA9	NM_175739	NP_783866	Coding	chr14:94476333 minus strand	1241664
SETD3	NM_032233	NP_115609	Coding	chr14:99480889 minus strand	1241665
SETD3	NM_199123	NP_954574	Coding	chr14:99480889 minus strand	1241665
SFTA3	NM_001101341	NP_001094811	Coding	chr14:36513785 minus strand	1241666
SGPP1	NM_030791	NP_110418	Coding	chr14:63728038 minus strand	1241667
SIPA1L1	NM_001284245	NP_001271174	Coding	chr14:71529311 plus strand	1241668
SIPA1L1	NM_001284246	NP_001271175	Coding	chr14:71586280 plus strand	1241669
SIPA1L1	NM_001284247	NP_001271176	Coding	chr14:71587570 plus strand	1241670
SIPA1L1	NM_015556	NP_056371	Coding	chr14:71529311 plus strand	1241668
SIVA1	NM_006427	NP_006418	Coding	chr14:104753132 plus strand	1241671
SIVA1	NM_021709	NP_068355	Coding	chr14:104753132 plus strand	1241671
SIX1	NM_005982	NP_005973	Coding	chr14:60649437 minus strand	1241672
SIX4	NM_017420	NP_059116	Coding	chr14:60724134 minus strand	1241673
SIX6	NM_007374	NP_031400	Coding	chr14:60509219 plus strand	1241674
SLC10A1	NM_003049	NP_003040	Coding	chr14:69797289 minus strand	1241675
SLC22A17	NM_001289050	NP_001275979	Coding	chr14:23352451 minus strand	1241676
SLC22A17	NM_016609	NP_057693	Coding	chr14:23352912 minus strand	1241677
SLC22A17	NM_020372	NP_065105	Coding	chr14:23352451 minus strand	1241676
SLC24A4	NM_153646	NP_705932	Coding	chr14:92323807 plus strand	1241678
SLC24A4	NM_153647	NP_705933	Coding	chr14:92323192 plus strand	1241679
SLC24A4	NM_153648	NP_705934	Coding	chr14:92322580 plus strand	1241680
SLC25A21	NM_001171170	NP_001164641	Coding	chr14:37172660 minus strand	1241681
SLC25A21	NM_030631	NP_085134	Coding	chr14:37172660 minus strand	1241681
SLC25A29	NM_001039355	NP_001034444	Coding	chr14:100306547 minus strand	1241682
SLC25A29	NM_001291813	NP_001278742	Coding	chr14:100306547 minus strand	1241682
SLC25A29	NM_001291814	NP_001278743	Coding	chr14:100306547 minus	1241682

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				strand	
SLC25A29	NM_152333	NP_689546	Coding	chr14:100306547 minus strand	1241682
SLC25A47	NM_207117	NP_997000	Coding	chr14:100323341 plus strand	1241683
SLC35F4	NM_001206920	NP_001193849	Coding	chr14:57865874 minus strand	1241684
SLC38A6	NM_001172702	NP_001166173	Coding	chr14:60981113 plus strand	1241685
SLC38A6	NM_153811	NP_722518	Coding	chr14:60981113 plus strand	1241685
SLC39A2	NM_001256588	NP_001243517	Coding	chr14:20999254 plus strand	1241686
SLC39A2	NM_014579	NP_055394	Coding	chr14:20999254 plus strand	1241686
SLC39A9	NM_001252148	NP_001239077	Coding	chr14:69398667 plus strand	1241687
SLC39A9	NM_001252150	NP_001239079	Coding	chr14:69398667 plus strand	1241687
SLC39A9	NM_001252151	NP_001239080	Coding	chr14:69398378 plus strand	1241688
SLC39A9	NM_001252152	NP_001239081	Coding	chr14:69398378 plus strand	1241688
SLC39A9	NM_018375	NP_060845	Coding	chr14:69398667 plus strand	1241687
SLC7A7	NM_001126105	NP_001119577	Coding	chr14:22815898 minus strand	1241689
SLC7A7	NM_001126106	NP_001119578	Coding	chr14:22819811 minus strand	1241690
SLC7A8	NM_001267036	NP_001253965	Coding	chr14:23155458 minus strand	1241691
SLC7A8	NM_001267037	NP_001253966	Coding	chr14:23154450 minus strand	1241692
SLC7A8	NM_012244	NP_036376	Coding	chr14:23183660 minus strand	1241693
SLC7A8	NM_182728	NP_877392	Coding	chr14:23154450 minus strand	1241692
SLC8A3	NM_001130417	NP_001123889	Coding	chr14:70080217 minus strand	1241694
SLC8A3	NM_033262	NP_150287	Coding	chr14:70189070 minus strand	1241695
SLC8A3	NM_058240	NP_489479	Coding	chr14:70189070 minus strand	1241695
SLC8A3	NM_182932	NP_891977	Coding	chr14:70189070 minus strand	1241695
SLC8A3	NM_182936	NP_891981	Coding	chr14:70080217 minus strand	1241694
SLC8A3	NM_183002	NP_892114	Coding	chr14:70189070 minus strand	1241695
SLIRP	NM_001267863	NP_001254792	Coding	chr14:77708070 plus strand	1241696
SLIRP	NM_001267864	NP_001254793	Coding	chr14:77708070 plus strand	1241696
SLIRP	NM_031210	NP_112487	Coding	chr14:77708070 plus	1241696

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				strand	
SMEK1	NM_001284280	NP_001271209	Coding	chr14:91510480 minus strand	1241697
SMEK1	NM_001284281	NP_001271210	Coding	chr14:91510480 minus strand	1241697
SMOC1	NM_001034852	NP_001030024	Coding	chr14:69879396 plus strand	1241698
SMOC1	NM_022137	NP_071420	Coding	chr14:69879396 plus strand	1241698
SNAPC1	NM_003082	NP_003073	Coding	chr14:61762356 plus strand	1241699
SNW1	NM_012245	NP_036377	Coding	chr14:77761154 minus strand	1241700
SNX6	NM_021249	NP_067072	Coding	chr14:34630109 minus strand	1241701
SNX6	NM_152233	NP_689419	Coding	chr14:34630160 minus strand	1241702
SOCS4	NM_080867	NP_543143	Coding	chr14:55027125 plus strand	1241703
SOCS4	NM_199421	NP_955453	Coding	chr14:55027125 plus strand	1241703
SOS2	NM_006939	NP_008870	Coding	chr14:50231381 minus strand	1241704
SPATA7	NM_001040428	NP_001035518	Coding	chr14:88385643 plus strand	1241705
SPATA7	NM_018418	NP_060888	Coding	chr14:88385643 plus strand	1241705
SPTB	NM_000347	NP_000338	Coding	chr14:64823148 minus strand	1241706
SPTB	NM_001024858	NP_001020029	Coding	chr14:64823148 minus strand	1241706
SPTLC2	NM_004863	NP_004854	Coding	chr14:77616767 minus strand	1241707
SPTSSA	NM_138288	NP_612145	Coding	chr14:34462262 minus strand	1241708
SRP54	NM_001146282	NP_001139754	Coding	chr14:34982897 plus strand	1241709
SRP54	NM_003136	NP_003127	Coding	chr14:34982897 plus strand	1241709
SRSF5	NM_001039465	NP_001034554	Coding	chr14:69767111 plus strand	1241710
SRSF5	NM_006925	NP_008856	Coding	chr14:69767116 plus strand	1241711
SSTR1	NM_001049	NP_001040	Coding	chr14:38207998 plus strand	1241712
STON2	NM_001256430	NP_001243359	Coding	chr14:81427404 minus strand	1241713
STON2	NM_033104	NP_149095	Coding	chr14:81427212 minus strand	1241714
STRN3	NM_001083893	NP_001077362	Coding	chr14:31026401 minus strand	1241715
STRN3	NM_014574	NP_055389	Coding	chr14:31026401 minus strand	1241715
STXBP6	NM_014178	NP_054897	Coding	chr14:25049889 minus	1241716

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				strand	
STYX	NM_001130701	NP_001124173	Coding	chr14:52730164 plus strand	1241717
STYX	NM_145251	NP_660294	Coding	chr14:52730164 plus strand	1241717
SUPT16H	NM_007192	NP_009123	Coding	chr14:21384266 minus strand	1241718
SUSD6	NM_014734	NP_055549	Coding	chr14:69611592 plus strand	1241719
SYNDIG1L	NM_001105579	NP_001099049	Coding	chr14:74426102 minus strand	1241720
SYNE2	NM_015180	NP_055995	Coding	chr14:63852964 plus strand	1241721
SYNE2	NM_182910	NP_878914	Coding	chr14:64215953 plus strand	1241722
SYNE2	NM_182913	NP_878917	Coding	chr14:64214140 plus strand	1241723
SYNE2	NM_182914	NP_878918	Coding	chr14:63852964 plus strand	1241721
SYNE3	NM_152592	NP_689805	Coding	chr14:95475836 minus strand	1241724
SYNJ2BP	NM_018373	NP_060843	Coding	chr14:70417090 minus strand	1241725
SYNJ2BP-COX16	NM_001202547	NP_001189476	Coding	chr14:70417090 minus strand	1241726
SYNJ2BP-COX16	NM_001202548	NP_001189477	Coding	chr14:70417090 minus strand	1241726
SYNJ2BP-COX16	NM_001202549	NP_001189478	Coding	chr14:70417090 minus strand	1241726
SYT16	NM_031914	NP_114120	Coding	chr14:61995822 plus strand	1241727
TBPL2	NM_199047	NP_950248	Coding	chr14:55440545 minus strand	1241728
TC2N	NM_001128595	NP_001122067	Coding	chr14:91836526 minus strand	1241729
TC2N	NM_001128596	NP_001122068	Coding	chr14:91867536 minus strand	1241730
TC2N	NM_001289134	NP_001276063	Coding	chr14:91836526 minus strand	1241729
TC2N	NM_152332	NP_689545	Coding	chr14:91836526 minus strand	1241729
TCL1A	NM_001098725	NP_001092195	Coding	chr14:95714196 minus strand	1241731
TCL1A	NM_021966	NP_068801	Coding	chr14:95714196 minus strand	1241731
TCL1B	NM_004918	NP_004909	Coding	chr14:95686416 plus strand	1241732
TDP1	NM_001008744	NP_001008744	Coding	chr14:89955901 plus strand	1241733
TDP1	NM_018319	NP_060789	Coding	chr14:89955901 plus strand	1241733
TDRD9	NM_153046	NP_694591	Coding	chr14:103928479 plus strand	1241734
TECPR2	NM_001172631	NP_001166102	Coding	chr14:102362962 plus	1241735

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				strand	
TECPR2	NM_014844	NP_055659	Coding	chr14:102362962 plus strand	1241735
TEP1	NM_007110	NP_009041	Coding	chr14:20413420 minus strand	1241736
TEX22	NM_001195082	NP_001182011	Coding	chr14:105398582 plus strand	1241737
TGFB3	NM_003239	NP_003230	Coding	chr14:75982022 minus strand	1241738
TGM1	NM_000359	NP_000350	Coding	chr14:24263210 minus strand	1241739
THTPA	NM_001126339	NP_001119811	Coding	chr14:23555981 plus strand	1241740
THTPA	NM_001256062	NP_001242991	Coding	chr14:23555981 plus strand	1241740
THTPA	NM_001256321	NP_001243250	Coding	chr14:23555981 plus strand	1241740
THTPA	NM_001256322	NP_001243251	Coding	chr14:23555981 plus strand	1241740
THTPA	NM_001256323	NP_001243252	Coding	chr14:23555981 plus strand	1241740
THTPA	NM_024328	NP_077304	Coding	chr14:23555981 plus strand	1241740
TIMM9	NM_012460	NP_036592	Coding	chr14:58427514 minus strand	1241741
TINF2	NM_001099274	NP_001092744	Coding	chr14:24242674 minus strand	1241742
TINF2	NM_012461	NP_036593	Coding	chr14:24242674 minus strand	1241742
TM9SF1	NM_001014842	NP_001014842	Coding	chr14:24195736 minus strand	1241743
TM9SF1	NM_001289006	NP_001275935	Coding	chr14:24195736 minus strand	1241743
TM9SF1	NM_006405	NP_006396	Coding	chr14:24195736 minus strand	1241743
TMED10	NM_006827	NP_006818	Coding	chr14:75176646 minus strand	1241744
TMED8	NM_213601	NP_998766	Coding	chr14:77377053 minus strand	1241745
TMEM121	NM_025268	NP_079544	Coding	chr14:105526615 plus strand	1241746
TMEM179	NM_001286389	NP_001273318	Coding	chr14:104604760 minus strand	1241747
TMEM179	NM_001286390	NP_001273319	Coding	chr14:104604760 minus strand	1241747
TMEM229B	NM_182526	NP_872332	Coding	chr14:67515304 minus strand	1241748
TMEM251	NM_001098621	NP_001092091	Coding	chr14:93185029 plus strand	1241749
TMEM251	NM_015676	NP_056491	Coding	chr14:93184950 plus strand	1241750
TMEM253	NM_001146683	NP_001140155	Coding	chr14:21098936 plus strand	1241751
TMEM260	NM_017799	NP_060269	Coding	chr14:56579792 plus	1241752

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				strand	
TMEM30B	NM_001017970	NP_001017970	Coding	chr14:61281812 minus strand	1241753
TMEM55B	NM_001100814	NP_001094284	Coding	chr14:20461612 minus strand	1241754
TMEM55B	NM_144568	NP_653169	Coding	chr14:20461612 minus strand	1241754
TMEM63C	NM_020431	NP_065164	Coding	chr14:77181758 plus strand	1241755
TMX1	NM_030755	NP_110382	Coding	chr14:51240167 plus strand	1241756
TNFAIP2	NM_006291	NP_006282	Coding	chr14:103126326 plus strand	1241757
TOMM20L	NM_207377	NP_997260	Coding	chr14:58395925 plus strand	1241758
TOX4	NM_014828	NP_055643	Coding	chr14:21477175 plus strand	1241759
TPPP2	NM_173846	NP_776245	Coding	chr14:21030185 plus strand	1241760
TRAF3	NM_001199427	NP_001186356	Coding	chr14:102777478 plus strand	1241761
TRAF3	NM_003300	NP_003291	Coding	chr14:102777478 plus strand	1241761
TRAF3	NM_145725	NP_663777	Coding	chr14:102777478 plus strand	1241761
TRAF3	NM_145726	NP_663778	Coding	chr14:102777478 plus strand	1241761
TRAPPC6B	NM_001079537	NP_001073005	Coding	chr14:39170430 minus strand	1241762
TRAPPC6B	NM_177452	NP_803235	Coding	chr14:39170430 minus strand	1241762
TRIM9	NM_015163	NP_055978	Coding	chr14:51095704 minus strand	1241763
TRIM9	NM_052978	NP_443210	Coding	chr14:51095704 minus strand	1241763
TRIP11	NM_004239	NP_004230	Coding	chr14:92040059 minus strand	1241764
TRMT5	NM_020810	NP_065861	Coding	chr14:60981079 minus strand	1241765
TRMT61A	NM_152307	NP_689520	Coding	chr14:103529171 plus strand	1241766
TSHR	NM_000369	NP_000360	Coding	chr14:80955524 plus strand	1241767
TSHR	NM_001018036	NP_001018046	Coding	chr14:80955524 plus strand	1241767
TSHR	NM_001142626	NP_001136098	Coding	chr14:80955524 plus strand	1241767
TSSK4	NM_001184739	NP_001171668	Coding	chr14:24205719 plus strand	1241768
TSSK4	NM_174944	NP_777604	Coding	chr14:24205719 plus strand	1241768
TTC5	NM_138376	NP_612385	Coding	chr14:20305994 minus strand	1241769
TTC7B	NM_001010854	NP_001010854	Coding	chr14:90816417 minus	1241770

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				strand	
TTC8	NM_001288781	NP_001275710	Coding	chr14:88824152 plus strand	1241771
TTC8	NM_001288782	NP_001275711	Coding	chr14:88824152 plus strand	1241771
TTC8	NM_001288783	NP_001275712	Coding	chr14:88824152 plus strand	1241771
TTC8	NM_144596	NP_653197	Coding	chr14:88824152 plus strand	1241771
TTC8	NM_198309	NP_938051	Coding	chr14:88824152 plus strand	1241771
TTC8	NM_198310	NP_938052	Coding	chr14:88824152 plus strand	1241771
TTC9	NM_015351	NP_056166	Coding	chr14:70641786 plus strand	1241772
TTLL5	NM_015072	NP_055887	Coding	chr14:75661207 plus strand	1241773
TXNDC16	NM_001160047	NP_001153519	Coding	chr14:52552583 minus strand	1241774
TXNDC16	NM_020784	NP_065835	Coding	chr14:52552583 minus strand	1241774
UBR7	NM_175748	NP_786924	Coding	chr14:93207055 plus strand	1241775
UNC79	NM_020818	NP_065869	Coding	chr14:93333218 plus strand	1241776
VASH1	NM_014909	NP_055724	Coding	chr14:76761891 plus strand	1241777
VCPKMT	NM_001040662	NP_001035752	Coding	chr14:50116579 minus strand	1241778
VCPKMT	NM_024558	NP_078834	Coding	chr14:50116579 minus strand	1241778
VIPAS39	NM_001193314	NP_001180243	Coding	chr14:77457640 minus strand	1241779
VIPAS39	NM_001193315	NP_001180244	Coding	chr14:77457640 minus strand	1241779
VIPAS39	NM_001193316	NP_001180245	Coding	chr14:77457640 minus strand	1241779
VIPAS39	NM_001193317	NP_001180246	Coding	chr14:77457640 minus strand	1241779
VIPAS39	NM_022067	NP_071350	Coding	chr14:77457640 minus strand	1241779
VRK1	NM_003384	NP_003375	Coding	chr14:96797346 plus strand	1241780
VRTN	NM_018228	NP_060698	Coding	chr14:74348462 plus strand	1241781
VSX2	NM_182894	NP_878314	Coding	chr14:74239471 plus strand	1241782
VTI1B	NM_006370	NP_006361	Coding	chr14:67674885 minus strand	1241783
WARS	NM_004184	NP_004175	Coding	chr14:100375590 minus strand	1241784
WARS	NM_173701	NP_776049	Coding	chr14:100376343 minus strand	1241785
WARS	NM_213645	NP_998810	Coding	chr14:100376343 minus	1241785

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				strand	
WARS	NM_213646	NP_998811	Coding	chr14:100375590 minus strand	1241784
WDHD1	NM_001008396	NP_001008397	Coding	chr14:55027101 minus strand	1241786
WDHD1	NM_007086	NP_009017	Coding	chr14:55027101 minus strand	1241786
WDR20	NM_001242414	NP_001229343	Coding	chr14:102139851 plus strand	1241787
WDR20	NM_001242415	NP_001229344	Coding	chr14:102139851 plus strand	1241787
WDR20	NM_001242416	NP_001229345	Coding	chr14:102139851 plus strand	1241787
WDR20	NM_001242417	NP_001229346	Coding	chr14:102139851 plus strand	1241787
WDR20	NM_001242418	NP_001229347	Coding	chr14:102139851 plus strand	1241787
WDR20	NM_144574	NP_653175	Coding	chr14:102139851 plus strand	1241787
WDR20	NM_181291	NP_851808	Coding	chr14:102139851 plus strand	1241787
WDR20	NM_181308	NP_851825	Coding	chr14:102139851 plus strand	1241787
WDR25	NM_001161476	NP_001154948	Coding	chr14:100376417 plus strand	1241788
WDR25	NM_024515	NP_078791	Coding	chr14:100376495 plus strand	1241789
WDR89	NM_001008726	NP_001008726	Coding	chr14:63641923 minus strand	1241790
WDR89	NM_001258272	NP_001245201	Coding	chr14:63641923 minus strand	1241790
WDR89	NM_080666	NP_542397	Coding	chr14:63641923 minus strand	1241790
XRCC3	NM_001100118	NP_001093588	Coding	chr14:103715486 minus strand	1241791
XRCC3	NM_001100119	NP_001093589	Coding	chr14:103715486 minus strand	1241791
XRCC3	NM_005432	NP_005423	Coding	chr14:103715486 minus strand	1241791
YLPM1	NM_019589	NP_062535	Coding	chr14:74763365 plus strand	1241792
YY1	NM_003403	NP_003394	Coding	chr14:100238764 plus strand	1241793
ZBTB1	NM_001123329	NP_001116801	Coding	chr14:64504573 plus strand	1241794
ZBTB1	NM_014950	NP_055765	Coding	chr14:64504573 plus strand	1241794
ZBTB25	NM_006977	NP_008908	Coding	chr14:64503836 minus strand	1241795
ZBTB42	NM_001137601	NP_001131073	Coding	chr14:104800595 plus strand	1241796
ZC2HC1C	NM_001042430	NP_001035895	Coding	chr14:75069576 plus strand	1241797
ZC2HC1C	NM_024643	NP_078919	Coding	chr14:75069576 plus	1241797

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				strand	
ZC3H14	NM_001160103	NP_001153575	Coding	chr14:88562908 plus strand	1241798
ZC3H14	NM_001160104	NP_001153576	Coding	chr14:88562908 plus strand	1241798
ZC3H14	NM_024824	NP_079100	Coding	chr14:88562908 plus strand	1241798
ZC3H14	NM_207660	NP_997543	Coding	chr14:88562908 plus strand	1241798
ZC3H14	NM_207661	NP_997544	Coding	chr14:88563346 plus strand	1241799
ZC3H14	NM_207662	NP_997545	Coding	chr14:88594385 plus strand	1241800
ZDHHC22	NM_174976	NP_777636	Coding	chr14:77141791 minus strand	1241801
ZFHX2	NM_033400	NP_207646	Coding	chr14:23551649 minus strand	1241802
ZFP36L1	NM_001244698	NP_001231627	Coding	chr14:68793914 minus strand	1241803
ZFP36L1	NM_001244701	NP_001231630	Coding	chr14:68796243 minus strand	1241804
ZFP36L1	NM_004926	NP_004917	Coding	chr14:68793914 minus strand	1241803
ZFYVE1	NM_001281734	NP_001268663	Coding	chr14:73027212 minus strand	1241805
ZFYVE1	NM_001281735	NP_001268664	Coding	chr14:72986956 minus strand	1241806
ZFYVE1	NM_021260	NP_067083	Coding	chr14:73027212 minus strand	1241805
ZFYVE1	NM_178441	NP_848535	Coding	chr14:72986956 minus strand	1241806
ZFYVE21	NM_001198953	NP_001185882	Coding	chr14:103715743 plus strand	1241807
ZFYVE21	NM_024071	NP_076976	Coding	chr14:103715743 plus strand	1241807
ZFYVE26	NM_015346	NP_056161	Coding	chr14:67816589 minus strand	1241808
ZNF219	NM_001101672	NP_001095142	Coding	chr14:21099014 minus strand	1241809
ZNF219	NM_001102454	NP_001095924	Coding	chr14:21104704 minus strand	1241810
ZNF219	NM_016423	NP_057507	Coding	chr14:21098649 minus strand	1241811
ZNF410	NM_001242924	NP_001229853	Coding	chr14:73886614 plus strand	1241812
ZNF410	NM_001242926	NP_001229855	Coding	chr14:73886614 plus strand	1241812
ZNF410	NM_001242927	NP_001229856	Coding	chr14:73886614 plus strand	1241812
ZNF410	NM_001242928	NP_001229857	Coding	chr14:73886614 plus strand	1241812
ZNF410	NM_021188	NP_067011	Coding	chr14:73886614 plus strand	1241812
ZNF839	NM_001267827	NP_001254756	Coding	chr14:102317376 plus	1241813

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				strand	
ZNF839	NM_001267828	NP_001254757	Coding	chr14:102319297 plus strand	1241814
ZNF839	NM_018335	NP_060805	Coding	chr14:102319750 plus strand	1241815
AAGAB	NM_001271885	NP_001258814	Coding	chr15:67255198 minus strand	1241816
AAGAB	NM_001271886	NP_001258815	Coding	chr15:67254736 minus strand	1241817
AAGAB	NM_024666	NP_078942	Coding	chr15:67254736 minus strand	1241817
ABHD17C	NM_021214	NP_067037	Coding	chr15:80695310 plus strand	1241818
ABHD2	NM_007011	NP_008942	Coding	chr15:89088149 plus strand	1241819
ABHD2	NM_152924	NP_690888	Coding	chr15:89088149 plus strand	1241819
ACAN	NM_001135	NP_001126	Coding	chr15:88803442 plus strand	1241820
ACAN	NM_013227	NP_037359	Coding	chr15:88803442 plus strand	1241820
ACSBG1	NM_001199377	NP_001186306	Coding	chr15:78234707 minus strand	1241821
ACSBG1	NM_015162	NP_055977	Coding	chr15:78234707 minus strand	1241821
ACTC1	NM_005159	NP_005150	Coding	chr15:34795726 minus strand	1241822
ADAL	NM_001012969	NP_001012987	Coding	chr15:43330355 plus strand	1241823
ADAL	NM_001159280	NP_001152752	Coding	chr15:43330355 plus strand	1241823
ADAM10	NM_001110	NP_001101	Coding	chr15:58749978 minus strand	1241824
ADAMTS17	NM_139057	NP_620688	Coding	chr15:100341978 minus strand	1241825
ADAMTS7	NM_014272	NP_055087	Coding	chr15:78811431 minus strand	1241826
ADAMTSL3	NM_001301110	NP_001288039	Coding	chr15:83654085 plus strand	1241827
ADAMTSL3	NM_207517	NP_997400	Coding	chr15:83654085 plus strand	1241827
ADPGK	NM_031284	NP_112574	Coding	chr15:72783785 minus strand	1241828
AEN	NM_022767	NP_073604	Coding	chr15:88621295 plus strand	1241829
AGBL1	NM_152336	NP_689549	Coding	chr15:86142010 plus strand	1241830
AKAP13	NM_001270546	NP_001257475	Coding	chr15:85619949 plus strand	1241831
AKAP13	NM_006738	NP_006729	Coding	chr15:85380615 plus strand	1241832
AKAP13	NM_007200	NP_009131	Coding	chr15:85380615 plus strand	1241832
ALDH1A2	NM_001206897	NP_001193826	Coding	chr15:58065923 minus	1241833

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				strand	
ALDH1A2	NM_003888	NP_003879	Coding	chr15:58065923 minus strand	1241833
ALDH1A2	NM_170696	NP_733797	Coding	chr15:58065923 minus strand	1241833
ALDH1A2	NM_170697	NP_733798	Coding	chr15:58014097 minus strand	1241834
ALDH1A3	NM_000693	NP_000684	Coding	chr15:100879691 plus strand	1241835
ALDH1A3	NM_001293815	NP_001280744	Coding	chr15:100879691 plus strand	1241835
ALPK3	NM_020778	NP_065829	Coding	chr15:84816679 plus strand	1241836
ANKDD1A	NM_182703	NP_874362	Coding	chr15:64911901 plus strand	1241837
ANKRD34C	NM_001146341	NP_001139813	Coding	chr15:79282803 plus strand	1241838
ANKRD63	NM_001190479	NP_001177408	Coding	chr15:40282586 minus strand	1241839
ANP32A	NM_006305	NP_006296	Coding	chr15:68820922 minus strand	1241840
ANPEP	NM_001150	NP_001141	Coding	chr15:89814840 minus strand	1241841
ANXA2	NM_001002857	NP_001002857	Coding	chr15:60397986 minus strand	1241842
ANXA2	NM_001002858	NP_001002858	Coding	chr15:60397986 minus strand	1241842
ANXA2	NM_001136015	NP_001129487	Coding	chr15:60397986 minus strand	1241842
ANXA2	NM_004039	NP_004030	Coding	chr15:60397986 minus strand	1241842
AP3B2	NM_001278511	NP_001265440	Coding	chr15:82709908 minus strand	1241843
AP3B2	NM_001278512	NP_001265441	Coding	chr15:82709908 minus strand	1241843
AP3B2	NM_004644	NP_004635	Coding	chr15:82709908 minus strand	1241843
AP3S2	NM_005829	NP_005820	Coding	chr15:89894385 minus strand	1241844
AP4E1	NM_001252127	NP_001239056	Coding	chr15:50908671 plus strand	1241845
AP4E1	NM_007347	NP_031373	Coding	chr15:50908671 plus strand	1241845
APBA2	NM_001130414	NP_001123886	Coding	chr15:28921636 plus strand	1241846
APBA2	NM_005503	NP_005494	Coding	chr15:28921636 plus strand	1241846
APH1B	NM_001145646	NP_001139118	Coding	chr15:63277549 plus strand	1241847
APH1B	NM_031301	NP_112591	Coding	chr15:63277549 plus strand	1241847
AQP9	NM_020980	NP_066190	Coding	chr15:58138208 plus strand	1241848
AQR	NM_014691	NP_055506	Coding	chr15:34969794 minus	1241849

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				strand	
ARHGAP11A	NM_001286479	NP_001273408	Coding	chr15:32615143 plus strand	1241850
ARHGAP11A	NM_001286480	NP_001273409	Coding	chr15:32615489 plus strand	1241851
ARHGAP11A	NM_014783	NP_055598	Coding	chr15:32615489 plus strand	1241851
ARHGAP11A	NM_199357	NP_955389	Coding	chr15:32615489 plus strand	1241851
ARHGAP11B	NM_001039841	NP_001034930	Coding	chr15:30626675 plus strand	1241852
ARHGAP11B	NM_001039841	NP_001034930	Coding	chr15:32616064 plus strand	1241853
ARID3B	NM_006465	NP_006456	Coding	chr15:74541206 plus strand	1241854
ARIH1	NM_005744	NP_005735	Coding	chr15:72474325 plus strand	1241855
ARNT2	NM_014862	NP_055677	Coding	chr15:80404349 plus strand	1241856
ARPIN	NM_001282380	NP_001269309	Coding	chr15:89912687 minus strand	1241857
ARPIN	NM_182616	NP_872422	Coding	chr15:89912990 minus strand	1241858
ARPP19	NM_006628	NP_006619	Coding	chr15:52569016 minus strand	1241859
ARRDC4	NM_183376	NP_899232	Coding	chr15:97960702 plus strand	1241860
ASB7	NM_024708	NP_078984	Coding	chr15:100602549 plus strand	1241861
ASB7	NM_198243	NP_937886	Coding	chr15:100602549 plus strand	1241861
ATP10A	NM_024490	NP_077816	Coding	chr15:25863202 minus strand	1241862
ATP8B4	NM_024837	NP_079113	Coding	chr15:50119222 minus strand	1241863
AVEN	NM_020371	NP_065104	Coding	chr15:34039102 minus strand	1241864
B2M	NM_004048	NP_004039	Coding	chr15:44711486 plus strand	1241865
BAHD1	NM_001301132	NP_001288061	Coding	chr15:40439720 plus strand	1241866
BAHD1	NM_014952	NP_055767	Coding	chr15:40441150 plus strand	1241867
BBS4	NM_001252678	NP_001239607	Coding	chr15:72686178 plus strand	1241868
BBS4	NM_033028	NP_149017	Coding	chr15:72686178 plus strand	1241868
BCL2A1	NM_001114735	NP_001108207	Coding	chr15:79971301 minus strand	1241869
BCL2A1	NM_004049	NP_004040	Coding	chr15:79971301 minus strand	1241869
BCL2L10	NM_020396	NP_065129	Coding	chr15:52112775 minus strand	1241870
BLM	NM_000057	NP_000048	Coding	chr15:90717326 plus	1241871

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				strand	
BLM	NM_001287246	NP_001274175	Coding	chr15:90717326 plus strand	1241871
BLM	NM_001287247	NP_001274176	Coding	chr15:90717326 plus strand	1241871
BLM	NM_001287248	NP_001274177	Coding	chr15:90717326 plus strand	1241871
BLOC1S6	NM_012388	NP_036520	Coding	chr15:45587218 plus strand	1241872
BMF	NM_001003940	NP_001003940	Coding	chr15:40108874 minus strand	1241873
BMF	NM_001003942	NP_001003942	Coding	chr15:40106086 minus strand	1241874
BMF	NM_001003943	NP_001003943	Coding	chr15:40108884 minus strand	1241875
BMF	NM_033503	NP_277038	Coding	chr15:40106438 minus strand	1241876
BNC1	NM_001301206	NP_001288135	Coding	chr15:83283457 minus strand	1241877
BNC1	NM_001717	NP_001708	Coding	chr15:83284716 minus strand	1241878
BNIP2	NM_004330	NP_004321	Coding	chr15:59689443 minus strand	1241879
BTBD1	NM_001011885	NP_001011885	Coding	chr15:83067354 minus strand	1241880
BTBD1	NM_025238	NP_079514	Coding	chr15:83067354 minus strand	1241880
BUB1B	NM_001211	NP_001202	Coding	chr15:40161008 plus strand	1241881
C15orf26	NM_173528	NP_775799	Coding	chr15:81134302 plus strand	1241882
C15orf27	NM_152335	NP_689548	Coding	chr15:76059957 plus strand	1241883
C15orf32	NM_001301106	NP_001288035	Coding	chr15:92471676 plus strand	1241884
C15orf32	NM_153040	NP_694585	Coding	chr15:92471676 plus strand	1241884
C15orf38-AP3S2	NM_001199058	NP_001185987	Coding	chr15:89912990 minus strand	1241885
C15orf39	NM_015492	NP_056307	Coding	chr15:75201879 plus strand	1241886
C15orf40	NM_001160113	NP_001153585	Coding	chr15:83011641 minus strand	1241887
C15orf40	NM_001160114	NP_001153586	Coding	chr15:83011641 minus strand	1241887
C15orf40	NM_001160115	NP_001153587	Coding	chr15:83011641 minus strand	1241887
C15orf40	NM_001160116	NP_001153588	Coding	chr15:83011641 minus strand	1241887
C15orf40	NM_144597	NP_653198	Coding	chr15:83011641 minus strand	1241887
C15orf41	NM_001130010	NP_001123482	Coding	chr15:36579602 plus strand	1241888
C15orf41	NM_001290232	NP_001277161	Coding	chr15:36594868 plus	1241889

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				strand	
C15orf41	NM_001290233	NP_001277162	Coding	chr15:36579602 plus strand	1241888
C15orf41	NM_032499	NP_115888	Coding	chr15:36594868 plus strand	1241889
C15orf43	NM_152448	NP_689661	Coding	chr15:44956701 plus strand	1241890
C15orf48	NM_032413	NP_115789	Coding	chr15:45430528 plus strand	1241891
C15orf48	NM_197955	NP_922946	Coding	chr15:45430528 plus strand	1241891
C15orf52	NM_207380	NP_997263	Coding	chr15:40340967 minus strand	1241892
C15orf53	NM_207444	NP_997327	Coding	chr15:38696597 plus strand	1241893
C15orf54	NM_001302797	NP_001289726	Coding	chr15:39250668 plus strand	1241894
C15orf54	NM_207445	NP_997328	Coding	chr15:39250668 plus strand	1241894
C15orf56	NM_001039905	NP_001034994	Coding	chr15:40252909 minus strand	1241895
C15orf57	NM_001080791	NP_001074260	Coding	chr15:40565057 minus strand	1241896
C15orf57	NM_001080792	NP_001074261	Coding	chr15:40565057 minus strand	1241896
C15orf57	NM_001289132	NP_001276061	Coding	chr15:40565057 minus strand	1241896
C15orf57	NM_052849	NP_443081	Coding	chr15:40565057 minus strand	1241896
C15orf59	NM_001039614	NP_001034703	Coding	chr15:73751475 minus strand	1241897
C15orf61	NM_001143936	NP_001137408	Coding	chr15:67521183 plus strand	1241898
C15orf62	NM_001130448	NP_001123920	Coding	chr15:40769960 plus strand	1241899
C15orf65	NM_001198784	NP_001185713	Coding	chr15:55408524 plus strand	1241900
C2CD4A	NM_207322	NP_997205	Coding	chr15:62066976 plus strand	1241901
C2CD4B	NM_001007595	NP_001007596	Coding	chr15:62165283 minus strand	1241902
CA12	NM_001218	NP_001209	Coding	chr15:63382110 minus strand	1241903
CA12	NM_001293642	NP_001280571	Coding	chr15:63382110 minus strand	1241903
CA12	NM_206925	NP_996808	Coding	chr15:63382110 minus strand	1241903
CALML4	NM_001031733	NP_001026903	Coding	chr15:68206110 minus strand	1241904
CALML4	NM_001286694	NP_001273623	Coding	chr15:68206110 minus strand	1241904
CALML4	NM_001286695	NP_001273624	Coding	chr15:68206110 minus strand	1241904
CALML4	NM_033429	NP_219501	Coding	chr15:68206110 minus	1241904

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				strand	
CAPN3	NM_000070	NP_000061	Coding	chr15:42359499 plus strand	1241905
CAPN3	NM_024344	NP_077320	Coding	chr15:42359499 plus strand	1241905
CAPN3	NM_173087	NP_775110	Coding	chr15:42359499 plus strand	1241905
CAPN3	NM_173088	NP_775111	Coding	chr15:42402389 plus strand	1241906
CAPN3	NM_173089	NP_775112	Coding	chr15:42404778 plus strand	1241907
CAPN3	NM_173090	NP_775113	Coding	chr15:42404778 plus strand	1241907
CASC4	NM_138423	NP_612432	Coding	chr15:44288710 plus strand	1241908
CASC4	NM_177974	NP_816929	Coding	chr15:44288710 plus strand	1241908
CASC5	NM_144508	NP_653091	Coding	chr15:40594248 plus strand	1241909
CASC5	NM_170589	NP_733468	Coding	chr15:40594248 plus strand	1241909
CATSPER2	NM_001282309	NP_001269238	Coding	chr15:43648845 minus strand	1241910
CATSPER2	NM_001282310	NP_001269239	Coding	chr15:43648845 minus strand	1241910
CATSPER2	NM_054020	NP_473361	Coding	chr15:43648841 minus strand	1241911
CATSPER2	NM_172095	NP_742093	Coding	chr15:43648841 minus strand	1241911
CCDC33	NM_001287181	NP_001274110	Coding	chr15:74318540 plus strand	1241912
CCDC33	NM_025055	NP_079331	Coding	chr15:74236288 plus strand	1241913
CCDC33	NM_182791	NP_877592	Coding	chr15:74318540 plus strand	1241912
CCNB2	NM_004701	NP_004692	Coding	chr15:59105084 plus strand	1241914
CCNDBP1	NM_012142	NP_036274	Coding	chr15:43185267 plus strand	1241915
CCPG1	NM_001204450	NP_001191379	Coding	chr15:55408510 minus strand	1241916
CCPG1	NM_001204451	NP_001191380	Coding	chr15:55408510 minus strand	1241916
CCPG1	NM_004748	NP_004739	Coding	chr15:55408376 minus strand	1241917
CCPG1	NM_020739	NP_065790	Coding	chr15:55408510 minus strand	1241916
CD276	NM_001024736	NP_001019907	Coding	chr15:73684280 plus strand	1241918
CD276	NM_025240	NP_079516	Coding	chr15:73684280 plus strand	1241918
CDAN1	NM_138477	NP_612486	Coding	chr15:42737219 minus strand	1241919
CELF6	NM_001172684	NP_001166155	Coding	chr15:72319946 minus	1241920

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				strand	
CELF6	NM_001172685	NP_001166156	Coding	chr15:72306315 minus strand	1241921
CELF6	NM_052840	NP_443072	Coding	chr15:72320184 minus strand	1241922
CEMIP	NM_001293298	NP_001280227	Coding	chr15:80779342 plus strand	1241923
CEMIP	NM_001293304	NP_001280233	Coding	chr15:80779342 plus strand	1241923
CEMIP	NM_018689	NP_061159	Coding	chr15:80779342 plus strand	1241923
CEP152	NM_001194998	NP_001181927	Coding	chr15:48811146 minus strand	1241924
CEP152	NM_014985	NP_055800	Coding	chr15:48811146 minus strand	1241924
CERS3	NM_001290341	NP_001277270	Coding	chr15:100544326 minus strand	1241925
CERS3	NM_001290342	NP_001277271	Coding	chr15:100544326 minus strand	1241925
CERS3	NM_001290343	NP_001277272	Coding	chr15:100544720 minus strand	1241926
CERS3	NM_178842	NP_849164	Coding	chr15:100544720 minus strand	1241926
CGNL1	NM_001252335	NP_001239264	Coding	chr15:57376504 plus strand	1241927
CGNL1	NM_032866	NP_116255	Coding	chr15:57376504 plus strand	1241927
CHAC1	NM_001142776	NP_001136248	Coding	chr15:40953437 plus strand	1241928
CHAC1	NM_024111	NP_077016	Coding	chr15:40953437 plus strand	1241928
CHD2	NM_001042572	NP_001036037	Coding	chr15:92900320 plus strand	1241929
CHD2	NM_001271	NP_001262	Coding	chr15:92900320 plus strand	1241929
CHP1	NM_007236	NP_009167	Coding	chr15:41231238 plus strand	1241930
CHRFAM7A	NM_139320	NP_647536	Coding	chr15:30393661 minus strand	1241931
CHRFAM7A	NM_148911	NP_683709	Coding	chr15:30393661 minus strand	1241931
CHRM5	NM_012125	NP_036257	Coding	chr15:33968887 plus strand	1241932
CHRNA3	NM_000743	NP_000734	Coding	chr15:78621295 minus strand	1241933
CHRNA3	NM_001166694	NP_001160166	Coding	chr15:78621295 minus strand	1241933
CHRNA5	NM_000745	NP_000736	Coding	chr15:78565519 plus strand	1241934
CHRNA7	NM_000746	NP_000737	Coding	chr15:32030482 plus strand	1241935
CHRNA7	NM_001190455	NP_001177384	Coding	chr15:32030482 plus strand	1241935
CHRNB4	NM_000750	NP_000741	Coding	chr15:78641245 minus	1241936

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				strand	
CHRNB4	NM_001256567	NP_001243496	Coding	chr15:78641245 minus strand	1241936
CHST14	NM_130468	NP_569735	Coding	chr15:40470960 plus strand	1241937
CHSY1	NM_014918	NP_055733	Coding	chr15:101251932 minus strand	1241938
CIB1	NM_001277764	NP_001264693	Coding	chr15:90234047 minus strand	1241939
CIB1	NM_006384	NP_006375	Coding	chr15:90234047 minus strand	1241939
CIB2	NM_001271888	NP_001258817	Coding	chr15:78131535 minus strand	1241940
CIB2	NM_001271889	NP_001258818	Coding	chr15:78131535 minus strand	1241940
CIB2	NM_001301224	NP_001288153	Coding	chr15:78131535 minus strand	1241940
CIB2	NM_006383	NP_006374	Coding	chr15:78131535 minus strand	1241940
CILP	NM_003613	NP_003604	Coding	chr15:65211502 minus strand	1241941
CKMT1A	NM_001015001	NP_001015001	Coding	chr15:43692885 plus strand	1241942
CKMT1B	NM_020990	NP_066270	Coding	chr15:43593053 plus strand	1241943
CLK3	NM_001130028	NP_001123500	Coding	chr15:74614993 plus strand	1241944
CLK3	NM_003992	NP_003983	Coding	chr15:74608371 plus strand	1241945
CLN6	NM_017882	NP_060352	Coding	chr15:68229742 minus strand	1241946
CLPX	NM_006660	NP_006651	Coding	chr15:65185225 minus strand	1241947
COMMD4	NM_001284377	NP_001271306	Coding	chr15:75335995 plus strand	1241948
COMMD4	NM_001284378	NP_001271307	Coding	chr15:75335995 plus strand	1241948
COMMD4	NM_001284379	NP_001271308	Coding	chr15:75336083 plus strand	1241949
COMMD4	NM_017828	NP_060298	Coding	chr15:75335995 plus strand	1241948
COPS2	NM_001143887	NP_001137359	Coding	chr15:49155657 minus strand	1241950
COPS2	NM_004236	NP_004227	Coding	chr15:49155657 minus strand	1241950
CORO2B	NM_001190456	NP_001177385	Coding	chr15:68616539 plus strand	1241951
CORO2B	NM_001190457	NP_001177386	Coding	chr15:68631987 plus strand	1241952
CORO2B	NM_006091	NP_006082	Coding	chr15:68578968 plus strand	1241953
COX5A	NM_004255	NP_004246	Coding	chr15:74938154 minus strand	1241954
CPEB1	NM_001079533	NP_001073001	Coding	chr15:82571823 minus	1241955

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				strand	
CPEB1	NM_001079534	NP_001073002	Coding	chr15:82571823 minus strand	1241955
CPEB1	NM_001079535	NP_001073003	Coding	chr15:82571823 minus strand	1241955
CPEB1	NM_001288819	NP_001275748	Coding	chr15:82647605 minus strand	1241956
CPEB1	NM_001288820	NP_001275749	Coding	chr15:82571823 minus strand	1241955
CPEB1	NM_030594	NP_085097	Coding	chr15:82648016 minus strand	1241957
CPLX3	NM_001030005	NP_001025176	Coding	chr15:74826609 plus strand	1241958
CRABP1	NM_004378	NP_004369	Coding	chr15:78340323 plus strand	1241959
CRTC3	NM_001042574	NP_001036039	Coding	chr15:90529885 plus strand	1241960
CRTC3	NM_022769	NP_073606	Coding	chr15:90529885 plus strand	1241960
CSK	NM_001127190	NP_001120662	Coding	chr15:74782083 plus strand	1241961
CSK	NM_004383	NP_004374	Coding	chr15:74782083 plus strand	1241961
CSNK1G1	NM_022048	NP_071331	Coding	chr15:64356243 minus strand	1241962
CSPG4	NM_001897	NP_001888	Coding	chr15:75712848 minus strand	1241963
CT62	NM_001102658	NP_001096128	Coding	chr15:71115500 minus strand	1241964
CTDSPL2	NM_016396	NP_057480	Coding	chr15:44427380 plus strand	1241965
CTSH	NM_004390	NP_004381	Coding	chr15:78945078 minus strand	1241966
CTXN2	NM_001145668	NP_001139140	Coding	chr15:48191669 plus strand	1241967
CYFIP1	NM_001033028	NP_001028200	Coding	chr15:22917313 minus strand	1241968
CYFIP1	NM_001287810	NP_001274739	Coding	chr15:22980419 minus strand	1241969
CYFIP1	NM_014608	NP_055423	Coding	chr15:22980419 minus strand	1241969
CYP11A1	NM_000781	NP_000772	Coding	chr15:74367740 minus strand	1241970
CYP11A1	NM_001099773	NP_001093243	Coding	chr15:74366212 minus strand	1241971
CYP19A1	NM_000103	NP_000094	Coding	chr15:51338598 minus strand	1241972
CYP19A1	NM_031226	NP_112503	Coding	chr15:51338598 minus strand	1241972
CYP1A1	NM_000499	NP_000490	Coding	chr15:74725536 minus strand	1241973
CYP1A2	NM_000761	NP_000752	Coding	chr15:74748842 plus strand	1241974
DAPK2	NM_014326	NP_055141	Coding	chr15:64046322 minus	1241975

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				strand	
DENND4A	NM_001144823	NP_001138295	Coding	chr15:65792293 minus strand	1241976
DENND4A	NM_005848	NP_005839	Coding	chr15:65792293 minus strand	1241976
DET1	NM_001144074	NP_001137546	Coding	chr15:88546681 minus strand	1241977
DET1	NM_017996	NP_060466	Coding	chr15:88546681 minus strand	1241977
DIS3L	NM_001143688	NP_001137160	Coding	chr15:66293581 plus strand	1241978
DIS3L	NM_133375	NP_588616	Coding	chr15:66293294 plus strand	1241979
DISP2	NM_033510	NP_277045	Coding	chr15:40358232 plus strand	1241980
DLL4	NM_019074	NP_061947	Coding	chr15:40929332 plus strand	1241981
DMXL2	NM_001174116	NP_001167587	Coding	chr15:51622770 minus strand	1241982
DMXL2	NM_001174117	NP_001167588	Coding	chr15:51622770 minus strand	1241982
DMXL2	NM_015263	NP_056078	Coding	chr15:51622770 minus strand	1241982
DNAJA4	NM_001130182	NP_001123654	Coding	chr15:78264646 plus strand	1241983
DNAJA4	NM_001130183	NP_001123655	Coding	chr15:78266217 plus strand	1241984
DNAJA4	NM_018602	NP_061072	Coding	chr15:78264144 plus strand	1241985
DNAJC17	NM_018163	NP_060633	Coding	chr15:40807478 minus strand	1241986
DPH6	NM_001141972	NP_001135444	Coding	chr15:35546203 minus strand	1241987
DPH6	NM_080650	NP_542381	Coding	chr15:35546203 minus strand	1241987
DPP8	NM_017743	NP_060213	Coding	chr15:65517697 minus strand	1241988
DPP8	NM_130434	NP_569118	Coding	chr15:65517697 minus strand	1241988
DPP8	NM_197960	NP_932064	Coding	chr15:65517271 minus strand	1241989
DPP8	NM_197961	NP_932065	Coding	chr15:65517697 minus strand	1241988
DTWD1	NM_001144955	NP_001138427	Coding	chr15:49621028 plus strand	1241990
DTWD1	NM_020234	NP_064619	Coding	chr15:49621028 plus strand	1241990
DUOX1	NM_017434	NP_059130	Coding	chr15:45129993 plus strand	1241991
DUOX1	NM_175940	NP_787954	Coding	chr15:45129993 plus strand	1241991
DUOX2	NM_014080	NP_054799	Coding	chr15:45114161 minus strand	1241992
DUOXA1	NM_001276264	NP_001263193	Coding	chr15:45129861 minus	1241993

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				strand	
DUOXA1	NM_001276265	NP_001263194	Coding	chr15:45123043 minus strand	1241994
DUOXA1	NM_001276266	NP_001263195	Coding	chr15:45123043 minus strand	1241994
DUOXA1	NM_001276267	NP_001263196	Coding	chr15:45129876 minus strand	1241995
DUOXA1	NM_001276268	NP_001263197	Coding	chr15:45129877 minus strand	1241996
DUOXA1	NM_144565	NP_653166	Coding	chr15:45129861 minus strand	1241993
DUOXA2	NM_207581	NP_997464	Coding	chr15:45114324 plus strand	1241997
DUT	NM_001025248	NP_001020419	Coding	chr15:48331423 plus strand	1241998
DUT	NM_001025249	NP_001020420	Coding	chr15:48331423 plus strand	1241998
DUT	NM_001948	NP_001939	Coding	chr15:48332167 plus strand	1241999
DYX1C1	NM_001033559	NP_001028731	Coding	chr15:55508234 minus strand	1242000
DYX1C1	NM_001033560	NP_001028732	Coding	chr15:55508234 minus strand	1242000
DYX1C1	NM_130810	NP_570722	Coding	chr15:55508234 minus strand	1242000
EDC3	NM_001142443	NP_001135915	Coding	chr15:74696045 minus strand	1242001
EDC3	NM_001142444	NP_001135916	Coding	chr15:74696045 minus strand	1242001
EDC3	NM_025083	NP_079359	Coding	chr15:74696045 minus strand	1242001
EFTUD1	NM_001040610	NP_001035700	Coding	chr15:82262763 minus strand	1242002
EFTUD1	NM_024580	NP_078856	Coding	chr15:82262763 minus strand	1242002
EHD4	NM_139265	NP_644670	Coding	chr15:41972557 minus strand	1242003
EID1	NM_014335	NP_055150	Coding	chr15:48878092 plus strand	1242004
EIF2AK4	NM_001013703	NP_001013725	Coding	chr15:39934123 plus strand	1242005
EIF3J	NM_001284335	NP_001271264	Coding	chr15:44537067 plus strand	1242006
EIF3J	NM_001284336	NP_001271265	Coding	chr15:44537067 plus strand	1242006
EIF3J	NM_003758	NP_003749	Coding	chr15:44537067 plus strand	1242006
ELL3	NM_025165	NP_079441	Coding	chr15:43777304 minus strand	1242007
EMC4	NM_001286420	NP_001273349	Coding	chr15:34224996 plus strand	1242008
EMC4	NM_016454	NP_057538	Coding	chr15:34224996 plus strand	1242008
EMC7	NM_020154	NP_064539	Coding	chr15:34101852 minus	1242009

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				strand	
EPB42	NM_000119	NP_000110	Coding	chr15:43221125 minus strand	1242010
EPB42	NM_001114134	NP_001107606	Coding	chr15:43221125 minus strand	1242010
ETFA	NM_000126	NP_000117	Coding	chr15:76311469 minus strand	1242011
ETFA	NM_001127716	NP_001121188	Coding	chr15:76311469 minus strand	1242011
EXD1	NM_001286441	NP_001273370	Coding	chr15:41230757 minus strand	1242012
EXD1	NM_152596	NP_689809	Coding	chr15:41230757 minus strand	1242012
FAH	NM_000137	NP_000128	Coding	chr15:80152890 plus strand	1242013
FAM103A1	NM_031452	NP_113640	Coding	chr15:82986202 plus strand	1242014
FAM154B	NM_001008226	NP_001008227	Coding	chr15:82262810 plus strand	1242015
FAM169B	NM_182562	NP_872368	Coding	chr15:98514382 minus strand	1242016
FAM174B	NM_207446	NP_997329	Coding	chr15:92655801 minus strand	1242017
FAM189A1	NM_015307	NP_056122	Coding	chr15:29570723 minus strand	1242018
FAM214A	NM_001286495	NP_001273424	Coding	chr15:52652050 minus strand	1242019
FAM214A	NM_019600	NP_062546	Coding	chr15:52678634 minus strand	1242020
FAM219B	NM_020447	NP_065180	Coding	chr15:74907121 minus strand	1242021
FAM227B	NM_152647	NP_689860	Coding	chr15:49620921 minus strand	1242022
FAM63B	NM_001040450	NP_001035540	Coding	chr15:58771193 plus strand	1242023
FAM63B	NM_001040453	NP_001035543	Coding	chr15:58771193 plus strand	1242023
FAM81A	NM_152450	NP_689663	Coding	chr15:59438172 plus strand	1242024
FAM96A	NM_001014812	NP_001014812	Coding	chr15:64094008 minus strand	1242025
FAM96A	NM_001289108	NP_001276037	Coding	chr15:64094008 minus strand	1242025
FAM96A	NM_032231	NP_115607	Coding	chr15:64094008 minus strand	1242025
FAM98B	NM_173611	NP_775882	Coding	chr15:38454126 plus strand	1242026
FAN1	NM_001146094	NP_001139566	Coding	chr15:30903872 plus strand	1242027
FAN1	NM_001146095	NP_001139567	Coding	chr15:30903851 plus strand	1242028
FAN1	NM_001146096	NP_001139568	Coding	chr15:30903872 plus strand	1242027
FAN1	NM_014967	NP_055782	Coding	chr15:30903872 plus	1242027

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				strand	
FANCI	NM_001113378	NP_001106849	Coding	chr15:89243962 plus strand	1242029
FANCI	NM_018193	NP_060663	Coding	chr15:89243962 plus strand	1242029
FBN1	NM_000138	NP_000129	Coding	chr15:48645788 minus strand	1242030
FBXL22	NM_203373	NP_976307	Coding	chr15:63597352 plus strand	1242031
FBXO22	NM_012170	NP_036302	Coding	chr15:75903858 plus strand	1242032
FBXO22	NM_147188	NP_671717	Coding	chr15:75903858 plus strand	1242032
FEM1B	NM_015322	NP_056137	Coding	chr15:68277802 plus strand	1242033
FES	NM_001143783	NP_001137255	Coding	chr15:90885045 plus strand	1242034
FES	NM_001143784	NP_001137256	Coding	chr15:90885045 plus strand	1242034
FES	NM_001143785	NP_001137257	Coding	chr15:90884434 plus strand	1242035
FES	NM_002005	NP_001996	Coding	chr15:90884457 plus strand	1242036
FGF7	NM_002009	NP_002000	Coding	chr15:49423177 plus strand	1242037
FMN1	NM_001103184	NP_001096654	Coding	chr15:33068032 minus strand	1242038
FMN1	NM_001277313	NP_001264242	Coding	chr15:33194733 minus strand	1242039
FMN1	NM_001277314	NP_001264243	Coding	chr15:33194733 minus strand	1242039
FOXB1	NM_012182	NP_036314	Coding	chr15:60004221 plus strand	1242040
FRMD5	NM_001286490	NP_001273419	Coding	chr15:44194446 minus strand	1242041
FRMD5	NM_001286491	NP_001273420	Coding	chr15:44195294 minus strand	1242042
FRMD5	NM_032892	NP_116281	Coding	chr15:44195294 minus strand	1242042
FSD2	NM_001007122	NP_001007123	Coding	chr15:82806070 minus strand	1242043
FSD2	NM_001281805	NP_001268734	Coding	chr15:82806070 minus strand	1242043
FSD2	NM_001281806	NP_001268735	Coding	chr15:82806070 minus strand	1242043
FSIP1	NM_152597	NP_689810	Coding	chr15:39782838 minus strand	1242044
FURIN	NM_001289823	NP_001276752	Coding	chr15:90871538 plus strand	1242045
FURIN	NM_001289824	NP_001276753	Coding	chr15:90872877 plus strand	1242046
FURIN	NM_002569	NP_002560	Coding	chr15:90868591 plus strand	1242047
GABPB1	NM_002041	NP_002032	Coding	chr15:50355408 minus	1242048

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				strand	
GABPB1	NM_005254	NP_005245	Coding	chr15:50355408 minus strand	1242048
GABPB1	NM_016654	NP_057738	Coding	chr15:50355408 minus strand	1242048
GABPB1	NM_016655	NP_057739	Coding	chr15:50355408 minus strand	1242048
GABPB1	NM_181427	NP_852092	Coding	chr15:50355408 minus strand	1242048
GABRA5	NM_000810	NP_000801	Coding	chr15:26866718 plus strand	1242049
GABRA5	NM_001165037	NP_001158509	Coding	chr15:26867125 plus strand	1242050
GABRB3	NM_000814	NP_000805	Coding	chr15:26773076 minus strand	1242051
GABRB3	NM_001191320	NP_001178249	Coding	chr15:26716765 minus strand	1242052
GABRB3	NM_001191321	NP_001178250	Coding	chr15:26629178 minus strand	1242053
GABRB3	NM_001278631	NP_001265560	Coding	chr15:26773076 minus strand	1242051
GABRB3	NM_021912	NP_068712	Coding	chr15:26773788 minus strand	1242054
GABRG3	NM_001270873	NP_001257802	Coding	chr15:26971281 plus strand	1242055
GABRG3	NM_033223	NP_150092	Coding	chr15:26971281 plus strand	1242055
GALK2	NM_001001556	NP_001001556	Coding	chr15:49155758 plus strand	1242056
GALK2	NM_001289030	NP_001275959	Coding	chr15:49170015 plus strand	1242057
GALK2	NM_001289031	NP_001275960	Coding	chr15:49170015 plus strand	1242057
GALK2	NM_002044	NP_002035	Coding	chr15:49170015 plus strand	1242057
GANC	NM_001301409	NP_001288338	Coding	chr15:42273657 plus strand	1242058
GANC	NM_001301410	NP_001288339	Coding	chr15:42274167 plus strand	1242059
GANC	NM_198141	NP_937784	Coding	chr15:42274167 plus strand	1242059
GATM	NM_001482	NP_001473	Coding	chr15:45378782 minus strand	1242060
GCHFR	NM_005258	NP_005249	Coding	chr15:40764086 plus strand	1242061
GCNT3	NM_004751	NP_004742	Coding	chr15:59611782 plus strand	1242062
GCOM1	NM_001018090	NP_001018100	Coding	chr15:57591903 plus strand	1242063
GCOM1	NM_001018091	NP_001018101	Coding	chr15:57591903 plus strand	1242063
GCOM1	NM_001285900	NP_001272829	Coding	chr15:57591903 plus strand	1242063
GDPGP1	NM_001013657	NP_001013679	Coding	chr15:90234254 plus	1242064

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				strand	
GJD2	NM_020660	NP_065711	Coding	chr15:34754581 minus strand	1242065
GLCE	NM_015554	NP_056369	Coding	chr15:69160633 plus strand	1242066
GLDN	NM_181789	NP_861454	Coding	chr15:51341515 plus strand	1242067
GNB5	NM_006578	NP_006569	Coding	chr15:52179965 minus strand	1242068
GNB5	NM_016194	NP_057278	Coding	chr15:52191368 minus strand	1242069
GOLGA6A	NM_001038640	NP_001033729	Coding	chr15:74082550 minus strand	1242070
GOLGA6B	NM_018652	NP_061122	Coding	chr15:72654696 plus strand	1242071
GOLGA6C	NM_001164404	NP_001157876	Coding	chr15:75258557 plus strand	1242072
GOLGA6D	NM_001145224	NP_001138696	Coding	chr15:75282840 plus strand	1242073
GOLGA6L1	NM_001001413	NP_001001413	Coding	chr15:23136822 minus strand	1242074
GOLGA6L10	NM_001164465	NP_001157937	Coding	chr15:82349475 minus strand	1242075
GOLGA6L22	NM_001271664	NP_001258593	Coding	chr15:23334210 minus strand	1242076
GOLGA6L4	NM_001267536	NP_001254465	Coding	chr15:84235772 plus strand	1242077
GOLGA6L4	NM_001267536	NP_001254465	Coding	chr15:84516847 minus strand	1242078
GOLGA6L6	NM_001145004	NP_001138476	Coding	chr15:20541800 minus strand	1242079
GOLGA6L9	NM_001291420	NP_001278349	Coding	chr15:82430782 plus strand	1242080
GOLGA6L9	NM_198181	NP_937824	Coding	chr15:82429979 plus strand	1242081
GOLGA8A	NM_181077	NP_851422	Coding	chr15:34389800 minus strand	1242082
GOLGA8B	NM_001023567	NP_001018861	Coding	chr15:34536021 minus strand	1242083
GOLGA8H	NM_001282490	NP_001269419	Coding	chr15:30604029 plus strand	1242084
GOLGA8H	NM_001282490	NP_001269419	Coding	chr15:32403290 minus strand	1242085
GOLGA8J	NM_001282472	NP_001269401	Coding	chr15:22617854 minus strand	1242086
GOLGA8J	NM_001282472	NP_001269401	Coding	chr15:30082954 plus strand	1242087
GOLGA8K	NM_001282493	NP_001269422	Coding	chr15:32403292 minus strand	1242088
GOLGA8M	NM_001282468	NP_001269397	Coding	chr15:28712421 minus strand	1242089
GOLGA8N	NM_001282494	NP_001269423	Coding	chr15:30604029 plus strand	1242090
GOLGA8N	NM_001282494	NP_001269423	Coding	chr15:32593455 plus	1242091

【１０００】

				strand	
GOLGA8O	NM_001277308	NP_001264237	Coding	chr15:32455634 minus strand	1242092
GOLGA8R	NM_001282484	NP_001269413	Coding	chr15:30414260 minus strand	1242093
GPR176	NM_001271854	NP_001258783	Coding	chr15:39920892 minus strand	1242094
GPR176	NM_001271855	NP_001258784	Coding	chr15:39829276 minus strand	1242095
GPR176	NM_007223	NP_009154	Coding	chr15:39920892 minus strand	1242094
GRAMD2	NM_001012642	NP_001012660	Coding	chr15:72197795 minus strand	1242096
GREM1	NM_001191322	NP_001178251	Coding	chr15:32718003 plus strand	1242097
GREM1	NM_001191323	NP_001178252	Coding	chr15:32718003 plus strand	1242097
GREM1	NM_013372	NP_037504	Coding	chr15:32718003 plus strand	1242097
GTF2A2	NM_004492	NP_004483	Coding	chr15:59657538 minus strand	1242098
HAPLN3	NM_178232	NP_839946	Coding	chr15:88895539 minus strand	1242099
HAUS2	NM_001130447	NP_001123919	Coding	chr15:42548812 plus strand	1242100
HAUS2	NM_018097	NP_060567	Coding	chr15:42548812 plus strand	1242100
HCN4	NM_005477	NP_005468	Coding	chr15:73369264 minus strand	1242101
HDC	NM_002112	NP_002103	Coding	chr15:50265965 minus strand	1242102
HDDC3	NM_001286451	NP_001273380	Coding	chr15:90932569 minus strand	1242103
HDDC3	NM_198527	NP_940929	Coding	chr15:90932569 minus strand	1242103
HDGFRP3	NM_016073	NP_057157	Coding	chr15:83208018 minus strand	1242104
HERC1	NM_003922	NP_003913	Coding	chr15:63833948 minus strand	1242105
HERC2	NM_004667	NP_004658	Coding	chr15:28322152 minus strand	1242106
HEXA	NM_000520	NP_000511	Coding	chr15:72376179 minus strand	1242107
HMG20A	NM_018200	NP_060670	Coding	chr15:77420900 plus strand	1242108
HOMER2	NM_004839	NP_004830	Coding	chr15:82952724 minus strand	1242109
HOMER2	NM_199330	NP_955362	Coding	chr15:82952724 minus strand	1242109
HYKK	NM_001013619	NP_001013641	Coding	chr15:78507563 plus strand	1242110
HYKK	NM_001083612	NP_001077081	Coding	chr15:78507563 plus strand	1242110
HYPK	NM_001199885	NP_001186814	Coding	chr15:43800420 plus	1242111

【１００１】

				strand	
HYPK	NM_016400	NP_057484	Coding	chr15:43800420 plus strand	1242111
ICE2	NM_001018089	NP_001018099	Coding	chr15:60479160 minus strand	1242112
ICE2	NM_001276385	NP_001263314	Coding	chr15:60479160 minus strand	1242112
ICE2	NM_024611	NP_078887	Coding	chr15:60479160 minus strand	1242112
IDH2	NM_001289910	NP_001276839	Coding	chr15:90100621 minus strand	1242113
IDH2	NM_001290114	NP_001277043	Coding	chr15:90102554 minus strand	1242114
IDH2	NM_002168	NP_002159	Coding	chr15:90102554 minus strand	1242114
IDH3A	NM_005530	NP_005521	Coding	chr15:78149376 plus strand	1242115
IGDCC3	NM_004884	NP_004875	Coding	chr15:65378040 minus strand	1242116
IGDCC4	NM_020962	NP_066013	Coding	chr15:65423072 minus strand	1242117
IGF1R	NM_000875	NP_000866	Coding	chr15:98648538 plus strand	1242118
IGF1R	NM_001291858	NP_001278787	Coding	chr15:98648538 plus strand	1242118
IL16	NM_001172128	NP_001165599	Coding	chr15:81196877 plus strand	1242119
IL16	NM_004513	NP_004504	Coding	chr15:81296912 plus strand	1242120
IL16	NM_172217	NP_757366	Coding	chr15:81225298 plus strand	1242121
IMP3	NM_018285	NP_060755	Coding	chr15:75640323 minus strand	1242122
INAFM2	NM_001301268	NP_001288197	Coding	chr15:40324055 plus strand	1242123
INO80	NM_017553	NP_060023	Coding	chr15:41116246 minus strand	1242124
IQCH	NM_001031715	NP_001026885	Coding	chr15:67254799 plus strand	1242125
IQCH	NM_001284347	NP_001271276	Coding	chr15:67254799 plus strand	1242125
IQCH	NM_001284348	NP_001271277	Coding	chr15:67254799 plus strand	1242125
IQCH	NM_001284349	NP_001271278	Coding	chr15:67254799 plus strand	1242125
IQCH	NM_022784	NP_073621	Coding	chr15:67254799 plus strand	1242125
IQGAP1	NM_003870	NP_003861	Coding	chr15:90388240 plus strand	1242126
IREB2	NM_004136	NP_004127	Coding	chr15:78438175 plus strand	1242127
ISG20	NM_002201	NP_002192	Coding	chr15:88638807 plus strand	1242128
ISL2	NM_145805	NP_665804	Coding	chr15:76336805 plus	1242129

【１００２】

				strand	
ISLR	NM_005545	NP_005536	Coding	chr15:74173745 plus strand	1242130
ISLR	NM_201526	NP_958934	Coding	chr15:74174563 plus strand	1242131
ISLR2	NM_001130136	NP_001123608	Coding	chr15:74129373 plus strand	1242132
ISLR2	NM_001130137	NP_001123609	Coding	chr15:74129654 plus strand	1242133
ISLR2	NM_001130138	NP_001123610	Coding	chr15:74130248 plus strand	1242134
ISLR2	NM_020851	NP_065902	Coding	chr15:74130401 plus strand	1242135
ITGA11	NM_001004439	NP_001004439	Coding	chr15:68432153 minus strand	1242136
ITPKA	NM_002220	NP_002211	Coding	chr15:41493857 plus strand	1242137
IVD	NM_001159508	NP_001152980	Coding	chr15:40405484 plus strand	1242138
IVD	NM_002225	NP_002216	Coding	chr15:40405484 plus strand	1242138
JMJD7	NM_001114632	NP_001108104	Coding	chr15:41828084 plus strand	1242139
JMJD7-PLA2G4B	NM_001198588	NP_001185517	Coding	chr15:41828084 plus strand	1242140
JMJD7-PLA2G4B	NM_005090	NP_005081	Coding	chr15:41828084 plus strand	1242140
KATNBL1	NM_024713	NP_078989	Coding	chr15:34210096 minus strand	1242141
KBTBD13	NM_001101362	NP_001094832	Coding	chr15:65076815 plus strand	1242142
KIAA0101	NM_001029989	NP_001025160	Coding	chr15:64381510 minus strand	1242143
KIAA0101	NM_014736	NP_055551	Coding	chr15:64381510 minus strand	1242143
KIAA1024	NM_015206	NP_056021	Coding	chr15:79432515 plus strand	1242144
KIF23	NM_001281301	NP_001268230	Coding	chr15:69414245 plus strand	1242145
KIF23	NM_004856	NP_004847	Coding	chr15:69414245 plus strand	1242145
KIF23	NM_138555	NP_612565	Coding	chr15:69414245 plus strand	1242145
KIF7	NM_198525	NP_940927	Coding	chr15:89655451 minus strand	1242146
KLF13	NM_001302461	NP_001289390	Coding	chr15:31326854 plus strand	1242147
KLF13	NM_015995	NP_057079	Coding	chr15:31326854 plus strand	1242147
KLHL25	NM_022480	NP_071925	Coding	chr15:85794958 minus strand	1242148
KNSTRN	NM_001142761	NP_001136233	Coding	chr15:40382720 plus strand	1242149
KNSTRN	NM_001142762	NP_001136234	Coding	chr15:40382720 plus	1242149

【１００３】

				strand	
KNSTRN	NM_033286	NP_150628	Coding	chr15:40382720 plus strand	1242149
LACTB	NM_001288585	NP_001275514	Coding	chr15:63121799 plus strand	1242150
LACTB	NM_032857	NP_116246	Coding	chr15:63121799 plus strand	1242150
LACTB	NM_171846	NP_741982	Coding	chr15:63121799 plus strand	1242150
LARP6	NM_001286679	NP_001273608	Coding	chr15:70853458 minus strand	1242151
LARP6	NM_018357	NP_060827	Coding	chr15:70854265 minus strand	1242152
LARP6	NM_197958	NP_932062	Coding	chr15:70854265 minus strand	1242152
LCMT2	NM_014793	NP_055608	Coding	chr15:43330622 minus strand	1242153
LCTL	NM_001278562	NP_001265491	Coding	chr15:66565979 minus strand	1242154
LCTL	NM_207338	NP_997221	Coding	chr15:66565497 minus strand	1242155
LDHAL6B	NM_033195	NP_149972	Coding	chr15:59206815 plus strand	1242156
LEO1	NM_001286430	NP_001273359	Coding	chr15:51971801 minus strand	1242157
LEO1	NM_138792	NP_620147	Coding	chr15:51971801 minus strand	1242157
LINGO1	NM_001301186	NP_001288115	Coding	chr15:77820900 minus strand	1242158
LINGO1	NM_001301187	NP_001288116	Coding	chr15:77820332 minus strand	1242159
LINGO1	NM_001301189	NP_001288118	Coding	chr15:77820102 minus strand	1242160
LINGO1	NM_001301191	NP_001288120	Coding	chr15:77819524 minus strand	1242161
LINGO1	NM_001301192	NP_001288121	Coding	chr15:77819524 minus strand	1242161
LINGO1	NM_001301194	NP_001288123	Coding	chr15:77819524 minus strand	1242161
LINGO1	NM_001301195	NP_001288124	Coding	chr15:77787014 minus strand	1242162
LINGO1	NM_001301197	NP_001288126	Coding	chr15:77720751 minus strand	1242163
LINGO1	NM_001301198	NP_001288127	Coding	chr15:77707507 minus strand	1242164
LINGO1	NM_001301199	NP_001288128	Coding	chr15:77696495 minus strand	1242165
LINGO1	NM_001301200	NP_001288129	Coding	chr15:77696148 minus strand	1242166
LINGO1	NM_032808	NP_116197	Coding	chr15:77632527 minus strand	1242167
LINS	NM_001040616	NP_001035706	Coding	chr15:100602240 minus strand	1242168
LIPC	NM_000236	NP_000227	Coding	chr15:58431975 plus	1242169

【１００４】

				strand	
LMAN1L	NM_021819	NP_068591	Coding	chr15:74812852 plus strand	1242170
LOC283710	NM_001243538	NP_001230467	Coding	chr15:31230847 minus strand	1242171
LOXL1	NM_005576	NP_005567	Coding	chr15:73926447 plus strand	1242172
LPCAT4	NM_153613	NP_705841	Coding	chr15:34367194 minus strand	1242173
LRRC28	NM_001284400	NP_001271329	Coding	chr15:99251361 plus strand	1242174
LRRC28	NM_144598	NP_653199	Coding	chr15:99251361 plus strand	1242174
LRRC49	NM_001199017	NP_001185946	Coding	chr15:70892442 plus strand	1242175
LRRC49	NM_001199018	NP_001185947	Coding	chr15:70892442 plus strand	1242175
LRRC49	NM_001284357	NP_001271286	Coding	chr15:70853238 plus strand	1242176
LRRC49	NM_017691	NP_060161	Coding	chr15:70892442 plus strand	1242175
LRRC57	NM_153260	NP_694992	Coding	chr15:42548804 minus strand	1242177
LRRK1	NM_024652	NP_078928	Coding	chr15:100919254 plus strand	1242178
LTK	NM_001135685	NP_001129157	Coding	chr15:41513887 minus strand	1242179
LTK	NM_002344	NP_002335	Coding	chr15:41513887 minus strand	1242179
LTK	NM_206961	NP_996844	Coding	chr15:41513887 minus strand	1242179
LYSMD2	NM_001143917	NP_001137389	Coding	chr15:51751453 minus strand	1242180
LYSMD2	NM_153374	NP_699205	Coding	chr15:51738123 minus strand	1242181
LYSMD4	NM_001284417	NP_001271346	Coding	chr15:99733444 minus strand	1242182
LYSMD4	NM_001284418	NP_001271347	Coding	chr15:99733385 minus strand	1242183
LYSMD4	NM_001284419	NP_001271348	Coding	chr15:99733444 minus strand	1242182
LYSMD4	NM_001284420	NP_001271349	Coding	chr15:99733444 minus strand	1242182
LYSMD4	NM_001284421	NP_001271350	Coding	chr15:99733444 minus strand	1242182
LYSMD4	NM_001284422	NP_001271351	Coding	chr15:99733444 minus strand	1242182
LYSMD4	NM_152449	NP_689662	Coding	chr15:99733444 minus strand	1242182
MAGEL2	NM_019066	NP_061939	Coding	chr15:23647846 minus strand	1242184
MAN2A2	NM_006122	NP_006113	Coding	chr15:90904189 plus strand	1242185
MAN2C1	NM_001256494	NP_001243423	Coding	chr15:75368627 minus	1242186

【１００５】

				strand	
MAN2C1	NM_001256495	NP_001243424	Coding	chr15:75368627 minus strand	1242186
MAN2C1	NM_001256496	NP_001243425	Coding	chr15:75368627 minus strand	1242186
MAN2C1	NM_006715	NP_006706	Coding	chr15:75368627 minus strand	1242186
MAP1A	NM_002373	NP_002364	Coding	chr15:43517607 plus strand	1242187
MAP2K1	NM_002755	NP_002746	Coding	chr15:66386872 plus strand	1242188
MAP2K5	NM_001206804	NP_001193733	Coding	chr15:67549003 plus strand	1242189
MAP2K5	NM_002757	NP_002748	Coding	chr15:67542682 plus strand	1242190
MAP2K5	NM_145160	NP_660143	Coding	chr15:67542682 plus strand	1242190
MAPK6	NM_002748	NP_002739	Coding	chr15:52019213 plus strand	1242191
MAPKBP1	NM_001128608	NP_001122080	Coding	chr15:41774433 plus strand	1242192
MAPKBP1	NM_001265611	NP_001252540	Coding	chr15:41774433 plus strand	1242192
MAPKBP1	NM_014994	NP_055809	Coding	chr15:41774433 plus strand	1242192
MCTP2	NM_001159643	NP_001153115	Coding	chr15:94298200 plus strand	1242193
MCTP2	NM_001159644	NP_001153116	Coding	chr15:94355934 plus strand	1242194
MCTP2	NM_018349	NP_060819	Coding	chr15:94298200 plus strand	1242193
MEF2A	NM_001130926	NP_001124398	Coding	chr15:99565927 plus strand	1242195
MEF2A	NM_001130927	NP_001124399	Coding	chr15:99565927 plus strand	1242195
MEF2A	NM_001130928	NP_001124400	Coding	chr15:99632977 plus strand	1242196
MEF2A	NM_001171894	NP_001165365	Coding	chr15:99565927 plus strand	1242195
MEF2A	NM_005587	NP_005578	Coding	chr15:99565927 plus strand	1242195
MEGF11	NM_032445	NP_115821	Coding	chr15:66253737 minus strand	1242197
MEIS2	NM_001220482	NP_001207411	Coding	chr15:37101299 minus strand	1242198
MEIS2	NM_002399	NP_002390	Coding	chr15:37101299 minus strand	1242198
MEIS2	NM_170674	NP_733774	Coding	chr15:37100140 minus strand	1242199
MEIS2	NM_170675	NP_733775	Coding	chr15:37100140 minus strand	1242199
MEIS2	NM_170676	NP_733776	Coding	chr15:37100140 minus strand	1242199
MEIS2	NM_170677	NP_733777	Coding	chr15:37100140 minus	1242199

【１００６】

				strand	
MEIS2	NM_172315	NP_758526	Coding	chr15:37098361 minus strand	1242200
MEIS2	NM_172316	NP_758527	Coding	chr15:37099396 minus strand	1242201
MESDC1	NM_022566	NP_072088	Coding	chr15:81000953 plus strand	1242202
MESDC2	NM_015154	NP_055969	Coding	chr15:80989878 minus strand	1242203
MESP1	NM_018670	NP_061140	Coding	chr15:89751309 minus strand	1242204
MESP2	NM_001039958	NP_001035047	Coding	chr15:89776357 plus strand	1242205
MEX3B	NM_032246	NP_115622	Coding	chr15:82046143 minus strand	1242206
MFAP1	NM_005926	NP_005917	Coding	chr15:43824753 minus strand	1242207
MFGE8	NM_001114614	NP_001108086	Coding	chr15:88913432 minus strand	1242208
MFGE8	NM_005928	NP_005919	Coding	chr15:88913432 minus strand	1242208
MGA	NM_001080541	NP_001074010	Coding	chr15:41660411 plus strand	1242209
MGA	NM_001164273	NP_001157745	Coding	chr15:41660411 plus strand	1242209
MKRN3	NM_005664	NP_005655	Coding	chr15:23565306 plus strand	1242210
MNS1	NM_018365	NP_060835	Coding	chr15:56465137 minus strand	1242211
MORF4L1	NM_001265603	NP_001252532	Coding	chr15:78872780 plus strand	1242212
MORF4L1	NM_001265604	NP_001252533	Coding	chr15:78872988 plus strand	1242213
MORF4L1	NM_001265605	NP_001252534	Coding	chr15:78872988 plus strand	1242213
MORF4L1	NM_006791	NP_006782	Coding	chr15:78872780 plus strand	1242212
MORF4L1	NM_206839	NP_996670	Coding	chr15:78872780 plus strand	1242212
MPI	NM_001289155	NP_001276084	Coding	chr15:74890010 plus strand	1242214
MPI	NM_001289156	NP_001276085	Coding	chr15:74890010 plus strand	1242214
MPI	NM_001289157	NP_001276086	Coding	chr15:74890010 plus strand	1242214
MPI	NM_002435	NP_002426	Coding	chr15:74890010 plus strand	1242214
MRPL46	NM_022163	NP_071446	Coding	chr15:88467402 minus strand	1242215
MRPS11	NM_022839	NP_073750	Coding	chr15:88467452 plus strand	1242216
MRPS11	NM_176805	NP_789775	Coding	chr15:88467452 plus strand	1242216
MTFMT	NM_139242	NP_640335	Coding	chr15:65029639 minus	1242217

【１００７】

				strand	
MTHFS	NM_001199758	NP_001186687	Coding	chr15:79897285 minus strand	1242218
MTHFS	NM_006441	NP_006432	Coding	chr15:79897049 minus strand	1242219
MTMR10	NM_017762	NP_060232	Coding	chr15:30991604 minus strand	1242220
MYEF2	NM_001301210	NP_001288139	Coding	chr15:48178361 minus strand	1242221
MYEF2	NM_016132	NP_057216	Coding	chr15:48178361 minus strand	1242221
MYO1E	NM_004998	NP_004989	Coding	chr15:59372872 minus strand	1242222
MYO5A	NM_000259	NP_000250	Coding	chr15:52529050 minus strand	1242223
MYO5A	NM_001142495	NP_001135967	Coding	chr15:52529050 minus strand	1242223
MYO5C	NM_018728	NP_061198	Coding	chr15:52295798 minus strand	1242224
MYO9A	NM_006901	NP_008832	Coding	chr15:72118099 minus strand	1242225
MYZAP	NM_001018100	NP_001018110	Coding	chr15:57591903 plus strand	1242226
MYZAP	NM_152451	NP_689664	Coding	chr15:57591903 plus strand	1242226
NDN	NM_002487	NP_002478	Coding	chr15:23687303 minus strand	1242227
NDNL2	NM_138704	NP_619649	Coding	chr15:29269816 minus strand	1242228
NDUFAF1	NM_016013	NP_057097	Coding	chr15:41402460 minus strand	1242229
NEDD4	NM_001284338	NP_001271267	Coding	chr15:55917131 minus strand	1242230
NEDD4	NM_001284339	NP_001271268	Coding	chr15:55917131 minus strand	1242230
NEDD4	NM_001284340	NP_001271269	Coding	chr15:55917131 minus strand	1242230
NEDD4	NM_006154	NP_006145	Coding	chr15:55993746 minus strand	1242231
NEDD4	NM_198400	NP_940682	Coding	chr15:55917131 minus strand	1242230
NEIL1	NM_001256552	NP_001243481	Coding	chr15:75347618 plus strand	1242232
NEIL1	NM_024608	NP_078884	Coding	chr15:75346989 plus strand	1242233
NEO1	NM_001172623	NP_001166094	Coding	chr15:73052483 plus strand	1242234
NEO1	NM_001172624	NP_001166095	Coding	chr15:73052483 plus strand	1242234
NEO1	NM_002499	NP_002490	Coding	chr15:73052483 plus strand	1242234
NGRN	NM_001033088	NP_001028260	Coding	chr15:90265662 plus strand	1242235
NIPA1	NM_001142275	NP_001135747	Coding	chr15:22786224 plus	1242236

【１００８】

				strand	
NIPA1	NM_144599	NP_653200	Coding	chr15:22786631 plus strand	1242237
NIPA2	NM_001008860	NP_001008860	Coding	chr15:22838640 plus strand	1242238
NIPA2	NM_001008892	NP_001008892	Coding	chr15:22838640 plus strand	1242238
NIPA2	NM_001008894	NP_001008894	Coding	chr15:22838640 plus strand	1242238
NIPA2	NM_001184888	NP_001171817	Coding	chr15:22838640 plus strand	1242238
NIPA2	NM_001184889	NP_001171818	Coding	chr15:22838640 plus strand	1242238
NIPA2	NM_030922	NP_112184	Coding	chr15:22838640 plus strand	1242238
NMB	NM_021077	NP_066563	Coding	chr15:84658571 minus strand	1242239
NMB	NM_205858	NP_995580	Coding	chr15:84658571 minus strand	1242239
NOP10	NM_018648	NP_061118	Coding	chr15:34343161 minus strand	1242240
NOX5	NM_001184779	NP_001171708	Coding	chr15:69014694 plus strand	1242241
NOX5	NM_001184780	NP_001171709	Coding	chr15:68930499 plus strand	1242242
NOX5	NM_024505	NP_078781	Coding	chr15:69014694 plus strand	1242241
NPAP1	NM_018958	NP_061831	Coding	chr15:24675393 plus strand	1242243
NPTN	NM_001161363	NP_001154835	Coding	chr15:73633412 minus strand	1242244
NPTN	NM_001161364	NP_001154836	Coding	chr15:73633412 minus strand	1242244
NPTN	NM_012428	NP_036560	Coding	chr15:73633412 minus strand	1242244
NPTN	NM_017455	NP_059429	Coding	chr15:73633412 minus strand	1242244
NR2E3	NM_014249	NP_055064	Coding	chr15:71810547 plus strand	1242245
NR2E3	NM_016346	NP_057430	Coding	chr15:71810547 plus strand	1242245
NR2F2	NM_001145155	NP_001138627	Coding	chr15:96325927 plus strand	1242246
NR2F2	NM_001145156	NP_001138628	Coding	chr15:96332564 plus strand	1242247
NR2F2	NM_001145157	NP_001138629	Coding	chr15:96333339 plus strand	1242248
NR2F2	NM_021005	NP_066285	Coding	chr15:96330881 plus strand	1242249
NRG4	NM_138573	NP_612640	Coding	chr15:76012444 minus strand	1242250
NTRK3	NM_001007156	NP_001007157	Coding	chr15:88256731 minus strand	1242251
NTRK3	NM_001012338	NP_001012338	Coding	chr15:88256731 minus	1242251

【１００９】

				strand	
NTRK3	NM_001243101	NP_001230030	Coding	chr15:88256731 minus strand	1242251
NTRK3	NM_002530	NP_002521	Coding	chr15:88256731 minus strand	1242251
NUSAP1	NM_001243142	NP_001230071	Coding	chr15:41332693 plus strand	1242252
NUSAP1	NM_001243143	NP_001230072	Coding	chr15:41332693 plus strand	1242252
NUSAP1	NM_001243144	NP_001230073	Coding	chr15:41332693 plus strand	1242252
NUSAP1	NM_001301136	NP_001288065	Coding	chr15:41332693 plus strand	1242252
NUSAP1	NM_016359	NP_057443	Coding	chr15:41332693 plus strand	1242252
NUSAP1	NM_018454	NP_060924	Coding	chr15:41332693 plus strand	1242252
NUTM1	NM_001284292	NP_001271221	Coding	chr15:34343314 plus strand	1242253
NUTM1	NM_001284293	NP_001271222	Coding	chr15:34343314 plus strand	1242253
NUTM1	NM_175741	NP_786883	Coding	chr15:34343314 plus strand	1242253
OAZ2	NM_001301302	NP_001288231	Coding	chr15:64703281 minus strand	1242254
OAZ2	NM_002537	NP_002528	Coding	chr15:64703281 minus strand	1242254
OCA2	NM_000275	NP_000266	Coding	chr15:28099312 minus strand	1242255
OCA2	NM_001300984	NP_001287913	Coding	chr15:28099312 minus strand	1242255
ODF3L1	NM_175881	NP_787077	Coding	chr15:75723977 plus strand	1242256
OIP5	NM_007280	NP_009211	Coding	chr15:41332621 minus strand	1242257
ONECUT1	NM_004498	NP_004489	Coding	chr15:52790012 minus strand	1242258
OR4F15	NM_001001674	NP_001001674	Coding	chr15:101818186 plus strand	1242259
OR4F4	NM_001004195	NP_001004195	Coding	chr15:101923059 minus strand	1242260
OR4F6	NM_001005326	NP_001005326	Coding	chr15:101805719 plus strand	1242261
OR4M2	NM_001004719	NP_001004719	Coding	chr15:21637908 plus strand	1242262
OR4M2	NM_001004719	NP_001004719	Coding	chr15:22080526 plus strand	1242263
OR4N4	NM_001005241	NP_001005241	Coding	chr15:22094430 plus strand	1242264
OTUD7A	NM_130901	NP_570971	Coding	chr15:31655339 minus strand	1242265
PAK6	NM_001128628	NP_001122100	Coding	chr15:40217427 plus strand	1242266
PAK6	NM_001128629	NP_001122101	Coding	chr15:40217427 plus	1242266

【１０１０】

				strand	
PAK6	NM_001276717	NP_001263646	Coding	chr15:40253177 plus strand	1242267
PAK6	NM_001276718	NP_001263647	Coding	chr15:40239090 plus strand	1242268
PAK6	NM_020168	NP_064553	Coding	chr15:40239796 plus strand	1242269
PAQR5	NM_001104554	NP_001098024	Coding	chr15:69314402 plus strand	1242270
PAQR5	NM_017705	NP_060175	Coding	chr15:69298954 plus strand	1242271
PARP16	NM_017851	NP_060321	Coding	chr15:65286680 minus strand	1242272
PARP6	NM_020214	NP_064599	Coding	chr15:72271287 minus strand	1242273
PATL2	NM_001145112	NP_001138584	Coding	chr15:44676888 minus strand	1242274
PCSK6	NM_001291309	NP_001278238	Coding	chr15:101489984 minus strand	1242275
PCSK6	NM_002570	NP_002561	Coding	chr15:101489984 minus strand	1242275
PCSK6	NM_138319	NP_612192	Coding	chr15:101489984 minus strand	1242275
PCSK6	NM_138322	NP_612195	Coding	chr15:101489984 minus strand	1242275
PCSK6	NM_138323	NP_612196	Coding	chr15:101489984 minus strand	1242275
PCSK6	NM_138324	NP_612197	Coding	chr15:101489984 minus strand	1242275
PCSK6	NM_138325	NP_612198	Coding	chr15:101489984 minus strand	1242275
PDCD7	NM_005707	NP_005698	Coding	chr15:65133836 minus strand	1242276
PDE8A	NM_001243137	NP_001230066	Coding	chr15:84980512 plus strand	1242277
PDE8A	NM_002605	NP_002596	Coding	chr15:84981973 plus strand	1242278
PDE8A	NM_173454	NP_775656	Coding	chr15:84981973 plus strand	1242278
PDIA3	NM_005313	NP_005304	Coding	chr15:43746391 plus strand	1242279
PEAK1	NM_024776	NP_079052	Coding	chr15:77420104 minus strand	1242280
PEX11A	NM_001271572	NP_001258501	Coding	chr15:89690784 minus strand	1242281
PEX11A	NM_001271573	NP_001258502	Coding	chr15:89690784 minus strand	1242281
PEX11A	NM_003847	NP_003838	Coding	chr15:89690784 minus strand	1242281
PGBD4	NM_152595	NP_689808	Coding	chr15:34102072 plus strand	1242282
PGPEP1L	NM_001102612	NP_001096082	Coding	chr15:99005656 minus strand	1242283
PGPEP1L	NM_001167902	NP_001161374	Coding	chr15:99007795 minus	1242284

【１０１１】

				strand	
PHGR1	NM_001145643	NP_001139115	Coding	chr15:40351032 plus strand	1242285
PIAS1	NM_016166	NP_057250	Coding	chr15:68054233 plus strand	1242286
PIF1	NM_001286496	NP_001273425	Coding	chr15:64825668 minus strand	1242287
PIF1	NM_001286497	NP_001273426	Coding	chr15:64825668 minus strand	1242287
PIF1	NM_001286499	NP_001273428	Coding	chr15:64825668 minus strand	1242287
PIF1	NM_025049	NP_079325	Coding	chr15:64825668 minus strand	1242287
PIGB	NM_004855	NP_004846	Coding	chr15:55318934 plus strand	1242288
PKM	NM_001206796	NP_001193725	Coding	chr15:72231386 minus strand	1242289
PKM	NM_001206797	NP_001193726	Coding	chr15:72231386 minus strand	1242289
PKM	NM_001206798	NP_001193727	Coding	chr15:72231386 minus strand	1242289
PKM	NM_001206799	NP_001193728	Coding	chr15:72229722 minus strand	1242290
PKM	NM_002654	NP_002645	Coding	chr15:72231386 minus strand	1242289
PKM	NM_182470	NP_872270	Coding	chr15:72231386 minus strand	1242289
PKM	NM_182471	NP_872271	Coding	chr15:72231386 minus strand	1242289
PLA2G4B	NM_001114633	NP_001108105	Coding	chr15:41838812 plus strand	1242291
PLA2G4D	NM_178034	NP_828848	Coding	chr15:42094554 minus strand	1242292
PLA2G4E	NM_001206670	NP_001193599	Coding	chr15:42050703 minus strand	1242293
PLA2G4F	NM_213600	NP_998765	Coding	chr15:42156641 minus strand	1242294
PLCB2	NM_001284297	NP_001271226	Coding	chr15:40307973 minus strand	1242295
PLCB2	NM_001284298	NP_001271227	Coding	chr15:40307973 minus strand	1242295
PLCB2	NM_001284299	NP_001271228	Coding	chr15:40307973 minus strand	1242295
PLCB2	NM_004573	NP_004564	Coding	chr15:40307973 minus strand	1242295
PLEKHO2	NM_001195059	NP_001181988	Coding	chr15:64841882 plus strand	1242296
PLEKHO2	NM_025201	NP_079477	Coding	chr15:64841882 plus strand	1242296
PLIN1	NM_001145311	NP_001138783	Coding	chr15:89679417 minus strand	1242297
PLIN1	NM_002666	NP_002657	Coding	chr15:89679417 minus strand	1242297
PML	NM_002675	NP_002666	Coding	chr15:73994672 plus	1242298

【１０１２】

				strand	
PML	NM_033238	NP_150241	Coding	chr15:73994672 plus strand	1242298
PML	NM_033239	NP_150242	Coding	chr15:73994672 plus strand	1242298
PML	NM_033240	NP_150243	Coding	chr15:73994672 plus strand	1242298
PML	NM_033244	NP_150247	Coding	chr15:73994672 plus strand	1242298
PML	NM_033246	NP_150249	Coding	chr15:73994672 plus strand	1242298
PML	NM_033247	NP_150250	Coding	chr15:73994672 plus strand	1242298
PML	NM_033249	NP_150252	Coding	chr15:73994672 plus strand	1242298
PML	NM_033250	NP_150253	Coding	chr15:73994672 plus strand	1242298
POLG	NM_001126131	NP_001119603	Coding	chr15:89334795 minus strand	1242299
POLG	NM_002693	NP_002684	Coding	chr15:89334795 minus strand	1242299
POLR2M	NM_001018102	NP_001018112	Coding	chr15:57706520 plus strand	1242300
POLR2M	NM_015532	NP_056347	Coding	chr15:57706520 plus strand	1242300
POTEB	NM_001277304	NP_001264233	Coding	chr15:20866314 minus strand	1242301
POTEB	NM_001277304	NP_001264233	Coding	chr15:21877279 minus strand	1242302
POTEB2	NM_001277303	NP_001264232	Coding	chr15:20866314 minus strand	1242303
POTEB2	NM_001277303	NP_001264232	Coding	chr15:21877279 minus strand	1242304
POTEB3	NM_207355	NP_997238	Coding	chr15:21440382 minus strand	1242305
PPCDC	NM_001301101	NP_001288030	Coding	chr15:75023554 plus strand	1242306
PPCDC	NM_001301102	NP_001288031	Coding	chr15:75023554 plus strand	1242306
PPCDC	NM_001301103	NP_001288032	Coding	chr15:75023554 plus strand	1242306
PPCDC	NM_001301104	NP_001288033	Coding	chr15:75043268 plus strand	1242307
PPCDC	NM_001301105	NP_001288034	Coding	chr15:75043268 plus strand	1242307
PPCDC	NM_021823	NP_068595	Coding	chr15:75023554 plus strand	1242306
PPIB	NM_000942	NP_000933	Coding	chr15:64163155 minus strand	1242308
PPIP5K1	NM_001130858	NP_001124330	Coding	chr15:43590253 minus strand	1242309
PPIP5K1	NM_001130859	NP_001124331	Coding	chr15:43590253 minus strand	1242309
PPIP5K1	NM_001190214	NP_001177143	Coding	chr15:43590253 minus	1242309

【１０１３】

				strand	
PPIP5K1	NM_014659	NP_055474	Coding	chr15:43584892 minus strand	1242310
PPP1R14D	NM_001130143	NP_001123615	Coding	chr15:40828709 minus strand	1242311
PPP1R14D	NM_017726	NP_060196	Coding	chr15:40828709 minus strand	1242311
PRC1	NM_001267580	NP_001254509	Coding	chr15:90994651 minus strand	1242312
PRC1	NM_003981	NP_003972	Coding	chr15:90994651 minus strand	1242312
PRC1	NM_199413	NP_955445	Coding	chr15:90994651 minus strand	1242312
PRTG	NM_173814	NP_776175	Coding	chr15:55743119 minus strand	1242313
PSMA4	NM_001102667	NP_001096137	Coding	chr15:78540404 plus strand	1242314
PSMA4	NM_001102668	NP_001096138	Coding	chr15:78540404 plus strand	1242314
PSMA4	NM_002789	NP_002780	Coding	chr15:78540404 plus strand	1242314
PSTPIP1	NM_003978	NP_003969	Coding	chr15:76995123 plus strand	1242315
PTPLAD1	NM_016395	NP_057479	Coding	chr15:65530488 plus strand	1242316
PTPN9	NM_002833	NP_002824	Coding	chr15:75579291 minus strand	1242317
PYGO1	NM_015617	NP_056432	Coding	chr15:55588852 minus strand	1242318
RAB11A	NM_001206836	NP_001193765	Coding	chr15:65869458 plus strand	1242319
RAB11A	NM_004663	NP_004654	Coding	chr15:65869458 plus strand	1242319
RAB27A	NM_004580	NP_004571	Coding	chr15:55270394 minus strand	1242320
RAB27A	NM_183234	NP_899057	Coding	chr15:55270286 minus strand	1242321
RAB27A	NM_183235	NP_899058	Coding	chr15:55289815 minus strand	1242322
RAB27A	NM_183236	NP_899059	Coding	chr15:55270909 minus strand	1242323
RAB8B	NM_016530	NP_057614	Coding	chr15:63189528 plus strand	1242324
RAD51	NM_001164269	NP_001157741	Coding	chr15:40695179 plus strand	1242325
RAD51	NM_001164270	NP_001157742	Coding	chr15:40695128 plus strand	1242326
RAD51	NM_002875	NP_002866	Coding	chr15:40695128 plus strand	1242326
RAD51	NM_133487	NP_597994	Coding	chr15:40695128 plus strand	1242326
RASGRF1	NM_001145648	NP_001139120	Coding	chr15:79090873 minus strand	1242327
RASGRF1	NM_002891	NP_002882	Coding	chr15:79090873 minus	1242327

【１０１４】

				strand	
RASGRF1	NM_153815	NP_722522	Coding	chr15:79005660 minus strand	1242328
RASGRP1	NM_001128602	NP_001122074	Coding	chr15:38564806 minus strand	1242329
RASGRP1	NM_005739	NP_005730	Coding	chr15:38564806 minus strand	1242329
RASL12	NM_016563	NP_057647	Coding	chr15:65068050 minus strand	1242330
RBPMS2	NM_194272	NP_919248	Coding	chr15:64775571 minus strand	1242331
RCCD1	NM_001017919	NP_001017919	Coding	chr15:90954875 plus strand	1242332
RCCD1	NM_033544	NP_291022	Coding	chr15:90954875 plus strand	1242332
RCN2	NM_001271837	NP_001258766	Coding	chr15:76931620 plus strand	1242333
RCN2	NM_002902	NP_002893	Coding	chr15:76931620 plus strand	1242333
REC114	NM_001042367	NP_001035826	Coding	chr15:73443157 plus strand	1242334
RFX7	NM_022841	NP_073752	Coding	chr15:56243285 minus strand	1242335
RGMA	NM_001166283	NP_001159755	Coding	chr15:93073987 minus strand	1242336
RGMA	NM_001166286	NP_001159758	Coding	chr15:93073160 minus strand	1242337
RGMA	NM_001166287	NP_001159759	Coding	chr15:93088523 minus strand	1242338
RGMA	NM_001166288	NP_001159760	Coding	chr15:93073710 minus strand	1242339
RGMA	NM_001166289	NP_001159761	Coding	chr15:93073710 minus strand	1242339
RGMA	NM_020211	NP_064596	Coding	chr15:93089214 minus strand	1242340
RHCG	NM_016321	NP_057405	Coding	chr15:89496613 minus strand	1242341
RHOV	NM_133639	NP_598378	Coding	chr15:40874289 minus strand	1242342
RLBP1	NM_000326	NP_000317	Coding	chr15:89221691 minus strand	1242343
RMDN3	NM_018145	NP_060615	Coding	chr15:40755260 minus strand	1242344
RNF111	NM_001270528	NP_001257457	Coding	chr15:58987665 plus strand	1242345
RNF111	NM_001270529	NP_001257458	Coding	chr15:58987665 plus strand	1242345
RNF111	NM_001270530	NP_001257459	Coding	chr15:58988145 plus strand	1242346
RNF111	NM_017610	NP_060080	Coding	chr15:58987665 plus strand	1242345
RORA	NM_002943	NP_002934	Coding	chr15:60627530 minus strand	1242347
RORA	NM_134260	NP_599022	Coding	chr15:60627530 minus	1242347

【１０１５】

				strand	
RORA	NM_134261	NP_599023	Coding	chr15:61229303 minus strand	1242348
RORA	NM_134262	NP_599024	Coding	chr15:60592508 minus strand	1242349
RPAP1	NM_015540	NP_056355	Coding	chr15:41544277 minus strand	1242350
RPL4	NM_000968	NP_000959	Coding	chr15:66504855 minus strand	1242351
RPLP1	NM_001003	NP_000994	Coding	chr15:69452819 plus strand	1242352
RPLP1	NM_213725	NP_998890	Coding	chr15:69452819 plus strand	1242352
RPP25	NM_017793	NP_060263	Coding	chr15:74957434 minus strand	1242353
RPS17	NM_001021	NP_001012	Coding	chr15:82540544 minus strand	1242354
RPS27L	NM_015920	NP_057004	Coding	chr15:63157542 minus strand	1242355
RPUSD2	NM_001286407	NP_001273336	Coding	chr15:40569292 plus strand	1242356
RPUSD2	NM_152260	NP_689473	Coding	chr15:40569292 plus strand	1242356
RSL24D1	NM_016304	NP_057388	Coding	chr15:55197033 minus strand	1242357
RTF1	NM_015138	NP_055953	Coding	chr15:41417103 plus strand	1242358
RYR3	NM_001036	NP_001027	Coding	chr15:33310961 plus strand	1242359
RYR3	NM_001243996	NP_001230925	Coding	chr15:33310961 plus strand	1242359
SCAMP2	NM_005697	NP_005688	Coding	chr15:74873329 minus strand	1242360
SCAMP5	NM_001178111	NP_001171582	Coding	chr15:74995534 plus strand	1242361
SCAMP5	NM_001178112	NP_001171583	Coding	chr15:74995534 plus strand	1242361
SCAMP5	NM_138967	NP_620417	Coding	chr15:74995534 plus strand	1242361
SCAPER	NM_001145923	NP_001139395	Coding	chr15:76861944 minus strand	1242362
SCAPER	NM_020843	NP_065894	Coding	chr15:76883876 minus strand	1242363
SCG3	NM_001165257	NP_001158729	Coding	chr15:51681352 plus strand	1242364
SCG3	NM_013243	NP_037375	Coding	chr15:51681352 plus strand	1242364
SCG5	NM_001144757	NP_001138229	Coding	chr15:32641668 plus strand	1242365
SCG5	NM_003020	NP_003011	Coding	chr15:32641668 plus strand	1242365
SEC11A	NM_001271918	NP_001258847	Coding	chr15:84716460 minus strand	1242366
SEC11A	NM_001271919	NP_001258848	Coding	chr15:84716460 minus	1242366

【１０１６】

				strand	
SEC11A	NM_001271920	NP_001258849	Coding	chr15:84716460 minus strand	1242366
SEC11A	NM_001271921	NP_001258850	Coding	chr15:84716460 minus strand	1242366
SEC11A	NM_001271922	NP_001258851	Coding	chr15:84716460 minus strand	1242366
SEC11A	NM_014300	NP_055115	Coding	chr15:84716460 minus strand	1242366
SECISBP2L	NM_001193489	NP_001180418	Coding	chr15:49046563 minus strand	1242367
SECISBP2L	NM_014701	NP_055516	Coding	chr15:49046563 minus strand	1242367
SEMA4B	NM_020210	NP_064595	Coding	chr15:90184919 plus strand	1242368
SEMA4B	NM_198925	NP_945119	Coding	chr15:90201329 plus strand	1242369
SEMA6D	NM_001198999	NP_001185928	Coding	chr15:47184205 plus strand	1242370
SEMA6D	NM_020858	NP_065909	Coding	chr15:47718488 plus strand	1242371
SEMA6D	NM_024966	NP_079242	Coding	chr15:47718488 plus strand	1242371
SEMA6D	NM_153616	NP_705869	Coding	chr15:47718488 plus strand	1242371
SEMA6D	NM_153617	NP_705870	Coding	chr15:47718488 plus strand	1242371
SEMA6D	NM_153618	NP_705871	Coding	chr15:47718488 plus strand	1242371
SEMA6D	NM_153619	NP_705872	Coding	chr15:47718488 plus strand	1242371
SEMA7A	NM_001146029	NP_001139501	Coding	chr15:74433958 minus strand	1242372
SEMA7A	NM_001146030	NP_001139502	Coding	chr15:74433660 minus strand	1242373
SEMA7A	NM_003612	NP_003603	Coding	chr15:74433958 minus strand	1242372
SENP8	NM_001166340	NP_001159812	Coding	chr15:72114257 plus strand	1242374
SENP8	NM_001172109	NP_001165580	Coding	chr15:72116850 plus strand	1242375
SENP8	NM_001172110	NP_001165581	Coding	chr15:72116904 plus strand	1242376
SENP8	NM_001172111	NP_001165582	Coding	chr15:72118289 plus strand	1242377
SENP8	NM_145204	NP_660205	Coding	chr15:72118289 plus strand	1242377
SERF2	NM_001018108	NP_001018118	Coding	chr15:43791841 plus strand	1242378
SERF2	NM_001199875	NP_001186804	Coding	chr15:43791975 plus strand	1242379
SERF2	NM_001199876	NP_001186805	Coding	chr15:43791975 plus strand	1242379
SERF2	NM_001199877	NP_001186806	Coding	chr15:43777095 plus	1242380

【１０１７】

				strand	
SERF2	NM_001199878	NP_001186807	Coding	chr15:43792376 plus strand	1242381
SERINC4	NM_001258031	NP_001244960	Coding	chr15:43800097 minus strand	1242382
SERINC4	NM_001258032	NP_001244961	Coding	chr15:43800097 minus strand	1242382
SH2D7	NM_001101404	NP_001094874	Coding	chr15:78092584 plus strand	1242383
SH3GL3	NM_001301108	NP_001288037	Coding	chr15:83447227 plus strand	1242384
SH3GL3	NM_001301109	NP_001288038	Coding	chr15:83447227 plus strand	1242384
SH3GL3	NM_003027	NP_003018	Coding	chr15:83447227 plus strand	1242384
SHC4	NM_203349	NP_976224	Coding	chr15:48963444 minus strand	1242385
SHF	NM_001301168	NP_001288097	Coding	chr15:45187967 minus strand	1242386
SHF	NM_001301169	NP_001288098	Coding	chr15:45187967 minus strand	1242386
SHF	NM_001301170	NP_001288099	Coding	chr15:45187967 minus strand	1242386
SHF	NM_001301171	NP_001288100	Coding	chr15:45181207 minus strand	1242387
SHF	NM_138356	NP_612365	Coding	chr15:45201175 minus strand	1242388
SIN3A	NM_001145357	NP_001138829	Coding	chr15:75455783 minus strand	1242389
SIN3A	NM_001145358	NP_001138830	Coding	chr15:75451746 minus strand	1242390
SIN3A	NM_015477	NP_056292	Coding	chr15:75451585 minus strand	1242391
SKOR1	NM_001258024	NP_001244953	Coding	chr15:67819703 plus strand	1242392
SLC12A1	NM_000338	NP_000329	Coding	chr15:48206300 plus strand	1242393
SLC12A1	NM_001184832	NP_001171761	Coding	chr15:48206300 plus strand	1242393
SLC12A6	NM_001042494	NP_001035959	Coding	chr15:34337760 minus strand	1242394
SLC12A6	NM_001042495	NP_001035960	Coding	chr15:34338064 minus strand	1242395
SLC12A6	NM_001042496	NP_001035961	Coding	chr15:34337760 minus strand	1242394
SLC12A6	NM_001042497	NP_001035962	Coding	chr15:34336844 minus strand	1242396
SLC12A6	NM_005135	NP_005126	Coding	chr15:34318820 minus strand	1242397
SLC12A6	NM_133647	NP_598408	Coding	chr15:34336844 minus strand	1242396
SLC24A1	NM_001254740	NP_001241669	Coding	chr15:65642904 plus strand	1242398
SLC24A1	NM_001301031	NP_001287960	Coding	chr15:65623954 plus	1242399

【１０１８】

				strand	
SLC24A1	NM_001301032	NP_001287961	Coding	chr15:65623954 plus strand	1242399
SLC24A1	NM_001301033	NP_001287962	Coding	chr15:65611404 plus strand	1242400
SLC24A1	NM_004727	NP_004718	Coding	chr15:65621931 plus strand	1242401
SLC24A5	NM_205850	NP_995322	Coding	chr15:48120971 plus strand	1242402
SLC27A2	NM_001159629	NP_001153101	Coding	chr15:50182195 plus strand	1242403
SLC27A2	NM_003645	NP_003636	Coding	chr15:50182195 plus strand	1242403
SLC28A1	NM_001287761	NP_001274690	Coding	chr15:84884660 plus strand	1242404
SLC28A1	NM_001287762	NP_001274691	Coding	chr15:84884660 plus strand	1242404
SLC28A1	NM_004213	NP_004204	Coding	chr15:84884660 plus strand	1242404
SLC28A1	NM_201651	NP_964014	Coding	chr15:84884660 plus strand	1242404
SLC28A2	NM_004212	NP_004203	Coding	chr15:45252229 plus strand	1242405
SLC30A4	NM_013309	NP_037441	Coding	chr15:45522804 minus strand	1242406
SLC51B	NM_178859	NP_849190	Coding	chr15:65045369 plus strand	1242407
SLCO3A1	NM_001145044	NP_001138516	Coding	chr15:91853707 plus strand	1242408
SLCO3A1	NM_013272	NP_037404	Coding	chr15:91853707 plus strand	1242408
SLTM	NM_001013843	NP_001013865	Coding	chr15:58933653 minus strand	1242409
SLTM	NM_024755	NP_079031	Coding	chr15:58933653 minus strand	1242409
SMAD3	NM_001145102	NP_001138574	Coding	chr15:67125715 plus strand	1242410
SMAD3	NM_001145103	NP_001138575	Coding	chr15:67138020 plus strand	1242411
SMAD3	NM_001145104	NP_001138576	Coding	chr15:67166154 plus strand	1242412
SMAD3	NM_005902	NP_005893	Coding	chr15:67065856 plus strand	1242413
SMAD6	NM_005585	NP_005576	Coding	chr15:66702335 plus strand	1242414
SNAP23	NM_003825	NP_003816	Coding	chr15:42495305 plus strand	1242415
SNAP23	NM_130798	NP_570710	Coding	chr15:42495305 plus strand	1242415
SNAPC5	NM_006049	NP_006040	Coding	chr15:66497808 minus strand	1242416
SNRPA1	NM_003090	NP_003081	Coding	chr15:101295255 minus strand	1242417
SNRPN	NM_003097	NP_003088	Coding	chr15:24954987 plus	1242418

【１０１９】

				strand	
SNRPN	NM_022805	NP_073716	Coding	chr15:24856550 plus strand	1242419
SNRPN	NM_022806	NP_073717	Coding	chr15:24823646 plus strand	1242420
SNRPN	NM_022807	NP_073718	Coding	chr15:24823646 plus strand	1242420
SNRPN	NM_022808	NP_073719	Coding	chr15:24823646 plus strand	1242420
SNUPN	NM_001042581	NP_001036046	Coding	chr15:75626105 minus strand	1242421
SNUPN	NM_001042588	NP_001036053	Coding	chr15:75626378 minus strand	1242422
SNUPN	NM_005701	NP_005692	Coding	chr15:75626105 minus strand	1242421
SNURF	NM_005678	NP_005669	Coding	chr15:24954987 plus strand	1242423
SNURF	NM_022804	NP_073715	Coding	chr15:24954922 plus strand	1242424
SNX1	NM_001242933	NP_001229862	Coding	chr15:64095883 plus strand	1242425
SNX1	NM_003099	NP_003090	Coding	chr15:64095883 plus strand	1242425
SNX1	NM_148955	NP_683758	Coding	chr15:64095883 plus strand	1242425
SNX22	NM_024798	NP_079074	Coding	chr15:64151716 plus strand	1242426
SNX33	NM_153271	NP_695003	Coding	chr15:75649006 plus strand	1242427
SORD	NM_003104	NP_003095	Coding	chr15:45023103 plus strand	1242428
SPATA5L1	NM_024063	NP_076968	Coding	chr15:45402320 plus strand	1242429
SPATA8	NM_173499	NP_775770	Coding	chr15:96783448 plus strand	1242430
SPESP1	NM_145658	NP_663633	Coding	chr15:68930499 plus strand	1242431
SPG11	NM_001160227	NP_001153699	Coding	chr15:44663678 minus strand	1242432
SPG11	NM_025137	NP_079413	Coding	chr15:44663678 minus strand	1242432
SPG21	NM_001127889	NP_001121361	Coding	chr15:64989506 minus strand	1242433
SPG21	NM_001127890	NP_001121362	Coding	chr15:64989946 minus strand	1242434
SPG21	NM_016630	NP_057714	Coding	chr15:64989946 minus strand	1242434
SPINT1	NM_001032367	NP_001027539	Coding	chr15:40844444 plus strand	1242435
SPINT1	NM_003710	NP_003701	Coding	chr15:40844047 plus strand	1242436
SPINT1	NM_181642	NP_857593	Coding	chr15:40844047 plus strand	1242436
SPPL2A	NM_032802	NP_116191	Coding	chr15:50765713 minus	1242437

【１０２０】

				strand	
SPRED1	NM_152594	NP_689807	Coding	chr15:38252850 plus strand	1242438
SPTBN5	NM_016642	NP_057726	Coding	chr15:41894077 minus strand	1242439
SQRDL	NM_001271213	NP_001258142	Coding	chr15:45631147 plus strand	1242440
SQRDL	NM_021199	NP_067022	Coding	chr15:45634739 plus strand	1242441
SRP14	NM_003134	NP_003125	Coding	chr15:40039188 minus strand	1242442
ST20	NM_001100879	NP_001094349	Coding	chr15:79915256 minus strand	1242443
ST20	NM_001100880	NP_001094350	Coding	chr15:79923322 minus strand	1242444
ST20	NM_001199757	NP_001186686	Coding	chr15:79923322 minus strand	1242444
ST20-MTHFS	NM_001199760	NP_001186689	Coding	chr15:79923106 minus strand	1242445
ST8SIA2	NM_006011	NP_006002	Coding	chr15:92393909 plus strand	1242446
STARD5	NM_181900	NP_871629	Coding	chr15:81324183 minus strand	1242447
STARD9	NM_020759	NP_065810	Coding	chr15:42575658 plus strand	1242448
STOML1	NM_001256672	NP_001243601	Coding	chr15:73992348 minus strand	1242449
STOML1	NM_001256673	NP_001243602	Coding	chr15:73992348 minus strand	1242449
STOML1	NM_001256674	NP_001243603	Coding	chr15:73992348 minus strand	1242449
STOML1	NM_001256675	NP_001243604	Coding	chr15:73992348 minus strand	1242449
STOML1	NM_001256676	NP_001243605	Coding	chr15:73994622 minus strand	1242450
STOML1	NM_001256677	NP_001243606	Coding	chr15:73992348 minus strand	1242449
STOML1	NM_004809	NP_004800	Coding	chr15:73992348 minus strand	1242449
STRA6	NM_001142617	NP_001136089	Coding	chr15:74209030 minus strand	1242451
STRA6	NM_001142618	NP_001136090	Coding	chr15:74203215 minus strand	1242452
STRA6	NM_001142619	NP_001136091	Coding	chr15:74209030 minus strand	1242451
STRA6	NM_001142620	NP_001136092	Coding	chr15:74209030 minus strand	1242451
STRA6	NM_001199040	NP_001185969	Coding	chr15:74209705 minus strand	1242453
STRA6	NM_001199041	NP_001185970	Coding	chr15:74208054 minus strand	1242454
STRA6	NM_001199042	NP_001185971	Coding	chr15:74202879 minus strand	1242455
STRA6	NM_022369	NP_071764	Coding	chr15:74202879 minus	1242455

【１０２１】

				strand	
STRC	NM_153700	NP_714544	Coding	chr15:43618800 minus strand	1242456
SV2B	NM_001167580	NP_001161052	Coding	chr15:91099951 plus strand	1242457
SV2B	NM_014848	NP_055663	Coding	chr15:91100308 plus strand	1242458
SYNM	NM_015286	NP_056101	Coding	chr15:99105079 plus strand	1242459
SYNM	NM_145728	NP_663780	Coding	chr15:99105079 plus strand	1242459
TARSL2	NM_152334	NP_689547	Coding	chr15:101724442 minus strand	1242460
TBC1D21	NM_001286434	NP_001273363	Coding	chr15:73873585 plus strand	1242461
TBC1D21	NM_153356	NP_699187	Coding	chr15:73873585 plus strand	1242461
TBC1D2B	NM_015079	NP_055894	Coding	chr15:78077652 minus strand	1242462
TBC1D2B	NM_144572	NP_653173	Coding	chr15:78077652 minus strand	1242462
TCF12	NM_003205	NP_003196	Coding	chr15:56918634 plus strand	1242463
TCF12	NM_207036	NP_996919	Coding	chr15:56918634 plus strand	1242463
TCF12	NM_207037	NP_996920	Coding	chr15:56918634 plus strand	1242463
TCF12	NM_207038	NP_996921	Coding	chr15:56918634 plus strand	1242463
TCF12	NM_207040	NP_996923	Coding	chr15:57219456 plus strand	1242464
TEX9	NM_001286449	NP_001273378	Coding	chr15:56365423 plus strand	1242465
TEX9	NM_198524	NP_940926	Coding	chr15:56365423 plus strand	1242465
TGM5	NM_004245	NP_004236	Coding	chr15:43266857 minus strand	1242466
TGM5	NM_201631	NP_963925	Coding	chr15:43266857 minus strand	1242466
TGM7	NM_052955	NP_443187	Coding	chr15:43302255 minus strand	1242467
THAP10	NM_020147	NP_064532	Coding	chr15:70892433 minus strand	1242468
THBS1	NM_003246	NP_003237	Coding	chr15:39581078 plus strand	1242469
THSD4	NM_001286429	NP_001273358	Coding	chr15:71547201 plus strand	1242470
THSD4	NM_024817	NP_079093	Coding	chr15:71141448 plus strand	1242471
TICRR	NM_152259	NP_689472	Coding	chr15:89575586 plus strand	1242472
TIPIN	NM_001289986	NP_001276915	Coding	chr15:66356716 minus strand	1242473
TIPIN	NM_017858	NP_060328	Coding	chr15:66356716 minus	1242473

【１０２２】

				strand	
TJP1	NM_001301025	NP_001287954	Coding	chr15:29968799 minus strand	1242474
TJP1	NM_001301026	NP_001287955	Coding	chr15:29821548 minus strand	1242475
TJP1	NM_003257	NP_003248	Coding	chr15:29822503 minus strand	1242476
TJP1	NM_175610	NP_783297	Coding	chr15:29822503 minus strand	1242476
TLE3	NM_001105192	NP_001098662	Coding	chr15:70097917 minus strand	1242477
TLE3	NM_001282979	NP_001269908	Coding	chr15:70097917 minus strand	1242477
TLE3	NM_001282980	NP_001269909	Coding	chr15:70097917 minus strand	1242477
TLE3	NM_001282981	NP_001269910	Coding	chr15:70096752 minus strand	1242478
TLE3	NM_001282982	NP_001269911	Coding	chr15:70094785 minus strand	1242479
TLE3	NM_005078	NP_005069	Coding	chr15:70097917 minus strand	1242477
TLE3	NM_020908	NP_065959	Coding	chr15:70097917 minus strand	1242477
TLN2	NM_015059	NP_055874	Coding	chr15:62647310 plus strand	1242480
TM2D3	NM_025141	NP_079417	Coding	chr15:101652391 minus strand	1242481
TM2D3	NM_078474	NP_510883	Coding	chr15:101652391 minus strand	1242481
TM6SF1	NM_001144903	NP_001138375	Coding	chr15:83107571 plus strand	1242482
TM6SF1	NM_023003	NP_075379	Coding	chr15:83107571 plus strand	1242482
TMC3	NM_001080532	NP_001074001	Coding	chr15:81374077 minus strand	1242483
TMCO5A	NM_152453	NP_689666	Coding	chr15:37935255 plus strand	1242484
TMED3	NM_001301203	NP_001288132	Coding	chr15:79311061 plus strand	1242485
TMED3	NM_007364	NP_031390	Coding	chr15:79311061 plus strand	1242485
TMEM202	NM_001080462	NP_001073931	Coding	chr15:72398326 plus strand	1242486
TMEM62	NM_024956	NP_079232	Coding	chr15:43133523 plus strand	1242487
TMEM87A	NM_001110503	NP_001103973	Coding	chr15:42273584 minus strand	1242488
TMEM87A	NM_001286487	NP_001273416	Coding	chr15:42273584 minus strand	1242488
TMEM87A	NM_015497	NP_056312	Coding	chr15:42273584 minus strand	1242488
TMOD2	NM_001142885	NP_001136357	Coding	chr15:51751560 plus strand	1242489
TMOD2	NM_014548	NP_055363	Coding	chr15:51751560 plus	1242489

【１０２３】

				strand	
TMOD3	NM_014547	NP_055362	Coding	chr15:51829627 plus strand	1242490
TNFAIP8L3	NM_207381	NP_997264	Coding	chr15:51105276 minus strand	1242491
TP53BP1	NM_001141979	NP_001135451	Coding	chr15:43493156 minus strand	1242492
TP53BP1	NM_001141980	NP_001135452	Coding	chr15:43493156 minus strand	1242492
TP53BP1	NM_005657	NP_005648	Coding	chr15:43510509 minus strand	1242493
TPM1	NM_000366	NP_000357	Coding	chr15:63042638 plus strand	1242494
TPM1	NM_001018004	NP_001018004	Coding	chr15:63042638 plus strand	1242494
TPM1	NM_001018005	NP_001018005	Coding	chr15:63042638 plus strand	1242494
TPM1	NM_001018006	NP_001018006	Coding	chr15:63042638 plus strand	1242494
TPM1	NM_001018007	NP_001018007	Coding	chr15:63042638 plus strand	1242494
TPM1	NM_001018008	NP_001018008	Coding	chr15:63048436 plus strand	1242495
TPM1	NM_001018020	NP_001018020	Coding	chr15:63042638 plus strand	1242494
TPM1	NM_001301244	NP_001288173	Coding	chr15:63042638 plus strand	1242494
TPM1	NM_001301289	NP_001288218	Coding	chr15:63048436 plus strand	1242495
TRIM69	NM_001301144	NP_001288073	Coding	chr15:44736361 plus strand	1242496
TRIM69	NM_001301145	NP_001288074	Coding	chr15:44736361 plus strand	1242496
TRIM69	NM_001301146	NP_001288075	Coding	chr15:44736361 plus strand	1242496
TRIM69	NM_080745	NP_542783	Coding	chr15:44736361 plus strand	1242496
TRIM69	NM_182985	NP_892030	Coding	chr15:44736361 plus strand	1242496
TRIP4	NM_016213	NP_057297	Coding	chr15:64387803 plus strand	1242497
TRPM1	NM_001252020	NP_001238949	Coding	chr15:31161273 minus strand	1242498
TRPM1	NM_001252024	NP_001238953	Coding	chr15:31101726 minus strand	1242499
TRPM1	NM_001252030	NP_001238959	Coding	chr15:31101726 minus strand	1242499
TRPM1	NM_002420	NP_002411	Coding	chr15:31101726 minus strand	1242499
TRPM7	NM_001301212	NP_001288141	Coding	chr15:50686815 minus strand	1242500
TRPM7	NM_017672	NP_060142	Coding	chr15:50686815 minus strand	1242500
TSPAN3	NM_001168412	NP_001161884	Coding	chr15:77071228 minus	1242501

【１０２４】

				strand	
TSPAN3	NM_005724	NP_005715	Coding	chr15:77071228 minus strand	1242501
TSPAN3	NM_198902	NP_944492	Coding	chr15:77071228 minus strand	1242501
TTBK2	NM_173500	NP_775771	Coding	chr15:42920809 minus strand	1242502
TTC23	NM_001288615	NP_001275544	Coding	chr15:99249619 minus strand	1242503
TTC23	NM_001288616	NP_001275545	Coding	chr15:99251226 minus strand	1242504
TUBGCP4	NM_001286414	NP_001273343	Coding	chr15:43371058 plus strand	1242505
TUBGCP4	NM_014444	NP_055259	Coding	chr15:43371058 plus strand	1242505
TUBGCP5	NM_001102610	NP_001096080	Coding	chr15:23039673 minus strand	1242506
TUBGCP5	NM_052903	NP_443135	Coding	chr15:23039673 minus strand	1242506
TYRO3	NM_006293	NP_006284	Coding	chr15:41559021 plus strand	1242507
UACA	NM_001008224	NP_001008225	Coding	chr15:70702281 minus strand	1242508
UACA	NM_018003	NP_060473	Coding	chr15:70763511 minus strand	1242509
UBAP1L	NM_001163692	NP_001157164	Coding	chr15:65106359 minus strand	1242510
UBE2Q2	NM_001145335	NP_001138807	Coding	chr15:75844043 plus strand	1242511
UBE2Q2	NM_001284382	NP_001271311	Coding	chr15:75843285 plus strand	1242512
UBE2Q2	NM_173469	NP_775740	Coding	chr15:75843285 plus strand	1242512
UBE2Q2L	NM_001243531	NP_001230460	Coding	chr15:84172489 plus strand	1242513
UBE3A	NM_000462	NP_000453	Coding	chr15:25439028 minus strand	1242514
UBE3A	NM_130838	NP_570853	Coding	chr15:25405506 minus strand	1242515
UBE3A	NM_130839	NP_570854	Coding	chr15:25439028 minus strand	1242514
UBL7	NM_001286739	NP_001273668	Coding	chr15:74461188 minus strand	1242516
UBL7	NM_001286740	NP_001273669	Coding	chr15:74461188 minus strand	1242516
UBL7	NM_001286741	NP_001273670	Coding	chr15:74461188 minus strand	1242516
UBL7	NM_001286742	NP_001273671	Coding	chr15:74461188 minus strand	1242516
UBL7	NM_032907	NP_116296	Coding	chr15:74461188 minus strand	1242516
UBL7	NM_201265	NP_957717	Coding	chr15:74461188 minus strand	1242516
UBR1	NM_174916	NP_777576	Coding	chr15:43106088 minus	1242517

【１０２５】

				strand	
ULK3	NM_001099436	NP_001092906	Coding	chr15:74843211 minus strand	1242518
ULK3	NM_001284364	NP_001271293	Coding	chr15:74843211 minus strand	1242518
ULK3	NM_001284365	NP_001271294	Coding	chr15:74843211 minus strand	1242518
UNC13C	NM_001080534	NP_001074003	Coding	chr15:54012903 plus strand	1242519
UNC45A	NM_001039675	NP_001034764	Coding	chr15:90930179 plus strand	1242520
UNC45A	NM_018671	NP_061141	Coding	chr15:90934984 plus strand	1242521
USP3	NM_001256702	NP_001243631	Coding	chr15:63504510 plus strand	1242522
USP3	NM_006537	NP_006528	Coding	chr15:63504510 plus strand	1242522
USP50	NM_203494	NP_987090	Coding	chr15:50546705 minus strand	1242523
USP8	NM_001128610	NP_001122082	Coding	chr15:50424376 plus strand	1242524
USP8	NM_001283049	NP_001269978	Coding	chr15:50424376 plus strand	1242524
USP8	NM_005154	NP_005145	Coding	chr15:50424376 plus strand	1242524
VIMP	NM_018445	NP_060915	Coding	chr15:101277520 minus strand	1242525
VIMP	NM_203472	NP_982298	Coding	chr15:101277520 minus strand	1242525
VPS13C	NM_001018088	NP_001018098	Coding	chr15:62060465 minus strand	1242526
VPS13C	NM_017684	NP_060154	Coding	chr15:62060465 minus strand	1242526
VPS13C	NM_018080	NP_060550	Coding	chr15:62060465 minus strand	1242526
VPS13C	NM_020821	NP_065872	Coding	chr15:62060465 minus strand	1242526
VPS18	NM_020857	NP_065908	Coding	chr15:40894429 plus strand	1242527
VPS33B	NM_001289148	NP_001276077	Coding	chr15:91022621 minus strand	1242528
VPS33B	NM_001289149	NP_001276078	Coding	chr15:91022621 minus strand	1242528
VPS33B	NM_018668	NP_061138	Coding	chr15:91022621 minus strand	1242528
VPS39	NM_001301138	NP_001288067	Coding	chr15:42208326 minus strand	1242529
VPS39	NM_015289	NP_056104	Coding	chr15:42208326 minus strand	1242529
VWA9	NM_001136043	NP_001129515	Coding	chr15:65611289 minus strand	1242530
VWA9	NM_001207058	NP_001193987	Coding	chr15:65611289 minus strand	1242530
VWA9	NM_001207059	NP_001193988	Coding	chr15:65611289 minus	1242530

【１０２６】

				strand	
WDR61	NM_025234	NP_079510	Coding	chr15:78299598 minus strand	1242531
WDR72	NM_001277176	NP_001264105	Coding	chr15:53541103 minus strand	1242532
WDR72	NM_182758	NP_877435	Coding	chr15:53759662 minus strand	1242533
WDR73	NM_032856	NP_116245	Coding	chr15:84654290 minus strand	1242534
WDR76	NM_001167941	NP_001161413	Coding	chr15:43826913 plus strand	1242535
WDR76	NM_024908	NP_079184	Coding	chr15:43826913 plus strand	1242535
WDR93	NM_001284395	NP_001271324	Coding	chr15:89690796 plus strand	1242536
WDR93	NM_001284396	NP_001271325	Coding	chr15:89690796 plus strand	1242536
WDR93	NM_020212	NP_064597	Coding	chr15:89690796 plus strand	1242536
WHAMM	NM_001080435	NP_001073904	Coding	chr15:82809627 plus strand	1242537
ZFAND6	NM_001242911	NP_001229840	Coding	chr15:80059567 plus strand	1242538
ZFAND6	NM_001242912	NP_001229841	Coding	chr15:80059567 plus strand	1242538
ZFAND6	NM_001242913	NP_001229842	Coding	chr15:80059929 plus strand	1242539
ZFAND6	NM_001242914	NP_001229843	Coding	chr15:80060159 plus strand	1242540
ZFAND6	NM_001242915	NP_001229844	Coding	chr15:80072560 plus strand	1242541
ZFAND6	NM_001242916	NP_001229845	Coding	chr15:80072560 plus strand	1242541
ZFAND6	NM_001242917	NP_001229846	Coding	chr15:80059567 plus strand	1242538
ZFAND6	NM_001242918	NP_001229847	Coding	chr15:80059567 plus strand	1242538
ZFAND6	NM_001242919	NP_001229848	Coding	chr15:80098415 plus strand	1242542
ZFAND6	NM_019006	NP_061879	Coding	chr15:80059567 plus strand	1242538
ZFYVE19	NM_001077268	NP_001070736	Coding	chr15:40807075 plus strand	1242543
ZFYVE19	NM_001258420	NP_001245349	Coding	chr15:40807075 plus strand	1242543
ZFYVE19	NM_001258421	NP_001245350	Coding	chr15:40807075 plus strand	1242543
ZFYVE19	NM_032850	NP_116239	Coding	chr15:40807075 plus strand	1242543
ZNF106	NM_001284306	NP_001271235	Coding	chr15:42457567 minus strand	1242544
ZNF106	NM_001284307	NP_001271236	Coding	chr15:42491197 minus strand	1242545
ZNF106	NM_022473	NP_071918	Coding	chr15:42457567 minus	1242544

【１０２７】

				strand	
ZNF280D	NM_001002843	NP_001002843	Coding	chr15:56734086 minus strand	1242546
ZNF280D	NM_001002844	NP_001002844	Coding	chr15:56734086 minus strand	1242546
ZNF280D	NM_001288588	NP_001275517	Coding	chr15:56734086 minus strand	1242546
ZNF280D	NM_001288589	NP_001275518	Coding	chr15:56734086 minus strand	1242546
ZNF280D	NM_017661	NP_060131	Coding	chr15:56734086 minus strand	1242546
ZNF592	NM_014630	NP_055445	Coding	chr15:84748586 plus strand	1242547
ZNF609	NM_015042	NP_055857	Coding	chr15:64499419 plus strand	1242548
ZNF710	NM_198526	NP_940928	Coding	chr15:90001490 plus strand	1242549
ZNF770	NM_014106	NP_054825	Coding	chr15:34988296 minus strand	1242550
ZNF774	NM_001004309	NP_001004309	Coding	chr15:90352244 plus strand	1242551
ZSCAN2	NM_001007072	NP_001007073	Coding	chr15:84601017 plus strand	1242552
ZSCAN2	NM_017894	NP_060364	Coding	chr15:84601017 plus strand	1242552
ZSCAN2	NM_181877	NP_870992	Coding	chr15:84601017 plus strand	1242552
ZSCAN29	NM_152455	NP_689668	Coding	chr15:43370060 minus strand	1242553
ZWILCH	NM_001287821	NP_001274750	Coding	chr15:66505082 plus strand	1242554
ZWILCH	NM_001287822	NP_001274751	Coding	chr15:66505082 plus strand	1242554
ZWILCH	NM_001287823	NP_001274752	Coding	chr15:66505082 plus strand	1242554
ZWILCH	NM_017975	NP_060445	Coding	chr15:66505082 plus strand	1242554
AARS	NM_001605	NP_001596	Coding	chr16:70289509 minus strand	1242555
ABAT	NM_000663	NP_000654	Coding	chr16:8712968 plus strand	1242556
ABAT	NM_001127448	NP_001120920	Coding	chr16:8720715 plus strand	1242557
ABAT	NM_020686	NP_065737	Coding	chr16:8674586 plus strand	1242558
ABCA3	NM_001089	NP_001080	Coding	chr16:2340746 minus strand	1242559
ABCC1	NM_004996	NP_004987	Coding	chr16:15949576 plus strand	1242560
ABCC11	NM_032583	NP_115972	Coding	chr16:48235177 minus strand	1242561
ABCC11	NM_033151	NP_149163	Coding	chr16:48232271 minus strand	1242562
ABCC11	NM_145186	NP_660187	Coding	chr16:48235177 minus strand	1242561
ABCC12	NM_033226	NP_150229	Coding	chr16:48146770 minus	1242563

【１０２８】

				strand	
ABCC6	NM_001079528	NP_001072996	Coding	chr16:16223471 minus strand	1242564
ABCC6	NM_001171	NP_001162	Coding	chr16:16223471 minus strand	1242564
ACD	NM_001082486	NP_001075955	Coding	chr16:67660815 minus strand	1242565
ACD	NM_001082487	NP_001075956	Coding	chr16:67660815 minus strand	1242565
ACD	NM_022914	NP_075065	Coding	chr16:67660815 minus strand	1242565
ACSF3	NM_001127214	NP_001120686	Coding	chr16:89093808 plus strand	1242566
ACSF3	NM_001243279	NP_001230208	Coding	chr16:89093808 plus strand	1242566
ACSF3	NM_001284316	NP_001271245	Coding	chr16:89093808 plus strand	1242566
ACSF3	NM_174917	NP_777577	Coding	chr16:89093808 plus strand	1242566
ACSM1	NM_052956	NP_443188	Coding	chr16:20691256 minus strand	1242567
ACSM2A	NM_001010845	NP_001010845	Coding	chr16:20451536 plus strand	1242568
ACSM2B	NM_001105069	NP_001098539	Coding	chr16:20576373 minus strand	1242569
ACSM2B	NM_182617	NP_872423	Coding	chr16:20576373 minus strand	1242569
ACSM3	NM_005622	NP_005613	Coding	chr16:20763989 plus strand	1242570
ACSM3	NM_202000	NP_973729	Coding	chr16:20763989 plus strand	1242570
ACSM5	NM_017888	NP_060358	Coding	chr16:20409533 plus strand	1242571
ADAD2	NM_001145400	NP_001138872	Coding	chr16:84191116 plus strand	1242572
ADAD2	NM_139174	NP_631913	Coding	chr16:84191116 plus strand	1242572
ADAMTS18	NM_199355	NP_955387	Coding	chr16:77435114 minus strand	1242573
ADAT1	NM_012091	NP_036223	Coding	chr16:75623323 minus strand	1242574
ADCY7	NM_001114	NP_001105	Coding	chr16:50287911 plus strand	1242575
ADCY7	NM_001286057	NP_001272986	Coding	chr16:50266539 plus strand	1242576
ADCY9	NM_001116	NP_001107	Coding	chr16:4116185 minus strand	1242577
AGRP	NM_001138	NP_001129	Coding	chr16:67483813 minus strand	1242578
AHSP	NM_016633	NP_057717	Coding	chr16:31527881 plus strand	1242579
AKTIP	NM_001012398	NP_001012398	Coding	chr16:53503258 minus strand	1242580
AKTIP	NM_022476	NP_071921	Coding	chr16:53503258 minus	1242580

【１０２９】

				strand	
ALDOA	NM_000034	NP_000025	Coding	chr16:30053089 plus strand	1242581
ALDOA	NM_001127617	NP_001121089	Coding	chr16:30064496 plus strand	1242582
ALDOA	NM_001243177	NP_001230106	Coding	chr16:30065672 plus strand	1242583
ALDOA	NM_184041	NP_908930	Coding	chr16:30065672 plus strand	1242583
ALDOA	NM_184043	NP_908932	Coding	chr16:30064278 plus strand	1242584
ALG1	NM_019109	NP_061982	Coding	chr16:5071808 plus strand	1242585
AMDHD2	NM_001145815	NP_001139287	Coding	chr16:2520361 plus strand	1242586
AMDHD2	NM_015944	NP_057028	Coding	chr16:2520361 plus strand	1242586
AMFR	NM_001144	NP_001135	Coding	chr16:56425538 minus strand	1242587
ANKRD11	NM_001256182	NP_001243111	Coding	chr16:89490561 minus strand	1242588
ANKRD11	NM_001256183	NP_001243112	Coding	chr16:89490561 minus strand	1242588
ANKRD11	NM_013275	NP_037407	Coding	chr16:89490561 minus strand	1242588
ANKS3	NM_001242929	NP_001229858	Coding	chr16:4734377 minus strand	1242589
ANKS3	NM_133450	NP_597707	Coding	chr16:4734162 minus strand	1242590
ANKS4B	NM_145865	NP_665872	Coding	chr16:21233694 plus strand	1242591
AP1G1	NM_001030007	NP_001025178	Coding	chr16:71809073 minus strand	1242592
AP1G1	NM_001128	NP_001119	Coding	chr16:71809073 minus strand	1242592
APOBR	NM_018690	NP_061160	Coding	chr16:28494648 plus strand	1242593
APRT	NM_000485	NP_000476	Coding	chr16:88811934 minus strand	1242594
APRT	NM_001030018	NP_001025189	Coding	chr16:88811934 minus strand	1242594
AQP8	NM_001169	NP_001160	Coding	chr16:25216963 plus strand	1242595
ARHGAP17	NM_001006634	NP_001006635	Coding	chr16:25015378 minus strand	1242596
ARHGAP17	NM_018054	NP_060524	Coding	chr16:25015378 minus strand	1242596
ARHGDIG	NM_001176	NP_001167	Coding	chr16:280605 plus strand	1242597
ARL2BP	NM_012106	NP_036238	Coding	chr16:57245125 plus strand	1242598
ARL6IP1	NM_015161	NP_055976	Coding	chr16:18801535 minus strand	1242599
ARMC5	NM_001105247	NP_001098717	Coding	chr16:31458995 plus strand	1242600
ARMC5	NM_001288767	NP_001275696	Coding	chr16:31458272 plus strand	1242601

【１０３０】

ARMC5	NM_001301820	NP_001288749	Coding	chr16:31458853 plus strand	1242602
ARMC5	NM_024742	NP_079018	Coding	chr16:31458995 plus strand	1242600
ASPHD1	NM_181718	NP_859069	Coding	chr16:29900825 plus strand	1242603
ATF7IP2	NM_001256160	NP_001243089	Coding	chr16:10386054 plus strand	1242604
ATF7IP2	NM_024997	NP_079273	Coding	chr16:10386054 plus strand	1242604
ATMIN	NM_001300728	NP_001287657	Coding	chr16:81037181 plus strand	1242605
ATMIN	NM_015251	NP_056066	Coding	chr16:81035852 plus strand	1242606
ATP2A1	NM_001286075	NP_001273004	Coding	chr16:28880042 plus strand	1242607
ATP2A1	NM_004320	NP_004311	Coding	chr16:28878487 plus strand	1242608
ATP2A1	NM_173201	NP_775293	Coding	chr16:28878487 plus strand	1242608
ATP2C2	NM_001286527	NP_001273456	Coding	chr16:84368522 plus strand	1242609
ATP2C2	NM_001291454	NP_001278383	Coding	chr16:84406587 plus strand	1242610
ATP2C2	NM_014861	NP_055676	Coding	chr16:84368522 plus strand	1242609
ATP6V0C	NM_001198569	NP_001185498	Coding	chr16:2513725 plus strand	1242611
ATP6V0C	NM_001694	NP_001685	Coding	chr16:2513869 plus strand	1242612
ATP6V0D1	NM_004691	NP_004682	Coding	chr16:67481186 minus strand	1242613
ATXN1L	NM_001137675	NP_001131147	Coding	chr16:71845990 plus strand	1242614
ATXN2L	NM_007245	NP_009176	Coding	chr16:28823047 plus strand	1242615
ATXN2L	NM_017492	NP_059867	Coding	chr16:28823047 plus strand	1242615
ATXN2L	NM_145714	NP_663760	Coding	chr16:28823047 plus strand	1242615
ATXN2L	NM_148414	NP_680780	Coding	chr16:28823047 plus strand	1242615
ATXN2L	NM_148415	NP_680781	Coding	chr16:28823047 plus strand	1242615
ATXN2L	NM_148416	NP_680782	Coding	chr16:28823047 plus strand	1242615
AXIN1	NM_003502	NP_003493	Coding	chr16:352676 minus strand	1242616
AXIN1	NM_181050	NP_851393	Coding	chr16:352676 minus strand	1242616
B3GNT9	NM_033309	NP_171608	Coding	chr16:67150999 minus strand	1242617
BAIAP3	NM_001199096	NP_001186025	Coding	chr16:1336196 plus strand	1242618
BAIAP3	NM_001199097	NP_001186026	Coding	chr16:1333604 plus strand	1242619
BAIAP3	NM_001199098	NP_001186027	Coding	chr16:1333604 plus strand	1242619
BAIAP3	NM_001199099	NP_001186028	Coding	chr16:1333604 plus strand	1242619

【１０３１】

BAIAP3	NM_001286464	NP_001273393	Coding	chr16:1333604 plus strand	1242619
BAIAP3	NM_003933	NP_003924	Coding	chr16:1334503 plus strand	1242620
BANP	NM_001173539	NP_001167010	Coding	chr16:87951431 plus strand	1242621
BANP	NM_001173540	NP_001167011	Coding	chr16:87951431 plus strand	1242621
BANP	NM_001173541	NP_001167012	Coding	chr16:87951431 plus strand	1242621
BANP	NM_001173542	NP_001167013	Coding	chr16:87959870 plus strand	1242622
BANP	NM_001173543	NP_001167014	Coding	chr16:87970017 plus strand	1242623
BANP	NM_017869	NP_060339	Coding	chr16:87951431 plus strand	1242621
BANP	NM_079837	NP_524576	Coding	chr16:87951431 plus strand	1242621
BBS2	NM_031885	NP_114091	Coding	chr16:56520096 minus strand	1242624
BCAR1	NM_001170714	NP_001164185	Coding	chr16:75266007 minus strand	1242625
BCAR1	NM_001170715	NP_001164186	Coding	chr16:75268053 minus strand	1242626
BCAR1	NM_001170716	NP_001164187	Coding	chr16:75266809 minus strand	1242627
BCAR1	NM_001170717	NP_001164188	Coding	chr16:75251628 minus strand	1242628
BCAR1	NM_001170718	NP_001164189	Coding	chr16:75266007 minus strand	1242625
BCAR1	NM_001170719	NP_001164190	Coding	chr16:75248326 minus strand	1242629
BCAR1	NM_001170720	NP_001164191	Coding	chr16:75265948 minus strand	1242630
BCAR1	NM_001170721	NP_001164192	Coding	chr16:75239082 minus strand	1242631
BCAR1	NM_014567	NP_055382	Coding	chr16:75251628 minus strand	1242628
BCKDK	NM_001122957	NP_001116429	Coding	chr16:31108293 plus strand	1242632
BCKDK	NM_001271926	NP_001258855	Coding	chr16:31108293 plus strand	1242632
BCKDK	NM_005881	NP_005872	Coding	chr16:31108293 plus strand	1242632
BCL7C	NM_001286526	NP_001273455	Coding	chr16:30894302 minus strand	1242633
BCL7C	NM_004765	NP_004756	Coding	chr16:30894302 minus strand	1242633
BCO1	NM_017429	NP_059125	Coding	chr16:81238690 plus strand	1242634
BEAN1	NM_001136106	NP_001129578	Coding	chr16:66427296 plus strand	1242635
BEAN1	NM_001178020	NP_001171491	Coding	chr16:66427296 plus strand	1242635
BEAN1	NM_001197224	NP_001184153	Coding	chr16:66427296 plus strand	1242635

【１０３２】

BEAN1	NM_001197225	NP_001184154	Coding	chr16:66427296 plus strand	1242635
BFAR	NM_016561	NP_057645	Coding	chr16:14632810 plus strand	1242636
BOLA2	NM_001031827	NP_001026997	Coding	chr16:29454964 minus strand	1242637
BOLA2	NM_001031827	NP_001026997	Coding	chr16:30194306 minus strand	1242638
BOLA2B	NM_001039182	NP_001034271	Coding	chr16:29454964 minus strand	1242639
BOLA2B	NM_001039182	NP_001034271	Coding	chr16:30194306 minus strand	1242640
BRD7	NM_001173984	NP_001167455	Coding	chr16:50368934 minus strand	1242641
BRD7	NM_013263	NP_037395	Coding	chr16:50368934 minus strand	1242641
BRICD5	NM_182563	NP_872369	Coding	chr16:2211068 minus strand	1242642
C16orf13	NM_001040160	NP_001035250	Coding	chr16:636366 minus strand	1242643
C16orf13	NM_001040161	NP_001035251	Coding	chr16:636366 minus strand	1242643
C16orf13	NM_001040162	NP_001035252	Coding	chr16:636366 minus strand	1242643
C16orf13	NM_001040165	NP_001035255	Coding	chr16:636366 minus strand	1242643
C16orf13	NM_001288710	NP_001275639	Coding	chr16:636366 minus strand	1242643
C16orf13	NM_032366	NP_115742	Coding	chr16:636366 minus strand	1242643
C16orf45	NM_001142469	NP_001135941	Coding	chr16:15502265 plus strand	1242644
C16orf45	NM_033201	NP_149978	Coding	chr16:15434467 plus strand	1242645
C16orf46	NM_001100873	NP_001094343	Coding	chr16:81077267 minus strand	1242646
C16orf46	NM_152337	NP_689550	Coding	chr16:81077267 minus strand	1242646
C16orf47	NM_207385	NP_997268	Coding	chr16:73144447 minus strand	1242647
C16orf52	NM_001164579	NP_001158051	Coding	chr16:22008134 plus strand	1242648
C16orf54	NM_175900	NP_787096	Coding	chr16:29746019 minus strand	1242649
C16orf58	NM_022744	NP_073581	Coding	chr16:31508419 minus strand	1242650
C16orf59	NM_025108	NP_079384	Coding	chr16:2460113 plus strand	1242651
C16orf62	NM_001300743	NP_001287672	Coding	chr16:19555414 plus strand	1242652
C16orf62	NM_020314	NP_064710	Coding	chr16:19555414 plus strand	1242652
C16orf70	NM_025187	NP_079463	Coding	chr16:67110011 plus strand	1242653
C16orf71	NM_139170	NP_631909	Coding	chr16:4734287 plus strand	1242654
C16orf72	NM_014117	NP_054836	Coding	chr16:9091679 plus strand	1242655
C16orf74	NM_206967	NP_996850	Coding	chr16:85751083 minus strand	1242656

【１０３３】

C16orf78	NM_144602	NP_653203	Coding	chr16:49373896 plus strand	1242657
C16orf82	NM_001145545	NP_001139017	Coding	chr16:27066897 plus strand	1242658
C16orf86	NM_001012984	NP_001013002	Coding	chr16:67666813 plus strand	1242659
C16orf87	NM_001001436	NP_001001436	Coding	chr16:46831162 minus strand	1242660
C16orf89	NM_001098514	NP_001091984	Coding	chr16:5066145 minus strand	1242661
C16orf89	NM_152459	NP_689672	Coding	chr16:5066145 minus strand	1242661
C16orf90	NM_001080524	NP_001073993	Coding	chr16:3495421 minus strand	1242662
C16orf91	NM_001272051	NP_001258980	Coding	chr16:1420800 minus strand	1242663
C16orf92	NM_001109659	NP_001103129	Coding	chr16:30023333 plus strand	1242664
C16orf92	NM_001109660	NP_001103130	Coding	chr16:30023333 plus strand	1242664
C16orf93	NM_001014979	NP_001014979	Coding	chr16:30762244 minus strand	1242665
C16orf93	NM_001195620	NP_001182549	Coding	chr16:30762244 minus strand	1242665
C16orf95	NM_001195124	NP_001182053	Coding	chr16:87317420 minus strand	1242666
C16orf95	NM_001195125	NP_001182054	Coding	chr16:87317420 minus strand	1242666
C16orf95	NM_001256917	NP_001243846	Coding	chr16:87317420 minus strand	1242666
C16orf96	NM_001145011	NP_001138483	Coding	chr16:4556489 plus strand	1242667
C16orf97	NM_001242473	NP_001229402	Coding	chr16:52073935 minus strand	1242668
C1QTNF8	NM_207419	NP_997302	Coding	chr16:1096244 minus strand	1242669
CA5A	NM_001739	NP_001730	Coding	chr16:87936506 minus strand	1242670
CA7	NM_001014435	NP_001014435	Coding	chr16:66844937 plus strand	1242671
CA7	NM_005182	NP_005173	Coding	chr16:66844378 plus strand	1242672
CACNA1H	NM_001005407	NP_001005407	Coding	chr16:1153240 plus strand	1242673
CACNA1H	NM_021098	NP_066921	Coding	chr16:1153240 plus strand	1242673
CACNG3	NM_006539	NP_006530	Coding	chr16:24255552 plus strand	1242674
CALB2	NM_001740	NP_001731	Coding	chr16:71358712 plus strand	1242675
CALB2	NM_007088	NP_009019	Coding	chr16:71358712 plus strand	1242675
CAPN15	NM_005632	NP_005623	Coding	chr16:527855 plus strand	1242676
CAPNS2	NM_032330	NP_115706	Coding	chr16:55566671 plus strand	1242677
CARHSP1	NM_001042476	NP_001035941	Coding	chr16:8868401 minus	1242678

【１０３４】

				strand	
CARHSP1	NM_001278260	NP_001265189	Coding	chr16:8869012 minus strand	1242679
CARHSP1	NM_001278261	NP_001265190	Coding	chr16:8868719 minus strand	1242680
CARHSP1	NM_001278262	NP_001265191	Coding	chr16:8861810 minus strand	1242681
CARHSP1	NM_001278263	NP_001265192	Coding	chr16:8868361 minus strand	1242682
CARHSP1	NM_001278264	NP_001265193	Coding	chr16:8867428 minus strand	1242683
CARHSP1	NM_001278265	NP_001265194	Coding	chr16:8861810 minus strand	1242681
CARHSP1	NM_001278266	NP_001265195	Coding	chr16:8861810 minus strand	1242681
CARHSP1	NM_014316	NP_055131	Coding	chr16:8869012 minus strand	1242679
CASKIN1	NM_020764	NP_065815	Coding	chr16:2196464 minus strand	1242684
CBFA2T3	NM_005187	NP_005178	Coding	chr16:88977096 minus strand	1242685
CBFA2T3	NM_175931	NP_787127	Coding	chr16:88941200 minus strand	1242686
CBFB	NM_001755	NP_001746	Coding	chr16:67029146 plus strand	1242687
CBFB	NM_022845	NP_074036	Coding	chr16:67029146 plus strand	1242687
CBLN1	NM_004352	NP_004343	Coding	chr16:49281831 minus strand	1242688
CCDC101	NM_138414	NP_612423	Coding	chr16:28553927 plus strand	1242689
CCDC102A	NM_033212	NP_149989	Coding	chr16:57536565 minus strand	1242690
CCDC113	NM_001142302	NP_001135774	Coding	chr16:58249935 plus strand	1242691
CCDC113	NM_014157	NP_054876	Coding	chr16:58249935 plus strand	1242691
CCDC154	NM_001143980	NP_001137452	Coding	chr16:1444489 minus strand	1242692
CCDC64B	NM_001103175	NP_001096645	Coding	chr16:3035541 minus strand	1242693
CCDC78	NM_001031737	NP_001026907	Coding	chr16:726473 minus strand	1242694
CCDC79	NM_001136505	NP_001129977	Coding	chr16:66801620 minus strand	1242695
CCL17	NM_002987	NP_002978	Coding	chr16:57404766 plus strand	1242696
CCL22	NM_002990	NP_002981	Coding	chr16:57358782 plus strand	1242697
CCNF	NM_001761	NP_001752	Coding	chr16:2429393 plus strand	1242698
CCP110	NM_001199022	NP_001185951	Coding	chr16:19523856 plus strand	1242699
CCP110	NM_014711	NP_055526	Coding	chr16:19523856 plus strand	1242699

【１０３５】

CD19	NM_001178098	NP_001171569	Coding	chr16:28931938 plus strand	1242700
CD19	NM_001770	NP_001761	Coding	chr16:28931938 plus strand	1242700
CD2BP2	NM_001243646	NP_001230575	Coding	chr16:30354934 minus strand	1242701
CD2BP2	NM_006110	NP_006101	Coding	chr16:30355361 minus strand	1242702
CDH1	NM_004360	NP_004351	Coding	chr16:68737291 plus strand	1242703
CDH11	NM_001797	NP_001788	Coding	chr16:65122016 minus strand	1242704
CDH13	NM_001220488	NP_001207417	Coding	chr16:82626793 plus strand	1242705
CDH13	NM_001220489	NP_001207418	Coding	chr16:82626793 plus strand	1242705
CDH13	NM_001220490	NP_001207419	Coding	chr16:82626793 plus strand	1242705
CDH13	NM_001220491	NP_001207420	Coding	chr16:82626793 plus strand	1242705
CDH13	NM_001220492	NP_001207421	Coding	chr16:82626793 plus strand	1242705
CDH13	NM_001257	NP_001248	Coding	chr16:82626793 plus strand	1242705
CDH15	NM_004933	NP_004924	Coding	chr16:89171754 plus strand	1242706
CDH16	NM_001204744	NP_001191673	Coding	chr16:66918984 minus strand	1242707
CDH16	NM_001204745	NP_001191674	Coding	chr16:66918984 minus strand	1242707
CDH16	NM_001204746	NP_001191675	Coding	chr16:66918984 minus strand	1242707
CDH16	NM_004062	NP_004053	Coding	chr16:66918984 minus strand	1242707
CDH3	NM_001793	NP_001784	Coding	chr16:68644247 plus strand	1242708
CDH5	NM_001795	NP_001786	Coding	chr16:66366621 plus strand	1242709
CDH8	NM_001796	NP_001787	Coding	chr16:62036835 minus strand	1242710
CDIP1	NM_001199054	NP_001185983	Coding	chr16:4538470 minus strand	1242711
CDIP1	NM_001199055	NP_001185984	Coding	chr16:4538815 minus strand	1242712
CDIP1	NM_001199056	NP_001185985	Coding	chr16:4538815 minus strand	1242712
CDIP1	NM_013399	NP_037531	Coding	chr16:4538815 minus strand	1242712
CDIPT	NM_001286585	NP_001273514	Coding	chr16:29863288 minus strand	1242713
CDIPT	NM_001286586	NP_001273515	Coding	chr16:29863288 minus strand	1242713
CDIPT	NM_006319	NP_006310	Coding	chr16:29863288 minus strand	1242713

【１０３６】

CDK10	NM_001098533	NP_001092003	Coding	chr16:89686667 plus strand	1242714
CDK10	NM_001160367	NP_001153839	Coding	chr16:89686667 plus strand	1242714
CDK10	NM_052987	NP_443713	Coding	chr16:89686667 plus strand	1242714
CDK10	NM_052988	NP_443714	Coding	chr16:89686667 plus strand	1242714
CDR2	NM_001802	NP_001793	Coding	chr16:22374617 minus strand	1242715
CDT1	NM_030928	NP_112190	Coding	chr16:88803777 plus strand	1242716
CDYL2	NM_152342	NP_689555	Coding	chr16:80804278 minus strand	1242717
CEMP1	NM_001048212	NP_001041677	Coding	chr16:2531408 minus strand	1242718
CENPBD1	NM_145039	NP_659476	Coding	chr16:89972832 minus strand	1242719
CENPN	NM_001100624	NP_001094094	Coding	chr16:81006497 plus strand	1242720
CENPN	NM_001100625	NP_001094095	Coding	chr16:81006497 plus strand	1242720
CENPN	NM_001270473	NP_001257402	Coding	chr16:81006497 plus strand	1242720
CENPN	NM_001270474	NP_001257403	Coding	chr16:81006497 plus strand	1242720
CENPN	NM_018455	NP_060925	Coding	chr16:81006497 plus strand	1242720
CENPT	NM_025082	NP_079358	Coding	chr16:67847458 minus strand	1242721
CES1	NM_001025194	NP_001020365	Coding	chr16:55833163 minus strand	1242722
CES1	NM_001025195	NP_001020366	Coding	chr16:55833163 minus strand	1242722
CES1	NM_001266	NP_001257	Coding	chr16:55833163 minus strand	1242722
CES2	NM_003869	NP_003860	Coding	chr16:66934443 plus strand	1242723
CES2	NM_198061	NP_932327	Coding	chr16:66934443 plus strand	1242723
CES3	NM_001185176	NP_001172105	Coding	chr16:66967474 plus strand	1242724
CES3	NM_001185177	NP_001172106	Coding	chr16:66961228 plus strand	1242725
CES3	NM_024922	NP_079198	Coding	chr16:66961228 plus strand	1242725
CES4A	NM_001190201	NP_001177130	Coding	chr16:67000512 plus strand	1242726
CES4A	NM_001190202	NP_001177131	Coding	chr16:67000512 plus strand	1242726
CES4A	NM_173815	NP_776176	Coding	chr16:66988588 plus strand	1242727
CES5A	NM_001143685	NP_001137157	Coding	chr16:55875370 minus strand	1242728

【１０３７】

CES5A	NM_001190158	NP_001177087	Coding	chr16:55956031 minus strand	1242729
CES5A	NM_145024	NP_659461	Coding	chr16:55875370 minus strand	1242728
CETP	NM_000078	NP_000069	Coding	chr16:56961922 plus strand	1242730
CETP	NM_001286085	NP_001273014	Coding	chr16:56961922 plus strand	1242730
CFAP20	NM_013242	NP_037374	Coding	chr16:58129392 minus strand	1242731
CFDP1	NM_006324	NP_006315	Coding	chr16:75433489 minus strand	1242732
CHD9	NM_025134	NP_079410	Coding	chr16:53055032 plus strand	1242733
CHMP1A	NM_001083314	NP_001076783	Coding	chr16:89657785 minus strand	1242734
CHMP1A	NM_002768	NP_002759	Coding	chr16:89657785 minus strand	1242734
CHP2	NM_022097	NP_071380	Coding	chr16:23754626 plus strand	1242735
CHST4	NM_001166395	NP_001159867	Coding	chr16:71526250 plus strand	1242736
CHST4	NM_005769	NP_005760	Coding	chr16:71526119 plus strand	1242737
CHST5	NM_024533	NP_078809	Coding	chr16:75535170 minus strand	1242738
CHST6	NM_021615	NP_067628	Coding	chr16:75495028 minus strand	1242739
CHTF18	NM_022092	NP_071375	Coding	chr16:788621 plus strand	1242740
CHTF8	NM_001039690	NP_001034779	Coding	chr16:69132590 minus strand	1242741
CHTF8	NM_001040146	NP_001035236	Coding	chr16:69132168 minus strand	1242742
CIAPIN1	NM_020313	NP_064709	Coding	chr16:57447457 minus strand	1242743
CIITA	NM_000246	NP_000237	Coding	chr16:10877197 plus strand	1242744
CIITA	NM_001286402	NP_001273331	Coding	chr16:10877197 plus strand	1242744
CIITA	NM_001286403	NP_001273332	Coding	chr16:10877197 plus strand	1242744
CIRH1A	NM_032830	NP_116219	Coding	chr16:69132595 plus strand	1242745
CKLF	NM_001040138	NP_001035228	Coding	chr16:66552562 plus strand	1242746
CKLF	NM_016326	NP_057410	Coding	chr16:66552562 plus strand	1242746
CKLF	NM_016951	NP_058647	Coding	chr16:66552562 plus strand	1242746
CKLF	NM_181640	NP_857591	Coding	chr16:66552562 plus strand	1242746
CKLF	NM_181641	NP_857592	Coding	chr16:66552562 plus strand	1242746
CKLF-CMTM1	NM_001202509	NP_001189438	Coding	chr16:66552562 plus	1242747

【１０３８】

				strand	
CKLF-CMTM1	NM_001204098	NP_001191027	Coding	chr16:66552562 plus strand	1242747
CKLF-CMTM1	NM_001204099	NP_001191028	Coding	chr16:66552562 plus strand	1242747
CLCN7	NM_001114331	NP_001107803	Coding	chr16:1475084 minus strand	1242748
CLCN7	NM_001287	NP_001278	Coding	chr16:1475084 minus strand	1242748
CLDN6	NM_021195	NP_067018	Coding	chr16:3018187 minus strand	1242749
CLDN9	NM_020982	NP_066192	Coding	chr16:3012455 plus strand	1242750
CLEC16A	NM_001243403	NP_001230332	Coding	chr16:10944487 plus strand	1242751
CLEC16A	NM_015226	NP_056041	Coding	chr16:10944487 plus strand	1242751
CLEC18A	NM_001136214	NP_001129686	Coding	chr16:69950704 plus strand	1242752
CLEC18A	NM_001271197	NP_001258126	Coding	chr16:69950985 plus strand	1242753
CLEC18A	NM_182619	NP_872425	Coding	chr16:69950901 plus strand	1242754
CLEC18B	NM_001011880	NP_001011880	Coding	chr16:74421470 minus strand	1242755
CLEC18C	NM_173619	NP_775890	Coding	chr16:70174024 plus strand	1242756
CLEC19A	NM_001256720	NP_001243649	Coding	chr16:19285782 plus strand	1242757
CLEC3A	NM_001244755	NP_001231684	Coding	chr16:78029088 plus strand	1242758
CLEC3A	NM_005752	NP_005743	Coding	chr16:78022545 plus strand	1242759
CLN3	NM_000086	NP_000077	Coding	chr16:28492082 minus strand	1242760
CLN3	NM_001042432	NP_001035897	Coding	chr16:28492302 minus strand	1242761
CLN3	NM_001286104	NP_001273033	Coding	chr16:28492302 minus strand	1242761
CLN3	NM_001286105	NP_001273034	Coding	chr16:28492082 minus strand	1242760
CLN3	NM_001286109	NP_001273038	Coding	chr16:28492082 minus strand	1242760
CLN3	NM_001286110	NP_001273039	Coding	chr16:28492082 minus strand	1242760
CLUAP1	NM_015041	NP_055856	Coding	chr16:3500944 plus strand	1242762
CLUAP1	NM_024793	NP_079069	Coding	chr16:3509893 plus strand	1242763
CMC2	NM_020188	NP_064573	Coding	chr16:81006897 minus strand	1242764
CMIP	NM_030629	NP_085132	Coding	chr16:81495348 plus strand	1242765
CMIP	NM_198390	NP_938204	Coding	chr16:81445169 plus strand	1242766
CMTM1	NM_052999	NP_443725	Coding	chr16:66566446 plus	1242767

【１０３９】

				strand	
CMTM1	NM_181268	NP_851785	Coding	chr16:66566446 plus strand	1242767
CMTM1	NM_181269	NP_851786	Coding	chr16:66566390 plus strand	1242768
CMTM1	NM_181270	NP_851787	Coding	chr16:66566390 plus strand	1242768
CMTM1	NM_181271	NP_851788	Coding	chr16:66566390 plus strand	1242768
CMTM1	NM_181272	NP_851789	Coding	chr16:66566390 plus strand	1242768
CMTM1	NM_181283	NP_851800	Coding	chr16:66566390 plus strand	1242768
CMTM1	NM_181296	NP_851813	Coding	chr16:66566390 plus strand	1242768
CMTM2	NM_001199317	NP_001186246	Coding	chr16:66579447 plus strand	1242769
CMTM2	NM_144673	NP_653274	Coding	chr16:66579447 plus strand	1242769
CMTM3	NM_144601	NP_653202	Coding	chr16:66604324 plus strand	1242770
CMTM3	NM_181553	NP_853531	Coding	chr16:66604663 plus strand	1242771
CMTM4	NM_178818	NP_848933	Coding	chr16:66696707 minus strand	1242772
CMTM4	NM_181521	NP_852662	Coding	chr16:66696707 minus strand	1242772
CMTR2	NM_001099642	NP_001093112	Coding	chr16:71289412 minus strand	1242773
CMTR2	NM_018348	NP_060818	Coding	chr16:71289606 minus strand	1242774
CNEP1R1	NM_001281789	NP_001268718	Coding	chr16:50025205 plus strand	1242775
CNEP1R1	NM_153261	NP_694993	Coding	chr16:50025205 plus strand	1242775
CNGB1	NM_001135639	NP_001129111	Coding	chr16:57971116 minus strand	1242776
CNGB1	NM_001286130	NP_001273059	Coding	chr16:57971116 minus strand	1242776
CNGB1	NM_001297	NP_001288	Coding	chr16:57971116 minus strand	1242776
CNOT1	NM_001265612	NP_001252541	Coding	chr16:58629886 minus strand	1242777
CNOT1	NM_016284	NP_057368	Coding	chr16:58629886 minus strand	1242777
CNOT1	NM_206999	NP_996882	Coding	chr16:58629886 minus strand	1242777
CNTNAP4	NM_033401	NP_207837	Coding	chr16:76277277 plus strand	1242778
CNTNAP4	NM_138994	NP_620481	Coding	chr16:76309837 plus strand	1242779
COG4	NM_001195139	NP_001182068	Coding	chr16:70523554 minus strand	1242780
COG4	NM_015386	NP_056201	Coding	chr16:70523554 minus	1242780

【１０４０】

				strand	
COG7	NM_153603	NP_705831	Coding	chr16:23453191 minus strand	1242781
COG8	NM_032382	NP_115758	Coding	chr16:69339623 minus strand	1242782
COQ7	NM_001190983	NP_001177912	Coding	chr16:19067916 plus strand	1242783
COQ7	NM_016138	NP_057222	Coding	chr16:19067594 plus strand	1242784
COQ9	NM_020312	NP_064708	Coding	chr16:57447424 plus strand	1242785
CORO1A	NM_001193333	NP_001180262	Coding	chr16:30183409 plus strand	1242786
CORO1A	NM_007074	NP_009005	Coding	chr16:30183409 plus strand	1242786
CORO7	NM_001201472	NP_001188401	Coding	chr16:4416961 minus strand	1242787
CORO7	NM_001201473	NP_001188402	Coding	chr16:4416961 minus strand	1242787
CORO7	NM_024535	NP_078811	Coding	chr16:4416961 minus strand	1242787
CORO7-PAM16	NM_001201479	NP_001188408	Coding	chr16:4416961 minus strand	1242788
COTL1	NM_021149	NP_066972	Coding	chr16:84618096 minus strand	1242789
COX4I1	NM_001861	NP_001852	Coding	chr16:85799566 plus strand	1242790
COX6A2	NM_005205	NP_005196	Coding	chr16:31428428 minus strand	1242791
CPNE2	NM_152727	NP_689940	Coding	chr16:57092542 plus strand	1242792
CPNE7	NM_014427	NP_055242	Coding	chr16:89575767 plus strand	1242793
CPNE7	NM_153636	NP_705900	Coding	chr16:89575767 plus strand	1242793
CPPED1	NM_001099455	NP_001092925	Coding	chr16:12803887 minus strand	1242794
CPPED1	NM_018340	NP_060810	Coding	chr16:12803887 minus strand	1242794
CRAMP1L	NM_020825	NP_065876	Coding	chr16:1614639 plus strand	1242795
CREBBP	NM_001079846	NP_001073315	Coding	chr16:3880120 minus strand	1242796
CREBBP	NM_004380	NP_004371	Coding	chr16:3880120 minus strand	1242796
CRISPLD2	NM_031476	NP_113664	Coding	chr16:84819980 plus strand	1242797
CRYM	NM_001888	NP_001879	Coding	chr16:21303136 minus strand	1242798
CSNK2A2	NM_001896	NP_001887	Coding	chr16:58197878 minus strand	1242799
CTCF	NM_001191022	NP_001177951	Coding	chr16:67562406 plus strand	1242800
CTCF	NM_006565	NP_006556	Coding	chr16:67562406 plus strand	1242800

【１０４１】

CTF1	NM_001142544	NP_001136016	Coding	chr16:30896606 plus strand	1242801
CTF1	NM_001330	NP_001321	Coding	chr16:30896606 plus strand	1242801
CTRB1	NM_001906	NP_001897	Coding	chr16:75218985 plus strand	1242802
CTRB2	NM_001025200	NP_001020371	Coding	chr16:75207174 minus strand	1242803
CTRL	NM_001907	NP_001898	Coding	chr16:67931875 minus strand	1242804
CTU2	NM_001012759	NP_001012777	Coding	chr16:88706482 plus strand	1242805
CTU2	NM_001012762	NP_001012780	Coding	chr16:88706482 plus strand	1242805
CX3CL1	NM_002996	NP_002987	Coding	chr16:57372501 plus strand	1242806
CYB5B	NM_030579	NP_085056	Coding	chr16:69424594 plus strand	1242807
CYBA	NM_000101	NP_000092	Coding	chr16:88651084 minus strand	1242808
CYLD	NM_001042355	NP_001035814	Coding	chr16:50742049 plus strand	1242809
CYLD	NM_001042412	NP_001035877	Coding	chr16:50742117 plus strand	1242810
CYLD	NM_015247	NP_056062	Coding	chr16:50742049 plus strand	1242809
DBNDD1	NM_001042610	NP_001036075	Coding	chr16:90019555 minus strand	1242811
DBNDD1	NM_001288708	NP_001275637	Coding	chr16:90020131 minus strand	1242812
DBNDD1	NM_001288709	NP_001275638	Coding	chr16:90020131 minus strand	1242812
DBNDD1	NM_024043	NP_076948	Coding	chr16:90010121 minus strand	1242813
DCTN5	NM_001199011	NP_001185940	Coding	chr16:23641365 plus strand	1242814
DCTN5	NM_001199743	NP_001186672	Coding	chr16:23641365 plus strand	1242814
DCTN5	NM_032486	NP_115875	Coding	chr16:23641365 plus strand	1242814
DCTPP1	NM_024096	NP_077001	Coding	chr16:30430052 minus strand	1242815
DCUN1D3	NM_173475	NP_775746	Coding	chr16:20900239 minus strand	1242816
DDX19A	NM_018332	NP_060802	Coding	chr16:70346920 plus strand	1242817
DDX19B	NM_001014449	NP_001014449	Coding	chr16:70299158 plus strand	1242818
DDX19B	NM_001014451	NP_001014451	Coding	chr16:70299158 plus strand	1242818
DDX19B	NM_001257172	NP_001244101	Coding	chr16:70294796 plus strand	1242819
DDX19B	NM_001257173	NP_001244102	Coding	chr16:70294832 plus strand	1242820

【１０４２】

DDX19B	NM_001257174	NP_001244103	Coding	chr16:70289766 plus strand	1242821
DDX19B	NM_001257175	NP_001244104	Coding	chr16:70299158 plus strand	1242818
DDX19B	NM_007242	NP_009173	Coding	chr16:70299158 plus strand	1242818
DDX28	NM_018380	NP_060850	Coding	chr16:68023867 minus strand	1242822
DECR2	NM_020664	NP_065715	Coding	chr16:401857 plus strand	1242823
DEF8	NM_001242816	NP_001229745	Coding	chr16:89948730 plus strand	1242824
DEF8	NM_001242817	NP_001229746	Coding	chr16:89948730 plus strand	1242824
DEF8	NM_001242818	NP_001229747	Coding	chr16:89948730 plus strand	1242824
DEF8	NM_001242819	NP_001229748	Coding	chr16:89949419 plus strand	1242825
DEF8	NM_001242820	NP_001229749	Coding	chr16:89948730 plus strand	1242824
DEF8	NM_001242821	NP_001229750	Coding	chr16:89948730 plus strand	1242824
DEF8	NM_001242822	NP_001229751	Coding	chr16:89948730 plus strand	1242824
DEF8	NM_017702	NP_060172	Coding	chr16:89948730 plus strand	1242824
DEF8	NM_207514	NP_997397	Coding	chr16:89948730 plus strand	1242824
DEXI	NM_014015	NP_054734	Coding	chr16:10942400 minus strand	1242826
DHODH	NM_001361	NP_001352	Coding	chr16:72008743 plus strand	1242827
DHX38	NM_014003	NP_054722	Coding	chr16:72093715 plus strand	1242828
DNAAF1	NM_178452	NP_848547	Coding	chr16:84145259 plus strand	1242829
DNAH3	NM_017539	NP_060009	Coding	chr16:21159441 minus strand	1242830
DNAJA2	NM_005880	NP_005871	Coding	chr16:46973714 minus strand	1242831
DNAJA3	NM_001135110	NP_001128582	Coding	chr16:4425804 plus strand	1242832
DNAJA3	NM_001286516	NP_001273445	Coding	chr16:4425804 plus strand	1242832
DNAJA3	NM_005147	NP_005138	Coding	chr16:4425804 plus strand	1242832
DNASE1	NM_005223	NP_005214	Coding	chr16:3652938 plus strand	1242833
DNASE1L2	NM_001301680	NP_001288609	Coding	chr16:2236466 plus strand	1242834
DNASE1L2	NM_001374	NP_001365	Coding	chr16:2236466 plus strand	1242834
DOC2A	NM_001282062	NP_001268991	Coding	chr16:30013596 minus strand	1242835
DOC2A	NM_001282063	NP_001268992	Coding	chr16:30011421 minus strand	1242836
DOC2A	NM_001282068	NP_001268997	Coding	chr16:30012348 minus strand	1242837
DOC2A	NM_003586	NP_003577	Coding	chr16:30011080 minus	1242838

【１０４３】

				strand	
DOK4	NM_018110	NP_060580	Coding	chr16:57486473 minus strand	1242839
DPEP1	NM_001128141	NP_001121613	Coding	chr16:89613307 plus strand	1242840
DPEP1	NM_004413	NP_004404	Coding	chr16:89620591 plus strand	1242841
DPEP2	NM_022355	NP_071750	Coding	chr16:67999518 minus strand	1242842
DPEP3	NM_001129758	NP_001123230	Coding	chr16:67980549 minus strand	1242843
DPEP3	NM_022357	NP_071752	Coding	chr16:67980549 minus strand	1242843
DRC7	NM_001289162	NP_001276091	Coding	chr16:57694800 plus strand	1242844
DRC7	NM_001289163	NP_001276092	Coding	chr16:57694800 plus strand	1242844
DRC7	NM_032269	NP_115645	Coding	chr16:57694800 plus strand	1242844
DUS2	NM_001271762	NP_001258691	Coding	chr16:68022943 plus strand	1242845
DUS2	NM_001271763	NP_001258692	Coding	chr16:68022943 plus strand	1242845
DUS2	NM_017803	NP_060273	Coding	chr16:68022943 plus strand	1242845
DYNC1LI2	NM_001286157	NP_001273086	Coding	chr16:66751622 minus strand	1242846
DYNC1LI2	NM_006141	NP_006132	Coding	chr16:66751622 minus strand	1242846
DYNLRB2	NM_130897	NP_570967	Coding	chr16:80540956 plus strand	1242847
E2F4	NM_001950	NP_001941	Coding	chr16:67192164 plus strand	1242848
E4F1	NM_001288776	NP_001275705	Coding	chr16:2223487 plus strand	1242849
E4F1	NM_001288778	NP_001275707	Coding	chr16:2223487 plus strand	1242849
E4F1	NM_004424	NP_004415	Coding	chr16:2223487 plus strand	1242849
EARS2	NM_001083614	NP_001077083	Coding	chr16:23557375 minus strand	1242850
ECI1	NM_001178029	NP_001171500	Coding	chr16:2251601 minus strand	1242851
ECI1	NM_001919	NP_001910	Coding	chr16:2251601 minus strand	1242851
EDC4	NM_014329	NP_055144	Coding	chr16:67873022 plus strand	1242852
EEF2K	NM_013302	NP_037434	Coding	chr16:22206270 plus strand	1242853
EEF2KMT	NM_001289029	NP_001275958	Coding	chr16:5097820 minus strand	1242854
EEF2KMT	NM_201400	NP_958802	Coding	chr16:5097820 minus strand	1242854
EEF2KMT	NM_201598	NP_963892	Coding	chr16:5097820 minus strand	1242854
EIF3C	NM_001037808	NP_001032897	Coding	chr16:28403888 minus	1242855

【１０４４】

				strand	
EIF3C	NM_001037808	NP_001032897	Coding	chr16:28711416 plus strand	1242856
EIF3C	NM_001199142	NP_001186071	Coding	chr16:28426454 minus strand	1242857
EIF3C	NM_001199142	NP_001186071	Coding	chr16:28688557 plus strand	1242858
EIF3C	NM_001267574	NP_001254503	Coding	chr16:28403888 minus strand	1242855
EIF3C	NM_001267574	NP_001254503	Coding	chr16:28711416 plus strand	1242856
EIF3C	NM_001286478	NP_001273407	Coding	chr16:28403888 minus strand	1242855
EIF3C	NM_001286478	NP_001273407	Coding	chr16:28711416 plus strand	1242856
EIF3C	NM_003752	NP_003743	Coding	chr16:28403888 minus strand	1242855
EIF3C	NM_003752	NP_003743	Coding	chr16:28711416 plus strand	1242856
EIF3CL	NM_001099661	NP_001093131	Coding	chr16:28403841 minus strand	1242859
EIF3CL	NM_001099661	NP_001093131	Coding	chr16:28711463 plus strand	1242860
ELMO3	NM_024712	NP_078988	Coding	chr16:67199124 plus strand	1242861
EMC8	NM_001142288	NP_001135760	Coding	chr16:85799542 minus strand	1242862
EMC8	NM_006067	NP_006058	Coding	chr16:85799542 minus strand	1242862
EME2	NM_001257370	NP_001244299	Coding	chr16:1773227 plus strand	1242863
EMP2	NM_001424	NP_001415	Coding	chr16:10580682 minus strand	1242864
ENKD1	NM_032140	NP_115516	Coding	chr16:67666725 minus strand	1242865
ERCC4	NM_005236	NP_005227	Coding	chr16:13920156 plus strand	1242866
ERI2	NM_001142725	NP_001136197	Coding	chr16:20806473 minus strand	1242867
ERI2	NM_080663	NP_542394	Coding	chr16:20806473 minus strand	1242867
ERN2	NM_033266	NP_150296	Coding	chr16:23713500 minus strand	1242868
ESRP2	NM_024939	NP_079215	Coding	chr16:68236233 minus strand	1242869
EXOC3L1	NM_178516	NP_848611	Coding	chr16:67190204 minus strand	1242870
EXOSC6	NM_058219	NP_478126	Coding	chr16:70251930 minus strand	1242871
FA2H	NM_024306	NP_077282	Coding	chr16:74774831 minus strand	1242872
FAHD1	NM_001018104	NP_001018114	Coding	chr16:1827223 plus strand	1242873
FAHD1	NM_001142398	NP_001135870	Coding	chr16:1827223 plus strand	1242873
FAHD1	NM_031208	NP_112485	Coding	chr16:1827223 plus strand	1242873

【１０４５】

FAM173A	NM_001271285	NP_001258214	Coding	chr16:721141 plus strand	1242874
FAM173A	NM_023933	NP_076422	Coding	chr16:721141 plus strand	1242874
FAM192A	NM_024946	NP_079222	Coding	chr16:57186064 minus strand	1242875
FAM195A	NM_138418	NP_612427	Coding	chr16:641848 plus strand	1242876
FAM57B	NM_031478	NP_113666	Coding	chr16:30030865 minus strand	1242877
FAM65A	NM_001193522	NP_001180451	Coding	chr16:67528816 plus strand	1242878
FAM65A	NM_001193523	NP_001180452	Coding	chr16:67529636 plus strand	1242879
FAM65A	NM_001193524	NP_001180453	Coding	chr16:67537461 plus strand	1242880
FAM65A	NM_024519	NP_078795	Coding	chr16:67528813 plus strand	1242881
FAM92B	NM_198491	NP_940893	Coding	chr16:85112508 minus strand	1242882
FAM96B	NM_016062	NP_057146	Coding	chr16:66934423 minus strand	1242883
FANCA	NM_000135	NP_000126	Coding	chr16:89816657 minus strand	1242884
FANCA	NM_001018112	NP_001018122	Coding	chr16:89816657 minus strand	1242884
FANCA	NM_001286167	NP_001273096	Coding	chr16:89816657 minus strand	1242884
FBRS	NM_001105079	NP_001098549	Coding	chr16:30664456 plus strand	1242885
FBXL16	NM_153350	NP_699181	Coding	chr16:705825 minus strand	1242886
FBXL19	NM_001099784	NP_001093254	Coding	chr16:30924574 plus strand	1242887
FBXL19	NM_001282351	NP_001269280	Coding	chr16:30923054 plus strand	1242888
FBXL8	NM_018378	NP_060848	Coding	chr16:67159987 plus strand	1242889
FBXO31	NM_001282683	NP_001269612	Coding	chr16:87392107 minus strand	1242890
FBXO31	NM_024735	NP_079011	Coding	chr16:87383793 minus strand	1242891
FHOD1	NM_013241	NP_037373	Coding	chr16:67247522 minus strand	1242892
FLYWCH1	NM_020912	NP_065963	Coding	chr16:2911978 plus strand	1242893
FLYWCH1	NM_032296	NP_115672	Coding	chr16:2911978 plus strand	1242893
FLYWCH2	NM_001142499	NP_001135971	Coding	chr16:2883194 plus strand	1242894
FLYWCH2	NM_001142500	NP_001135972	Coding	chr16:2883194 plus strand	1242894
FLYWCH2	NM_138439	NP_612448	Coding	chr16:2883194 plus strand	1242894
FOPNL	NM_144600	NP_653201	Coding	chr16:15888590 minus strand	1242895
FOXC2	NM_005251	NP_005242	Coding	chr16:86567250 plus strand	1242896
FOXF1	NM_001451	NP_001442	Coding	chr16:86510526 plus strand	1242897

【１０４６】

FOXL1	NM_005250	NP_005241	Coding	chr16:86578508 plus strand	1242898
FTO	NM_001080432	NP_001073901	Coding	chr16:53703962 plus strand	1242899
FUK	NM_145059	NP_659496	Coding	chr16:70454594 plus strand	1242900
FUS	NM_001170634	NP_001164105	Coding	chr16:31180109 plus strand	1242901
FUS	NM_001170937	NP_001164408	Coding	chr16:31180109 plus strand	1242901
FUS	NM_004960	NP_004951	Coding	chr16:31180109 plus strand	1242901
GABARAPL2	NM_007285	NP_009216	Coding	chr16:75566350 plus strand	1242902
GALNS	NM_000512	NP_000503	Coding	chr16:88856966 minus strand	1242903
GAN	NM_022041	NP_071324	Coding	chr16:81314965 plus strand	1242904
GAS8	NM_001286205	NP_001273134	Coding	chr16:90022599 plus strand	1242905
GAS8	NM_001286208	NP_001273137	Coding	chr16:90022599 plus strand	1242905
GAS8	NM_001286209	NP_001273138	Coding	chr16:90019628 plus strand	1242906
GAS8	NM_001481	NP_001472	Coding	chr16:90022599 plus strand	1242905
GCSH	NM_004483	NP_004474	Coding	chr16:81096375 minus strand	1242907
GDE1	NM_016641	NP_057725	Coding	chr16:19522128 minus strand	1242908
GDPD3	NM_024307	NP_077283	Coding	chr16:30113557 minus strand	1242909
GFER	NM_005262	NP_005253	Coding	chr16:1984148 plus strand	1242910
GFOD2	NM_001243650	NP_001230579	Coding	chr16:67719370 minus strand	1242911
GFOD2	NM_030819	NP_110446	Coding	chr16:67719370 minus strand	1242911
GGA2	NM_015044	NP_055859	Coding	chr16:23510494 minus strand	1242912
GINS2	NM_016095	NP_057179	Coding	chr16:85688982 minus strand	1242913
GINS3	NM_001126129	NP_001119601	Coding	chr16:58392393 plus strand	1242914
GINS3	NM_001126130	NP_001119602	Coding	chr16:58392393 plus strand	1242914
GINS3	NM_022770	NP_073607	Coding	chr16:58392393 plus strand	1242914
GLG1	NM_001145666	NP_001139138	Coding	chr16:74607144 minus strand	1242915
GLG1	NM_001145667	NP_001139139	Coding	chr16:74607144 minus strand	1242915
GLG1	NM_012201	NP_036333	Coding	chr16:74607144 minus strand	1242915
GLIS2	NM_032575	NP_115964	Coding	chr16:4332223 plus strand	1242916

【１０４７】

GLYR1	NM_032569	NP_115958	Coding	chr16:4847302 minus strand	1242917
GNAO1	NM_020988	NP_066268	Coding	chr16:56191338 plus strand	1242918
GNAO1	NM_138736	NP_620073	Coding	chr16:56191338 plus strand	1242918
GNG13	NM_016541	NP_057625	Coding	chr16:800733 minus strand	1242919
GNPTG	NM_032520	NP_115909	Coding	chr16:1351898 plus strand	1242920
GOT2	NM_001286220	NP_001273149	Coding	chr16:58734357 minus strand	1242921
GOT2	NM_002080	NP_002071	Coding	chr16:58734357 minus strand	1242921
GP2	NM_001007240	NP_001007241	Coding	chr16:20327513 minus strand	1242922
GP2	NM_001007241	NP_001007242	Coding	chr16:20327513 minus strand	1242922
GP2	NM_001007242	NP_001007243	Coding	chr16:20327513 minus strand	1242922
GP2	NM_001502	NP_001493	Coding	chr16:20327513 minus strand	1242922
GPR114	NM_153837	NP_722579	Coding	chr16:57542688 plus strand	1242923
GPR139	NM_001002911	NP_001002911	Coding	chr16:20073778 minus strand	1242924
GPR56	NM_001145770	NP_001139242	Coding	chr16:57619997 plus strand	1242925
GPR56	NM_001145771	NP_001139243	Coding	chr16:57628225 plus strand	1242926
GPR56	NM_001145772	NP_001139244	Coding	chr16:57628225 plus strand	1242926
GPR56	NM_001145773	NP_001139245	Coding	chr16:57628225 plus strand	1242926
GPR56	NM_001145774	NP_001139246	Coding	chr16:57639294 plus strand	1242927
GPR56	NM_001290142	NP_001277071	Coding	chr16:57619692 plus strand	1242928
GPR56	NM_001290143	NP_001277072	Coding	chr16:57619692 plus strand	1242928
GPR56	NM_001290144	NP_001277073	Coding	chr16:57639294 plus strand	1242927
GPR56	NM_005682	NP_005673	Coding	chr16:57619997 plus strand	1242925
GPR56	NM_201524	NP_958932	Coding	chr16:57628225 plus strand	1242926
GPR56	NM_201525	NP_958933	Coding	chr16:57628225 plus strand	1242926
GPR97	NM_170776	NP_740746	Coding	chr16:57668244 plus strand	1242929
GPRC5B	NM_016235	NP_057319	Coding	chr16:19884829 minus strand	1242930
GPT2	NM_001142466	NP_001135938	Coding	chr16:46885189 plus strand	1242931
GPT2	NM_133443	NP_597700	Coding	chr16:46884395 plus strand	1242932

【１０４８】

GRIN2A	NM_000833	NP_000824	Coding	chr16:10182754 minus strand	1242933
GRIN2A	NM_001134407	NP_001127879	Coding	chr16:10182406 minus strand	1242934
GRIN2A	NM_001134408	NP_001127880	Coding	chr16:10182067 minus strand	1242935
GSE1	NM_001134473	NP_001127945	Coding	chr16:85611422 plus strand	1242936
GSE1	NM_001278184	NP_001265113	Coding	chr16:85613235 plus strand	1242937
GSE1	NM_014615	NP_055430	Coding	chr16:85613235 plus strand	1242937
GSG1L	NM_001109763	NP_001103233	Coding	chr16:28063509 minus strand	1242938
GSG1L	NM_144675	NP_653276	Coding	chr16:27888157 minus strand	1242939
GSPT1	NM_001130006	NP_001123478	Coding	chr16:11915968 minus strand	1242940
GSPT1	NM_001130007	NP_001123479	Coding	chr16:11916662 minus strand	1242941
GSPT1	NM_002094	NP_002085	Coding	chr16:11915968 minus strand	1242940
GTF3C1	NM_001286242	NP_001273171	Coding	chr16:27549930 minus strand	1242942
GTF3C1	NM_001520	NP_001511	Coding	chr16:27549930 minus strand	1242942
HAGH	NM_001040427	NP_001035517	Coding	chr16:1827194 minus strand	1242943
HAGH	NM_001286249	NP_001273178	Coding	chr16:1827194 minus strand	1242943
HAGH	NM_005326	NP_005317	Coding	chr16:1827194 minus strand	1242943
HAGHL	NM_001290137	NP_001277066	Coding	chr16:726935 plus strand	1242944
HAGHL	NM_001290139	NP_001277068	Coding	chr16:726935 plus strand	1242944
HAGHL	NM_032304	NP_115680	Coding	chr16:727245 plus strand	1242945
HAS3	NM_001199280	NP_001186209	Coding	chr16:69105563 plus strand	1242946
HAS3	NM_005329	NP_005320	Coding	chr16:69107539 plus strand	1242947
HAS3	NM_138612	NP_619515	Coding	chr16:69106225 plus strand	1242948
HBA1	NM_000558	NP_000549	Coding	chr16:176650 plus strand	1242949
HBA2	NM_000517	NP_000508	Coding	chr16:172846 plus strand	1242950
HBM	NM_001003938	NP_001003938	Coding	chr16:165973 plus strand	1242951
HBQ1	NM_005331	NP_005322	Coding	chr16:180333 plus strand	1242952
HBZ	NM_005332	NP_005323	Coding	chr16:152854 plus strand	1242953
HCFC1R1	NM_001002017	NP_001002017	Coding	chr16:3024286 minus strand	1242954
HCFC1R1	NM_001002018	NP_001002018	Coding	chr16:3024286 minus strand	1242954
HCFC1R1	NM_001288665	NP_001275594	Coding	chr16:3024286 minus strand	1242954

【１０４９】

HCFC1R1	NM_001288666	NP_001275595	Coding	chr16:3024286 minus strand	1242954
HCFC1R1	NM_001288667	NP_001275596	Coding	chr16:3024286 minus strand	1242954
HCFC1R1	NM_001288668	NP_001275597	Coding	chr16:3024286 minus strand	1242954
HCFC1R1	NM_017885	NP_060355	Coding	chr16:3024286 minus strand	1242954
HEATR3	NM_182922	NP_891552	Coding	chr16:50065969 plus strand	1242955
HERPUD1	NM_001010989	NP_001010989	Coding	chr16:56932089 plus strand	1242956
HERPUD1	NM_001272103	NP_001259032	Coding	chr16:56932089 plus strand	1242956
HERPUD1	NM_014685	NP_055500	Coding	chr16:56932089 plus strand	1242956
HIRIP3	NM_001197323	NP_001184252	Coding	chr16:29996096 minus strand	1242957
HIRIP3	NM_003609	NP_003600	Coding	chr16:29996096 minus strand	1242957
HMOX2	NM_001127204	NP_001120676	Coding	chr16:4476339 plus strand	1242958
HMOX2	NM_001127205	NP_001120677	Coding	chr16:4495857 plus strand	1242959
HMOX2	NM_001127206	NP_001120678	Coding	chr16:4474702 plus strand	1242960
HMOX2	NM_001286267	NP_001273196	Coding	chr16:4476339 plus strand	1242958
HMOX2	NM_001286268	NP_001273197	Coding	chr16:4476339 plus strand	1242958
HMOX2	NM_001286269	NP_001273198	Coding	chr16:4476339 plus strand	1242958
HMOX2	NM_001286270	NP_001273199	Coding	chr16:4495818 plus strand	1242961
HMOX2	NM_001286271	NP_001273200	Coding	chr16:4476339 plus strand	1242958
HMOX2	NM_002134	NP_002125	Coding	chr16:4476339 plus strand	1242958
HN1L	NM_144570	NP_653171	Coding	chr16:1678276 plus strand	1242962
HP	NM_001126102	NP_001119574	Coding	chr16:72054608 plus strand	1242963
HP	NM_005143	NP_005134	Coding	chr16:72054608 plus strand	1242963
HPR	NM_020995	NP_066275	Coding	chr16:72063225 plus strand	1242964
HS3ST2	NM_006043	NP_006034	Coding	chr16:22814538 plus strand	1242965
HS3ST4	NM_006040	NP_006031	Coding	chr16:25692025 plus strand	1242966
HS3ST6	NM_001009606	NP_001009606	Coding	chr16:1918323 minus strand	1242967
HSBP1	NM_001537	NP_001528	Coding	chr16:83807902 plus strand	1242968
HSD11B2	NM_000196	NP_000187	Coding	chr16:67431132 plus strand	1242969
HSD17B2	NM_002153	NP_002144	Coding	chr16:82035252 plus strand	1242970
HSD3B7	NM_001142777	NP_001136249	Coding	chr16:30985197 plus strand	1242971
HSD3B7	NM_001142778	NP_001136250	Coding	chr16:30985197 plus	1242971

【１０５０】

				strand	
HSD3B7	NM_025193	NP_079469	Coding	chr16:30985197 plus strand	1242971
HSDL1	NM_001146051	NP_001139523	Coding	chr16:84145195 minus strand	1242972
HSDL1	NM_031463	NP_113651	Coding	chr16:84145195 minus strand	1242972
HSF4	NM_001040667	NP_001035757	Coding	chr16:67163384 plus strand	1242973
HSF4	NM_001538	NP_001529	Coding	chr16:67163384 plus strand	1242973
HYDIN	NM_001198542	NP_001185471	Coding	chr16:71230722 minus strand	1242974
HYDIN	NM_001198543	NP_001185472	Coding	chr16:71230722 minus strand	1242974
HYDIN	NM_001270974	NP_001257903	Coding	chr16:71230722 minus strand	1242974
HYDIN	NM_017558	NP_060028	Coding	chr16:71230722 minus strand	1242974
IFT140	NM_014714	NP_055529	Coding	chr16:1612108 minus strand	1242975
IGFALS	NM_001146006	NP_001139478	Coding	chr16:1793733 minus strand	1242976
IGFALS	NM_004970	NP_004961	Coding	chr16:1793733 minus strand	1242976
IGSF6	NM_005849	NP_005840	Coding	chr16:21652666 minus strand	1242977
IL17C	NM_013278	NP_037410	Coding	chr16:88638592 plus strand	1242978
IL21R	NM_021798	NP_068570	Coding	chr16:27427257 plus strand	1242979
IL21R	NM_181078	NP_851564	Coding	chr16:27402161 plus strand	1242980
IL21R	NM_181079	NP_851565	Coding	chr16:27402161 plus strand	1242980
IL27	NM_145659	NP_663634	Coding	chr16:28506834 minus strand	1242981
IL32	NM_001012631	NP_001012649	Coding	chr16:3065311 plus strand	1242982
IL32	NM_001012632	NP_001012650	Coding	chr16:3065661 plus strand	1242983
IL32	NM_001012633	NP_001012651	Coding	chr16:3065311 plus strand	1242982
IL32	NM_001012634	NP_001012652	Coding	chr16:3065637 plus strand	1242984
IL32	NM_001012635	NP_001012653	Coding	chr16:3065610 plus strand	1242985
IL32	NM_001012636	NP_001012654	Coding	chr16:3065783 plus strand	1242986
IL32	NM_001012718	NP_001012736	Coding	chr16:3065311 plus strand	1242982
IL32	NM_004221	NP_004212	Coding	chr16:3065311 plus strand	1242982
IL34	NM_001172771	NP_001166242	Coding	chr16:70579894 plus strand	1242987
IL34	NM_001172772	NP_001166243	Coding	chr16:70623991 plus strand	1242988
IL34	NM_152456	NP_689669	Coding	chr16:70579894 plus strand	1242987

【１０５１】

IL4R	NM_000418	NP_000409	Coding	chr16:27313908 plus strand	1242989
IL4R	NM_001257406	NP_001244335	Coding	chr16:27313908 plus strand	1242989
IL4R	NM_001257407	NP_001244336	Coding	chr16:27313908 plus strand	1242989
IL4R	NM_001257997	NP_001244926	Coding	chr16:27313908 plus strand	1242989
INO80E	NM_173618	NP_775889	Coding	chr16:29996209 plus strand	1242990
IQCK	NM_153208	NP_694940	Coding	chr16:19716455 plus strand	1242991
IRF8	NM_002163	NP_002154	Coding	chr16:85899167 plus strand	1242992
IRX3	NM_024336	NP_077312	Coding	chr16:54286466 minus strand	1242993
IRX5	NM_001252197	NP_001239126	Coding	chr16:54931198 plus strand	1242994
IRX5	NM_005853	NP_005844	Coding	chr16:54931198 plus strand	1242994
IRX6	NM_024335	NP_077311	Coding	chr16:55324558 plus strand	1242995
IST1	NM_001270975	NP_001257904	Coding	chr16:71895492 plus strand	1242996
IST1	NM_001270976	NP_001257905	Coding	chr16:71894407 plus strand	1242997
IST1	NM_001270977	NP_001257906	Coding	chr16:71895492 plus strand	1242996
IST1	NM_001270978	NP_001257907	Coding	chr16:71895492 plus strand	1242996
IST1	NM_001270979	NP_001257908	Coding	chr16:71895492 plus strand	1242996
IST1	NM_014761	NP_055576	Coding	chr16:71895492 plus strand	1242996
ITFG1	NM_030790	NP_110417	Coding	chr16:47461104 minus strand	1242998
ITFG3	NM_001284497	NP_001271426	Coding	chr16:234545 plus strand	1242999
ITFG3	NM_032039	NP_114428	Coding	chr16:234545 plus strand	1242999
ITGAD	NM_005353	NP_005344	Coding	chr16:31393311 plus strand	1243000
ITGAL	NM_001114380	NP_001107852	Coding	chr16:30472661 plus strand	1243001
ITGAL	NM_002209	NP_002200	Coding	chr16:30472661 plus strand	1243001
ITGAM	NM_000632	NP_000623	Coding	chr16:31259966 plus strand	1243002
ITGAM	NM_001145808	NP_001139280	Coding	chr16:31259966 plus strand	1243002
ITGAX	NM_000887	NP_000878	Coding	chr16:31355133 plus strand	1243003
ITGAX	NM_001286375	NP_001273304	Coding	chr16:31355133 plus strand	1243003
ITPRIPL2	NM_001034841	NP_001030013	Coding	chr16:19113931 plus strand	1243004

【１０５２】

JMJD8	NM_001005920	NP_001005920	Coding	chr16:684439 minus strand	1243005
JPH3	NM_001271604	NP_001258533	Coding	chr16:87602886 plus strand	1243006
JPH3	NM_001271605	NP_001258534	Coding	chr16:87602886 plus strand	1243006
JPH3	NM_020655	NP_065706	Coding	chr16:87602886 plus strand	1243006
KARS	NM_001130089	NP_001123561	Coding	chr16:75647687 minus strand	1243007
KARS	NM_005548	NP_005539	Coding	chr16:75647687 minus strand	1243007
KAT8	NM_032188	NP_115564	Coding	chr16:31117663 plus strand	1243008
KAT8	NM_182958	NP_892003	Coding	chr16:31117663 plus strand	1243008
KATNB1	NM_005886	NP_005877	Coding	chr16:57735747 plus strand	1243009
KCNG4	NM_172347	NP_758857	Coding	chr16:84239750 minus strand	1243010
KCTD13	NM_178863	NP_849194	Coding	chr16:29926232 minus strand	1243011
KCTD19	NM_001100915	NP_001094385	Coding	chr16:67326758 minus strand	1243012
KCTD5	NM_018992	NP_061865	Coding	chr16:2682493 plus strand	1243013
KDM8	NM_001145348	NP_001138820	Coding	chr16:27203974 plus strand	1243014
KDM8	NM_024773	NP_079049	Coding	chr16:27203485 plus strand	1243015
KIAA0430	NM_001184998	NP_001171927	Coding	chr16:15643166 minus strand	1243016
KIAA0430	NM_001184999	NP_001171928	Coding	chr16:15643166 minus strand	1243016
KIAA0430	NM_014647	NP_055462	Coding	chr16:15643166 minus strand	1243016
KIAA0513	NM_001286565	NP_001273494	Coding	chr16:85063211 plus strand	1243017
KIAA0513	NM_001286566	NP_001273495	Coding	chr16:85027750 plus strand	1243018
KIAA0513	NM_001297766	NP_001284695	Coding	chr16:85027750 plus strand	1243018
KIAA0513	NM_014732	NP_055547	Coding	chr16:85027750 plus strand	1243018
KIAA0556	NM_015202	NP_056017	Coding	chr16:27550146 plus strand	1243019
KIAA0895L	NM_001040715	NP_001035805	Coding	chr16:67183980 minus strand	1243020
KIF22	NM_001256269	NP_001243198	Coding	chr16:29790712 plus strand	1243021
KIF22	NM_001256270	NP_001243199	Coding	chr16:29790967 plus strand	1243022
KIF22	NM_007317	NP_015556	Coding	chr16:29790712 plus strand	1243021
KIFC3	NM_001130099	NP_001123571	Coding	chr16:57798017 minus strand	1243023

【１０５３】

KIFC3	NM_001130100	NP_001123572	Coding	chr16:57802527 minus strand	1243024
KIFC3	NM_005550	NP_005541	Coding	chr16:57802527 minus strand	1243024
KLHDC4	NM_001184854	NP_001171783	Coding	chr16:87765992 minus strand	1243025
KLHDC4	NM_001184856	NP_001171785	Coding	chr16:87765992 minus strand	1243025
KLHDC4	NM_017566	NP_060036	Coding	chr16:87765992 minus strand	1243025
KLHL36	NM_024731	NP_079007	Coding	chr16:84648524 plus strand	1243026
KNOP1	NM_001012991	NP_001013009	Coding	chr16:19718170 minus strand	1243027
KREMEN2	NM_001253725	NP_001240654	Coding	chr16:2964215 plus strand	1243028
KREMEN2	NM_001253726	NP_001240655	Coding	chr16:2964215 plus strand	1243028
KREMEN2	NM_024507	NP_078783	Coding	chr16:2964215 plus strand	1243028
KREMEN2	NM_172229	NP_757384	Coding	chr16:2964215 plus strand	1243028
LAT	NM_001014987	NP_001014987	Coding	chr16:28985065 plus strand	1243029
LAT	NM_001014988	NP_001014988	Coding	chr16:28985065 plus strand	1243029
LAT	NM_001014989	NP_001014989	Coding	chr16:28984825 plus strand	1243030
LAT	NM_014387	NP_055202	Coding	chr16:28985065 plus strand	1243029
LCAT	NM_000229	NP_000220	Coding	chr16:67944112 minus strand	1243031
LCMT1	NM_001032391	NP_001027563	Coding	chr16:25111725 plus strand	1243032
LCMT1	NM_016309	NP_057393	Coding	chr16:25111725 plus strand	1243032
LDHD	NM_153486	NP_705690	Coding	chr16:75116772 minus strand	1243033
LDHD	NM_194436	NP_919417	Coding	chr16:75116772 minus strand	1243033
LITAF	NM_001136472	NP_001129944	Coding	chr16:11586950 minus strand	1243034
LITAF	NM_001136473	NP_001129945	Coding	chr16:11586950 minus strand	1243034
LITAF	NM_004862	NP_004853	Coding	chr16:11586373 minus strand	1243035
LMF1	NM_022773	NP_073610	Coding	chr16:970984 minus strand	1243036
LOC100129697	NM_001290330	NP_001277259	Coding	chr16:88940038 plus strand	1243037
LOC100131303	NM_001282442	NP_001269371	Coding	chr16:68015911 minus strand	1243038
LOC100287036	NM_001242885	NP_001229814	Coding	chr16:89321132 plus strand	1243039
LOC100862671	NM_001256829	NP_001243758	Coding	chr16:30740190 plus strand	1243040
LOC388282	NM_001278081	NP_001265010	Coding	chr16:57810636 plus strand	1243041

【１０５４】

LOC643802	NM_001207030	NP_001193959	Coding	chr16:53371129 minus strand	1243042
LOC729159	NM_001282301	NP_001269230	Coding	chr16:60359763 minus strand	1243043
LOC730183	NM_001256932	NP_001243861	Coding	chr16:30698489 minus strand	1243044
LOC81691	NM_001144924	NP_001138396	Coding	chr16:20806444 plus strand	1243045
LOC81691	NM_001199053	NP_001185982	Coding	chr16:20806444 plus strand	1243045
LOC81691	NM_030941	NP_112203	Coding	chr16:20806444 plus strand	1243045
LONP2	NM_001300948	NP_001287877	Coding	chr16:48244166 plus strand	1243046
LONP2	NM_031490	NP_113678	Coding	chr16:48244166 plus strand	1243046
LPCAT2	NM_017839	NP_060309	Coding	chr16:55509000 plus strand	1243047
LRRC29	NM_001004055	NP_001004055	Coding	chr16:67226998 minus strand	1243048
LRRC29	NM_012163	NP_036295	Coding	chr16:67226818 minus strand	1243049
LRRC36	NM_001161575	NP_001155047	Coding	chr16:67347354 plus strand	1243050
LRRC36	NM_018296	NP_060766	Coding	chr16:67326843 plus strand	1243051
LUC7L	NM_018032	NP_060502	Coding	chr16:229450 minus strand	1243052
LUC7L	NM_201412	NP_958815	Coding	chr16:229450 minus strand	1243052
LYRM1	NM_001128301	NP_001121773	Coding	chr16:20900665 plus strand	1243053
LYRM1	NM_001128302	NP_001121774	Coding	chr16:20900665 plus strand	1243053
LYRM1	NM_001302835	NP_001289764	Coding	chr16:20901103 plus strand	1243054
LYRM1	NM_001302836	NP_001289765	Coding	chr16:20900297 plus strand	1243055
LYRM1	NM_020424	NP_065157	Coding	chr16:20899867 plus strand	1243056
MAF	NM_001031804	NP_001026974	Coding	chr16:79600725 minus strand	1243057
MAF	NM_005360	NP_005351	Coding	chr16:79600725 minus strand	1243057
MAP1LC3B	NM_022818	NP_073729	Coding	chr16:87392194 plus strand	1243058
MAPK3	NM_001040056	NP_001035145	Coding	chr16:30123309 minus strand	1243059
MAPK3	NM_001109891	NP_001103361	Coding	chr16:30123309 minus strand	1243059
MAPK3	NM_002746	NP_002737	Coding	chr16:30123309 minus strand	1243059
MAPK8IP3	NM_001040439	NP_001035529	Coding	chr16:1706219 plus strand	1243060
MAPK8IP3	NM_015133	NP_055948	Coding	chr16:1706219 plus strand	1243060
MARVELD3	NM_001017967	NP_001017967	Coding	chr16:71626152 plus	1243061

【１０５５】

				strand	
MARVELD3	NM_001271329	NP_001258258	Coding	chr16:71626152 plus strand	1243061
MARVELD3	NM_052858	NP_443090	Coding	chr16:71626152 plus strand	1243061
MAZ	NM_001042539	NP_001036004	Coding	chr16:29806536 plus strand	1243062
MAZ	NM_001276275	NP_001263204	Coding	chr16:29806095 plus strand	1243063
MAZ	NM_001276276	NP_001263205	Coding	chr16:29806536 plus strand	1243062
MAZ	NM_002383	NP_002374	Coding	chr16:29806536 plus strand	1243062
MBTPS1	NM_003791	NP_003782	Coding	chr16:84116943 minus strand	1243064
MC1R	NM_002386	NP_002377	Coding	chr16:89917878 plus strand	1243065
MEFV	NM_000243	NP_000234	Coding	chr16:3256627 minus strand	1243066
MEFV	NM_001198536	NP_001185465	Coding	chr16:3256627 minus strand	1243066
MEIOB	NM_001163560	NP_001157032	Coding	chr16:1872178 minus strand	1243067
MEIOB	NM_152764	NP_689977	Coding	chr16:1872101 minus strand	1243068
METRN	NM_024042	NP_076947	Coding	chr16:715172 plus strand	1243069
METTL22	NM_024109	NP_077014	Coding	chr16:8621669 plus strand	1243070
METTL9	NM_001077180	NP_001070648	Coding	chr16:21599475 plus strand	1243071
METTL9	NM_001288659	NP_001275588	Coding	chr16:21597220 plus strand	1243072
METTL9	NM_001288660	NP_001275589	Coding	chr16:21597220 plus strand	1243072
METTL9	NM_016025	NP_057109	Coding	chr16:21599475 plus strand	1243071
MGRN1	NM_001142289	NP_001135761	Coding	chr16:4624823 plus strand	1243073
MGRN1	NM_001142290	NP_001135762	Coding	chr16:4624823 plus strand	1243073
MGRN1	NM_001142291	NP_001135763	Coding	chr16:4624823 plus strand	1243073
MGRN1	NM_015246	NP_056061	Coding	chr16:4624823 plus strand	1243073
MKL2	NM_014048	NP_054767	Coding	chr16:14071338 plus strand	1243074
MLKL	NM_001142497	NP_001135969	Coding	chr16:74700891 minus strand	1243075
MLKL	NM_152649	NP_689862	Coding	chr16:74700891 minus strand	1243075
MLST8	NM_001199173	NP_001186102	Coding	chr16:2205176 plus strand	1243076
MLST8	NM_001199174	NP_001186103	Coding	chr16:2205730 plus strand	1243077
MLST8	NM_001199175	NP_001186104	Coding	chr16:2205176 plus strand	1243076
MLST8	NM_022372	NP_071767	Coding	chr16:2205176 plus strand	1243076
MLYCD	NM_012213	NP_036345	Coding	chr16:83899124 plus strand	1243078

【１０５６】

MMP15	NM_002428	NP_002419	Coding	chr16:58025377 plus strand	1243079
MMP2	NM_001127891	NP_001121363	Coding	chr16:55481556 plus strand	1243080
MMP2	NM_001302508	NP_001289437	Coding	chr16:55478829 plus strand	1243081
MMP2	NM_001302509	NP_001289438	Coding	chr16:55480532 plus strand	1243082
MMP2	NM_001302510	NP_001289439	Coding	chr16:55479997 plus strand	1243083
MMP2	NM_004530	NP_004521	Coding	chr16:55479168 plus strand	1243084
MMP25	NM_022468	NP_071913	Coding	chr16:3046680 plus strand	1243085
MON1B	NM_001286639	NP_001273568	Coding	chr16:77190918 plus strand	1243086
MON1B	NM_001286640	NP_001273569	Coding	chr16:77190918 plus strand	1243086
MON1B	NM_014940	NP_055755	Coding	chr16:77190918 plus strand	1243086
MPG	NM_001015052	NP_001015052	Coding	chr16:78169 plus strand	1243087
MPG	NM_001015054	NP_001015054	Coding	chr16:77018 plus strand	1243088
MPG	NM_002434	NP_002425	Coding	chr16:78169 plus strand	1243087
MPHOSPH6	NM_005792	NP_005783	Coding	chr16:82170224 minus strand	1243089
MPV17L	NM_001128423	NP_001121895	Coding	chr16:15395753 plus strand	1243090
MPV17L	NM_173803	NP_776164	Coding	chr16:15395753 plus strand	1243090
MRPL28	NM_006428	NP_006419	Coding	chr16:370569 minus strand	1243091
MRPS34	NM_001300900	NP_001287829	Coding	chr16:1773139 minus strand	1243092
MRPS34	NM_023936	NP_076425	Coding	chr16:1773139 minus strand	1243092
MSLN	NM_001177355	NP_001170826	Coding	chr16:760765 plus strand	1243093
MSLN	NM_005823	NP_005814	Coding	chr16:760764 plus strand	1243094
MSLN	NM_013404	NP_037536	Coding	chr16:761072 plus strand	1243095
MSRB1	NM_016332	NP_057416	Coding	chr16:1943293 minus strand	1243096
MT1A	NM_005946	NP_005937	Coding	chr16:56638665 plus strand	1243097
MT1B	NM_005947	NP_005938	Coding	chr16:56651898 plus strand	1243098
MT1E	NM_175617	NP_783316	Coding	chr16:56625672 plus strand	1243099
MT1F	NM_001301272	NP_001288201	Coding	chr16:56657942 plus strand	1243100
MT1F	NM_005949	NP_005940	Coding	chr16:56657942 plus strand	1243100
MT1G	NM_001301267	NP_001288196	Coding	chr16:56668065 minus strand	1243101
MT1G	NM_005950	NP_005941	Coding	chr16:56668065 minus strand	1243101

【１０５７】

MT1H	NM_005951	NP_005942	Coding	chr16:56669813 plus strand	1243102
MT1M	NM_176870	NP_789846	Coding	chr16:56632621 plus strand	1243103
MT1X	NM_005952	NP_005943	Coding	chr16:56682469 plus strand	1243104
MT2A	NM_005953	NP_005944	Coding	chr16:56608565 plus strand	1243105
MT3	NM_005954	NP_005945	Coding	chr16:56589354 plus strand	1243106
MT4	NM_032935	NP_116324	Coding	chr16:56565048 plus strand	1243107
MTHFSD	NM_001159377	NP_001152849	Coding	chr16:86555235 minus strand	1243108
MTHFSD	NM_001159378	NP_001152850	Coding	chr16:86555235 minus strand	1243108
MTHFSD	NM_001159379	NP_001152851	Coding	chr16:86555235 minus strand	1243108
MTHFSD	NM_001159380	NP_001152852	Coding	chr16:86555203 minus strand	1243109
MTHFSD	NM_022764	NP_073601	Coding	chr16:86555235 minus strand	1243108
MTRNR2L4	NM_001190476	NP_001177405	Coding	chr16:3372283 minus strand	1243110
MTSS1L	NM_138383	NP_612392	Coding	chr16:70686051 minus strand	1243111
MVD	NM_002461	NP_002452	Coding	chr16:88663087 minus strand	1243112
MVP	NM_001293204	NP_001280133	Coding	chr16:29830514 plus strand	1243113
MVP	NM_001293205	NP_001280134	Coding	chr16:29830514 plus strand	1243113
MVP	NM_005115	NP_005106	Coding	chr16:29820393 plus strand	1243114
MVP	NM_017458	NP_059447	Coding	chr16:29820393 plus strand	1243114
MYH11	NM_001040113	NP_001035202	Coding	chr16:15857030 minus strand	1243115
MYH11	NM_001040114	NP_001035203	Coding	chr16:15857030 minus strand	1243115
MYH11	NM_002474	NP_002465	Coding	chr16:15857030 minus strand	1243115
MYH11	NM_022844	NP_074035	Coding	chr16:15857030 minus strand	1243115
MYLK3	NM_182493	NP_872299	Coding	chr16:46748309 minus strand	1243116
MYLPF	NM_013292	NP_037424	Coding	chr16:30374801 plus strand	1243117
N4BP1	NM_153029	NP_694574	Coding	chr16:48610209 minus strand	1243118
NAA60	NM_001083600	NP_001077069	Coding	chr16:3457991 plus strand	1243119
NAA60	NM_001083601	NP_001077070	Coding	chr16:3443667 plus strand	1243120
NAA60	NM_024845	NP_079121	Coding	chr16:3457991 plus strand	1243119

【１０５８】

NAE1	NM_001018159	NP_001018169	Coding	chr16:66830976 minus strand	1243121
NAE1	NM_001018160	NP_001018170	Coding	chr16:66830976 minus strand	1243121
NAE1	NM_001286500	NP_001273429	Coding	chr16:66830976 minus strand	1243121
NAE1	NM_003905	NP_003896	Coding	chr16:66830976 minus strand	1243121
NAGPA	NM_016256	NP_057340	Coding	chr16:5033941 minus strand	1243122
NARFL	NM_022493	NP_071938	Coding	chr16:740997 minus strand	1243123
NDE1	NM_001143979	NP_001137451	Coding	chr16:15643266 plus strand	1243124
NDE1	NM_017668	NP_060138	Coding	chr16:15650225 plus strand	1243125
NDRG4	NM_001130487	NP_001123959	Coding	chr16:58464089 plus strand	1243126
NDRG4	NM_001242833	NP_001229762	Coding	chr16:58500142 plus strand	1243127
NDRG4	NM_001242834	NP_001229763	Coding	chr16:58500142 plus strand	1243127
NDRG4	NM_001242835	NP_001229764	Coding	chr16:58500142 plus strand	1243127
NDRG4	NM_001242836	NP_001229765	Coding	chr16:58500142 plus strand	1243127
NDRG4	NM_020465	NP_065198	Coding	chr16:58463644 plus strand	1243128
NDRG4	NM_022910	NP_075061	Coding	chr16:58464821 plus strand	1243129
NDUFAB1	NM_005003	NP_004994	Coding	chr16:23596318 minus strand	1243130
NDUFB10	NM_004548	NP_004539	Coding	chr16:1959515 plus strand	1243131
NECAB2	NM_019065	NP_061938	Coding	chr16:83968631 plus strand	1243132
NETO2	NM_001201477	NP_001188406	Coding	chr16:47144025 minus strand	1243133
NETO2	NM_018092	NP_060562	Coding	chr16:47144025 minus strand	1243133
NFAT5	NM_001113178	NP_001106649	Coding	chr16:69565965 plus strand	1243134
NFAT5	NM_006599	NP_006590	Coding	chr16:69565965 plus strand	1243134
NFAT5	NM_138713	NP_619727	Coding	chr16:69565965 plus strand	1243134
NFAT5	NM_138714	NP_619728	Coding	chr16:69565965 plus strand	1243134
NFAT5	NM_173214	NP_775321	Coding	chr16:69565965 plus strand	1243134
NFAT5	NM_173215	NP_775322	Coding	chr16:69565965 plus strand	1243134
NFATC2IP	NM_032815	NP_116204	Coding	chr16:28950996 plus strand	1243135
NFATC3	NM_004555	NP_004546	Coding	chr16:68085365 plus strand	1243136

【１０５９】

NFATC3	NM_173163	NP_775186	Coding	chr16:68085365 plus strand	1243136
NFATC3	NM_173165	NP_775188	Coding	chr16:68085365 plus strand	1243136
NHLRC4	NM_001301159	NP_001288088	Coding	chr16:566994 plus strand	1243137
NHLRC4	NM_176677	NP_788850	Coding	chr16:566994 plus strand	1243137
NIP7	NM_001199434	NP_001186363	Coding	chr16:69339511 plus strand	1243138
NIP7	NM_016101	NP_057185	Coding	chr16:69339511 plus strand	1243138
NKD1	NM_033119	NP_149110	Coding	chr16:50548329 plus strand	1243139
NLRC3	NM_178844	NP_849172	Coding	chr16:3577404 minus strand	1243140
NLRC5	NM_032206	NP_115582	Coding	chr16:57017073 plus strand	1243141
NME3	NM_002513	NP_002504	Coding	chr16:1771709 minus strand	1243142
NME4	NM_001286433	NP_001273362	Coding	chr16:397191 plus strand	1243143
NME4	NM_001286435	NP_001273364	Coding	chr16:397191 plus strand	1243143
NME4	NM_001286436	NP_001273365	Coding	chr16:396754 plus strand	1243144
NME4	NM_001286438	NP_001273367	Coding	chr16:397191 plus strand	1243143
NME4	NM_001286439	NP_001273368	Coding	chr16:397191 plus strand	1243143
NME4	NM_001286440	NP_001273369	Coding	chr16:397741 plus strand	1243145
NME4	NM_005009	NP_005000	Coding	chr16:397191 plus strand	1243143
NMRAL1	NM_020677	NP_065728	Coding	chr16:4474895 minus strand	1243146
NOB1	NM_014062	NP_054781	Coding	chr16:69754968 minus strand	1243147
NOD2	NM_001293557	NP_001280486	Coding	chr16:50699349 plus strand	1243148
NOD2	NM_022162	NP_071445	Coding	chr16:50697138 plus strand	1243149
NOL3	NM_001185057	NP_001171986	Coding	chr16:67173852 plus strand	1243150
NOL3	NM_001276307	NP_001263236	Coding	chr16:67170496 plus strand	1243151
NOL3	NM_001276309	NP_001263238	Coding	chr16:67170496 plus strand	1243151
NOL3	NM_001276311	NP_001263240	Coding	chr16:67173852 plus strand	1243150
NOL3	NM_001276312	NP_001263241	Coding	chr16:67170496 plus strand	1243151
NOL3	NM_001276319	NP_001263248	Coding	chr16:67170496 plus strand	1243151
NOL3	NM_003946	NP_003937	Coding	chr16:67173852 plus strand	1243150
NOMO1	NM_014287	NP_055102	Coding	chr16:14833785 plus strand	1243152
NOMO2	NM_001004060	NP_001004060	Coding	chr16:18562112 minus strand	1243153

【１０６０】

NOMO2	NM_173614	NP_775885	Coding	chr16:16232594 plus strand	1243154
NOMO2	NM_173614	NP_775885	Coding	chr16:18562112 minus strand	1243153
NOMO3	NM_001004067	NP_001004067	Coding	chr16:16232531 plus strand	1243155
NOXO1	NM_001267721	NP_001254650	Coding	chr16:1981549 minus strand	1243156
NOXO1	NM_144603	NP_653204	Coding	chr16:1981549 minus strand	1243156
NOXO1	NM_172167	NP_751907	Coding	chr16:1981549 minus strand	1243156
NOXO1	NM_172168	NP_751908	Coding	chr16:1981549 minus strand	1243156
NPIPA1	NM_006985	NP_008916	Coding	chr16:14937442 plus strand	1243157
NPIPA1	NM_006985	NP_008916	Coding	chr16:16335929 plus strand	1243158
NPIPA2	NM_001277324	NP_001264253	Coding	chr16:14711688 plus strand	1243159
NPIPA2	NM_001277324	NP_001264253	Coding	chr16:14750812 plus strand	1243160
NPIPA3	NM_001277323	NP_001264252	Coding	chr16:14711688 plus strand	1243161
NPIPA3	NM_001277323	NP_001264252	Coding	chr16:14750812 plus strand	1243162
NPIPA5	NM_001277325	NP_001264254	Coding	chr16:15378294 minus strand	1243163
NPIPA7	NM_001282507	NP_001269436	Coding	chr16:16335929 plus strand	1243164
NPIPA7	NM_001282507	NP_001269436	Coding	chr16:16379244 plus strand	1243165
NPIPA7	NM_001282507	NP_001269436	Coding	chr16:18332662 minus strand	1243166
NPIPA8	NM_001282511	NP_001269440	Coding	chr16:16335929 plus strand	1243167
NPIPA8	NM_001282511	NP_001269440	Coding	chr16:16379244 plus strand	1243168
NPIPA8	NM_001282511	NP_001269440	Coding	chr16:18332662 minus strand	1243169
NPIPB3	NM_130464	NP_569731	Coding	chr16:21425337 minus strand	1243170
NPIPB5	NM_001135865	NP_001129337	Coding	chr16:22513522 plus strand	1243171
NPIPB6	NM_001282524	NP_001269453	Coding	chr16:28362860 minus strand	1243172
NPIPB9	NM_001287250	NP_001274179	Coding	chr16:28752434 plus strand	1243173
NPIPB9	NM_001287251	NP_001274180	Coding	chr16:28752434 plus strand	1243173
NPRL3	NM_001039476	NP_001034565	Coding	chr16:138698 minus strand	1243174
NPRL3	NM_001077350	NP_001070818	Coding	chr16:138698 minus strand	1243174
NPRL3	NM_001243247	NP_001230176	Coding	chr16:138698 minus strand	1243174

【１０６１】

NPRL3	NM_001243248	NP_001230177	Coding	chr16:138698 minus strand	1243174
NPRL3	NM_001243249	NP_001230178	Coding	chr16:138698 minus strand	1243174
NPW	NM_001099456	NP_001092926	Coding	chr16:2019519 plus strand	1243175
NQO1	NM_000903	NP_000894	Coding	chr16:69726630 minus strand	1243176
NQO1	NM_001025433	NP_001020604	Coding	chr16:69726630 minus strand	1243176
NQO1	NM_001025434	NP_001020605	Coding	chr16:69726630 minus strand	1243176
NQO1	NM_001286137	NP_001273066	Coding	chr16:69726668 minus strand	1243177
NRN1L	NM_198443	NP_940845	Coding	chr16:67884877 plus strand	1243178
NSMCE1	NM_145080	NP_659547	Coding	chr16:27268792 minus strand	1243179
NTAN1	NM_001270766	NP_001257695	Coding	chr16:15056079 minus strand	1243180
NTAN1	NM_001270767	NP_001257696	Coding	chr16:15056079 minus strand	1243180
NTAN1	NM_173474	NP_775745	Coding	chr16:15056079 minus strand	1243180
NTHL1	NM_002528	NP_002519	Coding	chr16:2047866 minus strand	1243181
NTN3	NM_006181	NP_006172	Coding	chr16:2471498 plus strand	1243182
NUBP1	NM_001278506	NP_001265435	Coding	chr16:10743785 plus strand	1243183
NUBP1	NM_002484	NP_002475	Coding	chr16:10743785 plus strand	1243183
NUBP2	NM_001284501	NP_001271430	Coding	chr16:1782922 plus strand	1243184
NUBP2	NM_001284502	NP_001271431	Coding	chr16:1782922 plus strand	1243184
NUBP2	NM_012225	NP_036357	Coding	chr16:1782922 plus strand	1243184
NUDT16L1	NM_001193452	NP_001180381	Coding	chr16:4693692 plus strand	1243185
NUDT16L1	NM_032349	NP_115725	Coding	chr16:4693692 plus strand	1243185
NUDT21	NM_007006	NP_008937	Coding	chr16:56451349 minus strand	1243186
NUDT7	NM_001105663	NP_001099133	Coding	chr16:77722491 plus strand	1243187
NUDT7	NM_001243657	NP_001230586	Coding	chr16:77722491 plus strand	1243187
NUDT7	NM_001243660	NP_001230589	Coding	chr16:77722491 plus strand	1243187
NUDT7	NM_001243661	NP_001230590	Coding	chr16:77722491 plus strand	1243187
NUP93	NM_001242795	NP_001229724	Coding	chr16:56781791 plus strand	1243188
NUP93	NM_001242796	NP_001229725	Coding	chr16:56783500 plus strand	1243189
NUP93	NM_014669	NP_055484	Coding	chr16:56730104 plus strand	1243190
NUPR1	NM_001042483	NP_001035948	Coding	chr16:28539174 minus strand	1243191

【１０６２】

NUPR1	NM_012385	NP_036517	Coding	chr16:28539174 minus strand	1243191
NUTF2	NM_005796	NP_005787	Coding	chr16:67846915 plus strand	1243192
OGFOD1	NM_018233	NP_060703	Coding	chr16:56451511 plus strand	1243193
OR1F1	NM_012360	NP_036492	Coding	chr16:3204246 plus strand	1243194
OR2C1	NM_012368	NP_036500	Coding	chr16:3355888 plus strand	1243195
ORAI3	NM_152288	NP_689501	Coding	chr16:30949083 plus strand	1243196
ORC6	NM_014321	NP_055136	Coding	chr16:46689645 plus strand	1243197
OSGIN1	NM_182981	NP_892026	Coding	chr16:83953221 plus strand	1243198
OTOA	NM_001161683	NP_001155155	Coding	chr16:21684428 plus strand	1243199
OTOA	NM_144672	NP_653273	Coding	chr16:21678513 plus strand	1243200
OTOA	NM_170664	NP_733764	Coding	chr16:21704962 plus strand	1243201
PABPN1L	NM_001080487	NP_001073956	Coding	chr16:88866660 minus strand	1243202
PABPN1L	NM_001294328	NP_001281257	Coding	chr16:88866660 minus strand	1243202
PAGR1	NM_024516	NP_078792	Coding	chr16:29816206 plus strand	1243203
PALB2	NM_024675	NP_078951	Coding	chr16:23641357 minus strand	1243204
PAM16	NM_016069	NP_057153	Coding	chr16:4351372 minus strand	1243205
PAPD5	NM_001040284	NP_001035374	Coding	chr16:50152917 plus strand	1243206
PAPD5	NM_001040285	NP_001035375	Coding	chr16:50152917 plus strand	1243206
PAQR4	NM_001284511	NP_001271440	Coding	chr16:2969244 plus strand	1243207
PAQR4	NM_001284512	NP_001271441	Coding	chr16:2969244 plus strand	1243207
PAQR4	NM_001284513	NP_001271442	Coding	chr16:2969341 plus strand	1243208
PAQR4	NM_152341	NP_689554	Coding	chr16:2969244 plus strand	1243207
PARD6A	NM_001037281	NP_001032358	Coding	chr16:67660947 plus strand	1243209
PARD6A	NM_016948	NP_058644	Coding	chr16:67660947 plus strand	1243209
PARN	NM_001134477	NP_001127949	Coding	chr16:14630271 minus strand	1243210
PARN	NM_001242992	NP_001229921	Coding	chr16:14630271 minus strand	1243210
PARN	NM_002582	NP_002573	Coding	chr16:14630271 minus strand	1243210
PDF	NM_022341	NP_071736	Coding	chr16:69330595 minus strand	1243211
PDIA2	NM_006849	NP_006840	Coding	chr16:283117 plus strand	1243212
PDILT	NM_174924	NP_777584	Coding	chr16:20404711 minus	1243213

【１０６３】

				strand	
PDP2	NM_020786	NP_065837	Coding	chr16:66880479 plus strand	1243214
PDPK1	NM_001261816	NP_001248745	Coding	chr16:2537963 plus strand	1243215
PDPK1	NM_002613	NP_002604	Coding	chr16:2537963 plus strand	1243215
PDPK1	NM_031268	NP_112558	Coding	chr16:2537963 plus strand	1243215
PDPR	NM_017990	NP_060460	Coding	chr16:70113625 plus strand	1243216
PDXDC1	NM_001285444	NP_001272373	Coding	chr16:14974962 plus strand	1243217
PDXDC1	NM_001285445	NP_001272374	Coding	chr16:14974962 plus strand	1243217
PDXDC1	NM_001285447	NP_001272376	Coding	chr16:14974734 plus strand	1243218
PDXDC1	NM_001285448	NP_001272377	Coding	chr16:14974802 plus strand	1243219
PDXDC1	NM_001285449	NP_001272378	Coding	chr16:14974962 plus strand	1243217
PDXDC1	NM_001285450	NP_001272379	Coding	chr16:14974962 plus strand	1243217
PDXDC1	NM_015027	NP_055842	Coding	chr16:14974962 plus strand	1243217
PDZD9	NM_173806	NP_776167	Coding	chr16:22001110 minus strand	1243220
PGP	NM_001042371	NP_001035830	Coding	chr16:2214821 minus strand	1243221
PHKB	NM_000293	NP_000284	Coding	chr16:47461298 plus strand	1243222
PHKB	NM_001031835	NP_001027005	Coding	chr16:47461298 plus strand	1243222
PHKG2	NM_000294	NP_000285	Coding	chr16:30748298 plus strand	1243223
PHKG2	NM_001172432	NP_001165903	Coding	chr16:30748298 plus strand	1243223
PHLPP2	NM_001289003	NP_001275932	Coding	chr16:71715840 minus strand	1243224
PHLPP2	NM_015020	NP_055835	Coding	chr16:71724701 minus strand	1243225
PIEZO1	NM_001142864	NP_001136336	Coding	chr16:88784964 minus strand	1243226
PIGQ	NM_004204	NP_004195	Coding	chr16:569967 plus strand	1243227
PIGQ	NM_148920	NP_683721	Coding	chr16:569967 plus strand	1243227
PKD1	NM_000296	NP_000287	Coding	chr16:2135898 minus strand	1243228
PKD1	NM_001009944	NP_001009944	Coding	chr16:2135898 minus strand	1243228
PKD1L2	NM_001076780	NP_001070248	Coding	chr16:81220370 minus strand	1243229
PKD1L2	NM_001278423	NP_001265352	Coding	chr16:81181362 minus strand	1243230
PKD1L2	NM_001278425	NP_001265354	Coding	chr16:81181362 minus strand	1243230

【１０６４】

PKD1L2	NM_052892	NP_443124	Coding	chr16:81220370 minus strand	1243229
PKD1L3	NM_181536	NP_853514	Coding	chr16:71999978 minus strand	1243231
PKMYT1	NM_001258450	NP_001245379	Coding	chr16:2980539 minus strand	1243232
PKMYT1	NM_001258451	NP_001245380	Coding	chr16:2980539 minus strand	1243232
PKMYT1	NM_004203	NP_004194	Coding	chr16:2980539 minus strand	1243232
PKMYT1	NM_182687	NP_872629	Coding	chr16:2980539 minus strand	1243232
PLA2G10	NM_003561	NP_003552	Coding	chr16:14694669 minus strand	1243233
PLA2G15	NM_012320	NP_036452	Coding	chr16:68245343 plus strand	1243234
PLCG2	NM_002661	NP_002652	Coding	chr16:81779257 plus strand	1243235
PLEKHG4	NM_001129727	NP_001123199	Coding	chr16:67278172 plus strand	1243236
PLEKHG4	NM_001129728	NP_001123200	Coding	chr16:67279146 plus strand	1243237
PLEKHG4	NM_001129729	NP_001123201	Coding	chr16:67279585 plus strand	1243238
PLEKHG4	NM_001129731	NP_001123203	Coding	chr16:67279588 plus strand	1243239
PLEKHG4	NM_015432	NP_056247	Coding	chr16:67277509 plus strand	1243240
PLK1	NM_005030	NP_005021	Coding	chr16:23678879 plus strand	1243241
PLLP	NM_015993	NP_057077	Coding	chr16:57284672 minus strand	1243242
PMFBP1	NM_001160213	NP_001153685	Coding	chr16:72172450 minus strand	1243243
PMFBP1	NM_031293	NP_112583	Coding	chr16:72172165 minus strand	1243244
PMM2	NM_000303	NP_000294	Coding	chr16:8797812 plus strand	1243245
POLR2C	NM_032940	NP_116558	Coding	chr16:57462638 plus strand	1243246
POLR3E	NM_001258033	NP_001244962	Coding	chr16:22297374 plus strand	1243247
POLR3E	NM_001258034	NP_001244963	Coding	chr16:22297374 plus strand	1243247
POLR3E	NM_001258035	NP_001244964	Coding	chr16:22297374 plus strand	1243247
POLR3E	NM_001258036	NP_001244965	Coding	chr16:22297374 plus strand	1243247
POLR3E	NM_018119	NP_060589	Coding	chr16:22297374 plus strand	1243247
POLR3K	NM_016310	NP_057394	Coding	chr16:53632 minus strand	1243248
PPL	NM_002705	NP_002696	Coding	chr16:4937135 minus strand	1243249
PPP4C	NM_002720	NP_002711	Coding	chr16:30076062 plus strand	1243250

【１０６５】

PRDM7	NM_001098173	NP_001091643	Coding	chr16:90075930 minus strand	1243251
PRKCB	NM_002738	NP_002729	Coding	chr16:23835978 plus strand	1243252
PRKCB	NM_212535	NP_997700	Coding	chr16:23835978 plus strand	1243252
PRM1	NM_002761	NP_002752	Coding	chr16:11281335 minus strand	1243253
PRM2	NM_001286356	NP_001273285	Coding	chr16:11276480 minus strand	1243254
PRM2	NM_001286357	NP_001273286	Coding	chr16:11276480 minus strand	1243254
PRM2	NM_001286358	NP_001273287	Coding	chr16:11276480 minus strand	1243254
PRM2	NM_001286359	NP_001273288	Coding	chr16:11276480 minus strand	1243254
PRM2	NM_002762	NP_002753	Coding	chr16:11276480 minus strand	1243254
PRM3	NM_021247	NP_067070	Coding	chr16:11273595 minus strand	1243255
PRMT7	NM_001184824	NP_001171753	Coding	chr16:68310973 plus strand	1243256
PRMT7	NM_001290018	NP_001276947	Coding	chr16:68311113 plus strand	1243257
PRMT7	NM_019023	NP_061896	Coding	chr16:68310973 plus strand	1243256
PRR14	NM_024031	NP_076936	Coding	chr16:30650919 plus strand	1243258
PRR25	NM_001013638	NP_001013660	Coding	chr16:805442 plus strand	1243259
PRR35	NM_145270	NP_660313	Coding	chr16:560421 plus strand	1243260
PRRT2	NM_001256442	NP_001243371	Coding	chr16:29812087 plus strand	1243261
PRRT2	NM_001256443	NP_001243372	Coding	chr16:29812087 plus strand	1243261
PRRT2	NM_145239	NP_660282	Coding	chr16:29812087 plus strand	1243261
PRSS21	NM_001270452	NP_001257381	Coding	chr16:2817162 plus strand	1243262
PRSS21	NM_006799	NP_006790	Coding	chr16:2817162 plus strand	1243262
PRSS21	NM_144956	NP_659205	Coding	chr16:2817162 plus strand	1243262
PRSS21	NM_144957	NP_659206	Coding	chr16:2817162 plus strand	1243262
PRSS22	NM_022119	NP_071402	Coding	chr16:2858170 minus strand	1243263
PRSS27	NM_031948	NP_114154	Coding	chr16:2720551 minus strand	1243264
PRSS33	NM_152891	NP_690851	Coding	chr16:2786707 minus strand	1243265
PRSS36	NM_001258290	NP_001245219	Coding	chr16:31150094 minus strand	1243266
PRSS36	NM_001258291	NP_001245220	Coding	chr16:31150094 minus strand	1243266
PRSS36	NM_173502	NP_775773	Coding	chr16:31150094 minus strand	1243266

【１０６６】

PRSS41	NM_001135086	NP_001128558	Coding	chr16:2798484 plus strand	1243267
PRSS53	NM_001039503	NP_001034592	Coding	chr16:31088809 minus strand	1243268
PRSS54	NM_001080492	NP_001073961	Coding	chr16:58295047 minus strand	1243269
PRSS8	NM_002773	NP_002764	Coding	chr16:31135830 minus strand	1243270
PSKH1	NM_006742	NP_006733	Coding	chr16:67893271 plus strand	1243271
PSMB10	NM_002801	NP_002792	Coding	chr16:67936877 minus strand	1243272
PSMD7	NM_002811	NP_002802	Coding	chr16:74296774 plus strand	1243273
PTX4	NM_001013658	NP_001013680	Coding	chr16:1488467 minus strand	1243274
PYCARD	NM_013258	NP_037390	Coding	chr16:31202776 minus strand	1243275
PYCARD	NM_145182	NP_660183	Coding	chr16:31202776 minus strand	1243275
PYDC1	NM_152901	NP_690865	Coding	chr16:31217074 minus strand	1243276
QPRT	NM_014298	NP_055113	Coding	chr16:29679119 plus strand	1243277
RAB11FIP3	NM_001142272	NP_001135744	Coding	chr16:474849 plus strand	1243278
RAB11FIP3	NM_014700	NP_055515	Coding	chr16:425667 plus strand	1243279
RAB26	NM_014353	NP_055168	Coding	chr16:2148649 plus strand	1243280
RAB40C	NM_001172663	NP_001166134	Coding	chr16:589356 plus strand	1243281
RAB40C	NM_001172664	NP_001166135	Coding	chr16:589668 plus strand	1243282
RAB40C	NM_001172665	NP_001166136	Coding	chr16:590076 plus strand	1243283
RAB40C	NM_001172666	NP_001166137	Coding	chr16:590076 plus strand	1243283
RAB40C	NM_021168	NP_066991	Coding	chr16:590172 plus strand	1243284
RABEP2	NM_024816	NP_079092	Coding	chr16:28925211 minus strand	1243285
RANBP10	NM_020850	NP_065901	Coding	chr16:67806652 minus strand	1243286
RBBP6	NM_006910	NP_008841	Coding	chr16:24539586 plus strand	1243287
RBBP6	NM_018703	NP_061173	Coding	chr16:24539586 plus strand	1243287
RBBP6	NM_032626	NP_116015	Coding	chr16:24539586 plus strand	1243287
RBFOX1	NM_001142333	NP_001135805	Coding	chr16:6019130 plus strand	1243288
RBFOX1	NM_001142334	NP_001135806	Coding	chr16:6773808 plus strand	1243289
RBFOX1	NM_018723	NP_061193	Coding	chr16:6019130 plus strand	1243288
RBFOX1	NM_145891	NP_665898	Coding	chr16:7332749 plus strand	1243290
RBFOX1	NM_145892	NP_665899	Coding	chr16:7332749 plus strand	1243290
RBFOX1	NM_145893	NP_665900	Coding	chr16:7332749 plus strand	1243290
RBL2	NM_005611	NP_005602	Coding	chr16:53434438 plus strand	1243291
RFWD3	NM_018124	NP_060594	Coding	chr16:74666881 minus	1243292

【１０６７】

				strand	
RGS11	NM_001286485	NP_001273414	Coding	chr16:275943 minus strand	1243293
RGS11	NM_001286486	NP_001273415	Coding	chr16:275943 minus strand	1243293
RGS11	NM_003834	NP_003825	Coding	chr16:275943 minus strand	1243293
RGS11	NM_183337	NP_899180	Coding	chr16:275943 minus strand	1243293
RHBDF1	NM_022450	NP_071895	Coding	chr16:72631 minus strand	1243294
RHBDL1	NM_001278720	NP_001265649	Coding	chr16:675665 plus strand	1243295
RHBDL1	NM_001278721	NP_001265650	Coding	chr16:675665 plus strand	1243295
RHOT2	NM_138769	NP_620124	Coding	chr16:668082 plus strand	1243296
RLTPR	NM_001013838	NP_001013860	Coding	chr16:67645126 plus strand	1243297
RMI2	NM_152308	NP_689521	Coding	chr16:11345453 plus strand	1243298
RNF151	NM_174903	NP_777563	Coding	chr16:1966873 plus strand	1243299
RNF166	NM_001171815	NP_001165286	Coding	chr16:88706392 minus strand	1243300
RNF166	NM_001171816	NP_001165287	Coding	chr16:88703617 minus strand	1243301
RNF166	NM_178841	NP_849163	Coding	chr16:88706421 minus strand	1243302
RNF40	NM_001207033	NP_001193962	Coding	chr16:30761611 plus strand	1243303
RNF40	NM_001207034	NP_001193963	Coding	chr16:30761611 plus strand	1243303
RNF40	NM_001286572	NP_001273501	Coding	chr16:30762288 plus strand	1243304
RNF40	NM_014771	NP_055586	Coding	chr16:30761611 plus strand	1243303
RNPS1	NM_001286625	NP_001273554	Coding	chr16:2267337 minus strand	1243305
RNPS1	NM_001286626	NP_001273555	Coding	chr16:2268412 minus strand	1243306
RNPS1	NM_001286627	NP_001273556	Coding	chr16:2268412 minus strand	1243306
RNPS1	NM_006711	NP_006702	Coding	chr16:2267886 minus strand	1243307
RNPS1	NM_080594	NP_542161	Coding	chr16:2268412 minus strand	1243306
ROGDI	NM_024589	NP_078865	Coding	chr16:4802950 minus strand	1243308
RPGRIP1L	NM_001127897	NP_001121369	Coding	chr16:53703859 minus strand	1243309
RPGRIP1L	NM_015272	NP_056087	Coding	chr16:53703859 minus strand	1243309
RPL13	NM_000977	NP_000968	Coding	chr16:89560656 plus strand	1243310
RPL13	NM_001243130	NP_001230059	Coding	chr16:89560656 plus strand	1243310
RPL13	NM_001243131	NP_001230060	Coding	chr16:89560656 plus strand	1243310
RPL13	NM_033251	NP_150254	Coding	chr16:89560710 plus	1243311

【１０６８】

				strand	
RPL3L	NM_005061	NP_005052	Coding	chr16:1954678 minus strand	1243312
RPS15A	NM_001019	NP_001010	Coding	chr16:18790334 minus strand	1243313
RPS15A	NM_001030009	NP_001025180	Coding	chr16:18790334 minus strand	1243313
RPS2	NM_002952	NP_002943	Coding	chr16:1964826 minus strand	1243314
RPUSD1	NM_058192	NP_478072	Coding	chr16:788383 minus strand	1243315
RRAD	NM_001128850	NP_001122322	Coding	chr16:66925536 minus strand	1243316
RRAD	NM_004165	NP_004156	Coding	chr16:66925536 minus strand	1243316
RRN3	NM_001301064	NP_001287993	Coding	chr16:15094335 minus strand	1243317
RRN3	NM_018427	NP_060897	Coding	chr16:15094335 minus strand	1243317
RSL1D1	NM_015659	NP_056474	Coding	chr16:11851585 minus strand	1243318
RSPRY1	NM_133368	NP_588609	Coding	chr16:57186328 plus strand	1243319
SALL1	NM_001127892	NP_001121364	Coding	chr16:51150597 minus strand	1243320
SALL1	NM_002968	NP_002959	Coding	chr16:51151272 minus strand	1243321
SBK1	NM_001024401	NP_001019572	Coding	chr16:28292518 plus strand	1243322
SCNN1B	NM_000336	NP_000327	Coding	chr16:23302269 plus strand	1243323
SCNN1G	NM_001039	NP_001030	Coding	chr16:23182718 plus strand	1243324
SDR42E1	NM_145168	NP_660151	Coding	chr16:82011488 minus strand	1243325
SEC14L5	NM_014692	NP_055507	Coding	chr16:4958316 plus strand	1243326
SEPHS2	NM_012248	NP_036380	Coding	chr16:30445975 minus strand	1243327
SEPT1	NM_052838	NP_443070	Coding	chr16:30382850 minus strand	1243328
SEPT12	NM_001154458	NP_001147930	Coding	chr16:4788521 minus strand	1243329
SEPT12	NM_144605	NP_653206	Coding	chr16:4788521 minus strand	1243329
SETD1A	NM_014712	NP_055527	Coding	chr16:30957293 plus strand	1243330
SETD6	NM_001160305	NP_001153777	Coding	chr16:58515478 plus strand	1243331
SETD6	NM_024860	NP_079136	Coding	chr16:58515478 plus strand	1243331
SEZ6L2	NM_001114099	NP_001107571	Coding	chr16:29899264 minus strand	1243332
SEZ6L2	NM_001114100	NP_001107572	Coding	chr16:29899264 minus strand	1243332

【１０６９】

SEZ6L2	NM_001243332	NP_001230261	Coding	chr16:29899264 minus strand	1243332
SEZ6L2	NM_001243333	NP_001230262	Coding	chr16:29899264 minus strand	1243332
SEZ6L2	NM_012410	NP_036542	Coding	chr16:29899264 minus strand	1243332
SEZ6L2	NM_201575	NP_963869	Coding	chr16:29899264 minus strand	1243332
SF3B3	NM_012426	NP_036558	Coding	chr16:70523787 plus strand	1243333
SH2B1	NM_001145795	NP_001139267	Coding	chr16:28863756 plus strand	1243334
SH2B1	NM_001145796	NP_001139268	Coding	chr16:28863756 plus strand	1243334
SH2B1	NM_001145797	NP_001139269	Coding	chr16:28863756 plus strand	1243334
SH2B1	NM_001145812	NP_001139284	Coding	chr16:28863974 plus strand	1243335
SH2B1	NM_015503	NP_056318	Coding	chr16:28863992 plus strand	1243336
SHCBP1	NM_024745	NP_079021	Coding	chr16:46621399 minus strand	1243337
SHISA9	NM_001145204	NP_001138676	Coding	chr16:12901619 plus strand	1243338
SHISA9	NM_001145205	NP_001138677	Coding	chr16:12901619 plus strand	1243338
SIAH1	NM_001006610	NP_001006611	Coding	chr16:48365873 minus strand	1243339
SIAH1	NM_003031	NP_003022	Coding	chr16:48385318 minus strand	1243340
SLC12A3	NM_000339	NP_000330	Coding	chr16:56865206 plus strand	1243341
SLC12A3	NM_001126107	NP_001119579	Coding	chr16:56865206 plus strand	1243341
SLC12A3	NM_001126108	NP_001119580	Coding	chr16:56865206 plus strand	1243341
SLC12A4	NM_001145961	NP_001139433	Coding	chr16:67968694 minus strand	1243342
SLC12A4	NM_001145962	NP_001139434	Coding	chr16:67968694 minus strand	1243342
SLC12A4	NM_001145963	NP_001139435	Coding	chr16:67964065 minus strand	1243343
SLC12A4	NM_001145964	NP_001139436	Coding	chr16:67966878 minus strand	1243344
SLC12A4	NM_005072	NP_005063	Coding	chr16:67968694 minus strand	1243342
SLC22A31	NM_001242757	NP_001229686	Coding	chr16:89200121 minus strand	1243345
SLC38A7	NM_018231	NP_060701	Coding	chr16:58684770 minus strand	1243346
SLC38A8	NM_001080442	NP_001073911	Coding	chr16:84042157 minus strand	1243347
SLC5A11	NM_001258411	NP_001245340	Coding	chr16:24845862 plus strand	1243348

【１０７０】

SLC5A11	NM_001258412	NP_001245341	Coding	chr16:24845862 plus strand	1243348
SLC5A11	NM_001258413	NP_001245342	Coding	chr16:24845862 plus strand	1243348
SLC5A11	NM_001258414	NP_001245343	Coding	chr16:24845862 plus strand	1243348
SLC5A11	NM_052944	NP_443176	Coding	chr16:24846230 plus strand	1243349
SLC5A2	NM_003041	NP_003032	Coding	chr16:31483117 plus strand	1243350
SLC6A2	NM_001043	NP_001034	Coding	chr16:55656439 plus strand	1243351
SLC6A2	NM_001172501	NP_001165972	Coding	chr16:55655629 plus strand	1243352
SLC6A2	NM_001172502	NP_001165973	Coding	chr16:55671670 plus strand	1243353
SLC6A2	NM_001172504	NP_001165975	Coding	chr16:55656643 plus strand	1243354
SLC7A5	NM_003486	NP_003477	Coding	chr16:87869494 minus strand	1243355
SLC7A6	NM_001076785	NP_001070253	Coding	chr16:68264515 plus strand	1243356
SLC7A6	NM_003983	NP_003974	Coding	chr16:68264515 plus strand	1243356
SLC7A6OS	NM_032178	NP_115554	Coding	chr16:68310965 minus strand	1243357
SLC9A3R2	NM_001130012	NP_001123484	Coding	chr16:2026867 plus strand	1243358
SLC9A3R2	NM_001252073	NP_001239002	Coding	chr16:2033263 plus strand	1243359
SLC9A3R2	NM_001252075	NP_001239004	Coding	chr16:2033263 plus strand	1243359
SLC9A3R2	NM_001252076	NP_001239005	Coding	chr16:2033263 plus strand	1243359
SLC9A3R2	NM_004785	NP_004776	Coding	chr16:2026867 plus strand	1243358
SLC9A5	NM_004594	NP_004585	Coding	chr16:67248951 plus strand	1243360
SLX1A	NM_001014999	NP_001014999	Coding	chr16:29454500 plus strand	1243361
SLX1A	NM_001014999	NP_001014999	Coding	chr16:30193842 plus strand	1243362
SLX1A	NM_001015000	NP_001015000	Coding	chr16:29454500 plus strand	1243361
SLX1A	NM_001015000	NP_001015000	Coding	chr16:30193842 plus strand	1243362
SLX1B	NM_024044	NP_076949	Coding	chr16:29454500 plus strand	1243363
SLX1B	NM_024044	NP_076949	Coding	chr16:30193842 plus strand	1243364
SLX1B	NM_178044	NP_835145	Coding	chr16:29454500 plus strand	1243363
SLX1B	NM_178044	NP_835145	Coding	chr16:30193842 plus strand	1243364
SLX4	NM_032444	NP_115820	Coding	chr16:3611584 minus strand	1243365
SMG1	NM_015092	NP_055907	Coding	chr16:18926404 minus strand	1243366

【１０７１】

SMIM22	NM_001253790	NP_001240719	Coding	chr16:4788396 plus strand	1243367
SMIM22	NM_001253791	NP_001240720	Coding	chr16:4788455 plus strand	1243368
SMIM22	NM_001253793	NP_001240722	Coding	chr16:4795377 plus strand	1243369
SMIM22	NM_001253794	NP_001240723	Coding	chr16:4795377 plus strand	1243369
SMPD3	NM_018667	NP_061137	Coding	chr16:68448506 minus strand	1243370
SNAI3	NM_178310	NP_840101	Coding	chr16:88686474 minus strand	1243371
SNN	NM_003498	NP_003489	Coding	chr16:11668432 plus strand	1243372
SNRNP25	NM_024571	NP_078847	Coding	chr16:53828 plus strand	1243373
SNTB2	NM_006750	NP_006741	Coding	chr16:69187146 plus strand	1243374
SNX20	NM_001144972	NP_001138444	Coding	chr16:50681353 minus strand	1243375
SNX20	NM_153337	NP_699168	Coding	chr16:50681353 minus strand	1243375
SNX20	NM_182854	NP_878274	Coding	chr16:50681353 minus strand	1243375
SNX29	NM_032167	NP_115543	Coding	chr16:11976733 plus strand	1243376
SOCS1	NM_003745	NP_003736	Coding	chr16:11256182 minus strand	1243377
SOX8	NM_014587	NP_055402	Coding	chr16:981807 plus strand	1243378
SPATA2L	NM_152339	NP_689552	Coding	chr16:89701713 minus strand	1243379
SPATA33	NM_001271907	NP_001258836	Coding	chr16:89657803 plus strand	1243380
SPATA33	NM_001271908	NP_001258837	Coding	chr16:89657803 plus strand	1243380
SPATA33	NM_001271909	NP_001258838	Coding	chr16:89658046 plus strand	1243381
SPATA33	NM_001271910	NP_001258839	Coding	chr16:89657803 plus strand	1243380
SPATA33	NM_153025	NP_694570	Coding	chr16:89657743 plus strand	1243382
SPG7	NM_003119	NP_003110	Coding	chr16:89508387 plus strand	1243383
SPG7	NM_199367	NP_955399	Coding	chr16:89508387 plus strand	1243383
SPIRE2	NM_032451	NP_115827	Coding	chr16:89828498 plus strand	1243384
SPN	NM_001030288	NP_001025459	Coding	chr16:29662949 plus strand	1243385
SPN	NM_003123	NP_003114	Coding	chr16:29663218 plus strand	1243386
SPNS1	NM_001142448	NP_001135920	Coding	chr16:28974774 plus strand	1243387
SPNS1	NM_001142449	NP_001135921	Coding	chr16:28974774 plus strand	1243387
SPNS1	NM_001142450	NP_001135922	Coding	chr16:28974774 plus strand	1243387

【１０７２】

SPNS1	NM_001142451	NP_001135923	Coding	chr16:28974774 plus strand	1243387
SPNS1	NM_032038	NP_114427	Coding	chr16:28974774 plus strand	1243387
SPSB3	NM_080861	NP_543137	Coding	chr16:1782580 minus strand	1243388
SRCAP	NM_006662	NP_006653	Coding	chr16:30699140 plus strand	1243389
SRL	NM_001098814	NP_001092284	Coding	chr16:4242080 minus strand	1243390
SRRM2	NM_016333	NP_057417	Coding	chr16:2752328 plus strand	1243391
SSTR5	NM_001053	NP_001044	Coding	chr16:1078780 plus strand	1243392
SSTR5	NM_001172560	NP_001166031	Coding	chr16:1072755 plus strand	1243393
ST3GAL2	NM_006927	NP_008858	Coding	chr16:70439088 minus strand	1243394
STUB1	NM_001293197	NP_001280126	Coding	chr16:680110 plus strand	1243395
STUB1	NM_005861	NP_005852	Coding	chr16:680110 plus strand	1243395
STX1B	NM_052874	NP_443106	Coding	chr16:31010508 minus strand	1243396
STX4	NM_001272095	NP_001259024	Coding	chr16:31033490 plus strand	1243397
STX4	NM_001272096	NP_001259025	Coding	chr16:31033094 plus strand	1243398
STX4	NM_004604	NP_004595	Coding	chr16:31033490 plus strand	1243397
SULT1A1	NM_001055	NP_001046	Coding	chr16:28610044 minus strand	1243399
SULT1A1	NM_177529	NP_803565	Coding	chr16:28610044 minus strand	1243399
SULT1A1	NM_177530	NP_803566	Coding	chr16:28609328 minus strand	1243400
SULT1A1	NM_177534	NP_803878	Coding	chr16:28609328 minus strand	1243400
SULT1A1	NM_177536	NP_803880	Coding	chr16:28623586 minus strand	1243401
SULT1A2	NM_001054	NP_001045	Coding	chr16:28597070 minus strand	1243402
SULT1A2	NM_177528	NP_803564	Coding	chr16:28596480 minus strand	1243403
SULT1A3	NM_177552	NP_808220	Coding	chr16:29459885 plus strand	1243404
SULT1A3	NM_177552	NP_808220	Coding	chr16:30199227 plus strand	1243405
SULT1A4	NM_001017390	NP_001017390	Coding	chr16:29459885 plus strand	1243406
SULT1A4	NM_001017390	NP_001017390	Coding	chr16:30199227 plus strand	1243407
SYCE1L	NM_001129979	NP_001123451	Coding	chr16:77199451 plus strand	1243408
SYNGR3	NM_004209	NP_004200	Coding	chr16:1989944 plus strand	1243409
SYT17	NM_016524	NP_057608	Coding	chr16:19168315 plus strand	1243410

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TAF1C	NM_001243156	NP_001230085	Coding	chr16:84187070 minus strand	1243411
TAF1C	NM_001243157	NP_001230086	Coding	chr16:84187070 minus strand	1243411
TAF1C	NM_001243158	NP_001230087	Coding	chr16:84187070 minus strand	1243411
TAF1C	NM_001243159	NP_001230088	Coding	chr16:84187070 minus strand	1243411
TAF1C	NM_001243160	NP_001230089	Coding	chr16:84187070 minus strand	1243411
TAF1C	NM_005679	NP_005670	Coding	chr16:84187070 minus strand	1243411
TAF1C	NM_139353	NP_647610	Coding	chr16:84187070 minus strand	1243411
TANGO6	NM_024562	NP_078838	Coding	chr16:68843605 plus strand	1243412
TAOK2	NM_001252043	NP_001238972	Coding	chr16:29973866 plus strand	1243413
TAOK2	NM_004783	NP_004774	Coding	chr16:29973866 plus strand	1243413
TAOK2	NM_016151	NP_057235	Coding	chr16:29973866 plus strand	1243413
TAT	NM_000353	NP_000344	Coding	chr16:71577095 minus strand	1243414
TBC1D10B	NM_015527	NP_056342	Coding	chr16:30370201 minus strand	1243415
TBC1D24	NM_001199107	NP_001186036	Coding	chr16:2475145 plus strand	1243416
TBC1D24	NM_020705	NP_065756	Coding	chr16:2475145 plus strand	1243416
TBL3	NM_006453	NP_006444	Coding	chr16:1972062 plus strand	1243417
TBX6	NM_004608	NP_004599	Coding	chr16:30091884 minus strand	1243418
TCEB2	NM_007108	NP_009039	Coding	chr16:2777296 minus strand	1243419
TCEB2	NM_207013	NP_996896	Coding	chr16:2777296 minus strand	1243419
TCF25	NM_014972	NP_055787	Coding	chr16:89873585 plus strand	1243420
TEKT5	NM_144674	NP_653275	Coding	chr16:10694945 minus strand	1243421
TELO2	NM_016111	NP_057195	Coding	chr16:1493350 plus strand	1243422
TEPP	NM_199046	NP_950247	Coding	chr16:57976434 plus strand	1243423
TEPP	NM_199456	NP_955535	Coding	chr16:57976434 plus strand	1243423
TERF2	NM_005652	NP_005643	Coding	chr16:69385988 minus strand	1243424
TERF2IP	NM_018975	NP_061848	Coding	chr16:75647736 plus strand	1243425
TFAP4	NM_003223	NP_003214	Coding	chr16:4273000 minus strand	1243426
TGFB1I1	NM_001042454	NP_001035919	Coding	chr16:31472154 plus strand	1243427
TGFB1I1	NM_001164719	NP_001158191	Coding	chr16:31472207 plus	1243428

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				strand	
TGFB1I1	NM_015927	NP_057011	Coding	chr16:31473204 plus strand	1243429
THAP11	NM_020457	NP_065190	Coding	chr16:67842309 plus strand	1243430
THOC6	NM_001142350	NP_001135822	Coding	chr16:3024030 plus strand	1243431
THOC6	NM_024339	NP_077315	Coding	chr16:3024030 plus strand	1243431
THUMPD1	NM_017736	NP_060206	Coding	chr16:20741877 minus strand	1243432
TIGD7	NM_033208	NP_149985	Coding	chr16:3305439 minus strand	1243433
TK2	NM_001172643	NP_001166114	Coding	chr16:66550291 minus strand	1243434
TK2	NM_001172644	NP_001166115	Coding	chr16:66550412 minus strand	1243435
TK2	NM_001172645	NP_001166116	Coding	chr16:66550412 minus strand	1243435
TK2	NM_001271934	NP_001258863	Coding	chr16:66550412 minus strand	1243435
TK2	NM_001271935	NP_001258864	Coding	chr16:66550291 minus strand	1243434
TK2	NM_001272050	NP_001258979	Coding	chr16:66549825 minus strand	1243436
TK2	NM_004614	NP_004605	Coding	chr16:66550412 minus strand	1243435
TLDC1	NM_020947	NP_065998	Coding	chr16:84504682 minus strand	1243437
TMC5	NM_001105248	NP_001098718	Coding	chr16:19410734 plus strand	1243438
TMC5	NM_001105249	NP_001098719	Coding	chr16:19410734 plus strand	1243438
TMC5	NM_001261841	NP_001248770	Coding	chr16:19417695 plus strand	1243439
TMC5	NM_024780	NP_079056	Coding	chr16:19456449 plus strand	1243440
TMC7	NM_001160364	NP_001153836	Coding	chr16:18984286 plus strand	1243441
TMC7	NM_001300732	NP_001287661	Coding	chr16:18983933 plus strand	1243442
TMC7	NM_024847	NP_079123	Coding	chr16:18983933 plus strand	1243442
TMED6	NM_144676	NP_653277	Coding	chr16:69351809 minus strand	1243443
TMEM114	NM_001146336	NP_001139808	Coding	chr16:8589838 minus strand	1243444
TMEM114	NM_001290095	NP_001277024	Coding	chr16:8589838 minus strand	1243444
TMEM114	NM_001290097	NP_001277026	Coding	chr16:8590193 minus strand	1243445
TMEM114	NM_001290098	NP_001277027	Coding	chr16:8589838 minus strand	1243444
TMEM159	NM_001301769	NP_001288698	Coding	chr16:21158376 plus strand	1243446

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TMEM159	NM_001301771	NP_001288700	Coding	chr16:21158376 plus strand	1243446
TMEM159	NM_001301773	NP_001288702	Coding	chr16:21158376 plus strand	1243446
TMEM159	NM_001301774	NP_001288703	Coding	chr16:21158376 plus strand	1243446
TMEM159	NM_001301775	NP_001288704	Coding	chr16:21158376 plus strand	1243446
TMEM159	NM_020422	NP_065155	Coding	chr16:21158376 plus strand	1243446
TMEM170A	NM_145254	NP_660297	Coding	chr16:75464686 minus strand	1243447
TMEM186	NM_015421	NP_056236	Coding	chr16:8797648 minus strand	1243448
TMEM204	NM_001256541	NP_001243470	Coding	chr16:1528740 plus strand	1243449
TMEM204	NM_024600	NP_078876	Coding	chr16:1533656 plus strand	1243450
TMEM208	NM_014187	NP_054906	Coding	chr16:67227112 plus strand	1243451
TMEM219	NM_001083613	NP_001077082	Coding	chr16:29962029 plus strand	1243452
TMEM219	NM_194280	NP_919256	Coding	chr16:29962029 plus strand	1243452
TMEM231	NM_001077416	NP_001070884	Coding	chr16:75556286 minus strand	1243453
TMEM231	NM_001077418	NP_001070886	Coding	chr16:75556286 minus strand	1243453
TMEM8A	NM_021259	NP_067082	Coding	chr16:381950 minus strand	1243454
TNFRSF12A	NM_016639	NP_057723	Coding	chr16:3020311 plus strand	1243455
TNFRSF17	NM_001192	NP_001183	Coding	chr16:11965106 plus strand	1243456
TNP2	NM_005425	NP_005416	Coding	chr16:11269303 minus strand	1243457
TNRC6A	NM_014494	NP_055309	Coding	chr16:24729727 plus strand	1243458
TOX3	NM_001080430	NP_001073899	Coding	chr16:52546894 minus strand	1243459
TOX3	NM_001146188	NP_001139660	Coding	chr16:52547802 minus strand	1243460
TP53TG3	NM_016212	NP_057296	Coding	chr16:32676129 minus strand	1243461
TP53TG3	NM_016212	NP_057296	Coding	chr16:33194261 plus strand	1243462
TP53TG3	NM_016212	NP_057296	Coding	chr16:33304341 plus strand	1243463
TP53TG3	NM_016212	NP_057296	Coding	chr16:33360876 plus strand	1243464
TP53TG3	NM_016212	NP_057296	Coding	chr16:33459647 plus strand	1243465
TP53TG3B	NM_001099687	NP_001093157	Coding	chr16:32676129 minus strand	1243466
TP53TG3B	NM_001099687	NP_001093157	Coding	chr16:33194261 plus strand	1243467
TP53TG3B	NM_001099687	NP_001093157	Coding	chr16:33304341 plus	1243468

【１０７６】

				strand	
TP53TG3B	NM_001099687	NP_001093157	Coding	chr16:33360876 plus strand	1243469
TP53TG3B	NM_001099687	NP_001093157	Coding	chr16:33459647 plus strand	1243470
TP53TG3C	NM_001205259	NP_001192188	Coding	chr16:32676127 minus strand	1243471
TP53TG3C	NM_001205259	NP_001192188	Coding	chr16:33194263 plus strand	1243472
TP53TG3C	NM_001205259	NP_001192188	Coding	chr16:33304343 plus strand	1243473
TP53TG3C	NM_001205259	NP_001192188	Coding	chr16:33360878 plus strand	1243474
TP53TG3C	NM_001205259	NP_001192188	Coding	chr16:33459649 plus strand	1243475
TP53TG3D	NM_001243722	NP_001230651	Coding	chr16:32253323 plus strand	1243476
TPPP3	NM_015964	NP_057048	Coding	chr16:67393535 minus strand	1243477
TPPP3	NM_016140	NP_057224	Coding	chr16:67393535 minus strand	1243477
TPSAB1	NM_003294	NP_003285	Coding	chr16:1240676 plus strand	1243478
TPSB2	NM_024164	NP_077078	Coding	chr16:1230184 minus strand	1243479
TPSD1	NM_012217	NP_036349	Coding	chr16:1256271 plus strand	1243480
TPSG1	NM_012467	NP_036599	Coding	chr16:1225254 minus strand	1243481
TRADD	NM_003789	NP_003780	Coding	chr16:67159909 minus strand	1243482
TRAF7	NM_032271	NP_115647	Coding	chr16:2155797 plus strand	1243483
TRAP1	NM_001272049	NP_001258978	Coding	chr16:3717597 minus strand	1243484
TRAP1	NM_016292	NP_057376	Coding	chr16:3717597 minus strand	1243484
TRAPPC2L	NM_016209	NP_057293	Coding	chr16:88857097 plus strand	1243485
TRIM72	NM_001008274	NP_001008275	Coding	chr16:31214020 plus strand	1243486
TSC2	NM_000548	NP_000539	Coding	chr16:2047988 plus strand	1243487
TSC2	NM_001077183	NP_001070651	Coding	chr16:2047988 plus strand	1243487
TSC2	NM_001114382	NP_001107854	Coding	chr16:2047988 plus strand	1243487
TSNAXIP1	NM_001288990	NP_001275919	Coding	chr16:67806877 plus strand	1243488
TSNAXIP1	NM_001288991	NP_001275920	Coding	chr16:67806877 plus strand	1243488
TSNAXIP1	NM_001288992	NP_001275921	Coding	chr16:67806877 plus strand	1243488
TSNAXIP1	NM_001288993	NP_001275922	Coding	chr16:67806877 plus strand	1243488
TSNAXIP1	NM_001288994	NP_001275923	Coding	chr16:67806877 plus strand	1243488
TSNAXIP1	NM_018430	NP_060900	Coding	chr16:67806877 plus	1243488

【１０７７】

				strand	
TSR3	NM_001001410	NP_001001410	Coding	chr16:1351872 minus strand	1243489
TUBB3	NM_001197181	NP_001184110	Coding	chr16:89922008 plus strand	1243490
TUBB3	NM_006086	NP_006077	Coding	chr16:89923278 plus strand	1243491
TUFM	NM_003321	NP_003312	Coding	chr16:28846408 minus strand	1243492
TVP23A	NM_001079512	NP_001072980	Coding	chr16:10818764 minus strand	1243493
TXNDC11	NM_015914	NP_056998	Coding	chr16:11742792 minus strand	1243494
TXNL4B	NM_001142317	NP_001135789	Coding	chr16:72093869 minus strand	1243495
TXNL4B	NM_001142318	NP_001135790	Coding	chr16:72094316 minus strand	1243496
TXNL4B	NM_017853	NP_060323	Coding	chr16:72093640 minus strand	1243497
UBALD1	NM_145253	NP_660296	Coding	chr16:4614926 minus strand	1243498
UBE2I	NM_003345	NP_003336	Coding	chr16:1309626 plus strand	1243499
UBE2I	NM_194259	NP_919235	Coding	chr16:1309626 plus strand	1243499
UBE2I	NM_194260	NP_919236	Coding	chr16:1309152 plus strand	1243500
UBE2I	NM_194261	NP_919237	Coding	chr16:1309152 plus strand	1243500
UBFD1	NM_019116	NP_061989	Coding	chr16:23557540 plus strand	1243501
UBN1	NM_001079514	NP_001072982	Coding	chr16:4847630 plus strand	1243502
UBN1	NM_001288656	NP_001275585	Coding	chr16:4848379 plus strand	1243503
UMOD	NM_001008389	NP_001008390	Coding	chr16:20352878 minus strand	1243504
UMOD	NM_001278614	NP_001265543	Coding	chr16:20352878 minus strand	1243504
UMOD	NM_003361	NP_003352	Coding	chr16:20352878 minus strand	1243504
UNKL	NM_001037125	NP_001032202	Coding	chr16:1414720 minus strand	1243505
UNKL	NM_001193388	NP_001180317	Coding	chr16:1414720 minus strand	1243505
UNKL	NM_001193389	NP_001180318	Coding	chr16:1379683 minus strand	1243506
UNKL	NM_001276414	NP_001263343	Coding	chr16:1379683 minus strand	1243506
UQCRC2	NM_003366	NP_003357	Coding	chr16:21953287 plus strand	1243507
USB1	NM_001195302	NP_001182231	Coding	chr16:58001372 plus strand	1243508
USB1	NM_001204911	NP_001191840	Coding	chr16:58001372 plus strand	1243508
USB1	NM_024598	NP_078874	Coding	chr16:58001372 plus strand	1243508
USP10	NM_001272075	NP_001259004	Coding	chr16:84699948 plus	1243509

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				strand	
USP10	NM_005153	NP_005144	Coding	chr16:84699948 plus strand	1243509
USP31	NM_020718	NP_065769	Coding	chr16:23149270 minus strand	1243510
USP7	NM_001286457	NP_001273386	Coding	chr16:8936729 minus strand	1243511
USP7	NM_001286458	NP_001273387	Coding	chr16:8936729 minus strand	1243511
USP7	NM_003470	NP_003461	Coding	chr16:8963484 minus strand	1243512
VAC14	NM_018052	NP_060522	Coding	chr16:70801158 minus strand	1243513
VASN	NM_138440	NP_612449	Coding	chr16:4371847 plus strand	1243514
VAT1L	NM_020927	NP_065978	Coding	chr16:77788585 plus strand	1243515
VKORC1	NM_024006	NP_076869	Coding	chr16:31094955 minus strand	1243516
VKORC1	NM_206824	NP_996560	Coding	chr16:31094955 minus strand	1243516
VPS35	NM_018206	NP_060676	Coding	chr16:46689232 minus strand	1243517
VPS4A	NM_013245	NP_037377	Coding	chr16:69311383 plus strand	1243518
VPS9D1	NM_004913	NP_004904	Coding	chr16:89720986 minus strand	1243519
VWA3A	NM_173615	NP_775886	Coding	chr16:22092537 plus strand	1243520
WDR24	NM_032259	NP_115635	Coding	chr16:690400 minus strand	1243521
WDR59	NM_030581	NP_085058	Coding	chr16:74985119 minus strand	1243522
WDR90	NM_145294	NP_660337	Coding	chr16:649362 plus strand	1243523
WFDC1	NM_001282466	NP_001269395	Coding	chr16:84294705 plus strand	1243524
WFDC1	NM_001282467	NP_001269396	Coding	chr16:84294705 plus strand	1243524
WFDC1	NM_021197	NP_067020	Coding	chr16:84294705 plus strand	1243524
WFIKKN1	NM_053284	NP_444514	Coding	chr16:631011 plus strand	1243525
WWOX	NM_001291997	NP_001278926	Coding	chr16:78099412 plus strand	1243526
WWOX	NM_016373	NP_057457	Coding	chr16:78099412 plus strand	1243526
WWOX	NM_130791	NP_570607	Coding	chr16:78099412 plus strand	1243526
WWP2	NM_001270453	NP_001257382	Coding	chr16:69838736 plus strand	1243527
WWP2	NM_001270454	NP_001257383	Coding	chr16:69762283 plus strand	1243528
WWP2	NM_001270455	NP_001257384	Coding	chr16:69762283 plus strand	1243528
WWP2	NM_007014	NP_008945	Coding	chr16:69762283 plus strand	1243528

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WWP2	NM_199424	NP_955456	Coding	chr16:69924982 plus strand	1243529
XPO6	NM_001270940	NP_001257869	Coding	chr16:28211918 minus strand	1243530
XPO6	NM_015171	NP_055986	Coding	chr16:28211918 minus strand	1243530
XYLT1	NM_022166	NP_071449	Coding	chr16:17470881 minus strand	1243531
YPEL3	NM_001145524	NP_001138996	Coding	chr16:30096216 minus strand	1243532
YPEL3	NM_031477	NP_113665	Coding	chr16:30096200 minus strand	1243533
ZC3H18	NM_001294340	NP_001281269	Coding	chr16:88570380 plus strand	1243534
ZC3H18	NM_144604	NP_653205	Coding	chr16:88570380 plus strand	1243534
ZC3H7A	NM_014153	NP_054872	Coding	chr16:11797258 minus strand	1243535
ZCCHC14	NM_015144	NP_055959	Coding	chr16:87491854 minus strand	1243536
ZDHHC1	NM_013304	NP_037436	Coding	chr16:67416436 minus strand	1243537
ZDHHC7	NM_001145548	NP_001139020	Coding	chr16:85011535 minus strand	1243538
ZDHHC7	NM_017740	NP_060210	Coding	chr16:85011535 minus strand	1243538
ZFHX3	NM_001164766	NP_001158238	Coding	chr16:73058635 minus strand	1243539
ZFHX3	NM_006885	NP_008816	Coding	chr16:73048375 minus strand	1243540
ZFP1	NM_153688	NP_710155	Coding	chr16:75148522 plus strand	1243541
ZFP90	NM_133458	NP_597715	Coding	chr16:68539757 plus strand	1243542
ZFPM1	NM_153813	NP_722520	Coding	chr16:88453605 plus strand	1243543
ZG16	NM_152338	NP_689551	Coding	chr16:29778239 plus strand	1243544
ZG16B	NM_145252	NP_660295	Coding	chr16:2830171 plus strand	1243545
ZKSCAN2	NM_001012981	NP_001012999	Coding	chr16:25257534 minus strand	1243546
ZNF174	NM_001032292	NP_001027463	Coding	chr16:3401189 plus strand	1243547
ZNF174	NM_003450	NP_003441	Coding	chr16:3401189 plus strand	1243547
ZNF19	NM_006961	NP_008892	Coding	chr16:71489351 minus strand	1243548
ZNF200	NM_001145446	NP_001138918	Coding	chr16:3235457 minus strand	1243549
ZNF200	NM_001145447	NP_001138919	Coding	chr16:3235186 minus strand	1243550
ZNF200	NM_001145448	NP_001138920	Coding	chr16:3235456 minus strand	1243551
ZNF200	NM_003454	NP_003445	Coding	chr16:3235186 minus strand	1243550

【１０８０】

ZNF200	NM_198087	NP_932353	Coding	chr16:3235457 minus strand	1243549
ZNF200	NM_198088	NP_932354	Coding	chr16:3235456 minus strand	1243551
ZNF205	NM_001042428	NP_001035893	Coding	chr16:3112561 plus strand	1243552
ZNF205	NM_001278158	NP_001265087	Coding	chr16:3112578 plus strand	1243553
ZNF205	NM_003456	NP_003447	Coding	chr16:3112561 plus strand	1243552
ZNF213	NM_001134655	NP_001128127	Coding	chr16:3135132 plus strand	1243554
ZNF213	NM_004220	NP_004211	Coding	chr16:3135055 plus strand	1243555
ZNF23	NM_145911	NP_666016	Coding	chr16:71462214 minus strand	1243556
ZNF263	NM_005741	NP_005732	Coding	chr16:3283486 plus strand	1243557
ZNF267	NM_001265588	NP_001252517	Coding	chr16:31873757 plus strand	1243558
ZNF267	NM_003414	NP_003405	Coding	chr16:31873757 plus strand	1243558
ZNF276	NM_001113525	NP_001106997	Coding	chr16:89721543 plus strand	1243559
ZNF276	NM_152287	NP_689500	Coding	chr16:89720984 plus strand	1243560
ZNF319	NM_020807	NP_065858	Coding	chr16:57999858 minus strand	1243561
ZNF423	NM_001271620	NP_001258549	Coding	chr16:49857919 minus strand	1243562
ZNF423	NM_015069	NP_055884	Coding	chr16:49822738 minus strand	1243563
ZNF469	NM_001127464	NP_001120936	Coding	chr16:88427470 plus strand	1243564
ZNF48	NM_001214906	NP_001201835	Coding	chr16:30378311 plus strand	1243565
ZNF48	NM_001214907	NP_001201836	Coding	chr16:30378313 plus strand	1243566
ZNF48	NM_001214909	NP_001201838	Coding	chr16:30395111 plus strand	1243567
ZNF48	NM_152652	NP_689865	Coding	chr16:30395418 plus strand	1243568
ZNF500	NM_021646	NP_067678	Coding	chr16:4767165 minus strand	1243569
ZNF597	NM_152457	NP_689670	Coding	chr16:3443490 minus strand	1243570
ZNF598	NM_178167	NP_835461	Coding	chr16:2009821 minus strand	1243571
ZNF629	NM_001080417	NP_001073886	Coding	chr16:30787202 minus strand	1243572
ZNF646	NM_014699	NP_055514	Coding	chr16:31074421 plus strand	1243573
ZNF668	NM_001172668	NP_001166139	Coding	chr16:31073502 minus strand	1243574
ZNF668	NM_001172669	NP_001166140	Coding	chr16:31065088 minus strand	1243575
ZNF668	NM_001172670	NP_001166141	Coding	chr16:31065088 minus strand	1243575

【１０８１】

ZNF668	NM_024706	NP_078982	Coding	chr16:31074320 minus strand	1243576
ZNF688	NM_001024683	NP_001019854	Coding	chr16:30572407 minus strand	1243577
ZNF688	NM_145271	NP_660314	Coding	chr16:30572407 minus strand	1243577
ZNF689	NM_138447	NP_612456	Coding	chr16:30610386 minus strand	1243578
ZNF720	NM_001130913	NP_001124385	Coding	chr16:31713228 plus strand	1243579
ZNF747	NM_023931	NP_076420	Coding	chr16:30534873 minus strand	1243580
ZNF75A	NM_001302109	NP_001289038	Coding	chr16:3305405 plus strand	1243581
ZNF75A	NM_153028	NP_694573	Coding	chr16:3305405 plus strand	1243581
ZNF764	NM_001172679	NP_001166150	Coding	chr16:30558321 minus strand	1243582
ZNF764	NM_033410	NP_219363	Coding	chr16:30558321 minus strand	1243582
ZNF768	NM_024671	NP_078947	Coding	chr16:30526589 minus strand	1243583
ZNF771	NM_001142305	NP_001135777	Coding	chr16:30407413 plus strand	1243584
ZNF771	NM_016643	NP_057727	Coding	chr16:30407413 plus strand	1243584
ZNF778	NM_001201407	NP_001188336	Coding	chr16:89217702 plus strand	1243585
ZNF778	NM_182531	NP_872337	Coding	chr16:89217702 plus strand	1243585
ZNF785	NM_152458	NP_689671	Coding	chr16:30585771 minus strand	1243586
ZNF821	NM_001201552	NP_001188481	Coding	chr16:71884190 minus strand	1243587
ZNF821	NM_001201553	NP_001188482	Coding	chr16:71883541 minus strand	1243588
ZNF821	NM_001201554	NP_001188483	Coding	chr16:71884190 minus strand	1243587
ZNF821	NM_001201556	NP_001188485	Coding	chr16:71884190 minus strand	1243587
ZNF821	NM_017530	NP_060000	Coding	chr16:71883541 minus strand	1243588
ZNF843	NM_001136509	NP_001129981	Coding	chr16:31443027 minus strand	1243589
ZNRF1	NM_032268	NP_115644	Coding	chr16:74999016 plus strand	1243590
ZP2	NM_001290104	NP_001277033	Coding	chr16:21214510 minus strand	1243591
ZP2	NM_003460	NP_003451	Coding	chr16:21214510 minus strand	1243591
ZSCAN10	NM_001282415	NP_001269344	Coding	chr16:3099317 minus strand	1243592
ZSCAN10	NM_001282416	NP_001269345	Coding	chr16:3099317 minus strand	1243592
ZSCAN10	NM_032805	NP_116194	Coding	chr16:3092860 minus strand	1243593

【１０８２】

ZSCAN32	NM_001284527	NP_001271456	Coding	chr16:3401065 minus strand	1243594
ZSCAN32	NM_001284528	NP_001271457	Coding	chr16:3401065 minus strand	1243594
ZSCAN32	NM_001284529	NP_001271458	Coding	chr16:3401065 minus strand	1243594
ZSCAN32	NM_017810	NP_060280	Coding	chr16:3401065 minus strand	1243594
AANAT	NM_001088	NP_001079	Coding	chr17:76467547 plus strand	1243595
AANAT	NM_001166579	NP_001160051	Coding	chr17:76453350 plus strand	1243596
AARSD1	NM_001261434	NP_001248363	Coding	chr17:42964498 minus strand	1243597
AATF	NM_012138	NP_036270	Coding	chr17:36948874 plus strand	1243598
AATK	NM_001080395	NP_001073864	Coding	chr17:81166072 minus strand	1243599
AATK	NM_004920	NP_004911	Coding	chr17:81131948 minus strand	1243600
ABCA10	NM_080282	NP_525021	Coding	chr17:69244815 minus strand	1243601
ABCA5	NM_018672	NP_061142	Coding	chr17:69315633 minus strand	1243602
ABCA5	NM_172232	NP_758424	Coding	chr17:69327182 minus strand	1243603
ABCA6	NM_080284	NP_525023	Coding	chr17:69141874 minus strand	1243604
ABCA8	NM_001288985	NP_001275914	Coding	chr17:68955392 minus strand	1243605
ABCA8	NM_001288986	NP_001275915	Coding	chr17:68955392 minus strand	1243605
ABCA8	NM_007168	NP_009099	Coding	chr17:68955392 minus strand	1243605
ABCA9	NM_080283	NP_525022	Coding	chr17:69060995 minus strand	1243606
ABCC3	NM_001144070	NP_001137542	Coding	chr17:50634856 plus strand	1243607
ABCC3	NM_003786	NP_003777	Coding	chr17:50634856 plus strand	1243607
ABHD15	NM_198147	NP_937790	Coding	chr17:29567024 minus strand	1243608
ABI3	NM_001135186	NP_001128658	Coding	chr17:49210226 plus strand	1243609
ABI3	NM_016428	NP_057512	Coding	chr17:49210226 plus strand	1243609
ABR	NM_001092	NP_001083	Coding	chr17:1109100 minus strand	1243610
ABR	NM_001159746	NP_001153218	Coding	chr17:1187322 minus strand	1243611
ABR	NM_001256847	NP_001243776	Coding	chr17:1031841 minus strand	1243612
ABR	NM_001282149	NP_001269078	Coding	chr17:1079146 minus strand	1243613

【１０８３】

ABR	NM_021962	NP_068781	Coding	chr17:1179974 minus strand	1243614
ACACA	NM_198834	NP_942131	Coding	chr17:37406811 minus strand	1243615
ACACA	NM_198836	NP_942133	Coding	chr17:37359116 minus strand	1243616
ACACA	NM_198837	NP_942134	Coding	chr17:37299767 minus strand	1243617
ACACA	NM_198838	NP_942135	Coding	chr17:37299767 minus strand	1243617
ACACA	NM_198839	NP_942136	Coding	chr17:37406811 minus strand	1243615
ACADVL	NM_000018	NP_000009	Coding	chr17:7219830 plus strand	1243618
ACADVL	NM_001033859	NP_001029031	Coding	chr17:7219830 plus strand	1243618
ACADVL	NM_001270447	NP_001257376	Coding	chr17:7217124 plus strand	1243619
ACADVL	NM_001270448	NP_001257377	Coding	chr17:7219830 plus strand	1243618
ACAP1	NM_014716	NP_055531	Coding	chr17:7336528 plus strand	1243620
ACBD4	NM_001135704	NP_001129176	Coding	chr17:45132599 plus strand	1243621
ACBD4	NM_001135705	NP_001129177	Coding	chr17:45135646 plus strand	1243622
ACBD4	NM_001135706	NP_001129178	Coding	chr17:45135646 plus strand	1243622
ACBD4	NM_001135707	NP_001129179	Coding	chr17:45135646 plus strand	1243622
ACBD4	NM_024722	NP_078998	Coding	chr17:45135646 plus strand	1243622
ACE	NM_000789	NP_000780	Coding	chr17:63477060 plus strand	1243623
ACE	NM_001178057	NP_001171528	Coding	chr17:63484816 plus strand	1243624
ACE	NM_152830	NP_690043	Coding	chr17:63484816 plus strand	1243624
ACLY	NM_001096	NP_001087	Coding	chr17:41919019 minus strand	1243625
ACLY	NM_198830	NP_942127	Coding	chr17:41919019 minus strand	1243625
ACOX1	NM_001185039	NP_001171968	Coding	chr17:75979434 minus strand	1243626
ACOX1	NM_004035	NP_004026	Coding	chr17:75979434 minus strand	1243626
ACOX1	NM_007292	NP_009223	Coding	chr17:75979434 minus strand	1243626
ACSF2	NM_001288968	NP_001275897	Coding	chr17:50426157 plus strand	1243627
ACSF2	NM_001288969	NP_001275898	Coding	chr17:50426157 plus strand	1243627
ACSF2	NM_001288970	NP_001275899	Coding	chr17:50426157 plus strand	1243627
ACSF2	NM_001288971	NP_001275900	Coding	chr17:50426157 plus strand	1243627
ACSF2	NM_001288972	NP_001275901	Coding	chr17:50426157 plus strand	1243627

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ACSF2	NM_025149	NP_079425	Coding	chr17:50426157 plus strand	1243627
ACTG1	NM_001199954	NP_001186883	Coding	chr17:81512866 minus strand	1243628
ACTG1	NM_001614	NP_001605	Coding	chr17:81512866 minus strand	1243628
ADAM11	NM_002390	NP_002381	Coding	chr17:44759199 plus strand	1243629
ADAP2	NM_018404	NP_060874	Coding	chr17:30921735 plus strand	1243630
ADORA2B	NM_000676	NP_000667	Coding	chr17:15944916 plus strand	1243631
ADPRM	NM_020233	NP_064618	Coding	chr17:10697609 plus strand	1243632
AFMID	NM_001010982	NP_001010982	Coding	chr17:78187316 plus strand	1243633
AFMID	NM_001145526	NP_001138998	Coding	chr17:78187316 plus strand	1243633
AIPL1	NM_001033054	NP_001028226	Coding	chr17:6435199 minus strand	1243634
AIPL1	NM_001033055	NP_001028227	Coding	chr17:6435199 minus strand	1243634
AIPL1	NM_001285399	NP_001272328	Coding	chr17:6435199 minus strand	1243634
AIPL1	NM_001285400	NP_001272329	Coding	chr17:6435199 minus strand	1243634
AIPL1	NM_001285401	NP_001272330	Coding	chr17:6435199 minus strand	1243634
AIPL1	NM_001285402	NP_001272331	Coding	chr17:6435132 minus strand	1243635
AIPL1	NM_001285403	NP_001272332	Coding	chr17:6435199 minus strand	1243634
AIPL1	NM_014336	NP_055151	Coding	chr17:6435199 minus strand	1243634
AKAP1	NM_001242902	NP_001229831	Coding	chr17:57085773 plus strand	1243636
AKAP1	NM_001242903	NP_001229832	Coding	chr17:57085716 plus strand	1243637
AKAP1	NM_003488	NP_003479	Coding	chr17:57085191 plus strand	1243638
AKAP10	NM_007202	NP_009133	Coding	chr17:19977856 minus strand	1243639
ALDH3A1	NM_000691	NP_000682	Coding	chr17:19748433 minus strand	1243640
ALDH3A1	NM_001135167	NP_001128639	Coding	chr17:19745612 minus strand	1243641
ALDH3A1	NM_001135168	NP_001128640	Coding	chr17:19745459 minus strand	1243642
ALDH3A2	NM_000382	NP_000373	Coding	chr17:19648750 plus strand	1243643
ALDH3A2	NM_001031806	NP_001026976	Coding	chr17:19648750 plus strand	1243643
ALDOC	NM_005165	NP_005156	Coding	chr17:28576933 minus strand	1243644

【１０８５】

ALKBH5	NM_017758	NP_060228	Coding	chr17:18183552 plus strand	1243645
ALOX12	NM_000697	NP_000688	Coding	chr17:6996064 plus strand	1243646
ALOX12B	NM_001139	NP_001130	Coding	chr17:8087703 minus strand	1243647
ALOX15	NM_001140	NP_001131	Coding	chr17:4641665 minus strand	1243648
ALOX15B	NM_001039130	NP_001034219	Coding	chr17:8039039 plus strand	1243649
ALOX15B	NM_001039131	NP_001034220	Coding	chr17:8039039 plus strand	1243649
ALOX15B	NM_001141	NP_001132	Coding	chr17:8039039 plus strand	1243649
ALOXE3	NM_001165960	NP_001159432	Coding	chr17:8118916 minus strand	1243650
ALOXE3	NM_021628	NP_067641	Coding	chr17:8118542 minus strand	1243651
ALYREF	NM_005782	NP_005773	Coding	chr17:81891586 minus strand	1243652
AMZ2	NM_001033569	NP_001028741	Coding	chr17:68248003 plus strand	1243653
AMZ2	NM_001033570	NP_001028742	Coding	chr17:68248003 plus strand	1243653
AMZ2	NM_001033571	NP_001028743	Coding	chr17:68248003 plus strand	1243653
AMZ2	NM_001033572	NP_001028744	Coding	chr17:68248003 plus strand	1243653
AMZ2	NM_001033574	NP_001028746	Coding	chr17:68248003 plus strand	1243653
AMZ2	NM_001289054	NP_001275983	Coding	chr17:68248003 plus strand	1243653
AMZ2	NM_001289056	NP_001275985	Coding	chr17:68248003 plus strand	1243653
AMZ2	NM_016627	NP_057711	Coding	chr17:68248003 plus strand	1243653
ANAPC11	NM_001002244	NP_001002244	Coding	chr17:81891712 plus strand	1243654
ANAPC11	NM_001002245	NP_001002245	Coding	chr17:81891712 plus strand	1243654
ANAPC11	NM_001002246	NP_001002246	Coding	chr17:81891712 plus strand	1243654
ANAPC11	NM_001002247	NP_001002247	Coding	chr17:81891712 plus strand	1243654
ANAPC11	NM_001002248	NP_001002248	Coding	chr17:81891712 plus strand	1243654
ANAPC11	NM_001002249	NP_001002249	Coding	chr17:81891926 plus strand	1243655
ANAPC11	NM_001289414	NP_001276343	Coding	chr17:81890789 plus strand	1243656
ANAPC11	NM_001289415	NP_001276344	Coding	chr17:81891712 plus strand	1243654
ANAPC11	NM_001289416	NP_001276345	Coding	chr17:81891926 plus strand	1243655
ANAPC11	NM_001289417	NP_001276346	Coding	chr17:81891712 plus strand	1243654
ANAPC11	NM_001289418	NP_001276347	Coding	chr17:81891712 plus	1243654

【１０８６】

				strand	
ANAPC11	NM_001289419	NP_001276348	Coding	chr17:81891712 plus strand	1243654
ANAPC11	NM_001289420	NP_001276349	Coding	chr17:81891926 plus strand	1243655
ANAPC11	NM_016476	NP_057560	Coding	chr17:81891712 plus strand	1243654
ANKFN1	NM_153228	NP_694960	Coding	chr17:56153474 plus strand	1243657
ANKFY1	NM_001257999	NP_001244928	Coding	chr17:4263847 minus strand	1243658
ANKFY1	NM_016376	NP_057460	Coding	chr17:4263979 minus strand	1243659
ANKRD13B	NM_152345	NP_689558	Coding	chr17:29593508 plus strand	1243660
ANKRD40	NM_052855	NP_443087	Coding	chr17:50707909 minus strand	1243661
AOC2	NM_001158	NP_001149	Coding	chr17:42844591 plus strand	1243662
AOC2	NM_009590	NP_033720	Coding	chr17:42844591 plus strand	1243662
AOC3	NM_001277731	NP_001264660	Coding	chr17:42851183 plus strand	1243663
AOC3	NM_001277732	NP_001264661	Coding	chr17:42853242 plus strand	1243664
AOC3	NM_003734	NP_003725	Coding	chr17:42851183 plus strand	1243663
AP2B1	NM_001030006	NP_001025177	Coding	chr17:35587262 plus strand	1243665
AP2B1	NM_001282	NP_001273	Coding	chr17:35587262 plus strand	1243665
APOH	NM_000042	NP_000033	Coding	chr17:66229438 minus strand	1243666
APPBP2	NM_001282476	NP_001269405	Coding	chr17:60526240 minus strand	1243667
APPBP2	NM_006380	NP_006371	Coding	chr17:60526240 minus strand	1243667
ARHGAP23	NM_001199417	NP_001186346	Coding	chr17:38428475 plus strand	1243668
ARHGAP27	NM_001282290	NP_001269219	Coding	chr17:45430297 minus strand	1243669
ARHGAP27	NM_174919	NP_777579	Coding	chr17:45432916 minus strand	1243670
ARHGAP27	NM_199282	NP_954976	Coding	chr17:45425646 minus strand	1243671
ARHGAP44	NM_014859	NP_055674	Coding	chr17:12789511 plus strand	1243672
ARHGDIA	NM_001185077	NP_001172006	Coding	chr17:81870974 minus strand	1243673
ARHGDIA	NM_001185078	NP_001172007	Coding	chr17:81871406 minus strand	1243674
ARHGDIA	NM_001301240	NP_001288169	Coding	chr17:81871406 minus strand	1243674
ARHGDIA	NM_001301241	NP_001288170	Coding	chr17:81870974 minus	1243673

【１０８７】

				strand	
ARHGDIA	NM_001301242	NP_001288171	Coding	chr17:81871406 minus strand	1243674
ARHGDIA	NM_001301243	NP_001288172	Coding	chr17:81871406 minus strand	1243674
ARHGDIA	NM_004309	NP_004300	Coding	chr17:81871406 minus strand	1243674
ARHGEF15	NM_025014	NP_079290	Coding	chr17:8310821 plus strand	1243675
ARHGEF15	NM_173728	NP_776089	Coding	chr17:8310237 plus strand	1243676
ARL16	NM_001040025	NP_001035114	Coding	chr17:81683924 minus strand	1243677
ARL17A	NM_001113738	NP_001107210	Coding	chr17:46361797 minus strand	1243678
ARL17A	NM_001113738	NP_001107210	Coding	chr17:46579722 minus strand	1243679
ARL17A	NM_001288811	NP_001275740	Coding	chr17:46579722 minus strand	1243679
ARL17A	NM_001288812	NP_001275741	Coding	chr17:46579722 minus strand	1243679
ARL17A	NM_001288813	NP_001275742	Coding	chr17:46579722 minus strand	1243679
ARL17A	NM_016632	NP_057716	Coding	chr17:46579722 minus strand	1243679
ARL17B	NM_001039083	NP_001034172	Coding	chr17:46361768 minus strand	1243680
ARL17B	NM_001039083	NP_001034172	Coding	chr17:46579693 minus strand	1243681
ARL17B	NM_001103154	NP_001096624	Coding	chr17:46361768 minus strand	1243680
ARL4D	NM_001661	NP_001652	Coding	chr17:43398984 plus strand	1243682
ARL5C	NM_001143968	NP_001137440	Coding	chr17:39166161 minus strand	1243683
ARMC7	NM_024585	NP_078861	Coding	chr17:75109986 plus strand	1243684
ARRB2	NM_001257328	NP_001244257	Coding	chr17:4710493 plus strand	1243685
ARRB2	NM_001257329	NP_001244258	Coding	chr17:4710493 plus strand	1243685
ARRB2	NM_001257330	NP_001244259	Coding	chr17:4710493 plus strand	1243685
ARRB2	NM_001257331	NP_001244260	Coding	chr17:4710493 plus strand	1243685
ARRB2	NM_004313	NP_004304	Coding	chr17:4710493 plus strand	1243685
ARRB2	NM_199004	NP_945355	Coding	chr17:4710493 plus strand	1243685
ARSG	NM_001267727	NP_001254656	Coding	chr17:68291494 plus strand	1243686
ARSG	NM_014960	NP_055775	Coding	chr17:68259181 plus strand	1243687
ASB16	NM_080863	NP_543139	Coding	chr17:44170705 plus strand	1243688
ASGR1	NM_001197216	NP_001184145	Coding	chr17:7179564 minus strand	1243689
ASGR1	NM_001671	NP_001662	Coding	chr17:7179564 minus strand	1243689

【１０８８】

ASGR2	NM_001181	NP_001172	Coding	chr17:7114811 minus strand	1243690
ASGR2	NM_001201352	NP_001188281	Coding	chr17:7114811 minus strand	1243690
ASGR2	NM_080912	NP_550434	Coding	chr17:7114811 minus strand	1243690
ASGR2	NM_080913	NP_550435	Coding	chr17:7114811 minus strand	1243690
ASGR2	NM_080914	NP_550436	Coding	chr17:7114310 minus strand	1243691
ASIC2	NM_001094	NP_001085	Coding	chr17:34156806 minus strand	1243692
ASIC2	NM_183377	NP_899233	Coding	chr17:33292988 minus strand	1243693
ASPA	NM_000049	NP_000040	Coding	chr17:3476001 plus strand	1243694
ASPA	NM_001128085	NP_001121557	Coding	chr17:3474109 plus strand	1243695
ASPSCR1	NM_001251888	NP_001238817	Coding	chr17:81977549 plus strand	1243696
ASPSCR1	NM_024083	NP_076988	Coding	chr17:81977549 plus strand	1243696
ATAD5	NM_024857	NP_079133	Coding	chr17:30832004 plus strand	1243697
ATP1B2	NM_001678	NP_001669	Coding	chr17:7650935 plus strand	1243698
ATP2A3	NM_005173	NP_005164	Coding	chr17:3964464 minus strand	1243699
ATP2A3	NM_174953	NP_777613	Coding	chr17:3964464 minus strand	1243699
ATP2A3	NM_174954	NP_777614	Coding	chr17:3964464 minus strand	1243699
ATP2A3	NM_174955	NP_777615	Coding	chr17:3964464 minus strand	1243699
ATP2A3	NM_174956	NP_777616	Coding	chr17:3964464 minus strand	1243699
ATP2A3	NM_174957	NP_777617	Coding	chr17:3964464 minus strand	1243699
ATP2A3	NM_174958	NP_777618	Coding	chr17:3964464 minus strand	1243699
ATP5G1	NM_001002027	NP_001002027	Coding	chr17:48892785 plus strand	1243700
ATP5G1	NM_005175	NP_005166	Coding	chr17:48892785 plus strand	1243700
ATP5H	NM_001003785	NP_001003785	Coding	chr17:75046979 minus strand	1243701
ATP5H	NM_006356	NP_006347	Coding	chr17:75046979 minus strand	1243701
ATP6V0A1	NM_001130020	NP_001123492	Coding	chr17:42458843 plus strand	1243702
ATP6V0A1	NM_001130021	NP_001123493	Coding	chr17:42458843 plus strand	1243702
ATP6V0A1	NM_005177	NP_005168	Coding	chr17:42458843 plus strand	1243702
ATPAF2	NM_145691	NP_663729	Coding	chr17:18039166 minus strand	1243703

【１０８９】

ATXN7L3	NM_001098833	NP_001092303	Coding	chr17:44198161 minus strand	1243704
ATXN7L3	NM_020218	NP_064603	Coding	chr17:44198161 minus strand	1243704
AURKB	NM_001256834	NP_001243763	Coding	chr17:8210626 minus strand	1243705
AURKB	NM_001284526	NP_001271455	Coding	chr17:8210626 minus strand	1243705
AURKB	NM_004217	NP_004208	Coding	chr17:8210626 minus strand	1243705
AXIN2	NM_004655	NP_004646	Coding	chr17:65561622 minus strand	1243706
B3GNTL1	NM_001009905	NP_001009905	Coding	chr17:83051810 minus strand	1243707
B4GALNT2	NM_001159387	NP_001152859	Coding	chr17:49132768 plus strand	1243708
B4GALNT2	NM_001159388	NP_001152860	Coding	chr17:49132459 plus strand	1243709
B4GALNT2	NM_153446	NP_703147	Coding	chr17:49132966 plus strand	1243710
B9D1	NM_001243473	NP_001230402	Coding	chr17:19362733 minus strand	1243711
B9D1	NM_001243475	NP_001230404	Coding	chr17:19378182 minus strand	1243712
B9D1	NM_015681	NP_056496	Coding	chr17:19362733 minus strand	1243711
BAHCC1	NM_001291324	NP_001278253	Coding	chr17:81399720 plus strand	1243713
BAIAP2	NM_001144888	NP_001138360	Coding	chr17:81035146 plus strand	1243714
BAIAP2	NM_006340	NP_006331	Coding	chr17:81035146 plus strand	1243714
BAIAP2	NM_017450	NP_059344	Coding	chr17:81035146 plus strand	1243714
BAIAP2	NM_017451	NP_059345	Coding	chr17:81035146 plus strand	1243714
BCAS3	NM_001099432	NP_001092902	Coding	chr17:60677810 plus strand	1243715
BCAS3	NM_017679	NP_060149	Coding	chr17:60677810 plus strand	1243715
BCL6B	NM_181844	NP_862827	Coding	chr17:7023049 plus strand	1243716
BECN1	NM_003766	NP_003757	Coding	chr17:42824292 minus strand	1243717
BHLHA9	NM_001164405	NP_001157877	Coding	chr17:1270563 plus strand	1243718
BIRC5	NM_001012270	NP_001012270	Coding	chr17:78214195 plus strand	1243719
BIRC5	NM_001012271	NP_001012271	Coding	chr17:78214195 plus strand	1243719
BIRC5	NM_001168	NP_001159	Coding	chr17:78214195 plus strand	1243719
BLMH	NM_000386	NP_000377	Coding	chr17:30292166 minus strand	1243720
BPTF	NM_004459	NP_004450	Coding	chr17:67825663 plus strand	1243721

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BPTF	NM_182641	NP_872579	Coding	chr17:67825663 plus strand	1243721
BRCA1	NM_007294	NP_009225	Coding	chr17:43125483 minus strand	1243722
BRCA1	NM_007297	NP_009228	Coding	chr17:43125451 minus strand	1243723
BRCA1	NM_007298	NP_009229	Coding	chr17:43124115 minus strand	1243724
BRCA1	NM_007299	NP_009230	Coding	chr17:43125451 minus strand	1243723
BRCA1	NM_007300	NP_009231	Coding	chr17:43125483 minus strand	1243722
BRIP1	NM_032043	NP_114432	Coding	chr17:61863559 minus strand	1243725
BTBD17	NM_001080466	NP_001073935	Coding	chr17:74361819 minus strand	1243726
BZRAP1	NM_001261835	NP_001248764	Coding	chr17:58328791 minus strand	1243727
BZRAP1	NM_004758	NP_004749	Coding	chr17:58328791 minus strand	1243727
BZRAP1	NM_024418	NP_077729	Coding	chr17:58328791 minus strand	1243727
C17orf100	NM_001105520	NP_001098990	Coding	chr17:6651738 plus strand	1243728
C17orf102	NM_207454	NP_997337	Coding	chr17:34579369 minus strand	1243729
C17orf104	NM_001145080	NP_001138552	Coding	chr17:44656393 plus strand	1243730
C17orf105	NM_001136483	NP_001129955	Coding	chr17:43780434 plus strand	1243731
C17orf107	NM_001145536	NP_001139008	Coding	chr17:4899652 plus strand	1243732
C17orf112	NM_001243552	NP_001230481	Coding	chr17:52985519 plus strand	1243733
C17orf47	NM_001038704	NP_001033793	Coding	chr17:58544372 minus strand	1243734
C17orf49	NM_001142798	NP_001136270	Coding	chr17:7014736 plus strand	1243735
C17orf49	NM_001142799	NP_001136271	Coding	chr17:7014736 plus strand	1243735
C17orf49	NM_174893	NP_777553	Coding	chr17:7014736 plus strand	1243735
C17orf50	NM_145272	NP_660315	Coding	chr17:35760896 plus strand	1243736
C17orf51	NM_001113434	NP_001106905	Coding	chr17:21551678 minus strand	1243737
C17orf53	NM_001171251	NP_001164722	Coding	chr17:44141905 plus strand	1243738
C17orf53	NM_024032	NP_076937	Coding	chr17:44141905 plus strand	1243738
C17orf58	NM_181655	NP_858041	Coding	chr17:67993649 minus strand	1243739
C17orf58	NM_181656	NP_858042	Coding	chr17:67993649 minus strand	1243739
C17orf59	NM_017622	NP_060092	Coding	chr17:8190246 minus strand	1243740
C17orf62	NM_001033046	NP_001028218	Coding	chr17:82450831 minus strand	1243741

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C17orf62	NM_001100407	NP_001093877	Coding	chr17:82450831 minus strand	1243741
C17orf62	NM_001100408	NP_001093878	Coding	chr17:82450831 minus strand	1243741
C17orf62	NM_001193653	NP_001180582	Coding	chr17:82450831 minus strand	1243741
C17orf62	NM_001193654	NP_001180583	Coding	chr17:82450831 minus strand	1243741
C17orf62	NM_001193655	NP_001180584	Coding	chr17:82449726 minus strand	1243742
C17orf62	NM_001193657	NP_001180586	Coding	chr17:82450831 minus strand	1243741
C17orf64	NM_181707	NP_859058	Coding	chr17:60422503 plus strand	1243743
C17orf67	NM_001085430	NP_001078899	Coding	chr17:56833895 minus strand	1243744
C17orf70	NM_025161	NP_079437	Coding	chr17:81552403 minus strand	1243745
C17orf74	NM_175734	NP_783861	Coding	chr17:7425615 plus strand	1243746
C17orf75	NM_022344	NP_071739	Coding	chr17:32342209 minus strand	1243747
C17orf77	NM_001302809	NP_001289738	Coding	chr17:74584678 plus strand	1243748
C17orf77	NM_152460	NP_689673	Coding	chr17:74584917 plus strand	1243749
C17orf78	NM_173625	NP_775896	Coding	chr17:37376042 plus strand	1243750
C17orf80	NM_001100621	NP_001094091	Coding	chr17:73232621 plus strand	1243751
C17orf80	NM_001100622	NP_001094092	Coding	chr17:73232621 plus strand	1243751
C17orf80	NM_001288770	NP_001275699	Coding	chr17:73232232 plus strand	1243752
C17orf80	NM_001288771	NP_001275700	Coding	chr17:73232232 plus strand	1243752
C17orf80	NM_017941	NP_060411	Coding	chr17:73232621 plus strand	1243751
C17orf82	NM_203425	NP_982249	Coding	chr17:61411750 plus strand	1243753
C17orf85	NM_001114118	NP_001107590	Coding	chr17:3846251 minus strand	1243754
C17orf89	NM_001086521	NP_001079990	Coding	chr17:81239310 plus strand	1243755
C17orf96	NM_001130677	NP_001124149	Coding	chr17:38674934 minus strand	1243756
C17orf97	NM_001013672	NP_001013694	Coding	chr17:410326 plus strand	1243757
C17orf98	NM_001080465	NP_001073934	Coding	chr17:38841389 minus strand	1243758
C17orf99	NM_001163075	NP_001156547	Coding	chr17:78146352 plus strand	1243759
C1QBP	NM_001212	NP_001203	Coding	chr17:5439151 minus strand	1243760
C1QL1	NM_006688	NP_006679	Coding	chr17:44968276 minus strand	1243761

【１０９２】

C1QTNF1	NM_030968	NP_112230	Coding	chr17:79024075 plus strand	1243762
C1QTNF1	NM_153372	NP_699203	Coding	chr17:79022933 plus strand	1243763
C1QTNF1	NM_198593	NP_940995	Coding	chr17:79034298 plus strand	1243764
C1QTNF1	NM_198594	NP_940996	Coding	chr17:79024075 plus strand	1243762
CA10	NM_001082533	NP_001076002	Coding	chr17:52159801 minus strand	1243765
CA10	NM_001082534	NP_001076003	Coding	chr17:52160017 minus strand	1243766
CA10	NM_020178	NP_064563	Coding	chr17:52158772 minus strand	1243767
CA4	NM_000717	NP_000708	Coding	chr17:60149940 plus strand	1243768
CACNA1G	NM_001256324	NP_001243253	Coding	chr17:50561067 plus strand	1243769
CACNA1G	NM_001256325	NP_001243254	Coding	chr17:50561067 plus strand	1243769
CACNA1G	NM_001256326	NP_001243255	Coding	chr17:50561067 plus strand	1243769
CACNA1G	NM_001256327	NP_001243256	Coding	chr17:50561067 plus strand	1243769
CACNA1G	NM_001256328	NP_001243257	Coding	chr17:50561067 plus strand	1243769
CACNA1G	NM_001256329	NP_001243258	Coding	chr17:50561067 plus strand	1243769
CACNA1G	NM_001256330	NP_001243259	Coding	chr17:50561067 plus strand	1243769
CACNA1G	NM_001256331	NP_001243260	Coding	chr17:50561067 plus strand	1243769
CACNA1G	NM_001256332	NP_001243261	Coding	chr17:50561067 plus strand	1243769
CACNA1G	NM_001256333	NP_001243262	Coding	chr17:50561067 plus strand	1243769
CACNA1G	NM_001256334	NP_001243263	Coding	chr17:50561067 plus strand	1243769
CACNA1G	NM_001256359	NP_001243288	Coding	chr17:50561067 plus strand	1243769
CACNA1G	NM_001256360	NP_001243289	Coding	chr17:50561067 plus strand	1243769
CACNA1G	NM_001256361	NP_001243290	Coding	chr17:50561067 plus strand	1243769
CACNA1G	NM_018896	NP_061496	Coding	chr17:50561067 plus strand	1243769
CACNA1G	NM_198376	NP_938190	Coding	chr17:50561067 plus strand	1243769
CACNA1G	NM_198377	NP_938191	Coding	chr17:50561067 plus strand	1243769
CACNA1G	NM_198378	NP_938192	Coding	chr17:50561067 plus strand	1243769
CACNA1G	NM_198379	NP_938193	Coding	chr17:50561067 plus strand	1243769

【１０９３】

CACNA1G	NM_198380	NP_938194	Coding	chr17:50561067 plus strand	1243769
CACNA1G	NM_198382	NP_938196	Coding	chr17:50561067 plus strand	1243769
CACNA1G	NM_198383	NP_938197	Coding	chr17:50561067 plus strand	1243769
CACNA1G	NM_198384	NP_938198	Coding	chr17:50561067 plus strand	1243769
CACNA1G	NM_198385	NP_938199	Coding	chr17:50561067 plus strand	1243769
CACNA1G	NM_198386	NP_938200	Coding	chr17:50561067 plus strand	1243769
CACNA1G	NM_198387	NP_938201	Coding	chr17:50561067 plus strand	1243769
CACNA1G	NM_198388	NP_938202	Coding	chr17:50561067 plus strand	1243769
CACNA1G	NM_198396	NP_938406	Coding	chr17:50561067 plus strand	1243769
CACNB1	NM_000723	NP_000714	Coding	chr17:39197703 minus strand	1243770
CACNB1	NM_199247	NP_954855	Coding	chr17:39197703 minus strand	1243770
CACNB1	NM_199248	NP_954856	Coding	chr17:39197703 minus strand	1243770
CACNG1	NM_000727	NP_000718	Coding	chr17:67044535 plus strand	1243771
CACNG4	NM_014405	NP_055220	Coding	chr17:66964863 plus strand	1243772
CACNG5	NM_145811	NP_665810	Coding	chr17:66877272 plus strand	1243773
CALCOCO2	NM_001261390	NP_001248319	Coding	chr17:48830987 plus strand	1243774
CALCOCO2	NM_001261391	NP_001248320	Coding	chr17:48830987 plus strand	1243774
CALCOCO2	NM_001261393	NP_001248322	Coding	chr17:48830987 plus strand	1243774
CALCOCO2	NM_001261395	NP_001248324	Coding	chr17:48830987 plus strand	1243774
CALCOCO2	NM_005831	NP_005822	Coding	chr17:48830987 plus strand	1243774
CAMKK1	NM_032294	NP_115670	Coding	chr17:3893043 minus strand	1243775
CAMKK1	NM_172206	NP_757343	Coding	chr17:3890743 minus strand	1243776
CAMKK1	NM_172207	NP_757344	Coding	chr17:3893043 minus strand	1243775
CAMTA2	NM_001171166	NP_001164637	Coding	chr17:4987665 minus strand	1243777
CAMTA2	NM_001171167	NP_001164638	Coding	chr17:4987370 minus strand	1243778
CAMTA2	NM_001171168	NP_001164639	Coding	chr17:4987370 minus strand	1243778
CAMTA2	NM_015099	NP_055914	Coding	chr17:4987665 minus strand	1243777

【１０９４】

CANT1	NM_001159772	NP_001153244	Coding	chr17:79009817 minus strand	1243779
CANT1	NM_001159773	NP_001153245	Coding	chr17:79009817 minus strand	1243779
CANT1	NM_138793	NP_620148	Coding	chr17:79009817 minus strand	1243779
CARD14	NM_001257970	NP_001244899	Coding	chr17:80178507 plus strand	1243780
CARD14	NM_024110	NP_077015	Coding	chr17:80178507 plus strand	1243780
CARD14	NM_052819	NP_438170	Coding	chr17:80187799 plus strand	1243781
CASC3	NM_007359	NP_031385	Coding	chr17:40140253 plus strand	1243782
CASKIN2	NM_001142643	NP_001136115	Coding	chr17:75509888 minus strand	1243783
CASKIN2	NM_020753	NP_065804	Coding	chr17:75515583 minus strand	1243784
CBX1	NM_001127228	NP_001120700	Coding	chr17:48101521 minus strand	1243785
CBX1	NM_006807	NP_006798	Coding	chr17:48101198 minus strand	1243786
CBX2	NM_005189	NP_005180	Coding	chr17:79778177 plus strand	1243787
CBX2	NM_032647	NP_116036	Coding	chr17:79778177 plus strand	1243787
CBX4	NM_003655	NP_003646	Coding	chr17:79839414 minus strand	1243788
CBX8	NM_020649	NP_065700	Coding	chr17:79797116 minus strand	1243789
CCDC103	NM_001258395	NP_001245324	Coding	chr17:44899711 plus strand	1243790
CCDC103	NM_001258396	NP_001245325	Coding	chr17:44899711 plus strand	1243790
CCDC103	NM_001258397	NP_001245326	Coding	chr17:44899711 plus strand	1243790
CCDC103	NM_001258398	NP_001245327	Coding	chr17:44899711 plus strand	1243790
CCDC103	NM_001258399	NP_001245328	Coding	chr17:44899711 plus strand	1243790
CCDC103	NM_213607	NP_998772	Coding	chr17:44899711 plus strand	1243790
CCDC137	NM_199287	NP_954981	Coding	chr17:81666730 plus strand	1243791
CCDC144A	NM_014695	NP_055510	Coding	chr17:16690324 plus strand	1243792
CCDC144NL	NM_001004306	NP_001004306	Coding	chr17:20896140 minus strand	1243793
CCDC182	NM_001282544	NP_001269473	Coding	chr17:57745329 minus strand	1243794
CCDC40	NM_001243342	NP_001230271	Coding	chr17:80036631 plus strand	1243795
CCDC40	NM_017950	NP_060420	Coding	chr17:80036631 plus strand	1243795

【１０９５】

CCDC42	NM_001158261	NP_001151733	Coding	chr17:8744836 minus strand	1243796
CCDC42	NM_144681	NP_653282	Coding	chr17:8744836 minus strand	1243796
CCDC43	NM_001099225	NP_001092695	Coding	chr17:44689797 minus strand	1243797
CCDC43	NM_144609	NP_653210	Coding	chr17:44689797 minus strand	1243797
CCDC47	NM_020198	NP_064583	Coding	chr17:63773728 minus strand	1243798
CCDC57	NM_198082	NP_932348	Coding	chr17:82212813 minus strand	1243799
CCL1	NM_002981	NP_002972	Coding	chr17:34363233 minus strand	1243800
CCL11	NM_002986	NP_002977	Coding	chr17:34285667 plus strand	1243801
CCL13	NM_005408	NP_005399	Coding	chr17:34356451 plus strand	1243802
CCL14	NM_032962	NP_116738	Coding	chr17:35986728 minus strand	1243803
CCL14	NM_032963	NP_116739	Coding	chr17:35986728 minus strand	1243803
CCL15	NM_032965	NP_116741	Coding	chr17:36002038 minus strand	1243804
CCL16	NM_004590	NP_004581	Coding	chr17:35981487 minus strand	1243805
CCL18	NM_002988	NP_002979	Coding	chr17:36064271 plus strand	1243806
CCL2	NM_002982	NP_002973	Coding	chr17:34255276 plus strand	1243807
CCL23	NM_005064	NP_005055	Coding	chr17:36017968 minus strand	1243808
CCL23	NM_145898	NP_665905	Coding	chr17:36017968 minus strand	1243808
CCL3	NM_002983	NP_002974	Coding	chr17:36090160 minus strand	1243809
CCL3L1	NM_021006	NP_066286	Coding	chr17:36196758 minus strand	1243810
CCL3L3	NM_001001437	NP_001001437	Coding	chr17:36196748 minus strand	1243811
CCL4	NM_002984	NP_002975	Coding	chr17:36211775 plus strand	1243812
CCL4L1	NM_207007	NP_996890	Coding	chr17:36103672 plus strand	1243813
CCL4L1	NM_207007	NP_996890	Coding	chr17:36210907 plus strand	1243814
CCL4L2	NM_001291468	NP_001278397	Coding	chr17:36103826 plus strand	1243815
CCL4L2	NM_001291468	NP_001278397	Coding	chr17:36211062 plus strand	1243816
CCL4L2	NM_001291469	NP_001278398	Coding	chr17:36103826 plus strand	1243815
CCL4L2	NM_001291469	NP_001278398	Coding	chr17:36211062 plus strand	1243816

【１０９６】

CCL4L2	NM_001291470	NP_001278399	Coding	chr17:36103826 plus strand	1243815
CCL4L2	NM_001291470	NP_001278399	Coding	chr17:36211062 plus strand	1243816
CCL4L2	NM_001291471	NP_001278400	Coding	chr17:36103826 plus strand	1243815
CCL4L2	NM_001291471	NP_001278400	Coding	chr17:36211062 plus strand	1243816
CCL4L2	NM_001291472	NP_001278401	Coding	chr17:36103826 plus strand	1243815
CCL4L2	NM_001291472	NP_001278401	Coding	chr17:36211062 plus strand	1243816
CCL4L2	NM_001291473	NP_001278402	Coding	chr17:36103826 plus strand	1243815
CCL4L2	NM_001291473	NP_001278402	Coding	chr17:36211062 plus strand	1243816
CCL4L2	NM_001291474	NP_001278403	Coding	chr17:36103826 plus strand	1243815
CCL4L2	NM_001291474	NP_001278403	Coding	chr17:36211062 plus strand	1243816
CCL4L2	NM_001291475	NP_001278404	Coding	chr17:36103826 plus strand	1243815
CCL4L2	NM_001291475	NP_001278404	Coding	chr17:36211062 plus strand	1243816
CCL5	NM_001278736	NP_001265665	Coding	chr17:35880373 minus strand	1243817
CCL5	NM_002985	NP_002976	Coding	chr17:35880373 minus strand	1243817
CCL7	NM_006273	NP_006264	Coding	chr17:34270215 plus strand	1243818
CCL8	NM_005623	NP_005614	Coding	chr17:34319046 plus strand	1243819
CCR10	NM_016602	NP_057686	Coding	chr17:42681827 minus strand	1243820
CCR7	NM_001301714	NP_001288643	Coding	chr17:40565484 minus strand	1243821
CCR7	NM_001301716	NP_001288645	Coding	chr17:40561013 minus strand	1243822
CCR7	NM_001301717	NP_001288646	Coding	chr17:40561013 minus strand	1243822
CCR7	NM_001301718	NP_001288647	Coding	chr17:40560394 minus strand	1243823
CCR7	NM_001838	NP_001829	Coding	chr17:40565484 minus strand	1243821
CCT6B	NM_001193529	NP_001180458	Coding	chr17:34961509 minus strand	1243824
CCT6B	NM_001193530	NP_001180459	Coding	chr17:34961509 minus strand	1243824
CCT6B	NM_006584	NP_006575	Coding	chr17:34961509 minus strand	1243824
CD300A	NM_001256841	NP_001243770	Coding	chr17:74466382 plus strand	1243825
CD300A	NM_007261	NP_009192	Coding	chr17:74466382 plus strand	1243825

【１０９７】

CD300C	NM_006678	NP_006669	Coding	chr17:74546171 minus strand	1243826
CD300E	NM_181449	NP_852114	Coding	chr17:74623758 minus strand	1243827
CD300LB	NM_174892	NP_777552	Coding	chr17:74531474 minus strand	1243828
CD300LD	NM_001115152	NP_001108624	Coding	chr17:74592231 minus strand	1243829
CD300LF	NM_001289082	NP_001276011	Coding	chr17:74713000 minus strand	1243830
CD300LF	NM_001289083	NP_001276012	Coding	chr17:74713000 minus strand	1243830
CD300LF	NM_001289084	NP_001276013	Coding	chr17:74713000 minus strand	1243830
CD300LF	NM_001289085	NP_001276014	Coding	chr17:74713000 minus strand	1243830
CD300LF	NM_001289086	NP_001276015	Coding	chr17:74713000 minus strand	1243830
CD300LF	NM_001289087	NP_001276016	Coding	chr17:74713000 minus strand	1243830
CD300LF	NM_139018	NP_620587	Coding	chr17:74713000 minus strand	1243830
CD300LG	NM_001168322	NP_001161794	Coding	chr17:43847147 plus strand	1243831
CD300LG	NM_001168323	NP_001161795	Coding	chr17:43847147 plus strand	1243831
CD300LG	NM_001168324	NP_001161796	Coding	chr17:43847147 plus strand	1243831
CD300LG	NM_145273	NP_660316	Coding	chr17:43847147 plus strand	1243831
CD68	NM_001040059	NP_001035148	Coding	chr17:7579487 plus strand	1243832
CD68	NM_001251	NP_001242	Coding	chr17:7579486 plus strand	1243833
CD7	NM_006137	NP_006128	Coding	chr17:82317604 minus strand	1243834
CD79B	NM_000626	NP_000617	Coding	chr17:63932344 minus strand	1243835
CD79B	NM_001039933	NP_001035022	Coding	chr17:63932344 minus strand	1243835
CD79B	NM_021602	NP_067613	Coding	chr17:63932344 minus strand	1243835
CDC27	NM_001114091	NP_001107563	Coding	chr17:47189312 minus strand	1243836
CDC27	NM_001256	NP_001247	Coding	chr17:47189312 minus strand	1243836
CDC27	NM_001293089	NP_001280018	Coding	chr17:47189312 minus strand	1243836
CDC27	NM_001293091	NP_001280020	Coding	chr17:47189312 minus strand	1243836
CDC42EP4	NM_012121	NP_036253	Coding	chr17:73312004 minus strand	1243837
CDC6	NM_001254	NP_001245	Coding	chr17:40287893 plus strand	1243838
CDK12	NM_015083	NP_055898	Coding	chr17:39461510 plus strand	1243839

【１０９８】

CDK12	NM_016507	NP_057591	Coding	chr17:39461510 plus strand	1243839
CDK3	NM_001258	NP_001249	Coding	chr17:76000905 plus strand	1243840
CDK5R1	NM_003885	NP_003876	Coding	chr17:32487086 plus strand	1243841
CDK5RAP3	NM_001278197	NP_001265126	Coding	chr17:47970527 plus strand	1243842
CDK5RAP3	NM_001278198	NP_001265127	Coding	chr17:47970955 plus strand	1243843
CDK5RAP3	NM_001278216	NP_001265145	Coding	chr17:47970955 plus strand	1243843
CDK5RAP3	NM_001278217	NP_001265146	Coding	chr17:47970955 plus strand	1243843
CDK5RAP3	NM_176096	NP_788276	Coding	chr17:47970955 plus strand	1243843
CDR2L	NM_014603	NP_055418	Coding	chr17:74987631 plus strand	1243844
CDRT1	NM_001282540	NP_001269469	Coding	chr17:15619704 minus strand	1243845
CDRT1	NM_006382	NP_006373	Coding	chr17:15619704 minus strand	1243845
CDRT15	NM_001007530	NP_001007531	Coding	chr17:14236833 minus strand	1243846
CDRT15L2	NM_001190790	NP_001177719	Coding	chr17:20579723 plus strand	1243847
CDRT4	NM_001204477	NP_001191406	Coding	chr17:15467611 minus strand	1243848
CENPV	NM_181716	NP_859067	Coding	chr17:16353498 minus strand	1243849
CEP112	NM_001037325	NP_001032402	Coding	chr17:65826543 minus strand	1243850
CEP112	NM_001199165	NP_001186094	Coding	chr17:66192131 minus strand	1243851
CEP112	NM_001302891	NP_001289820	Coding	chr17:66191869 minus strand	1243852
CEP112	NM_145036	NP_659473	Coding	chr17:66191869 minus strand	1243852
CEP131	NM_001009811	NP_001009811	Coding	chr17:81222951 minus strand	1243853
CEP131	NM_014984	NP_055799	Coding	chr17:81222951 minus strand	1243853
CEP95	NM_138363	NP_612372	Coding	chr17:64507039 plus strand	1243854
CFAP52	NM_001080556	NP_001074025	Coding	chr17:9576626 plus strand	1243855
CFAP52	NM_145054	NP_659491	Coding	chr17:9576626 plus strand	1243855
CHAD	NM_001267	NP_001258	Coding	chr17:50468866 minus strand	1243856
CHD3	NM_001005271	NP_001005271	Coding	chr17:7884804 plus strand	1243857
CHD3	NM_001005273	NP_001005273	Coding	chr17:7888850 plus strand	1243858
CHD3	NM_005852	NP_005843	Coding	chr17:7888850 plus strand	1243858
CHMP6	NM_024591	NP_078867	Coding	chr17:80991840 plus strand	1243859

【１０９９】

CHRNB1	NM_000747	NP_000738	Coding	chr17:7445086 plus strand	1243860
CHRNE	NM_000080	NP_000071	Coding	chr17:4903074 minus strand	1243861
CISD3	NM_001136498	NP_001129970	Coding	chr17:38730256 plus strand	1243862
CLDN7	NM_001185022	NP_001171951	Coding	chr17:7263193 minus strand	1243863
CLDN7	NM_001185023	NP_001171952	Coding	chr17:7262945 minus strand	1243864
CLDN7	NM_001307	NP_001298	Coding	chr17:7262945 minus strand	1243864
CLEC10A	NM_006344	NP_006335	Coding	chr17:7080281 minus strand	1243865
CLEC10A	NM_182906	NP_878910	Coding	chr17:7080281 minus strand	1243865
CLTC	NM_001288653	NP_001275582	Coding	chr17:59619688 plus strand	1243866
CLTC	NM_004859	NP_004850	Coding	chr17:59619688 plus strand	1243866
CLUH	NM_015229	NP_056044	Coding	chr17:2711633 minus strand	1243867
CNP	NM_033133	NP_149124	Coding	chr17:41966740 plus strand	1243868
CNTD1	NM_173478	NP_775749	Coding	chr17:42798835 plus strand	1243869
CNTNAP1	NM_003632	NP_003623	Coding	chr17:42682613 plus strand	1243870
CNTROB	NM_001037144	NP_001032221	Coding	chr17:7932123 plus strand	1243871
CNTROB	NM_053051	NP_444279	Coding	chr17:7932123 plus strand	1243871
COA3	NM_001040431	NP_001035521	Coding	chr17:42798725 minus strand	1243872
COASY	NM_001042529	NP_001035994	Coding	chr17:42562073 plus strand	1243873
COASY	NM_001042532	NP_001035997	Coding	chr17:42562073 plus strand	1243873
COASY	NM_025233	NP_079509	Coding	chr17:42562073 plus strand	1243873
COG1	NM_018714	NP_061184	Coding	chr17:73193033 plus strand	1243874
COIL	NM_004645	NP_004636	Coding	chr17:56961050 minus strand	1243875
COL1A1	NM_000088	NP_000079	Coding	chr17:50201639 minus strand	1243876
COPRS	NM_018405	NP_060875	Coding	chr17:31859307 minus strand	1243877
COPS3	NM_001199125	NP_001186054	Coding	chr17:17280698 minus strand	1243878
COPS3	NM_003653	NP_003644	Coding	chr17:17281303 minus strand	1243879
COPZ2	NM_016429	NP_057513	Coding	chr17:48037806 minus strand	1243880
CORO6	NM_032854	NP_116243	Coding	chr17:29621423 minus strand	1243881

【１１００】

COX10	NM_001303	NP_001294	Coding	chr17:14069401 plus strand	1243882
COX11	NM_001162861	NP_001156333	Coding	chr17:54968703 minus strand	1243883
COX11	NM_001162862	NP_001156334	Coding	chr17:54968703 minus strand	1243883
COX11	NM_004375	NP_004366	Coding	chr17:54968703 minus strand	1243883
CPD	NM_001199775	NP_001186704	Coding	chr17:30380477 plus strand	1243884
CPD	NM_001304	NP_001295	Coding	chr17:30378923 plus strand	1243885
CPSF4L	NM_001129885	NP_001123357	Coding	chr17:73261880 minus strand	1243886
CRHR1	NM_001145146	NP_001138618	Coding	chr17:45784279 plus strand	1243887
CRHR1	NM_001145147	NP_001138619	Coding	chr17:45784279 plus strand	1243887
CRHR1	NM_001145148	NP_001138620	Coding	chr17:45784279 plus strand	1243887
CRHR1	NM_001303018	NP_001289947	Coding	chr17:45784279 plus strand	1243887
CRHR1	NM_001303020	NP_001289949	Coding	chr17:45784279 plus strand	1243887
CRHR1	NM_004382	NP_004373	Coding	chr17:45784279 plus strand	1243887
CRK	NM_005206	NP_005197	Coding	chr17:1456267 minus strand	1243888
CRK	NM_016823	NP_058431	Coding	chr17:1456267 minus strand	1243888
CRLF3	NM_015986	NP_057070	Coding	chr17:30824760 minus strand	1243889
CRYBA1	NM_005208	NP_005199	Coding	chr17:29246856 plus strand	1243890
CSF3	NM_000759	NP_000750	Coding	chr17:40015360 plus strand	1243891
CSF3	NM_001178147	NP_001171618	Coding	chr17:40015360 plus strand	1243891
CSF3	NM_172219	NP_757373	Coding	chr17:40015360 plus strand	1243891
CSF3	NM_172220	NP_757374	Coding	chr17:40015360 plus strand	1243891
CSH1	NM_001317	NP_001308	Coding	chr17:63896661 minus strand	1243892
CSH2	NM_020991	NP_066271	Coding	chr17:63873729 minus strand	1243893
CSH2	NM_022644	NP_072170	Coding	chr17:63873729 minus strand	1243893
CSH2	NM_022645	NP_072171	Coding	chr17:63873729 minus strand	1243893
CSHL1	NM_001318	NP_001309	Coding	chr17:63911258 minus strand	1243894
CSHL1	NM_022579	NP_072101	Coding	chr17:63911258 minus strand	1243894

【１１０１】

CSHL1	NM_022580	NP_072102	Coding	chr17:63911258 minus strand	1243894
CSHL1	NM_022581	NP_072103	Coding	chr17:63911258 minus strand	1243894
CSNK1D	NM_001893	NP_001884	Coding	chr17:82273718 minus strand	1243895
CSNK1D	NM_139062	NP_620693	Coding	chr17:82273718 minus strand	1243895
CTC1	NM_025099	NP_079375	Coding	chr17:8248095 minus strand	1243896
CTDNEP1	NM_001143775	NP_001137247	Coding	chr17:7251676 minus strand	1243897
CTDNEP1	NM_015343	NP_056158	Coding	chr17:7251940 minus strand	1243898
CTNS	NM_001031681	NP_001026851	Coding	chr17:3636467 plus strand	1243899
CTNS	NM_004937	NP_004928	Coding	chr17:3636467 plus strand	1243899
CUEDC1	NM_001271875	NP_001258804	Coding	chr17:57955323 minus strand	1243900
CUEDC1	NM_001292025	NP_001278954	Coding	chr17:57903389 minus strand	1243901
CWC25	NM_017748	NP_060218	Coding	chr17:38825350 minus strand	1243902
CXCL16	NM_001100812	NP_001094282	Coding	chr17:4739928 minus strand	1243903
CXCL16	NM_022059	NP_071342	Coding	chr17:4739928 minus strand	1243903
CYB561	NM_001017916	NP_001017916	Coding	chr17:63446184 minus strand	1243904
CYB561	NM_001017917	NP_001017917	Coding	chr17:63440846 minus strand	1243905
CYB561	NM_001915	NP_001906	Coding	chr17:63446361 minus strand	1243906
CYB5D1	NM_144607	NP_653208	Coding	chr17:7857745 plus strand	1243907
CYB5D2	NM_001254755	NP_001241684	Coding	chr17:4143620 plus strand	1243908
CYB5D2	NM_001254756	NP_001241685	Coding	chr17:4143167 plus strand	1243909
CYB5D2	NM_144611	NP_653212	Coding	chr17:4143167 plus strand	1243909
CYGB	NM_134268	NP_599030	Coding	chr17:76537905 minus strand	1243910
CYTH1	NM_001292018	NP_001278947	Coding	chr17:78723750 minus strand	1243911
CYTH1	NM_001292019	NP_001278948	Coding	chr17:78717032 minus strand	1243912
CYTH1	NM_004762	NP_004753	Coding	chr17:78782342 minus strand	1243913
CYTH1	NM_017456	NP_059430	Coding	chr17:78782342 minus strand	1243913
DBF4B	NM_025104	NP_079380	Coding	chr17:44708607 plus strand	1243914
DBF4B	NM_145663	NP_663696	Coding	chr17:44708607 plus strand	1243914
DCAF7	NM_005828	NP_005819	Coding	chr17:63550434 plus strand	1243915

【１１０２】

DCAKD	NM_001128631	NP_001122103	Coding	chr17:45051661 minus strand	1243916
DCAKD	NM_001288654	NP_001275583	Coding	chr17:45061109 minus strand	1243917
DCAKD	NM_001288655	NP_001275584	Coding	chr17:45051517 minus strand	1243918
DCAKD	NM_024819	NP_079095	Coding	chr17:45061109 minus strand	1243917
DCXR	NM_001195218	NP_001182147	Coding	chr17:82037697 minus strand	1243919
DCXR	NM_016286	NP_057370	Coding	chr17:82037697 minus strand	1243919
DDX42	NM_007372	NP_031398	Coding	chr17:63774188 plus strand	1243920
DDX42	NM_203499	NP_987095	Coding	chr17:63774188 plus strand	1243920
DDX5	NM_004396	NP_004387	Coding	chr17:64506366 minus strand	1243921
DDX52	NM_001291476	NP_001278405	Coding	chr17:37643464 minus strand	1243922
DDX52	NM_007010	NP_008941	Coding	chr17:37643464 minus strand	1243922
DERL2	NM_016041	NP_057125	Coding	chr17:5486174 minus strand	1243923
DGKE	NM_003647	NP_003638	Coding	chr17:56834098 plus strand	1243924
DHRS11	NM_024308	NP_077284	Coding	chr17:36591795 plus strand	1243925
DHRS13	NM_144683	NP_653284	Coding	chr17:28903071 minus strand	1243926
DHRS7B	NM_015510	NP_056325	Coding	chr17:21126927 plus strand	1243927
DHRS7C	NM_001105571	NP_001099041	Coding	chr17:9791297 minus strand	1243928
DHRS7C	NM_001220493	NP_001207422	Coding	chr17:9791297 minus strand	1243928
DHX33	NM_001199699	NP_001186628	Coding	chr17:5469060 minus strand	1243929
DHX33	NM_020162	NP_064547	Coding	chr17:5469060 minus strand	1243929
DHX40	NM_001166301	NP_001159773	Coding	chr17:59565524 plus strand	1243930
DHX40	NM_024612	NP_078888	Coding	chr17:59565524 plus strand	1243930
DHX58	NM_024119	NP_077024	Coding	chr17:42112733 minus strand	1243931
DHX8	NM_001302623	NP_001289552	Coding	chr17:43483916 plus strand	1243932
DHX8	NM_004941	NP_004932	Coding	chr17:43483916 plus strand	1243932
DLG4	NM_001128827	NP_001122299	Coding	chr17:7217609 minus strand	1243933
DLG4	NM_001365	NP_001356	Coding	chr17:7220050 minus strand	1243934

【１１０３】

DLX3	NM_005220	NP_005211	Coding	chr17:49995224 minus strand	1243935
DLX4	NM_001934	NP_001925	Coding	chr17:49972765 plus strand	1243936
DLX4	NM_138281	NP_612138	Coding	chr17:49969197 plus strand	1243937
DNAH17	NM_173628	NP_775899	Coding	chr17:78577394 minus strand	1243938
DNAH2	NM_020877	NP_065928	Coding	chr17:7719720 plus strand	1243939
DNAH9	NM_001372	NP_001363	Coding	chr17:11598430 plus strand	1243940
DNAH9	NM_004662	NP_004653	Coding	chr17:11882901 plus strand	1243941
DNAI2	NM_001172810	NP_001166281	Coding	chr17:74274246 plus strand	1243942
DNAI2	NM_023036	NP_075462	Coding	chr17:74274246 plus strand	1243942
DNAJC7	NM_001144766	NP_001138238	Coding	chr17:42017165 minus strand	1243943
DNAJC7	NM_003315	NP_003306	Coding	chr17:42017697 minus strand	1243944
DOC2B	NM_003585	NP_003576	Coding	chr17:181630 minus strand	1243945
DPH1	NM_001383	NP_001374	Coding	chr17:2030136 plus strand	1243946
DRG2	NM_001388	NP_001379	Coding	chr17:18087866 plus strand	1243947
DUS1L	NM_022156	NP_071439	Coding	chr17:82065821 minus strand	1243948
DUSP14	NM_007026	NP_008957	Coding	chr17:37489844 plus strand	1243949
DUSP3	NM_004090	NP_004081	Coding	chr17:43779000 minus strand	1243950
DVL2	NM_004422	NP_004413	Coding	chr17:7234544 minus strand	1243951
DYNLL2	NM_080677	NP_542408	Coding	chr17:58083418 plus strand	1243952
EFCAB13	NM_001195192	NP_001182121	Coding	chr17:47323960 plus strand	1243953
EFCAB13	NM_152347	NP_689560	Coding	chr17:47323960 plus strand	1243953
EFCAB3	NM_001144933	NP_001138405	Coding	chr17:62370217 plus strand	1243954
EFCAB3	NM_173503	NP_775774	Coding	chr17:62380552 plus strand	1243955
EFCAB5	NM_001145053	NP_001138525	Coding	chr17:29929855 plus strand	1243956
EFCAB5	NM_198529	NP_940931	Coding	chr17:29941604 plus strand	1243957
EFNB3	NM_001406	NP_001397	Coding	chr17:7705201 plus strand	1243958
EFTUD2	NM_001142605	NP_001136077	Coding	chr17:44899625 minus strand	1243959
EFTUD2	NM_001258353	NP_001245282	Coding	chr17:44899368 minus strand	1243960
EFTUD2	NM_001258354	NP_001245283	Coding	chr17:44899625 minus	1243959

【１１０４】

				strand	
EFTUD2	NM_004247	NP_004238	Coding	chr17:44899625 minus strand	1243959
EIF1	NM_005801	NP_005792	Coding	chr17:41688874 plus strand	1243961
EIF4A1	NM_001204510	NP_001191439	Coding	chr17:7572705 plus strand	1243962
EIF4A1	NM_001416	NP_001407	Coding	chr17:7572705 plus strand	1243962
EIF4A3	NM_014740	NP_055555	Coding	chr17:80147183 minus strand	1243963
EIF5A	NM_001143760	NP_001137232	Coding	chr17:7306998 plus strand	1243964
EIF5A	NM_001143761	NP_001137233	Coding	chr17:7307968 plus strand	1243965
EIF5A	NM_001143762	NP_001137234	Coding	chr17:7308374 plus strand	1243966
EIF5A	NM_001970	NP_001961	Coding	chr17:7307536 plus strand	1243967
ELAC2	NM_001165962	NP_001159434	Coding	chr17:13018064 minus strand	1243968
ELAC2	NM_018127	NP_060597	Coding	chr17:13018064 minus strand	1243968
ELAC2	NM_173717	NP_776065	Coding	chr17:13018064 minus strand	1243968
ELP5	NM_015362	NP_056177	Coding	chr17:7252200 plus strand	1243969
ELP5	NM_203413	NP_981958	Coding	chr17:7252200 plus strand	1243969
ELP5	NM_203414	NP_981959	Coding	chr17:7252200 plus strand	1243969
ELP5	NM_203415	NP_981960	Coding	chr17:7252052 plus strand	1243970
EMC6	NM_001014764	NP_001014764	Coding	chr17:3668722 plus strand	1243971
EMC6	NM_031298	NP_112588	Coding	chr17:3668722 plus strand	1243971
EME1	NM_001166131	NP_001159603	Coding	chr17:50373219 plus strand	1243972
EME1	NM_152463	NP_689676	Coding	chr17:50373219 plus strand	1243972
ENDOV	NM_001164637	NP_001158109	Coding	chr17:80415166 plus strand	1243973
ENDOV	NM_001164638	NP_001158110	Coding	chr17:80415166 plus strand	1243973
ENDOV	NM_173627	NP_775898	Coding	chr17:80415166 plus strand	1243973
ENGASE	NM_001042573	NP_001036038	Coding	chr17:79074936 plus strand	1243974
ENO3	NM_001193503	NP_001180432	Coding	chr17:4951088 plus strand	1243975
ENO3	NM_001976	NP_001967	Coding	chr17:4951088 plus strand	1243975
ENO3	NM_053013	NP_443739	Coding	chr17:4951088 plus strand	1243975
ENPP7	NM_178543	NP_848638	Coding	chr17:79731102 plus strand	1243976
ENTHD2	NM_144679	NP_653280	Coding	chr17:81239091 minus strand	1243977
EPN2	NM_001102664	NP_001096134	Coding	chr17:19237376 plus strand	1243978
EPN2	NM_014964	NP_055779	Coding	chr17:19237376 plus strand	1243978
EPN2	NM_148921	NP_683723	Coding	chr17:19237376 plus strand	1243978

【１１０５】

EPN3	NM_017957	NP_060427	Coding	chr17:50532686 plus strand	1243979
EPX	NM_000502	NP_000493	Coding	chr17:58192727 plus strand	1243980
ERAL1	NM_005702	NP_005693	Coding	chr17:28855024 plus strand	1243981
ERBB2	NM_001005862	NP_001005862	Coding	chr17:39688083 plus strand	1243982
ERBB2	NM_001289936	NP_001276865	Coding	chr17:39688083 plus strand	1243982
ERBB2	NM_001289937	NP_001276866	Coding	chr17:39699977 plus strand	1243983
ERBB2	NM_001289938	NP_001276867	Coding	chr17:39688083 plus strand	1243982
ERBB2	NM_004448	NP_004439	Coding	chr17:39699977 plus strand	1243983
ERN1	NM_001433	NP_001424	Coding	chr17:64130142 minus strand	1243984
ETV4	NM_001079675	NP_001073143	Coding	chr17:43546432 minus strand	1243985
ETV4	NM_001261437	NP_001248366	Coding	chr17:43546432 minus strand	1243985
ETV4	NM_001261438	NP_001248367	Coding	chr17:43545937 minus strand	1243986
ETV4	NM_001261439	NP_001248368	Coding	chr17:43530435 minus strand	1243987
ETV4	NM_001986	NP_001977	Coding	chr17:43545937 minus strand	1243986
EVI2A	NM_001003927	NP_001003927	Coding	chr17:31321749 minus strand	1243988
EVI2A	NM_014210	NP_055025	Coding	chr17:31321749 minus strand	1243988
EVI2B	NM_006495	NP_006486	Coding	chr17:31314112 minus strand	1243989
EVPL	NM_001988	NP_001979	Coding	chr17:76027426 minus strand	1243990
EVPLL	NM_001145127	NP_001138599	Coding	chr17:18377764 plus strand	1243991
EXOC7	NM_001013839	NP_001013861	Coding	chr17:76103787 minus strand	1243992
EXOC7	NM_001145297	NP_001138769	Coding	chr17:76103787 minus strand	1243992
EXOC7	NM_001145298	NP_001138770	Coding	chr17:76103787 minus strand	1243992
EXOC7	NM_001145299	NP_001138771	Coding	chr17:76103787 minus strand	1243992
EXOC7	NM_001282313	NP_001269242	Coding	chr17:76103571 minus strand	1243993
EXOC7	NM_001282314	NP_001269243	Coding	chr17:76103787 minus strand	1243992
EXOC7	NM_015219	NP_056034	Coding	chr17:76103787 minus strand	1243992
EZH1	NM_001991	NP_001982	Coding	chr17:42745053 minus strand	1243994

【１１０６】

FADS6	NM_178128	NP_835229	Coding	chr17:74893811 minus strand	1243995
FAM101B	NM_182705	NP_874364	Coding	chr17:445940 minus strand	1243996
FAM104A	NM_001098832	NP_001092302	Coding	chr17:73232394 minus strand	1243997
FAM104A	NM_001289410	NP_001276339	Coding	chr17:73232394 minus strand	1243997
FAM104A	NM_001289411	NP_001276340	Coding	chr17:73232394 minus strand	1243997
FAM104A	NM_001289412	NP_001276341	Coding	chr17:73227717 minus strand	1243998
FAM104A	NM_032837	NP_116226	Coding	chr17:73232394 minus strand	1243997
FAM117A	NM_030802	NP_110429	Coding	chr17:49764156 minus strand	1243999
FAM134C	NM_178126	NP_835227	Coding	chr17:42609427 minus strand	1244000
FAM171A2	NM_198475	NP_940877	Coding	chr17:44363867 minus strand	1244001
FAM195B	NM_001093767	NP_001087236	Coding	chr17:81833294 minus strand	1244002
FAM195B	NM_001288798	NP_001275727	Coding	chr17:81833294 minus strand	1244002
FAM195B	NM_001288799	NP_001275728	Coding	chr17:81833294 minus strand	1244002
FAM195B	NM_207368	NP_997251	Coding	chr17:81833294 minus strand	1244002
FAM20A	NM_001243746	NP_001230675	Coding	chr17:68600954 minus strand	1244003
FAM20A	NM_017565	NP_060035	Coding	chr17:68600954 minus strand	1244003
FAM222B	NM_001077498	NP_001070966	Coding	chr17:28842839 minus strand	1244004
FAM222B	NM_001288631	NP_001275560	Coding	chr17:28842839 minus strand	1244004
FAM222B	NM_001288632	NP_001275561	Coding	chr17:28842839 minus strand	1244004
FAM222B	NM_001288633	NP_001275562	Coding	chr17:28842839 minus strand	1244004
FAM222B	NM_001288634	NP_001275563	Coding	chr17:28812435 minus strand	1244005
FAM222B	NM_001288635	NP_001275564	Coding	chr17:28842839 minus strand	1244004
FAM222B	NM_001288636	NP_001275565	Coding	chr17:28842839 minus strand	1244004
FAM222B	NM_001288637	NP_001275566	Coding	chr17:28842839 minus strand	1244004
FAM222B	NM_001288638	NP_001275567	Coding	chr17:28842839 minus strand	1244004
FAM222B	NM_001288639	NP_001275568	Coding	chr17:28842839 minus strand	1244004
FAM222B	NM_001288640	NP_001275569	Coding	chr17:28842839 minus strand	1244004
FAM222B	NM_018182	NP_060652	Coding	chr17:28842839 minus	1244004

【１１０７】

				strand	
FAM57A	NM_024792	NP_079068	Coding	chr17:732606 plus strand	1244006
FAM64A	NM_001195228	NP_001182157	Coding	chr17:6444414 plus strand	1244007
FAM64A	NM_019013	NP_061886	Coding	chr17:6444414 plus strand	1244007
FAM83G	NM_001039999	NP_001035088	Coding	chr17:19004747 minus strand	1244008
FASN	NM_004104	NP_004095	Coding	chr17:82098230 minus strand	1244009
FBF1	NM_001080542	NP_001074011	Coding	chr17:75941038 minus strand	1244010
FBXL20	NM_001184906	NP_001171835	Coding	chr17:39401656 minus strand	1244011
FBXL20	NM_032875	NP_116264	Coding	chr17:39401656 minus strand	1244011
FBXO39	NM_153230	NP_694962	Coding	chr17:6776232 plus strand	1244012
FBXO47	NM_001008777	NP_001008777	Coding	chr17:38967402 minus strand	1244013
FBXW10	NM_001267585	NP_001254514	Coding	chr17:18744012 plus strand	1244014
FBXW10	NM_001267586	NP_001254515	Coding	chr17:18744012 plus strand	1244014
FDXR	NM_001258012	NP_001244941	Coding	chr17:74873031 minus strand	1244015
FDXR	NM_001258013	NP_001244942	Coding	chr17:74873031 minus strand	1244015
FDXR	NM_001258014	NP_001244943	Coding	chr17:74873031 minus strand	1244015
FDXR	NM_001258015	NP_001244944	Coding	chr17:74873031 minus strand	1244015
FDXR	NM_001258016	NP_001244945	Coding	chr17:74868753 minus strand	1244016
FDXR	NM_004110	NP_004101	Coding	chr17:74873031 minus strand	1244015
FDXR	NM_024417	NP_077728	Coding	chr17:74873031 minus strand	1244015
FGF11	NM_004112	NP_004103	Coding	chr17:7439369 plus strand	1244017
FKBP10	NM_021939	NP_068758	Coding	chr17:41812709 plus strand	1244018
FLCN	NM_144606	NP_653207	Coding	chr17:17237188 minus strand	1244019
FLCN	NM_144997	NP_659434	Coding	chr17:17237188 minus strand	1244019
FLII	NM_001256264	NP_001243193	Coding	chr17:18258556 minus strand	1244020
FLII	NM_001256265	NP_001243194	Coding	chr17:18258916 minus strand	1244021
FLII	NM_002018	NP_002009	Coding	chr17:18258916 minus strand	1244021
FLJ45513	NM_001242791	NP_001229720	Coding	chr17:49845909 plus strand	1244022
FLOT2	NM_004475	NP_004466	Coding	chr17:28897697 minus strand	1244023

【１１０８】

FMNL1	NM_005892	NP_005883	Coding	chr17:45221924 plus strand	1244024
FN3K	NM_022158	NP_071441	Coding	chr17:82735575 plus strand	1244025
FN3KRP	NM_024619	NP_078895	Coding	chr17:82716705 plus strand	1244026
FNDC8	NM_017559	NP_060029	Coding	chr17:35121611 plus strand	1244027
FOXJ1	NM_001454	NP_001445	Coding	chr17:76141299 minus strand	1244028
FOXK2	NM_004514	NP_004505	Coding	chr17:82519717 plus strand	1244029
FOXN1	NM_003593	NP_003584	Coding	chr17:28523940 plus strand	1244030
FSCN2	NM_001077182	NP_001070650	Coding	chr17:81528390 plus strand	1244031
FSCN2	NM_012418	NP_036550	Coding	chr17:81528390 plus strand	1244031
FTSJ3	NM_017647	NP_060117	Coding	chr17:63827671 minus strand	1244032
FXR2	NM_004860	NP_004851	Coding	chr17:7614897 minus strand	1244033
FZD2	NM_001466	NP_001457	Coding	chr17:44557443 plus strand	1244034
G6PC	NM_000151	NP_000142	Coding	chr17:42900796 plus strand	1244035
G6PC	NM_001270397	NP_001257326	Coding	chr17:42900796 plus strand	1244035
G6PC3	NM_138387	NP_612396	Coding	chr17:44070729 plus strand	1244036
GAA	NM_000152	NP_000143	Coding	chr17:80101555 plus strand	1244037
GAA	NM_001079803	NP_001073271	Coding	chr17:80101555 plus strand	1244037
GAA	NM_001079804	NP_001073272	Coding	chr17:80101555 plus strand	1244037
GABARAP	NM_007278	NP_009209	Coding	chr17:7242434 minus strand	1244038
GALK1	NM_000154	NP_000145	Coding	chr17:75765199 minus strand	1244039
GALR2	NM_003857	NP_003848	Coding	chr17:76074800 plus strand	1244040
GAS2L2	NM_139285	NP_644814	Coding	chr17:35752878 minus strand	1244041
GAS7	NM_001130831	NP_001124303	Coding	chr17:10026306 minus strand	1244042
GAS7	NM_003644	NP_003635	Coding	chr17:9959449 minus strand	1244043
GAS7	NM_201432	NP_958836	Coding	chr17:10036747 minus strand	1244044
GAS7	NM_201433	NP_958839	Coding	chr17:10198551 minus strand	1244045
GAST	NM_000805	NP_000796	Coding	chr17:41712325 plus strand	1244046

【１１０９】

GCGR	NM_000160	NP_000151	Coding	chr17:81804131 plus strand	1244047
GDPD1	NM_001165993	NP_001159465	Coding	chr17:59220466 plus strand	1244048
GDPD1	NM_001165994	NP_001159466	Coding	chr17:59220466 plus strand	1244048
GDPD1	NM_182569	NP_872375	Coding	chr17:59220466 plus strand	1244048
GEMIN4	NM_015721	NP_056536	Coding	chr17:752261 minus strand	1244049
GFAP	NM_001131019	NP_001124491	Coding	chr17:44915552 minus strand	1244050
GFAP	NM_001242376	NP_001229305	Coding	chr17:44915552 minus strand	1244050
GFAP	NM_002055	NP_002046	Coding	chr17:44915552 minus strand	1244050
GGA3	NM_001172703	NP_001166174	Coding	chr17:75262393 minus strand	1244051
GGA3	NM_001172704	NP_001166175	Coding	chr17:75262393 minus strand	1244051
GGA3	NM_001291641	NP_001278570	Coding	chr17:75261661 minus strand	1244052
GGA3	NM_001291642	NP_001278571	Coding	chr17:75261661 minus strand	1244052
GGA3	NM_014001	NP_054720	Coding	chr17:75261661 minus strand	1244052
GGA3	NM_138619	NP_619525	Coding	chr17:75261661 minus strand	1244052
GGNBP2	NM_024835	NP_079111	Coding	chr17:36544887 plus strand	1244053
GGT6	NM_001122890	NP_001116362	Coding	chr17:4560596 minus strand	1244054
GGT6	NM_001288702	NP_001275631	Coding	chr17:4560596 minus strand	1244054
GGT6	NM_001288703	NP_001275632	Coding	chr17:4560596 minus strand	1244054
GGT6	NM_001288704	NP_001275633	Coding	chr17:4560596 minus strand	1244054
GGT6	NM_153338	NP_699169	Coding	chr17:4560596 minus strand	1244054
GH1	NM_000515	NP_000506	Coding	chr17:63918852 minus strand	1244055
GH1	NM_022559	NP_072053	Coding	chr17:63918852 minus strand	1244055
GH1	NM_022560	NP_072054	Coding	chr17:63918852 minus strand	1244055
GH2	NM_002059	NP_002050	Coding	chr17:63881942 minus strand	1244056
GH2	NM_022556	NP_072050	Coding	chr17:63881942 minus strand	1244056
GH2	NM_022557	NP_072051	Coding	chr17:63881942 minus strand	1244056
GH2	NM_022558	NP_072052	Coding	chr17:63881942 minus strand	1244056
GHDC	NM_001142623	NP_001136095	Coding	chr17:42194532 minus	1244057

【１１１０】

				strand	
GHDC	NM_032484	NP_115873	Coding	chr17:42194532 minus strand	1244057
GID4	NM_024052	NP_076957	Coding	chr17:18039296 plus strand	1244058
GIP	NM_004123	NP_004114	Coding	chr17:48968593 minus strand	1244059
GIT1	NM_001085454	NP_001078923	Coding	chr17:29589592 minus strand	1244060
GIT1	NM_014030	NP_054749	Coding	chr17:29589592 minus strand	1244060
GJC1	NM_001080383	NP_001073852	Coding	chr17:44830811 minus strand	1244061
GJC1	NM_005497	NP_005488	Coding	chr17:44830239 minus strand	1244062
GJD3	NM_152219	NP_689343	Coding	chr17:40364693 minus strand	1244063
GLOD4	NM_016080	NP_057164	Coding	chr17:782331 minus strand	1244064
GLP2R	NM_004246	NP_004237	Coding	chr17:9826063 plus strand	1244065
GLTPD2	NM_001014985	NP_001014985	Coding	chr17:4788958 plus strand	1244066
GNA13	NM_001282425	NP_001269354	Coding	chr17:65055774 minus strand	1244067
GNA13	NM_006572	NP_006563	Coding	chr17:65056802 minus strand	1244068
GNGT2	NM_001198754	NP_001185683	Coding	chr17:49210574 minus strand	1244069
GNGT2	NM_001198755	NP_001185684	Coding	chr17:49209400 minus strand	1244070
GNGT2	NM_001198756	NP_001185685	Coding	chr17:49209400 minus strand	1244070
GNGT2	NM_031498	NP_113686	Coding	chr17:49209381 minus strand	1244071
GOSR1	NM_001007024	NP_001007025	Coding	chr17:30477407 plus strand	1244072
GOSR1	NM_001007025	NP_001007026	Coding	chr17:30477407 plus strand	1244072
GOSR1	NM_004871	NP_004862	Coding	chr17:30477407 plus strand	1244072
GOSR2	NM_001012511	NP_001012529	Coding	chr17:46923119 plus strand	1244073
GOSR2	NM_004287	NP_004278	Coding	chr17:46923119 plus strand	1244073
GOSR2	NM_054022	NP_473363	Coding	chr17:46923119 plus strand	1244073
GP1BA	NM_000173	NP_000164	Coding	chr17:4932296 plus strand	1244074
GPATCH8	NM_001002909	NP_001002909	Coding	chr17:44503589 minus strand	1244075
GPR142	NM_181790	NP_861455	Coding	chr17:74367505 plus strand	1244076
GPR179	NM_001004334	NP_001004334	Coding	chr17:38343810 minus strand	1244077
GPRC5C	NM_018653	NP_061123	Coding	chr17:74433696 plus strand	1244078

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GPRC5C	NM_022036	NP_071319	Coding	chr17:74431527 plus strand	1244079
GPS1	NM_004127	NP_004118	Coding	chr17:82051886 plus strand	1244080
GPS1	NM_212492	NP_997657	Coding	chr17:82051886 plus strand	1244080
GPS2	NM_004489	NP_004480	Coding	chr17:7315339 minus strand	1244081
GRAP	NM_006613	NP_006604	Coding	chr17:19047023 minus strand	1244082
GRAPL	NM_001129778	NP_001123250	Coding	chr17:19127468 plus strand	1244083
GRB2	NM_002086	NP_002077	Coding	chr17:75405708 minus strand	1244084
GRB2	NM_203506	NP_987102	Coding	chr17:75405709 minus strand	1244085
GRB7	NM_001030002	NP_001025173	Coding	chr17:39738322 plus strand	1244086
GRB7	NM_001242442	NP_001229371	Coding	chr17:39738770 plus strand	1244087
GRB7	NM_001242443	NP_001229372	Coding	chr17:39739966 plus strand	1244088
GRB7	NM_005310	NP_005301	Coding	chr17:39737908 plus strand	1244089
GRIN2C	NM_000835	NP_000826	Coding	chr17:74859884 minus strand	1244090
GRIN2C	NM_001278553	NP_001265482	Coding	chr17:74860843 minus strand	1244091
GRN	NM_002087	NP_002078	Coding	chr17:44345085 plus strand	1244092
GSDMA	NM_178171	NP_835465	Coding	chr17:39962972 plus strand	1244093
GSDMB	NM_001042471	NP_001035936	Coding	chr17:39918650 minus strand	1244094
GSDMB	NM_001165958	NP_001159430	Coding	chr17:39918650 minus strand	1244094
GSDMB	NM_001165959	NP_001159431	Coding	chr17:39918650 minus strand	1244094
GSDMB	NM_018530	NP_061000	Coding	chr17:39917540 minus strand	1244095
GSG2	NM_031965	NP_114171	Coding	chr17:3723902 plus strand	1244096
GUCY2D	NM_000180	NP_000171	Coding	chr17:8002669 plus strand	1244097
H3F3B	NM_005324	NP_005315	Coding	chr17:75779779 minus strand	1244098
HAP1	NM_001079870	NP_001073339	Coding	chr17:41734646 minus strand	1244099
HAP1	NM_001079871	NP_001073340	Coding	chr17:41734646 minus strand	1244099
HAP1	NM_177977	NP_817084	Coding	chr17:41734646 minus strand	1244099
HCRT	NM_001524	NP_001515	Coding	chr17:42185452 minus strand	1244100
HDAC5	NM_001015053	NP_001015053	Coding	chr17:44123646 minus strand	1244101

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HDAC5	NM_005474	NP_005465	Coding	chr17:44123646 minus strand	1244101
HEATR6	NM_022070	NP_071353	Coding	chr17:60078931 minus strand	1244102
HEATR9	NM_152781	NP_689994	Coding	chr17:35868891 minus strand	1244103
HELZ	NM_014877	NP_055692	Coding	chr17:67245203 minus strand	1244104
HES7	NM_001165967	NP_001159439	Coding	chr17:8124092 minus strand	1244105
HES7	NM_032580	NP_115969	Coding	chr17:8124092 minus strand	1244105
HEXDC	NM_173620	NP_775891	Coding	chr17:82418375 plus strand	1244106
HEXIM1	NM_006460	NP_006451	Coding	chr17:45147316 plus strand	1244107
HEXIM2	NM_144608	NP_653209	Coding	chr17:45160896 plus strand	1244108
HGS	NM_004712	NP_004703	Coding	chr17:81683931 plus strand	1244109
HIC1	NM_001098202	NP_001091672	Coding	chr17:2056309 plus strand	1244110
HIC1	NM_006497	NP_006488	Coding	chr17:2055098 plus strand	1244111
HID1	NM_030630	NP_085133	Coding	chr17:74972805 minus strand	1244112
HIGD1B	NM_001271880	NP_001258809	Coding	chr17:44846352 plus strand	1244113
HIGD1B	NM_016438	NP_057522	Coding	chr17:44847901 plus strand	1244114
HLF	NM_002126	NP_002117	Coding	chr17:55264959 plus strand	1244115
HN1	NM_001002032	NP_001002032	Coding	chr17:75154683 minus strand	1244116
HN1	NM_001002033	NP_001002033	Coding	chr17:75154683 minus strand	1244116
HN1	NM_001288609	NP_001275538	Coding	chr17:75154243 minus strand	1244117
HN1	NM_001288610	NP_001275539	Coding	chr17:75153293 minus strand	1244118
HN1	NM_001288611	NP_001275540	Coding	chr17:75154683 minus strand	1244116
HN1	NM_016185	NP_057269	Coding	chr17:75154683 minus strand	1244116
HNF1B	NM_000458	NP_000449	Coding	chr17:37745105 minus strand	1244119
HNF1B	NM_001165923	NP_001159395	Coding	chr17:37745105 minus strand	1244119
HOXB1	NM_002144	NP_002135	Coding	chr17:48530910 minus strand	1244120
HOXB13	NM_006361	NP_006352	Coding	chr17:48728749 minus strand	1244121
HOXB2	NM_002145	NP_002136	Coding	chr17:48545031 minus strand	1244122
HOXB3	NM_002146	NP_002137	Coding	chr17:48574448 minus strand	1244123

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HOXB4	NM_024015	NP_076920	Coding	chr17:48578381 minus strand	1244124
HOXB5	NM_002147	NP_002138	Coding	chr17:48593741 minus strand	1244125
HOXB6	NM_018952	NP_061825	Coding	chr17:48604972 minus strand	1244126
HOXB7	NM_004502	NP_004493	Coding	chr17:48611021 minus strand	1244127
HOXB8	NM_024016	NP_076921	Coding	chr17:48614939 minus strand	1244128
HOXB9	NM_024017	NP_076922	Coding	chr17:48626473 minus strand	1244129
HS3ST3A1	NM_006042	NP_006033	Coding	chr17:13601927 minus strand	1244130
HS3ST3B1	NM_006041	NP_006032	Coding	chr17:14301188 plus strand	1244131
HSD17B1	NM_000413	NP_000404	Coding	chr17:42551965 plus strand	1244132
HSF5	NM_001080439	NP_001073908	Coding	chr17:58488401 minus strand	1244133
HSPB9	NM_033194	NP_149971	Coding	chr17:42122737 plus strand	1244134
ICAM2	NM_000873	NP_000864	Coding	chr17:64006923 minus strand	1244135
ICAM2	NM_001099786	NP_001093256	Coding	chr17:64020634 minus strand	1244136
ICAM2	NM_001099787	NP_001093257	Coding	chr17:64020634 minus strand	1244136
ICAM2	NM_001099788	NP_001093258	Coding	chr17:64020634 minus strand	1244136
ICAM2	NM_001099789	NP_001093259	Coding	chr17:64020634 minus strand	1244136
ICT1	NM_001545	NP_001536	Coding	chr17:75012684 plus strand	1244137
IFI35	NM_005533	NP_005524	Coding	chr17:43006724 plus strand	1244138
IFT20	NM_001267774	NP_001254703	Coding	chr17:28335489 minus strand	1244139
IFT20	NM_001267775	NP_001254704	Coding	chr17:28335489 minus strand	1244139
IFT20	NM_001267776	NP_001254705	Coding	chr17:28335489 minus strand	1244139
IFT20	NM_001267777	NP_001254706	Coding	chr17:28335489 minus strand	1244139
IFT20	NM_001267778	NP_001254707	Coding	chr17:28335489 minus strand	1244139
IFT20	NM_174887	NP_777547	Coding	chr17:28335489 minus strand	1244139
IGF2BP1	NM_001160423	NP_001153895	Coding	chr17:48997411 plus strand	1244140
IGF2BP1	NM_006546	NP_006537	Coding	chr17:48997411 plus strand	1244140
IGFBP4	NM_001552	NP_001543	Coding	chr17:40443423 plus strand	1244141

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IKZF3	NM_001257408	NP_001244337	Coding	chr17:39864188 minus strand	1244142
IKZF3	NM_001257409	NP_001244338	Coding	chr17:39864188 minus strand	1244142
IKZF3	NM_001257410	NP_001244339	Coding	chr17:39864188 minus strand	1244142
IKZF3	NM_001257411	NP_001244340	Coding	chr17:39864188 minus strand	1244142
IKZF3	NM_001257412	NP_001244341	Coding	chr17:39864188 minus strand	1244142
IKZF3	NM_001257413	NP_001244342	Coding	chr17:39864188 minus strand	1244142
IKZF3	NM_001257414	NP_001244343	Coding	chr17:39864188 minus strand	1244142
IKZF3	NM_001284514	NP_001271443	Coding	chr17:39864188 minus strand	1244142
IKZF3	NM_001284515	NP_001271444	Coding	chr17:39864188 minus strand	1244142
IKZF3	NM_001284516	NP_001271445	Coding	chr17:39778225 minus strand	1244143
IKZF3	NM_012481	NP_036613	Coding	chr17:39864188 minus strand	1244142
IKZF3	NM_183228	NP_899051	Coding	chr17:39864188 minus strand	1244142
IKZF3	NM_183229	NP_899052	Coding	chr17:39864188 minus strand	1244142
IKZF3	NM_183230	NP_899053	Coding	chr17:39864188 minus strand	1244142
IKZF3	NM_183231	NP_899054	Coding	chr17:39864188 minus strand	1244142
IKZF3	NM_183232	NP_899055	Coding	chr17:39864188 minus strand	1244142
INCA1	NM_001167985	NP_001161457	Coding	chr17:4997610 minus strand	1244144
INCA1	NM_001167986	NP_001161458	Coding	chr17:4997610 minus strand	1244144
INCA1	NM_001167987	NP_001161459	Coding	chr17:4997610 minus strand	1244144
INCA1	NM_213726	NP_998891	Coding	chr17:4997610 minus strand	1244144
INPP5K	NM_001135642	NP_001129114	Coding	chr17:1516888 minus strand	1244145
INPP5K	NM_016532	NP_057616	Coding	chr17:1516888 minus strand	1244145
INPP5K	NM_130766	NP_570122	Coding	chr17:1516888 minus strand	1244145
INTS2	NM_020748	NP_065799	Coding	chr17:61928016 minus strand	1244146
ITGA2B	NM_000419	NP_000410	Coding	chr17:44389505 minus strand	1244147
ITGA3	NM_002204	NP_002195	Coding	chr17:50055975 plus strand	1244148
ITGA3	NM_005501	NP_005492	Coding	chr17:50055975 plus strand	1244148

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ITGAE	NM_002208	NP_002199	Coding	chr17:3801243 minus strand	1244149
ITGB3	NM_000212	NP_000203	Coding	chr17:47253841 plus strand	1244150
ITGB4	NM_000213	NP_000204	Coding	chr17:75721435 plus strand	1244151
ITGB4	NM_001005619	NP_001005619	Coding	chr17:75724695 plus strand	1244152
ITGB4	NM_001005731	NP_001005731	Coding	chr17:75721435 plus strand	1244151
JMJD6	NM_001081461	NP_001074930	Coding	chr17:76726799 minus strand	1244153
JMJD6	NM_015167	NP_055982	Coding	chr17:76726799 minus strand	1244153
JUP	NM_002230	NP_002221	Coding	chr17:41786712 minus strand	1244154
JUP	NM_021991	NP_068831	Coding	chr17:41786712 minus strand	1244154
KANSL1	NM_001193465	NP_001180394	Coding	chr17:46225374 minus strand	1244155
KANSL1	NM_001193466	NP_001180395	Coding	chr17:46192800 minus strand	1244156
KANSL1	NM_015443	NP_056258	Coding	chr17:46192906 minus strand	1244157
KAT2A	NM_021078	NP_066564	Coding	chr17:42121364 minus strand	1244158
KAT7	NM_001199155	NP_001186084	Coding	chr17:49788618 plus strand	1244159
KAT7	NM_001199156	NP_001186085	Coding	chr17:49788618 plus strand	1244159
KAT7	NM_001199157	NP_001186086	Coding	chr17:49788618 plus strand	1244159
KAT7	NM_001199158	NP_001186087	Coding	chr17:49788618 plus strand	1244159
KAT7	NM_007067	NP_008998	Coding	chr17:49788618 plus strand	1244159
KCNAB3	NM_004732	NP_004723	Coding	chr17:7929435 minus strand	1244160
KCNH4	NM_012285	NP_036417	Coding	chr17:42181278 minus strand	1244161
KCNH6	NM_001278919	NP_001265848	Coding	chr17:63523333 plus strand	1244162
KCNH6	NM_001278920	NP_001265849	Coding	chr17:63523333 plus strand	1244162
KCNH6	NM_030779	NP_110406	Coding	chr17:63523333 plus strand	1244162
KCNH6	NM_173092	NP_775115	Coding	chr17:63523333 plus strand	1244162
KCNJ12	NM_021012	NP_066292	Coding	chr17:21376386 plus strand	1244163
KCNJ16	NM_001270422	NP_001257351	Coding	chr17:70075224 plus strand	1244164
KCNJ16	NM_001291622	NP_001278551	Coding	chr17:70075224 plus strand	1244164

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KCNJ16	NM_001291623	NP_001278552	Coding	chr17:70104844 plus strand	1244165
KCNJ16	NM_001291624	NP_001278553	Coding	chr17:70104844 plus strand	1244165
KCNJ16	NM_001291625	NP_001278554	Coding	chr17:70104844 plus strand	1244165
KCNJ16	NM_018658	NP_061128	Coding	chr17:70075224 plus strand	1244164
KCNJ16	NM_170741	NP_733937	Coding	chr17:70075224 plus strand	1244164
KCNJ16	NM_170742	NP_733938	Coding	chr17:70104844 plus strand	1244165
KCNJ18	NM_001194958	NP_001181887	Coding	chr17:21692522 plus strand	1244166
KCNJ2	NM_000891	NP_000882	Coding	chr17:70169534 plus strand	1244167
KCTD11	NM_001002914	NP_001002914	Coding	chr17:7351888 plus strand	1244168
KCTD2	NM_015353	NP_056168	Coding	chr17:75047183 plus strand	1244169
KDM6B	NM_001080424	NP_001073893	Coding	chr17:7839916 plus strand	1244170
KIAA0100	NM_014680	NP_055495	Coding	chr17:28645159 minus strand	1244171
KIAA0195	NM_014738	NP_055553	Coding	chr17:75456582 plus strand	1244172
KIAA0753	NM_014804	NP_055619	Coding	chr17:6640927 minus strand	1244173
KIAA1731NL	NM_001243540	NP_001230469	Coding	chr17:78903217 minus strand	1244174
KIAA1731NL	NM_001243541	NP_001230470	Coding	chr17:78903217 minus strand	1244174
KIF18B	NM_001264573	NP_001251503	Coding	chr17:44947711 minus strand	1244175
KIF18B	NM_001265577	NP_001252506	Coding	chr17:44947711 minus strand	1244175
KIF19	NM_153209	NP_694941	Coding	chr17:74326211 plus strand	1244176
KIF1C	NM_006612	NP_006603	Coding	chr17:4997947 plus strand	1244177
KIF2B	NM_032559	NP_115948	Coding	chr17:53822877 plus strand	1244178
KLHL10	NM_152467	NP_689680	Coding	chr17:41837790 plus strand	1244179
KLHL11	NM_018143	NP_060613	Coding	chr17:41865376 minus strand	1244180
KPNA2	NM_002266	NP_002257	Coding	chr17:68035731 plus strand	1244181
KPNB1	NM_001276453	NP_001263382	Coding	chr17:47651195 plus strand	1244182
KPNB1	NM_002265	NP_002256	Coding	chr17:47649837 plus strand	1244183
KRBA2	NM_213597	NP_998762	Coding	chr17:8371540 minus strand	1244184
KRT10	NM_000421	NP_000412	Coding	chr17:40822611 minus strand	1244185

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KRT12	NM_000223	NP_000214	Coding	chr17:40867210 minus strand	1244186
KRT13	NM_002274	NP_002265	Coding	chr17:41505613 minus strand	1244187
KRT13	NM_153490	NP_705694	Coding	chr17:41505613 minus strand	1244187
KRT14	NM_000526	NP_000517	Coding	chr17:41586895 minus strand	1244188
KRT15	NM_002275	NP_002266	Coding	chr17:41519018 minus strand	1244189
KRT16	NM_005557	NP_005548	Coding	chr17:41612827 minus strand	1244190
KRT17	NM_000422	NP_000413	Coding	chr17:41624630 minus strand	1244191
KRT19	NM_002276	NP_002267	Coding	chr17:41528389 minus strand	1244192
KRT20	NM_019010	NP_061883	Coding	chr17:40885243 minus strand	1244193
KRT222	NM_152349	NP_689562	Coding	chr17:40665164 minus strand	1244194
KRT23	NM_001282433	NP_001269362	Coding	chr17:40937643 minus strand	1244195
KRT23	NM_015515	NP_056330	Coding	chr17:40937643 minus strand	1244195
KRT24	NM_019016	NP_061889	Coding	chr17:40703750 minus strand	1244196
KRT25	NM_181534	NP_853512	Coding	chr17:40755332 minus strand	1244197
KRT26	NM_181539	NP_853517	Coding	chr17:40772159 minus strand	1244198
KRT27	NM_181537	NP_853515	Coding	chr17:40782534 minus strand	1244199
KRT28	NM_181535	NP_853513	Coding	chr17:40799959 minus strand	1244200
KRT31	NM_002277	NP_002268	Coding	chr17:41397592 minus strand	1244201
KRT32	NM_002278	NP_002269	Coding	chr17:41467386 minus strand	1244202
KRT33A	NM_004138	NP_004129	Coding	chr17:41350812 minus strand	1244203
KRT33B	NM_002279	NP_002270	Coding	chr17:41369800 minus strand	1244204
KRT34	NM_021013	NP_066293	Coding	chr17:41382384 minus strand	1244205
KRT35	NM_002280	NP_002271	Coding	chr17:41481140 minus strand	1244206
KRT36	NM_003771	NP_003762	Coding	chr17:41489864 minus strand	1244207
KRT37	NM_003770	NP_003761	Coding	chr17:41424570 minus strand	1244208
KRT38	NM_006771	NP_006762	Coding	chr17:41441344 minus strand	1244209
KRT39	NM_213656	NP_998821	Coding	chr17:40966892 minus strand	1244210

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KRT40	NM_182497	NP_872303	Coding	chr17:40987135 minus strand	1244211
KRT9	NM_000226	NP_000217	Coding	chr17:41572058 minus strand	1244212
KRTAP1-1	NM_030967	NP_112229	Coding	chr17:41041461 minus strand	1244213
KRTAP1-3	NM_030966	NP_112228	Coding	chr17:41034855 minus strand	1244214
KRTAP1-4	NM_001257305	NP_001244234	Coding	chr17:41030125 minus strand	1244215
KRTAP1-5	NM_031957	NP_114163	Coding	chr17:41027202 minus strand	1244216
KRTAP16-1	NM_001146182	NP_001139654	Coding	chr17:41309253 minus strand	1244217
KRTAP17-1	NM_031964	NP_114170	Coding	chr17:41315695 minus strand	1244218
KRTAP2-1	NM_001123387	NP_001116859	Coding	chr17:41047316 minus strand	1244219
KRTAP2-2	NM_033032	NP_149021	Coding	chr17:41055211 minus strand	1244220
KRTAP2-3	NM_001165252	NP_001158724	Coding	chr17:41060092 minus strand	1244221
KRTAP2-4	NM_033184	NP_149440	Coding	chr17:41065879 minus strand	1244222
KRTAP29-1	NM_001257309	NP_001244238	Coding	chr17:41302851 minus strand	1244223
KRTAP3-1	NM_031958	NP_114164	Coding	chr17:41009114 minus strand	1244224
KRTAP3-2	NM_031959	NP_114165	Coding	chr17:40999886 minus strand	1244225
KRTAP3-3	NM_033185	NP_149441	Coding	chr17:40994133 minus strand	1244226
KRTAP4-1	NM_033060	NP_149049	Coding	chr17:41184895 minus strand	1244227
KRTAP4-11	NM_033059	NP_149048	Coding	chr17:41118354 minus strand	1244228
KRTAP4-12	NM_031854	NP_114060	Coding	chr17:41124167 minus strand	1244229
KRTAP4-2	NM_033062	NP_149051	Coding	chr17:41178208 minus strand	1244230
KRTAP4-3	NM_033187	NP_149443	Coding	chr17:41168172 minus strand	1244231
KRTAP4-4	NM_032524	NP_115913	Coding	chr17:41160731 minus strand	1244232
KRTAP4-5	NM_033188	NP_149445	Coding	chr17:41149802 minus strand	1244233
KRTAP4-6	NM_030976	NP_112238	Coding	chr17:41140487 minus strand	1244234
KRTAP4-7	NM_033061	NP_149050	Coding	chr17:41084206 plus strand	1244235
KRTAP4-8	NM_031960	NP_114166	Coding	chr17:41098123 minus strand	1244236
KRTAP4-9	NM_001146041	NP_001139513	Coding	chr17:41105388 plus strand	1244237

【１１１９】

KRTAP9-1	NM_001190460	NP_001177389	Coding	chr17:41189886 plus strand	1244238
KRTAP9-2	NM_031961	NP_114167	Coding	chr17:41226647 plus strand	1244239
KRTAP9-3	NM_031962	NP_114168	Coding	chr17:41232462 plus strand	1244240
KRTAP9-4	NM_033191	NP_149461	Coding	chr17:41249686 plus strand	1244241
KRTAP9-6	NM_001277331	NP_001264260	Coding	chr17:41265377 plus strand	1244242
KRTAP9-7	NM_001277332	NP_001264261	Coding	chr17:41167743 minus strand	1244243
KRTAP9-7	NM_001277332	NP_001264261	Coding	chr17:41275697 plus strand	1244244
KRTAP9-8	NM_031963	NP_114169	Coding	chr17:41238017 plus strand	1244245
KRTAP9-9	NM_030975	NP_112237	Coding	chr17:41255383 plus strand	1244246
KSR1	NM_014238	NP_055053	Coding	chr17:27472009 plus strand	1244247
LASP1	NM_001271608	NP_001258537	Coding	chr17:38869858 plus strand	1244248
LASP1	NM_006148	NP_006139	Coding	chr17:38869858 plus strand	1244248
LEPREL4	NM_006455	NP_006446	Coding	chr17:41812199 minus strand	1244249
LGALS3BP	NM_005567	NP_005558	Coding	chr17:78979979 minus strand	1244250
LGALS9	NM_002308	NP_002299	Coding	chr17:27631147 plus strand	1244251
LGALS9	NM_009587	NP_033665	Coding	chr17:27631147 plus strand	1244251
LGALS9B	NM_001042685	NP_001036150	Coding	chr17:20467535 minus strand	1244252
LGALS9C	NM_001040078	NP_001035167	Coding	chr17:18476784 plus strand	1244253
LHX1	NM_005568	NP_005559	Coding	chr17:36937474 plus strand	1244254
LIG3	NM_002311	NP_002302	Coding	chr17:34980497 plus strand	1244255
LIG3	NM_013975	NP_039269	Coding	chr17:34980497 plus strand	1244255
LIMD2	NM_030576	NP_085053	Coding	chr17:63700159 minus strand	1244256
LLGL1	NM_004140	NP_004131	Coding	chr17:18225621 plus strand	1244257
LLGL2	NM_001015002	NP_001015002	Coding	chr17:75525701 plus strand	1244258
LLGL2	NM_001031803	NP_001026973	Coding	chr17:75525701 plus strand	1244258
LLGL2	NM_004524	NP_004515	Coding	chr17:75525701 plus strand	1244258
LOC100130370	NM_001272086	NP_001259015	Coding	chr17:81385360 minus strand	1244259

【１１２０】

LOC100134391	NM_001278587	NP_001265516	Coding	chr17:73737853 plus strand	1244260
LOC100506388	NM_001242780	NP_001229709	Coding	chr17:331204 plus strand	1244261
LOC101060321	NM_001291462	NP_001278391	Coding	chr17:36176578 minus strand	1244262
LOC101060321	NM_001291462	NP_001278391	Coding	chr17:36388423 minus strand	1244263
LOC101060321	NM_001291462	NP_001278391	Coding	chr17:36323883 plus strand	1244264
LOC101060321	NM_001291462	NP_001278391	Coding	chr17:36457529 minus strand	1244265
LOC101060321	NM_001291462	NP_001278391	Coding	chr17:38127967 plus strand	1244266
LOC101060389	NM_001291465	NP_001278394	Coding	chr17:36176578 minus strand	1244267
LOC101060389	NM_001291465	NP_001278394	Coding	chr17:38004032 plus strand	1244268
LOC101060389	NM_001291465	NP_001278394	Coding	chr17:36264513 minus strand	1244269
LOC101060389	NM_001291465	NP_001278394	Coding	chr17:36388423 minus strand	1244270
LOC101060389	NM_001291465	NP_001278394	Coding	chr17:36457529 minus strand	1244271
LOC101060389	NM_001291465	NP_001278394	Coding	chr17:37989048 minus strand	1244272
LOC101060389	NM_001291465	NP_001278394	Coding	chr17:38068594 minus strand	1244273
LOC101060389	NM_001291465	NP_001278394	Coding	chr17:38127967 plus strand	1244274
LOC102723859	NM_001291466	NP_001278395	Coding	chr17:38127969 plus strand	1244275
LOC102723859	NM_001291466	NP_001278395	Coding	chr17:38192541 minus strand	1244276
LOC102724862	NM_001291463	NP_001278392	Coding	chr17:36176578 minus strand	1244277
LOC102724862	NM_001291463	NP_001278392	Coding	chr17:38004032 plus strand	1244278
LOC102724862	NM_001291463	NP_001278392	Coding	chr17:36264513 minus strand	1244279
LOC102724862	NM_001291463	NP_001278392	Coding	chr17:36388423 minus strand	1244280
LOC102724862	NM_001291463	NP_001278392	Coding	chr17:36457529 minus strand	1244281
LOC102724862	NM_001291463	NP_001278392	Coding	chr17:37989048 minus strand	1244282
LOC102724862	NM_001291463	NP_001278392	Coding	chr17:38127967 plus strand	1244283
LOC388436	NM_001291905	NP_001278834	Coding	chr17:19093212 plus strand	1244284
LOC388436	NM_001291905	NP_001278834	Coding	chr17:19158872 minus strand	1244285
LOC388436	NM_001291905	NP_001278834	Coding	chr17:19219381 plus strand	1244286
LOC728392	NM_001162371	NP_001155843	Coding	chr17:5500999 minus	1244287

【１１２１】

				strand	
LOC79999	NM_001291904	NP_001278833	Coding	chr17:19093212 plus strand	1244288
LOC79999	NM_001291904	NP_001278833	Coding	chr17:19219381 plus strand	1244289
LOC79999	NM_001291904	NP_001278833	Coding	chr17:19158872 minus strand	1244290
LPO	NM_001160102	NP_001153574	Coding	chr17:58238425 plus strand	1244291
LPO	NM_006151	NP_006142	Coding	chr17:58238425 plus strand	1244291
LRRC37A	NM_014834	NP_055649	Coding	chr17:46295130 plus strand	1244292
LRRC37A2	NM_001006607	NP_001006608	Coding	chr17:46512709 plus strand	1244293
LRRC37A3	NM_199340	NP_955372	Coding	chr17:64918785 minus strand	1244294
LRRC37B	NM_052888	NP_443120	Coding	chr17:32021135 plus strand	1244295
LRRC3C	NM_001195545	NP_001182474	Coding	chr17:39941473 plus strand	1244296
LRRC45	NM_144999	NP_659436	Coding	chr17:82023403 plus strand	1244297
LRRC46	NM_033413	NP_219481	Coding	chr17:47831626 plus strand	1244298
LRRC48	NM_001130090	NP_001123562	Coding	chr17:17972812 plus strand	1244299
LRRC48	NM_001130091	NP_001123563	Coding	chr17:17972812 plus strand	1244299
LRRC48	NM_001130092	NP_001123564	Coding	chr17:17972812 plus strand	1244299
LRRC48	NM_031294	NP_112584	Coding	chr17:17972812 plus strand	1244299
LRRC59	NM_018509	NP_060979	Coding	chr17:50397553 minus strand	1244300
LRRC75A	NM_001113567	NP_001107039	Coding	chr17:16492191 minus strand	1244301
LRRC75A	NM_207387	NP_997270	Coding	chr17:16492191 minus strand	1244301
LSM12	NM_152344	NP_689557	Coding	chr17:44067619 minus strand	1244302
LUC7L3	NM_006107	NP_006098	Coding	chr17:50719564 plus strand	1244303
LUC7L3	NM_016424	NP_057508	Coding	chr17:50719564 plus strand	1244303
LYRM9	NM_001076680	NP_001070148	Coding	chr17:27893383 minus strand	1244304
LYZL6	NM_001199951	NP_001186880	Coding	chr17:35943699 minus strand	1244305
LYZL6	NM_020426	NP_065159	Coding	chr17:35939556 minus strand	1244306
MAFG	NM_002359	NP_002350	Coding	chr17:81927711 minus strand	1244307
MAFG	NM_032711	NP_116100	Coding	chr17:81923568 minus	1244308

【１１２２】

				strand	
MAP2K3	NM_002756	NP_002747	Coding	chr17:21288035 plus strand	1244309
MAP2K3	NM_145109	NP_659731	Coding	chr17:21284655 plus strand	1244310
MAP2K4	NM_001281435	NP_001268364	Coding	chr17:12020817 plus strand	1244311
MAP2K4	NM_003010	NP_003001	Coding	chr17:12020817 plus strand	1244311
MAP2K6	NM_002758	NP_002749	Coding	chr17:69414696 plus strand	1244312
MAP3K14	NM_003954	NP_003945	Coding	chr17:45317064 minus strand	1244313
MAP3K3	NM_002401	NP_002392	Coding	chr17:63622440 plus strand	1244314
MAP3K3	NM_203351	NP_976226	Coding	chr17:63622440 plus strand	1244314
MAPK7	NM_002749	NP_002740	Coding	chr17:19378460 plus strand	1244315
MAPK7	NM_139032	NP_620601	Coding	chr17:19377720 plus strand	1244316
MAPK7	NM_139033	NP_620602	Coding	chr17:19377720 plus strand	1244316
MAPK7	NM_139034	NP_620603	Coding	chr17:19378460 plus strand	1244315
MAPT	NM_001123066	NP_001116538	Coding	chr17:45894381 plus strand	1244317
MAPT	NM_001123067	NP_001116539	Coding	chr17:45894381 plus strand	1244317
MAPT	NM_001203251	NP_001190180	Coding	chr17:45894381 plus strand	1244317
MAPT	NM_001203252	NP_001190181	Coding	chr17:45894381 plus strand	1244317
MAPT	NM_005910	NP_005901	Coding	chr17:45894381 plus strand	1244317
MAPT	NM_016834	NP_058518	Coding	chr17:45894381 plus strand	1244317
MAPT	NM_016835	NP_058519	Coding	chr17:45894381 plus strand	1244317
MAPT	NM_016841	NP_058525	Coding	chr17:45894381 plus strand	1244317
MARCH10	NM_001100875	NP_001094345	Coding	chr17:62806653 minus strand	1244318
MARCH10	NM_001288779	NP_001275708	Coding	chr17:62808381 minus strand	1244319
MARCH10	NM_001288780	NP_001275709	Coding	chr17:62808381 minus strand	1244319
MARCH10	NM_152598	NP_689811	Coding	chr17:62808381 minus strand	1244319
MBTD1	NM_017643	NP_060113	Coding	chr17:51260066 minus strand	1244320
MED1	NM_004774	NP_004765	Coding	chr17:39451274 minus strand	1244321
MED11	NM_001001683	NP_001001683	Coding	chr17:4731427 plus strand	1244322

【１１２３】

MED13	NM_005121	NP_005112	Coding	chr17:62065282 minus strand	1244323
MED24	NM_001079518	NP_001072986	Coding	chr17:40054636 minus strand	1244324
MED24	NM_001267797	NP_001254726	Coding	chr17:40054636 minus strand	1244324
MED24	NM_014815	NP_055630	Coding	chr17:40054636 minus strand	1244324
MED31	NM_016060	NP_057144	Coding	chr17:6651634 minus strand	1244325
MED9	NM_018019	NP_060489	Coding	chr17:17476985 plus strand	1244326
MEOX1	NM_001040002	NP_001035091	Coding	chr17:43661894 minus strand	1244327
MEOX1	NM_004527	NP_004518	Coding	chr17:43661563 minus strand	1244328
MEOX1	NM_013999	NP_054705	Coding	chr17:43661563 minus strand	1244328
METRNL	NM_001004431	NP_001004431	Coding	chr17:83079690 plus strand	1244329
METTL16	NM_024086	NP_076991	Coding	chr17:2511906 minus strand	1244330
METTL23	NM_001080510	NP_001073979	Coding	chr17:76726829 plus strand	1244331
METTL23	NM_001206983	NP_001193912	Coding	chr17:76726829 plus strand	1244331
METTL23	NM_001206984	NP_001193913	Coding	chr17:76726829 plus strand	1244331
METTL23	NM_001206985	NP_001193914	Coding	chr17:76726829 plus strand	1244331
METTL23	NM_001206986	NP_001193915	Coding	chr17:76726829 plus strand	1244331
METTL23	NM_001206987	NP_001193916	Coding	chr17:76726829 plus strand	1244331
METTL23	NM_001302703	NP_001289632	Coding	chr17:76726829 plus strand	1244331
METTL23	NM_001302704	NP_001289633	Coding	chr17:76726829 plus strand	1244331
METTL23	NM_001302705	NP_001289634	Coding	chr17:76726829 plus strand	1244331
METTL2A	NM_181725	NP_859076	Coding	chr17:62423884 plus strand	1244332
MFAP4	NM_001198695	NP_001185624	Coding	chr17:19387219 minus strand	1244333
MFAP4	NM_002404	NP_002395	Coding	chr17:19387219 minus strand	1244333
MFSD11	NM_001242532	NP_001229461	Coding	chr17:76737500 plus strand	1244334
MFSD11	NM_001242533	NP_001229462	Coding	chr17:76737500 plus strand	1244334
MFSD11	NM_001242534	NP_001229463	Coding	chr17:76736564 plus strand	1244335
MFSD11	NM_001242535	NP_001229464	Coding	chr17:76737500 plus strand	1244334

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MFSD11	NM_001242536	NP_001229465	Coding	chr17:76737500 plus strand	1244334
MFSD11	NM_001242537	NP_001229466	Coding	chr17:76737500 plus strand	1244334
MFSD11	NM_024311	NP_077287	Coding	chr17:76737500 plus strand	1244334
MFSD6L	NM_152599	NP_689812	Coding	chr17:8799349 minus strand	1244336
MGAT5B	NM_001199172	NP_001186101	Coding	chr17:76868715 plus strand	1244337
MGAT5B	NM_144677	NP_653278	Coding	chr17:76868715 plus strand	1244337
MGAT5B	NM_198955	NP_945193	Coding	chr17:76872646 plus strand	1244338
MGC57346-CRHR1	NM_001256299	NP_001243228	Coding	chr17:45620328 plus strand	1244339
MGC57346-CRHR1	NM_001303016	NP_001289945	Coding	chr17:45621907 plus strand	1244340
MIEF2	NM_001144900	NP_001138372	Coding	chr17:18260533 plus strand	1244341
MIEF2	NM_139162	NP_631901	Coding	chr17:18260533 plus strand	1244341
MIEF2	NM_148886	NP_683684	Coding	chr17:18261109 plus strand	1244342
MIEN1	NM_032339	NP_115715	Coding	chr17:39730535 minus strand	1244343
MIF4GD	NM_001242498	NP_001229427	Coding	chr17:75271230 minus strand	1244344
MIF4GD	NM_001242500	NP_001229429	Coding	chr17:75270245 minus strand	1244345
MIF4GD	NM_001242501	NP_001229430	Coding	chr17:75270245 minus strand	1244345
MIF4GD	NM_020679	NP_065730	Coding	chr17:75271230 minus strand	1244344
MILR1	NM_001085423	NP_001078892	Coding	chr17:64449114 plus strand	1244346
MILR1	NM_001291316	NP_001278245	Coding	chr17:64449114 plus strand	1244346
MILR1	NM_001291317	NP_001278246	Coding	chr17:64449114 plus strand	1244346
MINK1	NM_001024937	NP_001020108	Coding	chr17:4833339 plus strand	1244347
MINK1	NM_015716	NP_056531	Coding	chr17:4833339 plus strand	1244347
MINK1	NM_153827	NP_722549	Coding	chr17:4833339 plus strand	1244347
MINK1	NM_170663	NP_733763	Coding	chr17:4833339 plus strand	1244347
MIS12	NM_001258217	NP_001245146	Coding	chr17:5486373 plus strand	1244348
MIS12	NM_001258218	NP_001245147	Coding	chr17:5486373 plus strand	1244348
MIS12	NM_001258219	NP_001245148	Coding	chr17:5486373 plus strand	1244348
MIS12	NM_001258220	NP_001245149	Coding	chr17:5486373 plus strand	1244348
MIS12	NM_024039	NP_076944	Coding	chr17:5486892 plus strand	1244349
MKS1	NM_001165927	NP_001159399	Coding	chr17:58219605 minus strand	1244350

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MKS1	NM_017777	NP_060247	Coding	chr17:58219305 minus strand	1244351
MLLT6	NM_005937	NP_005928	Coding	chr17:38705619 plus strand	1244352
MLX	NM_170607	NP_733752	Coding	chr17:42567059 plus strand	1244353
MLX	NM_198204	NP_937847	Coding	chr17:42567059 plus strand	1244353
MLX	NM_198205	NP_937848	Coding	chr17:42567059 plus strand	1244353
MMD	NM_012329	NP_036461	Coding	chr17:55421980 minus strand	1244354
MMP28	NM_001032278	NP_001027449	Coding	chr17:35795707 minus strand	1244355
MMP28	NM_024302	NP_077278	Coding	chr17:35795707 minus strand	1244355
MMP28	NM_032950	NP_116568	Coding	chr17:35795707 minus strand	1244355
MNT	NM_020310	NP_064706	Coding	chr17:2400964 minus strand	1244356
MPDU1	NM_004870	NP_004861	Coding	chr17:7583646 plus strand	1244357
MPO	NM_000250	NP_000241	Coding	chr17:58280935 minus strand	1244358
MPP2	NM_001278370	NP_001265299	Coding	chr17:43909711 minus strand	1244359
MPP2	NM_001278371	NP_001265300	Coding	chr17:43909711 minus strand	1244359
MPP2	NM_001278372	NP_001265301	Coding	chr17:43907942 minus strand	1244360
MPP2	NM_001278373	NP_001265302	Coding	chr17:43907942 minus strand	1244360
MPP2	NM_001278374	NP_001265303	Coding	chr17:43907942 minus strand	1244360
MPP2	NM_001278375	NP_001265304	Coding	chr17:43901562 minus strand	1244361
MPP2	NM_001278376	NP_001265305	Coding	chr17:43900633 minus strand	1244362
MPP2	NM_001278381	NP_001265310	Coding	chr17:43907942 minus strand	1244360
MPP2	NM_005374	NP_005365	Coding	chr17:43907942 minus strand	1244360
MPP3	NM_001932	NP_001923	Coding	chr17:43833179 minus strand	1244363
MPRIP	NM_015134	NP_055949	Coding	chr17:17042759 plus strand	1244364
MPRIP	NM_201274	NP_958431	Coding	chr17:17042759 plus strand	1244364
MRC2	NM_006039	NP_006030	Coding	chr17:62627400 plus strand	1244365
MRM1	NM_024864	NP_079140	Coding	chr17:36601595 plus strand	1244366
MRPL10	NM_145255	NP_660298	Coding	chr17:47831541 minus strand	1244367
MRPL10	NM_148887	NP_683685	Coding	chr17:47831541 minus	1244367

【1126】

				strand	
MRPL12	NM_002949	NP_002940	Coding	chr17:81703369 plus strand	1244368
MRPL27	NM_016504	NP_057588	Coding	chr17:50373201 minus strand	1244369
MRPL38	NM_032478	NP_115867	Coding	chr17:75905100 minus strand	1244370
MRPL45	NM_001278279	NP_001265208	Coding	chr17:38297022 plus strand	1244371
MRPL45	NM_032351	NP_115727	Coding	chr17:38297022 plus strand	1244371
MRPS23	NM_016070	NP_057154	Coding	chr17:57850072 minus strand	1244372
MRPS7	NM_015971	NP_057055	Coding	chr17:75261667 plus strand	1244373
MSI2	NM_138962	NP_620412	Coding	chr17:57256569 plus strand	1244374
MSI2	NM_170721	NP_733839	Coding	chr17:57257012 plus strand	1244375
MSL1	NM_001012241	NP_001012241	Coding	chr17:40122536 plus strand	1244376
MTMR4	NM_004687	NP_004678	Coding	chr17:58517890 minus strand	1244377
MTRNR2L1	NM_001190452	NP_001177381	Coding	chr17:22523110 plus strand	1244378
MXRA7	NM_001008528	NP_001008528	Coding	chr17:76710974 minus strand	1244379
MXRA7	NM_001008529	NP_001008529	Coding	chr17:76710974 minus strand	1244379
MXRA7	NM_198530	NP_940932	Coding	chr17:76710974 minus strand	1244379
MYADML2	NM_001145113	NP_001138585	Coding	chr17:81947233 minus strand	1244380
MYBBP1A	NM_001105538	NP_001099008	Coding	chr17:4555386 minus strand	1244381
MYBBP1A	NM_014520	NP_055335	Coding	chr17:4555386 minus strand	1244381
MYCBPAP	NM_032133	NP_115509	Coding	chr17:50508383 plus strand	1244382
MYH1	NM_005963	NP_005954	Coding	chr17:10518542 minus strand	1244383
MYH10	NM_001256012	NP_001242941	Coding	chr17:8630761 minus strand	1244384
MYH10	NM_001256095	NP_001243024	Coding	chr17:8630761 minus strand	1244384
MYH10	NM_005964	NP_005955	Coding	chr17:8630761 minus strand	1244384
MYH13	NM_003802	NP_003793	Coding	chr17:10373005 minus strand	1244385
MYH2	NM_001100112	NP_001093582	Coding	chr17:10549623 minus strand	1244386
MYH2	NM_017534	NP_060004	Coding	chr17:10549700 minus strand	1244387
MYH3	NM_002470	NP_002461	Coding	chr17:10657309 minus	1244388

【１１２７】

				strand	
MYH4	NM_017533	NP_060003	Coding	chr17:10469559 minus strand	1244389
MYH8	NM_002472	NP_002463	Coding	chr17:10421950 minus strand	1244390
MYL4	NM_001002841	NP_001002841	Coding	chr17:47209061 plus strand	1244391
MYL4	NM_002476	NP_002467	Coding	chr17:47209347 plus strand	1244392
MYO15A	NM_016239	NP_057323	Coding	chr17:18108705 plus strand	1244393
MYO18A	NM_078471	NP_510880	Coding	chr17:29180389 minus strand	1244394
MYO18A	NM_203318	NP_976063	Coding	chr17:29180389 minus strand	1244394
MYO19	NM_001033580	NP_001028752	Coding	chr17:36535457 minus strand	1244395
MYO19	NM_001163735	NP_001157207	Coding	chr17:36535457 minus strand	1244395
MYO19	NM_025109	NP_079385	Coding	chr17:36535457 minus strand	1244395
MYO1C	NM_001080779	NP_001074248	Coding	chr17:1492707 minus strand	1244396
MYO1C	NM_001080950	NP_001074419	Coding	chr17:1485757 minus strand	1244397
MYO1C	NM_033375	NP_203693	Coding	chr17:1491678 minus strand	1244398
MYO1D	NM_015194	NP_056009	Coding	chr17:32876884 minus strand	1244399
MYOCD	NM_001146312	NP_001139784	Coding	chr17:12665889 plus strand	1244400
MYOCD	NM_153604	NP_705832	Coding	chr17:12665889 plus strand	1244400
NAA38	NM_032356	NP_115732	Coding	chr17:7857854 minus strand	1244401
NACA2	NM_199290	NP_954984	Coding	chr17:61591202 minus strand	1244402
NAGLU	NM_000263	NP_000254	Coding	chr17:42535932 plus strand	1244403
NAGS	NM_153006	NP_694551	Coding	chr17:44004663 plus strand	1244404
NARF	NM_001038618	NP_001033707	Coding	chr17:82458183 plus strand	1244405
NARF	NM_001083608	NP_001077077	Coding	chr17:82458663 plus strand	1244406
NARF	NM_012336	NP_036468	Coding	chr17:82458663 plus strand	1244406
NARF	NM_031968	NP_114174	Coding	chr17:82458663 plus strand	1244406
NARR	NM_001256281	NP_001243210	Coding	chr17:28717890 minus strand	1244407
NAT9	NM_015654	NP_056469	Coding	chr17:74776331 minus strand	1244408
NATD1	NM_152914	NP_690878	Coding	chr17:21253266 minus	1244409

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				strand	
NBR1	NM_001291571	NP_001278500	Coding	chr17:43170969 plus strand	1244410
NBR1	NM_001291572	NP_001278501	Coding	chr17:43170969 plus strand	1244410
NBR1	NM_005899	NP_005890	Coding	chr17:43170969 plus strand	1244410
NBR1	NM_031862	NP_114068	Coding	chr17:43170470 plus strand	1244411
NCOR1	NM_001190438	NP_001177367	Coding	chr17:16194639 minus strand	1244412
NCOR1	NM_001190440	NP_001177369	Coding	chr17:16194639 minus strand	1244412
NCOR1	NM_006311	NP_006302	Coding	chr17:16215560 minus strand	1244413
NDEL1	NM_001025579	NP_001020750	Coding	chr17:8435851 plus strand	1244414
NDEL1	NM_030808	NP_110435	Coding	chr17:8435851 plus strand	1244414
NEK8	NM_178170	NP_835464	Coding	chr17:28728813 plus strand	1244415
NEURL4	NM_001005408	NP_001005408	Coding	chr17:7329319 minus strand	1244416
NEURL4	NM_032442	NP_115818	Coding	chr17:7329319 minus strand	1244416
NEUROD2	NM_006160	NP_006151	Coding	chr17:39607922 minus strand	1244417
NF1	NM_000267	NP_000258	Coding	chr17:31094926 plus strand	1244418
NF1	NM_001042492	NP_001035957	Coding	chr17:31094926 plus strand	1244418
NF1	NM_001128147	NP_001121619	Coding	chr17:31094926 plus strand	1244418
NFE2L1	NM_003204	NP_003195	Coding	chr17:48048323 plus strand	1244419
NGFR	NM_002507	NP_002498	Coding	chr17:49495292 plus strand	1244420
NKIRAS2	NM_001001349	NP_001001349	Coding	chr17:42017575 plus strand	1244421
NKIRAS2	NM_001144927	NP_001138399	Coding	chr17:42020068 plus strand	1244422
NKIRAS2	NM_001144928	NP_001138400	Coding	chr17:42020068 plus strand	1244422
NKIRAS2	NM_001144929	NP_001138401	Coding	chr17:42020068 plus strand	1244422
NKIRAS2	NM_017595	NP_060065	Coding	chr17:42020068 plus strand	1244422
NLE1	NM_001014445	NP_001014445	Coding	chr17:35142251 minus strand	1244423
NLE1	NM_018096	NP_060566	Coding	chr17:35142315 minus strand	1244424
NLGN2	NM_020795	NP_065846	Coding	chr17:7408182 plus strand	1244425
NLK	NM_016231	NP_057315	Coding	chr17:28042661 plus strand	1244426
NLRP1	NM_001033053	NP_001028225	Coding	chr17:5584512 minus	1244427

【１１２９】

				strand	
NLRP1	NM_014922	NP_055737	Coding	chr17:5584512 minus strand	1244427
NLRP1	NM_033004	NP_127497	Coding	chr17:5584512 minus strand	1244427
NLRP1	NM_033006	NP_127499	Coding	chr17:5584512 minus strand	1244427
NLRP1	NM_033007	NP_127500	Coding	chr17:5584512 minus strand	1244427
NME1	NM_000269	NP_000260	Coding	chr17:51153558 plus strand	1244428
NME1	NM_198175	NP_937818	Coding	chr17:51153558 plus strand	1244428
NME1-NME2	NM_001018136	NP_001018146	Coding	chr17:51153535 plus strand	1244429
NME2	NM_001018137	NP_001018147	Coding	chr17:51165434 plus strand	1244430
NME2	NM_001018138	NP_001018148	Coding	chr17:51166721 plus strand	1244431
NME2	NM_001018139	NP_001018149	Coding	chr17:51166500 plus strand	1244432
NME2	NM_001198682	NP_001185611	Coding	chr17:51166271 plus strand	1244433
NME2	NM_002512	NP_002503	Coding	chr17:51166271 plus strand	1244433
NMT1	NM_021079	NP_066565	Coding	chr17:45061311 plus strand	1244434
NOG	NM_005450	NP_005441	Coding	chr17:56593698 plus strand	1244435
NOL11	NM_015462	NP_056277	Coding	chr17:67717944 plus strand	1244436
NOS2	NM_000625	NP_000616	Coding	chr17:27800529 minus strand	1244437
NOTUM	NM_178493	NP_848588	Coding	chr17:81961181 minus strand	1244438
NPB	NM_148896	NP_683694	Coding	chr17:81902195 plus strand	1244439
NPEPPS	NM_006310	NP_006301	Coding	chr17:47531077 plus strand	1244440
NPLOC4	NM_017921	NP_060391	Coding	chr17:81637112 minus strand	1244441
NPTX1	NM_002522	NP_002513	Coding	chr17:80476604 minus strand	1244442
NR1D1	NM_021724	NP_068370	Coding	chr17:40100725 minus strand	1244443
NSF	NM_006178	NP_006169	Coding	chr17:46590668 plus strand	1244444
NSRP1	NM_001261467	NP_001248396	Coding	chr17:30116806 plus strand	1244445
NSRP1	NM_032141	NP_115517	Coding	chr17:30116806 plus strand	1244445
NT5C	NM_001252377	NP_001239306	Coding	chr17:75131795 minus strand	1244446
NT5C	NM_014595	NP_055410	Coding	chr17:75131795 minus	1244446

【１１３０】

				strand	
NT5C3B	NM_052935	NP_443167	Coding	chr17:41836271 minus strand	1244447
NT5M	NM_020201	NP_064586	Coding	chr17:17303365 plus strand	1244448
NTN1	NM_004822	NP_004813	Coding	chr17:9021541 plus strand	1244449
NUFIP2	NM_020772	NP_065823	Coding	chr17:29294148 minus strand	1244450
NUP85	NM_024844	NP_079120	Coding	chr17:75205501 plus strand	1244451
NUP88	NM_002532	NP_002523	Coding	chr17:5419739 minus strand	1244452
NXN	NM_001205319	NP_001192248	Coding	chr17:864111 minus strand	1244453
NXN	NM_022463	NP_071908	Coding	chr17:979758 minus strand	1244454
NXPH3	NM_007225	NP_009156	Coding	chr17:49575935 plus strand	1244455
ODF4	NM_153007	NP_694552	Coding	chr17:8339869 plus strand	1244456
OGFOD3	NM_024648	NP_078924	Coding	chr17:82418637 minus strand	1244457
OGFOD3	NM_175902	NP_787098	Coding	chr17:82418637 minus strand	1244457
OMG	NM_002544	NP_002535	Coding	chr17:31297362 minus strand	1244458
OR1A1	NM_014565	NP_055380	Coding	chr17:3215620 plus strand	1244459
OR1A2	NM_012352	NP_036484	Coding	chr17:3197518 plus strand	1244460
OR1D2	NM_002548	NP_002539	Coding	chr17:3092996 minus strand	1244461
OR1D5	NM_014566	NP_055381	Coding	chr17:3063607 minus strand	1244462
OR1E1	NM_003553	NP_003544	Coding	chr17:3398410 minus strand	1244463
OR1E2	NM_003554	NP_003545	Coding	chr17:3433841 minus strand	1244464
OR1G1	NM_003555	NP_003546	Coding	chr17:3127551 minus strand	1244465
OR3A1	NM_002550	NP_002541	Coding	chr17:3292582 minus strand	1244466
OR3A2	NM_002551	NP_002542	Coding	chr17:3278974 minus strand	1244467
OR3A3	NM_012373	NP_036505	Coding	chr17:3420567 plus strand	1244468
OR4D1	NM_012374	NP_036506	Coding	chr17:58155153 plus strand	1244469
OR4D2	NM_001004707	NP_001004707	Coding	chr17:58169655 plus strand	1244470
ORMDL3	NM_139280	NP_644809	Coding	chr17:39927631 minus strand	1244471
OSBPL7	NM_145798	NP_665741	Coding	chr17:47821781 minus strand	1244472
OTOP2	NM_178160	NP_835454	Coding	chr17:74924274 plus strand	1244473
OTOP3	NM_001272005	NP_001258934	Coding	chr17:74935801 plus strand	1244474

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OTOP3	NM_178233	NP_839947	Coding	chr17:74935801 plus strand	1244474
OVCA2	NM_080822	NP_543012	Coding	chr17:2041982 plus strand	1244475
OXLD1	NM_001039842	NP_001034931	Coding	chr17:81666588 minus strand	1244476
P2RX1	NM_002558	NP_002549	Coding	chr17:3916666 minus strand	1244477
P2RX5	NM_001204519	NP_001191448	Coding	chr17:3696404 minus strand	1244478
P2RX5	NM_001204520	NP_001191449	Coding	chr17:3696404 minus strand	1244478
P2RX5	NM_002561	NP_002552	Coding	chr17:3696404 minus strand	1244478
P2RX5	NM_175080	NP_778255	Coding	chr17:3696404 minus strand	1244478
P4HB	NM_000918	NP_000909	Coding	chr17:81860668 minus strand	1244479
PAFAH1B1	NM_000430	NP_000421	Coding	chr17:2593628 plus strand	1244480
PCGF2	NM_007144	NP_009075	Coding	chr17:38748305 minus strand	1244481
PCTP	NM_001102402	NP_001095872	Coding	chr17:55751104 plus strand	1244482
PCTP	NM_021213	NP_067036	Coding	chr17:55750978 plus strand	1244483
PCYT2	NM_001184917	NP_001171846	Coding	chr17:81911477 minus strand	1244484
PCYT2	NM_001256433	NP_001243362	Coding	chr17:81911477 minus strand	1244484
PCYT2	NM_001256434	NP_001243363	Coding	chr17:81911477 minus strand	1244484
PCYT2	NM_001256435	NP_001243364	Coding	chr17:81911477 minus strand	1244484
PCYT2	NM_001282203	NP_001269132	Coding	chr17:81911239 minus strand	1244485
PCYT2	NM_001282204	NP_001269133	Coding	chr17:81911239 minus strand	1244485
PCYT2	NM_002861	NP_002852	Coding	chr17:81911477 minus strand	1244484
PDE6G	NM_002602	NP_002593	Coding	chr17:81656577 minus strand	1244486
PDK2	NM_001199898	NP_001186827	Coding	chr17:50094736 plus strand	1244487
PDK2	NM_001199899	NP_001186828	Coding	chr17:50095694 plus strand	1244488
PDK2	NM_001199900	NP_001186829	Coding	chr17:50095274 plus strand	1244489
PDK2	NM_002611	NP_002602	Coding	chr17:50095274 plus strand	1244489
PECAM1	NM_000442	NP_000433	Coding	chr17:64390878 minus strand	1244490
PELP1	NM_001278241	NP_001265170	Coding	chr17:4704337 minus strand	1244491
PELP1	NM_014389	NP_055204	Coding	chr17:4704337 minus strand	1244491

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PEMT	NM_001267551	NP_001254480	Coding	chr17:17591703 minus strand	1244492
PEMT	NM_001267552	NP_001254481	Coding	chr17:17591703 minus strand	1244492
PEMT	NM_007169	NP_009100	Coding	chr17:17582431 minus strand	1244493
PEMT	NM_148172	NP_680477	Coding	chr17:17591703 minus strand	1244492
PEMT	NM_148173	NP_680478	Coding	chr17:17577465 minus strand	1244494
PER1	NM_002616	NP_002607	Coding	chr17:8152435 minus strand	1244495
PEX12	NM_000286	NP_000277	Coding	chr17:35578637 minus strand	1244496
PFAS	NM_012393	NP_036525	Coding	chr17:8249277 plus strand	1244497
PFN1	NM_005022	NP_005013	Coding	chr17:4949086 minus strand	1244498
PGAP3	NM_001291726	NP_001278655	Coding	chr17:39688070 minus strand	1244499
PGAP3	NM_001291728	NP_001278657	Coding	chr17:39688070 minus strand	1244499
PGAP3	NM_001291730	NP_001278659	Coding	chr17:39688070 minus strand	1244499
PGAP3	NM_001291732	NP_001278661	Coding	chr17:39688070 minus strand	1244499
PGAP3	NM_001291733	NP_001278662	Coding	chr17:39688070 minus strand	1244499
PGAP3	NM_033419	NP_219487	Coding	chr17:39688070 minus strand	1244499
PGS1	NM_024419	NP_077733	Coding	chr17:78378617 plus strand	1244500
PHB	NM_001281496	NP_001268425	Coding	chr17:49414858 minus strand	1244501
PHB	NM_001281497	NP_001268426	Coding	chr17:49414905 minus strand	1244502
PHB	NM_001281715	NP_001268644	Coding	chr17:49414905 minus strand	1244502
PHB	NM_002634	NP_002625	Coding	chr17:49414905 minus strand	1244502
PHF12	NM_001033561	NP_001028733	Coding	chr17:28951490 minus strand	1244503
PHF12	NM_001290131	NP_001277060	Coding	chr17:28951490 minus strand	1244503
PHF12	NM_020889	NP_065940	Coding	chr17:28951490 minus strand	1244503
PHF23	NM_001284517	NP_001271446	Coding	chr17:7239506 minus strand	1244504
PHF23	NM_001284518	NP_001271447	Coding	chr17:7238930 minus strand	1244505
PHF23	NM_024297	NP_077273	Coding	chr17:7239506 minus strand	1244504
PHOSPHO1	NM_001143804	NP_001137276	Coding	chr17:49230766 minus strand	1244506
PHOSPHO1	NM_178500	NP_848595	Coding	chr17:49230766 minus	1244506

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				strand	
PIGL	NM_004278	NP_004269	Coding	chr17:16217194 plus strand	1244507
PIGS	NM_033198	NP_149975	Coding	chr17:28571869 minus strand	1244508
PIGW	NM_178517	NP_848612	Coding	chr17:36535554 plus strand	1244509
PIK3R5	NM_001142633	NP_001136105	Coding	chr17:8965712 minus strand	1244510
PIK3R5	NM_001251851	NP_001238780	Coding	chr17:8965712 minus strand	1244510
PIK3R5	NM_001251852	NP_001238781	Coding	chr17:8965712 minus strand	1244510
PIK3R5	NM_001251853	NP_001238782	Coding	chr17:8965712 minus strand	1244510
PIK3R5	NM_001251855	NP_001238784	Coding	chr17:8965712 minus strand	1244510
PIK3R5	NM_014308	NP_055123	Coding	chr17:8912517 minus strand	1244511
PIK3R6	NM_001010855	NP_001010855	Coding	chr17:8867677 minus strand	1244512
PIK3R6	NM_001290211	NP_001277140	Coding	chr17:8867677 minus strand	1244512
PIP4K2B	NM_003559	NP_003550	Coding	chr17:38799905 minus strand	1244513
PIPOX	NM_016518	NP_057602	Coding	chr17:29042899 plus strand	1244514
PIRT	NM_001101387	NP_001094857	Coding	chr17:10838101 minus strand	1244515
PITPNA	NM_006224	NP_006215	Coding	chr17:1562816 minus strand	1244516
PITPNC1	NM_012417	NP_036549	Coding	chr17:67377280 plus strand	1244517
PITPNC1	NM_181671	NP_858057	Coding	chr17:67377280 plus strand	1244517
PITPNM3	NM_001165966	NP_001159438	Coding	chr17:6556557 minus strand	1244518
PITPNM3	NM_031220	NP_112497	Coding	chr17:6556557 minus strand	1244518
PLCD3	NM_133373	NP_588614	Coding	chr17:45132533 minus strand	1244519
PLD2	NM_001243108	NP_001230037	Coding	chr17:4807100 plus strand	1244520
PLD2	NM_002663	NP_002654	Coding	chr17:4807100 plus strand	1244520
PLD6	NM_178836	NP_849158	Coding	chr17:17206332 minus strand	1244521
PLEKHH3	NM_024927	NP_079203	Coding	chr17:42677030 minus strand	1244522
PLEKHM1	NM_014798	NP_055613	Coding	chr17:45490780 minus strand	1244523
PLSCR3	NM_001201576	NP_001188505	Coding	chr17:7394843 minus strand	1244524
PLSCR3	NM_020360	NP_065093	Coding	chr17:7394843 minus strand	1244524

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PLXDC1	NM_020405	NP_065138	Coding	chr17:39151649 minus strand	1244525
PMP22	NM_000304	NP_000295	Coding	chr17:15265357 minus strand	1244526
PMP22	NM_001281455	NP_001268384	Coding	chr17:15262589 minus strand	1244527
PMP22	NM_001281456	NP_001268385	Coding	chr17:15265357 minus strand	1244526
PMP22	NM_153321	NP_696996	Coding	chr17:15262589 minus strand	1244527
PMP22	NM_153322	NP_696997	Coding	chr17:15260844 minus strand	1244528
PNMT	NM_002686	NP_002677	Coding	chr17:39668452 plus strand	1244529
PNPO	NM_018129	NP_060599	Coding	chr17:47941522 plus strand	1244530
POLDIP2	NM_001290145	NP_001277074	Coding	chr17:28357589 minus strand	1244531
POLDIP2	NM_015584	NP_056399	Coding	chr17:28357589 minus strand	1244531
POLG2	NM_007215	NP_009146	Coding	chr17:64497066 minus strand	1244532
POLR2A	NM_000937	NP_000928	Coding	chr17:7484378 plus strand	1244533
PPM1D	NM_003620	NP_003611	Coding	chr17:60600182 plus strand	1244534
PPM1E	NM_014906	NP_055721	Coding	chr17:58755868 plus strand	1244535
PPP1R1B	NM_001242464	NP_001229393	Coding	chr17:39628497 plus strand	1244536
PPP1R1B	NM_032192	NP_115568	Coding	chr17:39626923 plus strand	1244537
PPP1R1B	NM_181505	NP_852606	Coding	chr17:39628497 plus strand	1244536
PPP1R27	NM_001007533	NP_001007534	Coding	chr17:81835050 minus strand	1244538
PPP1R9B	NM_032595	NP_115984	Coding	chr17:50150517 minus strand	1244539
PPY	NM_002722	NP_002713	Coding	chr17:43942465 minus strand	1244540
PRAC1	NM_032391	NP_115767	Coding	chr17:48722520 minus strand	1244541
PRAC2	NM_001282275	NP_001269204	Coding	chr17:48723167 plus strand	1244542
PRAC2	NM_001282276	NP_001269205	Coding	chr17:48723691 plus strand	1244543
PRCD	NM_001077620	NP_001071088	Coding	chr17:76540038 plus strand	1244544
PRKAR1A	NM_001276289	NP_001263218	Coding	chr17:68512378 plus strand	1244545
PRKAR1A	NM_001276290	NP_001263219	Coding	chr17:68515393 plus strand	1244546
PRKAR1A	NM_001278433	NP_001265362	Coding	chr17:68413622 plus strand	1244547
PRKAR1A	NM_002734	NP_002725	Coding	chr17:68512378 plus	1244545

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				strand	
PRKAR1A	NM_212471	NP_997636	Coding	chr17:68511779 plus strand	1244548
PRKAR1A	NM_212472	NP_997637	Coding	chr17:68512378 plus strand	1244545
PRKCA	NM_002737	NP_002728	Coding	chr17:66302807 plus strand	1244549
PROCA1	NM_152465	NP_689678	Coding	chr17:28711854 minus strand	1244550
PRPF8	NM_006445	NP_006436	Coding	chr17:1684882 minus strand	1244551
PRPSAP1	NM_002766	NP_002757	Coding	chr17:76354149 minus strand	1244552
PRPSAP2	NM_001243936	NP_001230865	Coding	chr17:18856298 plus strand	1244553
PRPSAP2	NM_001243940	NP_001230869	Coding	chr17:18865468 plus strand	1244554
PRPSAP2	NM_001243941	NP_001230870	Coding	chr17:18858067 plus strand	1244555
PRPSAP2	NM_001243942	NP_001230871	Coding	chr17:18856298 plus strand	1244553
PRPSAP2	NM_002767	NP_002758	Coding	chr17:18858067 plus strand	1244555
PRR11	NM_018304	NP_060774	Coding	chr17:59155498 plus strand	1244556
PRR15L	NM_024320	NP_077296	Coding	chr17:47957877 minus strand	1244557
PRR29	NM_001164257	NP_001157729	Coding	chr17:63998350 plus strand	1244558
PRR29	NM_001191029	NP_001177958	Coding	chr17:63998350 plus strand	1244558
PRR29	NM_001191030	NP_001177959	Coding	chr17:63998350 plus strand	1244558
PRR29	NM_001191031	NP_001177960	Coding	chr17:63998350 plus strand	1244558
PSMB3	NM_002795	NP_002786	Coding	chr17:38752712 plus strand	1244559
PSMB6	NM_001270481	NP_001257410	Coding	chr17:4796143 plus strand	1244560
PSMB6	NM_002798	NP_002789	Coding	chr17:4796143 plus strand	1244560
PSMC3IP	NM_001256014	NP_001242943	Coding	chr17:42577716 minus strand	1244561
PSMC3IP	NM_001256015	NP_001242944	Coding	chr17:42577831 minus strand	1244562
PSMC3IP	NM_001256016	NP_001242945	Coding	chr17:42577831 minus strand	1244562
PSMC3IP	NM_013290	NP_037422	Coding	chr17:42577831 minus strand	1244562
PSMC3IP	NM_016556	NP_057640	Coding	chr17:42577831 minus strand	1244562
PSMC5	NM_001199163	NP_001186092	Coding	chr17:63827683 plus strand	1244563
PSMC5	NM_002805	NP_002796	Coding	chr17:63827409 plus strand	1244564

【１１３６】

PSMD11	NM_001270482	NP_001257411	Coding	chr17:32444462 plus strand	1244565
PSMD11	NM_002815	NP_002806	Coding	chr17:32444462 plus strand	1244565
PSMD12	NM_002816	NP_002807	Coding	chr17:67366605 minus strand	1244566
PSMD12	NM_174871	NP_777360	Coding	chr17:67366605 minus strand	1244566
PSMD3	NM_002809	NP_002800	Coding	chr17:39980767 plus strand	1244567
PSME3	NM_001267045	NP_001253974	Coding	chr17:42833141 plus strand	1244568
PSME3	NM_005789	NP_005780	Coding	chr17:42833141 plus strand	1244568
PSME3	NM_176863	NP_789839	Coding	chr17:42833141 plus strand	1244568
PTGES3L	NM_001142653	NP_001136125	Coding	chr17:42980528 minus strand	1244569
PTGES3L	NM_001142654	NP_001136126	Coding	chr17:42980528 minus strand	1244569
PTGES3L	NM_001261430	NP_001248359	Coding	chr17:42980528 minus strand	1244569
PTGES3L-AARSD1	NM_001136042	NP_001129514	Coding	chr17:42980528 minus strand	1244570
PTGES3L-AARSD1	NM_025267	NP_079543	Coding	chr17:42980003 minus strand	1244571
PTRF	NM_012232	NP_036364	Coding	chr17:42423320 minus strand	1244572
PTRH2	NM_016077	NP_057161	Coding	chr17:59707495 minus strand	1244573
PYCR1	NM_001282279	NP_001269208	Coding	chr17:81937328 minus strand	1244574
PYCR1	NM_001282280	NP_001269209	Coding	chr17:81937328 minus strand	1244574
PYCR1	NM_001282281	NP_001269210	Coding	chr17:81937239 minus strand	1244575
PYCR1	NM_006907	NP_008838	Coding	chr17:81937257 minus strand	1244576
PYCR1	NM_153824	NP_722546	Coding	chr17:81937257 minus strand	1244576
PYY	NM_004160	NP_004151	Coding	chr17:44004469 minus strand	1244577
QRICH2	NM_032134	NP_115510	Coding	chr17:76307680 minus strand	1244578
RAB11FIP4	NM_032932	NP_116321	Coding	chr17:31391623 plus strand	1244579
RAB34	NM_001142624	NP_001136096	Coding	chr17:28718268 minus strand	1244580
RAB34	NM_001142625	NP_001136097	Coding	chr17:28718268 minus strand	1244580
RAB34	NM_001144942	NP_001138414	Coding	chr17:28717890 minus strand	1244581
RAB34	NM_001144943	NP_001138415	Coding	chr17:28718268 minus strand	1244580

【１１３７】

RAB34	NM_001256276	NP_001243205	Coding	chr17:28718268 minus strand	1244580
RAB34	NM_001256277	NP_001243206	Coding	chr17:28718268 minus strand	1244580
RAB34	NM_001256278	NP_001243207	Coding	chr17:28718268 minus strand	1244580
RAB34	NM_031934	NP_114140	Coding	chr17:28717890 minus strand	1244581
RAB37	NM_001006638	NP_001006639	Coding	chr17:74737216 plus strand	1244582
RAB37	NM_001163989	NP_001157461	Coding	chr17:74736819 plus strand	1244583
RAB37	NM_001163990	NP_001157462	Coding	chr17:74737216 plus strand	1244582
RAB37	NM_175738	NP_783865	Coding	chr17:74671116 plus strand	1244584
RAB40B	NM_006822	NP_006813	Coding	chr17:82698722 minus strand	1244585
RAB5C	NM_001252039	NP_001238968	Coding	chr17:42155044 minus strand	1244586
RAB5C	NM_004583	NP_004574	Coding	chr17:42155044 minus strand	1244586
RAB5C	NM_201434	NP_958842	Coding	chr17:42155044 minus strand	1244586
RABEP1	NM_001083585	NP_001077054	Coding	chr17:5282262 plus strand	1244587
RABEP1	NM_001291581	NP_001278510	Coding	chr17:5282262 plus strand	1244587
RABEP1	NM_001291582	NP_001278511	Coding	chr17:5282262 plus strand	1244587
RABEP1	NM_004703	NP_004694	Coding	chr17:5282262 plus strand	1244587
RAC3	NM_005052	NP_005043	Coding	chr17:82031655 plus strand	1244588
RAD51C	NM_002876	NP_002867	Coding	chr17:58692572 plus strand	1244589
RAD51C	NM_058216	NP_478123	Coding	chr17:58692572 plus strand	1244589
RAD51D	NM_001142571	NP_001136043	Coding	chr17:35119869 minus strand	1244590
RAD51D	NM_002878	NP_002869	Coding	chr17:35119869 minus strand	1244590
RAD51D	NM_133629	NP_598332	Coding	chr17:35119869 minus strand	1244590
RAI1	NM_030665	NP_109590	Coding	chr17:17681472 plus strand	1244591
RAMP2	NM_005854	NP_005845	Coding	chr17:42761193 plus strand	1244592
RANGRF	NM_001177801	NP_001171272	Coding	chr17:8288650 plus strand	1244593
RANGRF	NM_001177802	NP_001171273	Coding	chr17:8288650 plus strand	1244593
RANGRF	NM_016492	NP_057576	Coding	chr17:8288650 plus strand	1244593
RAP1GAP2	NM_001100398	NP_001093868	Coding	chr17:2796437 plus strand	1244594
RAP1GAP2	NM_015085	NP_055900	Coding	chr17:2796437 plus strand	1244594
RAPGEFL1	NM_016339	NP_057423	Coding	chr17:40177988 plus strand	1244595

【１１３８】

RARA	NM_000964	NP_000955	Coding	chr17:40309170 plus strand	1244596
RARA	NM_001024809	NP_001019980	Coding	chr17:40342018 plus strand	1244597
RARA	NM_001145301	NP_001138773	Coding	chr17:40318220 plus strand	1244598
RARA	NM_001145302	NP_001138774	Coding	chr17:40318220 plus strand	1244598
RASD1	NM_001199989	NP_001186918	Coding	chr17:17496395 minus strand	1244599
RASD1	NM_016084	NP_057168	Coding	chr17:17496395 minus strand	1244599
RASL10B	NM_033315	NP_201572	Coding	chr17:35731659 plus strand	1244600
RBFOX3	NM_001082575	NP_001076044	Coding	chr17:79516148 minus strand	1244601
RCVRN	NM_002903	NP_002894	Coding	chr17:9905367 minus strand	1244602
RDM1	NM_001034836	NP_001030008	Coding	chr17:35930776 minus strand	1244603
RDM1	NM_001163120	NP_001156592	Coding	chr17:35930776 minus strand	1244603
RDM1	NM_001163121	NP_001156593	Coding	chr17:35930776 minus strand	1244603
RDM1	NM_001163122	NP_001156594	Coding	chr17:35930299 minus strand	1244604
RDM1	NM_001163124	NP_001156596	Coding	chr17:35930299 minus strand	1244604
RDM1	NM_001163125	NP_001156597	Coding	chr17:35930299 minus strand	1244604
RDM1	NM_001163130	NP_001156602	Coding	chr17:35930299 minus strand	1244604
RDM1	NM_145654	NP_663629	Coding	chr17:35930776 minus strand	1244603
RECQL5	NM_001003715	NP_001003715	Coding	chr17:75667189 minus strand	1244605
RECQL5	NM_001003716	NP_001003716	Coding	chr17:75667189 minus strand	1244605
RECQL5	NM_004259	NP_004250	Coding	chr17:75667189 minus strand	1244605
RFFL	NM_001017368	NP_001017368	Coding	chr17:35063740 minus strand	1244606
RFNG	NM_002917	NP_002908	Coding	chr17:82051774 minus strand	1244607
RGS9	NM_001081955	NP_001075424	Coding	chr17:65137337 plus strand	1244608
RGS9	NM_001165933	NP_001159405	Coding	chr17:65137337 plus strand	1244608
RGS9	NM_003835	NP_003826	Coding	chr17:65137337 plus strand	1244608
RHBDF2	NM_001005498	NP_001005498	Coding	chr17:76487909 minus strand	1244609
RHBDF2	NM_024599	NP_078875	Coding	chr17:76501427 minus strand	1244610

【１１３９】

RHBDL3	NM_138328	NP_612201	Coding	chr17:32266175 plus strand	1244611
RHOT1	NM_001033566	NP_001028738	Coding	chr17:32142453 plus strand	1244612
RHOT1	NM_001033567	NP_001028739	Coding	chr17:32142453 plus strand	1244612
RHOT1	NM_001033568	NP_001028740	Coding	chr17:32142453 plus strand	1244612
RHOT1	NM_001288754	NP_001275683	Coding	chr17:32142453 plus strand	1244612
RHOT1	NM_001288755	NP_001275684	Coding	chr17:32142453 plus strand	1244612
RHOT1	NM_001288758	NP_001275687	Coding	chr17:32142453 plus strand	1244612
RHOT1	NM_018307	NP_060777	Coding	chr17:32142453 plus strand	1244612
RILP	NM_031430	NP_113618	Coding	chr17:1650098 minus strand	1244613
RNASEK	NM_001004333	NP_001004333	Coding	chr17:7012416 plus strand	1244614
RND2	NM_005440	NP_005431	Coding	chr17:43025240 plus strand	1244615
RNF112	NM_007148	NP_009079	Coding	chr17:19411177 plus strand	1244616
RNF135	NM_001184992	NP_001171921	Coding	chr17:30970937 plus strand	1244617
RNF135	NM_032322	NP_115698	Coding	chr17:30970937 plus strand	1244617
RNF135	NM_197939	NP_922921	Coding	chr17:30970937 plus strand	1244617
RNF157	NM_052916	NP_443148	Coding	chr17:76240309 minus strand	1244618
RNF167	NM_015528	NP_056343	Coding	chr17:4940334 plus strand	1244619
RNF213	NM_001256071	NP_001243000	Coding	chr17:80260860 plus strand	1244620
RNF213	NM_020954	NP_066005	Coding	chr17:80260860 plus strand	1244620
RNF222	NM_001146684	NP_001140156	Coding	chr17:8397826 minus strand	1244621
RNF43	NM_017763	NP_060233	Coding	chr17:58417570 minus strand	1244622
RNFT1	NM_016125	NP_057209	Coding	chr17:59964756 minus strand	1244623
RNMTL1	NM_018146	NP_060616	Coding	chr17:782272 plus strand	1244624
RPA1	NM_002945	NP_002936	Coding	chr17:1829978 plus strand	1244625
RPAIN	NM_001033002	NP_001028174	Coding	chr17:5419640 plus strand	1244626
RPAIN	NM_001160243	NP_001153715	Coding	chr17:5419640 plus strand	1244626
RPAIN	NM_001160244	NP_001153716	Coding	chr17:5419640 plus strand	1244626
RPAIN	NM_001160246	NP_001153718	Coding	chr17:5419640 plus strand	1244626
RPAIN	NM_001160266	NP_001153738	Coding	chr17:5419640 plus strand	1244626
RPH3AL	NM_001190411	NP_001177340	Coding	chr17:352842 minus strand	1244627
RPH3AL	NM_001190412	NP_001177341	Coding	chr17:352842 minus strand	1244627

【１１４０】

RPH3AL	NM_001190413	NP_001177342	Coding	chr17:352842 minus strand	1244627
RPH3AL	NM_006987	NP_008918	Coding	chr17:352842 minus strand	1244627
RPL19	NM_000981	NP_000972	Coding	chr17:39200282 plus strand	1244628
RPL23	NM_000978	NP_000969	Coding	chr17:38853800 minus strand	1244629
RPL23A	NM_000984	NP_000975	Coding	chr17:28719981 plus strand	1244630
RPL26	NM_000987	NP_000978	Coding	chr17:8383247 minus strand	1244631
RPL27	NM_000988	NP_000979	Coding	chr17:42998428 plus strand	1244632
RPL38	NM_000999	NP_000990	Coding	chr17:74203655 plus strand	1244633
RPL38	NM_001035258	NP_001030335	Coding	chr17:74203655 plus strand	1244633
RPRML	NM_203400	NP_981945	Coding	chr17:46979248 minus strand	1244634
RPS6KB1	NM_001272042	NP_001258971	Coding	chr17:59893045 plus strand	1244635
RPS6KB1	NM_001272043	NP_001258972	Coding	chr17:59893045 plus strand	1244635
RPS6KB1	NM_001272044	NP_001258973	Coding	chr17:59893045 plus strand	1244635
RPS6KB1	NM_001272060	NP_001258989	Coding	chr17:59893045 plus strand	1244635
RPS6KB1	NM_003161	NP_003152	Coding	chr17:59893045 plus strand	1244635
RPTOR	NM_001163034	NP_001156506	Coding	chr17:80544824 plus strand	1244636
RPTOR	NM_020761	NP_065812	Coding	chr17:80544824 plus strand	1244636
RSAD1	NM_018346	NP_060816	Coding	chr17:50478828 plus strand	1244637
RTN4RL1	NM_178568	NP_848663	Coding	chr17:2024884 minus strand	1244638
RUNDC1	NM_173079	NP_775102	Coding	chr17:42980564 plus strand	1244639
RUNDC3A	NM_001144825	NP_001138297	Coding	chr17:44308558 plus strand	1244640
RUNDC3A	NM_001144826	NP_001138298	Coding	chr17:44308558 plus strand	1244640
RUNDC3A	NM_006695	NP_006686	Coding	chr17:44308558 plus strand	1244640
SAMD14	NM_001257359	NP_001244288	Coding	chr17:50129882 minus strand	1244641
SAMD14	NM_174920	NP_777580	Coding	chr17:50129882 minus strand	1244641
SAP30BP	NM_001301839	NP_001288768	Coding	chr17:75667115 plus strand	1244642
SAP30BP	NM_001301855	NP_001288784	Coding	chr17:75667115 plus strand	1244642
SAP30BP	NM_013260	NP_037392	Coding	chr17:75667115 plus strand	1244642

【1141】

SARM1	NM_015077	NP_055892	Coding	chr17:28371661 plus strand	1244643
SAT2	NM_133491	NP_597998	Coding	chr17:7627876 minus strand	1244644
SCARF1	NM_003693	NP_003684	Coding	chr17:1645789 minus strand	1244645
SCARF1	NM_145350	NP_663325	Coding	chr17:1645789 minus strand	1244645
SCGB1C2	NM_001097610	NP_001091079	Coding	chr17:137570 plus strand	1244646
SCIMP	NM_001271842	NP_001258771	Coding	chr17:5234860 minus strand	1244647
SCIMP	NM_207103	NP_996986	Coding	chr17:5234860 minus strand	1244647
SCN4A	NM_000334	NP_000325	Coding	chr17:63972918 minus strand	1244648
SCO1	NM_004589	NP_004580	Coding	chr17:10697568 minus strand	1244649
SCPEP1	NM_021626	NP_067639	Coding	chr17:56978106 plus strand	1244650
SCRN2	NM_001145023	NP_001138495	Coding	chr17:47841333 minus strand	1244651
SCRN2	NM_138355	NP_612364	Coding	chr17:47841333 minus strand	1244651
SDF2	NM_006923	NP_008854	Coding	chr17:28662172 minus strand	1244652
SDK2	NM_001144952	NP_001138424	Coding	chr17:73644088 minus strand	1244653
SEBOX	NM_001080837	NP_001074306	Coding	chr17:28365151 minus strand	1244654
SEC14L1	NM_001039573	NP_001034662	Coding	chr17:77140922 plus strand	1244655
SEC14L1	NM_001143998	NP_001137470	Coding	chr17:77140922 plus strand	1244655
SEC14L1	NM_001143999	NP_001137471	Coding	chr17:77140922 plus strand	1244655
SEC14L1	NM_001144001	NP_001137473	Coding	chr17:77185212 plus strand	1244656
SEC14L1	NM_001204408	NP_001191337	Coding	chr17:77088642 plus strand	1244657
SEC14L1	NM_001204410	NP_001191339	Coding	chr17:77089152 plus strand	1244658
SEC14L1	NM_003003	NP_002994	Coding	chr17:77140922 plus strand	1244655
SECTM1	NM_003004	NP_002995	Coding	chr17:82334045 minus strand	1244659
SENP3	NM_015670	NP_056485	Coding	chr17:7561991 plus strand	1244660
SEPT4	NM_001198713	NP_001185642	Coding	chr17:58540818 minus strand	1244661
SEPT4	NM_001256782	NP_001243711	Coding	chr17:58540818 minus strand	1244661
SEPT4	NM_001256822	NP_001243751	Coding	chr17:58528047 minus strand	1244662
SEPT4	NM_004574	NP_004565	Coding	chr17:58529467 minus strand	1244663

【1142】

SEPT4	NM_080415	NP_536340	Coding	chr17:58532084 minus strand	1244664
SEPT4	NM_080416	NP_536341	Coding	chr17:58532084 minus strand	1244664
SEPT9	NM_001113491	NP_001106963	Coding	chr17:77281409 plus strand	1244665
SEPT9	NM_001113492	NP_001106964	Coding	chr17:77287890 plus strand	1244666
SEPT9	NM_001113493	NP_001106965	Coding	chr17:77373189 plus strand	1244667
SEPT9	NM_001113494	NP_001106966	Coding	chr17:77376082 plus strand	1244668
SEPT9	NM_001113495	NP_001106967	Coding	chr17:77475242 plus strand	1244669
SEPT9	NM_001113496	NP_001106968	Coding	chr17:77450530 plus strand	1244670
SEPT9	NM_001293695	NP_001280624	Coding	chr17:77281409 plus strand	1244665
SEPT9	NM_001293696	NP_001280625	Coding	chr17:77405068 plus strand	1244671
SEPT9	NM_001293697	NP_001280626	Coding	chr17:77451243 plus strand	1244672
SEPT9	NM_001293698	NP_001280627	Coding	chr17:77453992 plus strand	1244673
SEPT9	NM_006640	NP_006631	Coding	chr17:77319514 plus strand	1244674
SERPINF1	NM_002615	NP_002606	Coding	chr17:1761964 plus strand	1244675
SERPINF2	NM_000934	NP_000925	Coding	chr17:1742835 plus strand	1244676
SERPINF2	NM_001165920	NP_001159392	Coding	chr17:1743025 plus strand	1244677
SERPINF2	NM_001165921	NP_001159393	Coding	chr17:1742835 plus strand	1244676
SEZ6	NM_001098635	NP_001092105	Coding	chr17:29006063 minus strand	1244678
SEZ6	NM_001290202	NP_001277131	Coding	chr17:29006440 minus strand	1244679
SEZ6	NM_178860	NP_849191	Coding	chr17:29006063 minus strand	1244678
SGCA	NM_000023	NP_000014	Coding	chr17:50166004 plus strand	1244680
SGCA	NM_001135697	NP_001129169	Coding	chr17:50166004 plus strand	1244680
SGK494	NM_001174103	NP_001167574	Coding	chr17:28614193 minus strand	1244681
SGSH	NM_000199	NP_000190	Coding	chr17:80220400 minus strand	1244682
SGSM2	NM_001098509	NP_001091979	Coding	chr17:2337513 plus strand	1244683
SGSM2	NM_014853	NP_055668	Coding	chr17:2337511 plus strand	1244684
SHBG	NM_001040	NP_001031	Coding	chr17:7630093 plus strand	1244685
SHBG	NM_001146279	NP_001139751	Coding	chr17:7630093 plus strand	1244685
SHBG	NM_001146280	NP_001139752	Coding	chr17:7630093 plus strand	1244685
SHBG	NM_001146281	NP_001139753	Coding	chr17:7630093 plus strand	1244685
SHBG	NM_001289113	NP_001276042	Coding	chr17:7627968 plus strand	1244686

【1143】

SHBG	NM_001289114	NP_001276043	Coding	chr17:7614063 plus strand	1244687
SHBG	NM_001289115	NP_001276044	Coding	chr17:7627968 plus strand	1244686
SHBG	NM_001289116	NP_001276045	Coding	chr17:7630093 plus strand	1244685
SHISA6	NM_001173461	NP_001166932	Coding	chr17:11241422 plus strand	1244688
SHISA6	NM_001173462	NP_001166933	Coding	chr17:11241422 plus strand	1244688
SHISA6	NM_207386	NP_997269	Coding	chr17:11241422 plus strand	1244688
SHMT1	NM_001281786	NP_001268715	Coding	chr17:18363563 minus strand	1244689
SHMT1	NM_004169	NP_004160	Coding	chr17:18363563 minus strand	1244689
SHMT1	NM_148918	NP_683718	Coding	chr17:18363563 minus strand	1244689
SHPK	NM_013276	NP_037408	Coding	chr17:3636322 minus strand	1244690
SIRT7	NM_016538	NP_057622	Coding	chr17:81918182 minus strand	1244691
SKA2	NM_001100595	NP_001094065	Coding	chr17:59155439 minus strand	1244692
SKA2	NM_182620	NP_872426	Coding	chr17:59155439 minus strand	1244692
SKAP1	NM_001075099	NP_001068567	Coding	chr17:48430232 minus strand	1244693
SKAP1	NM_003726	NP_003717	Coding	chr17:48430232 minus strand	1244693
SLC13A2	NM_001145975	NP_001139447	Coding	chr17:28473645 plus strand	1244694
SLC13A2	NM_003984	NP_003975	Coding	chr17:28473645 plus strand	1244694
SLC13A5	NM_001143838	NP_001137310	Coding	chr17:6713421 minus strand	1244695
SLC13A5	NM_001284509	NP_001271438	Coding	chr17:6713421 minus strand	1244695
SLC13A5	NM_001284510	NP_001271439	Coding	chr17:6713421 minus strand	1244695
SLC13A5	NM_177550	NP_808218	Coding	chr17:6713421 minus strand	1244695
SLC16A11	NM_153357	NP_699188	Coding	chr17:7043923 minus strand	1244696
SLC16A13	NM_201566	NP_963860	Coding	chr17:7036074 plus strand	1244697
SLC16A3	NM_001042422	NP_001035887	Coding	chr17:82228405 plus strand	1244698
SLC16A3	NM_001042423	NP_001035888	Coding	chr17:82232231 plus strand	1244699
SLC16A3	NM_001206950	NP_001193879	Coding	chr17:82228405 plus strand	1244698
SLC16A3	NM_001206951	NP_001193880	Coding	chr17:82234898 plus strand	1244700
SLC16A3	NM_001206952	NP_001193881	Coding	chr17:82235773 plus strand	1244701
SLC16A3	NM_004207	NP_004198	Coding	chr17:82229010 plus	1244702

【1144】

				strand	
SLC16A5	NM_001271765	NP_001258694	Coding	chr17:75087726 plus strand	1244703
SLC16A5	NM_004695	NP_004686	Coding	chr17:75087940 plus strand	1244704
SLC16A6	NM_001174166	NP_001167637	Coding	chr17:68291264 minus strand	1244705
SLC16A6	NM_004694	NP_004685	Coding	chr17:68291264 minus strand	1244705
SLC25A10	NM_001270888	NP_001257817	Coding	chr17:81712235 plus strand	1244706
SLC25A10	NM_001270953	NP_001257882	Coding	chr17:81712235 plus strand	1244706
SLC25A10	NM_012140	NP_036272	Coding	chr17:81712235 plus strand	1244706
SLC25A11	NM_001165417	NP_001158889	Coding	chr17:4940167 minus strand	1244707
SLC25A11	NM_001165418	NP_001158890	Coding	chr17:4940167 minus strand	1244707
SLC25A11	NM_003562	NP_003553	Coding	chr17:4940167 minus strand	1244707
SLC25A19	NM_001126121	NP_001119593	Coding	chr17:75289449 minus strand	1244708
SLC25A19	NM_001126122	NP_001119594	Coding	chr17:75289449 minus strand	1244708
SLC25A19	NM_021734	NP_068380	Coding	chr17:75289449 minus strand	1244708
SLC25A35	NM_201520	NP_958928	Coding	chr17:8294852 minus strand	1244709
SLC25A39	NM_001143780	NP_001137252	Coding	chr17:44324849 minus strand	1244710
SLC25A39	NM_016016	NP_057100	Coding	chr17:44324849 minus strand	1244710
SLC26A11	NM_001166347	NP_001159819	Coding	chr17:80220400 plus strand	1244711
SLC26A11	NM_001166348	NP_001159820	Coding	chr17:80220400 plus strand	1244711
SLC26A11	NM_001166349	NP_001159821	Coding	chr17:80220400 plus strand	1244711
SLC26A11	NM_173626	NP_775897	Coding	chr17:80220400 plus strand	1244711
SLC2A4	NM_001042	NP_001033	Coding	chr17:7281734 plus strand	1244712
SLC35B1	NM_001278784	NP_001265713	Coding	chr17:49707951 minus strand	1244713
SLC35B1	NM_005827	NP_005818	Coding	chr17:49707951 minus strand	1244713
SLC35G3	NM_152462	NP_689675	Coding	chr17:35194393 minus strand	1244714
SLC35G6	NM_001102614	NP_001096084	Coding	chr17:7481401 plus strand	1244715
SLC38A10	NM_001037984	NP_001033073	Coding	chr17:81295339 minus strand	1244716
SLC38A10	NM_138570	NP_612637	Coding	chr17:81295339 minus strand	1244716

【1145】

SLC39A11	NM_001159770	NP_001153242	Coding	chr17:73092714 minus strand	1244717
SLC39A11	NM_139177	NP_631916	Coding	chr17:73092714 minus strand	1244717
SLC43A2	NM_001284498	NP_001271427	Coding	chr17:1628375 minus strand	1244718
SLC43A2	NM_001284499	NP_001271428	Coding	chr17:1605034 minus strand	1244719
SLC43A2	NM_152346	NP_689559	Coding	chr17:1628886 minus strand	1244720
SLC46A1	NM_001242366	NP_001229295	Coding	chr17:28406212 minus strand	1244721
SLC46A1	NM_080669	NP_542400	Coding	chr17:28406212 minus strand	1244721
SLC47A1	NM_018242	NP_060712	Coding	chr17:19533853 plus strand	1244722
SLC47A2	NM_001099646	NP_001093116	Coding	chr17:19716730 minus strand	1244723
SLC47A2	NM_001256663	NP_001243592	Coding	chr17:19716730 minus strand	1244723
SLC47A2	NM_152908	NP_690872	Coding	chr17:19716730 minus strand	1244723
SLC4A1	NM_000342	NP_000333	Coding	chr17:44268134 minus strand	1244724
SLC52A1	NM_001104577	NP_001098047	Coding	chr17:5035432 minus strand	1244725
SLC52A1	NM_017986	NP_060456	Coding	chr17:5035432 minus strand	1244725
SLC5A10	NM_001042450	NP_001035915	Coding	chr17:18952164 plus strand	1244726
SLC5A10	NM_001270648	NP_001257577	Coding	chr17:18952164 plus strand	1244726
SLC5A10	NM_001270649	NP_001257578	Coding	chr17:18952164 plus strand	1244726
SLC5A10	NM_001282417	NP_001269346	Coding	chr17:18950675 plus strand	1244727
SLC5A10	NM_152351	NP_689564	Coding	chr17:18952164 plus strand	1244726
SLC6A4	NM_001045	NP_001036	Coding	chr17:30235968 minus strand	1244728
SLC9A3R1	NM_004252	NP_004243	Coding	chr17:74748611 plus strand	1244729
SLFN11	NM_001104587	NP_001098057	Coding	chr17:35373701 minus strand	1244730
SLFN11	NM_001104588	NP_001098058	Coding	chr17:35373701 minus strand	1244730
SLFN11	NM_001104589	NP_001098059	Coding	chr17:35373701 minus strand	1244730
SLFN11	NM_001104590	NP_001098060	Coding	chr17:35373701 minus strand	1244730
SLFN11	NM_152270	NP_689483	Coding	chr17:35373701 minus strand	1244730
SLFN12	NM_001289009	NP_001275938	Coding	chr17:35433176 minus strand	1244731

【１１４６】

SLFN12	NM_018042	NP_060512	Coding	chr17:35432524 minus strand	1244732
SLFN12L	NM_001195790	NP_001182719	Coding	chr17:35487739 minus strand	1244733
SLFN13	NM_144682	NP_653283	Coding	chr17:35448837 minus strand	1244734
SLFN14	NM_001129820	NP_001123292	Coding	chr17:35558091 minus strand	1244735
SLFN5	NM_144975	NP_659412	Coding	chr17:35243066 plus strand	1244736
SMARCD2	NM_001098426	NP_001091896	Coding	chr17:63842991 minus strand	1244737
SMARCE1	NM_003079	NP_003070	Coding	chr17:40647851 minus strand	1244738
SMCR8	NM_144775	NP_658988	Coding	chr17:18315279 plus strand	1244739
SMG6	NM_001256827	NP_001243756	Coding	chr17:2266199 minus strand	1244740
SMG6	NM_001256828	NP_001243757	Coding	chr17:2236847 minus strand	1244741
SMG6	NM_001282326	NP_001269255	Coding	chr17:2088761 minus strand	1244742
SMG6	NM_017575	NP_060045	Coding	chr17:2303775 minus strand	1244743
SMG8	NM_018149	NP_060619	Coding	chr17:59210009 plus strand	1244744
SMIM5	NM_001162995	NP_001156467	Coding	chr17:75633433 plus strand	1244745
SMIM6	NM_001162997	NP_001156469	Coding	chr17:75646565 plus strand	1244746
SMTNL2	NM_001114974	NP_001108446	Coding	chr17:4584538 plus strand	1244747
SMTNL2	NM_198501	NP_940903	Coding	chr17:4583980 plus strand	1244748
SMURF2	NM_022739	NP_073576	Coding	chr17:64662268 minus strand	1244749
SMYD4	NM_052928	NP_443160	Coding	chr17:1829881 minus strand	1244750
SNF8	NM_007241	NP_009172	Coding	chr17:48944792 minus strand	1244751
SNX11	NM_013323	NP_037455	Coding	chr17:48107584 plus strand	1244752
SNX11	NM_152244	NP_689450	Coding	chr17:48107557 plus strand	1244753
SOCS3	NM_003955	NP_003946	Coding	chr17:78360079 minus strand	1244754
SOCS7	NM_014598	NP_055413	Coding	chr17:38352123 plus strand	1244755
SOST	NM_025237	NP_079513	Coding	chr17:43758788 minus strand	1244756
SOX15	NM_006942	NP_008873	Coding	chr17:7590170 minus strand	1244757
SOX9	NM_000346	NP_000337	Coding	chr17:72121019 plus strand	1244758
SP2	NM_003110	NP_003101	Coding	chr17:47896149 plus strand	1244759

【1147】

SP6	NM_001258248	NP_001245177	Coding	chr17:47851150 minus strand	1244760
SP6	NM_199262	NP_954871	Coding	chr17:47855874 minus strand	1244761
SPACA3	NM_173847	NP_776246	Coding	chr17:32991863 plus strand	1244762
SPAG5	NM_006461	NP_006452	Coding	chr17:28599038 minus strand	1244763
SPAG7	NM_004890	NP_004881	Coding	chr17:4967837 minus strand	1244764
SPAG9	NM_001130527	NP_001123999	Coding	chr17:51120865 minus strand	1244765
SPAG9	NM_001130528	NP_001124000	Coding	chr17:51120865 minus strand	1244765
SPAG9	NM_001251971	NP_001238900	Coding	chr17:51046968 minus strand	1244766
SPAG9	NM_003971	NP_003962	Coding	chr17:51120865 minus strand	1244765
SPATA20	NM_001258372	NP_001245301	Coding	chr17:50547088 plus strand	1244767
SPATA20	NM_001258373	NP_001245302	Coding	chr17:50547088 plus strand	1244767
SPATA20	NM_022827	NP_073738	Coding	chr17:50547088 plus strand	1244767
SPATA22	NM_001170695	NP_001164166	Coding	chr17:3471848 minus strand	1244768
SPATA22	NM_001170696	NP_001164167	Coding	chr17:3471848 minus strand	1244768
SPATA22	NM_001170697	NP_001164168	Coding	chr17:3471832 minus strand	1244769
SPATA22	NM_001170698	NP_001164169	Coding	chr17:3471805 minus strand	1244770
SPATA22	NM_001170699	NP_001164170	Coding	chr17:3471773 minus strand	1244771
SPATA22	NM_032598	NP_115987	Coding	chr17:3471747 minus strand	1244772
SPATA32	NM_152343	NP_689556	Coding	chr17:45262112 minus strand	1244773
SPDYE4	NM_001128076	NP_001121548	Coding	chr17:8758559 minus strand	1244774
SPECC1	NM_001033553	NP_001028725	Coding	chr17:20087021 plus strand	1244775
SPECC1	NM_001033554	NP_001028726	Coding	chr17:20155993 plus strand	1244776
SPECC1	NM_001033555	NP_001028727	Coding	chr17:20155993 plus strand	1244776
SPECC1	NM_001243438	NP_001230367	Coding	chr17:20155993 plus strand	1244776
SPECC1	NM_001243439	NP_001230368	Coding	chr17:20009335 plus strand	1244777
SPECC1	NM_152904	NP_690868	Coding	chr17:20087021 plus strand	1244775
SPEM1	NM_199339	NP_955371	Coding	chr17:7420359 plus strand	1244778
SPHK1	NM_001142601	NP_001136073	Coding	chr17:76384608 plus	1244779

【１１４８】

				strand	
SPHK1	NM_001142602	NP_001136074	Coding	chr17:76385207 plus strand	1244780
SPHK1	NM_021972	NP_068807	Coding	chr17:76384608 plus strand	1244779
SPHK1	NM_182965	NP_892010	Coding	chr17:76384608 plus strand	1244779
SPNS2	NM_001124758	NP_001118230	Coding	chr17:4498833 plus strand	1244781
SPNS3	NM_182538	NP_872344	Coding	chr17:4433923 plus strand	1244782
SPOP	NM_001007226	NP_001007227	Coding	chr17:49678163 minus strand	1244783
SPOP	NM_001007227	NP_001007228	Coding	chr17:49678163 minus strand	1244783
SPOP	NM_001007228	NP_001007229	Coding	chr17:49678163 minus strand	1244783
SPOP	NM_001007229	NP_001007230	Coding	chr17:49678163 minus strand	1244783
SPOP	NM_001007230	NP_001007231	Coding	chr17:49678163 minus strand	1244783
SPOP	NM_003563	NP_003554	Coding	chr17:49678163 minus strand	1244783
SPPL2C	NM_175882	NP_787078	Coding	chr17:45844889 plus strand	1244784
SRCIN1	NM_025248	NP_079524	Coding	chr17:38605930 minus strand	1244785
SREBF1	NM_001005291	NP_001005291	Coding	chr17:17837011 minus strand	1244786
SREBF1	NM_004176	NP_004167	Coding	chr17:17837011 minus strand	1244786
SRP68	NM_001260502	NP_001247431	Coding	chr17:76072526 minus strand	1244787
SRP68	NM_001260503	NP_001247432	Coding	chr17:76053656 minus strand	1244788
SRP68	NM_014230	NP_055045	Coding	chr17:76072526 minus strand	1244787
SRR	NM_021947	NP_068766	Coding	chr17:2303953 plus strand	1244789
SRSF1	NM_001078166	NP_001071634	Coding	chr17:58007346 minus strand	1244790
SRSF1	NM_006924	NP_008855	Coding	chr17:58007346 minus strand	1244790
SRSF2	NM_001195427	NP_001182356	Coding	chr17:76737411 minus strand	1244791
SRSF2	NM_003016	NP_003007	Coding	chr17:76737411 minus strand	1244791
SSH2	NM_001282129	NP_001269058	Coding	chr17:29930228 minus strand	1244792
SSH2	NM_001282130	NP_001269059	Coding	chr17:29930228 minus strand	1244792
SSH2	NM_001282131	NP_001269060	Coding	chr17:29761432 minus strand	1244793
SSH2	NM_033389	NP_203747	Coding	chr17:29930040 minus strand	1244794
SSTR2	NM_001050	NP_001041	Coding	chr17:73165020 plus	1244795

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				strand	
ST6GALNAC1	NM_001289107	NP_001276036	Coding	chr17:76643838 minus strand	1244796
ST6GALNAC1	NM_018414	NP_060884	Coding	chr17:76643838 minus strand	1244796
ST6GALNAC2	NM_006456	NP_006447	Coding	chr17:76586063 minus strand	1244797
STAC2	NM_198993	NP_945344	Coding	chr17:39225787 minus strand	1244798
STARD3	NM_001165937	NP_001159409	Coding	chr17:39637079 plus strand	1244799
STARD3	NM_001165938	NP_001159410	Coding	chr17:39637079 plus strand	1244799
STARD3	NM_006804	NP_006795	Coding	chr17:39637079 plus strand	1244799
STAT3	NM_003150	NP_003141	Coding	chr17:42388495 minus strand	1244800
STAT3	NM_139276	NP_644805	Coding	chr17:42388495 minus strand	1244800
STAT3	NM_213662	NP_998827	Coding	chr17:42388387 minus strand	1244801
STAT5A	NM_001288718	NP_001275647	Coding	chr17:42287866 plus strand	1244802
STAT5A	NM_001288719	NP_001275648	Coding	chr17:42288055 plus strand	1244803
STAT5A	NM_001288720	NP_001275649	Coding	chr17:42288055 plus strand	1244803
STAT5A	NM_003152	NP_003143	Coding	chr17:42287546 plus strand	1244804
STAT5B	NM_012448	NP_036580	Coding	chr17:42276406 minus strand	1244805
STH	NM_001007532	NP_001007533	Coding	chr17:45999249 plus strand	1244806
STRA13	NM_001271006	NP_001257935	Coding	chr17:82022909 minus strand	1244807
STRA13	NM_001271007	NP_001257936	Coding	chr17:82022909 minus strand	1244807
STRA13	NM_144998	NP_659435	Coding	chr17:82022909 minus strand	1244807
STRADA	NM_001003786	NP_001003786	Coding	chr17:63741970 minus strand	1244808
STRADA	NM_001003787	NP_001003787	Coding	chr17:63741970 minus strand	1244808
STRADA	NM_001003788	NP_001003788	Coding	chr17:63741970 minus strand	1244808
STRADA	NM_001165969	NP_001159441	Coding	chr17:63741970 minus strand	1244808
STRADA	NM_001165970	NP_001159442	Coding	chr17:63741970 minus strand	1244808
STRADA	NM_153335	NP_699166	Coding	chr17:63741970 minus strand	1244808
STX8	NM_004853	NP_004844	Coding	chr17:9575958 minus strand	1244809
STXBP4	NM_178509	NP_848604	Coding	chr17:54968764 plus	1244810

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				strand	
SUMO2	NM_001005849	NP_001005849	Coding	chr17:75183003 minus strand	1244811
SUMO2	NM_006937	NP_008868	Coding	chr17:75183003 minus strand	1244811
SUPT4H1	NM_003168	NP_003159	Coding	chr17:58352238 minus strand	1244812
SUPT6H	NM_003170	NP_003161	Coding	chr17:28662283 plus strand	1244813
SUZ12	NM_015355	NP_056170	Coding	chr17:31937024 plus strand	1244814
SYNGR2	NM_004710	NP_004701	Coding	chr17:78168589 plus strand	1244815
SYNRG	NM_001163544	NP_001157016	Coding	chr17:37609438 minus strand	1244816
SYNRG	NM_001163545	NP_001157017	Coding	chr17:37609438 minus strand	1244816
SYNRG	NM_001163546	NP_001157018	Coding	chr17:37609438 minus strand	1244816
SYNRG	NM_001163547	NP_001157019	Coding	chr17:37609438 minus strand	1244816
SYNRG	NM_007247	NP_009178	Coding	chr17:37609438 minus strand	1244816
SYNRG	NM_080550	NP_542117	Coding	chr17:37609438 minus strand	1244816
SYNRG	NM_198882	NP_942583	Coding	chr17:37609438 minus strand	1244816
TAC4	NM_001077503	NP_001070971	Coding	chr17:49848017 minus strand	1244817
TAC4	NM_001077504	NP_001070972	Coding	chr17:49848017 minus strand	1244817
TAC4	NM_001077505	NP_001070973	Coding	chr17:49848017 minus strand	1244817
TAC4	NM_001077506	NP_001070974	Coding	chr17:49848017 minus strand	1244817
TAC4	NM_170685	NP_733786	Coding	chr17:49848017 minus strand	1244817
TACO1	NM_016360	NP_057444	Coding	chr17:63600871 plus strand	1244818
TADA2A	NM_001166105	NP_001159577	Coding	chr17:37406885 plus strand	1244819
TADA2A	NM_001291918	NP_001278847	Coding	chr17:37406885 plus strand	1244819
TADA2A	NM_001488	NP_001479	Coding	chr17:37407224 plus strand	1244820
TADA2A	NM_133439	NP_597683	Coding	chr17:37407224 plus strand	1244820
TAF15	NM_003487	NP_003478	Coding	chr17:35809454 plus strand	1244821
TAF15	NM_139215	NP_631961	Coding	chr17:35809454 plus strand	1244821
TANC2	NM_025185	NP_079461	Coding	chr17:63009536 plus strand	1244822
TAOK1	NM_020791	NP_065842	Coding	chr17:29390924 plus	1244823

【1151】

				strand	
TAOK1	NM_025142	NP_079418	Coding	chr17:29390924 plus strand	1244823
TAX1BP3	NM_001204698	NP_001191627	Coding	chr17:3668679 minus strand	1244824
TAX1BP3	NM_014604	NP_055419	Coding	chr17:3668679 minus strand	1244824
TBC1D16	NM_001271844	NP_001258773	Coding	chr17:79950857 minus strand	1244825
TBC1D16	NM_001271845	NP_001258774	Coding	chr17:79950857 minus strand	1244825
TBC1D16	NM_001271846	NP_001258775	Coding	chr17:79950857 minus strand	1244825
TBC1D16	NM_019020	NP_061893	Coding	chr17:80035858 minus strand	1244826
TBC1D26	NM_178571	NP_848666	Coding	chr17:15732276 plus strand	1244827
TBC1D28	NM_001039397	NP_001034486	Coding	chr17:18644427 minus strand	1244828
TBC1D29	NM_015594	NP_056409	Coding	chr17:30559565 plus strand	1244829
TBC1D3	NM_001123391	NP_001116863	Coding	chr17:37924459 plus strand	1244830
TBC1D3	NM_001123391	NP_001116863	Coding	chr17:38127955 plus strand	1244831
TBC1D3	NM_001123391	NP_001116863	Coding	chr17:38068606 minus strand	1244832
TBC1D3	NM_001123391	NP_001116863	Coding	chr17:38192555 minus strand	1244833
TBC1D3B	NM_001001417	NP_001001417	Coding	chr17:36176624 minus strand	1244834
TBC1D3C	NM_001001418	NP_001001418	Coding	chr17:38003992 plus strand	1244835
TBC1D3C	NM_001001418	NP_001001418	Coding	chr17:38068634 minus strand	1244836
TBC1D3C	NM_001001418	NP_001001418	Coding	chr17:38192583 minus strand	1244837
TBC1D3F	NM_032258	NP_115634	Coding	chr17:36439523 minus strand	1244838
TBC1D3F	NM_032258	NP_115634	Coding	chr17:38127953 plus strand	1244839
TBC1D3H	NM_001123392	NP_001116864	Coding	chr17:36176592 minus strand	1244840
TBC1D3H	NM_001123392	NP_001116864	Coding	chr17:38004018 plus strand	1244841
TBC1D3H	NM_001123392	NP_001116864	Coding	chr17:36264527 minus strand	1244842
TBC1D3H	NM_001123392	NP_001116864	Coding	chr17:36388437 minus strand	1244843
TBC1D3H	NM_001123392	NP_001116864	Coding	chr17:36323869 plus strand	1244844
TBC1D3H	NM_001123392	NP_001116864	Coding	chr17:36457529 minus strand	1244845
TBC1D3H	NM_001123392	NP_001116864	Coding	chr17:37989062 minus	1244846

【１１５２】

				strand	
TBC1D3H	NM_001123392	NP_001116864	Coding	chr17:38127953 plus strand	1244847
TBC1D3K	NM_001291464	NP_001278393	Coding	chr17:36439509 minus strand	1244848
TBC1D3K	NM_001291464	NP_001278393	Coding	chr17:37924471 plus strand	1244849
TBC1D3K	NM_001291464	NP_001278393	Coding	chr17:38127967 plus strand	1244850
TBC1D3K	NM_001291464	NP_001278393	Coding	chr17:38192543 minus strand	1244851
TBC1D3L	NM_001291459	NP_001278388	Coding	chr17:36176592 minus strand	1244852
TBC1D3L	NM_001291459	NP_001278388	Coding	chr17:38004018 plus strand	1244853
TBC1D3L	NM_001291459	NP_001278388	Coding	chr17:37989062 minus strand	1244854
TBC1D3L	NM_001291459	NP_001278388	Coding	chr17:38127953 plus strand	1244855
TBCD	NM_005993	NP_005984	Coding	chr17:82752063 plus strand	1244856
TBKBP1	NM_014726	NP_055541	Coding	chr17:47695263 plus strand	1244857
TBX2	NM_005994	NP_005985	Coding	chr17:61399895 plus strand	1244858
TBX21	NM_013351	NP_037483	Coding	chr17:47733243 plus strand	1244859
TBX4	NM_018488	NP_060958	Coding	chr17:61456445 plus strand	1244860
TCAP	NM_003673	NP_003664	Coding	chr17:39665345 plus strand	1244861
TEFM	NM_024683	NP_078959	Coding	chr17:30906268 minus strand	1244862
TEKT1	NM_053285	NP_444515	Coding	chr17:6831741 minus strand	1244863
TEKT3	NM_031898	NP_114104	Coding	chr17:15341641 minus strand	1244864
TEN1	NM_001113324	NP_001106795	Coding	chr17:75979216 plus strand	1244865
TEX14	NM_001201457	NP_001188386	Coding	chr17:58692055 minus strand	1244866
TEX14	NM_031272	NP_112562	Coding	chr17:58692055 minus strand	1244866
TEX14	NM_198393	NP_938207	Coding	chr17:58692055 minus strand	1244866
TEX19	NM_207459	NP_997342	Coding	chr17:82359246 plus strand	1244867
TEX2	NM_001288732	NP_001275661	Coding	chr17:64263323 minus strand	1244868
TEX2	NM_001288733	NP_001275662	Coding	chr17:64230756 minus strand	1244869
TEX2	NM_018469	NP_060939	Coding	chr17:64263323 minus strand	1244868
THRA	NM_001190918	NP_001177847	Coding	chr17:40062814 plus	1244870

【１１５３】

				strand	
THRA	NM_001190919	NP_001177848	Coding	chr17:40062192 plus strand	1244871
THRA	NM_003250	NP_003241	Coding	chr17:40062814 plus strand	1244870
THRA	NM_199334	NP_955366	Coding	chr17:40062814 plus strand	1244870
TIAF1	NM_004740	NP_004731	Coding	chr17:29075609 minus strand	1244872
TIMM22	NM_013337	NP_037469	Coding	chr17:997116 plus strand	1244873
TIMP2	NM_003255	NP_003246	Coding	chr17:78925390 minus strand	1244874
TK1	NM_003258	NP_003249	Coding	chr17:78187204 minus strand	1244875
TLCD1	NM_001160407	NP_001153879	Coding	chr17:28726931 minus strand	1244876
TLCD1	NM_138463	NP_612472	Coding	chr17:28726212 minus strand	1244877
TLCD2	NM_001164407	NP_001157879	Coding	chr17:1710368 minus strand	1244878
TLK2	NM_001284333	NP_001271262	Coding	chr17:62479024 plus strand	1244879
TLK2	NM_001284363	NP_001271292	Coding	chr17:62481112 plus strand	1244880
TLK2	NM_006852	NP_006843	Coding	chr17:62479024 plus strand	1244879
TM4SF5	NM_003963	NP_003954	Coding	chr17:4771891 plus strand	1244881
TMC6	NM_001127198	NP_001120670	Coding	chr17:78128780 minus strand	1244882
TMC6	NM_007267	NP_009198	Coding	chr17:78132407 minus strand	1244883
TMC8	NM_152468	NP_689681	Coding	chr17:78130777 plus strand	1244884
TMEM100	NM_001099640	NP_001093110	Coding	chr17:55732121 minus strand	1244885
TMEM100	NM_018286	NP_060756	Coding	chr17:55722864 minus strand	1244886
TMEM101	NM_032376	NP_115752	Coding	chr17:44014977 minus strand	1244887
TMEM102	NM_178518	NP_848613	Coding	chr17:7435442 plus strand	1244888
TMEM104	NM_017728	NP_060198	Coding	chr17:74776482 plus strand	1244889
TMEM105	NM_178520	NP_848615	Coding	chr17:81330674 minus strand	1244890
TMEM106A	NM_001291586	NP_001278515	Coding	chr17:43211826 plus strand	1244891
TMEM106A	NM_001291587	NP_001278516	Coding	chr17:43211826 plus strand	1244891
TMEM106A	NM_001291588	NP_001278517	Coding	chr17:43211826 plus strand	1244891
TMEM106A	NM_145041	NP_659478	Coding	chr17:43211826 plus strand	1244891
TMEM107	NM_032354	NP_115730	Coding	chr17:8176396 minus	1244892

【1154】

				strand	
TMEM107	NM_183065	NP_898888	Coding	chr17:8176396 minus strand	1244892
TMEM11	NM_003876	NP_003867	Coding	chr17:21214595 minus strand	1244893
TMEM132E	NM_207313	NP_997196	Coding	chr17:34580748 plus strand	1244894
TMEM199	NM_152464	NP_689677	Coding	chr17:28357663 plus strand	1244895
TMEM220	NM_001004313	NP_001004313	Coding	chr17:10730329 minus strand	1244896
TMEM235	NM_001204210	NP_001191139	Coding	chr17:78231309 plus strand	1244897
TMEM235	NM_001204211	NP_001191140	Coding	chr17:78231309 plus strand	1244897
TMEM235	NM_001204212	NP_001191141	Coding	chr17:78231309 plus strand	1244897
TMEM256	NM_152766	NP_689979	Coding	chr17:7404131 minus strand	1244898
TMEM88	NM_203411	NP_981956	Coding	chr17:7855065 plus strand	1244899
TMEM92	NM_001168215	NP_001161687	Coding	chr17:50271405 plus strand	1244900
TMEM92	NM_153229	NP_694961	Coding	chr17:50274426 plus strand	1244901
TMEM95	NM_198154	NP_937797	Coding	chr17:7355177 plus strand	1244902
TMEM97	NM_014573	NP_055388	Coding	chr17:28319094 plus strand	1244903
TMEM98	NM_001033504	NP_001028676	Coding	chr17:32927909 plus strand	1244904
TMEM98	NM_001301746	NP_001288675	Coding	chr17:32927909 plus strand	1244904
TMEM98	NM_015544	NP_056359	Coding	chr17:32927909 plus strand	1244904
TMEM99	NM_001195386	NP_001182315	Coding	chr17:40819184 plus strand	1244905
TMEM99	NM_001195387	NP_001182316	Coding	chr17:40819091 plus strand	1244906
TMEM99	NM_145274	NP_660317	Coding	chr17:40819121 plus strand	1244907
TMIGD1	NM_206832	NP_996663	Coding	chr17:30334047 minus strand	1244908
TMUB2	NM_001076674	NP_001070142	Coding	chr17:44186985 plus strand	1244909
TMUB2	NM_024107	NP_077012	Coding	chr17:44186985 plus strand	1244909
TMUB2	NM_177441	NP_803190	Coding	chr17:44187205 plus strand	1244910
TNFAIP1	NM_021137	NP_066960	Coding	chr17:28335521 plus strand	1244911
TNFRSF13B	NM_012452	NP_036584	Coding	chr17:16972088 minus strand	1244912
TNFSF12	NM_003809	NP_003800	Coding	chr17:7549057 plus strand	1244913
TNFSF12-	NM_172089	NP_742086	Coding	chr17:7549057 plus strand	1244914

【１１５５】

TNFSF13					
TNFSF13	NM_001198622	NP_001185551	Coding	chr17:7558291 plus strand	1244915
TNFSF13	NM_001198623	NP_001185552	Coding	chr17:7558291 plus strand	1244915
TNFSF13	NM_001198624	NP_001185553	Coding	chr17:7558291 plus strand	1244915
TNFSF13	NM_003808	NP_003799	Coding	chr17:7558291 plus strand	1244915
TNFSF13	NM_172087	NP_742084	Coding	chr17:7558291 plus strand	1244915
TNFSF13	NM_172088	NP_742085	Coding	chr17:7558291 plus strand	1244915
TNK1	NM_001251902	NP_001238831	Coding	chr17:7380973 plus strand	1244916
TNK1	NM_003985	NP_003976	Coding	chr17:7380973 plus strand	1244916
TNRC6C	NM_001142640	NP_001136112	Coding	chr17:78004236 plus strand	1244917
TNRC6C	NM_018996	NP_061869	Coding	chr17:78004236 plus strand	1244917
TNS4	NM_032865	NP_116254	Coding	chr17:40501602 minus strand	1244918
TOB1	NM_001243877	NP_001230806	Coding	chr17:50867978 minus strand	1244919
TOB1	NM_001243885	NP_001230814	Coding	chr17:50866354 minus strand	1244920
TOB1	NM_005749	NP_005740	Coding	chr17:50866354 minus strand	1244920
TOM1L1	NM_005486	NP_005477	Coding	chr17:54900690 plus strand	1244921
TOM1L2	NM_001033551	NP_001028723	Coding	chr17:17972470 minus strand	1244922
TOM1L2	NM_001082968	NP_001076437	Coding	chr17:17972470 minus strand	1244922
TOM1L2	NM_001288786	NP_001275715	Coding	chr17:17972470 minus strand	1244922
TOM1L2	NM_001288787	NP_001275716	Coding	chr17:17972470 minus strand	1244922
TOM1L2	NM_001288788	NP_001275717	Coding	chr17:17972470 minus strand	1244922
TOM1L2	NM_001288789	NP_001275718	Coding	chr17:17972470 minus strand	1244922
TOP2A	NM_001067	NP_001058	Coding	chr17:40417950 minus strand	1244923
TOP3A	NM_004618	NP_004609	Coding	chr17:18315007 minus strand	1244924
TP53	NM_000546	NP_000537	Coding	chr17:7687550 minus strand	1244925
TP53	NM_001126112	NP_001119584	Coding	chr17:7687550 minus strand	1244925
TP53	NM_001126113	NP_001119585	Coding	chr17:7687550 minus strand	1244925
TP53	NM_001126114	NP_001119586	Coding	chr17:7687550 minus strand	1244925
TP53	NM_001126115	NP_001119587	Coding	chr17:7675493 minus strand	1244926
TP53	NM_001126116	NP_001119588	Coding	chr17:7675493 minus strand	1244926

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TP53	NM_001126117	NP_001119589	Coding	chr17:7675493 minus strand	1244926
TP53	NM_001126118	NP_001119590	Coding	chr17:7687550 minus strand	1244925
TP53	NM_001276695	NP_001263624	Coding	chr17:7687550 minus strand	1244925
TP53	NM_001276696	NP_001263625	Coding	chr17:7687550 minus strand	1244925
TP53	NM_001276697	NP_001263626	Coding	chr17:7675493 minus strand	1244926
TP53	NM_001276698	NP_001263627	Coding	chr17:7675493 minus strand	1244926
TP53	NM_001276699	NP_001263628	Coding	chr17:7675493 minus strand	1244926
TP53	NM_001276760	NP_001263689	Coding	chr17:7687550 minus strand	1244925
TP53	NM_001276761	NP_001263690	Coding	chr17:7687550 minus strand	1244925
TP53I13	NM_138349	NP_612358	Coding	chr17:29568720 plus strand	1244927
TRAF4	NM_004295	NP_004286	Coding	chr17:28744004 plus strand	1244928
TRAPPC1	NM_001166621	NP_001160093	Coding	chr17:7931999 minus strand	1244929
TRAPPC1	NM_021210	NP_067033	Coding	chr17:7931949 minus strand	1244930
TRIM16	NM_006470	NP_006461	Coding	chr17:15682879 minus strand	1244931
TRIM16L	NM_001037330	NP_001032407	Coding	chr17:18722088 plus strand	1244932
TRIM25	NM_005082	NP_005073	Coding	chr17:56914048 minus strand	1244933
TRIM37	NM_001005207	NP_001005207	Coding	chr17:59106905 minus strand	1244934
TRIM37	NM_015294	NP_056109	Coding	chr17:59106905 minus strand	1244934
TRIM47	NM_033452	NP_258411	Coding	chr17:75878575 minus strand	1244935
TRIM65	NM_001256124	NP_001243053	Coding	chr17:75897003 minus strand	1244936
TRIM65	NM_173547	NP_775818	Coding	chr17:75897003 minus strand	1244936
TRPV1	NM_018727	NP_061197	Coding	chr17:3597042 minus strand	1244937
TRPV1	NM_080704	NP_542435	Coding	chr17:3609411 minus strand	1244938
TRPV1	NM_080705	NP_542436	Coding	chr17:3595831 minus strand	1244939
TRPV1	NM_080706	NP_542437	Coding	chr17:3592877 minus strand	1244940
TRPV2	NM_016113	NP_057197	Coding	chr17:16415541 plus strand	1244941
TRPV3	NM_001258205	NP_001245134	Coding	chr17:3557995 minus strand	1244942

【１１５７】

TRPV3	NM_145068	NP_659505	Coding	chr17:3557995 minus strand	1244942
TSEN54	NM_207346	NP_997229	Coding	chr17:75516527 plus strand	1244943
TSPAN10	NM_001290212	NP_001277141	Coding	chr17:81637170 plus strand	1244944
TSPAN10	NM_031945	NP_114151	Coding	chr17:81642304 plus strand	1244945
TSR1	NM_018128	NP_060598	Coding	chr17:2337384 minus strand	1244946
TTC19	NM_001271420	NP_001258349	Coding	chr17:15999379 plus strand	1244947
TTC19	NM_017775	NP_060245	Coding	chr17:15999379 plus strand	1244947
TTC25	NM_031421	NP_113609	Coding	chr17:41930622 plus strand	1244948
TTLL6	NM_001130918	NP_001124390	Coding	chr17:48817107 minus strand	1244949
TTLL6	NM_173623	NP_775894	Coding	chr17:48794324 minus strand	1244950
TTYH2	NM_032646	NP_116035	Coding	chr17:74213556 plus strand	1244951
TTYH2	NM_052869	NP_443101	Coding	chr17:74248365 plus strand	1244952
TUBD1	NM_001193609	NP_001180538	Coding	chr17:59892945 minus strand	1244953
TUBD1	NM_001193610	NP_001180539	Coding	chr17:59892945 minus strand	1244953
TUBD1	NM_001193611	NP_001180540	Coding	chr17:59892945 minus strand	1244953
TUBD1	NM_001193612	NP_001180541	Coding	chr17:59892945 minus strand	1244953
TUBD1	NM_001193613	NP_001180542	Coding	chr17:59892945 minus strand	1244953
TUBD1	NM_016261	NP_057345	Coding	chr17:59892945 minus strand	1244953
TUBG1	NM_001070	NP_001061	Coding	chr17:42609339 plus strand	1244954
TUBG2	NM_016437	NP_057521	Coding	chr17:42659247 plus strand	1244955
TUSC5	NM_172367	NP_758955	Coding	chr17:1279662 plus strand	1244956
TVP23B	NM_016078	NP_057162	Coding	chr17:18781268 plus strand	1244957
TVP23C	NM_001135036	NP_001128508	Coding	chr17:15563631 minus strand	1244958
TVP23C	NM_145301	NP_660344	Coding	chr17:15563631 minus strand	1244958
TVP23C-CDRT4	NM_001204478	NP_001191407	Coding	chr17:15563631 minus strand	1244959
TXNDC17	NM_032731	NP_116120	Coding	chr17:6640901 plus strand	1244960
UBALD2	NM_182565	NP_872371	Coding	chr17:76265204 plus strand	1244961
UBB	NM_001281716	NP_001268645	Coding	chr17:16380792 plus strand	1244962

【１１５８】

UBB	NM_001281717	NP_001268646	Coding	chr17:16381464 plus strand	1244963
UBB	NM_001281718	NP_001268647	Coding	chr17:16381340 plus strand	1244964
UBB	NM_001281719	NP_001268648	Coding	chr17:16381289 plus strand	1244965
UBB	NM_001281720	NP_001268649	Coding	chr17:16381096 plus strand	1244966
UBB	NM_018955	NP_061828	Coding	chr17:16380796 plus strand	1244967
UBE2G1	NM_003342	NP_003333	Coding	chr17:4366674 minus strand	1244968
UBE2O	NM_022066	NP_071349	Coding	chr17:76453206 minus strand	1244969
UBE2Z	NM_023079	NP_075567	Coding	chr17:48908368 plus strand	1244970
UBTF	NM_001076683	NP_001070151	Coding	chr17:44220882 minus strand	1244971
UBTF	NM_001076684	NP_001070152	Coding	chr17:44219673 minus strand	1244972
UBTF	NM_014233	NP_055048	Coding	chr17:44219673 minus strand	1244972
ULK2	NM_001142610	NP_001136082	Coding	chr17:19867926 minus strand	1244973
ULK2	NM_014683	NP_055498	Coding	chr17:19867926 minus strand	1244973
UNC119	NM_005148	NP_005139	Coding	chr17:28552628 minus strand	1244974
UNC119	NM_054035	NP_473376	Coding	chr17:28552628 minus strand	1244974
UNC13D	NM_199242	NP_954712	Coding	chr17:75844717 minus strand	1244975
UNC45B	NM_001033576	NP_001028748	Coding	chr17:35147816 plus strand	1244976
UNC45B	NM_001267052	NP_001253981	Coding	chr17:35147816 plus strand	1244976
UNC45B	NM_173167	NP_775259	Coding	chr17:35147816 plus strand	1244976
UNK	NM_001080419	NP_001073888	Coding	chr17:75784838 plus strand	1244977
USH1G	NM_001282489	NP_001269418	Coding	chr17:74923263 minus strand	1244978
USH1G	NM_173477	NP_775748	Coding	chr17:74923263 minus strand	1244978
USP22	NM_015276	NP_056091	Coding	chr17:21043039 minus strand	1244979
USP32	NM_032582	NP_115971	Coding	chr17:60392225 minus strand	1244980
USP36	NM_025090	NP_079366	Coding	chr17:78840887 minus strand	1244981
USP43	NM_001267576	NP_001254505	Coding	chr17:9645536 plus strand	1244982
USP43	NM_153210	NP_694942	Coding	chr17:9645536 plus strand	1244982
USP6	NM_004505	NP_004496	Coding	chr17:5128391 plus strand	1244983

【１１５９】

UTP18	NM_016001	NP_057085	Coding	chr17:51260535 plus strand	1244984
UTP6	NM_018428	NP_060898	Coding	chr17:31901710 minus strand	1244985
UTS2R	NM_018949	NP_061822	Coding	chr17:82374276 plus strand	1244986
VAMP2	NM_014232	NP_055047	Coding	chr17:8162975 minus strand	1244987
VAT1	NM_006373	NP_006364	Coding	chr17:43022442 minus strand	1244988
VEZF1	NM_007146	NP_009077	Coding	chr17:57988254 minus strand	1244989
VMO1	NM_001144939	NP_001138411	Coding	chr17:4786434 minus strand	1244990
VMO1	NM_001144940	NP_001138412	Coding	chr17:4786434 minus strand	1244990
VMO1	NM_001144941	NP_001138413	Coding	chr17:4786434 minus strand	1244990
VMO1	NM_182566	NP_872372	Coding	chr17:4786434 minus strand	1244990
VMP1	NM_030938	NP_112200	Coding	chr17:59707501 plus strand	1244991
VPS25	NM_032353	NP_115729	Coding	chr17:42773435 plus strand	1244992
VPS53	NM_001128159	NP_001121631	Coding	chr17:714856 minus strand	1244993
VPS53	NM_018289	NP_060759	Coding	chr17:714856 minus strand	1244993
VTN	NM_000638	NP_000629	Coding	chr17:28370352 minus strand	1244994
WBP2	NM_012478	NP_036610	Coding	chr17:75855420 minus strand	1244995
WDR45B	NM_019613	NP_062559	Coding	chr17:82648535 minus strand	1244996
WDR81	NM_001163673	NP_001157145	Coding	chr17:1716522 plus strand	1244997
WDR81	NM_001163809	NP_001157281	Coding	chr17:1724830 plus strand	1244998
WDR81	NM_001163811	NP_001157283	Coding	chr17:1724539 plus strand	1244999
WDR81	NM_152348	NP_689561	Coding	chr17:1716522 plus strand	1244997
WFIKKN2	NM_175575	NP_783165	Coding	chr17:50835243 plus strand	1245000
WIPF2	NM_133264	NP_573571	Coding	chr17:40219321 plus strand	1245001
WIPI1	NM_017983	NP_060453	Coding	chr17:68457512 minus strand	1245002
WNK4	NM_032387	NP_115763	Coding	chr17:42780630 plus strand	1245003
WNT3	NM_030753	NP_110380	Coding	chr17:46818760 minus strand	1245004
WNT9B	NM_003396	NP_003387	Coding	chr17:46851601 plus strand	1245005
WRAP53	NM_001143990	NP_001137462	Coding	chr17:7686070 plus strand	1245006
WRAP53	NM_001143991	NP_001137463	Coding	chr17:7687439 plus strand	1245007
WRAP53	NM_001143992	NP_001137464	Coding	chr17:7688348 plus strand	1245008

【１１６０】

WRAP53	NM_018081	NP_060551	Coding	chr17:7688348 plus strand	1245008
WSB1	NM_015626	NP_056441	Coding	chr17:27294079 plus strand	1245009
WSB1	NM_134265	NP_599027	Coding	chr17:27294079 plus strand	1245009
WSCD1	NM_015253	NP_056068	Coding	chr17:6070613 plus strand	1245010
XAF1	NM_017523	NP_059993	Coding	chr17:6755836 plus strand	1245011
XAF1	NM_199139	NP_954590	Coding	chr17:6755836 plus strand	1245011
XYLT2	NM_022167	NP_071450	Coding	chr17:50346031 plus strand	1245012
YBX2	NM_015982	NP_057066	Coding	chr17:7294557 minus strand	1245013
YPEL2	NM_001005404	NP_001005404	Coding	chr17:59331691 plus strand	1245014
YWHAE	NM_006761	NP_006752	Coding	chr17:1400262 minus strand	1245015
ZACN	NM_180990	NP_851321	Coding	chr17:76079181 plus strand	1245016
ZBTB4	NM_001128833	NP_001122305	Coding	chr17:7479625 minus strand	1245017
ZBTB4	NM_020899	NP_065950	Coding	chr17:7484249 minus strand	1245018
ZFP3	NM_153018	NP_694563	Coding	chr17:5078458 plus strand	1245019
ZMYND15	NM_001136046	NP_001129518	Coding	chr17:4740014 plus strand	1245020
ZMYND15	NM_001267822	NP_001254751	Coding	chr17:4740014 plus strand	1245020
ZMYND15	NM_032265	NP_115641	Coding	chr17:4740014 plus strand	1245020
ZNF18	NM_144680	NP_653281	Coding	chr17:11997372 minus strand	1245021
ZNF207	NM_001032293	NP_001027464	Coding	chr17:32350137 plus strand	1245022
ZNF207	NM_001098507	NP_001091977	Coding	chr17:32350137 plus strand	1245022
ZNF207	NM_003457	NP_003448	Coding	chr17:32350137 plus strand	1245022
ZNF232	NM_014519	NP_055334	Coding	chr17:5123102 minus strand	1245023
ZNF286A	NM_001130842	NP_001124314	Coding	chr17:15699576 plus strand	1245024
ZNF286A	NM_001288642	NP_001275571	Coding	chr17:15699576 plus strand	1245024
ZNF286A	NM_001288643	NP_001275572	Coding	chr17:15699576 plus strand	1245024
ZNF286A	NM_001288644	NP_001275573	Coding	chr17:15699576 plus strand	1245024
ZNF286A	NM_001288645	NP_001275574	Coding	chr17:15699576 plus strand	1245024
ZNF286A	NM_001288646	NP_001275575	Coding	chr17:15699576 plus strand	1245024
ZNF286A	NM_001288647	NP_001275576	Coding	chr17:15699576 plus strand	1245024
ZNF286A	NM_001288648	NP_001275577	Coding	chr17:15699576 plus strand	1245024

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ZNF286A	NM_001288649	NP_001275578	Coding	chr17:15699576 plus strand	1245024
ZNF286A	NM_020652	NP_065703	Coding	chr17:15699576 plus strand	1245024
ZNF286B	NM_001145045	NP_001138517	Coding	chr17:18682259 minus strand	1245025
ZNF287	NM_020653	NP_065704	Coding	chr17:16569206 minus strand	1245026
ZNF385C	NM_001242704	NP_001229633	Coding	chr17:42038026 minus strand	1245027
ZNF594	NM_032530	NP_115919	Coding	chr17:5191883 minus strand	1245028
ZNF624	NM_020787	NP_065838	Coding	chr17:16653853 minus strand	1245029
ZNF652	NM_001145365	NP_001138837	Coding	chr17:49362114 minus strand	1245030
ZNF652	NM_014897	NP_055712	Coding	chr17:49362473 minus strand	1245031
ZNF750	NM_024702	NP_078978	Coding	chr17:82840055 minus strand	1245032
ZNF830	NM_052857	NP_443089	Coding	chr17:34961529 plus strand	1245033
ZNHIT3	NM_001281432	NP_001268361	Coding	chr17:36486626 plus strand	1245034
ZNHIT3	NM_001281433	NP_001268362	Coding	chr17:36486626 plus strand	1245034
ZNHIT3	NM_001281434	NP_001268363	Coding	chr17:36486626 plus strand	1245034
ZNHIT3	NM_004773	NP_004764	Coding	chr17:36486626 plus strand	1245034
ZPBP2	NM_198844	NP_942141	Coding	chr17:39868201 plus strand	1245035
ZPBP2	NM_199321	NP_955353	Coding	chr17:39868201 plus strand	1245035
ZSWIM7	NM_001042697	NP_001036162	Coding	chr17:15999692 minus strand	1245036
ZSWIM7	NM_001042698	NP_001036163	Coding	chr17:15999692 minus strand	1245036
ZZEF1	NM_015113	NP_055928	Coding	chr17:4142959 minus strand	1245037
ABHD3	NM_138340	NP_612213	Coding	chr18:21704805 minus strand	1245038
ACAA2	NM_006111	NP_006102	Coding	chr18:49813881 minus strand	1245039
ADCYAP1	NM_001099733	NP_001093203	Coding	chr18:904942 plus strand	1245040
ADCYAP1	NM_001117	NP_001108	Coding	chr18:905195 plus strand	1245041
ADNP2	NM_014913	NP_055728	Coding	chr18:80109030 plus strand	1245042
AFG3L2	NM_006796	NP_006787	Coding	chr18:12377276 minus strand	1245043
ALPK2	NM_052947	NP_443179	Coding	chr18:58628957 minus strand	1245044
ANKRD12	NM_001083625	NP_001077094	Coding	chr18:9136752 plus strand	1245045

【１１６２】

ANKRD12	NM_001204056	NP_001190985	Coding	chr18:9137562 plus strand	1245046
ANKRD12	NM_015208	NP_056023	Coding	chr18:9136752 plus strand	1245045
ANKRD29	NM_173505	NP_775776	Coding	chr18:23662885 minus strand	1245047
ANKRD30B	NM_001145029	NP_001138501	Coding	chr18:14748239 plus strand	1245048
ANKRD62	NM_001277333	NP_001264262	Coding	chr18:12093848 plus strand	1245049
APCDD1	NM_153000	NP_694545	Coding	chr18:10454627 plus strand	1245050
AQP4	NM_001650	NP_001641	Coding	chr18:26865752 minus strand	1245051
AQP4	NM_004028	NP_004019	Coding	chr18:26862611 minus strand	1245052
ARHGAP28	NM_001010000	NP_001010000	Coding	chr18:6834432 plus strand	1245053
ASXL3	NM_030632	NP_085135	Coding	chr18:33578576 plus strand	1245054
ATP5A1	NM_001001935	NP_001001935	Coding	chr18:46098353 minus strand	1245055
ATP5A1	NM_001001937	NP_001001937	Coding	chr18:46104233 minus strand	1245056
ATP5A1	NM_001257334	NP_001244263	Coding	chr18:46098353 minus strand	1245055
ATP5A1	NM_001257335	NP_001244264	Coding	chr18:46098353 minus strand	1245055
ATP5A1	NM_004046	NP_004037	Coding	chr18:46098353 minus strand	1245055
ATP8B1	NM_005603	NP_005594	Coding	chr18:57803095 minus strand	1245057
ATP9B	NM_198531	NP_940933	Coding	chr18:79069396 plus strand	1245058
B4GALT6	NM_004775	NP_004766	Coding	chr18:31684723 minus strand	1245059
BCL2	NM_000633	NP_000624	Coding	chr18:63319380 minus strand	1245060
BCL2	NM_000657	NP_000648	Coding	chr18:63319380 minus strand	1245060
BOD1L2	NM_001257964	NP_001244893	Coding	chr18:57147061 plus strand	1245061
C18orf21	NM_001201474	NP_001188403	Coding	chr18:35972624 plus strand	1245062
C18orf21	NM_001201475	NP_001188404	Coding	chr18:35972624 plus strand	1245062
C18orf21	NM_001201476	NP_001188405	Coding	chr18:35972624 plus strand	1245062
C18orf21	NM_031446	NP_113634	Coding	chr18:35972624 plus strand	1245062
C18orf25	NM_001008239	NP_001008240	Coding	chr18:46174021 plus strand	1245063
C18orf25	NM_145055	NP_659492	Coding	chr18:46174021 plus strand	1245063
C18orf32	NM_001035005	NP_001030177	Coding	chr18:49487274 minus strand	1245064

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C18orf32	NM_001199346	NP_001186275	Coding	chr18:49487274 minus strand	1245064
C18orf42	NM_001145194	NP_001138666	Coding	chr18:5197256 minus strand	1245065
C18orf54	NM_001288980	NP_001275909	Coding	chr18:54357916 plus strand	1245066
C18orf54	NM_001288981	NP_001275910	Coding	chr18:54357916 plus strand	1245066
C18orf54	NM_001288982	NP_001275911	Coding	chr18:54360527 plus strand	1245067
C18orf54	NM_173529	NP_775800	Coding	chr18:54358773 plus strand	1245068
C18orf63	NM_001174123	NP_001167594	Coding	chr18:74315874 plus strand	1245069
C18orf65	NM_001272093	NP_001259022	Coding	chr18:76495520 plus strand	1245070
C18orf8	NM_001276342	NP_001263271	Coding	chr18:23503469 plus strand	1245071
C18orf8	NM_013326	NP_037458	Coding	chr18:23503469 plus strand	1245071
CABLES1	NM_001100619	NP_001094089	Coding	chr18:23135762 plus strand	1245072
CABLES1	NM_001256438	NP_001243367	Coding	chr18:23134563 plus strand	1245073
CABLES1	NM_138375	NP_612384	Coding	chr18:23155824 plus strand	1245074
CABYR	NM_012189	NP_036321	Coding	chr18:24138955 plus strand	1245075
CABYR	NM_138643	NP_619584	Coding	chr18:24138955 plus strand	1245075
CABYR	NM_138644	NP_619585	Coding	chr18:24139483 plus strand	1245076
CABYR	NM_153768	NP_722452	Coding	chr18:24138955 plus strand	1245075
CABYR	NM_153769	NP_722453	Coding	chr18:24138955 plus strand	1245075
CABYR	NM_153770	NP_722454	Coding	chr18:24138955 plus strand	1245075
CBLN2	NM_182511	NP_872317	Coding	chr18:72544488 minus strand	1245077
CCBE1	NM_133459	NP_597716	Coding	chr18:59697412 minus strand	1245078
CCDC102B	NM_001093729	NP_001087198	Coding	chr18:68715253 plus strand	1245079
CCDC102B	NM_024781	NP_079057	Coding	chr18:68798079 plus strand	1245080
CCDC178	NM_001105528	NP_001098998	Coding	chr18:33440081 minus strand	1245081
CCDC178	NM_198995	NP_945346	Coding	chr18:33440721 minus strand	1245082
CCDC68	NM_001143829	NP_001137301	Coding	chr18:54958048 minus strand	1245083
CCDC68	NM_025214	NP_079490	Coding	chr18:54959508 minus strand	1245084

【１１６４】

CD226	NM_006566	NP_006557	Coding	chr18:69956996 minus strand	1245085
CDH19	NM_001271028	NP_001257957	Coding	chr18:66604138 minus strand	1245086
CDH19	NM_021153	NP_066976	Coding	chr18:66604138 minus strand	1245086
CDH2	NM_001792	NP_001783	Coding	chr18:28177481 minus strand	1245087
CDH20	NM_031891	NP_114097	Coding	chr18:61490541 plus strand	1245088
CDH7	NM_004361	NP_004352	Coding	chr18:65750920 plus strand	1245089
CDH7	NM_033646	NP_387450	Coding	chr18:65750251 plus strand	1245090
CELF4	NM_001025087	NP_001020258	Coding	chr18:37566037 minus strand	1245091
CELF4	NM_001025088	NP_001020259	Coding	chr18:37566037 minus strand	1245091
CELF4	NM_001025089	NP_001020260	Coding	chr18:37566037 minus strand	1245091
CELF4	NM_020180	NP_064565	Coding	chr18:37566037 minus strand	1245091
CEP192	NM_032142	NP_115518	Coding	chr18:12991361 plus strand	1245092
CEP76	NM_001271989	NP_001258918	Coding	chr18:12702777 minus strand	1245093
CEP76	NM_024899	NP_079175	Coding	chr18:12702777 minus strand	1245093
CETN1	NM_004066	NP_004057	Coding	chr18:580368 plus strand	1245094
CFAP53	NM_145020	NP_659457	Coding	chr18:50266495 minus strand	1245095
CHMP1B	NM_020412	NP_065145	Coding	chr18:11851389 plus strand	1245096
CHST9	NM_001256316	NP_001243245	Coding	chr18:27185338 minus strand	1245097
CHST9	NM_031422	NP_113610	Coding	chr18:27185338 minus strand	1245097
CIDEA	NM_001279	NP_001270	Coding	chr18:12254318 plus strand	1245098
CLUL1	NM_001289036	NP_001275965	Coding	chr18:596997 plus strand	1245099
CLUL1	NM_014410	NP_055225	Coding	chr18:596997 plus strand	1245099
CLUL1	NM_199167	NP_954636	Coding	chr18:616699 plus strand	1245100
CNDP1	NM_032649	NP_116038	Coding	chr18:74534456 plus strand	1245101
CNDP2	NM_001168499	NP_001161971	Coding	chr18:74499587 plus strand	1245102
CNDP2	NM_018235	NP_060705	Coding	chr18:74496264 plus strand	1245103
COLEC12	NM_130386	NP_569057	Coding	chr18:500729 minus strand	1245104
CPLX4	NM_181654	NP_857637	Coding	chr18:59318649 minus strand	1245105
CTAGE1	NM_172241	NP_758441	Coding	chr18:22417915 minus strand	1245106

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CTDP1	NM_001202504	NP_001189433	Coding	chr18:79681429 plus strand	1245107
CTDP1	NM_004715	NP_004706	Coding	chr18:79679800 plus strand	1245108
CTDP1	NM_048368	NP_430255	Coding	chr18:79679800 plus strand	1245108
CTIF	NM_001142397	NP_001135869	Coding	chr18:48539055 plus strand	1245109
CTIF	NM_014772	NP_055587	Coding	chr18:48539055 plus strand	1245109
CXXC1	NM_001101654	NP_001095124	Coding	chr18:50288322 minus strand	1245110
CXXC1	NM_014593	NP_055408	Coding	chr18:50288322 minus strand	1245110
CYB5A	NM_001190807	NP_001177736	Coding	chr18:74292016 minus strand	1245111
CYB5A	NM_001914	NP_001905	Coding	chr18:74292016 minus strand	1245111
CYB5A	NM_148923	NP_683725	Coding	chr18:74292016 minus strand	1245111
DCC	NM_005215	NP_005206	Coding	chr18:52340171 plus strand	1245112
DLGAP1	NM_001003809	NP_001003809	Coding	chr18:3845358 minus strand	1245113
DLGAP1	NM_001242761	NP_001229690	Coding	chr18:4455266 minus strand	1245114
DLGAP1	NM_001242762	NP_001229691	Coding	chr18:3874767 minus strand	1245115
DLGAP1	NM_001242763	NP_001229692	Coding	chr18:3874767 minus strand	1245115
DLGAP1	NM_001242764	NP_001229693	Coding	chr18:3874253 minus strand	1245116
DLGAP1	NM_001242765	NP_001229694	Coding	chr18:3845358 minus strand	1245113
DLGAP1	NM_001242766	NP_001229695	Coding	chr18:3845358 minus strand	1245113
DLGAP1	NM_004746	NP_004737	Coding	chr18:4455266 minus strand	1245114
DOK6	NM_152721	NP_689934	Coding	chr18:69401047 plus strand	1245117
DSC1	NM_004948	NP_004939	Coding	chr18:31162856 minus strand	1245118
DSC1	NM_024421	NP_077739	Coding	chr18:31162856 minus strand	1245118
DSC2	NM_004949	NP_004940	Coding	chr18:31102425 minus strand	1245119
DSC2	NM_024422	NP_077740	Coding	chr18:31102425 minus strand	1245119
DSC3	NM_001941	NP_001932	Coding	chr18:31042815 minus strand	1245120
DSC3	NM_024423	NP_077741	Coding	chr18:31042815 minus strand	1245120
DSEL	NM_032160	NP_115536	Coding	chr18:67516730 minus strand	1245121

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DSG1	NM_001942	NP_001933	Coding	chr18:31318088 plus strand	1245122
DSG2	NM_001943	NP_001934	Coding	chr18:31498063 plus strand	1245123
DSG3	NM_001944	NP_001935	Coding	chr18:31447768 plus strand	1245124
DSG4	NM_001134453	NP_001127925	Coding	chr18:31376776 plus strand	1245125
DSG4	NM_177986	NP_817123	Coding	chr18:31376776 plus strand	1245125
DTNA	NM_001128175	NP_001121647	Coding	chr18:34593317 plus strand	1245126
DTNA	NM_001198938	NP_001185867	Coding	chr18:34593317 plus strand	1245126
DTNA	NM_001198939	NP_001185868	Coding	chr18:34593317 plus strand	1245126
DTNA	NM_001198940	NP_001185869	Coding	chr18:34593317 plus strand	1245126
DTNA	NM_001198941	NP_001185870	Coding	chr18:34710231 plus strand	1245127
DTNA	NM_001198942	NP_001185871	Coding	chr18:34818282 plus strand	1245128
DTNA	NM_001198943	NP_001185872	Coding	chr18:34817961 plus strand	1245129
DTNA	NM_001198944	NP_001185873	Coding	chr18:34818282 plus strand	1245128
DTNA	NM_001198945	NP_001185874	Coding	chr18:34493289 plus strand	1245130
DTNA	NM_001390	NP_001381	Coding	chr18:34755975 plus strand	1245131
DTNA	NM_001391	NP_001382	Coding	chr18:34755975 plus strand	1245131
DTNA	NM_001392	NP_001383	Coding	chr18:34493289 plus strand	1245130
DTNA	NM_032975	NP_116757	Coding	chr18:34493289 plus strand	1245130
DTNA	NM_032978	NP_116760	Coding	chr18:34710231 plus strand	1245127
DTNA	NM_032979	NP_116761	Coding	chr18:34493289 plus strand	1245130
DTNA	NM_032980	NP_116762	Coding	chr18:34818337 plus strand	1245132
DTNA	NM_032981	NP_116763	Coding	chr18:34818337 plus strand	1245132
DYM	NM_017653	NP_060123	Coding	chr18:49460709 minus strand	1245133
DYNAP	NM_173629	NP_775900	Coding	chr18:54591158 plus strand	1245134
ELAC1	NM_018696	NP_061166	Coding	chr18:50968016 plus strand	1245135
ELP2	NM_001242875	NP_001229804	Coding	chr18:36129873 plus strand	1245136
ELP2	NM_001242876	NP_001229805	Coding	chr18:36129873 plus strand	1245136

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ELP2	NM_001242877	NP_001229806	Coding	chr18:36129873 plus strand	1245136
ELP2	NM_001242878	NP_001229807	Coding	chr18:36129873 plus strand	1245136
ELP2	NM_001242879	NP_001229808	Coding	chr18:36129873 plus strand	1245136
ELP2	NM_018255	NP_060725	Coding	chr18:36129873 plus strand	1245136
EMILIN2	NM_032048	NP_114437	Coding	chr18:2847029 plus strand	1245137
ENOSF1	NM_001126123	NP_001119595	Coding	chr18:712662 minus strand	1245138
ENOSF1	NM_017512	NP_059982	Coding	chr18:712662 minus strand	1245138
ENOSF1	NM_202758	NP_974487	Coding	chr18:712517 minus strand	1245139
EPB41L3	NM_001281533	NP_001268462	Coding	chr18:5540556 minus strand	1245140
EPB41L3	NM_001281534	NP_001268463	Coding	chr18:5544310 minus strand	1245141
EPB41L3	NM_001281535	NP_001268464	Coding	chr18:5628991 minus strand	1245142
EPB41L3	NM_012307	NP_036439	Coding	chr18:5544310 minus strand	1245141
EPG5	NM_020964	NP_066015	Coding	chr18:45967339 minus strand	1245143
ESCO1	NM_052911	NP_443143	Coding	chr18:21600732 minus strand	1245144
FAM210A	NM_001098801	NP_001092271	Coding	chr18:13726592 minus strand	1245145
FAM210A	NM_152352	NP_689565	Coding	chr18:13726592 minus strand	1245145
FAM69C	NM_001044369	NP_001037834	Coding	chr18:74457268 minus strand	1245146
FBXO15	NM_001142958	NP_001136430	Coding	chr18:74147865 minus strand	1245147
FBXO15	NM_152676	NP_689889	Coding	chr18:74147764 minus strand	1245148
FECH	NM_000140	NP_000131	Coding	chr18:57586737 minus strand	1245149
FECH	NM_001012515	NP_001012533	Coding	chr18:57586737 minus strand	1245149
FHOD3	NM_001281739	NP_001268668	Coding	chr18:36297695 plus strand	1245150
FHOD3	NM_001281740	NP_001268669	Coding	chr18:36297695 plus strand	1245150
FHOD3	NM_025135	NP_079411	Coding	chr18:36297695 plus strand	1245150
GALNT1	NM_020474	NP_065207	Coding	chr18:35654568 plus strand	1245151
GALR1	NM_001480	NP_001471	Coding	chr18:77250051 plus strand	1245152
GAREM	NM_001242409	NP_001229338	Coding	chr18:32470484 minus strand	1245153
GAREM	NM_022751	NP_073588	Coding	chr18:32470484 minus strand	1245153
GATA6	NM_005257	NP_005248	Coding	chr18:22169436 plus	1245154

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				strand	
GNAL	NM_001142339	NP_001135811	Coding	chr18:11751471 plus strand	1245155
GNAL	NM_001261443	NP_001248372	Coding	chr18:11751471 plus strand	1245155
GNAL	NM_001261444	NP_001248373	Coding	chr18:11857437 plus strand	1245156
GNAL	NM_182978	NP_892023	Coding	chr18:11689014 plus strand	1245157
GREB1L	NM_001142966	NP_001136438	Coding	chr18:21242241 plus strand	1245158
GRP	NM_001012512	NP_001012530	Coding	chr18:59220167 plus strand	1245159
GRP	NM_001012513	NP_001012531	Coding	chr18:59220167 plus strand	1245159
GRP	NM_002091	NP_002082	Coding	chr18:59220167 plus strand	1245159
GTSCR1	NM_001278515	NP_001265444	Coding	chr18:70650857 minus strand	1245160
HAUS1	NM_138443	NP_612452	Coding	chr18:46104331 plus strand	1245161
HDHD2	NM_032124	NP_115500	Coding	chr18:47150500 minus strand	1245162
HMSD	NM_001123366	NP_001116838	Coding	chr18:63949353 plus strand	1245163
HRH4	NM_001143828	NP_001137300	Coding	chr18:24460628 plus strand	1245164
HRH4	NM_001160166	NP_001153638	Coding	chr18:24460628 plus strand	1245164
HRH4	NM_021624	NP_067637	Coding	chr18:24460628 plus strand	1245164
HSBP1L1	NM_001136180	NP_001129652	Coding	chr18:79964581 plus strand	1245165
IER3IP1	NM_016097	NP_057181	Coding	chr18:47176374 minus strand	1245166
IMPA2	NM_014214	NP_055029	Coding	chr18:11981427 plus strand	1245167
IMPACT	NM_018439	NP_060909	Coding	chr18:24426644 plus strand	1245168
INO80C	NM_001098817	NP_001092287	Coding	chr18:35497991 minus strand	1245169
INO80C	NM_194281	NP_919257	Coding	chr18:35497991 minus strand	1245169
KATNAL2	NM_031303	NP_112593	Coding	chr18:46946823 plus strand	1245170
KCNG2	NM_012283	NP_036415	Coding	chr18:79863667 plus strand	1245171
KCTD1	NM_001136205	NP_001129677	Coding	chr18:26549435 minus strand	1245172
KCTD1	NM_001142730	NP_001136202	Coding	chr18:26548536 minus strand	1245173
KCTD1	NM_001258221	NP_001245150	Coding	chr18:26549814 minus strand	1245174
KCTD1	NM_001258222	NP_001245151	Coding	chr18:26657401 minus	1245175

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				strand	
KCTD1	NM_198991	NP_945342	Coding	chr18:26640344 minus strand	1245176
KDSR	NM_002035	NP_002026	Coding	chr18:63367273 minus strand	1245177
KIAA1328	NM_020776	NP_065827	Coding	chr18:36829116 plus strand	1245178
KIAA1468	NM_020854	NP_065905	Coding	chr18:62187290 plus strand	1245179
KLHL14	NM_020805	NP_065856	Coding	chr18:32773011 minus strand	1245180
L3MBTL4	NM_173464	NP_775735	Coding	chr18:6414911 minus strand	1245181
LAMA1	NM_005559	NP_005550	Coding	chr18:7117814 minus strand	1245182
LAMA3	NM_000227	NP_000218	Coding	chr18:23873019 plus strand	1245183
LAMA3	NM_001127717	NP_001121189	Coding	chr18:23689442 plus strand	1245184
LAMA3	NM_001127718	NP_001121190	Coding	chr18:23873019 plus strand	1245183
LAMA3	NM_001302996	NP_001289925	Coding	chr18:23689442 plus strand	1245184
LAMA3	NM_198129	NP_937762	Coding	chr18:23689442 plus strand	1245184
LDLRAD4	NM_001003674	NP_001003674	Coding	chr18:13611463 plus strand	1245185
LDLRAD4	NM_001003675	NP_001003675	Coding	chr18:13611463 plus strand	1245185
LDLRAD4	NM_001276249	NP_001263178	Coding	chr18:13611763 plus strand	1245186
LDLRAD4	NM_001276251	NP_001263180	Coding	chr18:13641757 plus strand	1245187
LDLRAD4	NM_181481	NP_852146	Coding	chr18:13278104 plus strand	1245188
LDLRAD4	NM_181482	NP_852147	Coding	chr18:13218729 plus strand	1245189
LIPG	NM_006033	NP_006024	Coding	chr18:49562056 plus strand	1245190
LMAN1	NM_005570	NP_005561	Coding	chr18:59359276 minus strand	1245191
LOC100505549	NM_001242804	NP_001229733	Coding	chr18:57630301 plus strand	1245192
LOC101927322	NM_001289967	NP_001276896	Coding	chr18:58671873 minus strand	1245193
LOXHD1	NM_001145472	NP_001138944	Coding	chr18:46559307 minus strand	1245194
LOXHD1	NM_001145473	NP_001138945	Coding	chr18:46519086 minus strand	1245195
LOXHD1	NM_001173129	NP_001166600	Coding	chr18:46519086 minus strand	1245195
LOXHD1	NM_144612	NP_653213	Coding	chr18:46657033 minus strand	1245196
LPIN2	NM_014646	NP_055461	Coding	chr18:3011947 minus	1245197

【１１７０】

				strand	
LRRC30	NM_001105581	NP_001099051	Coding	chr18:7231138 plus strand	1245198
MALT1	NM_006785	NP_006776	Coding	chr18:58671385 plus strand	1245199
MALT1	NM_173844	NP_776216	Coding	chr18:58671385 plus strand	1245199
MAPK4	NM_001292039	NP_001278968	Coding	chr18:50560113 plus strand	1245200
MAPK4	NM_001292040	NP_001278969	Coding	chr18:50560113 plus strand	1245200
MAPK4	NM_002747	NP_002738	Coding	chr18:50560113 plus strand	1245200
MAPRE2	NM_001143826	NP_001137298	Coding	chr18:34976927 plus strand	1245201
MAPRE2	NM_001143827	NP_001137299	Coding	chr18:34978243 plus strand	1245202
MAPRE2	NM_001256420	NP_001243349	Coding	chr18:35041359 plus strand	1245203
MAPRE2	NM_014268	NP_055083	Coding	chr18:35041359 plus strand	1245203
MBD1	NM_001204136	NP_001191065	Coding	chr18:50281774 minus strand	1245204
MBD1	NM_001204137	NP_001191066	Coding	chr18:50281774 minus strand	1245204
MBD1	NM_001204138	NP_001191067	Coding	chr18:50281774 minus strand	1245204
MBD1	NM_001204139	NP_001191068	Coding	chr18:50281774 minus strand	1245204
MBD1	NM_001204140	NP_001191069	Coding	chr18:50281774 minus strand	1245204
MBD1	NM_001204141	NP_001191070	Coding	chr18:50281774 minus strand	1245204
MBD1	NM_001204142	NP_001191071	Coding	chr18:50281774 minus strand	1245204
MBD1	NM_001204143	NP_001191072	Coding	chr18:50281767 minus strand	1245205
MBD1	NM_001204151	NP_001191080	Coding	chr18:50280017 minus strand	1245206
MBD1	NM_002384	NP_002375	Coding	chr18:50281774 minus strand	1245204
MBD1	NM_015844	NP_056669	Coding	chr18:50281774 minus strand	1245204
MBD1	NM_015845	NP_056670	Coding	chr18:50281774 minus strand	1245204
MBD1	NM_015846	NP_056671	Coding	chr18:50281774 minus strand	1245204
MBD1	NM_015847	NP_056723	Coding	chr18:50281774 minus strand	1245204
MBD2	NM_003927	NP_003918	Coding	chr18:54224788 minus strand	1245207
MBD2	NM_015832	NP_056647	Coding	chr18:54224788 minus strand	1245207
MBP	NM_001025081	NP_001020252	Coding	chr18:77017099 minus strand	1245208

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MBP	NM_001025090	NP_001020261	Coding	chr18:77017099 minus strand	1245208
MBP	NM_001025092	NP_001020263	Coding	chr18:77017099 minus strand	1245208
MBP	NM_001025100	NP_001020271	Coding	chr18:77132818 minus strand	1245209
MBP	NM_001025101	NP_001020272	Coding	chr18:77132818 minus strand	1245209
MBP	NM_002385	NP_002376	Coding	chr18:77017099 minus strand	1245208
MC2R	NM_000529	NP_000520	Coding	chr18:13915536 minus strand	1245210
MC2R	NM_001291911	NP_001278840	Coding	chr18:13915707 minus strand	1245211
MC4R	NM_005912	NP_005903	Coding	chr18:60372768 minus strand	1245212
MC5R	NM_005913	NP_005904	Coding	chr18:13825543 plus strand	1245213
ME2	NM_001168335	NP_001161807	Coding	chr18:50879061 plus strand	1245214
ME2	NM_002396	NP_002387	Coding	chr18:50879061 plus strand	1245214
MEP1B	NM_005925	NP_005916	Coding	chr18:32190023 plus strand	1245215
METTL4	NM_022840	NP_073751	Coding	chr18:2571490 minus strand	1245216
MEX3C	NM_016626	NP_057710	Coding	chr18:51197681 minus strand	1245217
MIB1	NM_020774	NP_065825	Coding	chr18:21741328 plus strand	1245218
MOCOS	NM_017947	NP_060417	Coding	chr18:36187516 plus strand	1245219
MPPE1	NM_001242904	NP_001229833	Coding	chr18:11908797 minus strand	1245220
MPPE1	NM_023075	NP_075563	Coding	chr18:11908797 minus strand	1245220
MRO	NM_001127174	NP_001120646	Coding	chr18:50825384 minus strand	1245221
MRO	NM_001127175	NP_001120647	Coding	chr18:50820064 minus strand	1245222
MRO	NM_001127176	NP_001120648	Coding	chr18:50820064 minus strand	1245222
MRO	NM_031939	NP_114145	Coding	chr18:50820064 minus strand	1245222
MTCL1	NM_015210	NP_056025	Coding	chr18:8717370 plus strand	1245223
MYL12A	NM_006471	NP_006462	Coding	chr18:3247529 plus strand	1245224
MYL12B	NM_001144944	NP_001138416	Coding	chr18:3262612 plus strand	1245225
MYL12B	NM_001144945	NP_001138417	Coding	chr18:3262718 plus strand	1245226
MYL12B	NM_033546	NP_291024	Coding	chr18:3262112 plus strand	1245227
MYO5B	NM_001080467	NP_001073936	Coding	chr18:50195081 minus strand	1245228
MYOM1	NM_003803	NP_003794	Coding	chr18:3220108 minus strand	1245229

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MYOM1	NM_019856	NP_062830	Coding	chr18:3220108 minus strand	1245229
NAPG	NM_003826	NP_003817	Coding	chr18:10525875 plus strand	1245230
NARS	NM_004539	NP_004530	Coding	chr18:57621945 minus strand	1245231
NDC80	NM_006101	NP_006092	Coding	chr18:2571510 plus strand	1245232
NDUFV2	NM_021074	NP_066552	Coding	chr18:9102629 plus strand	1245233
NEDD4L	NM_001144964	NP_001138436	Coding	chr18:58047225 plus strand	1245234
NEDD4L	NM_001144965	NP_001138437	Coding	chr18:58149332 plus strand	1245235
NEDD4L	NM_001144966	NP_001138438	Coding	chr18:58221521 plus strand	1245236
NEDD4L	NM_001144967	NP_001138439	Coding	chr18:58044377 plus strand	1245237
NEDD4L	NM_001144968	NP_001138440	Coding	chr18:58149332 plus strand	1245235
NEDD4L	NM_001144969	NP_001138441	Coding	chr18:58149332 plus strand	1245235
NEDD4L	NM_001144970	NP_001138442	Coding	chr18:58195389 plus strand	1245238
NEDD4L	NM_001144971	NP_001138443	Coding	chr18:58149332 plus strand	1245235
NEDD4L	NM_001243960	NP_001230889	Coding	chr18:58044377 plus strand	1245237
NEDD4L	NM_015277	NP_056092	Coding	chr18:58044377 plus strand	1245237
NETO1	NM_001201465	NP_001188394	Coding	chr18:72867575 minus strand	1245239
NETO1	NM_138966	NP_620416	Coding	chr18:72867575 minus strand	1245239
NETO1	NM_138999	NP_620552	Coding	chr18:72865699 minus strand	1245240
NFATC1	NM_001278669	NP_001265598	Coding	chr18:79395771 plus strand	1245241
NFATC1	NM_001278670	NP_001265599	Coding	chr18:79395771 plus strand	1245241
NFATC1	NM_001278672	NP_001265601	Coding	chr18:79400273 plus strand	1245242
NFATC1	NM_001278673	NP_001265602	Coding	chr18:79400273 plus strand	1245242
NFATC1	NM_001278675	NP_001265604	Coding	chr18:79400273 plus strand	1245242
NFATC1	NM_006162	NP_006153	Coding	chr18:79395771 plus strand	1245241
NFATC1	NM_172387	NP_765975	Coding	chr18:79400273 plus strand	1245242
NFATC1	NM_172388	NP_765976	Coding	chr18:79395771 plus strand	1245241
NFATC1	NM_172389	NP_765977	Coding	chr18:79400273 plus strand	1245242
NFATC1	NM_172390	NP_765978	Coding	chr18:79395771 plus strand	1245241

【１１７３】

NOL4	NM_001198546	NP_001185475	Coding	chr18:34223551 minus strand	1245243
NOL4	NM_001198547	NP_001185476	Coding	chr18:34222470 minus strand	1245244
NOL4	NM_001198548	NP_001185477	Coding	chr18:34223551 minus strand	1245243
NOL4	NM_001198549	NP_001185478	Coding	chr18:34048612 minus strand	1245245
NOL4	NM_001282527	NP_001269456	Coding	chr18:34222470 minus strand	1245244
NOL4	NM_003787	NP_003778	Coding	chr18:34223551 minus strand	1245243
NPC1	NM_000271	NP_000262	Coding	chr18:23586617 minus strand	1245246
ONECUT2	NM_004852	NP_004843	Coding	chr18:57435684 plus strand	1245247
OSBPL1A	NM_001242508	NP_001229437	Coding	chr18:24311506 minus strand	1245248
OSBPL1A	NM_018030	NP_060500	Coding	chr18:24272232 minus strand	1245249
OSBPL1A	NM_080597	NP_542164	Coding	chr18:24397869 minus strand	1245250
PARD6G	NM_032510	NP_115899	Coding	chr18:80247514 minus strand	1245251
PHLPP1	NM_194449	NP_919431	Coding	chr18:62715438 plus strand	1245252
PIAS2	NM_004671	NP_004662	Coding	chr18:46917532 minus strand	1245253
PIAS2	NM_173206	NP_775298	Coding	chr18:46917532 minus strand	1245253
PIEZO2	NM_022068	NP_071351	Coding	chr18:11148762 minus strand	1245254
PIGN	NM_012327	NP_036459	Coding	chr18:62187056 minus strand	1245255
PIGN	NM_176787	NP_789744	Coding	chr18:62187056 minus strand	1245255
PIK3C3	NM_002647	NP_002638	Coding	chr18:41955233 plus strand	1245256
PMAIP1	NM_021127	NP_066950	Coding	chr18:59899959 plus strand	1245257
POLI	NM_007195	NP_009126	Coding	chr18:54269478 plus strand	1245258
POTEC	NM_001137671	NP_001131143	Coding	chr18:14543600 minus strand	1245259
PPP4R1	NM_001042388	NP_001035847	Coding	chr18:9614607 minus strand	1245260
PPP4R1	NM_005134	NP_005125	Coding	chr18:9614607 minus strand	1245260
PQLC1	NM_001146343	NP_001139815	Coding	chr18:79951653 minus strand	1245261
PQLC1	NM_001146345	NP_001139817	Coding	chr18:79951653 minus strand	1245261
PQLC1	NM_025078	NP_079354	Coding	chr18:79951653 minus strand	1245261

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PSMA8	NM_001025096	NP_001020267	Coding	chr18:26133851 plus strand	1245262
PSMA8	NM_001025097	NP_001020268	Coding	chr18:26133851 plus strand	1245262
PSMA8	NM_144662	NP_653263	Coding	chr18:26133851 plus strand	1245262
PSMG2	NM_020232	NP_064617	Coding	chr18:12702987 plus strand	1245263
PSMG2	NM_147163	NP_671692	Coding	chr18:12658738 plus strand	1245264
PSTPIP2	NM_024430	NP_077748	Coding	chr18:46072284 minus strand	1245265
PTPN2	NM_001207013	NP_001193942	Coding	chr18:12884335 minus strand	1245266
PTPN2	NM_002828	NP_002819	Coding	chr18:12884335 minus strand	1245266
PTPN2	NM_080422	NP_536347	Coding	chr18:12884335 minus strand	1245266
PTPN2	NM_080423	NP_536348	Coding	chr18:12884335 minus strand	1245266
PTPRM	NM_001105244	NP_001098714	Coding	chr18:7567315 plus strand	1245267
PTPRM	NM_002845	NP_002836	Coding	chr18:7567315 plus strand	1245267
RAB12	NM_001025300	NP_001020471	Coding	chr18:8609444 plus strand	1245268
RAB27B	NM_004163	NP_004154	Coding	chr18:54828476 plus strand	1245269
RAB31	NM_006868	NP_006859	Coding	chr18:9708230 plus strand	1245270
RALBP1	NM_006788	NP_006779	Coding	chr18:9475531 plus strand	1245271
RAX	NM_013435	NP_038463	Coding	chr18:59273393 minus strand	1245272
RBBP8	NM_002894	NP_002885	Coding	chr18:22933331 plus strand	1245273
RBBP8	NM_203291	NP_976036	Coding	chr18:22933875 plus strand	1245274
RBBP8	NM_203292	NP_976037	Coding	chr18:22933875 plus strand	1245274
RBFA	NM_001171967	NP_001165438	Coding	chr18:80034345 plus strand	1245275
RBFA	NM_024805	NP_079081	Coding	chr18:80034345 plus strand	1245275
RIOK3	NM_003831	NP_003822	Coding	chr18:23452822 plus strand	1245276
RIT2	NM_001272077	NP_001259006	Coding	chr18:43115692 minus strand	1245277
RIT2	NM_002930	NP_002921	Coding	chr18:43115692 minus strand	1245277
RNF125	NM_017831	NP_060301	Coding	chr18:32018481 plus strand	1245278
RNF138	NM_001191324	NP_001178253	Coding	chr18:32092605 plus strand	1245279
RNF138	NM_016271	NP_057355	Coding	chr18:32091854 plus strand	1245280
RNF138	NM_198128	NP_937761	Coding	chr18:32092605 plus strand	1245279

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RNF152	NM_173557	NP_775828	Coding	chr18:61893071 minus strand	1245281
RNF165	NM_001256758	NP_001243687	Coding	chr18:46334223 plus strand	1245282
RNF165	NM_152470	NP_689683	Coding	chr18:46334223 plus strand	1245282
RNMT	NM_003799	NP_003790	Coding	chr18:13726704 plus strand	1245283
ROCK1	NM_005406	NP_005397	Coding	chr18:21111851 minus strand	1245284
RPL17	NM_000985	NP_000976	Coding	chr18:49492565 minus strand	1245285
RPL17	NM_001035006	NP_001030178	Coding	chr18:49492565 minus strand	1245285
RPL17	NM_001199340	NP_001186269	Coding	chr18:49492565 minus strand	1245285
RPL17	NM_001199341	NP_001186270	Coding	chr18:49492464 minus strand	1245286
RPL17	NM_001199342	NP_001186271	Coding	chr18:49492464 minus strand	1245286
RPL17	NM_001199343	NP_001186272	Coding	chr18:49492464 minus strand	1245286
RPL17	NM_001199344	NP_001186273	Coding	chr18:49492464 minus strand	1245286
RPL17	NM_001199345	NP_001186274	Coding	chr18:49492565 minus strand	1245285
RPL17-C18orf32	NM_001199355	NP_001186284	Coding	chr18:49491584 minus strand	1245287
RPL17-C18orf32	NM_001199356	NP_001186285	Coding	chr18:49492565 minus strand	1245288
RPRD1A	NM_018170	NP_060640	Coding	chr18:36067410 minus strand	1245289
RTTN	NM_173630	NP_775901	Coding	chr18:70205726 minus strand	1245290
SALL3	NM_171999	NP_741996	Coding	chr18:78980274 plus strand	1245291
SEC11C	NM_033280	NP_150596	Coding	chr18:59139892 plus strand	1245292
SEH1L	NM_001013437	NP_001013455	Coding	chr18:12947983 plus strand	1245293
SEH1L	NM_031216	NP_112493	Coding	chr18:12947983 plus strand	1245293
SERPINB10	NM_005024	NP_005015	Coding	chr18:63915510 plus strand	1245294
SERPINB11	NM_001291278	NP_001278207	Coding	chr18:63702958 plus strand	1245295
SERPINB11	NM_001291279	NP_001278208	Coding	chr18:63702958 plus strand	1245295
SERPINB11	NM_080475	NP_536723	Coding	chr18:63702303 plus strand	1245296
SERPINB12	NM_080474	NP_536722	Coding	chr18:63556159 plus strand	1245297
SERPINB13	NM_012397	NP_036529	Coding	chr18:63587299 plus strand	1245298

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SERPINB2	NM_001143818	NP_001137290	Coding	chr18:63887704 plus strand	1245299
SERPINB2	NM_002575	NP_002566	Coding	chr18:63887704 plus strand	1245299
SERPINB3	NM_006919	NP_008850	Coding	chr18:63661963 minus strand	1245300
SERPINB4	NM_002974	NP_002965	Coding	chr18:63644319 minus strand	1245301
SERPINB4	NM_175041	NP_778206	Coding	chr18:63644319 minus strand	1245301
SERPINB5	NM_002639	NP_002630	Coding	chr18:63476910 plus strand	1245302
SERPINB7	NM_001040147	NP_001035237	Coding	chr18:63753046 plus strand	1245303
SERPINB7	NM_001261830	NP_001248759	Coding	chr18:63777776 plus strand	1245304
SERPINB7	NM_001261831	NP_001248760	Coding	chr18:63775374 plus strand	1245305
SERPINB7	NM_003784	NP_003775	Coding	chr18:63775374 plus strand	1245305
SERPINB8	NM_001031848	NP_001027018	Coding	chr18:63970028 plus strand	1245306
SERPINB8	NM_001276490	NP_001263419	Coding	chr18:63970028 plus strand	1245306
SERPINB8	NM_002640	NP_002631	Coding	chr18:63970028 plus strand	1245306
SERPINB8	NM_198833	NP_942130	Coding	chr18:63970028 plus strand	1245306
SETBP1	NM_001130110	NP_001123582	Coding	chr18:44680172 plus strand	1245307
SETBP1	NM_015559	NP_056374	Coding	chr18:44680897 plus strand	1245308
SIGLEC15	NM_213602	NP_998767	Coding	chr18:45825579 plus strand	1245309
SKA1	NM_001039535	NP_001034624	Coding	chr18:50375021 plus strand	1245310
SKA1	NM_145060	NP_659497	Coding	chr18:50375021 plus strand	1245310
SKOR2	NM_001037802	NP_001032891	Coding	chr18:47249183 minus strand	1245311
SKOR2	NM_001278063	NP_001264992	Coding	chr18:47249183 minus strand	1245311
SLC14A1	NM_001128588	NP_001122060	Coding	chr18:45724126 plus strand	1245312
SLC14A1	NM_001146036	NP_001139508	Coding	chr18:45724126 plus strand	1245312
SLC14A1	NM_001146037	NP_001139509	Coding	chr18:45726952 plus strand	1245313
SLC14A1	NM_015865	NP_056949	Coding	chr18:45724126 plus strand	1245312
SLC14A2	NM_001242692	NP_001229621	Coding	chr18:45212981 plus strand	1245314
SLC14A2	NM_007163	NP_009094	Coding	chr18:45614800 plus strand	1245315

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SLC25A52	NM_001034172	NP_001029344	Coding	chr18:31760880 minus strand	1245316
SLC35G4	NM_001282300	NP_001269229	Coding	chr18:11609557 plus strand	1245317
SLC39A6	NM_001099406	NP_001092876	Coding	chr18:36129394 minus strand	1245318
SLC39A6	NM_012319	NP_036451	Coding	chr18:36129394 minus strand	1245318
SLMO1	NM_001142405	NP_001135877	Coding	chr18:12407895 plus strand	1245319
SLMO1	NM_006553	NP_006544	Coding	chr18:12407895 plus strand	1245319
SMAD2	NM_001003652	NP_001003652	Coding	chr18:47931146 minus strand	1245320
SMAD2	NM_001135937	NP_001129409	Coding	chr18:47931146 minus strand	1245320
SMAD2	NM_005901	NP_005892	Coding	chr18:47930599 minus strand	1245321
SMAD4	NM_005359	NP_005350	Coding	chr18:51030212 plus strand	1245322
SMAD7	NM_001190821	NP_001177750	Coding	chr18:48950711 minus strand	1245323
SMAD7	NM_001190822	NP_001177751	Coding	chr18:48949333 minus strand	1245324
SMAD7	NM_001190823	NP_001177752	Coding	chr18:48942807 minus strand	1245325
SMAD7	NM_005904	NP_005895	Coding	chr18:48950711 minus strand	1245323
SMCHD1	NM_015295	NP_056110	Coding	chr18:2655886 plus strand	1245326
SMIM21	NM_001037331	NP_001032408	Coding	chr18:75427634 minus strand	1245327
SNRPD1	NM_001291916	NP_001278845	Coding	chr18:21612268 plus strand	1245328
SNRPD1	NM_006938	NP_008869	Coding	chr18:21612268 plus strand	1245328
SOCS6	NM_004232	NP_004223	Coding	chr18:70288900 plus strand	1245329
SPIRE1	NM_001128626	NP_001122098	Coding	chr18:12657913 minus strand	1245330
SPIRE1	NM_001128627	NP_001122099	Coding	chr18:12656732 minus strand	1245331
SPIRE1	NM_020148	NP_064533	Coding	chr18:12657913 minus strand	1245330
SS18	NM_001007559	NP_001007560	Coding	chr18:26090647 minus strand	1245332
SS18	NM_005637	NP_005628	Coding	chr18:26090647 minus strand	1245332
ST8SIA3	NM_015879	NP_056963	Coding	chr18:57352489 plus strand	1245333
ST8SIA5	NM_013305	NP_037437	Coding	chr18:46757076 minus strand	1245334
STARD6	NM_139171	NP_631910	Coding	chr18:54354573 minus strand	1245335
SYT4	NM_020783	NP_065834	Coding	chr18:43277650 minus	1245336

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				strand	
TAF4B	NM_001293725	NP_001280654	Coding	chr18:26226882 plus strand	1245337
TAF4B	NM_005640	NP_005631	Coding	chr18:26226882 plus strand	1245337
TCEB3B	NM_016427	NP_057511	Coding	chr18:47035617 minus strand	1245338
TCEB3C	NM_145653	NP_663628	Coding	chr18:47024163 minus strand	1245339
TCEB3C	NM_145653	NP_663628	Coding	chr18:47030078 minus strand	1245340
TCEB3CL	NM_001100817	NP_001094287	Coding	chr18:46964408 minus strand	1245341
TCEB3CL	NM_001100817	NP_001094287	Coding	chr18:47023927 minus strand	1245342
TCEB3CL	NM_001100817	NP_001094287	Coding	chr18:47029842 minus strand	1245343
TCEB3CL2	NM_001242907	NP_001229836	Coding	chr18:46964644 minus strand	1245344
TCF4	NM_001083962	NP_001077431	Coding	chr18:55588629 minus strand	1245345
TCF4	NM_001243226	NP_001230155	Coding	chr18:55635993 minus strand	1245346
TCF4	NM_001243227	NP_001230156	Coding	chr18:55589814 minus strand	1245347
TCF4	NM_001243228	NP_001230157	Coding	chr18:55589814 minus strand	1245347
TCF4	NM_001243230	NP_001230159	Coding	chr18:55588629 minus strand	1245345
TCF4	NM_001243231	NP_001230160	Coding	chr18:55510769 minus strand	1245348
TCF4	NM_001243232	NP_001230161	Coding	chr18:55403995 minus strand	1245349
TCF4	NM_001243233	NP_001230162	Coding	chr18:55422492 minus strand	1245350
TCF4	NM_001243234	NP_001230163	Coding	chr18:55321859 minus strand	1245351
TCF4	NM_001243235	NP_001230164	Coding	chr18:55321859 minus strand	1245351
TCF4	NM_001243236	NP_001230165	Coding	chr18:55302621 minus strand	1245352
TCF4	NM_003199	NP_003190	Coding	chr18:55588629 minus strand	1245345
TGIF1	NM_001278682	NP_001265611	Coding	chr18:3449412 plus strand	1245353
TGIF1	NM_001278684	NP_001265613	Coding	chr18:3449650 plus strand	1245354
TGIF1	NM_001278686	NP_001265615	Coding	chr18:3412855 plus strand	1245355
TGIF1	NM_003244	NP_003235	Coding	chr18:3450171 plus strand	1245356
TGIF1	NM_170695	NP_733796	Coding	chr18:3451404 plus strand	1245357
TGIF1	NM_173207	NP_775299	Coding	chr18:3447585 plus strand	1245358
TGIF1	NM_173208	NP_775300	Coding	chr18:3449650 plus strand	1245354
TGIF1	NM_173209	NP_775301	Coding	chr18:3449650 plus strand	1245354

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TGIF1	NM_173210	NP_775302	Coding	chr18:3451404 plus strand	1245357
TGIF1	NM_173211	NP_775303	Coding	chr18:3453773 plus strand	1245359
TGIF1	NM_174886	NP_777480	Coding	chr18:3411926 plus strand	1245360
THOC1	NM_005131	NP_005122	Coding	chr18:268059 minus strand	1245361
TIMM21	NM_014177	NP_054896	Coding	chr18:74148510 plus strand	1245362
TMEM200C	NM_001080209	NP_001073678	Coding	chr18:5892104 minus strand	1245363
TMEM241	NM_032933	NP_116322	Coding	chr18:23437961 minus strand	1245364
TMX3	NM_019022	NP_061895	Coding	chr18:68715116 minus strand	1245365
TNFRSF11A	NM_001270949	NP_001257878	Coding	chr18:62325286 plus strand	1245366
TNFRSF11A	NM_001270950	NP_001257879	Coding	chr18:62325286 plus strand	1245366
TNFRSF11A	NM_001270951	NP_001257880	Coding	chr18:62325286 plus strand	1245366
TNFRSF11A	NM_001278268	NP_001265197	Coding	chr18:62325286 plus strand	1245366
TNFRSF11A	NM_003839	NP_003830	Coding	chr18:62325286 plus strand	1245366
TPGS2	NM_001271949	NP_001258878	Coding	chr18:36829216 minus strand	1245367
TPGS2	NM_001271950	NP_001258879	Coding	chr18:36829216 minus strand	1245367
TPGS2	NM_001271951	NP_001258880	Coding	chr18:36829216 minus strand	1245367
TPGS2	NM_001271952	NP_001258881	Coding	chr18:36829216 minus strand	1245367
TPGS2	NM_001271953	NP_001258882	Coding	chr18:36829216 minus strand	1245367
TPGS2	NM_001271954	NP_001258883	Coding	chr18:36829216 minus strand	1245367
TPGS2	NM_001271955	NP_001258884	Coding	chr18:36829216 minus strand	1245367
TPGS2	NM_001271956	NP_001258885	Coding	chr18:36829216 minus strand	1245367
TPGS2	NM_015476	NP_056291	Coding	chr18:36829216 minus strand	1245367
TRAPPC8	NM_014939	NP_055754	Coding	chr18:31943128 minus strand	1245368
TSHZ1	NM_005786	NP_005777	Coding	chr18:75210754 plus strand	1245369
TTC39C	NM_001135993	NP_001129465	Coding	chr18:24014419 plus strand	1245370
TTC39C	NM_001243425	NP_001230354	Coding	chr18:24014419 plus strand	1245370
TTC39C	NM_001292030	NP_001278959	Coding	chr18:24113352 plus strand	1245371
TTC39C	NM_153211	NP_694943	Coding	chr18:23992772 plus strand	1245372
TTR	NM_000371	NP_000362	Coding	chr18:31591766 plus	1245373

【１１８０】

				strand	
TUBB6	NM_032525	NP_115914	Coding	chr18:12308257 plus strand	1245374
TWSG1	NM_020648	NP_065699	Coding	chr18:9334766 plus strand	1245375
TXNDC2	NM_001098529	NP_001091999	Coding	chr18:9885725 plus strand	1245376
TXNDC2	NM_032243	NP_115619	Coding	chr18:9885725 plus strand	1245376
TXNL1	NM_004786	NP_004777	Coding	chr18:56638689 minus strand	1245377
TXNL4A	NM_006701	NP_006692	Coding	chr18:79988532 minus strand	1245378
TYMS	NM_001071	NP_001062	Coding	chr18:657603 plus strand	1245379
TYMSOS	NM_001012716	NP_001012734	Coding	chr18:658340 minus strand	1245380
USP14	NM_001037334	NP_001032411	Coding	chr18:158482 plus strand	1245381
USP14	NM_005151	NP_005142	Coding	chr18:158482 plus strand	1245381
VAPA	NM_003574	NP_003565	Coding	chr18:9913957 plus strand	1245382
VAPA	NM_194434	NP_919415	Coding	chr18:9913957 plus strand	1245382
VPS4B	NM_004869	NP_004860	Coding	chr18:63422519 minus strand	1245383
WDR7	NM_015285	NP_056100	Coding	chr18:56651384 plus strand	1245384
WDR7	NM_052834	NP_443066	Coding	chr18:56651384 plus strand	1245384
YES1	NM_005433	NP_005424	Coding	chr18:812326 minus strand	1245385
ZADH2	NM_175907	NP_787103	Coding	chr18:75209326 minus strand	1245386
ZBTB14	NM_001143823	NP_001137295	Coding	chr18:5296195 minus strand	1245387
ZBTB14	NM_001243702	NP_001230631	Coding	chr18:5295702 minus strand	1245388
ZBTB14	NM_001243704	NP_001230633	Coding	chr18:5297053 minus strand	1245389
ZBTB14	NM_003409	NP_003400	Coding	chr18:5296195 minus strand	1245387
ZBTB7C	NM_001039360	NP_001034449	Coding	chr18:48137309 minus strand	1245390
ZCCHC2	NM_017742	NP_060212	Coding	chr18:62523424 plus strand	1245391
ZNF236	NM_007345	NP_031371	Coding	chr18:76824159 plus strand	1245392
ZNF24	NM_006965	NP_008896	Coding	chr18:35344462 minus strand	1245393
ZNF396	NM_145756	NP_665699	Coding	chr18:35377337 minus strand	1245394
ZNF397	NM_001135178	NP_001128650	Coding	chr18:35241029 plus strand	1245395
ZNF397	NM_032347	NP_115723	Coding	chr18:35241029 plus strand	1245395
ZNF407	NM_001146189	NP_001139661	Coding	chr18:74630962 plus strand	1245396
ZNF407	NM_001146190	NP_001139662	Coding	chr18:74630962 plus strand	1245396

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ZNF407	NM_017757	NP_060227	Coding	chr18:74630962 plus strand	1245396
ZNF516	NM_014643	NP_055458	Coding	chr18:76495190 minus strand	1245397
ZNF519	NM_145287	NP_660330	Coding	chr18:14132490 minus strand	1245398
ZNF521	NM_015461	NP_056276	Coding	chr18:25352250 minus strand	1245399
ZNF532	NM_018181	NP_060651	Coding	chr18:58862828 plus strand	1245400
ZSCAN30	NM_001112734	NP_001106205	Coding	chr18:35290245 minus strand	1245401
ZSCAN30	NM_001166012	NP_001159484	Coding	chr18:35290245 minus strand	1245401
ZSCAN30	NM_001288711	NP_001275640	Coding	chr18:35290245 minus strand	1245401
A1BG	NM_130786	NP_570602	Coding	chr19:58353499 minus strand	1559932
ABCA7	NM_019112	NP_061985	Coding	chr19:1040102 plus strand	1559933
ABHD17A	NM_001130111	NP_001123583	Coding	chr19:1885519 minus strand	1559934
ABHD17A	NM_031213	NP_112490	Coding	chr19:1885519 minus strand	1559934
ABHD8	NM_024527	NP_078803	Coding	chr19:17303473 minus strand	1559935
ACER1	NM_133492	NP_597999	Coding	chr19:6333629 minus strand	1559936
ACP5	NM_001111034	NP_001104504	Coding	chr19:11578777 minus strand	1559937
ACP5	NM_001111035	NP_001104505	Coding	chr19:11578986 minus strand	1559938
ACP5	NM_001111036	NP_001104506	Coding	chr19:11578986 minus strand	1559938
ACP5	NM_001611	NP_001602	Coding	chr19:11577738 minus strand	1559939
ACPT	NM_033068	NP_149059	Coding	chr19:50790414 plus strand	1559940
ACSBG2	NM_001289177	NP_001276106	Coding	chr19:6135632 plus strand	1559941
ACSBG2	NM_001289178	NP_001276107	Coding	chr19:6135632 plus strand	1559941
ACSBG2	NM_001289179	NP_001276108	Coding	chr19:6135632 plus strand	1559941
ACSBG2	NM_001289180	NP_001276109	Coding	chr19:6135632 plus strand	1559941
ACSBG2	NM_030924	NP_112186	Coding	chr19:6135632 plus strand	1559941
ACTL9	NM_178525	NP_848620	Coding	chr19:8698830 minus strand	1559942
ACTN4	NM_004924	NP_004915	Coding	chr19:38647626 plus strand	1559943
ADAMTS10	NM_001282352	NP_001269281	Coding	chr19:8592196 minus strand	1559944
ADAMTS10	NM_030957	NP_112219	Coding	chr19:8610735 minus strand	1559945
ADAMTSL5	NM_213604	NP_998769	Coding	chr19:1513189 minus strand	1559946

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ADAT3	NM_138422	NP_612431	Coding	chr19:1905371 plus strand	1559947
ADCK4	NM_001142555	NP_001136027	Coding	chr19:40715106 minus strand	1559948
ADCK4	NM_024876	NP_079152	Coding	chr19:40716885 minus strand	1559949
ADM5	NM_001101340	NP_001094810	Coding	chr19:49688684 plus strand	1559950
AES	NM_001130	NP_001121	Coding	chr19:3062373 minus strand	1559951
AES	NM_198969	NP_945320	Coding	chr19:3062966 minus strand	1559952
AES	NM_198970	NP_945321	Coding	chr19:3062373 minus strand	1559951
AKAP8	NM_005858	NP_005849	Coding	chr19:15379801 minus strand	1559953
AKAP8L	NM_001291478	NP_001278407	Coding	chr19:15419121 minus strand	1559954
AKAP8L	NM_014371	NP_055186	Coding	chr19:15419121 minus strand	1559954
AKT1S1	NM_001098632	NP_001092102	Coding	chr19:49877387 minus strand	1559955
AKT1S1	NM_001098633	NP_001092103	Coding	chr19:49877387 minus strand	1559955
AKT1S1	NM_001278159	NP_001265088	Coding	chr19:49876249 minus strand	1559956
AKT1S1	NM_001278160	NP_001265089	Coding	chr19:49878356 minus strand	1559957
AKT1S1	NM_032375	NP_115751	Coding	chr19:49877387 minus strand	1559955
AKT2	NM_001243027	NP_001229956	Coding	chr19:40285395 minus strand	1559958
AKT2	NM_001243028	NP_001229957	Coding	chr19:40285395 minus strand	1559958
AKT2	NM_001626	NP_001617	Coding	chr19:40285395 minus strand	1559958
ALDH16A1	NM_001145396	NP_001138868	Coding	chr19:49453215 plus strand	1559959
ALDH16A1	NM_153329	NP_699160	Coding	chr19:49453215 plus strand	1559959
ALKBH6	NM_001297701	NP_001284630	Coding	chr19:36014243 minus strand	1559960
ALKBH6	NM_032878	NP_116267	Coding	chr19:36014239 minus strand	1559961
ALKBH6	NM_198867	NP_942567	Coding	chr19:36014239 minus strand	1559961
ALKBH7	NM_032306	NP_115682	Coding	chr19:6372432 plus strand	1559962
AMH	NM_000479	NP_000470	Coding	chr19:2249113 plus strand	1559963
ANGPTL4	NM_001039667	NP_001034756	Coding	chr19:8364126 plus strand	1559964
ANGPTL4	NM_139314	NP_647475	Coding	chr19:8364126 plus strand	1559964
ANGPTL6	NM_031917	NP_114123	Coding	chr19:10102749 minus strand	1559965
ANKLE1	NM_001278443	NP_001265372	Coding	chr19:17281644 plus strand	1559966

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ANKLE1	NM_001278444	NP_001265373	Coding	chr19:17281644 plus strand	1559966
ANKLE1	NM_001278445	NP_001265374	Coding	chr19:17281644 plus strand	1559966
ANKLE1	NM_152363	NP_689576	Coding	chr19:17281644 plus strand	1559966
ANKRD24	NM_133475	NP_597732	Coding	chr19:4183353 plus strand	1559967
ANKRD27	NM_032139	NP_115515	Coding	chr19:32675196 minus strand	1559968
ANO8	NM_020959	NP_066010	Coding	chr19:17334829 minus strand	1559969
AP1M1	NM_001130524	NP_001123996	Coding	chr19:16197853 plus strand	1559970
AP1M1	NM_032493	NP_115882	Coding	chr19:16197853 plus strand	1559970
AP1M2	NM_001300887	NP_001287816	Coding	chr19:10587315 minus strand	1559971
AP1M2	NM_005498	NP_005489	Coding	chr19:10587315 minus strand	1559971
AP2A1	NM_014203	NP_055018	Coding	chr19:49766922 plus strand	1559972
AP2A1	NM_130787	NP_570603	Coding	chr19:49766922 plus strand	1559972
AP2S1	NM_001301076	NP_001288005	Coding	chr19:46850290 minus strand	1559973
AP2S1	NM_001301078	NP_001288007	Coding	chr19:46850995 minus strand	1559974
AP2S1	NM_001301081	NP_001288010	Coding	chr19:46850769 minus strand	1559975
AP2S1	NM_004069	NP_004060	Coding	chr19:46850995 minus strand	1559974
AP2S1	NM_021575	NP_067586	Coding	chr19:46850995 minus strand	1559974
AP3D1	NM_001261826	NP_001248755	Coding	chr19:2151557 minus strand	1559976
AP3D1	NM_003938	NP_003929	Coding	chr19:2151557 minus strand	1559976
APBA3	NM_004886	NP_004877	Coding	chr19:3761675 minus strand	1559977
APC2	NM_005883	NP_005874	Coding	chr19:1450148 plus strand	1559978
APLP1	NM_001024807	NP_001019978	Coding	chr19:35868498 plus strand	1559979
APLP1	NM_005166	NP_005157	Coding	chr19:35868498 plus strand	1559979
APOC1	NM_001645	NP_001636	Coding	chr19:44914663 plus strand	1559980
APOC2	NM_000483	NP_000474	Coding	chr19:44945981 plus strand	1559981
APOC4	NM_001646	NP_001637	Coding	chr19:44942237 plus strand	1559982
APOE	NM_000041	NP_000032	Coding	chr19:44905748 plus strand	1559983
APOE	NM_001302688	NP_001289617	Coding	chr19:44905748 plus strand	1559983

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APOE	NM_001302689	NP_001289618	Coding	chr19:44906020 plus strand	1559984
APOE	NM_001302690	NP_001289619	Coding	chr19:44906400 plus strand	1559985
APOE	NM_001302691	NP_001289620	Coding	chr19:44905748 plus strand	1559983
ARHGAP33	NM_001172630	NP_001166101	Coding	chr19:35775514 plus strand	1559986
ARHGAP33	NM_052948	NP_443180	Coding	chr19:35775514 plus strand	1559986
ARHGAP35	NM_004491	NP_004482	Coding	chr19:46918675 plus strand	1559987
ARHGEF1	NM_004706	NP_004697	Coding	chr19:41883199 plus strand	1559988
ARHGEF1	NM_198977	NP_945328	Coding	chr19:41883199 plus strand	1559988
ARHGEF1	NM_199002	NP_945353	Coding	chr19:41884378 plus strand	1559989
ARHGEF18	NM_001130955	NP_001124427	Coding	chr19:7439687 plus strand	1559990
ARHGEF18	NM_015318	NP_056133	Coding	chr19:7395112 plus strand	1559991
ARID3A	NM_005224	NP_005215	Coding	chr19:926036 plus strand	1559992
ARMC6	NM_001199196	NP_001186125	Coding	chr19:19033577 plus strand	1559993
ARMC6	NM_033415	NP_219483	Coding	chr19:19033577 plus strand	1559993
ARRDC2	NM_001025604	NP_001020775	Coding	chr19:18001131 plus strand	1559994
ARRDC2	NM_001286826	NP_001273755	Coding	chr19:18008167 plus strand	1559995
ARRDC2	NM_015683	NP_056498	Coding	chr19:18008167 plus strand	1559995
ARRDC5	NM_001080523	NP_001073992	Coding	chr19:4902867 minus strand	1559996
ASF1B	NM_018154	NP_060624	Coding	chr19:14136628 minus strand	1559997
ASNA1	NM_004317	NP_004308	Coding	chr19:12737491 plus strand	1559998
ASPDH	NM_001024656	NP_001019827	Coding	chr19:50514690 minus strand	1559999
ASPDH	NM_001114598	NP_001108070	Coding	chr19:50513885 minus strand	1560000
ATCAY	NM_033064	NP_149053	Coding	chr19:3880619 plus strand	1560001
ATF5	NM_001193646	NP_001180575	Coding	chr19:49929142 plus strand	1560002
ATF5	NM_001290746	NP_001277675	Coding	chr19:49930203 plus strand	1560003
ATF5	NM_012068	NP_036200	Coding	chr19:49928701 plus strand	1560004
ATG4D	NM_001281504	NP_001268433	Coding	chr19:10543893 plus strand	1560005
ATG4D	NM_032885	NP_116274	Coding	chr19:10543893 plus strand	1560005
ATP13A1	NM_020410	NP_065143	Coding	chr19:19663694 minus	1560006

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				strand	
ATP1A3	NM_001256213	NP_001243142	Coding	chr19:41993467 minus strand	1560007
ATP1A3	NM_001256214	NP_001243143	Coding	chr19:41994276 minus strand	1560008
ATP1A3	NM_152296	NP_689509	Coding	chr19:41994276 minus strand	1560008
ATP4A	NM_000704	NP_000695	Coding	chr19:35563658 minus strand	1560009
ATP5D	NM_001001975	NP_001001975	Coding	chr19:1241749 plus strand	1560010
ATP5D	NM_001687	NP_001678	Coding	chr19:1241749 plus strand	1560010
ATP5SL	NM_001167867	NP_001161339	Coding	chr19:41439576 minus strand	1560011
ATP5SL	NM_001167868	NP_001161340	Coding	chr19:41439576 minus strand	1560011
ATP5SL	NM_001167869	NP_001161341	Coding	chr19:41439938 minus strand	1560012
ATP5SL	NM_001167870	NP_001161342	Coding	chr19:41439938 minus strand	1560012
ATP5SL	NM_001167871	NP_001161343	Coding	chr19:41439938 minus strand	1560012
ATP5SL	NM_018035	NP_060505	Coding	chr19:41439938 minus strand	1560012
ATP8B3	NM_001178002	NP_001171473	Coding	chr19:1812237 minus strand	1560013
ATP8B3	NM_138813	NP_620168	Coding	chr19:1812276 minus strand	1560014
AURKC	NM_001015878	NP_001015878	Coding	chr19:57231059 plus strand	1560015
AURKC	NM_001015879	NP_001015879	Coding	chr19:57231008 plus strand	1560016
AURKC	NM_003160	NP_003151	Coding	chr19:57231008 plus strand	1560016
AXL	NM_001278599	NP_001265528	Coding	chr19:41226754 plus strand	1560017
AXL	NM_001699	NP_001690	Coding	chr19:41219198 plus strand	1560018
AXL	NM_021913	NP_068713	Coding	chr19:41219198 plus strand	1560018
AZU1	NM_001700	NP_001691	Coding	chr19:827830 plus strand	1560019
B3GNT3	NM_014256	NP_055071	Coding	chr19:17795109 plus strand	1560020
B3GNT8	NM_198540	NP_940942	Coding	chr19:41428730 minus strand	1560021
B9D2	NM_030578	NP_085055	Coding	chr19:41364173 minus strand	1560022
BABAM1	NM_001033549	NP_001028721	Coding	chr19:17267375 plus strand	1560023
BABAM1	NM_001288756	NP_001275685	Coding	chr19:17267375 plus strand	1560023
BABAM1	NM_001288757	NP_001275686	Coding	chr19:17267375 plus strand	1560023
BABAM1	NM_014173	NP_054892	Coding	chr19:17267375 plus	1560023

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				strand	
BAX	NM_001291428	NP_001278357	Coding	chr19:48954859 plus strand	1560024
BAX	NM_001291429	NP_001278358	Coding	chr19:48954859 plus strand	1560024
BAX	NM_001291430	NP_001278359	Coding	chr19:48954859 plus strand	1560024
BAX	NM_001291431	NP_001278360	Coding	chr19:48954859 plus strand	1560024
BAX	NM_004324	NP_004315	Coding	chr19:48954859 plus strand	1560024
BAX	NM_138761	NP_620116	Coding	chr19:48954859 plus strand	1560024
BAX	NM_138763	NP_620118	Coding	chr19:48954859 plus strand	1560024
BAX	NM_138764	NP_620119	Coding	chr19:48954859 plus strand	1560024
BBC3	NM_001127240	NP_001120712	Coding	chr19:47232766 minus strand	1560025
BBC3	NM_001127241	NP_001120713	Coding	chr19:47232766 minus strand	1560025
BBC3	NM_001127242	NP_001120714	Coding	chr19:47232766 minus strand	1560025
BBC3	NM_014417	NP_055232	Coding	chr19:47231194 minus strand	1560026
BCAM	NM_001013257	NP_001013275	Coding	chr19:44809058 plus strand	1560027
BCAM	NM_005581	NP_005572	Coding	chr19:44809058 plus strand	1560027
BCAT2	NM_001164773	NP_001158245	Coding	chr19:48811063 minus strand	1560028
BCAT2	NM_001190	NP_001181	Coding	chr19:48811063 minus strand	1560028
BCAT2	NM_001284325	NP_001271254	Coding	chr19:48811063 minus strand	1560028
BCKDHA	NM_000709	NP_000700	Coding	chr19:41397788 plus strand	1560029
BCKDHA	NM_001164783	NP_001158255	Coding	chr19:41397788 plus strand	1560029
BCL2L12	NM_001040668	NP_001035758	Coding	chr19:49665141 plus strand	1560030
BCL2L12	NM_001282516	NP_001269445	Coding	chr19:49665141 plus strand	1560030
BCL2L12	NM_001282517	NP_001269446	Coding	chr19:49665141 plus strand	1560030
BCL2L12	NM_001282519	NP_001269448	Coding	chr19:49665141 plus strand	1560030
BCL2L12	NM_001282520	NP_001269449	Coding	chr19:49665141 plus strand	1560030
BCL2L12	NM_001282521	NP_001269450	Coding	chr19:49665141 plus strand	1560030
BCL2L12	NM_138639	NP_619580	Coding	chr19:49665141 plus strand	1560030
BCL3	NM_005178	NP_005169	Coding	chr19:44748720 plus	1560031

【１１８７】

				strand	
BEST2	NM_017682	NP_060152	Coding	chr19:12752592 plus strand	1560032
BIRC8	NM_033341	NP_203127	Coding	chr19:53291622 minus strand	1560033
BLOC1S3	NM_212550	NP_997715	Coding	chr19:45178744 plus strand	1560034
BLVRB	NM_000713	NP_000704	Coding	chr19:40465818 minus strand	1560035
BRD4	NM_014299	NP_055114	Coding	chr19:15280451 minus strand	1560036
BRD4	NM_058243	NP_490597	Coding	chr19:15280451 minus strand	1560036
BRSK1	NM_032430	NP_115806	Coding	chr19:55284165 plus strand	1560037
BSG	NM_001728	NP_001719	Coding	chr19:572453 plus strand	1560038
BSG	NM_198589	NP_940991	Coding	chr19:572453 plus strand	1560038
BSG	NM_198590	NP_940992	Coding	chr19:571276 plus strand	1560039
BSG	NM_198591	NP_940993	Coding	chr19:571276 plus strand	1560039
BSPH1	NM_001128326	NP_001121798	Coding	chr19:47992170 minus strand	1560040
BST2	NM_004335	NP_004326	Coding	chr19:17405648 minus strand	1560041
BTBD2	NM_017797	NP_060267	Coding	chr19:2015703 minus strand	1560042
C19orf10	NM_019107	NP_061980	Coding	chr19:4670403 minus strand	1560043
C19orf12	NM_001031726	NP_001026896	Coding	chr19:29715056 minus strand	1560044
C19orf12	NM_001256046	NP_001242975	Coding	chr19:29715545 minus strand	1560045
C19orf12	NM_001256047	NP_001242976	Coding	chr19:29715789 minus strand	1560046
C19orf12	NM_001282929	NP_001269858	Coding	chr19:29715056 minus strand	1560044
C19orf12	NM_001282930	NP_001269859	Coding	chr19:29715545 minus strand	1560045
C19orf12	NM_001282931	NP_001269860	Coding	chr19:29715545 minus strand	1560045
C19orf12	NM_031448	NP_113636	Coding	chr19:29715545 minus strand	1560045
C19orf18	NM_152474	NP_689687	Coding	chr19:57974534 minus strand	1560047
C19orf24	NM_017914	NP_060384	Coding	chr19:1275520 plus strand	1560048
C19orf25	NM_152482	NP_689695	Coding	chr19:1479229 minus strand	1560049
C19orf26	NM_152769	NP_689982	Coding	chr19:1237991 minus strand	1560050
C19orf33	NM_033520	NP_277055	Coding	chr19:38304163 plus strand	1560051
C19orf35	NM_198532	NP_940934	Coding	chr19:2282182 minus strand	1560052

【１１８８】

C19orf38	NM_001136482	NP_001129954	Coding	chr19:10848429 plus strand	1560053
C19orf40	NM_001300978	NP_001287907	Coding	chr19:32972216 plus strand	1560054
C19orf40	NM_152266	NP_689479	Coding	chr19:32972216 plus strand	1560054
C19orf43	NM_024038	NP_076943	Coding	chr19:12734715 minus strand	1560055
C19orf44	NM_001288834	NP_001275763	Coding	chr19:16496310 plus strand	1560056
C19orf44	NM_032207	NP_115583	Coding	chr19:16496310 plus strand	1560056
C19orf45	NM_198534	NP_940936	Coding	chr19:7497558 plus strand	1560057
C19orf47	NM_001256440	NP_001243369	Coding	chr19:40348527 minus strand	1560058
C19orf47	NM_001256441	NP_001243370	Coding	chr19:40348409 minus strand	1560059
C19orf48	NM_001290149	NP_001277078	Coding	chr19:50804853 minus strand	1560060
C19orf48	NM_001290150	NP_001277079	Coding	chr19:50804853 minus strand	1560060
C19orf48	NM_001290151	NP_001277080	Coding	chr19:50804853 minus strand	1560060
C19orf48	NM_001290152	NP_001277081	Coding	chr19:50804853 minus strand	1560060
C19orf48	NM_001290153	NP_001277082	Coding	chr19:50804853 minus strand	1560060
C19orf48	NM_001290154	NP_001277083	Coding	chr19:50804853 minus strand	1560060
C19orf48	NM_001290155	NP_001277084	Coding	chr19:50804853 minus strand	1560060
C19orf48	NM_032712	NP_116101	Coding	chr19:50804554 minus strand	1560061
C19orf48	NM_199249	NP_954857	Coding	chr19:50804853 minus strand	1560060
C19orf48	NM_199250	NP_954858	Coding	chr19:50804853 minus strand	1560060
C19orf52	NM_138358	NP_612367	Coding	chr19:10928747 plus strand	1560062
C19orf53	NM_014047	NP_054766	Coding	chr19:13774442 plus strand	1560063
C19orf54	NM_198476	NP_940878	Coding	chr19:40749923 minus strand	1560064
C19orf57	NM_024323	NP_077299	Coding	chr19:13906096 minus strand	1560065
C19orf60	NM_001100418	NP_001093888	Coding	chr19:18588684 plus strand	1560066
C19orf60	NM_001100419	NP_001093889	Coding	chr19:18588684 plus strand	1560066
C19orf66	NM_018381	NP_060851	Coding	chr19:10086129 plus strand	1560067
C19orf67	NM_001277378	NP_001264307	Coding	chr19:14085795 minus strand	1560068
C19orf68	NM_199341	NP_955373	Coding	chr19:48170691 plus	1560069

【１１８９】

				strand	
C19orf70	NM_205767	NP_991330	Coding	chr19:5680900 minus strand	1560070
C19orf71	NM_001135580	NP_001129052	Coding	chr19:3539156 plus strand	1560071
C19orf73	NM_018111	NP_060581	Coding	chr19:49119140 minus strand	1560072
C19orf80	NM_018687	NP_061157	Coding	chr19:11239618 plus strand	1560073
C19orf81	NM_001195076	NP_001182005	Coding	chr19:50649444 plus strand	1560074
C19orf83	NM_001242348	NP_001229277	Coding	chr19:45641646 plus strand	1560075
C19orf84	NM_001193623	NP_001180552	Coding	chr19:51390574 minus strand	1560076
C2CD4C	NM_001136263	NP_001129735	Coding	chr19:409170 minus strand	1560077
C3	NM_000064	NP_000055	Coding	chr19:6720682 minus strand	1560078
C5AR1	NM_001736	NP_001727	Coding	chr19:47309846 plus strand	1560079
C5AR2	NM_001271749	NP_001258678	Coding	chr19:47332146 plus strand	1560080
C5AR2	NM_001271750	NP_001258679	Coding	chr19:47340486 plus strand	1560081
C5AR2	NM_018485	NP_060955	Coding	chr19:47337004 plus strand	1560082
CA11	NM_001217	NP_001208	Coding	chr19:48646194 minus strand	1560083
CABP5	NM_019855	NP_062829	Coding	chr19:48044054 minus strand	1560084
CACNA1A	NM_000068	NP_000059	Coding	chr19:13506460 minus strand	1560085
CACNA1A	NM_001127221	NP_001120693	Coding	chr19:13506460 minus strand	1560085
CACNA1A	NM_001127222	NP_001120694	Coding	chr19:13506460 minus strand	1560085
CACNA1A	NM_001174080	NP_001167551	Coding	chr19:13506460 minus strand	1560085
CACNA1A	NM_023035	NP_075461	Coding	chr19:13506460 minus strand	1560085
CACNG6	NM_031897	NP_114103	Coding	chr19:53992287 plus strand	1560086
CACNG6	NM_145814	NP_665813	Coding	chr19:53992287 plus strand	1560086
CACNG6	NM_145815	NP_665814	Coding	chr19:53992287 plus strand	1560086
CACNG7	NM_031896	NP_114102	Coding	chr19:53912736 plus strand	1560087
CACNG8	NM_031895	NP_114101	Coding	chr19:53963035 plus strand	1560088
CACTIN	NM_001080543	NP_001074012	Coding	chr19:3626815 minus strand	1560089
CACTIN	NM_021231	NP_067054	Coding	chr19:3626815 minus strand	1560089

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CADM4	NM_145296	NP_660339	Coding	chr19:43639839 minus strand	1560090
CALM3	NM_005184	NP_005175	Coding	chr19:46601254 plus strand	1560091
CALR	NM_004343	NP_004334	Coding	chr19:12938599 plus strand	1560092
CALR3	NM_145046	NP_659483	Coding	chr19:16496192 minus strand	1560093
CAMSAP3	NM_001080429	NP_001073898	Coding	chr19:7595901 plus strand	1560094
CAMSAP3	NM_020902	NP_065953	Coding	chr19:7595901 plus strand	1560094
CAPN12	NM_144691	NP_653292	Coding	chr19:38744474 minus strand	1560095
CAPNS1	NM_001003962	NP_001003962	Coding	chr19:36139925 plus strand	1560096
CAPNS1	NM_001302632	NP_001289561	Coding	chr19:36140126 plus strand	1560097
CAPNS1	NM_001302633	NP_001289562	Coding	chr19:36141419 plus strand	1560098
CAPNS1	NM_001749	NP_001740	Coding	chr19:36139925 plus strand	1560096
CAPS	NM_004058	NP_004049	Coding	chr19:5914181 plus strand	1560099
CAPS	NM_080590	NP_542157	Coding	chr19:5914181 plus strand	1560099
CARD8	NM_001184900	NP_001171829	Coding	chr19:48241063 minus strand	1560100
CARD8	NM_001184901	NP_001171830	Coding	chr19:48249847 minus strand	1560101
CARD8	NM_001184902	NP_001171831	Coding	chr19:48255946 minus strand	1560102
CARD8	NM_001184903	NP_001171832	Coding	chr19:48249847 minus strand	1560101
CARD8	NM_001184904	NP_001171833	Coding	chr19:48255946 minus strand	1560102
CARD8	NM_014959	NP_055774	Coding	chr19:48249847 minus strand	1560101
CARM1	NM_199141	NP_954592	Coding	chr19:10871576 plus strand	1560103
CASP14	NM_012114	NP_036246	Coding	chr19:15049479 plus strand	1560104
CATSPERD	NM_152784	NP_689997	Coding	chr19:5720676 plus strand	1560105
CATSPERG	NM_021185	NP_067008	Coding	chr19:38335802 plus strand	1560106
CBLC	NM_001130852	NP_001124324	Coding	chr19:44777868 plus strand	1560107
CBLC	NM_012116	NP_036248	Coding	chr19:44777868 plus strand	1560107
CC2D1A	NM_017721	NP_060191	Coding	chr19:13906142 plus strand	1560108
CCDC105	NM_173482	NP_775753	Coding	chr19:15010726 plus strand	1560109
CCDC106	NM_013301	NP_037433	Coding	chr19:55647587 plus strand	1560110
CCDC114	NM_144577	NP_653178	Coding	chr19:48320075 minus strand	1560111

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CCDC124	NM_001136203	NP_001129675	Coding	chr19:17933014 plus strand	1560112
CCDC124	NM_138442	NP_612451	Coding	chr19:17935095 plus strand	1560113
CCDC130	NM_030818	NP_110445	Coding	chr19:13747938 plus strand	1560114
CCDC151	NM_001302453	NP_001289382	Coding	chr19:11435782 minus strand	1560115
CCDC151	NM_001302454	NP_001289383	Coding	chr19:11435159 minus strand	1560116
CCDC151	NM_145045	NP_659482	Coding	chr19:11435159 minus strand	1560116
CCDC155	NM_144688	NP_653289	Coding	chr19:49388217 plus strand	1560117
CCDC159	NM_001080503	NP_001073972	Coding	chr19:11346504 plus strand	1560118
CCDC61	NM_001267723	NP_001254652	Coding	chr19:45995460 plus strand	1560119
CCDC8	NM_032040	NP_114429	Coding	chr19:46413662 minus strand	1560120
CCDC9	NM_015603	NP_056418	Coding	chr19:47256473 plus strand	1560121
CCDC94	NM_018074	NP_060544	Coding	chr19:4247113 plus strand	1560122
CCDC97	NM_052848	NP_443080	Coding	chr19:41310188 plus strand	1560123
CCER2	NM_001243212	NP_001230141	Coding	chr19:38912158 minus strand	1560124
CCL25	NM_001201359	NP_001188288	Coding	chr19:8052761 plus strand	1560125
CCL25	NM_005624	NP_005615	Coding	chr19:8052761 plus strand	1560125
CCNE1	NM_001238	NP_001229	Coding	chr19:29811993 plus strand	1560126
CD177	NM_020406	NP_065139	Coding	chr19:43353658 plus strand	1560127
CD209	NM_001144893	NP_001138365	Coding	chr19:7747578 minus strand	1560128
CD209	NM_001144894	NP_001138366	Coding	chr19:7747578 minus strand	1560128
CD209	NM_001144895	NP_001138367	Coding	chr19:7747578 minus strand	1560128
CD209	NM_001144896	NP_001138368	Coding	chr19:7747578 minus strand	1560128
CD209	NM_001144897	NP_001138369	Coding	chr19:7747578 minus strand	1560128
CD209	NM_001144899	NP_001138371	Coding	chr19:7747578 minus strand	1560128
CD209	NM_021155	NP_066978	Coding	chr19:7747578 minus strand	1560128
CD22	NM_001185099	NP_001172028	Coding	chr19:35329168 plus strand	1560129
CD22	NM_001185100	NP_001172029	Coding	chr19:35329168 plus strand	1560129
CD22	NM_001185101	NP_001172030	Coding	chr19:35329168 plus strand	1560129

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CD22	NM_001278417	NP_001265346	Coding	chr19:35329165 plus strand	1560130
CD22	NM_001771	NP_001762	Coding	chr19:35329168 plus strand	1560129
CD320	NM_001165895	NP_001159367	Coding	chr19:8308356 minus strand	1560131
CD320	NM_016579	NP_057663	Coding	chr19:8308356 minus strand	1560131
CD33	NM_001082618	NP_001076087	Coding	chr19:51225078 plus strand	1560132
CD33	NM_001177608	NP_001171079	Coding	chr19:51225078 plus strand	1560132
CD33	NM_001772	NP_001763	Coding	chr19:51225078 plus strand	1560132
CD37	NM_001040031	NP_001035120	Coding	chr19:49335419 plus strand	1560133
CD37	NM_001774	NP_001765	Coding	chr19:49335419 plus strand	1560133
CD3EAP	NM_001297590	NP_001284519	Coding	chr19:45406208 plus strand	1560134
CD3EAP	NM_012099	NP_036231	Coding	chr19:45406208 plus strand	1560134
CD70	NM_001252	NP_001243	Coding	chr19:6591152 minus strand	1560135
CD79A	NM_001783	NP_001774	Coding	chr19:41877119 plus strand	1560136
CD79A	NM_021601	NP_067612	Coding	chr19:41877119 plus strand	1560136
CD97	NM_001025160	NP_001020331	Coding	chr19:14381143 plus strand	1560137
CD97	NM_001784	NP_001775	Coding	chr19:14381143 plus strand	1560137
CD97	NM_078481	NP_510966	Coding	chr19:14381143 plus strand	1560137
CDC34	NM_004359	NP_004350	Coding	chr19:531732 plus strand	1560138
CDC37	NM_007065	NP_008996	Coding	chr19:10403595 minus strand	1560139
CDC42EP5	NM_145057	NP_659494	Coding	chr19:54473290 minus strand	1560140
CDKN2D	NM_001800	NP_001791	Coding	chr19:10568955 minus strand	1560141
CDKN2D	NM_079421	NP_524145	Coding	chr19:10568979 minus strand	1560142
CEACAM1	NM_001024912	NP_001020083	Coding	chr19:42528509 minus strand	1560143
CEACAM1	NM_001184813	NP_001171742	Coding	chr19:42528509 minus strand	1560143
CEACAM1	NM_001184815	NP_001171744	Coding	chr19:42528509 minus strand	1560143
CEACAM1	NM_001184816	NP_001171745	Coding	chr19:42528509 minus strand	1560143
CEACAM1	NM_001205344	NP_001192273	Coding	chr19:42528509 minus strand	1560143
CEACAM1	NM_001712	NP_001703	Coding	chr19:42528509 minus	1560143

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				strand	
CEACAM16	NM_001039213	NP_001034302	Coding	chr19:44699150 plus strand	1560144
CEACAM18	NM_001278392	NP_001265321	Coding	chr19:51478642 plus strand	1560145
CEACAM19	NM_001127893	NP_001121365	Coding	chr19:44671451 plus strand	1560146
CEACAM19	NM_020219	NP_064604	Coding	chr19:44671451 plus strand	1560146
CEACAM20	NM_001102597	NP_001096067	Coding	chr19:44529525 minus strand	1560147
CEACAM20	NM_001102598	NP_001096068	Coding	chr19:44529525 minus strand	1560147
CEACAM20	NM_001102599	NP_001096069	Coding	chr19:44529525 minus strand	1560147
CEACAM20	NM_001102600	NP_001096070	Coding	chr19:44529525 minus strand	1560147
CEACAM21	NM_001098506	NP_001091976	Coding	chr19:41576178 plus strand	1560148
CEACAM21	NM_001288773	NP_001275702	Coding	chr19:41549517 plus strand	1560149
CEACAM21	NM_001290113	NP_001277042	Coding	chr19:41576178 plus strand	1560148
CEACAM21	NM_033543	NP_291021	Coding	chr19:41576178 plus strand	1560148
CEACAM3	NM_001277163	NP_001264092	Coding	chr19:41796589 plus strand	1560150
CEACAM3	NM_001815	NP_001806	Coding	chr19:41796589 plus strand	1560150
CEACAM4	NM_001817	NP_001808	Coding	chr19:41627074 minus strand	1560151
CEACAM5	NM_001291484	NP_001278413	Coding	chr19:41708610 plus strand	1560152
CEACAM5	NM_004363	NP_004354	Coding	chr19:41708610 plus strand	1560152
CEACAM6	NM_002483	NP_002474	Coding	chr19:41755519 plus strand	1560153
CEACAM7	NM_001291485	NP_001278414	Coding	chr19:41688277 minus strand	1560154
CEACAM7	NM_006890	NP_008821	Coding	chr19:41688277 minus strand	1560154
CEACAM8	NM_001816	NP_001807	Coding	chr19:42594930 minus strand	1560155
CEBPG	NM_001252296	NP_001239225	Coding	chr19:33374523 plus strand	1560156
CEBPG	NM_001806	NP_001797	Coding	chr19:33373668 plus strand	1560157
CELF5	NM_001172673	NP_001166144	Coding	chr19:3224703 plus strand	1560158
CELF5	NM_021938	NP_068757	Coding	chr19:3224702 plus strand	1560159
CEP89	NM_032816	NP_116205	Coding	chr19:32971963 minus strand	1560160
CERS1	NM_001290265	NP_001277194	Coding	chr19:18896727 minus strand	1560161

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CERS1	NM_021267	NP_067090	Coding	chr19:18896144 minus strand	1560162
CERS1	NM_198207	NP_937850	Coding	chr19:18896144 minus strand	1560162
CERS4	NM_024552	NP_078828	Coding	chr19:8209332 plus strand	1560163
CFD	NM_001928	NP_001919	Coding	chr19:859664 plus strand	1560164
CGB	NM_000737	NP_000728	Coding	chr19:49024375 minus strand	1560165
CGB1	NM_033377	NP_203695	Coding	chr19:49036934 minus strand	1560166
CGB2	NM_033378	NP_203696	Coding	chr19:49031872 plus strand	1560167
CGB5	NM_033043	NP_149032	Coding	chr19:49043844 plus strand	1560168
CGB7	NM_033142	NP_149133	Coding	chr19:49055740 minus strand	1560169
CGB8	NM_033183	NP_149439	Coding	chr19:49049111 minus strand	1560170
CHAF1A	NM_005483	NP_005474	Coding	chr19:4402662 plus strand	1560171
CHERP	NM_006387	NP_006378	Coding	chr19:16542452 minus strand	1560172
CHMP2A	NM_014453	NP_055268	Coding	chr19:58555124 minus strand	1560173
CHMP2A	NM_198426	NP_940818	Coding	chr19:58555003 minus strand	1560174
CHST8	NM_001127895	NP_001121367	Coding	chr19:33621954 plus strand	1560175
CHST8	NM_001127896	NP_001121368	Coding	chr19:33621966 plus strand	1560176
CHST8	NM_022467	NP_071912	Coding	chr19:33684527 plus strand	1560177
CIB3	NM_001300922	NP_001287851	Coding	chr19:16173525 minus strand	1560178
CIB3	NM_054113	NP_473454	Coding	chr19:16173525 minus strand	1560178
CIC	NM_015125	NP_055940	Coding	chr19:42284664 plus strand	1560179
CILP2	NM_153221	NP_694953	Coding	chr19:19538264 plus strand	1560180
CIRBP	NM_001280	NP_001271	Coding	chr19:1269267 plus strand	1560181
CIRBP	NM_001300815	NP_001287744	Coding	chr19:1269265 plus strand	1560182
CIRBP	NM_001300829	NP_001287758	Coding	chr19:1269265 plus strand	1560182
CKM	NM_001824	NP_001815	Coding	chr19:45322977 minus strand	1560183
CLASRP	NM_001278439	NP_001265368	Coding	chr19:45039039 plus strand	1560184
CLASRP	NM_007056	NP_008987	Coding	chr19:45039039 plus strand	1560184
CLC	NM_001828	NP_001819	Coding	chr19:39738029 minus strand	1560185
CLDND2	NM_152353	NP_689566	Coding	chr19:51369003 minus strand	1560186

【1195】

CLEC11A	NM_002975	NP_002966	Coding	chr19:50723347 plus strand	1560187
CLEC17A	NM_001204118	NP_001191047	Coding	chr19:14583083 plus strand	1560188
CLEC17A	NM_207390	NP_997273	Coding	chr19:14583083 plus strand	1560188
CLEC4G	NM_001244856	NP_001231785	Coding	chr19:7732171 minus strand	1560189
CLEC4G	NM_198492	NP_940894	Coding	chr19:7732171 minus strand	1560189
CLEC4M	NM_001144904	NP_001138376	Coding	chr19:7763148 plus strand	1560190
CLEC4M	NM_001144905	NP_001138377	Coding	chr19:7763148 plus strand	1560190
CLEC4M	NM_001144906	NP_001138378	Coding	chr19:7763148 plus strand	1560190
CLEC4M	NM_001144907	NP_001138379	Coding	chr19:7763148 plus strand	1560190
CLEC4M	NM_001144908	NP_001138380	Coding	chr19:7763148 plus strand	1560190
CLEC4M	NM_001144909	NP_001138381	Coding	chr19:7763148 plus strand	1560190
CLEC4M	NM_001144910	NP_001138382	Coding	chr19:7763148 plus strand	1560190
CLEC4M	NM_001144911	NP_001138383	Coding	chr19:7763148 plus strand	1560190
CLEC4M	NM_014257	NP_055072	Coding	chr19:7763148 plus strand	1560190
CLIP3	NM_001199570	NP_001186499	Coding	chr19:36032671 minus strand	1560191
CLIP3	NM_015526	NP_056341	Coding	chr19:36032895 minus strand	1560192
CLPP	NM_006012	NP_006003	Coding	chr19:6361451 plus strand	1560193
CLPTM1	NM_001282175	NP_001269104	Coding	chr19:44954992 plus strand	1560194
CLPTM1	NM_001282176	NP_001269105	Coding	chr19:44954584 plus strand	1560195
CLPTM1	NM_001294	NP_001285	Coding	chr19:44955223 plus strand	1560196
CNFN	NM_032488	NP_115877	Coding	chr19:42390292 minus strand	1560197
CNN1	NM_001299	NP_001290	Coding	chr19:11538763 plus strand	1560198
CNN2	NM_004368	NP_004359	Coding	chr19:1026298 plus strand	1560199
CNN2	NM_201277	NP_958434	Coding	chr19:1026298 plus strand	1560199
CNOT3	NM_014516	NP_055331	Coding	chr19:54137719 plus strand	1560200
CNTD2	NM_024877	NP_079153	Coding	chr19:40226690 minus strand	1560201
COL5A3	NM_015719	NP_056534	Coding	chr19:10010471 minus strand	1560202
COLGALT1	NM_024656	NP_078932	Coding	chr19:17555701 plus strand	1560203
COMP	NM_000095	NP_000086	Coding	chr19:18791305 minus strand	1560204
COPE	NM_007263	NP_009194	Coding	chr19:18919390 minus strand	1560205
COPE	NM_199442	NP_955474	Coding	chr19:18919390 minus strand	1560205

【１１９６】

COPE	NM_199444	NP_955476	Coding	chr19:18919390 minus strand	1560205
COX6B1	NM_001863	NP_001854	Coding	chr19:35648222 plus strand	1560206
COX6B2	NM_144613	NP_653214	Coding	chr19:55354814 minus strand	1560207
COX7A1	NM_001864	NP_001855	Coding	chr19:36152869 minus strand	1560208
CPAMD8	NM_015692	NP_056507	Coding	chr19:17026815 minus strand	1560209
CPT1C	NM_001136052	NP_001129524	Coding	chr19:49691107 plus strand	1560210
CPT1C	NM_001199752	NP_001186681	Coding	chr19:49691107 plus strand	1560210
CPT1C	NM_001199753	NP_001186682	Coding	chr19:49691107 plus strand	1560210
CPT1C	NM_152359	NP_689572	Coding	chr19:49691107 plus strand	1560210
CRB3	NM_139161	NP_631900	Coding	chr19:6464248 plus strand	1560211
CRB3	NM_174881	NP_777377	Coding	chr19:6464248 plus strand	1560211
CREB3L3	NM_001271995	NP_001258924	Coding	chr19:4153600 plus strand	1560212
CREB3L3	NM_001271996	NP_001258925	Coding	chr19:4153600 plus strand	1560212
CREB3L3	NM_001271997	NP_001258926	Coding	chr19:4153600 plus strand	1560212
CREB3L3	NM_032607	NP_115996	Coding	chr19:4153600 plus strand	1560212
CRLF1	NM_004750	NP_004741	Coding	chr19:18606850 minus strand	1560213
CRTC1	NM_001098482	NP_001091952	Coding	chr19:18683614 plus strand	1560214
CRTC1	NM_015321	NP_056136	Coding	chr19:18683614 plus strand	1560214
CRX	NM_000554	NP_000545	Coding	chr19:47821841 plus strand	1560215
CSNK1G2	NM_001319	NP_001310	Coding	chr19:1941161 plus strand	1560216
CTU1	NM_145232	NP_660275	Coding	chr19:51108390 minus strand	1560217
CTXN1	NM_206833	NP_996664	Coding	chr19:7926166 minus strand	1560218
CXCL17	NM_198477	NP_940879	Coding	chr19:42442984 minus strand	1560219
CYP2A13	NM_000766	NP_000757	Coding	chr19:41088450 plus strand	1560220
CYP2A6	NM_000762	NP_000753	Coding	chr19:40850447 minus strand	1560221
CYP2A7	NM_000764	NP_000755	Coding	chr19:40882752 minus strand	1560222
CYP2A7	NM_030589	NP_085079	Coding	chr19:40882752 minus strand	1560222
CYP2B6	NM_000767	NP_000758	Coding	chr19:40991298 plus strand	1560223
CYP2F1	NM_000774	NP_000765	Coding	chr19:41114447 plus strand	1560224
CYP2S1	NM_030622	NP_085125	Coding	chr19:41193209 plus	1560225

【１１９７】

				strand	
CYP4F11	NM_001128932	NP_001122404	Coding	chr19:15934866 minus strand	1560226
CYP4F11	NM_021187	NP_067010	Coding	chr19:15934866 minus strand	1560226
CYP4F12	NM_023944	NP_076433	Coding	chr19:15673017 plus strand	1560227
CYP4F2	NM_001082	NP_001073	Coding	chr19:15898120 minus strand	1560228
CYP4F22	NM_173483	NP_775754	Coding	chr19:15508524 plus strand	1560229
CYP4F3	NM_000896	NP_000887	Coding	chr19:15640896 plus strand	1560230
CYP4F3	NM_001199208	NP_001186137	Coding	chr19:15640896 plus strand	1560230
CYP4F3	NM_001199209	NP_001186138	Coding	chr19:15640896 plus strand	1560230
CYP4F8	NM_007253	NP_009184	Coding	chr19:15615217 plus strand	1560231
CYTH2	NM_004228	NP_004219	Coding	chr19:48469207 plus strand	1560232
CYTH2	NM_017457	NP_059431	Coding	chr19:48469207 plus strand	1560232
DACT3	NM_001301046	NP_001287975	Coding	chr19:46654657 minus strand	1560233
DACT3	NM_145056	NP_659493	Coding	chr19:46661138 minus strand	1560234
DAND5	NM_152654	NP_689867	Coding	chr19:12969617 plus strand	1560235
DAPK3	NM_001348	NP_001339	Coding	chr19:3971123 minus strand	1560236
DAZAP1	NM_018959	NP_061832	Coding	chr19:1407568 plus strand	1560237
DAZAP1	NM_170711	NP_733829	Coding	chr19:1407568 plus strand	1560237
DBP	NM_001352	NP_001343	Coding	chr19:48637550 minus strand	1560238
DCAF15	NM_138353	NP_612362	Coding	chr19:13952506 plus strand	1560239
DDA1	NM_024050	NP_076955	Coding	chr19:17309527 plus strand	1560240
DDX39A	NM_005804	NP_005795	Coding	chr19:14419383 minus strand	1560241
DDX49	NM_019070	NP_061943	Coding	chr19:18919674 plus strand	1560242
DEDD2	NM_001270614	NP_001257543	Coding	chr19:42220152 minus strand	1560243
DEDD2	NM_001270615	NP_001257544	Coding	chr19:42217792 minus strand	1560244
DEDD2	NM_133328	NP_579874	Coding	chr19:42217792 minus strand	1560244
DENND1C	NM_001290331	NP_001277260	Coding	chr19:6481808 minus strand	1560245
DENND1C	NM_024898	NP_079174	Coding	chr19:6481808 minus strand	1560245

【１１９８】

DHDH	NM_014475	NP_055290	Coding	chr19:48933681 plus strand	1560246
DHPS	NM_001206974	NP_001193903	Coding	chr19:12681211 minus strand	1560247
DHPS	NM_001930	NP_001921	Coding	chr19:12681887 minus strand	1560248
DHPS	NM_013406	NP_037538	Coding	chr19:12681887 minus strand	1560248
DHX34	NM_014681	NP_055496	Coding	chr19:47349280 plus strand	1560249
DIRAS1	NM_145173	NP_660156	Coding	chr19:2721392 minus strand	1560250
DKKL1	NM_001197301	NP_001184230	Coding	chr19:49363784 plus strand	1560251
DKKL1	NM_001197302	NP_001184231	Coding	chr19:49363729 plus strand	1560252
DKKL1	NM_014419	NP_055234	Coding	chr19:49363784 plus strand	1560251
DLL3	NM_016941	NP_058637	Coding	chr19:39498916 plus strand	1560253
DLL3	NM_203486	NP_982353	Coding	chr19:39498916 plus strand	1560253
DMKN	NM_001035516	NP_001030593	Coding	chr19:35501911 minus strand	1560254
DMKN	NM_001126056	NP_001119528	Coding	chr19:35513658 minus strand	1560255
DMKN	NM_001126057	NP_001119529	Coding	chr19:35513658 minus strand	1560255
DMKN	NM_001126058	NP_001119530	Coding	chr19:35513658 minus strand	1560255
DMKN	NM_001126059	NP_001119531	Coding	chr19:35510489 minus strand	1560256
DMKN	NM_001190347	NP_001177276	Coding	chr19:35513658 minus strand	1560255
DMKN	NM_001190348	NP_001177277	Coding	chr19:35513658 minus strand	1560255
DMKN	NM_001190349	NP_001177278	Coding	chr19:35513658 minus strand	1560255
DMKN	NM_033317	NP_201574	Coding	chr19:35513658 minus strand	1560255
DMPK	NM_001081560	NP_001075029	Coding	chr19:45782557 minus strand	1560257
DMPK	NM_001081562	NP_001075031	Coding	chr19:45782557 minus strand	1560257
DMPK	NM_001081563	NP_001075032	Coding	chr19:45780603 minus strand	1560258
DMPK	NM_001288764	NP_001275693	Coding	chr19:45782557 minus strand	1560257
DMPK	NM_001288765	NP_001275694	Coding	chr19:45779619 minus strand	1560259
DMPK	NM_001288766	NP_001275695	Coding	chr19:45782557 minus strand	1560257
DMPK	NM_004409	NP_004400	Coding	chr19:45782557 minus strand	1560257

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DMRTC2	NM_001040283	NP_001035373	Coding	chr19:41845022 plus strand	1560260
DMWD	NM_004943	NP_004934	Coding	chr19:45792802 minus strand	1560261
DNAAF3	NM_001256714	NP_001243643	Coding	chr19:55166722 minus strand	1560262
DNAAF3	NM_001256715	NP_001243644	Coding	chr19:55166722 minus strand	1560262
DNAAF3	NM_001256716	NP_001243645	Coding	chr19:55166722 minus strand	1560262
DNAAF3	NM_178837	NP_849159	Coding	chr19:55166722 minus strand	1560262
DNAJB1	NM_001300914	NP_001287843	Coding	chr19:14517862 minus strand	1560263
DNAJB1	NM_006145	NP_006136	Coding	chr19:14518559 minus strand	1560264
DNASE2	NM_001375	NP_001366	Coding	chr19:12881521 minus strand	1560265
DNM2	NM_001005360	NP_001005360	Coding	chr19:10718052 plus strand	1560266
DNM2	NM_001005361	NP_001005361	Coding	chr19:10718052 plus strand	1560266
DNM2	NM_001005362	NP_001005362	Coding	chr19:10718052 plus strand	1560266
DNM2	NM_001190716	NP_001177645	Coding	chr19:10718052 plus strand	1560266
DNM2	NM_004945	NP_004936	Coding	chr19:10718052 plus strand	1560266
DNMT1	NM_001130823	NP_001124295	Coding	chr19:10195079 minus strand	1560267
DNMT1	NM_001379	NP_001370	Coding	chr19:10195079 minus strand	1560267
DOCK6	NM_020812	NP_065863	Coding	chr19:11262492 minus strand	1560268
DOHH	NM_001145165	NP_001138637	Coding	chr19:3500940 minus strand	1560269
DOHH	NM_031304	NP_112594	Coding	chr19:3500623 minus strand	1560270
DOT1L	NM_032482	NP_115871	Coding	chr19:2164148 plus strand	1560271
DPF1	NM_001135155	NP_001128627	Coding	chr19:38224250 minus strand	1560272
DPF1	NM_001135156	NP_001128628	Coding	chr19:38229714 minus strand	1560273
DPF1	NM_001289978	NP_001276907	Coding	chr19:38224250 minus strand	1560272
DPF1	NM_004647	NP_004638	Coding	chr19:38224250 minus strand	1560272
DPP9	NM_139159	NP_631898	Coding	chr19:4723843 minus strand	1560274
DPP9-AS1	NM_001242901	NP_001229830	Coding	chr19:4679281 plus strand	1560275
DPRX	NM_001012728	NP_001012746	Coding	chr19:53632055 plus strand	1560276
DPY19L3	NM_001172774	NP_001166245	Coding	chr19:32405748 plus strand	1560277

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DPY19L3	NM_207325	NP_997208	Coding	chr19:32406115 plus strand	1560278
DUS3L	NM_001161619	NP_001155091	Coding	chr19:5791238 minus strand	1560279
DUS3L	NM_020175	NP_064560	Coding	chr19:5791238 minus strand	1560279
DUXA	NM_001012729	NP_001012747	Coding	chr19:57167488 minus strand	1560280
DYRK1B	NM_004714	NP_004705	Coding	chr19:39834233 minus strand	1560281
DYRK1B	NM_006483	NP_006474	Coding	chr19:39834233 minus strand	1560281
DYRK1B	NM_006484	NP_006475	Coding	chr19:39834233 minus strand	1560281
EBI3	NM_005755	NP_005746	Coding	chr19:4229542 plus strand	1560282
ECH1	NM_001398	NP_001389	Coding	chr19:38831857 minus strand	1560283
ECSIT	NM_001142464	NP_001135936	Coding	chr19:11529172 minus strand	1560284
ECSIT	NM_001142465	NP_001135937	Coding	chr19:11529172 minus strand	1560284
ECSIT	NM_001243204	NP_001230133	Coding	chr19:11528865 minus strand	1560285
ECSIT	NM_016581	NP_057665	Coding	chr19:11529172 minus strand	1560284
EEF2	NM_001961	NP_001952	Coding	chr19:3985463 minus strand	1560286
EFNA2	NM_001405	NP_001396	Coding	chr19:1286153 plus strand	1560287
EGLN2	NM_053046	NP_444274	Coding	chr19:40799428 plus strand	1560288
EGLN2	NM_080732	NP_542770	Coding	chr19:40799142 plus strand	1560289
EHD2	NM_014601	NP_055416	Coding	chr19:47713343 plus strand	1560290
EID2	NM_153232	NP_694964	Coding	chr19:39540198 minus strand	1560291
EID2B	NM_152361	NP_689574	Coding	chr19:39532854 minus strand	1560292
EIF3G	NM_003755	NP_003746	Coding	chr19:10119923 minus strand	1560293
EIF3K	NM_001300992	NP_001287921	Coding	chr19:38619073 plus strand	1560294
EIF3K	NM_013234	NP_037366	Coding	chr19:38619073 plus strand	1560294
ELANE	NM_001972	NP_001963	Coding	chr19:852290 plus strand	1560295
ELAVL1	NM_001419	NP_001410	Coding	chr19:8005645 minus strand	1560296
ELAVL3	NM_001420	NP_001411	Coding	chr19:11480988 minus strand	1560297
ELAVL3	NM_032281	NP_115657	Coding	chr19:11480988 minus strand	1560297
ELL	NM_006532	NP_006523	Coding	chr19:18522127 minus strand	1560298

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ELOF1	NM_032377	NP_115753	Coding	chr19:11559236 minus strand	1560299
ELSPBP1	NM_022142	NP_071425	Coding	chr19:47994650 plus strand	1560300
EMC10	NM_175063	NP_778233	Coding	chr19:50476476 plus strand	1560301
EMC10	NM_206538	NP_996261	Coding	chr19:50476476 plus strand	1560301
EML2	NM_001193268	NP_001180197	Coding	chr19:45645517 minus strand	1560302
EML2	NM_001193269	NP_001180198	Coding	chr19:45643727 minus strand	1560303
EML2	NM_012155	NP_036287	Coding	chr19:45639417 minus strand	1560304
EMP3	NM_001425	NP_001416	Coding	chr19:48325371 plus strand	1560305
EMR1	NM_001256252	NP_001243181	Coding	chr19:6887548 plus strand	1560306
EMR1	NM_001256253	NP_001243182	Coding	chr19:6887548 plus strand	1560306
EMR1	NM_001256254	NP_001243183	Coding	chr19:6887548 plus strand	1560306
EMR1	NM_001256255	NP_001243184	Coding	chr19:6887548 plus strand	1560306
EMR1	NM_001974	NP_001965	Coding	chr19:6887548 plus strand	1560306
EMR2	NM_001271052	NP_001257981	Coding	chr19:14776927 minus strand	1560307
EMR2	NM_013447	NP_038475	Coding	chr19:14778541 minus strand	1560308
EMR3	NM_001289158	NP_001276087	Coding	chr19:14674918 minus strand	1560309
EMR3	NM_001289159	NP_001276088	Coding	chr19:14674918 minus strand	1560309
EMR3	NM_032571	NP_115960	Coding	chr19:14674918 minus strand	1560309
EPHX3	NM_001142886	NP_001136358	Coding	chr19:15233047 minus strand	1560310
EPHX3	NM_024794	NP_079070	Coding	chr19:15232420 minus strand	1560311
EPN1	NM_001130071	NP_001123543	Coding	chr19:55676624 plus strand	1560312
EPN1	NM_001130072	NP_001123544	Coding	chr19:55675194 plus strand	1560313
EPN1	NM_013333	NP_037465	Coding	chr19:55675194 plus strand	1560313
EPOR	NM_000121	NP_000112	Coding	chr19:11384342 minus strand	1560314
EPS15L1	NM_001258374	NP_001245303	Coding	chr19:16472012 minus strand	1560315
EPS15L1	NM_001258375	NP_001245304	Coding	chr19:16472012 minus strand	1560315
EPS15L1	NM_001258376	NP_001245305	Coding	chr19:16472012 minus strand	1560315
EPS15L1	NM_021235	NP_067058	Coding	chr19:16472012 minus strand	1560315
EPS8L1	NM_017729	NP_060199	Coding	chr19:55080391 plus strand	1560316

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EPS8L1	NM_133180	NP_573441	Coding	chr19:55075852 plus strand	1560317
ERCC1	NM_001166049	NP_001159521	Coding	chr19:45423919 minus strand	1560318
ERCC1	NM_001983	NP_001974	Coding	chr19:45423919 minus strand	1560318
ERCC1	NM_202001	NP_973730	Coding	chr19:45423562 minus strand	1560319
ERCC2	NM_000400	NP_000391	Coding	chr19:45370587 minus strand	1560320
ERCC2	NM_001130867	NP_001124339	Coding	chr19:45370587 minus strand	1560320
ERF	NM_001301035	NP_001287964	Coding	chr19:42254635 minus strand	1560321
ERF	NM_006494	NP_006485	Coding	chr19:42255164 minus strand	1560322
ERICH4	NM_001130514	NP_001123986	Coding	chr19:41443157 plus strand	1560323
ERVV-1	NM_152473	NP_689686	Coding	chr19:53014090 plus strand	1560324
ERVV-2	NM_001191055	NP_001177984	Coding	chr19:53044737 plus strand	1560325
ETFB	NM_001014763	NP_001014763	Coding	chr19:51354842 minus strand	1560326
ETFB	NM_001985	NP_001976	Coding	chr19:51366418 minus strand	1560327
ETHE1	NM_014297	NP_055112	Coding	chr19:43527244 minus strand	1560328
ETV2	NM_001300974	NP_001287903	Coding	chr19:35641736 plus strand	1560329
ETV2	NM_014209	NP_055024	Coding	chr19:35641736 plus strand	1560329
EVI5L	NM_001159944	NP_001153416	Coding	chr19:7846499 plus strand	1560330
EVI5L	NM_145245	NP_660288	Coding	chr19:7830274 plus strand	1560331
EXOC3L2	NM_138568	NP_612635	Coding	chr19:45234211 minus strand	1560332
EXOSC5	NM_020158	NP_064543	Coding	chr19:41397351 minus strand	1560333
F2RL3	NM_003950	NP_003941	Coding	chr19:16889014 plus strand	1560334
FAM129C	NM_001098524	NP_001091994	Coding	chr19:17523300 plus strand	1560335
FAM129C	NM_173544	NP_775815	Coding	chr19:17523300 plus strand	1560335
FAM187B	NM_152481	NP_689694	Coding	chr19:35228725 minus strand	1560336
FAM32A	NM_014077	NP_054796	Coding	chr19:16185423 plus strand	1560337
FAM71E1	NM_138411	NP_612420	Coding	chr19:50476746 minus strand	1560338
FAM71E2	NM_001145402	NP_001138874	Coding	chr19:55363252 minus strand	1560339
FAM83E	NM_017708	NP_060178	Coding	chr19:48613437 minus strand	1560340

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FAM98C	NM_174905	NP_777565	Coding	chr19:38403134 plus strand	1560341
FARSA	NM_004461	NP_004452	Coding	chr19:12933744 minus strand	1560342
FBL	NM_001436	NP_001427	Coding	chr19:39846414 minus strand	1560343
FBN3	NM_032447	NP_115823	Coding	chr19:8147501 minus strand	1560344
FBXL12	NM_017703	NP_060173	Coding	chr19:9819055 minus strand	1560345
FBXO17	NM_024907	NP_079183	Coding	chr19:38975813 minus strand	1560346
FBXO17	NM_148169	NP_680474	Coding	chr19:38952687 minus strand	1560347
FBXO27	NM_178820	NP_849142	Coding	chr19:39032558 minus strand	1560348
FBXO46	NM_001080469	NP_001073938	Coding	chr19:45730893 minus strand	1560349
FBXW9	NM_032301	NP_115677	Coding	chr19:12696641 minus strand	1560350
FCAR	NM_002000	NP_001991	Coding	chr19:54874092 plus strand	1560351
FCAR	NM_133269	NP_579803	Coding	chr19:54874092 plus strand	1560351
FCAR	NM_133271	NP_579805	Coding	chr19:54874092 plus strand	1560351
FCAR	NM_133272	NP_579806	Coding	chr19:54874092 plus strand	1560351
FCAR	NM_133273	NP_579807	Coding	chr19:54874092 plus strand	1560351
FCAR	NM_133274	NP_579808	Coding	chr19:54874092 plus strand	1560351
FCAR	NM_133277	NP_579811	Coding	chr19:54874092 plus strand	1560351
FCAR	NM_133278	NP_579812	Coding	chr19:54874092 plus strand	1560351
FCAR	NM_133279	NP_579813	Coding	chr19:54874092 plus strand	1560351
FCER2	NM_001207019	NP_001193948	Coding	chr19:7699479 minus strand	1560352
FCER2	NM_001220500	NP_001207429	Coding	chr19:7702146 minus strand	1560353
FCER2	NM_002002	NP_001993	Coding	chr19:7702146 minus strand	1560353
FCGBP	NM_003890	NP_003881	Coding	chr19:39934626 minus strand	1560354
FCGRT	NM_001136019	NP_001129491	Coding	chr19:49512278 plus strand	1560355
FCGRT	NM_004107	NP_004098	Coding	chr19:49513178 plus strand	1560356
FCHO1	NM_001161357	NP_001154829	Coding	chr19:17747717 plus strand	1560357
FCHO1	NM_001161358	NP_001154830	Coding	chr19:17747717 plus strand	1560357

【１２０４】

FCHO1	NM_001161359	NP_001154831	Coding	chr19:17751476 plus strand	1560358
FCHO1	NM_015122	NP_055937	Coding	chr19:17751476 plus strand	1560358
FDX1L	NM_001031734	NP_001026904	Coding	chr19:10316015 minus strand	1560359
FEM1A	NM_018708	NP_061178	Coding	chr19:4791715 plus strand	1560360
FFAR1	NM_005303	NP_005294	Coding	chr19:35351541 plus strand	1560361
FFAR2	NM_005306	NP_005297	Coding	chr19:35449714 plus strand	1560362
FFAR3	NM_005304	NP_005295	Coding	chr19:35358585 plus strand	1560363
FGF21	NM_019113	NP_061986	Coding	chr19:48756086 plus strand	1560364
FGF22	NM_001300812	NP_001287741	Coding	chr19:639894 plus strand	1560365
FGF22	NM_020637	NP_065688	Coding	chr19:639925 plus strand	1560366
FIZ1	NM_032836	NP_116225	Coding	chr19:55599527 minus strand	1560367
FKBP8	NM_012181	NP_036313	Coding	chr19:18543573 minus strand	1560368
FKRP	NM_001039885	NP_001034974	Coding	chr19:46746045 plus strand	1560369
FKRP	NM_024301	NP_077277	Coding	chr19:46746045 plus strand	1560369
FLT3LG	NM_001204502	NP_001191431	Coding	chr19:49474208 plus strand	1560370
FLT3LG	NM_001204503	NP_001191432	Coding	chr19:49474560 plus strand	1560371
FLT3LG	NM_001278637	NP_001265566	Coding	chr19:49474208 plus strand	1560370
FLT3LG	NM_001278638	NP_001265567	Coding	chr19:49474208 plus strand	1560370
FLT3LG	NM_001459	NP_001450	Coding	chr19:49474208 plus strand	1560370
FOSB	NM_001114171	NP_001107643	Coding	chr19:45467994 plus strand	1560372
FOSB	NM_006732	NP_006723	Coding	chr19:45467994 plus strand	1560372
FOXA3	NM_004497	NP_004488	Coding	chr19:45864259 plus strand	1560373
FPR1	NM_001193306	NP_001180235	Coding	chr19:51751897 minus strand	1560374
FPR1	NM_002029	NP_002020	Coding	chr19:51751897 minus strand	1560374
FPR2	NM_001005738	NP_001005738	Coding	chr19:51761199 plus strand	1560375
FPR2	NM_001462	NP_001453	Coding	chr19:51763388 plus strand	1560376
FPR3	NM_002030	NP_002021	Coding	chr19:51795157 plus strand	1560377
FSD1	NM_024333	NP_077309	Coding	chr19:4304593 plus strand	1560378
FSTL3	NM_005860	NP_005851	Coding	chr19:676388 plus strand	1560379

【１２０５】

FTL	NM_000146	NP_000137	Coding	chr19:48965308 plus strand	1560380
FUT1	NM_000148	NP_000139	Coding	chr19:48755390 minus strand	1560381
FUT2	NM_000511	NP_000502	Coding	chr19:48695970 plus strand	1560382
FUT2	NM_001097638	NP_001091107	Coding	chr19:48695970 plus strand	1560382
FUT3	NM_000149	NP_000140	Coding	chr19:5851474 minus strand	1560383
FUT3	NM_001097639	NP_001091108	Coding	chr19:5851474 minus strand	1560383
FUT3	NM_001097640	NP_001091109	Coding	chr19:5851474 minus strand	1560383
FUT3	NM_001097641	NP_001091110	Coding	chr19:5851474 minus strand	1560383
FUT5	NM_002034	NP_002025	Coding	chr19:5870540 minus strand	1560384
FUT6	NM_000150	NP_000141	Coding	chr19:5839731 minus strand	1560385
FUT6	NM_001040701	NP_001035791	Coding	chr19:5839731 minus strand	1560385
FUZ	NM_001171937	NP_001165408	Coding	chr19:49813310 minus strand	1560386
FUZ	NM_025129	NP_079405	Coding	chr19:49813310 minus strand	1560386
FXYD1	NM_001278717	NP_001265646	Coding	chr19:35138992 plus strand	1560387
FXYD1	NM_001278718	NP_001265647	Coding	chr19:35139633 plus strand	1560388
FXYD1	NM_005031	NP_005022	Coding	chr19:35139458 plus strand	1560389
FXYD1	NM_021902	NP_068702	Coding	chr19:35138788 plus strand	1560390
FXYD3	NM_001136007	NP_001129479	Coding	chr19:35115827 plus strand	1560391
FXYD3	NM_001136008	NP_001129480	Coding	chr19:35115827 plus strand	1560391
FXYD3	NM_001136009	NP_001129481	Coding	chr19:35115827 plus strand	1560391
FXYD3	NM_001136010	NP_001129482	Coding	chr19:35115827 plus strand	1560391
FXYD3	NM_001136011	NP_001129483	Coding	chr19:35115827 plus strand	1560391
FXYD3	NM_001136012	NP_001129484	Coding	chr19:35115827 plus strand	1560391
FXYD3	NM_005971	NP_005962	Coding	chr19:35115827 plus strand	1560391
FXYD3	NM_021910	NP_068710	Coding	chr19:35115827 plus strand	1560391
FXYD5	NM_001164605	NP_001158077	Coding	chr19:35154941 plus strand	1560392
FXYD5	NM_014164	NP_054883	Coding	chr19:35154721 plus strand	1560393

【１２０６】

FXYD5	NM_144779	NP_659003	Coding	chr19:35154768 plus strand	1560394
FXYD7	NM_022006	NP_071289	Coding	chr19:35143249 plus strand	1560395
FZR1	NM_001136197	NP_001129669	Coding	chr19:3522955 plus strand	1560396
FZR1	NM_001136198	NP_001129670	Coding	chr19:3522955 plus strand	1560396
FZR1	NM_016263	NP_057347	Coding	chr19:3506296 plus strand	1560397
GADD45B	NM_015675	NP_056490	Coding	chr19:2476124 plus strand	1560398
GADD45GIP1	NM_052850	NP_443082	Coding	chr19:12957254 minus strand	1560399
GALP	NM_001145546	NP_001139018	Coding	chr19:56176019 plus strand	1560400
GALP	NM_033106	NP_149097	Coding	chr19:56176019 plus strand	1560400
GAMT	NM_000156	NP_000147	Coding	chr19:1401570 minus strand	1560401
GAMT	NM_138924	NP_620279	Coding	chr19:1401570 minus strand	1560401
GAPDHS	NM_014364	NP_055179	Coding	chr19:35533411 plus strand	1560402
GATAD2A	NM_001300946	NP_001287875	Coding	chr19:19465339 plus strand	1560403
GATAD2A	NM_017660	NP_060130	Coding	chr19:19385832 plus strand	1560404
GCDH	NM_000159	NP_000150	Coding	chr19:12891128 plus strand	1560405
GCDH	NM_013976	NP_039663	Coding	chr19:12891128 plus strand	1560405
GDF1	NM_001492	NP_001483	Coding	chr19:18896144 minus strand	1560406
GDF15	NM_004864	NP_004855	Coding	chr19:18386157 plus strand	1560407
GEMIN7	NM_001007269	NP_001007270	Coding	chr19:45079271 plus strand	1560408
GEMIN7	NM_001007270	NP_001007271	Coding	chr19:45079259 plus strand	1560409
GEMIN7	NM_024707	NP_078983	Coding	chr19:45079271 plus strand	1560408
GFY	NM_001195256	NP_001182185	Coding	chr19:49426430 plus strand	1560410
GGN	NM_152657	NP_689870	Coding	chr19:38388028 minus strand	1560411
GIPC1	NM_005716	NP_005707	Coding	chr19:14496149 minus strand	1560412
GIPC1	NM_202468	NP_974197	Coding	chr19:14496149 minus strand	1560412
GIPC1	NM_202469	NP_974198	Coding	chr19:14496149 minus strand	1560412
GIPC1	NM_202470	NP_974199	Coding	chr19:14496149 minus strand	1560412
GIPC1	NM_202494	NP_974223	Coding	chr19:14496149 minus strand	1560412
GIPC3	NM_133261	NP_573568	Coding	chr19:3585570 plus strand	1560413

【１２０７】

GIPR	NM_000164	NP_000155	Coding	chr19:45668243 plus strand	1560414
GLTSCR1	NM_015711	NP_056526	Coding	chr19:47608195 plus strand	1560415
GLTSCR2	NM_015710	NP_056525	Coding	chr19:47745535 plus strand	1560416
GMFG	NM_001301008	NP_001287937	Coding	chr19:39336086 minus strand	1560417
GMFG	NM_004877	NP_004868	Coding	chr19:39336086 minus strand	1560417
GMIP	NM_001288998	NP_001275927	Coding	chr19:19643667 minus strand	1560418
GMIP	NM_001288999	NP_001275928	Coding	chr19:19643667 minus strand	1560418
GMIP	NM_016573	NP_057657	Coding	chr19:19643667 minus strand	1560418
GNA11	NM_002067	NP_002058	Coding	chr19:3094409 plus strand	1560419
GNA15	NM_002068	NP_002059	Coding	chr19:3136031 plus strand	1560420
GNG7	NM_052847	NP_443079	Coding	chr19:2702748 minus strand	1560421
GNG8	NM_033258	NP_150283	Coding	chr19:46634682 minus strand	1560422
GP6	NM_001083899	NP_001077368	Coding	chr19:55038264 minus strand	1560423
GP6	NM_001256017	NP_001242946	Coding	chr19:55038264 minus strand	1560423
GP6	NM_016363	NP_057447	Coding	chr19:55038264 minus strand	1560423
GPATCH1	NM_018025	NP_060495	Coding	chr19:33080879 plus strand	1560424
GPI	NM_000175	NP_000166	Coding	chr19:34365126 plus strand	1560425
GPI	NM_001184722	NP_001171651	Coding	chr19:34364739 plus strand	1560426
GPI	NM_001289789	NP_001276718	Coding	chr19:34364739 plus strand	1560426
GPI	NM_001289790	NP_001276719	Coding	chr19:34365126 plus strand	1560425
GPR108	NM_001080452	NP_001073921	Coding	chr19:6737622 minus strand	1560427
GPR32	NM_001506	NP_001497	Coding	chr19:50770463 plus strand	1560428
GPR4	NM_005282	NP_005273	Coding	chr19:45602208 minus strand	1560429
GPX4	NM_001039847	NP_001034936	Coding	chr19:1103925 plus strand	1560430
GPX4	NM_001039848	NP_001034937	Coding	chr19:1104649 plus strand	1560431
GPX4	NM_002085	NP_002076	Coding	chr19:1103925 plus strand	1560430
GRAMD1A	NM_001136199	NP_001129671	Coding	chr19:35000341 plus strand	1560432
GRAMD1A	NM_020895	NP_065946	Coding	chr19:35000341 plus strand	1560432
GRIK5	NM_001301030	NP_001287959	Coding	chr19:42065815 minus strand	1560433

【１２０８】

GRIK5	NM_002088	NP_002079	Coding	chr19:42065805 minus strand	1560434
GRIN2D	NM_000836	NP_000827	Coding	chr19:48394874 plus strand	1560435
GRIN3B	NM_138690	NP_619635	Coding	chr19:1000437 plus strand	1560436
GRWD1	NM_031485	NP_113673	Coding	chr19:48445772 plus strand	1560437
GSK3A	NM_019884	NP_063937	Coding	chr19:42242584 minus strand	1560438
GTF2F1	NM_002096	NP_002087	Coding	chr19:6393280 minus strand	1560439
GTPBP3	NM_001128855	NP_001122327	Coding	chr19:17337516 plus strand	1560440
GTPBP3	NM_001195422	NP_001182351	Coding	chr19:17334981 plus strand	1560441
GTPBP3	NM_032620	NP_116009	Coding	chr19:17337516 plus strand	1560440
GTPBP3	NM_133644	NP_598399	Coding	chr19:17337516 plus strand	1560440
GYS1	NM_001161587	NP_001155059	Coding	chr19:48993353 minus strand	1560442
GYS1	NM_002103	NP_002094	Coding	chr19:48993353 minus strand	1560442
GZMM	NM_001258351	NP_001245280	Coding	chr19:544033 plus strand	1560443
GZMM	NM_005317	NP_005308	Coding	chr19:544033 plus strand	1560443
HAMP	NM_021175	NP_066998	Coding	chr19:35282506 plus strand	1560444
HAPLN4	NM_023002	NP_075378	Coding	chr19:19262787 minus strand	1560445
HAS1	NM_001297436	NP_001284365	Coding	chr19:51723992 minus strand	1560446
HAS1	NM_001523	NP_001514	Coding	chr19:51723992 minus strand	1560446
HAUS5	NM_015302	NP_056117	Coding	chr19:35612743 plus strand	1560447
HAUS8	NM_001011699	NP_001011699	Coding	chr19:17075533 minus strand	1560448
HAUS8	NM_033417	NP_219485	Coding	chr19:17075533 minus strand	1560448
HCN2	NM_001194	NP_001185	Coding	chr19:589892 plus strand	1560449
HCST	NM_001007469	NP_001007470	Coding	chr19:35902479 plus strand	1560450
HCST	NM_014266	NP_055081	Coding	chr19:35902479 plus strand	1560450
HDGFRP2	NM_001001520	NP_001001520	Coding	chr19:4472195 plus strand	1560451
HDGFRP2	NM_032631	NP_116020	Coding	chr19:4472195 plus strand	1560451
HIF3A	NM_022462	NP_071907	Coding	chr19:46298375 plus strand	1560452
HIF3A	NM_152794	NP_690007	Coding	chr19:46303598 plus strand	1560453
HIF3A	NM_152795	NP_690008	Coding	chr19:46297045 plus strand	1560454

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HIF3A	NM_152796	NP_690009	Coding	chr19:46298375 plus strand	1560452
HIPK4	NM_144685	NP_653286	Coding	chr19:40390221 minus strand	1560455
HKR1	NM_181786	NP_861451	Coding	chr19:37334677 plus strand	1560456
HMG20B	NM_006339	NP_006330	Coding	chr19:3572944 plus strand	1560457
HMHA1	NM_001258328	NP_001245257	Coding	chr19:1065922 plus strand	1560458
HMHA1	NM_001282334	NP_001269263	Coding	chr19:1076633 plus strand	1560459
HMHA1	NM_001282335	NP_001269264	Coding	chr19:1071220 plus strand	1560460
HMHA1	NM_012292	NP_036424	Coding	chr19:1067165 plus strand	1560461
HNRNPL	NM_001005335	NP_001005335	Coding	chr19:38852339 minus strand	1560462
HNRNPL	NM_001533	NP_001524	Coding	chr19:38849977 minus strand	1560463
HNRNPM	NM_001297418	NP_001284347	Coding	chr19:8444827 plus strand	1560464
HNRNPM	NM_005968	NP_005959	Coding	chr19:8444918 plus strand	1560465
HNRNPM	NM_031203	NP_112480	Coding	chr19:8444918 plus strand	1560465
HNRNPUL1	NM_007040	NP_008971	Coding	chr19:41264321 plus strand	1560466
HNRNPUL1	NM_144732	NP_653333	Coding	chr19:41262475 plus strand	1560467
HOMER3	NM_001145721	NP_001139193	Coding	chr19:18940352 minus strand	1560468
HOMER3	NM_001145722	NP_001139194	Coding	chr19:18940304 minus strand	1560469
HOMER3	NM_001145724	NP_001139196	Coding	chr19:18939049 minus strand	1560470
HOMER3	NM_004838	NP_004829	Coding	chr19:18941232 minus strand	1560471
HOOK2	NM_001100176	NP_001093646	Coding	chr19:12775620 minus strand	1560472
HOOK2	NM_013312	NP_037444	Coding	chr19:12775620 minus strand	1560472
HPN	NM_002151	NP_002142	Coding	chr19:35040505 plus strand	1560473
HPN	NM_182983	NP_892028	Coding	chr19:35040505 plus strand	1560473
HRC	NM_002152	NP_002143	Coding	chr19:49155424 minus strand	1560474
HSD11B1L	NM_001267868	NP_001254797	Coding	chr19:5680764 plus strand	1560475
HSD11B1L	NM_001267869	NP_001254798	Coding	chr19:5680764 plus strand	1560475
HSD11B1L	NM_001267870	NP_001254799	Coding	chr19:5680764 plus strand	1560475
HSD11B1L	NM_001267871	NP_001254800	Coding	chr19:5680764 plus strand	1560475
HSD11B1L	NM_198533	NP_940935	Coding	chr19:5680764 plus strand	1560475
HSD11B1L	NM_198704	NP_941993	Coding	chr19:5680764 plus strand	1560475
HSD11B1L	NM_198705	NP_941994	Coding	chr19:5680764 plus strand	1560475
HSD11B1L	NM_198706	NP_941995	Coding	chr19:5680764 plus strand	1560475
HSD11B1L	NM_198707	NP_941996	Coding	chr19:5680764 plus strand	1560475

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HSD11B1L	NM_198708	NP_941997	Coding	chr19:5680764 plus strand	1560475
HSD17B14	NM_016246	NP_057330	Coding	chr19:48836677 minus strand	1560476
HSH2D	NM_001291274	NP_001278203	Coding	chr19:16134027 plus strand	1560477
HSH2D	NM_032855	NP_116244	Coding	chr19:16134027 plus strand	1560477
HSPB6	NM_144617	NP_653218	Coding	chr19:35757029 minus strand	1560478
HSPBP1	NM_001130106	NP_001123578	Coding	chr19:55280383 minus strand	1560479
HSPBP1	NM_001297600	NP_001284529	Coding	chr19:55279857 minus strand	1560480
HSPBP1	NM_012267	NP_036399	Coding	chr19:55280383 minus strand	1560479
ICAM1	NM_000201	NP_000192	Coding	chr19:10270840 plus strand	1560481
ICAM3	NM_002162	NP_002153	Coding	chr19:10339669 minus strand	1560482
ICAM4	NM_001039132	NP_001034221	Coding	chr19:10286966 plus strand	1560483
ICAM4	NM_001544	NP_001535	Coding	chr19:10286966 plus strand	1560483
ICAM4	NM_022377	NP_071772	Coding	chr19:10286966 plus strand	1560483
ICAM5	NM_003259	NP_003250	Coding	chr19:10289978 plus strand	1560484
IER2	NM_004907	NP_004898	Coding	chr19:13150467 plus strand	1560485
IFI30	NM_006332	NP_006323	Coding	chr19:18173779 plus strand	1560486
IFNL1	NM_172140	NP_742152	Coding	chr19:39296324 plus strand	1560487
IFNL2	NM_172138	NP_742150	Coding	chr19:39268516 plus strand	1560488
IFNL3	NM_172139	NP_742151	Coding	chr19:39244971 minus strand	1560489
IFNL4	NM_001276254	NP_001263183	Coding	chr19:39248856 minus strand	1560490
IGFL1	NM_198541	NP_940943	Coding	chr19:46229751 plus strand	1560491
IGFL2	NM_001002915	NP_001002915	Coding	chr19:46147781 plus strand	1560492
IGFL2	NM_001135113	NP_001128585	Coding	chr19:46148242 plus strand	1560493
IGFL3	NM_207393	NP_997276	Coding	chr19:46124674 minus strand	1560494
IGFL4	NM_001002923	NP_001002923	Coding	chr19:46041016 minus strand	1560495
IGFLR1	NM_024660	NP_078936	Coding	chr19:35742450 minus strand	1560496
IGLON5	NM_001101372	NP_001094842	Coding	chr19:51311847 plus strand	1560497
IGSF23	NM_001205280	NP_001192209	Coding	chr19:44613629 plus	1560498

【１２１１】

				strand	
IL11	NM_000641	NP_000632	Coding	chr19:55370463 minus strand	1560499
IL11	NM_001267718	NP_001254647	Coding	chr19:55370463 minus strand	1560499
IL12RB1	NM_001290023	NP_001276952	Coding	chr19:18087003 minus strand	1560500
IL12RB1	NM_001290024	NP_001276953	Coding	chr19:18098816 minus strand	1560501
IL12RB1	NM_005535	NP_005526	Coding	chr19:18087003 minus strand	1560500
IL12RB1	NM_153701	NP_714912	Coding	chr19:18087003 minus strand	1560500
IL27RA	NM_004843	NP_004834	Coding	chr19:14031739 plus strand	1560502
IL4I1	NM_001258017	NP_001244946	Coding	chr19:49929539 minus strand	1560503
IL4I1	NM_001258018	NP_001244947	Coding	chr19:49929539 minus strand	1560503
IL4I1	NM_152899	NP_690863	Coding	chr19:49896890 minus strand	1560504
IL4I1	NM_172374	NP_758962	Coding	chr19:49929539 minus strand	1560503
ILF3	NM_001137673	NP_001131145	Coding	chr19:10654260 plus strand	1560505
ILF3	NM_004516	NP_004507	Coding	chr19:10654260 plus strand	1560505
ILF3	NM_012218	NP_036350	Coding	chr19:10654260 plus strand	1560505
ILF3	NM_017620	NP_060090	Coding	chr19:10654260 plus strand	1560505
ILF3	NM_153464	NP_703194	Coding	chr19:10654260 plus strand	1560505
ILVBL	NM_006844	NP_006835	Coding	chr19:15125799 minus strand	1560506
INAFM1	NM_178511	NP_848606	Coding	chr19:47274884 plus strand	1560507
INSL3	NM_001265587	NP_001252516	Coding	chr19:17821574 minus strand	1560508
INSL3	NM_005543	NP_005534	Coding	chr19:17821574 minus strand	1560508
INSR	NM_000208	NP_000199	Coding	chr19:7294000 minus strand	1560509
INSR	NM_001079817	NP_001073285	Coding	chr19:7294000 minus strand	1560509
IRF2BP1	NM_015649	NP_056464	Coding	chr19:45886170 minus strand	1560510
IRF3	NM_001197122	NP_001184051	Coding	chr19:49665875 minus strand	1560511
IRF3	NM_001197123	NP_001184052	Coding	chr19:49665875 minus strand	1560511
IRF3	NM_001197124	NP_001184053	Coding	chr19:49665875 minus strand	1560511
IRF3	NM_001197125	NP_001184054	Coding	chr19:49665875 minus	1560511

【１２１２】

				strand	
IRF3	NM_001197126	NP_001184055	Coding	chr19:49665875 minus strand	1560511
IRF3	NM_001197127	NP_001184056	Coding	chr19:49665875 minus strand	1560511
IRF3	NM_001197128	NP_001184057	Coding	chr19:49665875 minus strand	1560511
IRF3	NM_001571	NP_001562	Coding	chr19:49665875 minus strand	1560511
IRGC	NM_019612	NP_062558	Coding	chr19:43716061 plus strand	1560512
IRGQ	NM_001007561	NP_001007562	Coding	chr19:43596135 minus strand	1560513
ISOC2	NM_001136201	NP_001129673	Coding	chr19:55461682 minus strand	1560514
ISOC2	NM_001136202	NP_001129674	Coding	chr19:55461682 minus strand	1560514
ISOC2	NM_024710	NP_078986	Coding	chr19:55461682 minus strand	1560514
ISYNA1	NM_001170938	NP_001164409	Coding	chr19:18438301 minus strand	1560515
ISYNA1	NM_001253389	NP_001240318	Coding	chr19:18437309 minus strand	1560516
ISYNA1	NM_016368	NP_057452	Coding	chr19:18438301 minus strand	1560515
ITPKC	NM_025194	NP_079470	Coding	chr19:40717102 plus strand	1560517
IZUMO1	NM_182575	NP_872381	Coding	chr19:48746909 minus strand	1560518
IZUMO2	NM_152358	NP_689571	Coding	chr19:50163281 minus strand	1560519
IZUMO4	NM_001031735	NP_001026905	Coding	chr19:2096868 plus strand	1560520
IZUMO4	NM_001039846	NP_001034935	Coding	chr19:2096868 plus strand	1560520
JAK3	NM_000215	NP_000206	Coding	chr19:17848032 minus strand	1560521
JOSD2	NM_001270639	NP_001257568	Coding	chr19:50511355 minus strand	1560522
JOSD2	NM_001270640	NP_001257569	Coding	chr19:50511355 minus strand	1560522
JOSD2	NM_001270641	NP_001257570	Coding	chr19:50511355 minus strand	1560522
JOSD2	NM_001270686	NP_001257615	Coding	chr19:50511159 minus strand	1560523
JOSD2	NM_138334	NP_612207	Coding	chr19:50511159 minus strand	1560523
JSRP1	NM_144616	NP_653217	Coding	chr19:2256423 minus strand	1560524
JUNB	NM_002229	NP_002220	Coding	chr19:12791495 plus strand	1560525
JUND	NM_001286968	NP_001273897	Coding	chr19:18281656 minus strand	1560526
JUND	NM_005354	NP_005345	Coding	chr19:18281656 minus strand	1560526

【１２１３】

KANK2	NM_001136191	NP_001129663	Coding	chr19:11197567 minus strand	1560527
KANK2	NM_015493	NP_056308	Coding	chr19:11194590 minus strand	1560528
KANK3	NM_198471	NP_940873	Coding	chr19:8343262 minus strand	1560529
KCNA7	NM_031886	NP_114092	Coding	chr19:49072941 minus strand	1560530
KCNC3	NM_004977	NP_004968	Coding	chr19:50329377 minus strand	1560531
KCNJ14	NM_013348	NP_037480	Coding	chr19:48455706 plus strand	1560532
KCNK6	NM_004823	NP_004814	Coding	chr19:38319843 plus strand	1560533
KCNN1	NM_002248	NP_002239	Coding	chr19:17951301 plus strand	1560534
KCNN4	NM_002250	NP_002241	Coding	chr19:43781257 minus strand	1560535
KCTD15	NM_001129994	NP_001123466	Coding	chr19:33796845 plus strand	1560536
KCTD15	NM_001129995	NP_001123467	Coding	chr19:33796845 plus strand	1560536
KCTD15	NM_024076	NP_076981	Coding	chr19:33796845 plus strand	1560536
KDELR1	NM_006801	NP_006792	Coding	chr19:48391553 minus strand	1560537
KDM4B	NM_015015	NP_055830	Coding	chr19:4969112 plus strand	1560538
KEAP1	NM_012289	NP_036421	Coding	chr19:10502805 minus strand	1560539
KEAP1	NM_203500	NP_987096	Coding	chr19:10503378 minus strand	1560540
KHSRP	NM_003685	NP_003676	Coding	chr19:6424811 minus strand	1560541
KIAA0355	NM_014686	NP_055501	Coding	chr19:34254550 plus strand	1560542
KIAA1683	NM_001145304	NP_001138776	Coding	chr19:18274509 minus strand	1560543
KIAA1683	NM_001145305	NP_001138777	Coding	chr19:18274509 minus strand	1560543
KIAA1683	NM_025249	NP_079525	Coding	chr19:18274509 minus strand	1560543
KIR2DL1	NM_014218	NP_055033	Coding	chr19:54724458 plus strand	1560544
KIR2DL1	NM_014218	NP_055033	Coding	chr19:54769812 plus strand	1560545
KIR2DL2	NM_014219	NP_055034	Coding	chr19:54738516 plus strand	1560546
KIR2DL3	NM_015868	NP_056952	Coding	chr19:54738508 plus strand	1560547
KIR2DL3	NM_015868	NP_056952	Coding	chr19:54754985 plus strand	1560548
KIR2DL4	NM_001080770	NP_001074239	Coding	chr19:54803611 plus strand	1560549
KIR2DL4	NM_001080772	NP_001074241	Coding	chr19:54803611 plus	1560549

【１２１４】

				strand	
KIR2DL4	NM_002255	NP_002246	Coding	chr19:54803611 plus strand	1560549
KIR2DS1	NM_014512	NP_055327	Coding	chr19:54755009 plus strand	1560550
KIR2DS2	NM_001291695	NP_001278624	Coding	chr19:54738510 plus strand	1560551
KIR2DS2	NM_001291696	NP_001278625	Coding	chr19:54738510 plus strand	1560551
KIR2DS2	NM_001291700	NP_001278629	Coding	chr19:54738510 plus strand	1560551
KIR2DS2	NM_001291701	NP_001278630	Coding	chr19:54738510 plus strand	1560551
KIR2DS2	NM_012312	NP_036444	Coding	chr19:54738510 plus strand	1560551
KIR2DS3	NM_012313	NP_036445	Coding	chr19:54724485 plus strand	1560552
KIR2DS4	NM_001281971	NP_001268900	Coding	chr19:54832675 plus strand	1560553
KIR2DS4	NM_001281972	NP_001268901	Coding	chr19:54735819 plus strand	1560554
KIR2DS4	NM_001281972	NP_001268901	Coding	chr19:54832675 plus strand	1560553
KIR2DS4	NM_012314	NP_036446	Coding	chr19:54832675 plus strand	1560553
KIR2DS5	NM_014513	NP_055328	Coding	chr19:54724463 plus strand	1560555
KIR3DL1	NM_013289	NP_037421	Coding	chr19:54816437 plus strand	1560556
KIR3DL2	NM_001242867	NP_001229796	Coding	chr19:54850442 plus strand	1560557
KIR3DL2	NM_006737	NP_006728	Coding	chr19:54850442 plus strand	1560557
KIR3DL3	NM_153443	NP_703144	Coding	chr19:54724478 plus strand	1560558
KIR3DS1	NM_001083539	NP_001077008	Coding	chr19:54816463 plus strand	1560559
KIR3DS1	NM_001282170	NP_001269099	Coding	chr19:54816463 plus strand	1560559
KIR3DS1	NM_001282171	NP_001269100	Coding	chr19:54816463 plus strand	1560559
KIRREL2	NM_032123	NP_115499	Coding	chr19:35857049 plus strand	1560560
KIRREL2	NM_199179	NP_954648	Coding	chr19:35857049 plus strand	1560560
KIRREL2	NM_199180	NP_954649	Coding	chr19:35856907 plus strand	1560561
KISS1R	NM_032551	NP_115940	Coding	chr19:917341 plus strand	1560562
KLC3	NM_177417	NP_803136	Coding	chr19:45340739 plus strand	1560563
KLF1	NM_006563	NP_006554	Coding	chr19:12887203 minus strand	1560564
KLF16	NM_031918	NP_114124	Coding	chr19:1863565 minus strand	1560565

【１２１５】

KLF2	NM_016270	NP_057354	Coding	chr19:16324839 plus strand	1560566
KLHL26	NM_018316	NP_060786	Coding	chr19:18637027 plus strand	1560567
KLK1	NM_002257	NP_002248	Coding	chr19:50823787 minus strand	1560568
KLK10	NM_001077500	NP_001070968	Coding	chr19:51020175 minus strand	1560569
KLK10	NM_002776	NP_002767	Coding	chr19:51020026 minus strand	1560570
KLK10	NM_145888	NP_665895	Coding	chr19:51019698 minus strand	1560571
KLK11	NM_001136032	NP_001129504	Coding	chr19:51026616 minus strand	1560572
KLK11	NM_001167605	NP_001161077	Coding	chr19:51028034 minus strand	1560573
KLK11	NM_006853	NP_006844	Coding	chr19:51028034 minus strand	1560573
KLK11	NM_144947	NP_659196	Coding	chr19:51027629 minus strand	1560574
KLK12	NM_019598	NP_062544	Coding	chr19:51034892 minus strand	1560575
KLK12	NM_145894	NP_665901	Coding	chr19:51034892 minus strand	1560575
KLK12	NM_145895	NP_665902	Coding	chr19:51034892 minus strand	1560575
KLK13	NM_015596	NP_056411	Coding	chr19:51065110 minus strand	1560576
KLK14	NM_022046	NP_071329	Coding	chr19:51084245 minus strand	1560577
KLK15	NM_001277081	NP_001264010	Coding	chr19:50831523 minus strand	1560578
KLK15	NM_001277082	NP_001264011	Coding	chr19:50831523 minus strand	1560578
KLK15	NM_017509	NP_059979	Coding	chr19:50831523 minus strand	1560578
KLK2	NM_001002231	NP_001002231	Coding	chr19:50873432 plus strand	1560579
KLK2	NM_001256080	NP_001243009	Coding	chr19:50873432 plus strand	1560579
KLK2	NM_005551	NP_005542	Coding	chr19:50873432 plus strand	1560579
KLK3	NM_001030047	NP_001025218	Coding	chr19:50854914 plus strand	1560580
KLK3	NM_001030048	NP_001025219	Coding	chr19:50854914 plus strand	1560580
KLK3	NM_001648	NP_001639	Coding	chr19:50854914 plus strand	1560580
KLK4	NM_001302961	NP_001289890	Coding	chr19:50910738 minus strand	1560581
KLK4	NM_004917	NP_004908	Coding	chr19:50910738 minus strand	1560581
KLK5	NM_001077491	NP_001070959	Coding	chr19:50953088 minus strand	1560582

【１２１６】

KLK5	NM_001077492	NP_001070960	Coding	chr19:50953088 minus strand	1560582
KLK5	NM_012427	NP_036559	Coding	chr19:50953088 minus strand	1560582
KLK6	NM_001012964	NP_001012982	Coding	chr19:50968791 minus strand	1560583
KLK6	NM_001012965	NP_001012983	Coding	chr19:50968791 minus strand	1560583
KLK6	NM_002774	NP_002765	Coding	chr19:50969673 minus strand	1560584
KLK7	NM_001207053	NP_001193982	Coding	chr19:50984064 minus strand	1560585
KLK7	NM_001243126	NP_001230055	Coding	chr19:50984064 minus strand	1560585
KLK7	NM_005046	NP_005037	Coding	chr19:50984064 minus strand	1560585
KLK7	NM_139277	NP_644806	Coding	chr19:50983815 minus strand	1560586
KLK8	NM_001281431	NP_001268360	Coding	chr19:51001702 minus strand	1560587
KLK8	NM_007196	NP_009127	Coding	chr19:51001702 minus strand	1560587
KLK8	NM_144505	NP_653088	Coding	chr19:51001702 minus strand	1560587
KLK8	NM_144506	NP_653089	Coding	chr19:51001702 minus strand	1560587
KLK8	NM_144507	NP_653090	Coding	chr19:51001702 minus strand	1560587
KLK9	NM_012315	NP_036447	Coding	chr19:51009634 minus strand	1560588
KMT2B	NM_014727	NP_055542	Coding	chr19:35718018 plus strand	1560589
KPTN	NM_001291296	NP_001278225	Coding	chr19:47484264 minus strand	1560590
KPTN	NM_007059	NP_008990	Coding	chr19:47484264 minus strand	1560590
KRI1	NM_023008	NP_075384	Coding	chr19:10566026 minus strand	1560591
KRTDAP	NM_001244847	NP_001231776	Coding	chr19:35490531 minus strand	1560592
KRTDAP	NM_207392	NP_997275	Coding	chr19:35490531 minus strand	1560592
KXD1	NM_001171948	NP_001165419	Coding	chr19:18557761 plus strand	1560593
KXD1	NM_001171949	NP_001165420	Coding	chr19:18557761 plus strand	1560593
KXD1	NM_024069	NP_076974	Coding	chr19:18557761 plus strand	1560593
LAIR1	NM_001289023	NP_001275952	Coding	chr19:54365114 minus strand	1560594
LAIR1	NM_001289025	NP_001275954	Coding	chr19:54365114 minus strand	1560594
LAIR1	NM_001289026	NP_001275955	Coding	chr19:54370556 minus strand	1560595

【１２１７】

LAIR1	NM_001289027	NP_001275956	Coding	chr19:54370556 minus strand	1560595
LAIR1	NM_002287	NP_002278	Coding	chr19:54365114 minus strand	1560594
LAIR1	NM_021706	NP_068352	Coding	chr19:54365114 minus strand	1560594
LAIR2	NM_002288	NP_002279	Coding	chr19:54502796 plus strand	1560596
LAIR2	NM_021270	NP_067154	Coding	chr19:54502796 plus strand	1560596
LDLR	NM_000527	NP_000518	Coding	chr19:11089361 plus strand	1560597
LDLR	NM_001195798	NP_001182727	Coding	chr19:11089361 plus strand	1560597
LDLR	NM_001195799	NP_001182728	Coding	chr19:11089361 plus strand	1560597
LDLR	NM_001195800	NP_001182729	Coding	chr19:11089361 plus strand	1560597
LDLR	NM_001195803	NP_001182732	Coding	chr19:11089361 plus strand	1560597
LENG1	NM_024316	NP_077292	Coding	chr19:54159743 minus strand	1560598
LENG8	NM_052925	NP_443157	Coding	chr19:54449161 plus strand	1560599
LENG9	NM_001301782	NP_001288711	Coding	chr19:54463711 minus strand	1560600
LENG9	NM_198988	NP_945339	Coding	chr19:54463711 minus strand	1560600
LEUTX	NM_001143832	NP_001137304	Coding	chr19:39776593 plus strand	1560601
LGALS13	NM_013268	NP_037400	Coding	chr19:39602528 plus strand	1560602
LGALS14	NM_020129	NP_064514	Coding	chr19:39704305 plus strand	1560603
LGALS14	NM_203471	NP_982297	Coding	chr19:39704305 plus strand	1560603
LGALS16	NM_001190441	NP_001177370	Coding	chr19:39655893 plus strand	1560604
LGALS4	NM_006149	NP_006140	Coding	chr19:38813100 minus strand	1560605
LGALS7	NM_002307	NP_002298	Coding	chr19:38773517 minus strand	1560606
LGALS7B	NM_001042507	NP_001035972	Coding	chr19:38789209 plus strand	1560607
LGI4	NM_139284	NP_644813	Coding	chr19:35135274 minus strand	1560608
LHB	NM_000894	NP_000885	Coding	chr19:49017090 minus strand	1560609
LIG1	NM_000234	NP_000225	Coding	chr19:48170603 minus strand	1560610
LIG1	NM_001289063	NP_001275992	Coding	chr19:48170603 minus strand	1560610
LIG1	NM_001289064	NP_001275993	Coding	chr19:48170603 minus strand	1560610

【１２１８】

LILRA1	NM_001278318	NP_001265247	Coding	chr19:54593575 plus strand	1560611
LILRA1	NM_001278319	NP_001265248	Coding	chr19:54594196 plus strand	1560612
LILRA1	NM_006863	NP_006854	Coding	chr19:54593575 plus strand	1560611
LILRA2	NM_001130917	NP_001124389	Coding	chr19:54573830 plus strand	1560613
LILRA2	NM_001290270	NP_001277199	Coding	chr19:54573830 plus strand	1560613
LILRA2	NM_001290271	NP_001277200	Coding	chr19:54572996 plus strand	1560614
LILRA2	NM_006866	NP_006857	Coding	chr19:54572996 plus strand	1560614
LILRA4	NM_012276	NP_036408	Coding	chr19:54339150 minus strand	1560615
LILRA5	NM_021250	NP_067073	Coding	chr19:54313139 minus strand	1560616
LILRA5	NM_181879	NP_870994	Coding	chr19:54313139 minus strand	1560616
LILRA5	NM_181985	NP_871714	Coding	chr19:54313139 minus strand	1560616
LILRA5	NM_181986	NP_871715	Coding	chr19:54313139 minus strand	1560616
LILRA6	NM_024318	NP_077294	Coding	chr19:54242763 minus strand	1560617
LILRB1	NM_001081637	NP_001075106	Coding	chr19:54630516 plus strand	1560618
LILRB1	NM_001081638	NP_001075107	Coding	chr19:54630410 plus strand	1560619
LILRB1	NM_001081639	NP_001075108	Coding	chr19:54630410 plus strand	1560619
LILRB1	NM_001278398	NP_001265327	Coding	chr19:54630516 plus strand	1560618
LILRB1	NM_001278399	NP_001265328	Coding	chr19:54630516 plus strand	1560618
LILRB1	NM_006669	NP_006660	Coding	chr19:54616929 plus strand	1560620
LILRB2	NM_001080978	NP_001074447	Coding	chr19:54281178 minus strand	1560621
LILRB2	NM_001278403	NP_001265332	Coding	chr19:54280883 minus strand	1560622
LILRB2	NM_001278404	NP_001265333	Coding	chr19:54281178 minus strand	1560621
LILRB2	NM_001278405	NP_001265334	Coding	chr19:54280544 minus strand	1560623
LILRB2	NM_001278406	NP_001265335	Coding	chr19:54280544 minus strand	1560623
LILRB2	NM_005874	NP_005865	Coding	chr19:54281178 minus strand	1560621
LILRB3	NM_001081450	NP_001074919	Coding	chr19:54223087 minus strand	1560624
LILRB3	NM_006864	NP_006855	Coding	chr19:54223087 minus strand	1560624

【１２１９】

LILRB4	NM_001278426	NP_001265355	Coding	chr19:54662818 plus strand	1560625
LILRB4	NM_001278427	NP_001265356	Coding	chr19:54662818 plus strand	1560625
LILRB4	NM_001278428	NP_001265357	Coding	chr19:54662818 plus strand	1560625
LILRB4	NM_001278429	NP_001265358	Coding	chr19:54662818 plus strand	1560625
LILRB4	NM_001278430	NP_001265359	Coding	chr19:54662818 plus strand	1560625
LILRB5	NM_001081442	NP_001074911	Coding	chr19:54257304 minus strand	1560626
LILRB5	NM_001081443	NP_001074912	Coding	chr19:54257304 minus strand	1560626
LILRB5	NM_006840	NP_006831	Coding	chr19:54257304 minus strand	1560626
LIM2	NM_001161748	NP_001155220	Coding	chr19:51387956 minus strand	1560627
LIM2	NM_030657	NP_085915	Coding	chr19:51387956 minus strand	1560627
LIN37	NM_019104	NP_061977	Coding	chr19:35748360 plus strand	1560628
LIN7B	NM_022165	NP_071448	Coding	chr19:49114360 plus strand	1560629
LINGO3	NM_001101391	NP_001094861	Coding	chr19:2308157 minus strand	1560630
LIPE	NM_005357	NP_005348	Coding	chr19:42427426 minus strand	1560631
LMNB2	NM_032737	NP_116126	Coding	chr19:2456968 minus strand	1560632
LMTK3	NM_001080434	NP_001073903	Coding	chr19:48513189 minus strand	1560633
LOC100129083	NM_001256795	NP_001243724	Coding	chr19:51415905 plus strand	1560634
LOC101927572	NM_001290056	NP_001276985	Coding	chr19:36014498 plus strand	1560635
LOC102724279	NM_001302493	NP_001289422	Coding	chr19:15864904 minus strand	1560636
LOC113230	NM_001291291	NP_001278220	Coding	chr19:14073008 plus strand	1560637
LOC728485	NM_001294306	NP_001281235	Coding	chr19:36773117 plus strand	1560638
LONP1	NM_001276479	NP_001263408	Coding	chr19:5720165 minus strand	1560639
LONP1	NM_001276480	NP_001263409	Coding	chr19:5720452 minus strand	1560640
LONP1	NM_004793	NP_004784	Coding	chr19:5720258 minus strand	1560641
LPAR2	NM_004720	NP_004711	Coding	chr19:19628230 minus strand	1560642
LPHN1	NM_001008701	NP_001008701	Coding	chr19:14206185 minus strand	1560643
LPHN1	NM_014921	NP_055736	Coding	chr19:14206185 minus strand	1560643

【１２２０】

LPPR2	NM_001170635	NP_001164106	Coding	chr19:11355385 plus strand	1560644
LPPR2	NM_022737	NP_073574	Coding	chr19:11355385 plus strand	1560644
LPPR3	NM_001270366	NP_001257295	Coding	chr19:821952 minus strand	1560645
LPPR3	NM_024888	NP_079164	Coding	chr19:821952 minus strand	1560645
LRFN1	NM_020862	NP_065913	Coding	chr19:39315336 minus strand	1560646
LRFN3	NM_024509	NP_078785	Coding	chr19:35937119 plus strand	1560647
LRG1	NM_052972	NP_443204	Coding	chr19:4540024 minus strand	1560648
LRP3	NM_002333	NP_002324	Coding	chr19:33194692 plus strand	1560649
LRRC25	NM_145256	NP_660299	Coding	chr19:18397605 minus strand	1560650
LRRC4B	NM_001080457	NP_001073926	Coding	chr19:50568045 minus strand	1560651
LRRC8E	NM_001268284	NP_001255213	Coding	chr19:7888504 plus strand	1560652
LRRC8E	NM_001268285	NP_001255214	Coding	chr19:7888504 plus strand	1560652
LRRC8E	NM_025061	NP_079337	Coding	chr19:7888504 plus strand	1560652
LSM14A	NM_001114093	NP_001107565	Coding	chr19:34172446 plus strand	1560653
LSM14A	NM_015578	NP_056393	Coding	chr19:34172446 plus strand	1560653
LSM4	NM_001252129	NP_001239058	Coding	chr19:18323191 minus strand	1560654
LSM4	NM_012321	NP_036453	Coding	chr19:18323191 minus strand	1560654
LSM7	NM_016199	NP_057283	Coding	chr19:2328615 minus strand	1560655
LSR	NM_001260489	NP_001247418	Coding	chr19:35248655 plus strand	1560656
LSR	NM_001260490	NP_001247419	Coding	chr19:35248655 plus strand	1560656
LSR	NM_015925	NP_057009	Coding	chr19:35248655 plus strand	1560656
LSR	NM_205834	NP_991403	Coding	chr19:35248655 plus strand	1560656
LSR	NM_205835	NP_991404	Coding	chr19:35248655 plus strand	1560656
LTBP4	NM_001042544	NP_001036009	Coding	chr19:40597234 plus strand	1560657
LTBP4	NM_001042545	NP_001036010	Coding	chr19:40601370 plus strand	1560658
LTBP4	NM_003573	NP_003564	Coding	chr19:40593165 plus strand	1560659
LYL1	NM_005583	NP_005574	Coding	chr19:13103160 minus strand	1560660
LYPD3	NM_014400	NP_055215	Coding	chr19:43465679 minus strand	1560661
LYPD4	NM_001291419	NP_001278348	Coding	chr19:41843727 minus strand	1560662

【１２２１】

LYPD4	NM_173506	NP_775777	Coding	chr19:41844673 minus strand	1560663
LYPD5	NM_001031749	NP_001026919	Coding	chr19:43802461 minus strand	1560664
LYPD5	NM_001288763	NP_001275692	Coding	chr19:43800029 minus strand	1560665
LYPD5	NM_182573	NP_872379	Coding	chr19:43820656 minus strand	1560666
MADCAM1	NM_130760	NP_570116	Coding	chr19:496489 plus strand	1560667
MADCAM1	NM_130762	NP_570118	Coding	chr19:496489 plus strand	1560667
MAG	NM_001199216	NP_001186145	Coding	chr19:35292085 plus strand	1560668
MAG	NM_002361	NP_002352	Coding	chr19:35292085 plus strand	1560668
MAG	NM_080600	NP_542167	Coding	chr19:35292085 plus strand	1560668
MAMSTR	NM_001130915	NP_001124387	Coding	chr19:48719719 minus strand	1560669
MAMSTR	NM_001297753	NP_001284682	Coding	chr19:48717021 minus strand	1560670
MAMSTR	NM_182574	NP_872380	Coding	chr19:48716957 minus strand	1560671
MAN2B1	NM_000528	NP_000519	Coding	chr19:12666777 minus strand	1560672
MAN2B1	NM_001173498	NP_001166969	Coding	chr19:12666777 minus strand	1560672
MAP1S	NM_018174	NP_060644	Coding	chr19:17719493 plus strand	1560673
MAP2K2	NM_030662	NP_109587	Coding	chr19:4124129 minus strand	1560674
MAP2K7	NM_001297555	NP_001284484	Coding	chr19:7903779 plus strand	1560675
MAP2K7	NM_001297556	NP_001284485	Coding	chr19:7903779 plus strand	1560675
MAP2K7	NM_145185	NP_660186	Coding	chr19:7903779 plus strand	1560675
MAP3K10	NM_002446	NP_002437	Coding	chr19:40191743 plus strand	1560676
MAP4K1	NM_001042600	NP_001036065	Coding	chr19:38618035 minus strand	1560677
MAP4K1	NM_007181	NP_009112	Coding	chr19:38618035 minus strand	1560677
MARCH2	NM_001005415	NP_001005415	Coding	chr19:8413302 plus strand	1560678
MARCH2	NM_001005416	NP_001005416	Coding	chr19:8413302 plus strand	1560678
MARCH2	NM_016496	NP_057580	Coding	chr19:8413302 plus strand	1560678
MARK4	NM_001199867	NP_001186796	Coding	chr19:45251257 plus strand	1560679
MARK4	NM_031417	NP_113605	Coding	chr19:45251257 plus strand	1560679
MAST1	NM_014975	NP_055790	Coding	chr19:12838444 plus strand	1560680
MAST3	NM_015016	NP_055831	Coding	chr19:18097792 plus strand	1560681
MATK	NM_002378	NP_002369	Coding	chr19:3801812 minus strand	1560682

【１２２２】

MATK	NM_139354	NP_647611	Coding	chr19:3786417 minus strand	1560683
MATK	NM_139355	NP_647612	Coding	chr19:3786417 minus strand	1560683
MAU2	NM_015329	NP_056144	Coding	chr19:19320820 plus strand	1560684
MBD3	NM_001281453	NP_001268382	Coding	chr19:1592761 minus strand	1560685
MBD3	NM_001281454	NP_001268383	Coding	chr19:1592761 minus strand	1560685
MBD3L1	NM_145208	NP_660209	Coding	chr19:8842592 plus strand	1560686
MBD3L2	NM_144614	NP_653215	Coding	chr19:7049339 plus strand	1560687
MBD3L3	NM_001164425	NP_001157897	Coding	chr19:7058634 minus strand	1560688
MBD3L4	NM_001164419	NP_001157891	Coding	chr19:7040173 minus strand	1560689
MBD3L5	NM_001136507	NP_001129979	Coding	chr19:7030582 plus strand	1560690
MBOAT7	NM_001146056	NP_001139528	Coding	chr19:54189882 minus strand	1560691
MBOAT7	NM_001146082	NP_001139554	Coding	chr19:54189882 minus strand	1560691
MBOAT7	NM_001146083	NP_001139555	Coding	chr19:54189882 minus strand	1560691
MBOAT7	NM_024298	NP_077274	Coding	chr19:54189882 minus strand	1560691
MCEMP1	NM_174918	NP_777578	Coding	chr19:7677056 plus strand	1560692
MCOLN1	NM_020533	NP_065394	Coding	chr19:7522609 plus strand	1560693
MED16	NM_005481	NP_005472	Coding	chr19:893218 minus strand	1560694
MED25	NM_030973	NP_112235	Coding	chr19:49818278 plus strand	1560695
MED26	NM_004831	NP_004822	Coding	chr19:16628204 minus strand	1560696
MED29	NM_017592	NP_060062	Coding	chr19:39391322 plus strand	1560697
MEF2B	NM_001145785	NP_001139257	Coding	chr19:19170289 minus strand	1560698
MEF2BNB	NM_001145783	NP_001139255	Coding	chr19:19192591 minus strand	1560699
MEF2BNB	NM_001145784	NP_001139256	Coding	chr19:19192591 minus strand	1560699
MEF2BNB-MEF2B	NM_005919	NP_005910	Coding	chr19:19192591 minus strand	1560700
MEGF8	NM_001271938	NP_001258867	Coding	chr19:42325608 plus strand	1560701
MEGF8	NM_001410	NP_001401	Coding	chr19:42325608 plus strand	1560701
MEIS3	NM_001009813	NP_001009813	Coding	chr19:47419528 minus strand	1560702
MEIS3	NM_001301059	NP_001287988	Coding	chr19:47419528 minus strand	1560702
MEIS3	NM_020160	NP_064545	Coding	chr19:47419528 minus strand	1560702

【１２２３】

MEX3D	NM_001174118	NP_001167589	Coding	chr19:1568058 minus strand	1560703
MEX3D	NM_203304	NP_976049	Coding	chr19:1568058 minus strand	1560703
MFSD12	NM_001287529	NP_001274458	Coding	chr19:3557584 minus strand	1560704
MFSD12	NM_174983	NP_778148	Coding	chr19:3557584 minus strand	1560704
MIA	NM_001202553	NP_001189482	Coding	chr19:40775176 plus strand	1560705
MIA	NM_006533	NP_006524	Coding	chr19:40775376 plus strand	1560706
MIDN	NM_177401	NP_796375	Coding	chr19:1248552 plus strand	1560707
MIER2	NM_017550	NP_060020	Coding	chr19:344791 minus strand	1560708
MISP	NM_173481	NP_775752	Coding	chr19:751145 plus strand	1560709
MKNK2	NM_017572	NP_060042	Coding	chr19:2051244 minus strand	1560710
MKNK2	NM_199054	NP_951009	Coding	chr19:2051244 minus strand	1560710
MLLT1	NM_005934	NP_005925	Coding	chr19:6279948 minus strand	1560711
MOB3A	NM_130807	NP_570719	Coding	chr19:2096270 minus strand	1560712
MPND	NM_001159846	NP_001153318	Coding	chr19:4343526 plus strand	1560713
MPND	NM_001300862	NP_001287791	Coding	chr19:4343526 plus strand	1560713
MPND	NM_032868	NP_116257	Coding	chr19:4343526 plus strand	1560713
MPV17L2	NM_032683	NP_116072	Coding	chr19:18193229 plus strand	1560714
MRI1	NM_001031727	NP_001026897	Coding	chr19:13764522 plus strand	1560715
MRI1	NM_032285	NP_115661	Coding	chr19:13764522 plus strand	1560715
MRPL34	NM_023937	NP_076426	Coding	chr19:17305667 plus strand	1560716
MRPL4	NM_015956	NP_057040	Coding	chr19:10251963 plus strand	1560717
MRPL4	NM_146387	NP_666499	Coding	chr19:10251963 plus strand	1560717
MRPL4	NM_146388	NP_666500	Coding	chr19:10251963 plus strand	1560717
MRPL54	NM_172251	NP_758455	Coding	chr19:3762666 plus strand	1560718
MRPS12	NM_021107	NP_066930	Coding	chr19:38930953 plus strand	1560719
MRPS12	NM_033362	NP_203526	Coding	chr19:38930707 plus strand	1560720
MRPS12	NM_033363	NP_203527	Coding	chr19:38930953 plus strand	1560719
MUC16	NM_024690	NP_078966	Coding	chr19:8981342 minus strand	1560721
MUM1	NM_032853	NP_116242	Coding	chr19:1354976 plus strand	1560722
MVB12A	NM_138401	NP_612410	Coding	chr19:17419846 plus strand	1560723

【１２２４】

MYADM	NM_001020818	NP_001018654	Coding	chr19:53869390 plus strand	1560724
MYADM	NM_001020819	NP_001018655	Coding	chr19:53867864 plus strand	1560725
MYADM	NM_001020820	NP_001018656	Coding	chr19:53866157 plus strand	1560726
MYADM	NM_001020821	NP_001018657	Coding	chr19:53869390 plus strand	1560724
MYADM	NM_001290188	NP_001277117	Coding	chr19:53866157 plus strand	1560726
MYADM	NM_001290189	NP_001277118	Coding	chr19:53869390 plus strand	1560724
MYADM	NM_001290190	NP_001277119	Coding	chr19:53868544 plus strand	1560727
MYADM	NM_001290191	NP_001277120	Coding	chr19:53867864 plus strand	1560725
MYADM	NM_001290192	NP_001277121	Coding	chr19:53867864 plus strand	1560725
MYADM	NM_001290193	NP_001277122	Coding	chr19:53865583 plus strand	1560728
MYADM	NM_001290194	NP_001277123	Coding	chr19:53867864 plus strand	1560725
MYADM	NM_138373	NP_612382	Coding	chr19:53867864 plus strand	1560725
MYBPC2	NM_004533	NP_004524	Coding	chr19:50432902 plus strand	1560729
MYH14	NM_001077186	NP_001070654	Coding	chr19:50203627 plus strand	1560730
MYH14	NM_001145809	NP_001139281	Coding	chr19:50203627 plus strand	1560730
MYH14	NM_024729	NP_079005	Coding	chr19:50203627 plus strand	1560730
MYO1F	NM_012335	NP_036467	Coding	chr19:8577447 minus strand	1560731
MYO9B	NM_001130065	NP_001123537	Coding	chr19:17075780 plus strand	1560732
MYO9B	NM_004145	NP_004136	Coding	chr19:17075780 plus strand	1560732
MYPOP	NM_001012643	NP_001012661	Coding	chr19:45902604 minus strand	1560733
MZF1	NM_001267033	NP_001253962	Coding	chr19:58573575 minus strand	1560734
MZF1	NM_003422	NP_003413	Coding	chr19:58573575 minus strand	1560734
MZF1	NM_198055	NP_932172	Coding	chr19:58573575 minus strand	1560734
NACC1	NM_052876	NP_443108	Coding	chr19:13118287 plus strand	1560735
NANOS2	NM_001029861	NP_001025032	Coding	chr19:45914778 minus strand	1560736
NANOS3	NM_001098622	NP_001092092	Coding	chr19:13877248 plus strand	1560737
NAPA	NM_003827	NP_003818	Coding	chr19:47515258 minus strand	1560738

【1225】

NAPSA	NM_004851	NP_004842	Coding	chr19:50365674 minus strand	1560739
NAT14	NM_020378	NP_065111	Coding	chr19:55485189 plus strand	1560740
NCAN	NM_004386	NP_004377	Coding	chr19:19211972 plus strand	1560741
NCCRP1	NM_001001414	NP_001001414	Coding	chr19:39196963 plus strand	1560742
NCLN	NM_020170	NP_064555	Coding	chr19:3185876 plus strand	1560743
NCR1	NM_001145457	NP_001138929	Coding	chr19:54906149 plus strand	1560744
NCR1	NM_001145458	NP_001138930	Coding	chr19:54906149 plus strand	1560744
NCR1	NM_001242356	NP_001229285	Coding	chr19:54906149 plus strand	1560744
NCR1	NM_001242357	NP_001229286	Coding	chr19:54906149 plus strand	1560744
NCR1	NM_004829	NP_004820	Coding	chr19:54906149 plus strand	1560744
NDUFA11	NM_001193375	NP_001180304	Coding	chr19:5904013 minus strand	1560745
NDUFA11	NM_175614	NP_783313	Coding	chr19:5904013 minus strand	1560745
NDUFA13	NM_015965	NP_057049	Coding	chr19:19516209 plus strand	1560746
NDUFA3	NM_004542	NP_004533	Coding	chr19:54102851 plus strand	1560747
NDUFA7	NM_005001	NP_004992	Coding	chr19:8321396 minus strand	1560748
NDUFB7	NM_004146	NP_004137	Coding	chr19:14572077 minus strand	1560749
NDUFS7	NM_024407	NP_077718	Coding	chr19:1383883 plus strand	1560750
NFIC	NM_001245002	NP_001231931	Coding	chr19:3366566 plus strand	1560751
NFIC	NM_001245004	NP_001231933	Coding	chr19:3366566 plus strand	1560751
NFIC	NM_001245005	NP_001231934	Coding	chr19:3359562 plus strand	1560752
NFIC	NM_005597	NP_005588	Coding	chr19:3366566 plus strand	1560751
NFIC	NM_205843	NP_995315	Coding	chr19:3359562 plus strand	1560752
NFIX	NM_001271043	NP_001257972	Coding	chr19:13024580 plus strand	1560753
NFIX	NM_001271044	NP_001257973	Coding	chr19:13023970 plus strand	1560754
NFIX	NM_002501	NP_002492	Coding	chr19:12995769 plus strand	1560755
NFKBIB	NM_001243116	NP_001230045	Coding	chr19:38899699 plus strand	1560756
NFKBIB	NM_002503	NP_002494	Coding	chr19:38899929 plus strand	1560757
NFKBID	NM_139239	NP_640332	Coding	chr19:35900650 minus strand	1560758
NKG7	NM_005601	NP_005592	Coding	chr19:51372706 minus strand	1560759
NKPD1	NM_198478	NP_940880	Coding	chr19:45160150 minus	1560760

【１２２６】

				strand	
NLRP11	NM_001297743	NP_001284672	Coding	chr19:55832094 minus strand	1560761
NLRP11	NM_145007	NP_659444	Coding	chr19:55836762 minus strand	1560762
NLRP12	NM_001277126	NP_001264055	Coding	chr19:53824403 minus strand	1560763
NLRP12	NM_001277129	NP_001264058	Coding	chr19:53824403 minus strand	1560763
NLRP12	NM_144687	NP_653288	Coding	chr19:53824403 minus strand	1560763
NLRP13	NM_176810	NP_789780	Coding	chr19:55932336 minus strand	1560764
NLRP2	NM_001174081	NP_001167552	Coding	chr19:54965283 plus strand	1560765
NLRP2	NM_001174082	NP_001167553	Coding	chr19:54966342 plus strand	1560766
NLRP2	NM_001174083	NP_001167554	Coding	chr19:54966342 plus strand	1560766
NLRP2	NM_017852	NP_060322	Coding	chr19:54966342 plus strand	1560766
NLRP4	NM_134444	NP_604393	Coding	chr19:55836577 plus strand	1560767
NLRP5	NM_153447	NP_703148	Coding	chr19:55999725 plus strand	1560768
NLRP7	NM_001127255	NP_001120727	Coding	chr19:54947505 minus strand	1560769
NLRP7	NM_139176	NP_631915	Coding	chr19:54947505 minus strand	1560769
NLRP7	NM_206828	NP_996611	Coding	chr19:54947505 minus strand	1560769
NLRP8	NM_176811	NP_789781	Coding	chr19:55947831 plus strand	1560770
NLRP9	NM_176820	NP_789790	Coding	chr19:55738402 minus strand	1560771
NMRK2	NM_001289117	NP_001276046	Coding	chr19:3933102 plus strand	1560772
NMRK2	NM_170678	NP_733778	Coding	chr19:3933102 plus strand	1560772
NOSIP	NM_001270960	NP_001257889	Coding	chr19:49580572 minus strand	1560773
NOSIP	NM_015953	NP_057037	Coding	chr19:49580572 minus strand	1560773
NOTCH3	NM_000435	NP_000426	Coding	chr19:15200981 minus strand	1560774
NOVA2	NM_002516	NP_002507	Coding	chr19:45973399 minus strand	1560775
NPAS1	NM_002517	NP_002508	Coding	chr19:47020885 plus strand	1560776
NPHS1	NM_004646	NP_004637	Coding	chr19:35851993 minus strand	1560777
NR1H2	NM_001256647	NP_001243576	Coding	chr19:50376422 plus strand	1560778
NR1H2	NM_007121	NP_009052	Coding	chr19:50376422 plus strand	1560778

【１２２７】

NR2C2AP	NM_001300945	NP_001287874	Coding	chr19:19203429 minus strand	1560779
NR2C2AP	NM_176880	NP_795361	Coding	chr19:19203429 minus strand	1560779
NR2F6	NM_005234	NP_005225	Coding	chr19:17245342 minus strand	1560780
NRTN	NM_004558	NP_004549	Coding	chr19:5823806 plus strand	1560781
NTF4	NM_006179	NP_006170	Coding	chr19:49063867 minus strand	1560782
NTN5	NM_145807	NP_665806	Coding	chr19:48673007 minus strand	1560783
NUCB1	NM_006184	NP_006175	Coding	chr19:48900049 plus strand	1560784
NUDT19	NM_001105570	NP_001099040	Coding	chr19:32691960 plus strand	1560785
NUMBL	NM_001289979	NP_001276908	Coding	chr19:40690658 minus strand	1560786
NUMBL	NM_001289980	NP_001276909	Coding	chr19:40690122 minus strand	1560787
NUMBL	NM_004756	NP_004747	Coding	chr19:40690658 minus strand	1560786
NUP62	NM_001193357	NP_001180286	Coding	chr19:49929542 minus strand	1560788
NUP62	NM_012346	NP_036478	Coding	chr19:49929516 minus strand	1560789
NUP62	NM_016553	NP_057637	Coding	chr19:49929731 minus strand	1560790
NUP62	NM_153718	NP_714940	Coding	chr19:49929531 minus strand	1560791
NUP62	NM_153719	NP_714941	Coding	chr19:49929531 minus strand	1560791
NWD1	NM_001007525	NP_001007526	Coding	chr19:16719975 plus strand	1560792
NWD1	NM_001290355	NP_001277284	Coding	chr19:16719975 plus strand	1560792
NXNL1	NM_138454	NP_612463	Coding	chr19:17460916 minus strand	1560793
OAZ1	NM_001301020	NP_001287949	Coding	chr19:2269485 plus strand	1560794
OAZ1	NM_004152	NP_004143	Coding	chr19:2269485 plus strand	1560794
OCEL1	NM_024578	NP_078854	Coding	chr19:17226245 plus strand	1560795
ODF3L2	NM_182577	NP_872383	Coding	chr19:474983 minus strand	1560796
OLFM2	NM_058164	NP_477512	Coding	chr19:9936394 minus strand	1560797
ONECUT3	NM_001080488	NP_001073957	Coding	chr19:1753662 plus strand	1560798
OPA3	NM_001017989	NP_001017989	Coding	chr19:45584864 minus strand	1560799
OPA3	NM_025136	NP_079412	Coding	chr19:45584864 minus strand	1560799
OR10H1	NM_013940	NP_039228	Coding	chr19:15808126 minus strand	1560800
OR10H2	NM_013939	NP_039227	Coding	chr19:15728023 plus strand	1560801

【１２２８】

OR10H3	NM_013938	NP_039226	Coding	chr19:15741392 plus strand	1560802
OR10H4	NM_001004465	NP_001004465	Coding	chr19:15949007 plus strand	1560803
OR10H5	NM_001004466	NP_001004466	Coding	chr19:15794048 plus strand	1560804
OR1I1	NM_001004713	NP_001004713	Coding	chr19:15087065 plus strand	1560805
OR1M1	NM_001004456	NP_001004456	Coding	chr19:9093244 plus strand	1560806
OR2Z1	NM_001004699	NP_001004699	Coding	chr19:8730953 plus strand	1560807
OR4F17	NM_001005240	NP_001005240	Coding	chr19:110678 plus strand	1560808
OR7A10	NM_001005190	NP_001005190	Coding	chr19:14841877 minus strand	1560809
OR7A17	NM_030901	NP_112163	Coding	chr19:14881355 minus strand	1560810
OR7A5	NM_017506	NP_059976	Coding	chr19:14828464 minus strand	1560811
OR7C1	NM_198944	NP_945182	Coding	chr19:14800136 minus strand	1560812
OR7C2	NM_012377	NP_036509	Coding	chr19:14941488 plus strand	1560813
OR7D2	NM_175883	NP_787079	Coding	chr19:9185593 plus strand	1560814
OR7D4	NM_001005191	NP_001005191	Coding	chr19:9214871 minus strand	1560815
OR7E24	NM_001079935	NP_001073404	Coding	chr19:9251043 plus strand	1560816
OR7G1	NM_001005192	NP_001005192	Coding	chr19:9115763 minus strand	1560817
OR7G2	NM_001005193	NP_001005193	Coding	chr19:9103306 minus strand	1560818
OR7G3	NM_001001958	NP_001001958	Coding	chr19:9126950 minus strand	1560819
OSCAR	NM_001282349	NP_001269278	Coding	chr19:54102686 minus strand	1560820
OSCAR	NM_001282350	NP_001269279	Coding	chr19:54102686 minus strand	1560820
OSCAR	NM_130771	NP_570127	Coding	chr19:54102686 minus strand	1560820
OSCAR	NM_133168	NP_573398	Coding	chr19:54102686 minus strand	1560820
OSCAR	NM_133169	NP_573399	Coding	chr19:54102686 minus strand	1560820
OSCAR	NM_206818	NP_996554	Coding	chr19:54102686 minus strand	1560820
OVOL3	NM_001270948	NP_001257877	Coding	chr19:36111202 plus strand	1560821
OVOL3	NM_001302757	NP_001289686	Coding	chr19:36111202 plus strand	1560821
P2RY11	NM_002566	NP_002557	Coding	chr19:10111520 plus strand	1560822
PAF1	NM_001256826	NP_001243755	Coding	chr19:39391195 minus strand	1560823
PAF1	NM_019088	NP_061961	Coding	chr19:39391195 minus strand	1560823

【１２２９】

PAFAH1B3	NM_001145939	NP_001139411	Coding	chr19:42302777 minus strand	1560824
PAFAH1B3	NM_001145940	NP_001139412	Coding	chr19:42302800 minus strand	1560825
PAFAH1B3	NM_002573	NP_002564	Coding	chr19:42302644 minus strand	1560826
PAK4	NM_001014831	NP_001014831	Coding	chr19:39125779 plus strand	1560827
PAK4	NM_001014832	NP_001014832	Coding	chr19:39125779 plus strand	1560827
PAK4	NM_001014834	NP_001014834	Coding	chr19:39125779 plus strand	1560827
PAK4	NM_001014835	NP_001014835	Coding	chr19:39125779 plus strand	1560827
PAK4	NM_005884	NP_005875	Coding	chr19:39125779 plus strand	1560827
PALM	NM_001040134	NP_001035224	Coding	chr19:708952 plus strand	1560828
PALM	NM_002579	NP_002570	Coding	chr19:708952 plus strand	1560828
PALM3	NM_001145028	NP_001138500	Coding	chr19:14059159 minus strand	1560829
PAPL	NM_001004318	NP_001004318	Coding	chr19:39084304 plus strand	1560830
PBX4	NM_025245	NP_079521	Coding	chr19:19618916 minus strand	1560831
PCP2	NM_001271830	NP_001258759	Coding	chr19:7633012 minus strand	1560832
PCP2	NM_174895	NP_777555	Coding	chr19:7633748 minus strand	1560833
PCSK4	NM_017573	NP_060043	Coding	chr19:1490450 minus strand	1560834
PDCD2L	NM_032346	NP_115722	Coding	chr19:34404397 plus strand	1560835
PDCD5	NM_004708	NP_004699	Coding	chr19:32581187 plus strand	1560836
PDE4A	NM_001111307	NP_001104777	Coding	chr19:10420656 plus strand	1560837
PDE4A	NM_001111308	NP_001104778	Coding	chr19:10430844 plus strand	1560838
PDE4A	NM_001111309	NP_001104779	Coding	chr19:10432434 plus strand	1560839
PDE4A	NM_001243121	NP_001230050	Coding	chr19:10416772 plus strand	1560840
PDE4A	NM_006202	NP_006193	Coding	chr19:10452956 plus strand	1560841
PDE4C	NM_000923	NP_000914	Coding	chr19:18248200 minus strand	1560842
PDE4C	NM_001098818	NP_001092288	Coding	chr19:18226475 minus strand	1560843
PDE4C	NM_001098819	NP_001092289	Coding	chr19:18224493 minus strand	1560844
PEG3	NM_001146184	NP_001139656	Coding	chr19:56840726 minus strand	1560845
PEG3	NM_001146185	NP_001139657	Coding	chr19:56840726 minus strand	1560845

【１２３０】

PEG3	NM_001146186	NP_001139658	Coding	chr19:56825006 minus strand	1560846
PEG3	NM_001146187	NP_001139659	Coding	chr19:56840726 minus strand	1560845
PEG3	NM_006210	NP_006201	Coding	chr19:56840726 minus strand	1560845
PEPD	NM_000285	NP_000276	Coding	chr19:33521893 minus strand	1560847
PEPD	NM_001166056	NP_001159528	Coding	chr19:33521893 minus strand	1560847
PEPD	NM_001166057	NP_001159529	Coding	chr19:33521893 minus strand	1560847
PET100	NM_001171155	NP_001164626	Coding	chr19:7629784 plus strand	1560848
PEX11G	NM_001270539	NP_001257468	Coding	chr19:7489038 minus strand	1560849
PEX11G	NM_001300881	NP_001287810	Coding	chr19:7489400 minus strand	1560850
PEX11G	NM_080662	NP_542393	Coding	chr19:7489038 minus strand	1560849
PGLS	NM_012088	NP_036220	Coding	chr19:17511622 plus strand	1560851
PGLYRP1	NM_005091	NP_005082	Coding	chr19:46023298 minus strand	1560852
PGLYRP2	NM_052890	NP_443122	Coding	chr19:15479504 minus strand	1560853
PGPEP1	NM_001300927	NP_001287856	Coding	chr19:18340586 plus strand	1560854
PGPEP1	NM_017712	NP_060182	Coding	chr19:18340597 plus strand	1560855
PHLDB3	NM_198850	NP_942147	Coding	chr19:43504833 minus strand	1560856
PIAS4	NM_015897	NP_056981	Coding	chr19:4007750 plus strand	1560857
PIH1D1	NM_017916	NP_060386	Coding	chr19:49451858 minus strand	1560858
PIK3R2	NM_005027	NP_005018	Coding	chr19:18153177 plus strand	1560859
PIN1	NM_006221	NP_006212	Coding	chr19:9835206 plus strand	1560860
PINLYP	NM_001193621	NP_001180550	Coding	chr19:43576799 plus strand	1560861
PINLYP	NM_001193622	NP_001180551	Coding	chr19:43580543 plus strand	1560862
PIP5K1C	NM_001195733	NP_001182662	Coding	chr19:3700479 minus strand	1560863
PIP5K1C	NM_001300849	NP_001287778	Coding	chr19:3700492 minus strand	1560864
PIP5K1C	NM_012398	NP_036530	Coding	chr19:3700479 minus strand	1560863
PKN1	NM_002741	NP_002732	Coding	chr19:14433353 plus strand	1560865
PKN1	NM_213560	NP_998725	Coding	chr19:14440273 plus strand	1560866
PLA2G4C	NM_001159322	NP_001152794	Coding	chr19:48110852 minus strand	1560867

【１２３１】

PLA2G4C	NM_001159323	NP_001152795	Coding	chr19:48110852 minus strand	1560867
PLA2G4C	NM_003706	NP_003697	Coding	chr19:48110852 minus strand	1560867
PLAUR	NM_001005376	NP_001005376	Coding	chr19:43670346 minus strand	1560868
PLAUR	NM_001005377	NP_001005377	Coding	chr19:43670346 minus strand	1560868
PLAUR	NM_001301037	NP_001287966	Coding	chr19:43670346 minus strand	1560868
PLAUR	NM_002659	NP_002650	Coding	chr19:43670346 minus strand	1560868
PLD3	NM_001031696	NP_001026866	Coding	chr19:40348424 plus strand	1560869
PLD3	NM_001291311	NP_001278240	Coding	chr19:40359641 plus strand	1560870
PLD3	NM_012268	NP_036400	Coding	chr19:40348424 plus strand	1560869
PLEKHA4	NM_001161354	NP_001154826	Coding	chr19:48868627 minus strand	1560871
PLEKHA4	NM_020904	NP_065955	Coding	chr19:48868627 minus strand	1560871
PLEKHF1	NM_024310	NP_077286	Coding	chr19:29665419 plus strand	1560872
PLEKHG2	NM_022835	NP_073746	Coding	chr19:39413109 plus strand	1560873
PLEKHJ1	NM_001300836	NP_001287765	Coding	chr19:2236353 minus strand	1560874
PLEKHJ1	NM_018049	NP_060519	Coding	chr19:2236329 minus strand	1560875
PLIN3	NM_001164189	NP_001157661	Coding	chr19:4867768 minus strand	1560876
PLIN3	NM_001164194	NP_001157666	Coding	chr19:4867768 minus strand	1560876
PLIN3	NM_005817	NP_005808	Coding	chr19:4867768 minus strand	1560876
PLIN4	NM_001080400	NP_001073869	Coding	chr19:4517704 minus strand	1560877
PLIN5	NM_001013706	NP_001013728	Coding	chr19:4535196 minus strand	1560878
PLK5	NM_001243079	NP_001230008	Coding	chr19:1524073 plus strand	1560879
PLVAP	NM_031310	NP_112600	Coding	chr19:17377328 minus strand	1560880
PNKP	NM_007254	NP_009185	Coding	chr19:49867565 minus strand	1560881
PNMAL1	NM_001103149	NP_001096619	Coding	chr19:46471563 minus strand	1560882
PNMAL1	NM_018215	NP_060685	Coding	chr19:46471563 minus strand	1560882
PNMAL2	NM_020709	NP_065760	Coding	chr19:46495912 minus strand	1560883
PNPLA6	NM_001166111	NP_001159583	Coding	chr19:7534704 plus strand	1560884
PNPLA6	NM_001166112	NP_001159584	Coding	chr19:7534241 plus strand	1560885

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PNPLA6	NM_001166113	NP_001159585	Coding	chr19:7534749 plus strand	1560886
PNPLA6	NM_001166114	NP_001159586	Coding	chr19:7535702 plus strand	1560887
PNPLA6	NM_006702	NP_006693	Coding	chr19:7534151 plus strand	1560888
PODNL1	NM_001146254	NP_001139726	Coding	chr19:13953392 minus strand	1560889
PODNL1	NM_001146255	NP_001139727	Coding	chr19:13953392 minus strand	1560889
PODNL1	NM_024825	NP_079101	Coding	chr19:13938476 minus strand	1560890
POLD1	NM_001256849	NP_001243778	Coding	chr19:50384322 plus strand	1560891
POLD1	NM_002691	NP_002682	Coding	chr19:50384322 plus strand	1560891
POLR2E	NM_002695	NP_002686	Coding	chr19:1095392 minus strand	1560892
POLR2I	NM_006233	NP_006224	Coding	chr19:36115304 minus strand	1560893
POLRMT	NM_005035	NP_005026	Coding	chr19:633568 minus strand	1560894
POP4	NM_006627	NP_006618	Coding	chr19:29606262 plus strand	1560895
POU2F2	NM_001207025	NP_001193954	Coding	chr19:42132473 minus strand	1560896
POU2F2	NM_001207026	NP_001193955	Coding	chr19:42132473 minus strand	1560896
POU2F2	NM_001247994	NP_001234923	Coding	chr19:42132473 minus strand	1560896
POU2F2	NM_002698	NP_002689	Coding	chr19:42132473 minus strand	1560896
PPAN	NM_020230	NP_064615	Coding	chr19:10106222 plus strand	1560897
PPAN-P2RY11	NM_001040664	NP_001035754	Coding	chr19:10106222 plus strand	1560898
PPAN-P2RY11	NM_001198690	NP_001185619	Coding	chr19:10106222 plus strand	1560898
PPAP2C	NM_003712	NP_003703	Coding	chr19:291435 minus strand	1560899
PPAP2C	NM_177526	NP_803545	Coding	chr19:291435 minus strand	1560899
PPAP2C	NM_177543	NP_808211	Coding	chr19:291169 minus strand	1560900
PPFIA3	NM_003660	NP_003651	Coding	chr19:49119388 plus strand	1560901
PPM1N	NM_001080401	NP_001073870	Coding	chr19:45498472 plus strand	1560902
PPP1R12C	NM_001271618	NP_001258547	Coding	chr19:55117600 minus strand	1560903
PPP1R12C	NM_017607	NP_060077	Coding	chr19:55117600 minus strand	1560903
PPP1R13L	NM_001142502	NP_001135974	Coding	chr19:45406349 minus strand	1560904
PPP1R13L	NM_006663	NP_006654	Coding	chr19:45405054 minus strand	1560905
PPP1R14A	NM_001243947	NP_001230876	Coding	chr19:38256591 minus strand	1560906
PPP1R14A	NM_033256	NP_150281	Coding	chr19:38256591 minus	1560906

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				strand	
PPP1R15A	NM_014330	NP_055145	Coding	chr19:48872391 plus strand	1560907
PPP1R37	NM_019121	NP_061994	Coding	chr19:45093172 plus strand	1560908
PPP2R1A	NM_014225	NP_055040	Coding	chr19:52189801 plus strand	1560909
PPP5C	NM_001204284	NP_001191213	Coding	chr19:46346993 plus strand	1560910
PPP5C	NM_006247	NP_006238	Coding	chr19:46346993 plus strand	1560910
PPP5D1	NM_001205281	NP_001192210	Coding	chr19:46601200 minus strand	1560911
PPP6R1	NM_014931	NP_055746	Coding	chr19:55258670 minus strand	1560912
PRAM1	NM_032152	NP_115528	Coding	chr19:8502654 minus strand	1560913
PRDX2	NM_005809	NP_005800	Coding	chr19:12801910 minus strand	1560914
PRKACA	NM_002730	NP_002721	Coding	chr19:14117747 minus strand	1560915
PRKACA	NM_207518	NP_997401	Coding	chr19:14114180 minus strand	1560916
PRKCG	NM_002739	NP_002730	Coding	chr19:53882212 plus strand	1560917
PRKCSH	NM_001001329	NP_001001329	Coding	chr19:11435256 plus strand	1560918
PRKCSH	NM_001289102	NP_001276031	Coding	chr19:11435739 plus strand	1560919
PRKCSH	NM_001289103	NP_001276032	Coding	chr19:11435256 plus strand	1560918
PRKCSH	NM_001289104	NP_001276033	Coding	chr19:11435256 plus strand	1560918
PRKCSH	NM_002743	NP_002734	Coding	chr19:11435644 plus strand	1560920
PRKD2	NM_001079880	NP_001073349	Coding	chr19:46717127 minus strand	1560921
PRKD2	NM_001079881	NP_001073350	Coding	chr19:46717127 minus strand	1560921
PRKD2	NM_001079882	NP_001073351	Coding	chr19:46714320 minus strand	1560922
PRKD2	NM_016457	NP_057541	Coding	chr19:46717127 minus strand	1560921
PRMT1	NM_001207042	NP_001193971	Coding	chr19:49677151 plus strand	1560923
PRMT1	NM_001536	NP_001527	Coding	chr19:49677151 plus strand	1560923
PRMT1	NM_198318	NP_938074	Coding	chr19:49677151 plus strand	1560923
PRODH2	NM_021232	NP_067055	Coding	chr19:35813299 minus strand	1560924
PROSER3	NM_001039887	NP_001034976	Coding	chr19:35758142 plus strand	1560925
PRPF31	NM_015629	NP_056444	Coding	chr19:54115409 plus	1560926

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				strand	
PRR12	NM_020719	NP_065770	Coding	chr19:49591654 plus strand	1560927
PRR19	NM_199285	NP_954979	Coding	chr19:42302131 plus strand	1560928
PRR22	NM_001134316	NP_001127788	Coding	chr19:5784765 minus strand	1560929
PRR36	NM_001190467	NP_001177396	Coding	chr19:7874441 minus strand	1560930
PRRG2	NM_000951	NP_000942	Coding	chr19:49581329 plus strand	1560931
PRSS57	NM_214710	NP_999875	Coding	chr19:695461 minus strand	1560932
PRTN3	NM_002777	NP_002768	Coding	chr19:840984 plus strand	1560933
PRX	NM_020956	NP_066007	Coding	chr19:40413364 minus strand	1560934
PRX	NM_181882	NP_870998	Coding	chr19:40413364 minus strand	1560934
PSENEN	NM_001281532	NP_001268461	Coding	chr19:35745576 plus strand	1560935
PSENEN	NM_172341	NP_758844	Coding	chr19:35745576 plus strand	1560935
PSG1	NM_001184825	NP_001171754	Coding	chr19:42879719 minus strand	1560936
PSG1	NM_001184826	NP_001171755	Coding	chr19:42879719 minus strand	1560936
PSG1	NM_001297773	NP_001284702	Coding	chr19:42879667 minus strand	1560937
PSG1	NM_006905	NP_008836	Coding	chr19:42879719 minus strand	1560936
PSG11	NM_001113410	NP_001106881	Coding	chr19:43026479 minus strand	1560938
PSG11	NM_002785	NP_002776	Coding	chr19:43026479 minus strand	1560938
PSG11	NM_203287	NP_976032	Coding	chr19:43026479 minus strand	1560938
PSG2	NM_031246	NP_112536	Coding	chr19:43082741 minus strand	1560939
PSG3	NM_021016	NP_066296	Coding	chr19:42740516 minus strand	1560940
PSG4	NM_001276495	NP_001263424	Coding	chr19:43205774 minus strand	1560941
PSG4	NM_002780	NP_002771	Coding	chr19:43205774 minus strand	1560941
PSG4	NM_213633	NP_998798	Coding	chr19:43205774 minus strand	1560941
PSG5	NM_001130014	NP_001123486	Coding	chr19:43186536 minus strand	1560942
PSG5	NM_002781	NP_002772	Coding	chr19:43186536 minus strand	1560942
PSG6	NM_001031850	NP_001027020	Coding	chr19:42917924 minus strand	1560943
PSG6	NM_002782	NP_002773	Coding	chr19:42917924 minus strand	1560943

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PSG7	NM_001206650	NP_001193579	Coding	chr19:42937178 minus strand	1560944
PSG7	NM_001290042	NP_001276971	Coding	chr19:42937178 minus strand	1560944
PSG7	NM_002783	NP_002774	Coding	chr19:42937178 minus strand	1560944
PSG8	NM_001130167	NP_001123639	Coding	chr19:42765679 minus strand	1560945
PSG8	NM_001130168	NP_001123640	Coding	chr19:42765679 minus strand	1560945
PSG8	NM_182707	NP_874366	Coding	chr19:42765679 minus strand	1560945
PSG9	NM_001301707	NP_001288636	Coding	chr19:43269563 minus strand	1560946
PSG9	NM_001301708	NP_001288637	Coding	chr19:43269563 minus strand	1560946
PSG9	NM_001301709	NP_001288638	Coding	chr19:43269563 minus strand	1560946
PSG9	NM_002784	NP_002775	Coding	chr19:43269563 minus strand	1560946
PSMC4	NM_006503	NP_006494	Coding	chr19:39971004 plus strand	1560947
PSMC4	NM_153001	NP_694546	Coding	chr19:39971004 plus strand	1560947
PSMD8	NM_002812	NP_002803	Coding	chr19:38374549 plus strand	1560948
PSPN	NM_004158	NP_004149	Coding	chr19:6375849 minus strand	1560949
PTBP1	NM_002819	NP_002810	Coding	chr19:797391 plus strand	1560950
PTBP1	NM_031990	NP_114367	Coding	chr19:797391 plus strand	1560950
PTBP1	NM_031991	NP_114368	Coding	chr19:797391 plus strand	1560950
PTGER1	NM_000955	NP_000946	Coding	chr19:14475362 minus strand	1560951
PTGIR	NM_000960	NP_000951	Coding	chr19:46625097 minus strand	1560952
PTH2	NM_178449	NP_848544	Coding	chr19:49423441 minus strand	1560953
PTOV1	NM_017432	NP_059128	Coding	chr19:49851158 plus strand	1560954
PTPRH	NM_001161440	NP_001154912	Coding	chr19:55209506 minus strand	1560955
PTPRH	NM_002842	NP_002833	Coding	chr19:55209506 minus strand	1560955
PTPRS	NM_002850	NP_002841	Coding	chr19:5340803 minus strand	1560956
PTPRS	NM_130853	NP_570923	Coding	chr19:5340803 minus strand	1560956
PTPRS	NM_130854	NP_570924	Coding	chr19:5340803 minus strand	1560956
PTPRS	NM_130855	NP_570925	Coding	chr19:5340803 minus strand	1560956
PVR	NM_001135768	NP_001129240	Coding	chr19:44643797 plus strand	1560957

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PVR	NM_001135769	NP_001129241	Coding	chr19:44643797 plus strand	1560957
PVR	NM_001135770	NP_001129242	Coding	chr19:44643797 plus strand	1560957
PVR	NM_006505	NP_006496	Coding	chr19:44643797 plus strand	1560957
PVRL2	NM_001042724	NP_001036189	Coding	chr19:44846135 plus strand	1560958
PVRL2	NM_002856	NP_002847	Coding	chr19:44846135 plus strand	1560958
QPCTL	NM_001163377	NP_001156849	Coding	chr19:45692482 plus strand	1560959
QPCTL	NM_017659	NP_060129	Coding	chr19:45692482 plus strand	1560959
QTRT1	NM_031209	NP_112486	Coding	chr19:10701435 plus strand	1560960
R3HDM4	NM_138774	NP_620129	Coding	chr19:913225 minus strand	1560961
RAB11B	NM_004218	NP_004209	Coding	chr19:8390320 plus strand	1560962
RAB3A	NM_002866	NP_002857	Coding	chr19:18204064 minus strand	1560963
RAB3D	NM_004283	NP_004274	Coding	chr19:11339668 minus strand	1560964
RAB4B	NM_016154	NP_057238	Coding	chr19:40778218 plus strand	1560965
RAB8A	NM_005370	NP_005361	Coding	chr19:16111679 plus strand	1560966
RABAC1	NM_006423	NP_006414	Coding	chr19:41959376 minus strand	1560967
RAD23A	NM_001270362	NP_001257291	Coding	chr19:12945813 plus strand	1560968
RAD23A	NM_001270363	NP_001257292	Coding	chr19:12945813 plus strand	1560968
RAD23A	NM_005053	NP_005044	Coding	chr19:12945813 plus strand	1560968
RANBP3	NM_001300865	NP_001287794	Coding	chr19:5978309 minus strand	1560969
RANBP3	NM_003624	NP_003615	Coding	chr19:5978309 minus strand	1560969
RANBP3	NM_007320	NP_015559	Coding	chr19:5978309 minus strand	1560969
RANBP3	NM_007322	NP_015561	Coding	chr19:5978309 minus strand	1560969
RASAL3	NM_022904	NP_075055	Coding	chr19:15464571 minus strand	1560970
RASGRP4	NM_001146202	NP_001139674	Coding	chr19:38426305 minus strand	1560971
RASGRP4	NM_001146203	NP_001139675	Coding	chr19:38426305 minus strand	1560971
RASGRP4	NM_001146204	NP_001139676	Coding	chr19:38426305 minus strand	1560971
RASGRP4	NM_001146205	NP_001139677	Coding	chr19:38426305 minus strand	1560971
RASGRP4	NM_001146206	NP_001139678	Coding	chr19:38426305 minus strand	1560971

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RASGRP4	NM_001146207	NP_001139679	Coding	chr19:38426305 minus strand	1560971
RASGRP4	NM_170604	NP_733749	Coding	chr19:38426305 minus strand	1560971
RASIP1	NM_017805	NP_060275	Coding	chr19:48740713 minus strand	1560972
RAVER1	NM_133452	NP_597709	Coding	chr19:10333638 minus strand	1560973
RAX2	NM_032753	NP_116142	Coding	chr19:3772221 minus strand	1560974
RBM42	NM_024321	NP_077297	Coding	chr19:35629077 plus strand	1560975
RCN3	NM_020650	NP_065701	Coding	chr19:49527617 plus strand	1560976
RDH13	NM_001145971	NP_001139443	Coding	chr19:55063217 minus strand	1560977
RDH13	NM_138412	NP_612421	Coding	chr19:55069546 minus strand	1560978
RDH8	NM_015725	NP_056540	Coding	chr19:10013248 plus strand	1560979
REEP6	NM_138393	NP_612402	Coding	chr19:1491165 plus strand	1560980
RELB	NM_006509	NP_006500	Coding	chr19:45001448 plus strand	1560981
RETN	NM_001193374	NP_001180303	Coding	chr19:7669085 plus strand	1560982
RETN	NM_020415	NP_065148	Coding	chr19:7669085 plus strand	1560982
REXO1	NM_020695	NP_065746	Coding	chr19:1848453 minus strand	1560983
RFPL4A	NM_001145014	NP_001138486	Coding	chr19:55759140 plus strand	1560984
RFPL4AL1	NM_001277397	NP_001264326	Coding	chr19:55771804 plus strand	1560985
RFX1	NM_002918	NP_002909	Coding	chr19:14006322 minus strand	1560986
RFX2	NM_000635	NP_000626	Coding	chr19:6110653 minus strand	1560987
RFX2	NM_134433	NP_602309	Coding	chr19:6110653 minus strand	1560987
RFXANK	NM_001278727	NP_001265656	Coding	chr19:19192198 plus strand	1560988
RFXANK	NM_001278728	NP_001265657	Coding	chr19:19192765 plus strand	1560989
RFXANK	NM_003721	NP_003712	Coding	chr19:19192198 plus strand	1560988
RFXANK	NM_134440	NP_604389	Coding	chr19:19192198 plus strand	1560988
RGL3	NM_001035223	NP_001030300	Coding	chr19:11419342 minus strand	1560990
RGL3	NM_001161616	NP_001155088	Coding	chr19:11419342 minus strand	1560990
RGS9BP	NM_207391	NP_997274	Coding	chr19:32675406 plus strand	1560991
RHPN2	NM_033103	NP_149094	Coding	chr19:33064918 minus strand	1560992

【１２３８】

RINL	NM_001195833	NP_001182762	Coding	chr19:38878279 minus strand	1560993
RINL	NM_198445	NP_940847	Coding	chr19:38878279 minus strand	1560993
RLN3	NM_080864	NP_543140	Coding	chr19:14028204 plus strand	1560994
RNASEH2A	NM_006397	NP_006388	Coding	chr19:12806613 plus strand	1560995
RNF126	NM_194460	NP_919442	Coding	chr19:663233 minus strand	1560996
RNF225	NM_001195135	NP_001182064	Coding	chr19:58396089 plus strand	1560997
RPL13A	NM_001270491	NP_001257420	Coding	chr19:49487553 plus strand	1560998
RPL13A	NM_012423	NP_036555	Coding	chr19:49487553 plus strand	1560998
RPL18	NM_000979	NP_000970	Coding	chr19:48619418 minus strand	1560999
RPL18	NM_001270490	NP_001257419	Coding	chr19:48619418 minus strand	1560999
RPL18A	NM_000980	NP_000971	Coding	chr19:17859877 plus strand	1561000
RPL28	NM_000991	NP_000982	Coding	chr19:55385931 plus strand	1561001
RPL28	NM_001136134	NP_001129606	Coding	chr19:55385931 plus strand	1561001
RPL28	NM_001136135	NP_001129607	Coding	chr19:55385931 plus strand	1561001
RPL28	NM_001136136	NP_001129608	Coding	chr19:55385931 plus strand	1561001
RPL28	NM_001136137	NP_001129609	Coding	chr19:55385931 plus strand	1561001
RPL36	NM_015414	NP_056229	Coding	chr19:5690334 plus strand	1561002
RPL36	NM_033643	NP_378669	Coding	chr19:5690260 plus strand	1561003
RPS11	NM_001015	NP_001006	Coding	chr19:49496364 plus strand	1561004
RPS15	NM_001018	NP_001009	Coding	chr19:1438363 plus strand	1561005
RPS16	NM_001020	NP_001011	Coding	chr19:39435978 minus strand	1561006
RPS19	NM_001022	NP_001013	Coding	chr19:41859917 plus strand	1561007
RPS28	NM_001031	NP_001022	Coding	chr19:8321499 plus strand	1561008
RPS5	NM_001009	NP_001000	Coding	chr19:58387268 plus strand	1561009
RPS9	NM_001013	NP_001004	Coding	chr19:54200857 plus strand	1561010
RRAS	NM_006270	NP_006261	Coding	chr19:49640143 minus strand	1561011
RSPH6A	NM_030785	NP_110412	Coding	chr19:45815347 minus strand	1561012
RTBDN	NM_001080997	NP_001074466	Coding	chr19:12830416 minus strand	1561013
RTBDN	NM_001270440	NP_001257369	Coding	chr19:12835428 minus strand	1561014

【１２３９】

RTBDN	NM_001270441	NP_001257370	Coding	chr19:12834576 minus strand	1561015
RTBDN	NM_001270442	NP_001257371	Coding	chr19:12834576 minus strand	1561015
RTBDN	NM_001270443	NP_001257372	Coding	chr19:12830675 minus strand	1561016
RTBDN	NM_001270444	NP_001257373	Coding	chr19:12830675 minus strand	1561016
RTBDN	NM_001270445	NP_001257374	Coding	chr19:12830675 minus strand	1561016
RTBDN	NM_031429	NP_113617	Coding	chr19:12835428 minus strand	1561014
RTN2	NM_005619	NP_005610	Coding	chr19:45497055 minus strand	1561017
RTN2	NM_206900	NP_996783	Coding	chr19:45497055 minus strand	1561017
RTN2	NM_206901	NP_996784	Coding	chr19:45493245 minus strand	1561018
RUVBL2	NM_006666	NP_006657	Coding	chr19:48993898 plus strand	1561019
RYR1	NM_000540	NP_000531	Coding	chr19:38433699 plus strand	1561020
RYR1	NM_001042723	NP_001036188	Coding	chr19:38433699 plus strand	1561020
S1PR2	NM_004230	NP_004221	Coding	chr19:10231272 minus strand	1561021
S1PR4	NM_003775	NP_003766	Coding	chr19:3178737 plus strand	1561022
S1PR5	NM_001166215	NP_001159687	Coding	chr19:10517992 minus strand	1561023
S1PR5	NM_030760	NP_110387	Coding	chr19:10517450 minus strand	1561024
SAE1	NM_001145713	NP_001139185	Coding	chr19:47130822 plus strand	1561025
SAE1	NM_001145714	NP_001139186	Coding	chr19:47130822 plus strand	1561025
SAE1	NM_005500	NP_005491	Coding	chr19:47130822 plus strand	1561025
SAFB	NM_001201338	NP_001188267	Coding	chr19:5623034 plus strand	1561026
SAFB	NM_001201339	NP_001188268	Coding	chr19:5623034 plus strand	1561026
SAFB	NM_001201340	NP_001188269	Coding	chr19:5623034 plus strand	1561026
SAFB	NM_002967	NP_002958	Coding	chr19:5623034 plus strand	1561026
SAFB2	NM_014649	NP_055464	Coding	chr19:5622927 minus strand	1561027
SAMD1	NM_138352	NP_612361	Coding	chr19:14090420 minus strand	1561028
SAMD4B	NM_018028	NP_060498	Coding	chr19:39342467 plus strand	1561029
SARS2	NM_001145901	NP_001139373	Coding	chr19:38930896 minus strand	1561030
SARS2	NM_017827	NP_060297	Coding	chr19:38930896 minus strand	1561030
SBK2	NM_001101401	NP_001094871	Coding	chr19:55536294 minus strand	1561031

【１２４０】

SBK3	NM_001199824	NP_001186753	Coding	chr19:55545543 minus strand	1561032
SBNO2	NM_001100122	NP_001093592	Coding	chr19:1132274 minus strand	1561033
SBNO2	NM_014963	NP_055778	Coding	chr19:1174283 minus strand	1561034
SBSN	NM_001166034	NP_001159506	Coding	chr19:35528351 minus strand	1561035
SBSN	NM_001166035	NP_001159507	Coding	chr19:35528351 minus strand	1561035
SBSN	NM_198538	NP_940940	Coding	chr19:35528351 minus strand	1561035
SCAF1	NM_021228	NP_067051	Coding	chr19:49642124 plus strand	1561036
SCAMP4	NM_079834	NP_524558	Coding	chr19:1905373 plus strand	1561037
SCGB2B2	NM_001025591	NP_001020762	Coding	chr19:34594585 minus strand	1561038
SCN1B	NM_001037	NP_001028	Coding	chr19:35030687 plus strand	1561039
SCN1B	NM_199037	NP_950238	Coding	chr19:35030687 plus strand	1561039
SDHAF1	NM_001042631	NP_001036096	Coding	chr19:35995187 plus strand	1561040
SELV	NM_182704	NP_874363	Coding	chr19:39515112 plus strand	1561041
SEMA6B	NM_032108	NP_115484	Coding	chr19:4559759 minus strand	1561042
SEPW1	NM_003009	NP_003000	Coding	chr19:47778584 plus strand	1561043
SERTAD1	NM_013376	NP_037508	Coding	chr19:40426025 minus strand	1561044
SERTAD3	NM_013368	NP_037500	Coding	chr19:40442598 minus strand	1561045
SERTAD3	NM_203344	NP_976219	Coding	chr19:40444375 minus strand	1561046
SF3A2	NM_007165	NP_009096	Coding	chr19:2236816 plus strand	1561047
SGTA	NM_003021	NP_003012	Coding	chr19:2783356 minus strand	1561048
SH2D3A	NM_005490	NP_005481	Coding	chr19:6767512 minus strand	1561049
SH3GL1	NM_001199943	NP_001186872	Coding	chr19:4400568 minus strand	1561050
SH3GL1	NM_001199944	NP_001186873	Coding	chr19:4400418 minus strand	1561051
SH3GL1	NM_003025	NP_003016	Coding	chr19:4400568 minus strand	1561050
SHANK1	NM_016148	NP_057232	Coding	chr19:50716938 minus strand	1561052
SHC2	NM_012435	NP_036567	Coding	chr19:460996 minus strand	1561053
SHD	NM_020209	NP_064594	Coding	chr19:4278600 plus strand	1561054
SHISA7	NM_001145176	NP_001138648	Coding	chr19:55442863 minus strand	1561055
SHKBP1	NM_138392	NP_612401	Coding	chr19:40576850 plus	1561056

【１２４１】

				strand	
SIGLEC10	NM_001171156	NP_001164627	Coding	chr19:51417803 minus strand	1561057
SIGLEC10	NM_001171157	NP_001164628	Coding	chr19:51417803 minus strand	1561057
SIGLEC10	NM_001171158	NP_001164629	Coding	chr19:51417803 minus strand	1561057
SIGLEC10	NM_001171159	NP_001164630	Coding	chr19:51417803 minus strand	1561057
SIGLEC10	NM_001171161	NP_001164632	Coding	chr19:51417803 minus strand	1561057
SIGLEC10	NM_033130	NP_149121	Coding	chr19:51417803 minus strand	1561057
SIGLEC11	NM_001135163	NP_001128635	Coding	chr19:49961172 minus strand	1561058
SIGLEC11	NM_052884	NP_443116	Coding	chr19:49961172 minus strand	1561058
SIGLEC12	NM_033329	NP_201586	Coding	chr19:51500393 minus strand	1561059
SIGLEC12	NM_053003	NP_443729	Coding	chr19:51501789 minus strand	1561060
SIGLEC14	NM_001098612	NP_001092082	Coding	chr19:51646879 minus strand	1561061
SIGLEC5	NM_003830	NP_003821	Coding	chr19:51630474 minus strand	1561062
SIGLEC6	NM_001177547	NP_001171018	Coding	chr19:51531856 minus strand	1561063
SIGLEC6	NM_001177548	NP_001171019	Coding	chr19:51531856 minus strand	1561063
SIGLEC6	NM_001177549	NP_001171020	Coding	chr19:51531856 minus strand	1561063
SIGLEC6	NM_001245	NP_001236	Coding	chr19:51531856 minus strand	1561063
SIGLEC6	NM_198845	NP_942142	Coding	chr19:51531856 minus strand	1561063
SIGLEC6	NM_198846	NP_942143	Coding	chr19:51531856 minus strand	1561063
SIGLEC7	NM_001277201	NP_001264130	Coding	chr19:51142300 plus strand	1561064
SIGLEC7	NM_014385	NP_055200	Coding	chr19:51142300 plus strand	1561064
SIGLEC7	NM_016543	NP_057627	Coding	chr19:51142300 plus strand	1561064
SIGLEC8	NM_014442	NP_055257	Coding	chr19:51458454 minus strand	1561065
SIGLEC9	NM_001198558	NP_001185487	Coding	chr19:51124879 plus strand	1561066
SIGLEC9	NM_014441	NP_055256	Coding	chr19:51124879 plus strand	1561066
SIGLECL1	NM_173635	NP_775906	Coding	chr19:51257709 plus strand	1561067
SIN3B	NM_001297595	NP_001284524	Coding	chr19:16829386 plus strand	1561068
SIN3B	NM_001297597	NP_001284526	Coding	chr19:16863273 plus	1561069

【１２４２】

				strand	
SIN3B	NM_015260	NP_056075	Coding	chr19:16829386 plus strand	1561068
SIPA1L3	NM_015073	NP_055888	Coding	chr19:37907220 plus strand	1561070
SIRT2	NM_001193286	NP_001180215	Coding	chr19:38899862 minus strand	1561071
SIRT2	NM_012237	NP_036369	Coding	chr19:38899823 minus strand	1561072
SIRT2	NM_030593	NP_085096	Coding	chr19:38899862 minus strand	1561071
SIRT6	NM_001193285	NP_001180214	Coding	chr19:4182599 minus strand	1561073
SIRT6	NM_016539	NP_057623	Coding	chr19:4182599 minus strand	1561073
SIX5	NM_175875	NP_787071	Coding	chr19:45769239 minus strand	1561074
SLC17A7	NM_020309	NP_064705	Coding	chr19:49441551 minus strand	1561075
SLC1A5	NM_001145144	NP_001138616	Coding	chr19:46787288 minus strand	1561076
SLC1A5	NM_001145145	NP_001138617	Coding	chr19:46784877 minus strand	1561077
SLC1A5	NM_005628	NP_005619	Coding	chr19:46788585 minus strand	1561078
SLC1A6	NM_001272087	NP_001259016	Coding	chr19:14979735 minus strand	1561079
SLC1A6	NM_001272088	NP_001259017	Coding	chr19:14979735 minus strand	1561079
SLC1A6	NM_005071	NP_005062	Coding	chr19:14972918 minus strand	1561080
SLC25A23	NM_024103	NP_077008	Coding	chr19:6459770 minus strand	1561081
SLC25A41	NM_173637	NP_775908	Coding	chr19:6433779 minus strand	1561082
SLC25A42	NM_178526	NP_848621	Coding	chr19:19063993 plus strand	1561083
SLC27A1	NM_198580	NP_940982	Coding	chr19:17470490 plus strand	1561084
SLC27A5	NM_012254	NP_036386	Coding	chr19:58512065 minus strand	1561085
SLC35E1	NM_024881	NP_079157	Coding	chr19:16572382 minus strand	1561086
SLC39A3	NM_144564	NP_653165	Coding	chr19:2740076 minus strand	1561087
SLC39A3	NM_213568	NP_998733	Coding	chr19:2740076 minus strand	1561087
SLC44A2	NM_001145056	NP_001138528	Coding	chr19:10602444 plus strand	1561088
SLC44A2	NM_020428	NP_065161	Coding	chr19:10625494 plus strand	1561089
SLC5A5	NM_000453	NP_000444	Coding	chr19:17871972 plus strand	1561090
SLC6A16	NM_014037	NP_054756	Coding	chr19:49325217 minus	1561091

【１２４３】

				strand	
SLC7A10	NM_019849	NP_062823	Coding	chr19:33225850 minus strand	1561092
SLC7A9	NM_001126335	NP_001119807	Coding	chr19:32869777 minus strand	1561093
SLC7A9	NM_001243036	NP_001229965	Coding	chr19:32869777 minus strand	1561093
SLC7A9	NM_014270	NP_055085	Coding	chr19:32869777 minus strand	1561093
SLC8A2	NM_015063	NP_055878	Coding	chr19:47472050 minus strand	1561094
SMARCA4	NM_001128844	NP_001122316	Coding	chr19:10960921 plus strand	1561095
SMARCA4	NM_001128845	NP_001122317	Coding	chr19:10984151 plus strand	1561096
SMARCA4	NM_001128846	NP_001122318	Coding	chr19:10984151 plus strand	1561096
SMARCA4	NM_001128847	NP_001122319	Coding	chr19:10984151 plus strand	1561096
SMARCA4	NM_001128848	NP_001122320	Coding	chr19:10984151 plus strand	1561096
SMARCA4	NM_001128849	NP_001122321	Coding	chr19:10961131 plus strand	1561097
SMARCA4	NM_003072	NP_003063	Coding	chr19:10960921 plus strand	1561095
SMG9	NM_019108	NP_061981	Coding	chr19:43754990 minus strand	1561098
SMIM17	NM_001193628	NP_001180557	Coding	chr19:56643158 plus strand	1561099
SMIM24	NM_001136503	NP_001129975	Coding	chr19:3480542 minus strand	1561100
SMIM7	NM_001300925	NP_001287854	Coding	chr19:16660157 minus strand	1561101
SMIM7	NM_024104	NP_077009	Coding	chr19:16660157 minus strand	1561101
SNAPC2	NM_003083	NP_003074	Coding	chr19:7920308 plus strand	1561102
SNRNP70	NM_001301069	NP_001287998	Coding	chr19:49085139 plus strand	1561103
SNRNP70	NM_003089	NP_003080	Coding	chr19:49085139 plus strand	1561103
SNRPA	NM_004596	NP_004587	Coding	chr19:40750853 plus strand	1561104
SNRPD2	NM_004597	NP_004588	Coding	chr19:45692185 minus strand	1561105
SNRPD2	NM_177542	NP_808210	Coding	chr19:45692185 minus strand	1561105
SPACA4	NM_133498	NP_598005	Coding	chr19:48606742 plus strand	1561106
SPC24	NM_182513	NP_872319	Coding	chr19:11155808 minus strand	1561107
SPHK2	NM_001204158	NP_001191087	Coding	chr19:48619290 plus strand	1561108
SPHK2	NM_001204159	NP_001191088	Coding	chr19:48619532 plus strand	1561109

【１２４４】

SPHK2	NM_001204160	NP_001191089	Coding	chr19:48624951 plus strand	1561110
SPHK2	NM_001243876	NP_001230805	Coding	chr19:48619290 plus strand	1561108
SPHK2	NM_020126	NP_064511	Coding	chr19:48619290 plus strand	1561108
SPIB	NM_001243998	NP_001230927	Coding	chr19:50418937 plus strand	1561111
SPIB	NM_001243999	NP_001230928	Coding	chr19:50418937 plus strand	1561111
SPIB	NM_001244000	NP_001230929	Coding	chr19:50418937 plus strand	1561111
SPIB	NM_003121	NP_003112	Coding	chr19:50418937 plus strand	1561111
SPINT2	NM_001166103	NP_001159575	Coding	chr19:38264457 plus strand	1561112
SPINT2	NM_021102	NP_066925	Coding	chr19:38264457 plus strand	1561112
SPPL2B	NM_001077238	NP_001070706	Coding	chr19:2328629 plus strand	1561113
SPPL2B	NM_152988	NP_694533	Coding	chr19:2328629 plus strand	1561113
SPRED3	NM_001042522	NP_001035987	Coding	chr19:38390199 plus strand	1561114
SPTBN4	NM_020971	NP_066022	Coding	chr19:40467218 plus strand	1561115
SPTBN4	NM_025213	NP_079489	Coding	chr19:40530487 plus strand	1561116
SRRM5	NM_001145641	NP_001139113	Coding	chr19:43612100 plus strand	1561117
SSBP4	NM_001009998	NP_001009998	Coding	chr19:18419335 plus strand	1561118
SSBP4	NM_032627	NP_116016	Coding	chr19:18419335 plus strand	1561118
SSC5D	NM_001144950	NP_001138422	Coding	chr19:55488502 plus strand	1561119
SSC5D	NM_001195267	NP_001182196	Coding	chr19:55488502 plus strand	1561119
STAP2	NM_001013841	NP_001013863	Coding	chr19:4338850 minus strand	1561120
STAP2	NM_017720	NP_060190	Coding	chr19:4338850 minus strand	1561120
STK11	NM_000455	NP_000446	Coding	chr19:1205798 plus strand	1561121
STRN4	NM_001039877	NP_001034966	Coding	chr19:46746463 minus strand	1561122
STRN4	NM_013403	NP_037535	Coding	chr19:46746463 minus strand	1561122
STX10	NM_001271609	NP_001258538	Coding	chr19:13150374 minus strand	1561123
STX10	NM_001271610	NP_001258539	Coding	chr19:13150374 minus strand	1561123
STX10	NM_001271611	NP_001258540	Coding	chr19:13150374 minus strand	1561123
STX10	NM_003765	NP_003756	Coding	chr19:13150374 minus strand	1561123

【１２４５】

STXBP2	NM_001127396	NP_001120868	Coding	chr19:7637100 plus strand	1561124
STXBP2	NM_001272034	NP_001258963	Coding	chr19:7637100 plus strand	1561124
STXBP2	NM_006949	NP_008880	Coding	chr19:7637100 plus strand	1561124
SUGP1	NM_172231	NP_757386	Coding	chr19:19320512 minus strand	1561125
SUGP2	NM_001017392	NP_001017392	Coding	chr19:19033571 minus strand	1561126
SUGP2	NM_014884	NP_055699	Coding	chr19:19033571 minus strand	1561126
SULT2A1	NM_003167	NP_003158	Coding	chr19:47886397 minus strand	1561127
SULT2B1	NM_004605	NP_004596	Coding	chr19:48575735 plus strand	1561128
SULT2B1	NM_177973	NP_814444	Coding	chr19:48552171 plus strand	1561129
SUPT5H	NM_001111020	NP_001104490	Coding	chr19:39445545 plus strand	1561130
SUPT5H	NM_001130824	NP_001124296	Coding	chr19:39445545 plus strand	1561130
SUPT5H	NM_001130825	NP_001124297	Coding	chr19:39445545 plus strand	1561130
SUPT5H	NM_003169	NP_003160	Coding	chr19:39445647 plus strand	1561131
SUV420H2	NM_032701	NP_116090	Coding	chr19:55339852 plus strand	1561132
SWSAP1	NM_175871	NP_787067	Coding	chr19:11374706 plus strand	1561133
SYCE2	NM_001105578	NP_001099048	Coding	chr19:12919272 minus strand	1561134
SYCN	NM_001080468	NP_001073937	Coding	chr19:39204266 minus strand	1561135
SYDE1	NM_001300910	NP_001287839	Coding	chr19:15107363 plus strand	1561136
SYDE1	NM_033025	NP_149014	Coding	chr19:15107363 plus strand	1561136
SYMPK	NM_004819	NP_004810	Coding	chr19:45863290 minus strand	1561137
SYNE4	NM_001039876	NP_001034965	Coding	chr19:36008770 minus strand	1561138
SYNE4	NM_001297735	NP_001284664	Coding	chr19:36008793 minus strand	1561139
SYNGR4	NM_012451	NP_036583	Coding	chr19:48364393 plus strand	1561140
SYT3	NM_001160328	NP_001153800	Coding	chr19:50639835 minus strand	1561141
SYT3	NM_001160329	NP_001153801	Coding	chr19:50639835 minus strand	1561141
SYT3	NM_032298	NP_115674	Coding	chr19:50638045 minus strand	1561142
SYT5	NM_001297774	NP_001284703	Coding	chr19:55179443 minus strand	1561143
SYT5	NM_003180	NP_003171	Coding	chr19:55180352 minus strand	1561144

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TARM1	NM_001135686	NP_001129158	Coding	chr19:54081365 minus strand	1561145
TBC1D17	NM_001168222	NP_001161694	Coding	chr19:49877424 plus strand	1561146
TBC1D17	NM_024682	NP_078958	Coding	chr19:49877424 plus strand	1561146
TBCB	NM_001281	NP_001272	Coding	chr19:36114985 plus strand	1561147
TBCB	NM_001300971	NP_001287900	Coding	chr19:36115827 plus strand	1561148
TBXA2R	NM_001060	NP_001051	Coding	chr19:3606833 minus strand	1561149
TBXA2R	NM_201636	NP_963998	Coding	chr19:3606833 minus strand	1561149
TCF3	NM_001136139	NP_001129611	Coding	chr19:1650287 minus strand	1561150
TCF3	NM_003200	NP_003191	Coding	chr19:1652329 minus strand	1561151
TDRD12	NM_001110822	NP_001104292	Coding	chr19:32719772 plus strand	1561152
TEAD2	NM_001256658	NP_001243587	Coding	chr19:49362457 minus strand	1561153
TEAD2	NM_001256659	NP_001243588	Coding	chr19:49362457 minus strand	1561153
TEAD2	NM_001256660	NP_001243589	Coding	chr19:49362457 minus strand	1561153
TEAD2	NM_001256661	NP_001243590	Coding	chr19:49361495 minus strand	1561154
TEAD2	NM_001256662	NP_001243591	Coding	chr19:49362457 minus strand	1561153
TEAD2	NM_003598	NP_003589	Coding	chr19:49362457 minus strand	1561153
TECR	NM_138501	NP_612510	Coding	chr19:14529566 plus strand	1561155
TEX101	NM_001130011	NP_001123483	Coding	chr19:43414882 plus strand	1561156
TEX101	NM_031451	NP_113639	Coding	chr19:43388610 plus strand	1561157
TFPT	NM_013342	NP_037474	Coding	chr19:54115675 minus strand	1561158
TGFB1	NM_000660	NP_000651	Coding	chr19:41353933 minus strand	1561159
TGFBR3L	NM_001195259	NP_001182188	Coding	chr19:7916146 plus strand	1561160
THAP8	NM_152658	NP_689871	Coding	chr19:36054762 minus strand	1561161
THEG	NM_016585	NP_057669	Coding	chr19:376013 minus strand	1561162
THEG	NM_199202	NP_954672	Coding	chr19:376013 minus strand	1561162
THEG5	NM_001205273	NP_001192202	Coding	chr19:31592280 plus strand	1561163
THEG5	NM_001278575	NP_001265504	Coding	chr19:31588188 plus strand	1561164
THEG5	NM_001278576	NP_001265505	Coding	chr19:31588188 plus strand	1561164

【１２４７】

THEG5	NM_001278577	NP_001265506	Coding	chr19:31588188 plus strand	1561164
THEG5	NM_001278578	NP_001265507	Coding	chr19:31588188 plus strand	1561164
THOP1	NM_003249	NP_003240	Coding	chr19:2785507 plus strand	1561165
TICAM1	NM_182919	NP_891549	Coding	chr19:4831742 minus strand	1561166
TIMM13	NM_012458	NP_036590	Coding	chr19:2427916 minus strand	1561167
TIMM44	NM_006351	NP_006342	Coding	chr19:7943823 minus strand	1561168
TIMM50	NM_001001563	NP_001001563	Coding	chr19:39480411 plus strand	1561169
TJP3	NM_001267560	NP_001254489	Coding	chr19:3708336 plus strand	1561170
TJP3	NM_001267561	NP_001254490	Coding	chr19:3721698 plus strand	1561171
TLE2	NM_001144761	NP_001138233	Coding	chr19:3047635 minus strand	1561172
TLE2	NM_001144762	NP_001138234	Coding	chr19:3029614 minus strand	1561173
TLE2	NM_001300846	NP_001287775	Coding	chr19:3029201 minus strand	1561174
TLE2	NM_003260	NP_003251	Coding	chr19:3029167 minus strand	1561175
TLE6	NM_001143986	NP_001137458	Coding	chr19:2977537 plus strand	1561176
TLE6	NM_024760	NP_079036	Coding	chr19:2977537 plus strand	1561176
TM6SF2	NM_001001524	NP_001001524	Coding	chr19:19273265 minus strand	1561177
TMC4	NM_001145303	NP_001138775	Coding	chr19:54173250 minus strand	1561178
TMC4	NM_144686	NP_653287	Coding	chr19:54173250 minus strand	1561178
TMED1	NM_006858	NP_006849	Coding	chr19:10836307 minus strand	1561179
TMEM143	NM_018273	NP_060743	Coding	chr19:48363929 minus strand	1561180
TMEM145	NM_173633	NP_775904	Coding	chr19:42313324 plus strand	1561181
TMEM147	NM_001242597	NP_001229526	Coding	chr19:35545599 plus strand	1561182
TMEM147	NM_001242598	NP_001229527	Coding	chr19:35545599 plus strand	1561182
TMEM147	NM_032635	NP_116024	Coding	chr19:35545599 plus strand	1561182
TMEM150B	NM_001085488	NP_001078957	Coding	chr19:55325340 minus strand	1561183
TMEM150B	NM_001282011	NP_001268940	Coding	chr19:55325340 minus strand	1561183
TMEM160	NM_017854	NP_060324	Coding	chr19:47048624 minus strand	1561184
TMEM161A	NM_001256766	NP_001243695	Coding	chr19:19138501 minus strand	1561185
TMEM161A	NM_017814	NP_060284	Coding	chr19:19138501 minus strand	1561185

【１２４８】

TMEM190	NM_139172	NP_631911	Coding	chr19:55376835 plus strand	1561186
TMEM205	NM_001145416	NP_001138888	Coding	chr19:11346305 minus strand	1561187
TMEM205	NM_033408	NP_212133	Coding	chr19:11346305 minus strand	1561187
TMEM205	NM_198536	NP_940938	Coding	chr19:11346305 minus strand	1561187
TMEM221	NM_001190844	NP_001177773	Coding	chr19:17448567 minus strand	1561188
TMEM238	NM_001190764	NP_001177693	Coding	chr19:55384259 minus strand	1561189
TMEM259	NM_001033026	NP_001028198	Coding	chr19:1021142 minus strand	1561190
TMEM259	NM_033420	NP_219488	Coding	chr19:1021142 minus strand	1561190
TMEM38A	NM_024074	NP_076979	Coding	chr19:16661126 plus strand	1561191
TMEM59L	NM_012109	NP_036241	Coding	chr19:18612871 plus strand	1561192
TMEM86B	NM_173804	NP_776165	Coding	chr19:55229264 minus strand	1561193
TMEM91	NM_001042595	NP_001036060	Coding	chr19:41377263 plus strand	1561194
TMEM91	NM_001098821	NP_001092291	Coding	chr19:41376532 plus strand	1561195
TMEM91	NM_001098822	NP_001092292	Coding	chr19:41376532 plus strand	1561195
TMEM91	NM_001098823	NP_001092293	Coding	chr19:41376532 plus strand	1561195
TMEM91	NM_001098824	NP_001092294	Coding	chr19:41376532 plus strand	1561195
TMEM91	NM_001098825	NP_001092295	Coding	chr19:41363965 plus strand	1561196
TMIGD2	NM_001169126	NP_001162597	Coding	chr19:4302431 minus strand	1561197
TMIGD2	NM_144615	NP_653216	Coding	chr19:4302431 minus strand	1561197
TMPRSS9	NM_182973	NP_892018	Coding	chr19:2389785 plus strand	1561198
TNFAIP8L1	NM_001167942	NP_001161414	Coding	chr19:4640016 plus strand	1561199
TNFAIP8L1	NM_152362	NP_689575	Coding	chr19:4639514 plus strand	1561200
TNFSF14	NM_003807	NP_003798	Coding	chr19:6670588 minus strand	1561201
TNFSF14	NM_172014	NP_742011	Coding	chr19:6670588 minus strand	1561201
TNFSF9	NM_003811	NP_003802	Coding	chr19:6530998 plus strand	1561202
TNNI3	NM_000363	NP_000354	Coding	chr19:55157732 minus strand	1561203
TNNT1	NM_001126132	NP_001119604	Coding	chr19:55149354 minus strand	1561204
TNNT1	NM_001126133	NP_001119605	Coding	chr19:55149354 minus strand	1561204
TNNT1	NM_001291774	NP_001278703	Coding	chr19:55149354 minus	1561204

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				strand	
TNNT1	NM_003283	NP_003274	Coding	chr19:55149354 minus strand	1561204
TNPO2	NM_001136195	NP_001129667	Coding	chr19:12723996 minus strand	1561205
TNPO2	NM_001136196	NP_001129668	Coding	chr19:12722648 minus strand	1561206
TNPO2	NM_013433	NP_038461	Coding	chr19:12722291 minus strand	1561207
TOMM40	NM_001128916	NP_001122388	Coding	chr19:44891219 plus strand	1561208
TOMM40	NM_001128917	NP_001122389	Coding	chr19:44891219 plus strand	1561208
TOMM40	NM_006114	NP_006105	Coding	chr19:44891219 plus strand	1561208
TPGS1	NM_033513	NP_277048	Coding	chr19:507496 plus strand	1561209
TPM4	NM_001145160	NP_001138632	Coding	chr19:16067506 plus strand	1561210
TPM4	NM_003290	NP_003281	Coding	chr19:16076324 plus strand	1561211
TPRX1	NM_198479	NP_940881	Coding	chr19:47803604 minus strand	1561212
TRAPPC5	NM_001042461	NP_001035926	Coding	chr19:7680820 plus strand	1561213
TRAPPC5	NM_001042462	NP_001035927	Coding	chr19:7680820 plus strand	1561213
TRAPPC5	NM_174894	NP_777554	Coding	chr19:7680820 plus strand	1561213
TRAPPC6A	NM_001270891	NP_001257820	Coding	chr19:45178243 minus strand	1561214
TRAPPC6A	NM_001270892	NP_001257821	Coding	chr19:45178243 minus strand	1561214
TRAPPC6A	NM_001270893	NP_001257822	Coding	chr19:45178243 minus strand	1561214
TRAPPC6A	NM_024108	NP_077013	Coding	chr19:45178243 minus strand	1561214
TRIM28	NM_005762	NP_005753	Coding	chr19:58544468 plus strand	1561215
TRIP10	NM_001288962	NP_001275891	Coding	chr19:6739681 plus strand	1561216
TRIP10	NM_001288963	NP_001275892	Coding	chr19:6739681 plus strand	1561216
TRIP10	NM_004240	NP_004231	Coding	chr19:6739681 plus strand	1561216
TRMT1	NM_001136035	NP_001129507	Coding	chr19:13116749 minus strand	1561217
TRMT1	NM_001142554	NP_001136026	Coding	chr19:13116649 minus strand	1561218
TRMT1	NM_017722	NP_060192	Coding	chr19:13116649 minus strand	1561218
TRPM4	NM_001195227	NP_001182156	Coding	chr19:49157758 plus strand	1561219
TRPM4	NM_017636	NP_060106	Coding	chr19:49157758 plus strand	1561219
TSEN34	NM_001077446	NP_001070914	Coding	chr19:54191213 plus strand	1561220
TSEN34	NM_001282332	NP_001269261	Coding	chr19:54190730 plus strand	1561221

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TSEN34	NM_001282333	NP_001269262	Coding	chr19:54190267 plus strand	1561222
TSEN34	NM_024075	NP_076980	Coding	chr19:54190267 plus strand	1561222
TSHZ3	NM_020856	NP_065907	Coding	chr19:31349284 minus strand	1561223
TSKS	NM_021733	NP_068379	Coding	chr19:49763258 minus strand	1561224
TSPAN16	NM_001282509	NP_001269438	Coding	chr19:11296138 plus strand	1561225
TSPAN16	NM_001282510	NP_001269439	Coding	chr19:11296138 plus strand	1561225
TSPAN16	NM_012466	NP_036598	Coding	chr19:11296138 plus strand	1561225
TSSK6	NM_032037	NP_114426	Coding	chr19:19515660 minus strand	1561226
TTC9B	NM_152479	NP_689692	Coding	chr19:40218399 minus strand	1561227
TTYH1	NM_001005367	NP_001005367	Coding	chr19:54415430 plus strand	1561228
TTYH1	NM_001201461	NP_001188390	Coding	chr19:54415430 plus strand	1561228
TTYH1	NM_020659	NP_065710	Coding	chr19:54415430 plus strand	1561228
TUBB4A	NM_001289123	NP_001276052	Coding	chr19:6502848 minus strand	1561229
TUBB4A	NM_001289127	NP_001276056	Coding	chr19:6502848 minus strand	1561229
TUBB4A	NM_001289129	NP_001276058	Coding	chr19:6502848 minus strand	1561229
TUBB4A	NM_001289130	NP_001276059	Coding	chr19:6502584 minus strand	1561230
TUBB4A	NM_001289131	NP_001276060	Coding	chr19:6502584 minus strand	1561230
TUBB4A	NM_006087	NP_006078	Coding	chr19:6502584 minus strand	1561230
TULP2	NM_003323	NP_003314	Coding	chr19:48898739 minus strand	1561231
TYK2	NM_003331	NP_003322	Coding	chr19:10380572 minus strand	1561232
TYROBP	NM_001173514	NP_001166985	Coding	chr19:35908309 minus strand	1561233
TYROBP	NM_001173515	NP_001166986	Coding	chr19:35908309 minus strand	1561233
TYROBP	NM_003332	NP_003323	Coding	chr19:35908309 minus strand	1561233
TYROBP	NM_198125	NP_937758	Coding	chr19:35908309 minus strand	1561233
U2AF1L4	NM_001040425	NP_001035515	Coding	chr19:35745442 minus strand	1561234
U2AF1L4	NM_144987	NP_659424	Coding	chr19:35745442 minus strand	1561234
U2AF2	NM_001012478	NP_001012496	Coding	chr19:55654049 plus strand	1561235

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U2AF2	NM_007279	NP_009210	Coding	chr19:55654049 plus strand	1561235
UBA2	NM_005499	NP_005490	Coding	chr19:34428362 plus strand	1561236
UBA52	NM_001033930	NP_001029102	Coding	chr19:18571803 plus strand	1561237
UBA52	NM_003333	NP_003324	Coding	chr19:18571803 plus strand	1561237
UBE2M	NM_003969	NP_003960	Coding	chr19:58558976 minus strand	1561238
UBE2S	NM_014501	NP_055316	Coding	chr19:55407957 minus strand	1561239
UBL5	NM_001048241	NP_001041706	Coding	chr19:9827879 plus strand	1561240
UBL5	NM_024292	NP_077268	Coding	chr19:9827891 plus strand	1561241
UBXN6	NM_001171091	NP_001164562	Coding	chr19:4455298 minus strand	1561242
UBXN6	NM_025241	NP_079517	Coding	chr19:4457794 minus strand	1561243
UHRF1	NM_001048201	NP_001041666	Coding	chr19:4909429 plus strand	1561244
UHRF1	NM_001290050	NP_001276979	Coding	chr19:4903079 plus strand	1561245
UHRF1	NM_001290051	NP_001276980	Coding	chr19:4910092 plus strand	1561246
UHRF1	NM_001290052	NP_001276981	Coding	chr19:4910366 plus strand	1561247
UHRF1	NM_013282	NP_037414	Coding	chr19:4910366 plus strand	1561247
UNC13A	NM_001080421	NP_001073890	Coding	chr19:17688199 minus strand	1561248
UPF1	NM_001297549	NP_001284478	Coding	chr19:18831934 plus strand	1561249
UPF1	NM_002911	NP_002902	Coding	chr19:18831934 plus strand	1561249
UPK1A	NM_001281443	NP_001268372	Coding	chr19:35666515 plus strand	1561250
UPK1A	NM_007000	NP_008931	Coding	chr19:35666515 plus strand	1561250
UQCR11	NM_006830	NP_006821	Coding	chr19:1605484 minus strand	1561251
UQCRFS1	NM_006003	NP_005994	Coding	chr19:29213229 minus strand	1561252
URI1	NM_001252641	NP_001239570	Coding	chr19:29923643 plus strand	1561253
URI1	NM_003796	NP_003787	Coding	chr19:29942238 plus strand	1561254
USE1	NM_018467	NP_060937	Coding	chr19:17215345 plus strand	1561255
USF2	NM_003367	NP_003358	Coding	chr19:35268992 plus strand	1561256
USF2	NM_207291	NP_997174	Coding	chr19:35268992 plus strand	1561256
USHBP1	NM_001297703	NP_001284632	Coding	chr19:17264796 minus strand	1561257
USHBP1	NM_031941	NP_114147	Coding	chr19:17264735 minus strand	1561258
USP29	NM_020903	NP_065954	Coding	chr19:57120140 plus	1561259

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				strand	
VASP	NM_003370	NP_003361	Coding	chr19:45507429 plus strand	1561260
VAV1	NM_001258206	NP_001245135	Coding	chr19:6772667 plus strand	1561261
VAV1	NM_001258207	NP_001245136	Coding	chr19:6772667 plus strand	1561261
VAV1	NM_005428	NP_005419	Coding	chr19:6772667 plus strand	1561261
VMAC	NM_001017921	NP_001017921	Coding	chr19:5904840 plus strand	1561262
VN1R1	NM_020633	NP_065684	Coding	chr19:57456739 minus strand	1561263
VN1R2	NM_173856	NP_776255	Coding	chr19:53258291 plus strand	1561264
VN1R4	NM_173857	NP_776256	Coding	chr19:53267665 minus strand	1561265
VRK3	NM_001025778	NP_001020949	Coding	chr19:50025548 minus strand	1561266
VRK3	NM_016440	NP_057524	Coding	chr19:50025548 minus strand	1561266
VSIG10L	NM_001163922	NP_001157394	Coding	chr19:51342124 minus strand	1561267
VSTM1	NM_001288791	NP_001275720	Coding	chr19:54063953 minus strand	1561268
VSTM1	NM_001288792	NP_001275721	Coding	chr19:54063953 minus strand	1561268
VSTM1	NM_001288793	NP_001275722	Coding	chr19:54063953 minus strand	1561268
VSTM1	NM_198481	NP_940883	Coding	chr19:54063953 minus strand	1561268
VSTM2B	NM_001146339	NP_001139811	Coding	chr19:29526583 plus strand	1561269
WDR18	NM_024100	NP_077005	Coding	chr19:984327 plus strand	1561270
WDR62	NM_001083961	NP_001077430	Coding	chr19:36054880 plus strand	1561271
WDR62	NM_173636	NP_775907	Coding	chr19:36054880 plus strand	1561271
WDR83	NM_001099737	NP_001093207	Coding	chr19:12666803 plus strand	1561272
WDR83	NM_032332	NP_115708	Coding	chr19:12669702 plus strand	1561273
WDR83OS	NM_016145	NP_057229	Coding	chr19:12669651 minus strand	1561274
WDR87	NM_001291088	NP_001278017	Coding	chr19:37906706 minus strand	1561275
WDR87	NM_031951	NP_114157	Coding	chr19:37906706 minus strand	1561275
WDR88	NM_173479	NP_775750	Coding	chr19:33132091 plus strand	1561276
WIZ	NM_021241	NP_067064	Coding	chr19:15449951 minus strand	1561277
WTIP	NM_001080436	NP_001073905	Coding	chr19:34481974 plus strand	1561278
XAB2	NM_020196	NP_064581	Coding	chr19:7629553 minus strand	1561279

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XRCC1	NM_006297	NP_006288	Coding	chr19:43575578 minus strand	1561280
YIF1B	NM_001039671	NP_001034760	Coding	chr19:38315805 minus strand	1561281
YIF1B	NM_001039672	NP_001034761	Coding	chr19:38315966 minus strand	1561282
YIF1B	NM_001039673	NP_001034762	Coding	chr19:38315966 minus strand	1561282
YIF1B	NM_001145461	NP_001138933	Coding	chr19:38315805 minus strand	1561281
YIF1B	NM_001145462	NP_001138934	Coding	chr19:38315805 minus strand	1561281
YIF1B	NM_001145463	NP_001138935	Coding	chr19:38315966 minus strand	1561282
YIPF2	NM_024029	NP_076934	Coding	chr19:10929012 minus strand	1561283
YJEFN3	NM_001190328	NP_001177257	Coding	chr19:19528860 plus strand	1561284
YJEFN3	NM_198537	NP_940939	Coding	chr19:19528860 plus strand	1561284
ZBTB32	NM_014383	NP_055198	Coding	chr19:35712927 plus strand	1561285
ZBTB45	NM_032792	NP_116181	Coding	chr19:58519554 minus strand	1561286
ZBTB7A	NM_015898	NP_056982	Coding	chr19:4066818 minus strand	1561287
ZC3H4	NM_015168	NP_055983	Coding	chr19:47113752 minus strand	1561288
ZFP14	NM_001297619	NP_001284548	Coding	chr19:36379203 minus strand	1561289
ZFP14	NM_020917	NP_065968	Coding	chr19:36379203 minus strand	1561289
ZFP28	NM_020828	NP_065879	Coding	chr19:56538947 plus strand	1561290
ZFP30	NM_014898	NP_055713	Coding	chr19:37655412 minus strand	1561291
ZFP36	NM_003407	NP_003398	Coding	chr19:39406846 plus strand	1561292
ZFP82	NM_133466	NP_597723	Coding	chr19:36418648 minus strand	1561293
ZFR2	NM_001145640	NP_001139112	Coding	chr19:3869029 minus strand	1561294
ZFR2	NM_015174	NP_055989	Coding	chr19:3869029 minus strand	1561294
ZGLP1	NM_001103167	NP_001096637	Coding	chr19:10309557 minus strand	1561295
ZIK1	NM_001010879	NP_001010879	Coding	chr19:57584259 plus strand	1561296
ZIM2	NM_001146326	NP_001139798	Coding	chr19:56840729 minus strand	1561297
ZIM2	NM_001146327	NP_001139799	Coding	chr19:56840729 minus strand	1561297
ZIM2	NM_015363	NP_056178	Coding	chr19:56840729 minus strand	1561297

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ZIM3	NM_052882	NP_443114	Coding	chr19:57145202 minus strand	1561298
ZNF100	NM_173531	NP_775802	Coding	chr19:21767628 minus strand	1561299
ZNF101	NM_001300949	NP_001287878	Coding	chr19:19668152 plus strand	1561300
ZNF101	NM_033204	NP_149981	Coding	chr19:19668787 plus strand	1561301
ZNF112	NM_001083335	NP_001076804	Coding	chr19:44356704 minus strand	1561302
ZNF112	NM_013380	NP_037512	Coding	chr19:44356704 minus strand	1561302
ZNF114	NM_001301062	NP_001287991	Coding	chr19:48273749 plus strand	1561303
ZNF114	NM_153608	NP_705836	Coding	chr19:48270098 plus strand	1561304
ZNF121	NM_001008727	NP_001008727	Coding	chr19:9584533 minus strand	1561305
ZNF132	NM_003433	NP_003424	Coding	chr19:58440222 minus strand	1561306
ZNF134	NM_003435	NP_003426	Coding	chr19:57614461 plus strand	1561307
ZNF135	NM_001164527	NP_001157999	Coding	chr19:58059238 plus strand	1561308
ZNF135	NM_001164529	NP_001158001	Coding	chr19:58059238 plus strand	1561308
ZNF135	NM_001164530	NP_001158002	Coding	chr19:58059238 plus strand	1561308
ZNF135	NM_001289401	NP_001276330	Coding	chr19:58059238 plus strand	1561308
ZNF135	NM_001289402	NP_001276331	Coding	chr19:58059238 plus strand	1561308
ZNF135	NM_003436	NP_003427	Coding	chr19:58059238 plus strand	1561308
ZNF135	NM_007134	NP_009065	Coding	chr19:58059238 plus strand	1561308
ZNF136	NM_003437	NP_003428	Coding	chr19:12163056 plus strand	1561309
ZNF14	NM_021030	NP_066358	Coding	chr19:19733112 minus strand	1561310
ZNF146	NM_001099638	NP_001093108	Coding	chr19:36214601 plus strand	1561311
ZNF146	NM_001099639	NP_001093109	Coding	chr19:36214601 plus strand	1561311
ZNF146	NM_007145	NP_009076	Coding	chr19:36214601 plus strand	1561311
ZNF154	NM_001085384	NP_001078853	Coding	chr19:57709211 minus strand	1561312
ZNF155	NM_001260486	NP_001247415	Coding	chr19:43984169 plus strand	1561313
ZNF155	NM_001260487	NP_001247416	Coding	chr19:43984169 plus strand	1561313
ZNF155	NM_001260488	NP_001247417	Coding	chr19:43984169 plus strand	1561313

【１２５５】

ZNF155	NM_003445	NP_003436	Coding	chr19:43984169 plus strand	1561313
ZNF155	NM_198089	NP_932355	Coding	chr19:43984169 plus strand	1561313
ZNF160	NM_001102603	NP_001096073	Coding	chr19:53103434 minus strand	1561314
ZNF160	NM_033288	NP_150630	Coding	chr19:53103434 minus strand	1561314
ZNF160	NM_198893	NP_942596	Coding	chr19:53103434 minus strand	1561314
ZNF17	NM_006959	NP_008890	Coding	chr19:57411160 plus strand	1561315
ZNF175	NM_007147	NP_009078	Coding	chr19:51571277 plus strand	1561316
ZNF177	NM_001172651	NP_001166122	Coding	chr19:9376315 plus strand	1561317
ZNF177	NM_003451	NP_003442	Coding	chr19:9363019 plus strand	1561318
ZNF180	NM_001278508	NP_001265437	Coding	chr19:44500523 minus strand	1561319
ZNF180	NM_001278509	NP_001265438	Coding	chr19:44500523 minus strand	1561319
ZNF180	NM_001288759	NP_001275688	Coding	chr19:44500523 minus strand	1561319
ZNF180	NM_001288760	NP_001275689	Coding	chr19:44500523 minus strand	1561319
ZNF180	NM_001288761	NP_001275690	Coding	chr19:44500523 minus strand	1561319
ZNF180	NM_001288762	NP_001275691	Coding	chr19:44500523 minus strand	1561319
ZNF180	NM_001291633	NP_001278562	Coding	chr19:44500523 minus strand	1561319
ZNF180	NM_013256	NP_037388	Coding	chr19:44500523 minus strand	1561319
ZNF181	NM_001029997	NP_001025168	Coding	chr19:34734574 plus strand	1561320
ZNF181	NM_001145665	NP_001139137	Coding	chr19:34734574 plus strand	1561320
ZNF20	NM_001203250	NP_001190179	Coding	chr19:12140407 minus strand	1561321
ZNF20	NM_021143	NP_066966	Coding	chr19:12140407 minus strand	1561321
ZNF208	NM_007153	NP_009084	Coding	chr19:22010943 minus strand	1561322
ZNF211	NM_001265597	NP_001252526	Coding	chr19:57633166 plus strand	1561323
ZNF211	NM_001265598	NP_001252527	Coding	chr19:57633166 plus strand	1561323
ZNF211	NM_001265599	NP_001252528	Coding	chr19:57633166 plus strand	1561323
ZNF211	NM_001265600	NP_001252529	Coding	chr19:57633166 plus strand	1561323
ZNF211	NM_006385	NP_006376	Coding	chr19:57633166 plus strand	1561323
ZNF211	NM_198855	NP_942152	Coding	chr19:57633166 plus strand	1561323

【１２５６】

ZNF221	NM_001297588	NP_001284517	Coding	chr19:43951222 plus strand	1561324
ZNF221	NM_001297589	NP_001284518	Coding	chr19:43951222 plus strand	1561324
ZNF221	NM_013359	NP_037491	Coding	chr19:43951244 plus strand	1561325
ZNF222	NM_001129996	NP_001123468	Coding	chr19:44025341 plus strand	1561326
ZNF222	NM_013360	NP_037492	Coding	chr19:44025341 plus strand	1561326
ZNF223	NM_013361	NP_037493	Coding	chr19:44052010 plus strand	1561327
ZNF224	NM_013398	NP_037530	Coding	chr19:44094328 plus strand	1561328
ZNF225	NM_013362	NP_037494	Coding	chr19:44113394 plus strand	1561329
ZNF226	NM_001032372	NP_001027544	Coding	chr19:44165163 plus strand	1561330
ZNF226	NM_001032373	NP_001027545	Coding	chr19:44165095 plus strand	1561331
ZNF226	NM_001032374	NP_001027546	Coding	chr19:44165095 plus strand	1561331
ZNF226	NM_001146220	NP_001139692	Coding	chr19:44165061 plus strand	1561332
ZNF226	NM_015919	NP_057003	Coding	chr19:44165095 plus strand	1561331
ZNF227	NM_001289166	NP_001276095	Coding	chr19:44212527 plus strand	1561333
ZNF227	NM_001289167	NP_001276096	Coding	chr19:44212527 plus strand	1561333
ZNF227	NM_001289168	NP_001276097	Coding	chr19:44212527 plus strand	1561333
ZNF227	NM_001289169	NP_001276098	Coding	chr19:44212527 plus strand	1561333
ZNF227	NM_001289170	NP_001276099	Coding	chr19:44212527 plus strand	1561333
ZNF227	NM_001289171	NP_001276100	Coding	chr19:44212527 plus strand	1561333
ZNF227	NM_001289172	NP_001276101	Coding	chr19:44212527 plus strand	1561333
ZNF227	NM_001289173	NP_001276102	Coding	chr19:44212527 plus strand	1561333
ZNF227	NM_182490	NP_872296	Coding	chr19:44212527 plus strand	1561333
ZNF229	NM_001278510	NP_001265439	Coding	chr19:44448578 minus strand	1561334
ZNF229	NM_014518	NP_055333	Coding	chr19:44448477 minus strand	1561335
ZNF230	NM_006300	NP_006291	Coding	chr19:44002924 plus strand	1561336
ZNF233	NM_001207005	NP_001193934	Coding	chr19:44259879 plus strand	1561337
ZNF233	NM_181756	NP_861421	Coding	chr19:44259913 plus strand	1561338

【１２５７】

ZNF234	NM_001144824	NP_001138296	Coding	chr19:44141556 plus strand	1561339
ZNF234	NM_006630	NP_006621	Coding	chr19:44141556 plus strand	1561339
ZNF235	NM_004234	NP_004225	Coding	chr19:44305025 minus strand	1561340
ZNF253	NM_021047	NP_066385	Coding	chr19:19865904 plus strand	1561341
ZNF254	NM_001278661	NP_001265590	Coding	chr19:24033404 plus strand	1561342
ZNF254	NM_001278662	NP_001265591	Coding	chr19:24087159 plus strand	1561343
ZNF254	NM_001278663	NP_001265592	Coding	chr19:24033404 plus strand	1561342
ZNF254	NM_001278664	NP_001265593	Coding	chr19:24087159 plus strand	1561343
ZNF254	NM_001278665	NP_001265594	Coding	chr19:24087159 plus strand	1561343
ZNF254	NM_001278677	NP_001265606	Coding	chr19:24033404 plus strand	1561342
ZNF254	NM_001278678	NP_001265607	Coding	chr19:24087159 plus strand	1561343
ZNF254	NM_203282	NP_975011	Coding	chr19:24087159 plus strand	1561343
ZNF256	NM_005773	NP_005764	Coding	chr19:57947709 minus strand	1561344
ZNF257	NM_033468	NP_258429	Coding	chr19:22052463 plus strand	1561345
ZNF260	NM_001012756	NP_001012774	Coding	chr19:36528346 minus strand	1561346
ZNF260	NM_001166036	NP_001159508	Coding	chr19:36528346 minus strand	1561346
ZNF260	NM_001166037	NP_001159509	Coding	chr19:36528346 minus strand	1561346
ZNF260	NM_001166038	NP_001159510	Coding	chr19:36528346 minus strand	1561346
ZNF264	NM_003417	NP_003408	Coding	chr19:57191499 plus strand	1561347
ZNF266	NM_001271314	NP_001258243	Coding	chr19:9435578 minus strand	1561348
ZNF266	NM_006631	NP_006622	Coding	chr19:9435578 minus strand	1561348
ZNF274	NM_001278734	NP_001265663	Coding	chr19:58182988 plus strand	1561349
ZNF274	NM_016324	NP_057408	Coding	chr19:58182988 plus strand	1561349
ZNF274	NM_016325	NP_057409	Coding	chr19:58182988 plus strand	1561349
ZNF274	NM_133502	NP_598009	Coding	chr19:58182988 plus strand	1561349
ZNF28	NM_006969	NP_008900	Coding	chr19:52821669 minus strand	1561350
ZNF283	NM_001297752	NP_001284681	Coding	chr19:43827291 plus strand	1561351

【１２５８】

ZNF283	NM_181845	NP_862828	Coding	chr19:43827320 plus strand	1561352
ZNF284	NM_001037813	NP_001032902	Coding	chr19:44072143 plus strand	1561353
ZNF285	NM_001291488	NP_001278417	Coding	chr19:44401611 minus strand	1561354
ZNF285	NM_001291489	NP_001278418	Coding	chr19:44401611 minus strand	1561354
ZNF285	NM_001291490	NP_001278419	Coding	chr19:44401611 minus strand	1561354
ZNF285	NM_001291491	NP_001278420	Coding	chr19:44401611 minus strand	1561354
ZNF285	NM_152354	NP_689567	Coding	chr19:44401611 minus strand	1561354
ZNF296	NM_145288	NP_660331	Coding	chr19:45076430 minus strand	1561355
ZNF30	NM_001099437	NP_001092907	Coding	chr19:34926902 plus strand	1561356
ZNF30	NM_001099438	NP_001092908	Coding	chr19:34926902 plus strand	1561356
ZNF30	NM_194325	NP_919306	Coding	chr19:34926902 plus strand	1561356
ZNF302	NM_001012320	NP_001012320	Coding	chr19:34677638 plus strand	1561357
ZNF302	NM_001289181	NP_001276110	Coding	chr19:34677638 plus strand	1561357
ZNF302	NM_001289182	NP_001276111	Coding	chr19:34677638 plus strand	1561357
ZNF302	NM_001289183	NP_001276112	Coding	chr19:34677638 plus strand	1561357
ZNF302	NM_001289184	NP_001276113	Coding	chr19:34677638 plus strand	1561357
ZNF302	NM_001289185	NP_001276114	Coding	chr19:34677638 plus strand	1561357
ZNF302	NM_001289186	NP_001276115	Coding	chr19:34677638 plus strand	1561357
ZNF302	NM_001289187	NP_001276116	Coding	chr19:34677638 plus strand	1561357
ZNF302	NM_001289188	NP_001276117	Coding	chr19:34677638 plus strand	1561357
ZNF302	NM_001289189	NP_001276118	Coding	chr19:34677638 plus strand	1561357
ZNF302	NM_001289190	NP_001276119	Coding	chr19:34677638 plus strand	1561357
ZNF302	NM_001289191	NP_001276120	Coding	chr19:34677638 plus strand	1561357
ZNF302	NM_001289192	NP_001276121	Coding	chr19:34677638 plus strand	1561357
ZNF302	NM_018443	NP_060913	Coding	chr19:34677638 plus strand	1561357
ZNF302	NM_018675	NP_061145	Coding	chr19:34677638 plus strand	1561357
ZNF304	NM_001290318	NP_001277247	Coding	chr19:57351273 plus strand	1561358

【１２５９】

ZNF304	NM_001290319	NP_001277248	Coding	chr19:57351273 plus strand	1561358
ZNF304	NM_020657	NP_065708	Coding	chr19:57351273 plus strand	1561358
ZNF317	NM_001190791	NP_001177720	Coding	chr19:9140379 plus strand	1561359
ZNF317	NM_020933	NP_065984	Coding	chr19:9140379 plus strand	1561359
ZNF320	NM_207333	NP_997216	Coding	chr19:52891346 minus strand	1561360
ZNF324	NM_014347	NP_055162	Coding	chr19:58467044 plus strand	1561361
ZNF324B	NM_207395	NP_997278	Coding	chr19:58451603 plus strand	1561362
ZNF329	NM_024620	NP_078896	Coding	chr19:58150781 minus strand	1561363
ZNF331	NM_001079906	NP_001073375	Coding	chr19:53538078 plus strand	1561364
ZNF331	NM_001079907	NP_001073376	Coding	chr19:53555306 plus strand	1561365
ZNF331	NM_001253798	NP_001240727	Coding	chr19:53538285 plus strand	1561366
ZNF331	NM_001253799	NP_001240728	Coding	chr19:53538285 plus strand	1561366
ZNF331	NM_001253800	NP_001240729	Coding	chr19:53538787 plus strand	1561367
ZNF331	NM_001253801	NP_001240730	Coding	chr19:53554644 plus strand	1561368
ZNF331	NM_018555	NP_061025	Coding	chr19:53520922 plus strand	1561369
ZNF333	NM_001300912	NP_001287841	Coding	chr19:14690039 plus strand	1561370
ZNF333	NM_032433	NP_115809	Coding	chr19:14690057 plus strand	1561371
ZNF345	NM_001242472	NP_001229401	Coding	chr19:36850875 plus strand	1561372
ZNF345	NM_001242474	NP_001229403	Coding	chr19:36850875 plus strand	1561372
ZNF345	NM_001242475	NP_001229404	Coding	chr19:36851650 plus strand	1561373
ZNF345	NM_001242476	NP_001229405	Coding	chr19:36851650 plus strand	1561373
ZNF345	NM_003419	NP_003410	Coding	chr19:36850357 plus strand	1561374
ZNF347	NM_001172674	NP_001166145	Coding	chr19:53159060 minus strand	1561375
ZNF347	NM_001172675	NP_001166146	Coding	chr19:53159069 minus strand	1561376
ZNF347	NM_032584	NP_115973	Coding	chr19:53159069 minus strand	1561376
ZNF350	NM_021632	NP_067645	Coding	chr19:51986826 minus strand	1561377
ZNF358	NM_018083	NP_060553	Coding	chr19:7516117 plus strand	1561378
ZNF382	NM_001256838	NP_001243767	Coding	chr19:36605304 plus strand	1561379

【１２６０】

ZNF382	NM_032825	NP_116214	Coding	chr19:36605304 plus strand	1561379
ZNF383	NM_152604	NP_689817	Coding	chr19:37226463 plus strand	1561380
ZNF404	NM_001033719	NP_001028891	Coding	chr19:43880136 minus strand	1561381
ZNF414	NM_001146175	NP_001139647	Coding	chr19:8514164 minus strand	1561382
ZNF414	NM_032370	NP_115746	Coding	chr19:8514164 minus strand	1561382
ZNF415	NM_001136038	NP_001129510	Coding	chr19:53132918 minus strand	1561383
ZNF415	NM_001164309	NP_001157781	Coding	chr19:53132918 minus strand	1561383
ZNF415	NM_018355	NP_060825	Coding	chr19:53132920 minus strand	1561384
ZNF416	NM_017879	NP_060349	Coding	chr19:57578875 minus strand	1561385
ZNF417	NM_001297734	NP_001284663	Coding	chr19:57916616 minus strand	1561386
ZNF417	NM_152475	NP_689688	Coding	chr19:57916610 minus strand	1561387
ZNF418	NM_133460	NP_597717	Coding	chr19:57935372 minus strand	1561388
ZNF419	NM_001098491	NP_001091961	Coding	chr19:57487710 plus strand	1561389
ZNF419	NM_001098492	NP_001091962	Coding	chr19:57487710 plus strand	1561389
ZNF419	NM_001098493	NP_001091963	Coding	chr19:57487710 plus strand	1561389
ZNF419	NM_001098494	NP_001091964	Coding	chr19:57487710 plus strand	1561389
ZNF419	NM_001098495	NP_001091965	Coding	chr19:57487710 plus strand	1561389
ZNF419	NM_001098496	NP_001091966	Coding	chr19:57487710 plus strand	1561389
ZNF419	NM_001291743	NP_001278672	Coding	chr19:57487710 plus strand	1561389
ZNF419	NM_001291744	NP_001278673	Coding	chr19:57487710 plus strand	1561389
ZNF419	NM_001291745	NP_001278674	Coding	chr19:57487710 plus strand	1561389
ZNF419	NM_024691	NP_078967	Coding	chr19:57487710 plus strand	1561389
ZNF420	NM_144689	NP_653290	Coding	chr19:37078479 plus strand	1561390
ZNF426	NM_001300883	NP_001287812	Coding	chr19:9538645 minus strand	1561391
ZNF426	NM_024106	NP_077011	Coding	chr19:9538627 minus strand	1561392
ZNF428	NM_182498	NP_872304	Coding	chr19:43619862 minus strand	1561393
ZNF429	NM_001001415	NP_001001415	Coding	chr19:21505634 plus strand	1561394

【１２６１】

ZNF43	NM_001256648	NP_001243577	Coding	chr19:21852068 minus strand	1561395
ZNF43	NM_001256649	NP_001243578	Coding	chr19:21852068 minus strand	1561395
ZNF43	NM_001256650	NP_001243579	Coding	chr19:21852068 minus strand	1561395
ZNF43	NM_001256651	NP_001243580	Coding	chr19:21852068 minus strand	1561395
ZNF43	NM_001256653	NP_001243582	Coding	chr19:21852068 minus strand	1561395
ZNF43	NM_001256654	NP_001243583	Coding	chr19:21836208 minus strand	1561396
ZNF43	NM_003423	NP_003414	Coding	chr19:21836208 minus strand	1561396
ZNF430	NM_001172671	NP_001166142	Coding	chr19:21020619 plus strand	1561397
ZNF430	NM_025189	NP_079465	Coding	chr19:21020619 plus strand	1561397
ZNF431	NM_133473	NP_597730	Coding	chr19:21142036 plus strand	1561398
ZNF432	NM_014650	NP_055465	Coding	chr19:52048820 minus strand	1561399
ZNF433	NM_001080411	NP_001073880	Coding	chr19:12035710 minus strand	1561400
ZNF439	NM_152262	NP_689475	Coding	chr19:11866028 plus strand	1561401
ZNF44	NM_001164276	NP_001157748	Coding	chr19:12294899 minus strand	1561402
ZNF44	NM_016264	NP_057348	Coding	chr19:12294899 minus strand	1561402
ZNF440	NM_152357	NP_689570	Coding	chr19:11814291 plus strand	1561403
ZNF441	NM_152355	NP_689568	Coding	chr19:11766999 plus strand	1561404
ZNF442	NM_030824	NP_110451	Coding	chr19:12365661 minus strand	1561405
ZNF443	NM_005815	NP_005806	Coding	chr19:12441112 minus strand	1561406
ZNF444	NM_001253792	NP_001240721	Coding	chr19:56141165 plus strand	1561407
ZNF444	NM_018337	NP_060807	Coding	chr19:56141165 plus strand	1561407
ZNF446	NM_017908	NP_060378	Coding	chr19:58476427 plus strand	1561408
ZNF45	NM_003425	NP_003416	Coding	chr19:43935259 minus strand	1561409
ZNF460	NM_006635	NP_006626	Coding	chr19:57280484 plus strand	1561410
ZNF461	NM_001297623	NP_001284552	Coding	chr19:36666853 minus strand	1561411
ZNF461	NM_153257	NP_694989	Coding	chr19:36666853 minus strand	1561411
ZNF468	NM_001008801	NP_001008801	Coding	chr19:52857649 minus strand	1561412

【１２６２】

ZNF468	NM_001277120	NP_001264049	Coding	chr19:52857649 minus strand	1561412
ZNF470	NM_001001668	NP_001001668	Coding	chr19:56567520 plus strand	1561413
ZNF471	NM_020813	NP_065864	Coding	chr19:56507842 plus strand	1561414
ZNF473	NM_001006656	NP_001006657	Coding	chr19:50025954 plus strand	1561415
ZNF473	NM_015428	NP_056243	Coding	chr19:50025954 plus strand	1561415
ZNF480	NM_001297624	NP_001284553	Coding	chr19:52297168 plus strand	1561416
ZNF480	NM_001297625	NP_001284554	Coding	chr19:52297168 plus strand	1561416
ZNF480	NM_144684	NP_653285	Coding	chr19:52297168 plus strand	1561416
ZNF486	NM_052852	NP_443084	Coding	chr19:20167213 plus strand	1561417
ZNF490	NM_020714	NP_065765	Coding	chr19:12610809 minus strand	1561418
ZNF491	NM_152356	NP_689569	Coding	chr19:11798575 plus strand	1561419
ZNF492	NM_020855	NP_065906	Coding	chr19:22634323 plus strand	1561420
ZNF493	NM_001076678	NP_001070146	Coding	chr19:21397118 plus strand	1561421
ZNF493	NM_145326	NP_663299	Coding	chr19:21397118 plus strand	1561421
ZNF493	NM_175910	NP_787106	Coding	chr19:21397118 plus strand	1561421
ZNF497	NM_001207009	NP_001193938	Coding	chr19:58362848 minus strand	1561422
ZNF497	NM_198458	NP_940860	Coding	chr19:58362848 minus strand	1561422
ZNF506	NM_001099269	NP_001092739	Coding	chr19:19821751 minus strand	1561423
ZNF506	NM_001145404	NP_001138876	Coding	chr19:19821751 minus strand	1561423
ZNF507	NM_001136156	NP_001129628	Coding	chr19:32345607 plus strand	1561424
ZNF507	NM_014910	NP_055725	Coding	chr19:32345607 plus strand	1561424
ZNF524	NM_153219	NP_694951	Coding	chr19:55600339 plus strand	1561425
ZNF526	NM_133444	NP_597701	Coding	chr19:42220339 plus strand	1561426
ZNF527	NM_032453	NP_115829	Coding	chr19:37371156 plus strand	1561427
ZNF528	NM_032423	NP_115799	Coding	chr19:52397867 plus strand	1561428
ZNF529	NM_001145649	NP_001139121	Coding	chr19:36605276 minus strand	1561429
ZNF529	NM_001145650	NP_001139122	Coding	chr19:36605276 minus strand	1561429

【１２６３】

ZNF529	NM_020951	NP_066002	Coding	chr19:36573295 minus strand	1561430
ZNF530	NM_020880	NP_065931	Coding	chr19:57599884 plus strand	1561431
ZNF534	NM_001143938	NP_001137410	Coding	chr19:52431413 plus strand	1561432
ZNF534	NM_001143939	NP_001137411	Coding	chr19:52431413 plus strand	1561432
ZNF534	NM_001291368	NP_001278297	Coding	chr19:52431413 plus strand	1561432
ZNF534	NM_001291369	NP_001278298	Coding	chr19:52431413 plus strand	1561432
ZNF536	NM_014717	NP_055532	Coding	chr19:30372420 plus strand	1561433
ZNF540	NM_001172225	NP_001165696	Coding	chr19:37594829 plus strand	1561434
ZNF540	NM_001172226	NP_001165697	Coding	chr19:37594829 plus strand	1561434
ZNF540	NM_152606	NP_689819	Coding	chr19:37551370 plus strand	1561435
ZNF541	NM_001277075	NP_001264004	Coding	chr19:47555856 minus strand	1561436
ZNF543	NM_213598	NP_998763	Coding	chr19:57320496 plus strand	1561437
ZNF544	NM_014480	NP_055295	Coding	chr19:58228703 plus strand	1561438
ZNF546	NM_001297763	NP_001284692	Coding	chr19:39997035 plus strand	1561439
ZNF546	NM_178544	NP_848639	Coding	chr19:39997035 plus strand	1561439
ZNF547	NM_173631	NP_775902	Coding	chr19:57363522 plus strand	1561440
ZNF548	NM_001172773	NP_001166244	Coding	chr19:57389849 plus strand	1561441
ZNF548	NM_152909	NP_690873	Coding	chr19:57389849 plus strand	1561441
ZNF549	NM_001199295	NP_001186224	Coding	chr19:57527324 plus strand	1561442
ZNF549	NM_153263	NP_694995	Coding	chr19:57527324 plus strand	1561442
ZNF550	NM_001277090	NP_001264019	Coding	chr19:57559863 minus strand	1561443
ZNF550	NM_001277091	NP_001264020	Coding	chr19:57559863 minus strand	1561443
ZNF550	NM_001277092	NP_001264021	Coding	chr19:57559863 minus strand	1561443
ZNF550	NM_001277093	NP_001264022	Coding	chr19:57559863 minus strand	1561443
ZNF551	NM_001270938	NP_001257867	Coding	chr19:57681968 plus strand	1561444
ZNF551	NM_138347	NP_612356	Coding	chr19:57681968 plus strand	1561444
ZNF552	NM_024762	NP_079038	Coding	chr19:57814913 minus strand	1561445

【１２６４】

ZNF554	NM_001102651	NP_001096121	Coding	chr19:2819873 plus strand	1561446
ZNF555	NM_001172775	NP_001166246	Coding	chr19:2841434 plus strand	1561447
ZNF555	NM_152791	NP_690004	Coding	chr19:2841434 plus strand	1561447
ZNF556	NM_001300843	NP_001287772	Coding	chr19:2867334 plus strand	1561448
ZNF556	NM_024967	NP_079243	Coding	chr19:2867334 plus strand	1561448
ZNF557	NM_001044387	NP_001037852	Coding	chr19:7069459 plus strand	1561449
ZNF557	NM_001044388	NP_001037853	Coding	chr19:7069459 plus strand	1561449
ZNF557	NM_024341	NP_077317	Coding	chr19:7069459 plus strand	1561449
ZNF558	NM_144693	NP_653294	Coding	chr19:8822889 minus strand	1561450
ZNF559	NM_001202406	NP_001189335	Coding	chr19:9323771 plus strand	1561451
ZNF559	NM_001202407	NP_001189336	Coding	chr19:9323771 plus strand	1561451
ZNF559	NM_001202408	NP_001189337	Coding	chr19:9323771 plus strand	1561451
ZNF559	NM_001202409	NP_001189338	Coding	chr19:9323771 plus strand	1561451
ZNF559	NM_001202410	NP_001189339	Coding	chr19:9323771 plus strand	1561451
ZNF559	NM_001202411	NP_001189340	Coding	chr19:9323771 plus strand	1561451
ZNF559	NM_001202412	NP_001189341	Coding	chr19:9324225 plus strand	1561452
ZNF559	NM_032497	NP_115886	Coding	chr19:9323771 plus strand	1561451
ZNF559-ZNF177	NM_001172650	NP_001166121	Coding	chr19:9324225 plus strand	1561453
ZNF559-ZNF177	NM_001202425	NP_001189354	Coding	chr19:9324694 plus strand	1561454
ZNF560	NM_152476	NP_689689	Coding	chr19:9498603 minus strand	1561455
ZNF561	NM_152289	NP_689502	Coding	chr19:9621240 minus strand	1561456
ZNF562	NM_001130031	NP_001123503	Coding	chr19:9675100 minus strand	1561457
ZNF562	NM_001130032	NP_001123504	Coding	chr19:9675100 minus strand	1561457
ZNF562	NM_001300885	NP_001287814	Coding	chr19:9675100 minus strand	1561457
ZNF562	NM_017656	NP_060126	Coding	chr19:9675100 minus strand	1561457
ZNF563	NM_145276	NP_660319	Coding	chr19:12333720 minus strand	1561458
ZNF564	NM_144976	NP_659413	Coding	chr19:12551542 minus strand	1561459
ZNF565	NM_001042474	NP_001035939	Coding	chr19:36215084 minus strand	1561460
ZNF565	NM_152477	NP_689690	Coding	chr19:36214673 minus strand	1561461
ZNF566	NM_001145343	NP_001138815	Coding	chr19:36489561 minus strand	1561462
ZNF566	NM_001145344	NP_001138816	Coding	chr19:36489561 minus strand	1561462
ZNF566	NM_001145345	NP_001138817	Coding	chr19:36489561 minus strand	1561462
ZNF566	NM_001300970	NP_001287899	Coding	chr19:36489902 minus strand	1561463

【１２６５】

ZNF566	NM_032838	NP_116227	Coding	chr19:36489435 minus strand	1561464
ZNF567	NM_001300979	NP_001287908	Coding	chr19:36687611 plus strand	1561465
ZNF567	NM_152603	NP_689816	Coding	chr19:36689399 plus strand	1561466
ZNF568	NM_001204835	NP_001191764	Coding	chr19:36916328 plus strand	1561467
ZNF568	NM_001204836	NP_001191765	Coding	chr19:36916328 plus strand	1561467
ZNF568	NM_001204837	NP_001191766	Coding	chr19:36916328 plus strand	1561467
ZNF568	NM_001204838	NP_001191767	Coding	chr19:36916328 plus strand	1561467
ZNF568	NM_001204839	NP_001191768	Coding	chr19:36916328 plus strand	1561467
ZNF568	NM_198539	NP_940941	Coding	chr19:36916328 plus strand	1561467
ZNF569	NM_152484	NP_689697	Coding	chr19:37467437 minus strand	1561468
ZNF57	NM_173480	NP_775751	Coding	chr19:2900897 plus strand	1561469
ZNF570	NM_001300993	NP_001287922	Coding	chr19:37467771 plus strand	1561470
ZNF570	NM_144694	NP_653295	Coding	chr19:37469057 plus strand	1561471
ZNF571	NM_001290314	NP_001277243	Coding	chr19:37594792 minus strand	1561472
ZNF571	NM_016536	NP_057620	Coding	chr19:37594792 minus strand	1561472
ZNF573	NM_001172689	NP_001166160	Coding	chr19:37779590 minus strand	1561473
ZNF573	NM_001172690	NP_001166161	Coding	chr19:37779590 minus strand	1561473
ZNF573	NM_001172691	NP_001166162	Coding	chr19:37779590 minus strand	1561473
ZNF573	NM_001172692	NP_001166163	Coding	chr19:37779590 minus strand	1561473
ZNF573	NM_152360	NP_689573	Coding	chr19:37779590 minus strand	1561473
ZNF574	NM_022752	NP_073589	Coding	chr19:42076137 plus strand	1561474
ZNF575	NM_174945	NP_777605	Coding	chr19:43533187 plus strand	1561475
ZNF576	NM_001145347	NP_001138819	Coding	chr19:43596585 plus strand	1561476
ZNF576	NM_024327	NP_077303	Coding	chr19:43596391 plus strand	1561477
ZNF577	NM_001135590	NP_001129062	Coding	chr19:51887936 minus strand	1561478
ZNF577	NM_032679	NP_116068	Coding	chr19:51887976 minus strand	1561479
ZNF578	NM_001099694	NP_001093164	Coding	chr19:52453575 plus strand	1561480
ZNF579	NM_152600	NP_689813	Coding	chr19:55580845 minus	1561481

【１２６６】

				strand	
ZNF580	NM_001163423	NP_001156895	Coding	chr19:55642096 plus strand	1561482
ZNF580	NM_016202	NP_057286	Coding	chr19:55642051 plus strand	1561483
ZNF580	NM_207115	NP_996998	Coding	chr19:55641025 plus strand	1561484
ZNF581	NM_016535	NP_057619	Coding	chr19:55643619 plus strand	1561485
ZNF582	NM_144690	NP_653291	Coding	chr19:56393520 minus strand	1561486
ZNF583	NM_001159860	NP_001153332	Coding	chr19:56404013 plus strand	1561487
ZNF583	NM_001159861	NP_001153333	Coding	chr19:56404348 plus strand	1561488
ZNF583	NM_152478	NP_689691	Coding	chr19:56404324 plus strand	1561489
ZNF584	NM_173548	NP_775819	Coding	chr19:58408695 plus strand	1561490
ZNF585A	NM_001288800	NP_001275729	Coding	chr19:37172741 minus strand	1561491
ZNF585A	NM_152655	NP_689868	Coding	chr19:37172741 minus strand	1561491
ZNF585A	NM_199126	NP_954577	Coding	chr19:37172436 minus strand	1561492
ZNF585B	NM_152279	NP_689492	Coding	chr19:37210549 minus strand	1561493
ZNF586	NM_001077426	NP_001070894	Coding	chr19:57769651 plus strand	1561494
ZNF586	NM_001204814	NP_001191743	Coding	chr19:57769651 plus strand	1561494
ZNF586	NM_017652	NP_060122	Coding	chr19:57769651 plus strand	1561494
ZNF587	NM_001204817	NP_001191746	Coding	chr19:57849812 plus strand	1561495
ZNF587	NM_032828	NP_116217	Coding	chr19:57849812 plus strand	1561495
ZNF587B	NM_001204818	NP_001191747	Coding	chr19:57830293 plus strand	1561496
ZNF599	NM_001007248	NP_001007249	Coding	chr19:34773229 minus strand	1561497
ZNF600	NM_198457	NP_940859	Coding	chr19:52786781 minus strand	1561498
ZNF606	NM_025027	NP_079303	Coding	chr19:58003346 minus strand	1561499
ZNF607	NM_001172677	NP_001166148	Coding	chr19:37719188 minus strand	1561500
ZNF607	NM_032689	NP_116078	Coding	chr19:37719790 minus strand	1561501
ZNF610	NM_001161425	NP_001154897	Coding	chr19:52336244 plus strand	1561502
ZNF610	NM_001161426	NP_001154898	Coding	chr19:52336244 plus strand	1561502
ZNF610	NM_001161427	NP_001154899	Coding	chr19:52336244 plus	1561502

【１２６７】

				strand	
ZNF610	NM_173530	NP_775801	Coding	chr19:52345428 plus strand	1561503
ZNF611	NM_001161499	NP_001154971	Coding	chr19:52735054 minus strand	1561504
ZNF611	NM_001161500	NP_001154972	Coding	chr19:52735054 minus strand	1561504
ZNF611	NM_001161501	NP_001154973	Coding	chr19:52735044 minus strand	1561505
ZNF611	NM_030972	NP_112234	Coding	chr19:52729882 minus strand	1561506
ZNF613	NM_001031721	NP_001026891	Coding	chr19:51927434 plus strand	1561507
ZNF613	NM_024840	NP_079116	Coding	chr19:51927434 plus strand	1561507
ZNF614	NM_025040	NP_079316	Coding	chr19:52028427 minus strand	1561508
ZNF615	NM_001199324	NP_001186253	Coding	chr19:52008230 minus strand	1561509
ZNF615	NM_198480	NP_940882	Coding	chr19:52008230 minus strand	1561509
ZNF616	NM_178523	NP_848618	Coding	chr19:52139938 minus strand	1561510
ZNF625	NM_145233	NP_660276	Coding	chr19:12156731 minus strand	1561511
ZNF626	NM_001076675	NP_001070143	Coding	chr19:20661596 minus strand	1561512
ZNF626	NM_145297	NP_660340	Coding	chr19:20661596 minus strand	1561512
ZNF627	NM_001290083	NP_001277012	Coding	chr19:11597419 plus strand	1561513
ZNF627	NM_001290084	NP_001277013	Coding	chr19:11597419 plus strand	1561513
ZNF627	NM_001290085	NP_001277014	Coding	chr19:11597419 plus strand	1561513
ZNF627	NM_145295	NP_660338	Coding	chr19:11597419 plus strand	1561513
ZNF628	NM_033113	NP_149104	Coding	chr19:55476331 plus strand	1561514
ZNF649	NM_023074	NP_075562	Coding	chr19:51905052 minus strand	1561515
ZNF653	NM_138783	NP_620138	Coding	chr19:11505923 minus strand	1561516
ZNF665	NM_024733	NP_079009	Coding	chr19:53193366 minus strand	1561517
ZNF667	NM_022103	NP_071386	Coding	chr19:56477401 minus strand	1561518
ZNF671	NM_024833	NP_079109	Coding	chr19:57727627 minus strand	1561519
ZNF675	NM_138330	NP_612203	Coding	chr19:23687215 minus strand	1561520
ZNF676	NM_001001411	NP_001001411	Coding	chr19:22196951 minus strand	1561521
ZNF677	NM_182609	NP_872415	Coding	chr19:53254858 minus	1561522

【１２６８】

				strand	
ZNF681	NM_138286	NP_612143	Coding	chr19:23758891 minus strand	1561523
ZNF682	NM_001077349	NP_001070817	Coding	chr19:20039255 minus strand	1561524
ZNF682	NM_033196	NP_149973	Coding	chr19:20039468 minus strand	1561525
ZNF69	NM_021915	NP_068734	Coding	chr19:11887854 plus strand	1561526
ZNF699	NM_198535	NP_940937	Coding	chr19:9305119 minus strand	1561527
ZNF700	NM_001271848	NP_001258777	Coding	chr19:11925067 plus strand	1561528
ZNF700	NM_144566	NP_653167	Coding	chr19:11925067 plus strand	1561528
ZNF701	NM_001172655	NP_001166126	Coding	chr19:52570663 plus strand	1561529
ZNF701	NM_018260	NP_060730	Coding	chr19:52570272 plus strand	1561530
ZNF708	NM_001297560	NP_001284489	Coding	chr19:21329439 minus strand	1561531
ZNF708	NM_001297561	NP_001284490	Coding	chr19:21329412 minus strand	1561532
ZNF708	NM_021269	NP_067092	Coding	chr19:21329410 minus strand	1561533
ZNF709	NM_152601	NP_689814	Coding	chr19:12484818 minus strand	1561534
ZNF71	NM_021216	NP_067039	Coding	chr19:56595295 plus strand	1561535
ZNF714	NM_182515	NP_872321	Coding	chr19:21082146 plus strand	1561536
ZNF726	NM_001244038	NP_001230967	Coding	chr19:23914881 plus strand	1561537
ZNF728	NM_001267716	NP_001254645	Coding	chr19:23003208 minus strand	1561538
ZNF729	NM_001242680	NP_001229609	Coding	chr19:22286449 plus strand	1561539
ZNF730	NM_001277403	NP_001264332	Coding	chr19:23116974 plus strand	1561540
ZNF737	NM_001159293	NP_001152765	Coding	chr19:20565820 minus strand	1561541
ZNF749	NM_001023561	NP_001018855	Coding	chr19:57435324 plus strand	1561542
ZNF761	NM_001008401	NP_001008401	Coding	chr19:53431973 plus strand	1561543
ZNF761	NM_001289951	NP_001276880	Coding	chr19:53431973 plus strand	1561543
ZNF761	NM_001289952	NP_001276881	Coding	chr19:53445000 plus strand	1561544
ZNF761	NM_001289953	NP_001276882	Coding	chr19:53446226 plus strand	1561545
ZNF763	NM_001012753	NP_001012771	Coding	chr19:11965053 plus strand	1561546
ZNF765	NM_001040185	NP_001035275	Coding	chr19:53395143 plus	1561547

【１２６９】

				strand	
ZNF766	NM_001010851	NP_001010851	Coding	chr19:52269570 plus strand	1561548
ZNF77	NM_021217	NP_067040	Coding	chr19:2944971 minus strand	1561549
ZNF772	NM_001024596	NP_001019767	Coding	chr19:57477570 minus strand	1561550
ZNF772	NM_001144068	NP_001137540	Coding	chr19:57477570 minus strand	1561550
ZNF773	NM_198542	NP_940944	Coding	chr19:57499940 plus strand	1561551
ZNF776	NM_173632	NP_775903	Coding	chr19:57746795 plus strand	1561552
ZNF780A	NM_001010880	NP_001010880	Coding	chr19:40090903 minus strand	1561553
ZNF780A	NM_001142577	NP_001136049	Coding	chr19:40090938 minus strand	1561554
ZNF780A	NM_001142578	NP_001136050	Coding	chr19:40090938 minus strand	1561554
ZNF780A	NM_001142579	NP_001136051	Coding	chr19:40090938 minus strand	1561554
ZNF780B	NM_001005851	NP_001005851	Coding	chr19:40056208 minus strand	1561555
ZNF781	NM_152605	NP_689818	Coding	chr19:37692315 minus strand	1561556
ZNF784	NM_203374	NP_976308	Coding	chr19:55624575 minus strand	1561557
ZNF787	NM_001002836	NP_001002836	Coding	chr19:56121373 minus strand	1561558
ZNF790	NM_001242800	NP_001229729	Coding	chr19:36850787 minus strand	1561559
ZNF790	NM_001242801	NP_001229730	Coding	chr19:36850267 minus strand	1561560
ZNF790	NM_001242802	NP_001229731	Coding	chr19:36838027 minus strand	1561561
ZNF790	NM_206894	NP_996777	Coding	chr19:36838384 minus strand	1561562
ZNF791	NM_153358	NP_699189	Coding	chr19:12610917 plus strand	1561563
ZNF792	NM_175872	NP_787068	Coding	chr19:34964049 minus strand	1561564
ZNF793	NM_001013659	NP_001013681	Coding	chr19:37506938 plus strand	1561565
ZNF799	NM_001080821	NP_001074290	Coding	chr19:12401274 minus strand	1561566
ZNF8	NM_021089	NP_066575	Coding	chr19:58278951 plus strand	1561567
ZNF805	NM_001023563	NP_001018857	Coding	chr19:57240684 plus strand	1561568
ZNF805	NM_001145078	NP_001138550	Coding	chr19:57240684 plus strand	1561568
ZNF808	NM_001039886	NP_001034975	Coding	chr19:52527655 plus strand	1561569
ZNF812	NM_001199814	NP_001186743	Coding	chr19:9700817 minus	1561570

【１２７０】

				strand	
ZNF813	NM_001004301	NP_001004301	Coding	chr19:53467734 plus strand	1561571
ZNF814	NM_001144989	NP_001138461	Coding	chr19:57889074 minus strand	1561572
ZNF816	NM_001031665	NP_001026835	Coding	chr19:52962911 minus strand	1561573
ZNF816	NM_001202456	NP_001189385	Coding	chr19:52962911 minus strand	1561573
ZNF816	NM_001202457	NP_001189386	Coding	chr19:52962911 minus strand	1561573
ZNF816-ZNF321P	NM_001202473	NP_001189402	Coding	chr19:52962911 minus strand	1561574
ZNF823	NM_001080493	NP_001073962	Coding	chr19:11739009 minus strand	1561575
ZNF823	NM_001297610	NP_001284539	Coding	chr19:11739009 minus strand	1561575
ZNF823	NM_017507	NP_059977	Coding	chr19:11739009 minus strand	1561575
ZNF829	NM_001037232	NP_001032309	Coding	chr19:36916291 minus strand	1561576
ZNF829	NM_001171979	NP_001165450	Coding	chr19:36916021 minus strand	1561577
ZNF83	NM_001105549	NP_001099019	Coding	chr19:52638391 minus strand	1561578
ZNF83	NM_001105550	NP_001099020	Coding	chr19:52638391 minus strand	1561578
ZNF83	NM_001105551	NP_001099021	Coding	chr19:52638391 minus strand	1561578
ZNF83	NM_001105552	NP_001099022	Coding	chr19:52638391 minus strand	1561578
ZNF83	NM_001277945	NP_001264874	Coding	chr19:52690581 minus strand	1561579
ZNF83	NM_001277946	NP_001264875	Coding	chr19:52690581 minus strand	1561579
ZNF83	NM_001277947	NP_001264876	Coding	chr19:52690581 minus strand	1561579
ZNF83	NM_001277948	NP_001264877	Coding	chr19:52690581 minus strand	1561579
ZNF83	NM_001277949	NP_001264878	Coding	chr19:52690581 minus strand	1561579
ZNF83	NM_001277951	NP_001264880	Coding	chr19:52638391 minus strand	1561578
ZNF83	NM_001277952	NP_001264881	Coding	chr19:52638391 minus strand	1561578
ZNF83	NM_018300	NP_060770	Coding	chr19:52638391 minus strand	1561578
ZNF835	NM_001005850	NP_001005850	Coding	chr19:56671755 minus strand	1561580
ZNF836	NM_001102657	NP_001096127	Coding	chr19:52171643 minus strand	1561581
ZNF837	NM_138466	NP_612475	Coding	chr19:58381022 minus strand	1561582
ZNF841	NM_001136499	NP_001129971	Coding	chr19:52095765 minus	1561583

【１２７１】

				strand	
ZNF844	NM_001136501	NP_001129973	Coding	chr19:12064730 plus strand	1561584
ZNF845	NM_138374	NP_612383	Coding	chr19:53333748 plus strand	1561585
ZNF846	NM_001077624	NP_001071092	Coding	chr19:9768734 minus strand	1561586
ZNF85	NM_001256171	NP_001243100	Coding	chr19:20923252 plus strand	1561587
ZNF85	NM_001256172	NP_001243101	Coding	chr19:20923252 plus strand	1561587
ZNF85	NM_001256173	NP_001243102	Coding	chr19:20923252 plus strand	1561587
ZNF85	NM_003429	NP_003420	Coding	chr19:20923252 plus strand	1561587
ZNF850	NM_001193552	NP_001180481	Coding	chr19:36772814 minus strand	1561588
ZNF850	NM_001267779	NP_001254708	Coding	chr19:36772814 minus strand	1561588
ZNF865	NM_001195605	NP_001182534	Coding	chr19:55613592 plus strand	1561589
ZNF878	NM_001080404	NP_001073873	Coding	chr19:12052967 minus strand	1561590
ZNF880	NM_001145434	NP_001138906	Coding	chr19:52369916 plus strand	1561591
ZNF90	NM_007138	NP_009069	Coding	chr19:20077993 plus strand	1561592
ZNF91	NM_001300951	NP_001287880	Coding	chr19:23395560 minus strand	1561593
ZNF91	NM_003430	NP_003421	Coding	chr19:23395560 minus strand	1561593
ZNF93	NM_031218	NP_112495	Coding	chr19:19900912 plus strand	1561594
ZNF98	NM_001098626	NP_001092096	Coding	chr19:22422346 minus strand	1561595
ZNF99	NM_001080409	NP_001073878	Coding	chr19:22784171 minus strand	1561596
ZNRF4	NM_181710	NP_859061	Coding	chr19:5455414 plus strand	1561597
ZSCAN1	NM_182572	NP_872378	Coding	chr19:58034065 plus strand	1561598
ZSCAN18	NM_001145542	NP_001139014	Coding	chr19:58118426 minus strand	1561599
ZSCAN18	NM_001145543	NP_001139015	Coding	chr19:58098363 minus strand	1561600
ZSCAN18	NM_001145544	NP_001139016	Coding	chr19:58098363 minus strand	1561600
ZSCAN18	NM_023926	NP_076415	Coding	chr19:58098363 minus strand	1561600
ZSCAN22	NM_181846	NP_862829	Coding	chr19:58327018 plus strand	1561601
ZSCAN4	NM_152677	NP_689890	Coding	chr19:57668934 plus strand	1561602
ZSCAN5A	NM_024303	NP_077279	Coding	chr19:56228290 minus strand	1561603

【１２７２】

ZSCAN5B	NM_001080456	NP_001073925	Coding	chr19:56193052 minus strand	1561604
ZSWIM4	NM_023072	NP_075560	Coding	chr19:13795459 plus strand	1561605
AAR2	NM_001271874	NP_001258803	Coding	chr20:36236416 plus strand	1561606
AAR2	NM_015511	NP_056326	Coding	chr20:36236416 plus strand	1561606
ABHD12	NM_001042472	NP_001035937	Coding	chr20:25390982 minus strand	1561607
ABHD12	NM_015600	NP_056415	Coding	chr20:25390982 minus strand	1561607
ABHD16B	NM_080622	NP_542189	Coding	chr20:63861212 plus strand	1561608
ACOT8	NM_005469	NP_005460	Coding	chr20:45857409 minus strand	1561609
ACSS1	NM_001252675	NP_001239604	Coding	chr20:25058182 minus strand	1561610
ACSS1	NM_001252676	NP_001239605	Coding	chr20:25032706 minus strand	1561611
ACSS1	NM_001252677	NP_001239606	Coding	chr20:25058182 minus strand	1561610
ACSS1	NM_032501	NP_115890	Coding	chr20:25058182 minus strand	1561610
ACSS2	NM_001076552	NP_001070020	Coding	chr20:34876524 plus strand	1561612
ACSS2	NM_001242393	NP_001229322	Coding	chr20:34874962 plus strand	1561613
ACSS2	NM_018677	NP_061147	Coding	chr20:34876524 plus strand	1561612
ACTL10	NM_001024675	NP_001019846	Coding	chr20:33666497 plus strand	1561614
ACTR5	NM_024855	NP_079131	Coding	chr20:38748453 plus strand	1561615
ADA	NM_000022	NP_000013	Coding	chr20:44651735 minus strand	1561616
ADAM33	NM_001282447	NP_001269376	Coding	chr20:3682131 minus strand	1561617
ADAM33	NM_025220	NP_079496	Coding	chr20:3682131 minus strand	1561617
ADAM33	NM_153202	NP_694882	Coding	chr20:3682131 minus strand	1561617
ADIG	NM_001018082	NP_001018092	Coding	chr20:38581194 plus strand	1561618
ADNP	NM_001282531	NP_001269460	Coding	chr20:50930990 minus strand	1561619
ADNP	NM_001282532	NP_001269461	Coding	chr20:50909791 minus strand	1561620
ADNP	NM_015339	NP_056154	Coding	chr20:50930990 minus strand	1561619
ADNP	NM_181442	NP_852107	Coding	chr20:50930990 minus strand	1561619
ADRA1D	NM_000678	NP_000669	Coding	chr20:4249012 minus strand	1561621

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ADRM1	NM_001281437	NP_001268366	Coding	chr20:62302895 plus strand	1561622
ADRM1	NM_001281438	NP_001268367	Coding	chr20:62302895 plus strand	1561622
ADRM1	NM_007002	NP_008933	Coding	chr20:62302895 plus strand	1561622
ADRM1	NM_175573	NP_783163	Coding	chr20:62302895 plus strand	1561622
AHCY	NM_000687	NP_000678	Coding	chr20:34303409 minus strand	1561623
AHCY	NM_001161766	NP_001155238	Coding	chr20:34311802 minus strand	1561624
ANGPT4	NM_015985	NP_057069	Coding	chr20:916317 minus strand	1561625
ANKEF1	NM_022096	NP_071379	Coding	chr20:10035048 plus strand	1561626
ANKEF1	NM_198798	NP_942093	Coding	chr20:10035048 plus strand	1561626
AP5S1	NM_001204446	NP_001191375	Coding	chr20:3820523 plus strand	1561627
AP5S1	NM_001204447	NP_001191376	Coding	chr20:3820523 plus strand	1561627
AP5S1	NM_018347	NP_060817	Coding	chr20:3820523 plus strand	1561627
APCDD1L	NM_153360	NP_699191	Coding	chr20:58514893 minus strand	1561628
APMAP	NM_020531	NP_065392	Coding	chr20:24992789 minus strand	1561629
ARFGAP1	NM_001281482	NP_001268411	Coding	chr20:63272784 plus strand	1561630
ARFGAP1	NM_001281483	NP_001268412	Coding	chr20:63272784 plus strand	1561630
ARFGAP1	NM_001281484	NP_001268413	Coding	chr20:63272784 plus strand	1561630
ARFGAP1	NM_018209	NP_060679	Coding	chr20:63272784 plus strand	1561630
ARFGAP1	NM_175609	NP_783202	Coding	chr20:63272784 plus strand	1561630
ARFGEF2	NM_006420	NP_006411	Coding	chr20:48921737 plus strand	1561631
ARFRP1	NM_001134758	NP_001128230	Coding	chr20:63708013 minus strand	1561632
ARFRP1	NM_001267544	NP_001254473	Coding	chr20:63708013 minus strand	1561632
ARFRP1	NM_001267545	NP_001254474	Coding	chr20:63708013 minus strand	1561632
ARFRP1	NM_001267546	NP_001254475	Coding	chr20:63708013 minus strand	1561632
ARFRP1	NM_001267547	NP_001254476	Coding	chr20:63708013 minus strand	1561632
ARFRP1	NM_001267548	NP_001254477	Coding	chr20:63707853 minus strand	1561633
ARFRP1	NM_001267549	NP_001254478	Coding	chr20:63708013 minus strand	1561632
ARFRP1	NM_003224	NP_003215	Coding	chr20:63708013 minus strand	1561632
ARHGAP40	NM_001164431	NP_001157903	Coding	chr20:38601933 plus	1561634

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				strand	
ASIP	NM_001672	NP_001663	Coding	chr20:34260364 plus strand	1561635
ASXL1	NM_001164603	NP_001158075	Coding	chr20:32358343 plus strand	1561636
ASXL1	NM_015338	NP_056153	Coding	chr20:32358343 plus strand	1561636
ATP5E	NM_006886	NP_008817	Coding	chr20:59032367 minus strand	1561637
ATP9A	NM_006045	NP_006036	Coding	chr20:51768411 minus strand	1561638
ATRN	NM_001207047	NP_001193976	Coding	chr20:3471017 plus strand	1561639
ATRN	NM_139321	NP_647537	Coding	chr20:3471017 plus strand	1561639
ATRN	NM_139322	NP_647538	Coding	chr20:3471017 plus strand	1561639
AURKA	NM_003600	NP_003591	Coding	chr20:56392295 minus strand	1561640
AURKA	NM_198433	NP_940835	Coding	chr20:56392295 minus strand	1561640
AURKA	NM_198434	NP_940836	Coding	chr20:56392295 minus strand	1561640
AURKA	NM_198435	NP_940837	Coding	chr20:56392295 minus strand	1561640
AURKA	NM_198436	NP_940838	Coding	chr20:56392295 minus strand	1561640
AURKA	NM_198437	NP_940839	Coding	chr20:56392295 minus strand	1561640
AVP	NM_000490	NP_000481	Coding	chr20:3084724 minus strand	1561641
B4GALT5	NM_004776	NP_004767	Coding	chr20:49713884 minus strand	1561642
BANF2	NM_001014977	NP_001014977	Coding	chr20:17699947 plus strand	1561643
BANF2	NM_001159495	NP_001152967	Coding	chr20:17693674 plus strand	1561644
BANF2	NM_178477	NP_848572	Coding	chr20:17699947 plus strand	1561643
BCAS1	NM_003657	NP_003648	Coding	chr20:54070765 minus strand	1561645
BCAS4	NM_001010974	NP_001010974	Coding	chr20:50794893 plus strand	1561646
BCAS4	NM_017843	NP_060313	Coding	chr20:50794893 plus strand	1561646
BCAS4	NM_198799	NP_942094	Coding	chr20:50794893 plus strand	1561646
BCL2L1	NM_001191	NP_001182	Coding	chr20:31722853 minus strand	1561647
BCL2L1	NM_138578	NP_612815	Coding	chr20:31722853 minus strand	1561647
BFSP1	NM_001161705	NP_001155177	Coding	chr20:17558960 minus strand	1561648
BFSP1	NM_001195	NP_001186	Coding	chr20:17531369 minus strand	1561649
BFSP1	NM_001278606	NP_001265535	Coding	chr20:17558960 minus	1561648

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				strand	
BFSP1	NM_001278607	NP_001265536	Coding	chr20:17558960 minus strand	1561648
BFSP1	NM_001278608	NP_001265537	Coding	chr20:17569220 minus strand	1561650
BHLHE23	NM_080606	NP_542173	Coding	chr20:63007035 minus strand	1561651
BIRC7	NM_022161	NP_071444	Coding	chr20:63235882 plus strand	1561652
BIRC7	NM_139317	NP_647478	Coding	chr20:63235882 plus strand	1561652
BLCAP	NM_001167820	NP_001161292	Coding	chr20:37527931 minus strand	1561653
BLCAP	NM_001167821	NP_001161293	Coding	chr20:37527732 minus strand	1561654
BLCAP	NM_001167822	NP_001161294	Coding	chr20:37527681 minus strand	1561655
BLCAP	NM_001167823	NP_001161295	Coding	chr20:37524551 minus strand	1561656
BLCAP	NM_006698	NP_006689	Coding	chr20:37527931 minus strand	1561653
BMP2	NM_001200	NP_001191	Coding	chr20:6768097 plus strand	1561657
BMP7	NM_001719	NP_001710	Coding	chr20:57266651 minus strand	1561658
BPI	NM_001725	NP_001716	Coding	chr20:38304149 plus strand	1561659
BPIFA1	NM_001243193	NP_001230122	Coding	chr20:33235995 plus strand	1561660
BPIFA1	NM_016583	NP_057667	Coding	chr20:33235995 plus strand	1561660
BPIFA1	NM_130852	NP_570913	Coding	chr20:33235995 plus strand	1561660
BPIFA2	NM_080574	NP_542141	Coding	chr20:33168153 plus strand	1561661
BPIFA3	NM_001042439	NP_001035904	Coding	chr20:33217309 plus strand	1561662
BPIFA3	NM_178466	NP_848561	Coding	chr20:33217309 plus strand	1561662
BPIFB1	NM_033197	NP_149974	Coding	chr20:33283134 plus strand	1561663
BPIFB2	NM_025227	NP_079503	Coding	chr20:33007577 plus strand	1561664
BPIFB3	NM_182658	NP_872599	Coding	chr20:33055423 plus strand	1561665
BPIFB4	NM_182519	NP_872325	Coding	chr20:33081511 plus strand	1561666
BPIFB6	NM_174897	NP_777557	Coding	chr20:33031647 plus strand	1561667
BTBD3	NM_001282550	NP_001269479	Coding	chr20:11892492 plus strand	1561668
BTBD3	NM_001282551	NP_001269480	Coding	chr20:11917864 plus strand	1561669
BTBD3	NM_001282552	NP_001269481	Coding	chr20:11890722 plus strand	1561670

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BTBD3	NM_001282554	NP_001269483	Coding	chr20:11917864 plus strand	1561669
BTBD3	NM_014962	NP_055777	Coding	chr20:11917864 plus strand	1561669
BTBD3	NM_181443	NP_852108	Coding	chr20:11890722 plus strand	1561670
C20orf141	NM_001256538	NP_001243467	Coding	chr20:2814986 plus strand	1561671
C20orf141	NM_080739	NP_542777	Coding	chr20:2815010 plus strand	1561672
C20orf144	NM_080825	NP_543015	Coding	chr20:33662285 plus strand	1561673
C20orf173	NM_001145350	NP_001138822	Coding	chr20:35529652 minus strand	1561674
C20orf194	NM_001009984	NP_001009984	Coding	chr20:3407662 minus strand	1561675
C20orf195	NM_024059	NP_076964	Coding	chr20:63553019 plus strand	1561676
C20orf196	NM_152504	NP_689717	Coding	chr20:5750396 plus strand	1561677
C20orf197	NM_001302813	NP_001289742	Coding	chr20:60055924 plus strand	1561678
C20orf197	NM_001302815	NP_001289744	Coding	chr20:60055924 plus strand	1561678
C20orf197	NM_173644	NP_775915	Coding	chr20:60055924 plus strand	1561678
C20orf202	NM_001009612	NP_001009612	Coding	chr20:1203453 plus strand	1561679
C20orf203	NM_182584	NP_872390	Coding	chr20:32651981 minus strand	1561680
C20orf24	NM_001199534	NP_001186463	Coding	chr20:36605733 plus strand	1561681
C20orf24	NM_018840	NP_061328	Coding	chr20:36605733 plus strand	1561681
C20orf24	NM_199483	NP_955777	Coding	chr20:36605733 plus strand	1561681
C20orf27	NM_001039140	NP_001034229	Coding	chr20:3767805 minus strand	1561682
C20orf27	NM_001258429	NP_001245358	Coding	chr20:3767805 minus strand	1561682
C20orf27	NM_001258430	NP_001245359	Coding	chr20:3767805 minus strand	1561682
C20orf62	NM_001287807	NP_001274736	Coding	chr20:44465344 minus strand	1561683
C20orf78	NM_001242671	NP_001229600	Coding	chr20:18830203 minus strand	1561684
C20orf78	NM_001302818	NP_001289747	Coding	chr20:18830203 minus strand	1561684
C20orf85	NM_178456	NP_848551	Coding	chr20:58150926 plus strand	1561685
C20orf96	NM_080571	NP_542138	Coding	chr20:290778 minus strand	1561686
C20orf96	NM_153269	NP_695001	Coding	chr20:290778 minus strand	1561686
CABLES2	NM_031215	NP_112492	Coding	chr20:62407283 minus strand	1561687
CASS4	NM_001164114	NP_001157586	Coding	chr20:56412257 plus strand	1561688

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CASS4	NM_001164115	NP_001157587	Coding	chr20:56412257 plus strand	1561688
CASS4	NM_001164116	NP_001157588	Coding	chr20:56412111 plus strand	1561689
CASS4	NM_020356	NP_065089	Coding	chr20:56412257 plus strand	1561688
CBFA2T2	NM_001032999	NP_001028171	Coding	chr20:33490121 plus strand	1561690
CBFA2T2	NM_001039709	NP_001034798	Coding	chr20:33562364 plus strand	1561691
CBFA2T2	NM_005093	NP_005084	Coding	chr20:33562364 plus strand	1561691
CBLN4	NM_080617	NP_542184	Coding	chr20:56005472 minus strand	1561692
CCM2L	NM_080625	NP_542192	Coding	chr20:32010441 plus strand	1561693
CD40	NM_001250	NP_001241	Coding	chr20:46118253 plus strand	1561694
CD40	NM_001302753	NP_001289682	Coding	chr20:46118253 plus strand	1561694
CD40	NM_152854	NP_690593	Coding	chr20:46118253 plus strand	1561694
CD93	NM_012072	NP_036204	Coding	chr20:23086340 minus strand	1561695
CDC25B	NM_001287516	NP_001274445	Coding	chr20:3786771 plus strand	1561696
CDC25B	NM_001287517	NP_001274446	Coding	chr20:3786771 plus strand	1561696
CDC25B	NM_001287518	NP_001274447	Coding	chr20:3786771 plus strand	1561696
CDC25B	NM_001287519	NP_001274448	Coding	chr20:3795738 plus strand	1561697
CDC25B	NM_001287520	NP_001274449	Coding	chr20:3795738 plus strand	1561697
CDC25B	NM_001287522	NP_001274451	Coding	chr20:3795738 plus strand	1561697
CDC25B	NM_001287524	NP_001274453	Coding	chr20:3800061 plus strand	1561698
CDC25B	NM_004358	NP_004349	Coding	chr20:3795738 plus strand	1561697
CDC25B	NM_021872	NP_068658	Coding	chr20:3795738 plus strand	1561697
CDC25B	NM_021873	NP_068659	Coding	chr20:3795738 plus strand	1561697
CDH22	NM_021248	NP_067071	Coding	chr20:46308498 minus strand	1561699
CDH26	NM_021810	NP_068582	Coding	chr20:59996361 plus strand	1561700
CDH26	NM_177980	NP_817089	Coding	chr20:59958415 plus strand	1561701
CDH4	NM_001252338	NP_001239267	Coding	chr20:61499420 plus strand	1561702
CDH4	NM_001252339	NP_001239268	Coding	chr20:61599760 plus strand	1561703
CDH4	NM_001794	NP_001785	Coding	chr20:61252425 plus strand	1561704
CDK5RAP1	NM_001278167	NP_001265096	Coding	chr20:33401569 minus strand	1561705
CDK5RAP1	NM_001278168	NP_001265097	Coding	chr20:33401569 minus strand	1561705
CDK5RAP1	NM_001278169	NP_001265098	Coding	chr20:33401569 minus	1561705

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				strand	
CDK5RAP1	NM_016082	NP_057166	Coding	chr20:33401569 minus strand	1561705
CDK5RAP1	NM_016408	NP_057492	Coding	chr20:33401569 minus strand	1561705
CDS2	NM_003818	NP_003809	Coding	chr20:5126760 plus strand	1561706
CEBPB	NM_001285878	NP_001272807	Coding	chr20:50190582 plus strand	1561707
CEBPB	NM_001285879	NP_001272808	Coding	chr20:50190582 plus strand	1561707
CEBPB	NM_005194	NP_005185	Coding	chr20:50190582 plus strand	1561707
CENPB	NM_001810	NP_001801	Coding	chr20:3786690 minus strand	1561708
CEP250	NM_007186	NP_009117	Coding	chr20:35455401 plus strand	1561709
CFAP61	NM_001167816	NP_001161288	Coding	chr20:20056645 plus strand	1561710
CFAP61	NM_015585	NP_056400	Coding	chr20:20052513 plus strand	1561711
CHD6	NM_032221	NP_115597	Coding	chr20:41618494 minus strand	1561712
CHGB	NM_001819	NP_001810	Coding	chr20:5911327 plus strand	1561713
CHMP4B	NM_176812	NP_789782	Coding	chr20:33811303 plus strand	1561714
CHRNA4	NM_000744	NP_000735	Coding	chr20:63361396 minus strand	1561715
CHRNA4	NM_001256573	NP_001243502	Coding	chr20:63361396 minus strand	1561715
CNBD2	NM_001207076	NP_001194005	Coding	chr20:35968606 plus strand	1561716
CNBD2	NM_080834	NP_543024	Coding	chr20:35968606 plus strand	1561716
COL20A1	NM_020882	NP_065933	Coding	chr20:63293185 plus strand	1561717
COL9A3	NM_001853	NP_001844	Coding	chr20:62817061 plus strand	1561718
COMMD7	NM_001099339	NP_001092809	Coding	chr20:32744008 minus strand	1561719
COMMD7	NM_053041	NP_444269	Coding	chr20:32744008 minus strand	1561719
COX4I2	NM_032609	NP_115998	Coding	chr20:31637887 plus strand	1561720
CPNE1	NM_001198863	NP_001185792	Coding	chr20:35664956 minus strand	1561721
CPNE1	NM_003915	NP_003906	Coding	chr20:35653909 minus strand	1561722
CPNE1	NM_152925	NP_690902	Coding	chr20:35664956 minus strand	1561721
CPNE1	NM_152926	NP_690903	Coding	chr20:35664956 minus strand	1561721
CPNE1	NM_152927	NP_690904	Coding	chr20:35664956 minus strand	1561721

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CPNE1	NM_152928	NP_690905	Coding	chr20:35664956 minus strand	1561721
CPXM1	NM_001184699	NP_001171628	Coding	chr20:2800646 minus strand	1561723
CPXM1	NM_019609	NP_062555	Coding	chr20:2800646 minus strand	1561723
CRLS1	NM_001127458	NP_001120930	Coding	chr20:6007251 plus strand	1561724
CRLS1	NM_019095	NP_061968	Coding	chr20:6006092 plus strand	1561725
CRNKL1	NM_001278625	NP_001265554	Coding	chr20:20056046 minus strand	1561726
CRNKL1	NM_001278626	NP_001265555	Coding	chr20:20056046 minus strand	1561726
CRNKL1	NM_001278627	NP_001265556	Coding	chr20:20056046 minus strand	1561726
CRNKL1	NM_001278628	NP_001265557	Coding	chr20:20052492 minus strand	1561727
CRNKL1	NM_016652	NP_057736	Coding	chr20:20056046 minus strand	1561726
CSE1L	NM_001256135	NP_001243064	Coding	chr20:49046245 plus strand	1561728
CSE1L	NM_001316	NP_001307	Coding	chr20:49046245 plus strand	1561728
CSNK2A1	NM_001895	NP_001886	Coding	chr20:543838 minus strand	1561729
CSNK2A1	NM_177559	NP_808227	Coding	chr20:543838 minus strand	1561729
CSNK2A1	NM_177560	NP_808228	Coding	chr20:543838 minus strand	1561729
CSRP2BP	NM_020536	NP_065397	Coding	chr20:18142223 plus strand	1561730
CST1	NM_001898	NP_001889	Coding	chr20:23750937 minus strand	1561731
CST11	NM_080830	NP_543020	Coding	chr20:23452845 minus strand	1561732
CST11	NM_130794	NP_570612	Coding	chr20:23452845 minus strand	1561732
CST2	NM_001322	NP_001313	Coding	chr20:23826675 minus strand	1561733
CST3	NM_000099	NP_000090	Coding	chr20:23638048 minus strand	1561734
CST3	NM_001288614	NP_001275543	Coding	chr20:23638048 minus strand	1561734
CST4	NM_001899	NP_001890	Coding	chr20:23689025 minus strand	1561735
CST5	NM_001900	NP_001891	Coding	chr20:23879743 minus strand	1561736
CST7	NM_003650	NP_003641	Coding	chr20:24949229 plus strand	1561737
CST8	NM_001281730	NP_001268659	Coding	chr20:23491100 plus strand	1561738
CST8	NM_005492	NP_005483	Coding	chr20:23491100 plus strand	1561738
CST9	NM_001008693	NP_001008693	Coding	chr20:23605973 minus strand	1561739
CST9L	NM_080610	NP_542177	Coding	chr20:23568749 minus strand	1561740

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CSTF1	NM_001033521	NP_001028693	Coding	chr20:56392370 plus strand	1561741
CSTF1	NM_001033522	NP_001028694	Coding	chr20:56392650 plus strand	1561742
CSTF1	NM_001324	NP_001315	Coding	chr20:56392517 plus strand	1561743
CSTL1	NM_138283	NP_612140	Coding	chr20:23439684 plus strand	1561744
CTCFL	NM_001269040	NP_001255969	Coding	chr20:57525652 minus strand	1561745
CTCFL	NM_001269041	NP_001255970	Coding	chr20:57524867 minus strand	1561746
CTCFL	NM_001269042	NP_001255971	Coding	chr20:57525652 minus strand	1561745
CTCFL	NM_001269043	NP_001255972	Coding	chr20:57525127 minus strand	1561747
CTCFL	NM_001269044	NP_001255973	Coding	chr20:57524867 minus strand	1561746
CTCFL	NM_001269045	NP_001255974	Coding	chr20:57525652 minus strand	1561745
CTCFL	NM_001269046	NP_001255975	Coding	chr20:57525652 minus strand	1561745
CTCFL	NM_001269047	NP_001255976	Coding	chr20:57525652 minus strand	1561745
CTCFL	NM_001269048	NP_001255977	Coding	chr20:57524867 minus strand	1561746
CTCFL	NM_001269049	NP_001255978	Coding	chr20:57525127 minus strand	1561747
CTCFL	NM_001269050	NP_001255979	Coding	chr20:57525107 minus strand	1561748
CTCFL	NM_001269051	NP_001255980	Coding	chr20:57525652 minus strand	1561745
CTCFL	NM_001269052	NP_001255981	Coding	chr20:57524867 minus strand	1561746
CTCFL	NM_001269054	NP_001255983	Coding	chr20:57525127 minus strand	1561747
CTCFL	NM_001269055	NP_001255984	Coding	chr20:57525107 minus strand	1561748
CTCFL	NM_080618	NP_542185	Coding	chr20:57525652 minus strand	1561745
CTNNBL1	NM_001281495	NP_001268424	Coding	chr20:37693954 plus strand	1561749
CTNNBL1	NM_030877	NP_110517	Coding	chr20:37693954 plus strand	1561749
CTSA	NM_000308	NP_000299	Coding	chr20:45890951 plus strand	1561750
CTSA	NM_001127695	NP_001121167	Coding	chr20:45890951 plus strand	1561750
CTSA	NM_001167594	NP_001161066	Coding	chr20:45890951 plus strand	1561750
CTSZ	NM_001336	NP_001327	Coding	chr20:59007254 minus strand	1561751
CYP24A1	NM_000782	NP_000773	Coding	chr20:54173977 minus strand	1561752

【１２８１】

CYP24A1	NM_001128915	NP_001122387	Coding	chr20:54173977 minus strand	1561752
DBNDD2	NM_001048221	NP_001041686	Coding	chr20:45406014 plus strand	1561753
DBNDD2	NM_001048222	NP_001041687	Coding	chr20:45406014 plus strand	1561753
DBNDD2	NM_001048223	NP_001041688	Coding	chr20:45406587 plus strand	1561754
DBNDD2	NM_001048224	NP_001041689	Coding	chr20:45406587 plus strand	1561754
DBNDD2	NM_001048225	NP_001041690	Coding	chr20:45407988 plus strand	1561755
DBNDD2	NM_001048226	NP_001041691	Coding	chr20:45407988 plus strand	1561755
DBNDD2	NM_001197139	NP_001184068	Coding	chr20:45405992 plus strand	1561756
DBNDD2	NM_001197140	NP_001184069	Coding	chr20:45406180 plus strand	1561757
DBNDD2	NM_018478	NP_060948	Coding	chr20:45406220 plus strand	1561758
DDRGK1	NM_023935	NP_076424	Coding	chr20:3204649 minus strand	1561759
DDX27	NM_017895	NP_060365	Coding	chr20:49219294 plus strand	1561760
DEFB115	NM_001037730	NP_001032819	Coding	chr20:31257663 plus strand	1561761
DEFB116	NM_001037731	NP_001032820	Coding	chr20:31308585 minus strand	1561762
DEFB118	NM_054112	NP_473453	Coding	chr20:31368617 plus strand	1561763
DEFB119	NM_001271209	NP_001258138	Coding	chr20:31390649 minus strand	1561764
DEFB119	NM_153289	NP_695021	Coding	chr20:31390649 minus strand	1561764
DEFB119	NM_153323	NP_697018	Coding	chr20:31390649 minus strand	1561764
DEFB121	NM_001011878	NP_001011878	Coding	chr20:31406266 minus strand	1561765
DEFB121	NM_001171832	NP_001165303	Coding	chr20:31412838 minus strand	1561766
DEFB123	NM_153324	NP_697019	Coding	chr20:31440518 plus strand	1561767
DEFB124	NM_001037500	NP_001032589	Coding	chr20:31473013 minus strand	1561768
DEFB125	NM_153325	NP_697020	Coding	chr20:87671 plus strand	1561769
DEFB126	NM_030931	NP_112193	Coding	chr20:142552 plus strand	1561770
DEFB127	NM_139074	NP_620713	Coding	chr20:157469 plus strand	1561771
DEFB128	NM_001037732	NP_001032821	Coding	chr20:189681 minus strand	1561772
DEFB129	NM_080831	NP_543021	Coding	chr20:227257 plus strand	1561773
DEFB132	NM_207469	NP_997352	Coding	chr20:257735 plus strand	1561774
DHX35	NM_001190809	NP_001177738	Coding	chr20:38962337 plus strand	1561775

【１２８２】

DHX35	NM_021931	NP_068750	Coding	chr20:38962337 plus strand	1561775
DIDO1	NM_001193369	NP_001180298	Coding	chr20:62926551 minus strand	1561776
DIDO1	NM_001193370	NP_001180299	Coding	chr20:62926551 minus strand	1561776
DIDO1	NM_022105	NP_071388	Coding	chr20:62937952 minus strand	1561777
DIDO1	NM_033081	NP_149072	Coding	chr20:62937952 minus strand	1561777
DIDO1	NM_080796	NP_542986	Coding	chr20:62926551 minus strand	1561776
DIDO1	NM_080797	NP_542987	Coding	chr20:62937952 minus strand	1561777
DLGAP4	NM_001042486	NP_001035951	Coding	chr20:36461414 plus strand	1561778
DLGAP4	NM_014902	NP_055717	Coding	chr20:36306322 plus strand	1561779
DLGAP4	NM_183006	NP_892118	Coding	chr20:36461782 plus strand	1561780
DNAJC5	NM_025219	NP_079495	Coding	chr20:63895101 plus strand	1561781
DNMT3B	NM_001207055	NP_001193984	Coding	chr20:32762384 plus strand	1561782
DNMT3B	NM_001207056	NP_001193985	Coding	chr20:32762384 plus strand	1561782
DNMT3B	NM_006892	NP_008823	Coding	chr20:32762384 plus strand	1561782
DNMT3B	NM_175848	NP_787044	Coding	chr20:32762384 plus strand	1561782
DNMT3B	NM_175849	NP_787045	Coding	chr20:32762384 plus strand	1561782
DNMT3B	NM_175850	NP_787046	Coding	chr20:32779851 plus strand	1561783
DNTTIP1	NM_052951	NP_443183	Coding	chr20:45791936 plus strand	1561784
DOK5	NM_001294161	NP_001281090	Coding	chr20:54475471 plus strand	1561785
DOK5	NM_018431	NP_060901	Coding	chr20:54475471 plus strand	1561785
DOK5	NM_177959	NP_808874	Coding	chr20:54475717 plus strand	1561786
DPH3P1	NM_080750	NP_542788	Coding	chr20:62844565 plus strand	1561787
DPM1	NM_003859	NP_003850	Coding	chr20:50958523 minus strand	1561788
DSN1	NM_001145315	NP_001138787	Coding	chr20:36773827 minus strand	1561789
DSN1	NM_001145316	NP_001138788	Coding	chr20:36773751 minus strand	1561790
DSN1	NM_001145317	NP_001138789	Coding	chr20:36773827 minus strand	1561789
DSN1	NM_001145318	NP_001138790	Coding	chr20:36773827 minus strand	1561789

【１２８３】

DSN1	NM_024918	NP_079194	Coding	chr20:36773751 minus strand	1561790
DSTN	NM_001011546	NP_001011546	Coding	chr20:17569953 plus strand	1561791
DSTN	NM_006870	NP_006861	Coding	chr20:17569953 plus strand	1561791
DTD1	NM_080820	NP_543010	Coding	chr20:18587911 plus strand	1561792
DUSP15	NM_001012644	NP_001012662	Coding	chr20:31869998 minus strand	1561793
DUSP15	NM_080611	NP_542178	Coding	chr20:31870676 minus strand	1561794
DUSP15	NM_177991	NP_817130	Coding	chr20:31870208 minus strand	1561795
DYNLRB1	NM_001281727	NP_001268656	Coding	chr20:34516383 plus strand	1561796
DYNLRB1	NM_001281728	NP_001268657	Coding	chr20:34516383 plus strand	1561796
DYNLRB1	NM_001281729	NP_001268658	Coding	chr20:34516383 plus strand	1561796
DYNLRB1	NM_014183	NP_054902	Coding	chr20:34516383 plus strand	1561796
DYNLRB1	NM_177953	NP_808852	Coding	chr20:34516383 plus strand	1561796
DZANK1	NM_001099407	NP_001092877	Coding	chr20:18467185 minus strand	1561797
E2F1	NM_005225	NP_005216	Coding	chr20:33686404 minus strand	1561798
EBF4	NM_001110514	NP_001103984	Coding	chr20:2692877 plus strand	1561799
EDEM2	NM_001145025	NP_001138497	Coding	chr20:35147358 minus strand	1561800
EDEM2	NM_018217	NP_060687	Coding	chr20:35147358 minus strand	1561800
EDN3	NM_001302455	NP_001289384	Coding	chr20:59300426 plus strand	1561801
EDN3	NM_001302456	NP_001289385	Coding	chr20:59300426 plus strand	1561801
EDN3	NM_207032	NP_996915	Coding	chr20:59300426 plus strand	1561801
EDN3	NM_207033	NP_996916	Coding	chr20:59300426 plus strand	1561801
EDN3	NM_207034	NP_996917	Coding	chr20:59300426 plus strand	1561801
EEF1A2	NM_001958	NP_001949	Coding	chr20:63499315 minus strand	1561802
EIF2S2	NM_003908	NP_003899	Coding	chr20:34112279 minus strand	1561803
EIF6	NM_001267810	NP_001254739	Coding	chr20:35284717 minus strand	1561804
EIF6	NM_002212	NP_002203	Coding	chr20:35284816 minus strand	1561805
EIF6	NM_181466	NP_852131	Coding	chr20:35284816 minus strand	1561805
EIF6	NM_181468	NP_852133	Coding	chr20:35284717 minus	1561804

【１２８４】

				strand	
ELMO2	NM_133171	NP_573403	Coding	chr20:46406632 minus strand	1561806
ELMO2	NM_182764	NP_877496	Coding	chr20:46406632 minus strand	1561806
EMILIN3	NM_052846	NP_443078	Coding	chr20:41366858 minus strand	1561807
ENTPD6	NM_001114089	NP_001107561	Coding	chr20:25195702 plus strand	1561808
ENTPD6	NM_001247	NP_001238	Coding	chr20:25195702 plus strand	1561808
EPB41L1	NM_001258329	NP_001245258	Coding	chr20:36092709 plus strand	1561809
EPB41L1	NM_001258330	NP_001245259	Coding	chr20:36092709 plus strand	1561809
EPB41L1	NM_001258331	NP_001245260	Coding	chr20:36091503 plus strand	1561810
EPB41L1	NM_012156	NP_036288	Coding	chr20:36154739 plus strand	1561811
EPB41L1	NM_177996	NP_818932	Coding	chr20:36092709 plus strand	1561809
EPPIN	NM_001302861	NP_001289790	Coding	chr20:45547426 minus strand	1561812
EPPIN	NM_020398	NP_065131	Coding	chr20:45547426 minus strand	1561812
EPPIN-WFDC6	NM_001198986	NP_001185915	Coding	chr20:45547426 minus strand	1561813
ERGIC3	NM_015966	NP_057050	Coding	chr20:35542028 plus strand	1561814
ERGIC3	NM_198398	NP_938408	Coding	chr20:35542028 plus strand	1561814
ESF1	NM_001276380	NP_001263309	Coding	chr20:13784933 minus strand	1561815
ESF1	NM_016649	NP_057733	Coding	chr20:13784886 minus strand	1561816
EYA2	NM_005244	NP_005235	Coding	chr20:46894623 plus strand	1561817
EYA2	NM_172110	NP_742108	Coding	chr20:46894623 plus strand	1561817
FAM110A	NM_001042353	NP_001035812	Coding	chr20:833696 plus strand	1561818
FAM110A	NM_001289145	NP_001276074	Coding	chr20:833696 plus strand	1561818
FAM110A	NM_001289146	NP_001276075	Coding	chr20:833696 plus strand	1561818
FAM110A	NM_001289147	NP_001276076	Coding	chr20:841274 plus strand	1561819
FAM110A	NM_031424	NP_113612	Coding	chr20:844607 plus strand	1561820
FAM110A	NM_207121	NP_997004	Coding	chr20:836067 plus strand	1561821
FAM209A	NM_001012971	NP_001012989	Coding	chr20:56524728 plus strand	1561822
FAM209B	NM_001013646	NP_001013668	Coding	chr20:56533245 plus strand	1561823
FAM210B	NM_080821	NP_543011	Coding	chr20:56358926 plus strand	1561824
FAM217B	NM_001190826	NP_001177755	Coding	chr20:59933763 plus	1561825

【１２８５】

				strand	
FAM217B	NM_001190827	NP_001177756	Coding	chr20:59940388 plus strand	1561826
FAM217B	NM_022106	NP_071389	Coding	chr20:59940388 plus strand	1561826
FAM65C	NM_001290268	NP_001277197	Coding	chr20:50691530 minus strand	1561827
FAM65C	NM_080829	NP_543019	Coding	chr20:50636918 minus strand	1561828
FAM83C	NM_178468	NP_848563	Coding	chr20:35292422 minus strand	1561829
FAM83D	NM_030919	NP_112181	Coding	chr20:38926311 plus strand	1561830
FASTKD5	NM_021826	NP_068598	Coding	chr20:3159886 minus strand	1561831
FERMT1	NM_017671	NP_060141	Coding	chr20:6123544 minus strand	1561832
FITM2	NM_001080472	NP_001073941	Coding	chr20:44311249 minus strand	1561833
FKBP1A	NM_000801	NP_000792	Coding	chr20:1393172 minus strand	1561834
FKBP1A	NM_001199786	NP_001186715	Coding	chr20:1393172 minus strand	1561834
FKBP1A	NM_054014	NP_463460	Coding	chr20:1393172 minus strand	1561834
FLRT3	NM_013281	NP_037413	Coding	chr20:14337667 minus strand	1561835
FLRT3	NM_198391	NP_938205	Coding	chr20:14337667 minus strand	1561835
FOXA2	NM_021784	NP_068556	Coding	chr20:22584463 minus strand	1561836
FOXA2	NM_153675	NP_710141	Coding	chr20:22585463 minus strand	1561837
FOXS1	NM_004118	NP_004109	Coding	chr20:31845617 minus strand	1561838
GATA5	NM_080473	NP_536721	Coding	chr20:62475970 minus strand	1561839
GCNT7	NM_080615	NP_542182	Coding	chr20:56525925 minus strand	1561840
GDAP1L1	NM_001256737	NP_001243666	Coding	chr20:44247257 plus strand	1561841
GDAP1L1	NM_001256738	NP_001243667	Coding	chr20:44247098 plus strand	1561842
GDAP1L1	NM_001256739	NP_001243668	Coding	chr20:44247257 plus strand	1561841
GDAP1L1	NM_001256740	NP_001243669	Coding	chr20:44247257 plus strand	1561841
GDAP1L1	NM_024034	NP_076939	Coding	chr20:44247257 plus strand	1561841
GDF5	NM_000557	NP_000548	Coding	chr20:35438190 minus strand	1561843
GFRA4	NM_022139	NP_071422	Coding	chr20:3663399 minus strand	1561844
GFRA4	NM_145762	NP_665705	Coding	chr20:3663399 minus	1561844

【１２８６】

				strand	
GGT7	NM_178026	NP_821158	Coding	chr20:34872858 minus strand	1561845
GGTLC1	NM_178311	NP_842563	Coding	chr20:23988779 minus strand	1561846
GGTLC1	NM_178312	NP_842564	Coding	chr20:23986875 minus strand	1561847
GHRH	NM_001184731	NP_001171660	Coding	chr20:37256896 minus strand	1561848
GHRH	NM_021081	NP_066567	Coding	chr20:37256896 minus strand	1561848
GID8	NM_017896	NP_060366	Coding	chr20:62938088 plus strand	1561849
GINS1	NM_021067	NP_066545	Coding	chr20:25407686 plus strand	1561850
GMEB2	NM_012384	NP_036516	Coding	chr20:63627028 minus strand	1561851
GNAS	NM_000516	NP_000507	Coding	chr20:58891370 plus strand	1561852
GNAS	NM_001077488	NP_001070956	Coding	chr20:58891370 plus strand	1561852
GNAS	NM_001077489	NP_001070957	Coding	chr20:58891370 plus strand	1561852
GNAS	NM_001077490	NP_001070958	Coding	chr20:58852980 plus strand	1561853
GNAS	NM_016592	NP_057676	Coding	chr20:58839739 plus strand	1561854
GNAS	NM_080425	NP_536350	Coding	chr20:58852980 plus strand	1561853
GNAS	NM_080426	NP_536351	Coding	chr20:58891370 plus strand	1561852
GNRH2	NM_001501	NP_001492	Coding	chr20:3043621 plus strand	1561855
GNRH2	NM_178331	NP_847901	Coding	chr20:3043621 plus strand	1561855
GNRH2	NM_178332	NP_847902	Coding	chr20:3043621 plus strand	1561855
GPCPD1	NM_019593	NP_062539	Coding	chr20:5611026 minus strand	1561856
GSS	NM_000178	NP_000169	Coding	chr20:34955798 minus strand	1561857
GTSF1L	NM_001008901	NP_001008901	Coding	chr20:43727002 minus strand	1561858
GTSF1L	NM_176791	NP_789761	Coding	chr20:43727002 minus strand	1561858
GZF1	NM_022482	NP_071927	Coding	chr20:23364383 plus strand	1561859
HAO1	NM_017545	NP_060015	Coding	chr20:7940446 minus strand	1561860
HCK	NM_001172129	NP_001165600	Coding	chr20:32052187 plus strand	1561861
HCK	NM_001172130	NP_001165601	Coding	chr20:32052187 plus strand	1561861
HCK	NM_001172131	NP_001165602	Coding	chr20:32052187 plus strand	1561861
HCK	NM_001172132	NP_001165603	Coding	chr20:32052187 plus	1561861

【１２８７】

				strand	
HCK	NM_001172133	NP_001165604	Coding	chr20:32052187 plus strand	1561861
HCK	NM_002110	NP_002101	Coding	chr20:32052187 plus strand	1561861
HELZ2	NM_001037335	NP_001032412	Coding	chr20:63574239 minus strand	1561862
HELZ2	NM_033405	NP_208384	Coding	chr20:63567754 minus strand	1561863
HM13	NM_030789	NP_110416	Coding	chr20:31514409 plus strand	1561864
HM13	NM_178580	NP_848695	Coding	chr20:31514409 plus strand	1561864
HM13	NM_178581	NP_848696	Coding	chr20:31514409 plus strand	1561864
HM13	NM_178582	NP_848697	Coding	chr20:31514409 plus strand	1561864
HNF4A	NM_000457	NP_000448	Coding	chr20:44401255 plus strand	1561865
HNF4A	NM_001030003	NP_001025174	Coding	chr20:44355800 plus strand	1561866
HNF4A	NM_001030004	NP_001025175	Coding	chr20:44355800 plus strand	1561866
HNF4A	NM_001258355	NP_001245284	Coding	chr20:44401255 plus strand	1561865
HNF4A	NM_001287182	NP_001274111	Coding	chr20:44355800 plus strand	1561866
HNF4A	NM_001287183	NP_001274112	Coding	chr20:44355800 plus strand	1561866
HNF4A	NM_001287184	NP_001274113	Coding	chr20:44355800 plus strand	1561866
HNF4A	NM_175914	NP_787110	Coding	chr20:44355800 plus strand	1561866
HNF4A	NM_178849	NP_849180	Coding	chr20:44401255 plus strand	1561865
HNF4A	NM_178850	NP_849181	Coding	chr20:44401255 plus strand	1561865
HRH3	NM_007232	NP_009163	Coding	chr20:62220267 minus strand	1561867
HSPA12B	NM_001197327	NP_001184256	Coding	chr20:3732669 plus strand	1561868
HSPA12B	NM_052970	NP_443202	Coding	chr20:3732669 plus strand	1561868
ID1	NM_002165	NP_002156	Coding	chr20:31605282 plus strand	1561869
ID1	NM_181353	NP_851998	Coding	chr20:31605282 plus strand	1561869
IDH3B	NM_001258384	NP_001245313	Coding	chr20:2664219 minus strand	1561870
IDH3B	NM_006899	NP_008830	Coding	chr20:2664219 minus strand	1561870
IDH3B	NM_174855	NP_777280	Coding	chr20:2664219 minus strand	1561870
IFT52	NM_016004	NP_057088	Coding	chr20:43590938 plus strand	1561871

【１２８８】

INSM1	NM_002196	NP_002187	Coding	chr20:20368120 plus strand	1561872
ISM1	NM_080826	NP_543016	Coding	chr20:13221770 plus strand	1561873
ITCH	NM_001257137	NP_001244066	Coding	chr20:34363234 plus strand	1561874
ITCH	NM_001257138	NP_001244067	Coding	chr20:34363234 plus strand	1561874
ITCH	NM_031483	NP_113671	Coding	chr20:34363234 plus strand	1561874
ITPA	NM_001267623	NP_001254552	Coding	chr20:3209359 plus strand	1561875
ITPA	NM_033453	NP_258412	Coding	chr20:3209359 plus strand	1561875
ITPA	NM_181493	NP_852470	Coding	chr20:3209487 plus strand	1561876
JAG1	NM_000214	NP_000205	Coding	chr20:10674046 minus strand	1561877
JPH2	NM_020433	NP_065166	Coding	chr20:44187578 minus strand	1561878
JPH2	NM_175913	NP_787109	Coding	chr20:44187578 minus strand	1561878
KCNB1	NM_004975	NP_004966	Coding	chr20:49482644 minus strand	1561879
KCNG1	NM_002237	NP_002228	Coding	chr20:51023138 minus strand	1561880
KCNK15	NM_022358	NP_071753	Coding	chr20:44745846 plus strand	1561881
KCNQ2	NM_004518	NP_004509	Coding	chr20:63472640 minus strand	1561882
KCNQ2	NM_172106	NP_742104	Coding	chr20:63472640 minus strand	1561882
KCNQ2	NM_172107	NP_742105	Coding	chr20:63472640 minus strand	1561882
KCNQ2	NM_172108	NP_742106	Coding	chr20:63472640 minus strand	1561882
KCNQ2	NM_172109	NP_742107	Coding	chr20:63472640 minus strand	1561882
KCNS1	NM_002251	NP_002242	Coding	chr20:45101112 minus strand	1561883
KIAA1755	NM_001029864	NP_001025035	Coding	chr20:38260772 minus strand	1561884
KIF16B	NM_001199865	NP_001186794	Coding	chr20:16573434 minus strand	1561885
KIF16B	NM_001199866	NP_001186795	Coding	chr20:16573434 minus strand	1561885
KIF16B	NM_024704	NP_078980	Coding	chr20:16573434 minus strand	1561885
KIF3B	NM_004798	NP_004789	Coding	chr20:32277650 plus strand	1561886
KIZ	NM_001163022	NP_001156494	Coding	chr20:21125982 plus strand	1561887
KIZ	NM_001163023	NP_001156495	Coding	chr20:21125982 plus strand	1561887
KIZ	NM_001276389	NP_001263318	Coding	chr20:21125982 plus strand	1561887

【１２８９】

KIZ	NM_018474	NP_060944	Coding	chr20:21125982 plus strand	1561887
L3MBTL1	NM_015478	NP_056293	Coding	chr20:43514435 plus strand	1561888
L3MBTL1	NM_032107	NP_115479	Coding	chr20:43507679 plus strand	1561889
LAMA5	NM_005560	NP_005551	Coding	chr20:62367312 minus strand	1561890
LAMP5	NM_001199897	NP_001186826	Coding	chr20:9514357 plus strand	1561891
LAMP5	NM_012261	NP_036393	Coding	chr20:9514357 plus strand	1561891
LBP	NM_004139	NP_004130	Coding	chr20:38346410 plus strand	1561892
LIME1	NM_017806	NP_060276	Coding	chr20:63736625 plus strand	1561893
LINC01272	NM_001278655	NP_001265584	Coding	chr20:50267485 plus strand	1561894
LKAAEAR1	NM_001007125	NP_001007126	Coding	chr20:64084359 minus strand	1561895
LOC388780	NM_001287682	NP_001274611	Coding	chr20:2206927 plus strand	1561896
LPIN3	NM_001301860	NP_001288789	Coding	chr20:41340852 plus strand	1561897
LRRN4	NM_152611	NP_689824	Coding	chr20:6054080 minus strand	1561898
LSM14B	NM_144703	NP_653304	Coding	chr20:62122460 plus strand	1561899
LZTS3	NM_001282533	NP_001269462	Coding	chr20:3173592 minus strand	1561900
MACROD2	NM_001033087	NP_001028259	Coding	chr20:15196857 plus strand	1561901
MACROD2	NM_080676	NP_542407	Coding	chr20:13995499 plus strand	1561902
MAFB	NM_005461	NP_005452	Coding	chr20:40689240 minus strand	1561903
MANBAL	NM_001003897	NP_001003897	Coding	chr20:37289647 plus strand	1561904
MANBAL	NM_022077	NP_071360	Coding	chr20:37289647 plus strand	1561904
MAP1LC3A	NM_032514	NP_115903	Coding	chr20:34558696 plus strand	1561905
MAP1LC3A	NM_181509	NP_852610	Coding	chr20:34546883 plus strand	1561906
MAPRE1	NM_012325	NP_036457	Coding	chr20:32819892 plus strand	1561907
MATN4	NM_003833	NP_003824	Coding	chr20:45308529 minus strand	1561908
MATN4	NM_030590	NP_085080	Coding	chr20:45308327 minus strand	1561909
MATN4	NM_030592	NP_085095	Coding	chr20:45308297 minus strand	1561910
MAVS	NM_001206491	NP_001193420	Coding	chr20:3846798 plus strand	1561911
MAVS	NM_020746	NP_065797	Coding	chr20:3846798 plus strand	1561911
MC3R	NM_019888	NP_063941	Coding	chr20:56248731 plus strand	1561912

【１２９０】

MCM8	NM_001281520	NP_001268449	Coding	chr20:5950651 plus strand	1561913
MCM8	NM_001281521	NP_001268450	Coding	chr20:5950651 plus strand	1561913
MCM8	NM_001281522	NP_001268451	Coding	chr20:5950651 plus strand	1561913
MCM8	NM_032485	NP_115874	Coding	chr20:5950651 plus strand	1561913
MCM8	NM_182802	NP_877954	Coding	chr20:5950651 plus strand	1561913
MGME1	NM_052865	NP_443097	Coding	chr20:17969118 plus strand	1561914
MIR1-1HG	NM_001302812	NP_001289741	Coding	chr20:62550452 plus strand	1561915
MIR1-1HG	NM_178463	NP_848558	Coding	chr20:62550452 plus strand	1561915
MKKS	NM_018848	NP_061336	Coding	chr20:10431925 minus strand	1561916
MKKS	NM_170784	NP_740754	Coding	chr20:10434239 minus strand	1561917
MMP24	NM_006690	NP_006681	Coding	chr20:35226735 plus strand	1561918
MMP9	NM_004994	NP_004985	Coding	chr20:46008907 plus strand	1561919
MOCS3	NM_014484	NP_055299	Coding	chr20:50958813 plus strand	1561920
MRGBP	NM_018270	NP_060740	Coding	chr20:62796452 plus strand	1561921
MROH8	NM_152503	NP_689716	Coding	chr20:37179588 minus strand	1561922
MROH8	NM_213631	NP_998796	Coding	chr20:37179588 minus strand	1561922
MROH8	NM_213632	NP_998797	Coding	chr20:37179588 minus strand	1561922
MRPS26	NM_030811	NP_110438	Coding	chr20:3046028 plus strand	1561923
MTG2	NM_015666	NP_056481	Coding	chr20:62183024 plus strand	1561924
MTRNR2L3	NM_001190472	NP_001177401	Coding	chr20:57359822 minus strand	1561925
MYBL2	NM_001278610	NP_001265539	Coding	chr20:43667018 plus strand	1561926
MYBL2	NM_002466	NP_002457	Coding	chr20:43667018 plus strand	1561926
MYH7B	NM_020884	NP_065935	Coding	chr20:34955834 plus strand	1561927
MYL9	NM_006097	NP_006088	Coding	chr20:36541483 plus strand	1561928
MYL9	NM_181526	NP_852667	Coding	chr20:36541483 plus strand	1561928
MYLK2	NM_033118	NP_149109	Coding	chr20:31819374 plus strand	1561929
MYT1	NM_004535	NP_004526	Coding	chr20:64164473 plus strand	1561930
NAA20	NM_016100	NP_057184	Coding	chr20:20017289 plus strand	1561931
NAA20	NM_181527	NP_852668	Coding	chr20:20017794 plus strand	1561932

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NAA20	NM_181528	NP_852669	Coding	chr20:20017289 plus strand	1561931
NANP	NM_152667	NP_689880	Coding	chr20:25624012 minus strand	1561933
NAPB	NM_001283018	NP_001269947	Coding	chr20:23421519 minus strand	1561934
NAPB	NM_001283020	NP_001269949	Coding	chr20:23421519 minus strand	1561934
NAPB	NM_001283026	NP_001269955	Coding	chr20:23421519 minus strand	1561934
NAPB	NM_022080	NP_071363	Coding	chr20:23421519 minus strand	1561934
NCOA3	NM_001174087	NP_001167558	Coding	chr20:47501856 plus strand	1561935
NCOA3	NM_001174088	NP_001167559	Coding	chr20:47501856 plus strand	1561935
NCOA3	NM_006534	NP_006525	Coding	chr20:47501856 plus strand	1561935
NCOA3	NM_181659	NP_858045	Coding	chr20:47501856 plus strand	1561935
NCOA5	NM_020967	NP_066018	Coding	chr20:46089941 minus strand	1561936
NCOA6	NM_001242539	NP_001229468	Coding	chr20:34825630 minus strand	1561937
NCOA6	NM_014071	NP_054790	Coding	chr20:34825630 minus strand	1561937
NDRG3	NM_022477	NP_071922	Coding	chr20:36746138 minus strand	1561938
NDRG3	NM_032013	NP_114402	Coding	chr20:36746138 minus strand	1561938
NDUFAF5	NM_001039375	NP_001034464	Coding	chr20:13785025 plus strand	1561939
NDUFAF5	NM_024120	NP_077025	Coding	chr20:13785025 plus strand	1561939
NECAB3	NM_031231	NP_112508	Coding	chr20:33674458 minus strand	1561940
NECAB3	NM_031232	NP_112509	Coding	chr20:33674458 minus strand	1561940
NELFCD	NM_198976	NP_945327	Coding	chr20:58981207 plus strand	1561941
NEURL2	NM_001278535	NP_001265464	Coding	chr20:45891287 minus strand	1561942
NEURL2	NM_080749	NP_542787	Coding	chr20:45891287 minus strand	1561942
NFATC2	NM_001136021	NP_001129493	Coding	chr20:51562831 minus strand	1561943
NFATC2	NM_001258292	NP_001245221	Coding	chr20:51562831 minus strand	1561943
NFATC2	NM_001258294	NP_001245223	Coding	chr20:51562831 minus strand	1561943
NFATC2	NM_001258295	NP_001245224	Coding	chr20:51562831 minus strand	1561943
NFATC2	NM_001258296	NP_001245225	Coding	chr20:51542719 minus strand	1561944

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NFATC2	NM_001258297	NP_001245226	Coding	chr20:51542719 minus strand	1561944
NFATC2	NM_012340	NP_036472	Coding	chr20:51542719 minus strand	1561944
NFATC2	NM_173091	NP_775114	Coding	chr20:51542719 minus strand	1561944
NFS1	NM_001198989	NP_001185918	Coding	chr20:35699365 minus strand	1561945
NFS1	NM_021100	NP_066923	Coding	chr20:35699365 minus strand	1561945
NINL	NM_025176	NP_079452	Coding	chr20:25585517 minus strand	1561946
NKAIN4	NM_152864	NP_690603	Coding	chr20:63254540 minus strand	1561947
NKX2-2	NM_002509	NP_002500	Coding	chr20:21514026 minus strand	1561948
NKX2-4	NM_033176	NP_149416	Coding	chr20:21397409 minus strand	1561949
NNAT	NM_005386	NP_005377	Coding	chr20:37521204 plus strand	1561950
NNAT	NM_181689	NP_859017	Coding	chr20:37521204 plus strand	1561950
NOL4L	NM_001256798	NP_001243727	Coding	chr20:32585073 minus strand	1561951
NOL4L	NM_080616	NP_542183	Coding	chr20:32483582 minus strand	1561952
NOP56	NM_006392	NP_006383	Coding	chr20:2652531 plus strand	1561953
NPBWR2	NM_005286	NP_005277	Coding	chr20:64106831 minus strand	1561954
NPEPL1	NM_001204872	NP_001191801	Coding	chr20:58689130 plus strand	1561955
NPEPL1	NM_001204873	NP_001191802	Coding	chr20:58689130 plus strand	1561955
NPEPL1	NM_024663	NP_078939	Coding	chr20:58692805 plus strand	1561956
NRSN2	NM_024958	NP_079234	Coding	chr20:346725 plus strand	1561957
NSFL1C	NM_001206736	NP_001193665	Coding	chr20:1467692 minus strand	1561958
NSFL1C	NM_016143	NP_057227	Coding	chr20:1467692 minus strand	1561958
NSFL1C	NM_018839	NP_061327	Coding	chr20:1467692 minus strand	1561958
NTSR1	NM_002531	NP_002522	Coding	chr20:62708836 plus strand	1561959
NXT1	NM_013248	NP_037380	Coding	chr20:23350735 plus strand	1561960
OCSTAMP	NM_080721	NP_542452	Coding	chr20:46550574 minus strand	1561961
OGFR	NM_007346	NP_031372	Coding	chr20:62804824 plus strand	1561962
OPRL1	NM_000913	NP_000904	Coding	chr20:64080117 plus strand	1561963
OPRL1	NM_001200019	NP_001186948	Coding	chr20:64085015 plus strand	1561964

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OPRL1	NM_182647	NP_872588	Coding	chr20:64080117 plus strand	1561963
OSBPL2	NM_001278649	NP_001265578	Coding	chr20:62238484 plus strand	1561965
OSBPL2	NM_014835	NP_055650	Coding	chr20:62238484 plus strand	1561965
OSBPL2	NM_144498	NP_653081	Coding	chr20:62238484 plus strand	1561965
OSER1	NM_016470	NP_057554	Coding	chr20:44210906 minus strand	1561966
OTOR	NM_020157	NP_064542	Coding	chr20:16748352 plus strand	1561967
OVOL2	NM_021220	NP_067043	Coding	chr20:18057877 minus strand	1561968
OXT	NM_000915	NP_000906	Coding	chr20:3071619 plus strand	1561969
PABPC1L	NM_001124756	NP_001118228	Coding	chr20:44910061 plus strand	1561970
PAK7	NM_020341	NP_065074	Coding	chr20:9839039 minus strand	1561971
PAK7	NM_177990	NP_817127	Coding	chr20:9839039 minus strand	1561971
PANK2	NM_024960	NP_079236	Coding	chr20:3888838 plus strand	1561972
PANK2	NM_153638	NP_705902	Coding	chr20:3889094 plus strand	1561973
PANK2	NM_153640	NP_705904	Coding	chr20:3889815 plus strand	1561974
PARD6B	NM_032521	NP_115910	Coding	chr20:50731543 plus strand	1561975
PAX1	NM_001257096	NP_001244025	Coding	chr20:21705658 plus strand	1561976
PAX1	NM_006192	NP_006183	Coding	chr20:21705658 plus strand	1561976
PCED1A	NM_001271168	NP_001258097	Coding	chr20:2841243 minus strand	1561977
PCED1A	NM_022760	NP_073597	Coding	chr20:2840702 minus strand	1561978
PCIF1	NM_022104	NP_071387	Coding	chr20:45934677 plus strand	1561979
PCK1	NM_002591	NP_002582	Coding	chr20:57561080 plus strand	1561980
PCMTD2	NM_001104925	NP_001098395	Coding	chr20:64255694 plus strand	1561981
PCMTD2	NM_018257	NP_060727	Coding	chr20:64255694 plus strand	1561981
PCNA	NM_002592	NP_002583	Coding	chr20:5126622 minus strand	1561982
PCNA	NM_182649	NP_872590	Coding	chr20:5120001 minus strand	1561983
PCSK2	NM_001201528	NP_001188457	Coding	chr20:17226106 plus strand	1561984
PCSK2	NM_001201529	NP_001188458	Coding	chr20:17226951 plus strand	1561985
PCSK2	NM_002594	NP_002585	Coding	chr20:17226951 plus strand	1561985
PDRG1	NM_030815	NP_110442	Coding	chr20:31952080 minus	1561986

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				strand	
PDYN	NM_001190892	NP_001177821	Coding	chr20:1992806 minus strand	1561987
PDYN	NM_001190898	NP_001177827	Coding	chr20:1994285 minus strand	1561988
PDYN	NM_001190899	NP_001177828	Coding	chr20:1994285 minus strand	1561988
PDYN	NM_001190900	NP_001177829	Coding	chr20:1993748 minus strand	1561989
PDYN	NM_024411	NP_077722	Coding	chr20:1994285 minus strand	1561988
PET117	NM_001164811	NP_001158283	Coding	chr20:18137854 plus strand	1561990
PFDN4	NM_002623	NP_002614	Coding	chr20:54207962 plus strand	1561991
PHACTR3	NM_001199505	NP_001186434	Coding	chr20:59577508 plus strand	1561992
PHACTR3	NM_001199506	NP_001186435	Coding	chr20:59676660 plus strand	1561993
PHACTR3	NM_001281507	NP_001268436	Coding	chr20:59628608 plus strand	1561994
PHACTR3	NM_080672	NP_542403	Coding	chr20:59604546 plus strand	1561995
PHACTR3	NM_183244	NP_899067	Coding	chr20:59721209 plus strand	1561996
PHACTR3	NM_183246	NP_899069	Coding	chr20:59721209 plus strand	1561996
PHF20	NM_016436	NP_057520	Coding	chr20:35772000 plus strand	1561997
PI3	NM_002638	NP_002629	Coding	chr20:45174898 plus strand	1561998
PIGT	NM_001184728	NP_001171657	Coding	chr20:45416066 plus strand	1561999
PIGT	NM_001184729	NP_001171658	Coding	chr20:45416066 plus strand	1561999
PIGT	NM_001184730	NP_001171659	Coding	chr20:45416066 plus strand	1561999
PIGT	NM_015937	NP_057021	Coding	chr20:45416066 plus strand	1561999
PIGU	NM_080476	NP_536724	Coding	chr20:34677285 minus strand	1562000
PKIG	NM_001281444	NP_001268373	Coding	chr20:44531780 plus strand	1562001
PKIG	NM_001281445	NP_001268374	Coding	chr20:44582548 plus strand	1562002
PKIG	NM_007066	NP_008997	Coding	chr20:44531780 plus strand	1562001
PKIG	NM_181804	NP_861520	Coding	chr20:44531780 plus strand	1562001
PKIG	NM_181805	NP_861521	Coding	chr20:44531780 plus strand	1562001
PLAGL2	NM_002657	NP_002648	Coding	chr20:32207743 minus strand	1562003
PLCB1	NM_015192	NP_056007	Coding	chr20:8132264 plus strand	1562004

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PLCB1	NM_182734	NP_877398	Coding	chr20:8132264 plus strand	1562004
PLCB4	NM_000933	NP_000924	Coding	chr20:9307799 plus strand	1562005
PLCB4	NM_001172646	NP_001166117	Coding	chr20:9069053 plus strand	1562006
PLCB4	NM_182797	NP_877949	Coding	chr20:9217389 plus strand	1562007
PLCG1	NM_002660	NP_002651	Coding	chr20:41137520 plus strand	1562008
PLCG1	NM_182811	NP_877963	Coding	chr20:41137520 plus strand	1562008
PLTP	NM_001242920	NP_001229849	Coding	chr20:45912364 minus strand	1562009
PLTP	NM_001242921	NP_001229850	Coding	chr20:45910994 minus strand	1562010
PLTP	NM_006227	NP_006218	Coding	chr20:45912364 minus strand	1562009
PLTP	NM_182676	NP_872617	Coding	chr20:45912364 minus strand	1562009
PMEPA1	NM_001255976	NP_001242905	Coding	chr20:57690624 minus strand	1562011
PMEPA1	NM_020182	NP_064567	Coding	chr20:57709975 minus strand	1562012
PMEPA1	NM_199169	NP_954638	Coding	chr20:57710614 minus strand	1562013
PMEPA1	NM_199170	NP_954639	Coding	chr20:57710614 minus strand	1562013
PMEPA1	NM_199171	NP_954640	Coding	chr20:57711536 minus strand	1562014
POFUT1	NM_015352	NP_056167	Coding	chr20:32207892 plus strand	1562015
POFUT1	NM_172236	NP_758436	Coding	chr20:32207892 plus strand	1562015
POLR3F	NM_001282526	NP_001269455	Coding	chr20:18467388 plus strand	1562016
POLR3F	NM_006466	NP_006457	Coding	chr20:18467388 plus strand	1562016
PPDPF	NM_024299	NP_077275	Coding	chr20:63520779 plus strand	1562017
PPP1R16B	NM_001172735	NP_001166206	Coding	chr20:38805704 plus strand	1562018
PPP1R16B	NM_015568	NP_056383	Coding	chr20:38805704 plus strand	1562018
PPP1R3D	NM_006242	NP_006233	Coding	chr20:59940297 minus strand	1562019
PREX1	NM_020820	NP_065871	Coding	chr20:48827883 minus strand	1562020
PRND	NM_012409	NP_036541	Coding	chr20:4721853 plus strand	1562021
PRNP	NM_000311	NP_000302	Coding	chr20:4686150 plus strand	1562022
PRNP	NM_001080121	NP_001073590	Coding	chr20:4686150 plus strand	1562022
PRNP	NM_001080122	NP_001073591	Coding	chr20:4686150 plus strand	1562022
PRNP	NM_001080123	NP_001073592	Coding	chr20:4686510 plus strand	1562023
PRNP	NM_001271561	NP_001258490	Coding	chr20:4686150 plus strand	1562022
PRNP	NM_183079	NP_898902	Coding	chr20:4686150 plus strand	1562022

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PROCR	NM_006404	NP_006395	Coding	chr20:35171936 plus strand	1562024
PROKR2	NM_144773	NP_658986	Coding	chr20:5314369 minus strand	1562025
PRPF6	NM_012469	NP_036601	Coding	chr20:63981077 plus strand	1562026
PSMA7	NM_002792	NP_002783	Coding	chr20:62143458 minus strand	1562027
PSMF1	NM_006814	NP_006805	Coding	chr20:1118596 plus strand	1562028
PSMF1	NM_178578	NP_848693	Coding	chr20:1113262 plus strand	1562029
PTGIS	NM_000961	NP_000952	Coding	chr20:49568170 minus strand	1562030
PTK6	NM_001256358	NP_001243287	Coding	chr20:63537370 minus strand	1562031
PTK6	NM_005975	NP_005966	Coding	chr20:63537370 minus strand	1562031
PTPN1	NM_001278618	NP_001265547	Coding	chr20:50510320 plus strand	1562032
PTPN1	NM_002827	NP_002818	Coding	chr20:50510320 plus strand	1562032
PTPRA	NM_002836	NP_002827	Coding	chr20:2864194 plus strand	1562033
PTPRA	NM_080840	NP_543030	Coding	chr20:2873495 plus strand	1562034
PTPRA	NM_080841	NP_543031	Coding	chr20:2923206 plus strand	1562035
PTPRT	NM_007050	NP_008981	Coding	chr20:43189917 minus strand	1562036
PTPRT	NM_133170	NP_573400	Coding	chr20:43189917 minus strand	1562036
PXMP4	NM_007238	NP_009169	Coding	chr20:33720330 minus strand	1562037
PXMP4	NM_183397	NP_899634	Coding	chr20:33720330 minus strand	1562037
PYGB	NM_002862	NP_002853	Coding	chr20:25248069 plus strand	1562038
R3HDML	NM_178491	NP_848586	Coding	chr20:44337157 plus strand	1562039
RAB22A	NM_020673	NP_065724	Coding	chr20:58309714 plus strand	1562040
RAD21L1	NM_001136566	NP_001130038	Coding	chr20:1226119 plus strand	1562041
RAE1	NM_001015885	NP_001015885	Coding	chr20:57351561 plus strand	1562042
RAE1	NM_003610	NP_003601	Coding	chr20:57351088 plus strand	1562043
RALGAPA2	NM_020343	NP_065076	Coding	chr20:20712623 minus strand	1562044
RALGAPB	NM_001282917	NP_001269846	Coding	chr20:38472805 plus strand	1562045
RALGAPB	NM_001282918	NP_001269847	Coding	chr20:38472805 plus strand	1562045
RALGAPB	NM_020336	NP_065069	Coding	chr20:38472805 plus strand	1562045
RALY	NM_007367	NP_031393	Coding	chr20:33993651 plus strand	1562046

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RALY	NM_016732	NP_057951	Coding	chr20:33993651 plus strand	1562046
RASSF2	NM_014737	NP_055552	Coding	chr20:4823645 minus strand	1562047
RASSF2	NM_170774	NP_739580	Coding	chr20:4815123 minus strand	1562048
RBBP8NL	NM_080833	NP_543023	Coding	chr20:62427573 minus strand	1562049
RBBP9	NM_006606	NP_006597	Coding	chr20:18497243 minus strand	1562050
RBCK1	NM_006462	NP_006453	Coding	chr20:408064 plus strand	1562051
RBCK1	NM_031229	NP_112506	Coding	chr20:408064 plus strand	1562051
RBL1	NM_002895	NP_002886	Coding	chr20:37096000 minus strand	1562052
RBL1	NM_183404	NP_899662	Coding	chr20:37096000 minus strand	1562052
RBM12	NM_001198838	NP_001185767	Coding	chr20:35664956 minus strand	1562053
RBM12	NM_001198840	NP_001185769	Coding	chr20:35664956 minus strand	1562053
RBM12	NM_006047	NP_006038	Coding	chr20:35664956 minus strand	1562053
RBM12	NM_152838	NP_690051	Coding	chr20:35664956 minus strand	1562053
RBM38	NM_001291780	NP_001278709	Coding	chr20:57391397 plus strand	1562054
RBM38	NM_017495	NP_059965	Coding	chr20:57391397 plus strand	1562054
RBM38	NM_183425	NP_906270	Coding	chr20:57391397 plus strand	1562054
RBM39	NM_001242599	NP_001229528	Coding	chr20:35742336 minus strand	1562055
RBM39	NM_001242600	NP_001229529	Coding	chr20:35742336 minus strand	1562055
RBM39	NM_004902	NP_004893	Coding	chr20:35742336 minus strand	1562055
RBM39	NM_184234	NP_909122	Coding	chr20:35742336 minus strand	1562055
RBPJL	NM_001281448	NP_001268377	Coding	chr20:45306842 plus strand	1562056
RBPJL	NM_001281449	NP_001268378	Coding	chr20:45306842 plus strand	1562056
RBPJL	NM_014276	NP_055091	Coding	chr20:45306842 plus strand	1562056
REM1	NM_014012	NP_054731	Coding	chr20:31475287 plus strand	1562057
RGS19	NM_001039467	NP_001034556	Coding	chr20:64079971 minus strand	1562058
RGS19	NM_005873	NP_005864	Coding	chr20:64079492 minus strand	1562059
RIMS4	NM_001205317	NP_001192246	Coding	chr20:44810338 minus strand	1562060
RIMS4	NM_182970	NP_892015	Coding	chr20:44810338 minus strand	1562060

【１２９８】

RIN2	NM_001242581	NP_001229510	Coding	chr20:19886520 plus strand	1562061
RIN2	NM_018993	NP_061866	Coding	chr20:19889565 plus strand	1562062
RNF114	NM_018683	NP_061153	Coding	chr20:49936376 plus strand	1562063
RNF24	NM_001134337	NP_001127809	Coding	chr20:4015569 minus strand	1562064
RNF24	NM_001134338	NP_001127810	Coding	chr20:4015569 minus strand	1562064
RNF24	NM_007219	NP_009150	Coding	chr20:4015407 minus strand	1562065
ROMO1	NM_080748	NP_542786	Coding	chr20:35699309 plus strand	1562066
RPN2	NM_001135771	NP_001129243	Coding	chr20:37179052 plus strand	1562067
RPN2	NM_002951	NP_002942	Coding	chr20:37179052 plus strand	1562067
RPRD1B	NM_021215	NP_067038	Coding	chr20:38033545 plus strand	1562068
RPS21	NM_001024	NP_001015	Coding	chr20:62387064 plus strand	1562069
RRBP1	NM_001042576	NP_001036041	Coding	chr20:17682283 minus strand	1562070
RRBP1	NM_004587	NP_004578	Coding	chr20:17682283 minus strand	1562070
RSPO4	NM_001029871	NP_001025042	Coding	chr20:1002264 minus strand	1562071
RSPO4	NM_001040007	NP_001035096	Coding	chr20:1002264 minus strand	1562071
RTEL1	NM_001283009	NP_001269938	Coding	chr20:63657809 plus strand	1562072
RTEL1	NM_001283010	NP_001269939	Coding	chr20:63657809 plus strand	1562072
RTEL1	NM_016434	NP_057518	Coding	chr20:63657809 plus strand	1562072
RTEL1	NM_032957	NP_116575	Coding	chr20:63657809 plus strand	1562072
RTFDC1	NM_001283035	NP_001269964	Coding	chr20:56468584 plus strand	1562073
RTFDC1	NM_001283036	NP_001269965	Coding	chr20:56468584 plus strand	1562073
RTFDC1	NM_001283037	NP_001269966	Coding	chr20:56468584 plus strand	1562073
RTFDC1	NM_016407	NP_057491	Coding	chr20:56468584 plus strand	1562073
SALL4	NM_020436	NP_065169	Coding	chr20:51802509 minus strand	1562074
SAMD10	NM_080621	NP_542188	Coding	chr20:63979642 minus strand	1562075
SAMHD1	NM_015474	NP_056289	Coding	chr20:36951843 minus strand	1562076
SCAND1	NM_016558	NP_057642	Coding	chr20:35955359 minus strand	1562077

【１２９９】

SCAND1	NM_033630	NP_361012	Coding	chr20:35954626 minus strand	1562078
SCP2D1	NM_178483	NP_848578	Coding	chr20:18813725 plus strand	1562079
SCRT2	NM_033129	NP_149120	Coding	chr20:676179 minus strand	1562080
SDC4	NM_002999	NP_002990	Coding	chr20:45348424 minus strand	1562081
SDCBP2	NM_001199784	NP_001186713	Coding	chr20:1325869 minus strand	1562082
SDCBP2	NM_015685	NP_056500	Coding	chr20:1313673 minus strand	1562083
SDCBP2	NM_080489	NP_536737	Coding	chr20:1329235 minus strand	1562084
SEC23B	NM_001172745	NP_001166216	Coding	chr20:18507962 plus strand	1562085
SEC23B	NM_001172746	NP_001166217	Coding	chr20:18507565 plus strand	1562086
SEC23B	NM_006363	NP_006354	Coding	chr20:18507543 plus strand	1562087
SEC23B	NM_032985	NP_116780	Coding	chr20:18507543 plus strand	1562087
SEC23B	NM_032986	NP_116781	Coding	chr20:18507543 plus strand	1562087
SEL1L2	NM_001271539	NP_001258468	Coding	chr20:13990619 minus strand	1562088
SEMG1	NM_003007	NP_002998	Coding	chr20:45206996 plus strand	1562089
SEMG2	NM_003008	NP_002999	Coding	chr20:45221368 plus strand	1562090
SERINC3	NM_006811	NP_006802	Coding	chr20:44522085 minus strand	1562091
SERINC3	NM_198941	NP_945179	Coding	chr20:44522085 minus strand	1562091
SGK2	NM_001199264	NP_001186193	Coding	chr20:43565114 plus strand	1562092
SGK2	NM_016276	NP_057360	Coding	chr20:43566096 plus strand	1562093
SGK2	NM_170693	NP_733794	Coding	chr20:43558994 plus strand	1562094
SIGLEC1	NM_023068	NP_075556	Coding	chr20:3707128 minus strand	1562095
SIRPA	NM_001040022	NP_001035111	Coding	chr20:1894166 plus strand	1562096
SIRPA	NM_001040023	NP_001035112	Coding	chr20:1895179 plus strand	1562097
SIRPA	NM_080792	NP_542970	Coding	chr20:1894778 plus strand	1562098
SIRPB1	NM_001083910	NP_001077379	Coding	chr20:1620043 minus strand	1562099
SIRPB1	NM_001135844	NP_001129316	Coding	chr20:1620043 minus strand	1562099
SIRPB1	NM_006065	NP_006056	Coding	chr20:1620043 minus strand	1562099
SIRPB2	NM_001122962	NP_001116434	Coding	chr20:1491587 minus strand	1562100
SIRPB2	NM_001134836	NP_001128308	Coding	chr20:1491587 minus	1562100

【１３００】

				strand	
SIRPD	NM_178460	NP_848555	Coding	chr20:1557697 minus strand	1562101
SIRPG	NM_001039508	NP_001034597	Coding	chr20:1657779 minus strand	1562102
SIRPG	NM_018556	NP_061026	Coding	chr20:1657779 minus strand	1562102
SIRPG	NM_080816	NP_543006	Coding	chr20:1657779 minus strand	1562102
SLA2	NM_032214	NP_115590	Coding	chr20:36646216 minus strand	1562103
SLA2	NM_175077	NP_778252	Coding	chr20:36646216 minus strand	1562103
SLC12A5	NM_001134771	NP_001128243	Coding	chr20:46021689 plus strand	1562104
SLC12A5	NM_020708	NP_065759	Coding	chr20:46029181 plus strand	1562105
SLC13A3	NM_001011554	NP_001011554	Coding	chr20:46684485 minus strand	1562106
SLC13A3	NM_001193339	NP_001180268	Coding	chr20:46651461 minus strand	1562107
SLC13A3	NM_001193340	NP_001180269	Coding	chr20:46684485 minus strand	1562106
SLC13A3	NM_001193342	NP_001180271	Coding	chr20:46651461 minus strand	1562107
SLC13A3	NM_022829	NP_073740	Coding	chr20:46651461 minus strand	1562107
SLC17A9	NM_001302643	NP_001289572	Coding	chr20:62952646 plus strand	1562108
SLC17A9	NM_022082	NP_071365	Coding	chr20:62952646 plus strand	1562108
SLC23A2	NM_005116	NP_005107	Coding	chr20:5001499 minus strand	1562109
SLC23A2	NM_203327	NP_976072	Coding	chr20:5010293 minus strand	1562110
SLC24A3	NM_020689	NP_065740	Coding	chr20:19212645 plus strand	1562111
SLC2A10	NM_030777	NP_110404	Coding	chr20:46709639 plus strand	1562112
SLC2A4RG	NM_020062	NP_064446	Coding	chr20:63739857 plus strand	1562113
SLC32A1	NM_080552	NP_542119	Coding	chr20:38724461 plus strand	1562114
SLC35C2	NM_001281457	NP_001268386	Coding	chr20:46364458 minus strand	1562115
SLC35C2	NM_001281458	NP_001268387	Coding	chr20:46364458 minus strand	1562115
SLC35C2	NM_001281459	NP_001268388	Coding	chr20:46364458 minus strand	1562115
SLC35C2	NM_001281460	NP_001268389	Coding	chr20:46364458 minus strand	1562115
SLC35C2	NM_015945	NP_057029	Coding	chr20:46364458 minus strand	1562115
SLC35C2	NM_173073	NP_775096	Coding	chr20:46364458 minus	1562115

【１３０１】

				strand	
SLC35C2	NM_173179	NP_775271	Coding	chr20:46364458 minus strand	1562115
SLC4A11	NM_001174089	NP_001167560	Coding	chr20:3239241 minus strand	1562116
SLC4A11	NM_001174090	NP_001167561	Coding	chr20:3238189 minus strand	1562117
SLC4A11	NM_032034	NP_114423	Coding	chr20:3237727 minus strand	1562118
SLC52A3	NM_033409	NP_212134	Coding	chr20:768584 minus strand	1562119
SLC9A8	NM_001260491	NP_001247420	Coding	chr20:49812712 plus strand	1562120
SLC9A8	NM_015266	NP_056081	Coding	chr20:49812712 plus strand	1562120
SLCO4A1	NM_016354	NP_057438	Coding	chr20:62642444 plus strand	1562121
SLMO2	NM_001256403	NP_001243332	Coding	chr20:59042846 minus strand	1562122
SLMO2	NM_016045	NP_057129	Coding	chr20:59042846 minus strand	1562122
SLPI	NM_003064	NP_003055	Coding	chr20:45254564 minus strand	1562123
SLX4IP	NM_001009608	NP_001009608	Coding	chr20:10435302 plus strand	1562124
SMOX	NM_001270691	NP_001257620	Coding	chr20:4148778 plus strand	1562125
SMOX	NM_175839	NP_787033	Coding	chr20:4148778 plus strand	1562125
SMOX	NM_175840	NP_787034	Coding	chr20:4148778 plus strand	1562125
SMOX	NM_175841	NP_787035	Coding	chr20:4148778 plus strand	1562125
SMOX	NM_175842	NP_787036	Coding	chr20:4148778 plus strand	1562125
SNAI1	NM_005985	NP_005976	Coding	chr20:49982975 plus strand	1562126
SNAP25	NM_003081	NP_003072	Coding	chr20:10218828 plus strand	1562127
SNAP25	NM_130811	NP_570824	Coding	chr20:10218828 plus strand	1562127
SNPH	NM_014723	NP_055538	Coding	chr20:1266315 plus strand	1562128
SNRPB	NM_003091	NP_003082	Coding	chr20:2470853 minus strand	1562129
SNRPB	NM_198216	NP_937859	Coding	chr20:2470853 minus strand	1562129
SNRPB2	NM_003092	NP_003083	Coding	chr20:16729963 plus strand	1562130
SNRPB2	NM_198220	NP_937863	Coding	chr20:16729963 plus strand	1562130
SNTA1	NM_003098	NP_003089	Coding	chr20:33443892 minus strand	1562131
SNX21	NM_001042632	NP_001036097	Coding	chr20:45833830 plus strand	1562132
SNX21	NM_001042633	NP_001036098	Coding	chr20:45833830 plus strand	1562132
SNX21	NM_033421	NP_219489	Coding	chr20:45833830 plus strand	1562132

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SNX21	NM_152897	NP_690857	Coding	chr20:45833830 plus strand	1562132
SNX5	NM_001282454	NP_001269383	Coding	chr20:17968991 minus strand	1562133
SNX5	NM_014426	NP_055241	Coding	chr20:17968794 minus strand	1562134
SNX5	NM_152227	NP_689413	Coding	chr20:17968991 minus strand	1562133
SOGA1	NM_080627	NP_542194	Coding	chr20:36863684 minus strand	1562135
SOGA1	NM_199181	NP_954650	Coding	chr20:36859873 minus strand	1562136
SOX12	NM_006943	NP_008874	Coding	chr20:325570 plus strand	1562137
SOX18	NM_018419	NP_060889	Coding	chr20:64049626 minus strand	1562138
SPAG4	NM_003116	NP_003107	Coding	chr20:35615886 plus strand	1562139
SPATA2	NM_001135773	NP_001129245	Coding	chr20:49913739 minus strand	1562140
SPATA2	NM_006038	NP_006029	Coding	chr20:49915543 minus strand	1562141
SPATA25	NM_080608	NP_542175	Coding	chr20:45887599 minus strand	1562142
SPEF1	NM_015417	NP_056232	Coding	chr20:3781455 minus strand	1562143
SPINT3	NM_006652	NP_006643	Coding	chr20:45515624 minus strand	1562144
SPINT4	NM_178455	NP_848550	Coding	chr20:45722348 plus strand	1562145
SPO11	NM_012444	NP_036576	Coding	chr20:57329774 plus strand	1562146
SPO11	NM_198265	NP_937998	Coding	chr20:57329774 plus strand	1562146
SPTLC3	NM_018327	NP_060797	Coding	chr20:13008978 plus strand	1562147
SRC	NM_005417	NP_005408	Coding	chr20:37344684 plus strand	1562148
SRC	NM_198291	NP_938033	Coding	chr20:37346127 plus strand	1562149
SRMS	NM_080823	NP_543013	Coding	chr20:63547504 minus strand	1562150
SRSF6	NM_006275	NP_006266	Coding	chr20:43457863 plus strand	1562151
SRXN1	NM_080725	NP_542763	Coding	chr20:653370 minus strand	1562152
SS18L1	NM_001301778	NP_001288707	Coding	chr20:62143719 plus strand	1562153
SS18L1	NM_198935	NP_945173	Coding	chr20:62143719 plus strand	1562153
SSTR4	NM_001052	NP_001043	Coding	chr20:23035419 plus strand	1562154
STAU1	NM_001037328	NP_001032405	Coding	chr20:49188367 minus strand	1562155
STAU1	NM_004602	NP_004593	Coding	chr20:49188367 minus strand	1562155

【１３０３】

STAU1	NM_017452	NP_059346	Coding	chr20:49188367 minus strand	1562155
STAU1	NM_017453	NP_059347	Coding	chr20:49188367 minus strand	1562155
STAU1	NM_017454	NP_059348	Coding	chr20:49188367 minus strand	1562155
STK35	NM_080836	NP_543026	Coding	chr20:2101881 plus strand	1562156
STK4	NM_006282	NP_006273	Coding	chr20:44966478 plus strand	1562157
STMN3	NM_001276310	NP_001263239	Coding	chr20:63652766 minus strand	1562158
STMN3	NM_015894	NP_056978	Coding	chr20:63653610 minus strand	1562159
STX16	NM_001001433	NP_001001433	Coding	chr20:58651252 plus strand	1562160
STX16	NM_001134772	NP_001128244	Coding	chr20:58651252 plus strand	1562160
STX16	NM_001134773	NP_001128245	Coding	chr20:58651252 plus strand	1562160
STX16	NM_001204868	NP_001191797	Coding	chr20:58651252 plus strand	1562160
STX16	NM_003763	NP_003754	Coding	chr20:58651252 plus strand	1562160
SULF2	NM_001161841	NP_001155313	Coding	chr20:47786616 minus strand	1562161
SULF2	NM_018837	NP_061325	Coding	chr20:47786064 minus strand	1562162
SULF2	NM_198596	NP_940998	Coding	chr20:47786616 minus strand	1562161
SUN5	NM_080675	NP_542406	Coding	chr20:33004433 minus strand	1562163
SYCP2	NM_014258	NP_055073	Coding	chr20:59932154 minus strand	1562164
SYNDIG1	NM_024893	NP_079169	Coding	chr20:24469198 plus strand	1562165
SYS1	NM_001099791	NP_001093261	Coding	chr20:45363099 plus strand	1562166
SYS1	NM_001197129	NP_001184058	Coding	chr20:45361936 plus strand	1562167
SYS1	NM_033542	NP_291020	Coding	chr20:45363099 plus strand	1562166
TAF4	NM_003185	NP_003176	Coding	chr20:62065810 minus strand	1562168
TASP1	NM_017714	NP_060184	Coding	chr20:13638936 minus strand	1562169
TBC1D20	NM_144628	NP_653229	Coding	chr20:462553 minus strand	1562170
TCEA2	NM_003195	NP_003186	Coding	chr20:64062656 plus strand	1562171
TCEA2	NM_198723	NP_942016	Coding	chr20:64057085 plus strand	1562172
TCF15	NM_004609	NP_004600	Coding	chr20:610266 minus strand	1562173
TCFL5	NM_001301726	NP_001288655	Coding	chr20:62861763 minus strand	1562174

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TCFL5	NM_006602	NP_006593	Coding	chr20:62861763 minus strand	1562174
TFAP2C	NM_003222	NP_003213	Coding	chr20:56629301 plus strand	1562175
TGIF2	NM_001199513	NP_001186442	Coding	chr20:36573472 plus strand	1562176
TGIF2	NM_001199514	NP_001186443	Coding	chr20:36573472 plus strand	1562176
TGIF2	NM_001199515	NP_001186444	Coding	chr20:36574553 plus strand	1562177
TGIF2	NM_021809	NP_068581	Coding	chr20:36573606 plus strand	1562178
TGIF2-C20orf24	NM_001199535	NP_001186464	Coding	chr20:36574553 plus strand	1562179
TGM2	NM_004613	NP_004604	Coding	chr20:38165298 minus strand	1562180
TGM2	NM_198951	NP_945189	Coding	chr20:38165298 minus strand	1562180
TGM3	NM_003245	NP_003236	Coding	chr20:2295966 plus strand	1562181
TGM6	NM_001254734	NP_001241663	Coding	chr20:2380907 plus strand	1562182
TGM6	NM_198994	NP_945345	Coding	chr20:2380907 plus strand	1562182
THBD	NM_000361	NP_000352	Coding	chr20:23049664 minus strand	1562183
TLDC2	NM_080628	NP_542195	Coding	chr20:36876166 plus strand	1562184
TM9SF4	NM_014742	NP_055557	Coding	chr20:32109505 plus strand	1562185
TMC2	NM_080751	NP_542789	Coding	chr20:2536606 plus strand	1562186
TMEM189	NM_001162505	NP_001155977	Coding	chr20:50153798 minus strand	1562187
TMEM189	NM_199129	NP_954580	Coding	chr20:50153798 minus strand	1562187
TMEM189-UBE2V1	NM_199203	NP_954673	Coding	chr20:50153798 minus strand	1562188
TMEM230	NM_001009923	NP_001009923	Coding	chr20:5113087 minus strand	1562189
TMEM230	NM_001009924	NP_001009924	Coding	chr20:5113087 minus strand	1562189
TMEM230	NM_001009925	NP_001009925	Coding	chr20:5113087 minus strand	1562189
TMEM230	NM_014145	NP_054864	Coding	chr20:5113087 minus strand	1562189
TMEM239	NM_001167670	NP_001161142	Coding	chr20:2816329 plus strand	1562190
TMEM74B	NM_018354	NP_060824	Coding	chr20:1184473 minus strand	1562191
TMX4	NM_021156	NP_066979	Coding	chr20:8019829 minus strand	1562192
TNFRSF6B	NM_003823	NP_003814	Coding	chr20:63696650 plus strand	1562193
TNNC2	NM_003279	NP_003270	Coding	chr20:45827314 minus strand	1562194
TOMM34	NM_006809	NP_006800	Coding	chr20:44960473 minus strand	1562195

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TOP1	NM_003286	NP_003277	Coding	chr20:41028821 plus strand	1562196
TOX2	NM_001098796	NP_001092266	Coding	chr20:43916141 plus strand	1562197
TOX2	NM_001098797	NP_001092267	Coding	chr20:43914851 plus strand	1562198
TOX2	NM_001098798	NP_001092268	Coding	chr20:43945895 plus strand	1562199
TOX2	NM_032883	NP_116272	Coding	chr20:43916141 plus strand	1562197
TP53INP2	NM_021202	NP_067025	Coding	chr20:34704343 plus strand	1562200
TP53RK	NM_033550	NP_291028	Coding	chr20:46689637 minus strand	1562201
TP53TG5	NM_014477	NP_055292	Coding	chr20:45378317 minus strand	1562202
TPD52L2	NM_001243891	NP_001230820	Coding	chr20:63865227 plus strand	1562203
TPD52L2	NM_001243892	NP_001230821	Coding	chr20:63865227 plus strand	1562203
TPD52L2	NM_001243894	NP_001230823	Coding	chr20:63865227 plus strand	1562203
TPD52L2	NM_001243895	NP_001230824	Coding	chr20:63865227 plus strand	1562203
TPD52L2	NM_003288	NP_003279	Coding	chr20:63865227 plus strand	1562203
TPD52L2	NM_199359	NP_955391	Coding	chr20:63865227 plus strand	1562203
TPD52L2	NM_199360	NP_955392	Coding	chr20:63865227 plus strand	1562203
TPD52L2	NM_199361	NP_955393	Coding	chr20:63865227 plus strand	1562203
TPD52L2	NM_199362	NP_955394	Coding	chr20:63865227 plus strand	1562203
TPD52L2	NM_199363	NP_955395	Coding	chr20:63865227 plus strand	1562203
TPX2	NM_012112	NP_036244	Coding	chr20:31739100 plus strand	1562204
TRIB3	NM_001301188	NP_001288117	Coding	chr20:381305 plus strand	1562205
TRIB3	NM_001301190	NP_001288119	Coding	chr20:381342 plus strand	1562206
TRIB3	NM_001301193	NP_001288122	Coding	chr20:381342 plus strand	1562206
TRIB3	NM_001301196	NP_001288125	Coding	chr20:381294 plus strand	1562207
TRIB3	NM_001301201	NP_001288130	Coding	chr20:381294 plus strand	1562207
TRIB3	NM_021158	NP_066981	Coding	chr20:380628 plus strand	1562208
TRMT6	NM_001281467	NP_001268396	Coding	chr20:5950558 minus strand	1562209
TRMT6	NM_015939	NP_057023	Coding	chr20:5950558 minus strand	1562209
TRPC4AP	NM_015638	NP_056453	Coding	chr20:35092815 minus strand	1562210
TRPC4AP	NM_199368	NP_955400	Coding	chr20:35092815 minus strand	1562210

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TSHZ2	NM_001193421	NP_001180350	Coding	chr20:53185282 plus strand	1562211
TSHZ2	NM_173485	NP_775756	Coding	chr20:52972406 plus strand	1562212
TTI1	NM_014657	NP_055472	Coding	chr20:38033431 minus strand	1562213
TTLL9	NM_001008409	NP_001008409	Coding	chr20:31870701 plus strand	1562214
TTPAL	NM_001039199	NP_001034288	Coding	chr20:44475885 plus strand	1562215
TTPAL	NM_001261839	NP_001248768	Coding	chr20:44475885 plus strand	1562215
TTPAL	NM_024331	NP_077307	Coding	chr20:44475885 plus strand	1562215
TUBB1	NM_030773	NP_110400	Coding	chr20:59019253 plus strand	1562216
UBE2C	NM_001281741	NP_001268670	Coding	chr20:45812575 plus strand	1562217
UBE2C	NM_001281742	NP_001268671	Coding	chr20:45812575 plus strand	1562217
UBE2C	NM_007019	NP_008950	Coding	chr20:45812575 plus strand	1562217
UBE2C	NM_181799	NP_861515	Coding	chr20:45812575 plus strand	1562217
UBE2C	NM_181800	NP_861516	Coding	chr20:45812575 plus strand	1562217
UBE2C	NM_181801	NP_861517	Coding	chr20:45813032 plus strand	1562218
UBE2V1	NM_001032288	NP_001027459	Coding	chr20:50113198 minus strand	1562219
UBE2V1	NM_001257393	NP_001244322	Coding	chr20:50115959 minus strand	1562220
UBE2V1	NM_001257394	NP_001244323	Coding	chr20:50115959 minus strand	1562220
UBE2V1	NM_001257395	NP_001244324	Coding	chr20:50113198 minus strand	1562219
UBE2V1	NM_001257396	NP_001244325	Coding	chr20:50113198 minus strand	1562219
UBE2V1	NM_001257397	NP_001244326	Coding	chr20:50113198 minus strand	1562219
UBE2V1	NM_001257398	NP_001244327	Coding	chr20:50113198 minus strand	1562219
UBE2V1	NM_001257399	NP_001244328	Coding	chr20:50113198 minus strand	1562219
UBE2V1	NM_001282575	NP_001269504	Coding	chr20:50115959 minus strand	1562220
UBE2V1	NM_001282576	NP_001269505	Coding	chr20:50113198 minus strand	1562219
UBE2V1	NM_001282577	NP_001269506	Coding	chr20:50113198 minus strand	1562219
UBE2V1	NM_001282578	NP_001269507	Coding	chr20:50113198 minus strand	1562219
UBE2V1	NM_001282579	NP_001269508	Coding	chr20:50113198 minus strand	1562219

【１３０７】

UBE2V1	NM_001282580	NP_001269509	Coding	chr20:50113198 minus strand	1562219
UBE2V1	NM_021988	NP_068823	Coding	chr20:50115959 minus strand	1562220
UBE2V1	NM_022442	NP_071887	Coding	chr20:50115959 minus strand	1562220
UBE2V1	NM_199144	NP_954595	Coding	chr20:50115959 minus strand	1562220
UBOX5	NM_001267584	NP_001254513	Coding	chr20:3159910 minus strand	1562221
UBOX5	NM_014948	NP_055763	Coding	chr20:3159910 minus strand	1562221
UBOX5	NM_199415	NP_955447	Coding	chr20:3159910 minus strand	1562221
UCKL1	NM_001193379	NP_001180308	Coding	chr20:63951174 minus strand	1562222
UCKL1	NM_017859	NP_060329	Coding	chr20:63956447 minus strand	1562223
UQCC1	NM_001184977	NP_001171906	Coding	chr20:35412142 minus strand	1562224
UQCC1	NM_018244	NP_060714	Coding	chr20:35412142 minus strand	1562224
UQCC1	NM_199487	NP_955781	Coding	chr20:35412142 minus strand	1562224
VAPB	NM_001195677	NP_001182606	Coding	chr20:58389118 plus strand	1562225
VAPB	NM_004738	NP_004729	Coding	chr20:58389118 plus strand	1562225
VPS16	NM_022575	NP_072097	Coding	chr20:2840696 plus strand	1562226
VPS16	NM_080413	NP_536338	Coding	chr20:2840696 plus strand	1562226
VSTM2L	NM_080607	NP_542174	Coding	chr20:37903096 plus strand	1562227
VSX1	NM_001256271	NP_001243200	Coding	chr20:25082379 minus strand	1562228
VSX1	NM_001256272	NP_001243201	Coding	chr20:25082379 minus strand	1562228
VSX1	NM_014588	NP_055403	Coding	chr20:25082379 minus strand	1562228
VSX1	NM_199425	NP_955457	Coding	chr20:25082379 minus strand	1562228
WFDC10A	NM_080753	NP_542791	Coding	chr20:45629745 plus strand	1562229
WFDC10B	NM_172006	NP_742003	Coding	chr20:45705019 minus strand	1562230
WFDC10B	NM_172131	NP_742143	Coding	chr20:45705019 minus strand	1562230
WFDC11	NM_147197	NP_671730	Coding	chr20:45670239 minus strand	1562231
WFDC12	NM_080869	NP_543145	Coding	chr20:45124465 minus strand	1562232
WFDC13	NM_172005	NP_742002	Coding	chr20:45702015 plus strand	1562233
WFDC2	NM_006103	NP_006094	Coding	chr20:45469753 plus strand	1562234

【１３０８】

WFDC3	NM_080614	NP_542181	Coding	chr20:45791908 minus strand	1562235
WFDC5	NM_145652	NP_663627	Coding	chr20:45115172 minus strand	1562236
WFDC6	NM_080827	NP_543017	Coding	chr20:45539495 minus strand	1562237
WFDC8	NM_130896	NP_570966	Coding	chr20:45579326 minus strand	1562238
WFDC8	NM_181510	NP_852611	Coding	chr20:45579326 minus strand	1562238
WFDC9	NM_147198	NP_671731	Coding	chr20:45631268 minus strand	1562239
WISP2	NM_003881	NP_003872	Coding	chr20:44715243 plus strand	1562240
XKR7	NM_001011718	NP_001011718	Coding	chr20:31968001 plus strand	1562241
XRN2	NM_012255	NP_036387	Coding	chr20:21303303 plus strand	1562242
YTHDF1	NM_017798	NP_060268	Coding	chr20:63216186 minus strand	1562243
YWHAB	NM_003404	NP_003395	Coding	chr20:44885598 plus strand	1562244
YWHAB	NM_139323	NP_647539	Coding	chr20:44885598 plus strand	1562244
ZBP1	NM_001160417	NP_001153889	Coding	chr20:57620576 minus strand	1562245
ZBP1	NM_001160418	NP_001153890	Coding	chr20:57620576 minus strand	1562245
ZBP1	NM_001160419	NP_001153891	Coding	chr20:57620576 minus strand	1562245
ZBP1	NM_030776	NP_110403	Coding	chr20:57620576 minus strand	1562245
ZBTB46	NM_025224	NP_079500	Coding	chr20:63805503 minus strand	1562246
ZCCHC3	NM_033089	NP_149080	Coding	chr20:297562 plus strand	1562247
ZFP64	NM_018197	NP_060667	Coding	chr20:52191985 minus strand	1562248
ZFP64	NM_022088	NP_071371	Coding	chr20:52191985 minus strand	1562248
ZFP64	NM_199426	NP_955458	Coding	chr20:52191985 minus strand	1562248
ZFP64	NM_199427	NP_955459	Coding	chr20:52191985 minus strand	1562248
ZGPAT	NM_001083113	NP_001076582	Coding	chr20:63707441 plus strand	1562249
ZGPAT	NM_001195653	NP_001182582	Coding	chr20:63708027 plus strand	1562250
ZGPAT	NM_001195654	NP_001182583	Coding	chr20:63708027 plus strand	1562250
ZGPAT	NM_032527	NP_115916	Coding	chr20:63708027 plus strand	1562250
ZGPAT	NM_181485	NP_852150	Coding	chr20:63708027 plus strand	1562250
ZHX3	NM_015035	NP_055850	Coding	chr20:41300099 minus	1562251

【１３０９】

				strand	
ZMYND8	NM_001281769	NP_001268698	Coding	chr20:47356889 minus strand	1562252
ZMYND8	NM_001281771	NP_001268700	Coding	chr20:47356889 minus strand	1562252
ZMYND8	NM_001281772	NP_001268701	Coding	chr20:47356889 minus strand	1562252
ZMYND8	NM_001281773	NP_001268702	Coding	chr20:47356889 minus strand	1562252
ZMYND8	NM_001281774	NP_001268703	Coding	chr20:47356889 minus strand	1562252
ZMYND8	NM_001281775	NP_001268704	Coding	chr20:47356889 minus strand	1562252
ZMYND8	NM_001281776	NP_001268705	Coding	chr20:47356889 minus strand	1562252
ZMYND8	NM_001281777	NP_001268706	Coding	chr20:47356889 minus strand	1562252
ZMYND8	NM_001281778	NP_001268707	Coding	chr20:47356889 minus strand	1562252
ZMYND8	NM_001281779	NP_001268708	Coding	chr20:47356889 minus strand	1562252
ZMYND8	NM_001281780	NP_001268709	Coding	chr20:47356889 minus strand	1562252
ZMYND8	NM_001281781	NP_001268710	Coding	chr20:47356889 minus strand	1562252
ZMYND8	NM_001281782	NP_001268711	Coding	chr20:47356889 minus strand	1562252
ZMYND8	NM_001281783	NP_001268712	Coding	chr20:47356889 minus strand	1562252
ZMYND8	NM_001281784	NP_001268713	Coding	chr20:47356889 minus strand	1562252
ZMYND8	NM_012408	NP_036540	Coding	chr20:47356889 minus strand	1562252
ZMYND8	NM_183047	NP_898868	Coding	chr20:47356889 minus strand	1562252
ZMYND8	NM_183048	NP_898869	Coding	chr20:47356889 minus strand	1562252
ZNF133	NM_001083330	NP_001076799	Coding	chr20:18288282 plus strand	1562253
ZNF133	NM_001282995	NP_001269924	Coding	chr20:18288282 plus strand	1562253
ZNF133	NM_001282996	NP_001269925	Coding	chr20:18288282 plus strand	1562253
ZNF133	NM_001282997	NP_001269926	Coding	chr20:18288282 plus strand	1562253
ZNF133	NM_001282998	NP_001269927	Coding	chr20:18288282 plus strand	1562253
ZNF133	NM_001282999	NP_001269928	Coding	chr20:18288282 plus strand	1562253
ZNF133	NM_001283000	NP_001269929	Coding	chr20:18288282 plus strand	1562253
ZNF133	NM_001283001	NP_001269930	Coding	chr20:18288282 plus strand	1562253
ZNF133	NM_001283002	NP_001269931	Coding	chr20:18288282 plus	1562253

【１３１０】

				strand	
ZNF133	NM_001283003	NP_001269932	Coding	chr20:18288282 plus strand	1562253
ZNF133	NM_001283004	NP_001269933	Coding	chr20:18288282 plus strand	1562253
ZNF133	NM_001283005	NP_001269934	Coding	chr20:18288282 plus strand	1562253
ZNF133	NM_001283006	NP_001269935	Coding	chr20:18288282 plus strand	1562253
ZNF133	NM_001283007	NP_001269936	Coding	chr20:18288282 plus strand	1562253
ZNF133	NM_001283008	NP_001269937	Coding	chr20:18288282 plus strand	1562253
ZNF133	NM_003434	NP_003425	Coding	chr20:18288282 plus strand	1562253
ZNF217	NM_006526	NP_006517	Coding	chr20:53583097 minus strand	1562254
ZNF334	NM_001270497	NP_001257426	Coding	chr20:46513559 minus strand	1562255
ZNF334	NM_018102	NP_060572	Coding	chr20:46513559 minus strand	1562255
ZNF335	NM_022095	NP_071378	Coding	chr20:45972194 minus strand	1562256
ZNF337	NM_001290261	NP_001277190	Coding	chr20:25686939 minus strand	1562257
ZNF337	NM_015655	NP_056470	Coding	chr20:25696904 minus strand	1562258
ZNF341	NM_001282933	NP_001269862	Coding	chr20:33731759 plus strand	1562259
ZNF341	NM_001282935	NP_001269864	Coding	chr20:33731759 plus strand	1562259
ZNF341	NM_032819	NP_116208	Coding	chr20:33731759 plus strand	1562259
ZNF343	NM_001282495	NP_001269424	Coding	chr20:2524522 minus strand	1562260
ZNF343	NM_001282496	NP_001269425	Coding	chr20:2509132 minus strand	1562261
ZNF343	NM_001282497	NP_001269426	Coding	chr20:2509132 minus strand	1562261
ZNF343	NM_001282498	NP_001269427	Coding	chr20:2509132 minus strand	1562261
ZNF343	NM_001282499	NP_001269428	Coding	chr20:2509132 minus strand	1562261
ZNF343	NM_024325	NP_077301	Coding	chr20:2509132 minus strand	1562261
ZNF512B	NM_020713	NP_065764	Coding	chr20:63969870 minus strand	1562262
ZNF831	NM_178457	NP_848552	Coding	chr20:59191019 plus strand	1562263
ZNFX1	NM_021035	NP_066363	Coding	chr20:49278219 minus strand	1562264
ZSWIM1	NM_080603	NP_542170	Coding	chr20:45881208 plus strand	1562265
ZSWIM3	NM_080752	NP_542790	Coding	chr20:45857580 plus	1562266

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				strand	
ABCG1	NM_004915	NP_004906	Coding	chr21:42219156 plus strand	1562267
ABCG1	NM_016818	NP_058198	Coding	chr21:42219156 plus strand	1562267
ABCG1	NM_207174	NP_997057	Coding	chr21:42219897 plus strand	1562268
ABCG1	NM_207627	NP_997510	Coding	chr21:42199688 plus strand	1562269
ABCG1	NM_207628	NP_997511	Coding	chr21:42199811 plus strand	1562270
ABCG1	NM_207629	NP_997512	Coding	chr21:42216076 plus strand	1562271
ADAMTS1	NM_006988	NP_008919	Coding	chr21:26845409 minus strand	1562272
ADAMTS5	NM_007038	NP_008969	Coding	chr21:26967120 minus strand	1562273
ADARB1	NM_001112	NP_001103	Coding	chr21:45074577 plus strand	1562274
ADARB1	NM_001160230	NP_001153702	Coding	chr21:45074577 plus strand	1562274
ADARB1	NM_015833	NP_056648	Coding	chr21:45074577 plus strand	1562274
ADARB1	NM_015834	NP_056649	Coding	chr21:45074577 plus strand	1562274
AGPAT3	NM_001037553	NP_001032642	Coding	chr21:43925397 plus strand	1562275
AGPAT3	NM_020132	NP_064517	Coding	chr21:43865234 plus strand	1562276
AIRE	NM_000383	NP_000374	Coding	chr21:44285837 plus strand	1562277
APP	NM_000484	NP_000475	Coding	chr21:26170820 minus strand	1562278
APP	NM_001136016	NP_001129488	Coding	chr21:26140390 minus strand	1562279
APP	NM_001136129	NP_001129601	Coding	chr21:26170820 minus strand	1562278
APP	NM_001136130	NP_001129602	Coding	chr21:26170820 minus strand	1562278
APP	NM_001136131	NP_001129603	Coding	chr21:26171128 minus strand	1562280
APP	NM_001204301	NP_001191230	Coding	chr21:26170820 minus strand	1562278
APP	NM_001204302	NP_001191231	Coding	chr21:26170820 minus strand	1562278
APP	NM_001204303	NP_001191232	Coding	chr21:26170820 minus strand	1562278
APP	NM_201413	NP_958816	Coding	chr21:26170820 minus strand	1562278
APP	NM_201414	NP_958817	Coding	chr21:26170820 minus strand	1562278
ATP5J	NM_001003696	NP_001003696	Coding	chr21:25735654 minus strand	1562281
ATP5J	NM_001003697	NP_001003697	Coding	chr21:25735654 minus	1562281

【１３１２】

				strand	
ATP5J	NM_001003701	NP_001003701	Coding	chr21:25735654 minus strand	1562281
ATP5J	NM_001003703	NP_001003703	Coding	chr21:25735654 minus strand	1562281
ATP5J	NM_001685	NP_001676	Coding	chr21:25735654 minus strand	1562281
ATP5O	NM_001697	NP_001688	Coding	chr21:33915854 minus strand	1562282
B3GALT5	NM_001278650	NP_001265579	Coding	chr21:39612939 plus strand	1562283
B3GALT5	NM_006057	NP_006048	Coding	chr21:39657319 plus strand	1562284
B3GALT5	NM_033170	NP_149360	Coding	chr21:39657319 plus strand	1562284
B3GALT5	NM_033171	NP_149361	Coding	chr21:39657319 plus strand	1562284
B3GALT5	NM_033172	NP_149362	Coding	chr21:39657319 plus strand	1562284
BACE2	NM_012105	NP_036237	Coding	chr21:41167800 plus strand	1562285
BACE2	NM_138991	NP_620476	Coding	chr21:41167800 plus strand	1562285
BACE2	NM_138992	NP_620477	Coding	chr21:41167800 plus strand	1562285
BACH1	NM_001186	NP_001177	Coding	chr21:29298794 plus strand	1562286
BACH1	NM_206866	NP_996749	Coding	chr21:29299415 plus strand	1562287
BAGE	NM_001187	NP_001178	Coding	chr21:10413519 plus strand	1562288
BAGE2	NM_182482	NP_872288	Coding	chr21:10413531 plus strand	1562289
BAGE3	NM_182481	NP_872287	Coding	chr21:10413531 plus strand	1562290
BAGE4	NM_181704	NP_859055	Coding	chr21:10413531 plus strand	1562291
BAGE5	NM_182484	NP_872290	Coding	chr21:10413531 plus strand	1562292
BRWD1	NM_001007246	NP_001007247	Coding	chr21:39313786 minus strand	1562293
BRWD1	NM_018963	NP_061836	Coding	chr21:39313786 minus strand	1562293
BRWD1	NM_033656	NP_387505	Coding	chr21:39313786 minus strand	1562293
BTG3	NM_001130914	NP_001124386	Coding	chr21:17612950 minus strand	1562294
BTG3	NM_006806	NP_006797	Coding	chr21:17612950 minus strand	1562294
C21orf140	NM_001282537	NP_001269466	Coding	chr21:34401072 minus strand	1562295
C21orf140	NM_001282537	NP_001269466	Coding	chr21:7770548 minus strand	1562296
C21orf2	NM_001271440	NP_001258369	Coding	chr21:44339402 minus	1562297

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				strand	
C21orf2	NM_001271441	NP_001258370	Coding	chr21:44339402 minus strand	1562297
C21orf2	NM_001271442	NP_001258371	Coding	chr21:44338338 minus strand	1562298
C21orf2	NM_004928	NP_004919	Coding	chr21:44339402 minus strand	1562297
C21orf33	NM_004649	NP_004640	Coding	chr21:44133611 plus strand	1562299
C21orf33	NM_004649	NP_004640	Coding	chr21:5128440 minus strand	1562300
C21orf33	NM_198155	NP_937798	Coding	chr21:44133611 plus strand	1562299
C21orf33	NM_198155	NP_937798	Coding	chr21:5128440 minus strand	1562300
C21orf58	NM_001286462	NP_001273391	Coding	chr21:46320825 minus strand	1562301
C21orf58	NM_001286463	NP_001273392	Coding	chr21:46318220 minus strand	1562302
C21orf58	NM_001286476	NP_001273405	Coding	chr21:46323899 minus strand	1562303
C21orf58	NM_001286477	NP_001273406	Coding	chr21:46323857 minus strand	1562304
C21orf58	NM_058180	NP_478060	Coding	chr21:46323899 minus strand	1562303
C21orf59	NM_021254	NP_067077	Coding	chr21:32612608 minus strand	1562305
C21orf62	NM_001162495	NP_001155967	Coding	chr21:32813743 minus strand	1562306
C21orf62	NM_001162496	NP_001155968	Coding	chr21:32813743 minus strand	1562306
C21orf62	NM_019596	NP_062542	Coding	chr21:32813743 minus strand	1562306
C21orf91	NM_001100420	NP_001093890	Coding	chr21:17819386 minus strand	1562307
C21orf91	NM_001100421	NP_001093891	Coding	chr21:17819386 minus strand	1562307
C21orf91	NM_017447	NP_059143	Coding	chr21:17819386 minus strand	1562307
C2CD2	NM_015500	NP_056315	Coding	chr21:41953890 minus strand	1562308
C2CD2	NM_199050	NP_950251	Coding	chr21:41926690 minus strand	1562309
CBR1	NM_001286789	NP_001273718	Coding	chr21:36069923 plus strand	1562310
CBR1	NM_001757	NP_001748	Coding	chr21:36069923 plus strand	1562310
CBR3	NM_001236	NP_001227	Coding	chr21:36134964 plus strand	1562311
CBS	NM_000071	NP_000062	Coding	chr21:43075930 minus strand	1562312
CBS	NM_000071	NP_000062	Coding	chr21:6467608 minus strand	1562313
CBS	NM_001178008	NP_001171479	Coding	chr21:43076362 minus	1562314

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				strand	
CBS	NM_001178008	NP_001171479	Coding	chr21:6468040 minus strand	1562315
CBS	NM_001178009	NP_001171480	Coding	chr21:43076362 minus strand	1562314
CBS	NM_001178009	NP_001171480	Coding	chr21:6468040 minus strand	1562315
CCT8	NM_001282907	NP_001269836	Coding	chr21:29073797 minus strand	1562316
CCT8	NM_001282908	NP_001269837	Coding	chr21:29073797 minus strand	1562316
CCT8	NM_001282909	NP_001269838	Coding	chr21:29073797 minus strand	1562316
CCT8	NM_006585	NP_006576	Coding	chr21:29073797 minus strand	1562316
CHAF1B	NM_005441	NP_005432	Coding	chr21:36385390 plus strand	1562317
CHODL	NM_001204174	NP_001191103	Coding	chr21:18245874 plus strand	1562318
CHODL	NM_001204175	NP_001191104	Coding	chr21:17917339 plus strand	1562319
CHODL	NM_001204176	NP_001191105	Coding	chr21:17917339 plus strand	1562319
CHODL	NM_001204177	NP_001191106	Coding	chr21:17917339 plus strand	1562319
CHODL	NM_001204178	NP_001191107	Coding	chr21:17917339 plus strand	1562319
CHODL	NM_024944	NP_079220	Coding	chr21:18244832 plus strand	1562320
CLDN14	NM_001146077	NP_001139549	Coding	chr21:36576569 minus strand	1562321
CLDN14	NM_001146078	NP_001139550	Coding	chr21:36542819 minus strand	1562322
CLDN14	NM_001146079	NP_001139551	Coding	chr21:36480090 minus strand	1562323
CLDN14	NM_012130	NP_036262	Coding	chr21:36466441 minus strand	1562324
CLDN14	NM_144492	NP_652763	Coding	chr21:36480090 minus strand	1562323
CLDN17	NM_012131	NP_036263	Coding	chr21:30166653 minus strand	1562325
CLDN8	NM_199328	NP_955360	Coding	chr21:30216151 minus strand	1562326
CLIC6	NM_053277	NP_444507	Coding	chr21:34669388 plus strand	1562327
COL18A1	NM_030582	NP_085059	Coding	chr21:45455509 plus strand	1562328
COL18A1	NM_130445	NP_569712	Coding	chr21:45405181 plus strand	1562329
COL6A1	NM_001848	NP_001839	Coding	chr21:45981748 plus strand	1562330
COL6A2	NM_001849	NP_001840	Coding	chr21:46098118 plus strand	1562331
COL6A2	NM_058174	NP_478054	Coding	chr21:46098118 plus	1562331

【１３１５】

				strand	
COL6A2	NM_058175	NP_478055	Coding	chr21:46098118 plus strand	1562331
CRYAA	NM_000394	NP_000385	Coding	chr21:43169007 plus strand	1562332
CRYAA	NM_000394	NP_000385	Coding	chr21:6560690 plus strand	1562333
CRYZL1	NM_145858	NP_665857	Coding	chr21:33641854 minus strand	1562334
CSTB	NM_000100	NP_000091	Coding	chr21:43776375 minus strand	1562335
CXADR	NM_001207063	NP_001193992	Coding	chr21:17512905 plus strand	1562336
CXADR	NM_001207064	NP_001193993	Coding	chr21:17512905 plus strand	1562336
CXADR	NM_001207065	NP_001193994	Coding	chr21:17512905 plus strand	1562336
CXADR	NM_001207066	NP_001193995	Coding	chr21:17512905 plus strand	1562336
CXADR	NM_001338	NP_001329	Coding	chr21:17512905 plus strand	1562336
CYYR1	NM_052954	NP_443186	Coding	chr21:26573262 minus strand	1562337
DIP2A	NM_001146115	NP_001139587	Coding	chr21:46458948 plus strand	1562338
DIP2A	NM_001146116	NP_001139588	Coding	chr21:46458948 plus strand	1562338
DIP2A	NM_015151	NP_055966	Coding	chr21:46458948 plus strand	1562338
DIP2A	NM_206889	NP_996772	Coding	chr21:46458948 plus strand	1562338
DIP2A	NM_206890	NP_996773	Coding	chr21:46458948 plus strand	1562338
DIP2A	NM_206891	NP_996774	Coding	chr21:46458948 plus strand	1562338
DNAJC28	NM_001040192	NP_001035282	Coding	chr21:33491723 minus strand	1562339
DNAJC28	NM_017833	NP_060303	Coding	chr21:33491483 minus strand	1562340
DNMT3L	NM_013369	NP_037501	Coding	chr21:44262216 minus strand	1562341
DNMT3L	NM_175867	NP_787063	Coding	chr21:44262216 minus strand	1562341
DONSON	NM_017613	NP_060083	Coding	chr21:33588708 minus strand	1562342
DOPEY2	NM_005128	NP_005119	Coding	chr21:36164540 plus strand	1562343
DSCAM	NM_001271534	NP_001258463	Coding	chr21:40847113 minus strand	1562344
DSCAM	NM_001389	NP_001380	Coding	chr21:40847113 minus strand	1562344
DSCR3	NM_006052	NP_006043	Coding	chr21:37267532 minus strand	1562345
DSCR4	NM_005867	NP_005858	Coding	chr21:38121360 minus strand	1562346

【１３１６】

DYRK1A	NM_001396	NP_001387	Coding	chr21:37420299 plus strand	1562347
DYRK1A	NM_101395	NP_567824	Coding	chr21:37367556 plus strand	1562348
DYRK1A	NM_130436	NP_569120	Coding	chr21:37418904 plus strand	1562349
DYRK1A	NM_130438	NP_569122	Coding	chr21:37420298 plus strand	1562350
ERG	NM_001136154	NP_001129626	Coding	chr21:38661780 minus strand	1562351
ERG	NM_001136155	NP_001129627	Coding	chr21:38498504 minus strand	1562352
ERG	NM_001243428	NP_001230357	Coding	chr21:38660667 minus strand	1562353
ERG	NM_001243429	NP_001230358	Coding	chr21:38584945 minus strand	1562354
ERG	NM_001243432	NP_001230361	Coding	chr21:38661780 minus strand	1562351
ERG	NM_001291391	NP_001278320	Coding	chr21:38661780 minus strand	1562351
ERG	NM_004449	NP_004440	Coding	chr21:38661780 minus strand	1562351
ERG	NM_182918	NP_891548	Coding	chr21:38498504 minus strand	1562352
ETS2	NM_001256295	NP_001243224	Coding	chr21:38805306 plus strand	1562355
ETS2	NM_005239	NP_005230	Coding	chr21:38805830 plus strand	1562356
EVA1C	NM_001286556	NP_001273485	Coding	chr21:32412436 plus strand	1562357
EVA1C	NM_058187	NP_478067	Coding	chr21:32412436 plus strand	1562357
FAM207A	NM_058190	NP_478070	Coding	chr21:44940039 plus strand	1562358
FAM3B	NM_058186	NP_478066	Coding	chr21:41316733 plus strand	1562359
FAM3B	NM_206964	NP_996847	Coding	chr21:41316733 plus strand	1562359
FTCD	NM_006657	NP_006648	Coding	chr21:46155567 minus strand	1562360
FTCD	NM_206965	NP_996848	Coding	chr21:46155567 minus strand	1562360
GABPA	NM_001197297	NP_001184226	Coding	chr21:25734946 plus strand	1562361
GABPA	NM_002040	NP_002031	Coding	chr21:25735017 plus strand	1562362
GART	NM_000819	NP_000810	Coding	chr21:33542158 minus strand	1562363
GART	NM_001136005	NP_001129477	Coding	chr21:33542889 minus strand	1562364
GART	NM_001136006	NP_001129478	Coding	chr21:33542892 minus strand	1562365
GART	NM_175085	NP_780294	Coding	chr21:33542158 minus strand	1562363

【１３１７】

GRIK1	NM_000830	NP_000821	Coding	chr21:29939964 minus strand	1562366
GRIK1	NM_175611	NP_783300	Coding	chr21:29939964 minus strand	1562366
HLCS	NM_000411	NP_000402	Coding	chr21:36990245 minus strand	1562367
HLCS	NM_001242784	NP_001229713	Coding	chr21:36966656 minus strand	1562368
HLCS	NM_001242785	NP_001229714	Coding	chr21:36980964 minus strand	1562369
HMGN1	NM_004965	NP_004956	Coding	chr21:39349121 minus strand	1562370
HSF2BP	NM_007031	NP_008962	Coding	chr21:43659493 minus strand	1562371
HSPA13	NM_006948	NP_008879	Coding	chr21:14383188 minus strand	1562372
HUNK	NM_014586	NP_055401	Coding	chr21:31873314 plus strand	1562373
ICOSLG	NM_001283050	NP_001269979	Coding	chr21:44241004 minus strand	1562374
ICOSLG	NM_001283050	NP_001269979	Coding	chr21:5022492 plus strand	1562375
ICOSLG	NM_001283051	NP_001269980	Coding	chr21:44241004 minus strand	1562374
ICOSLG	NM_001283052	NP_001269981	Coding	chr21:44241004 minus strand	1562374
ICOSLG	NM_001283052	NP_001269981	Coding	chr21:5022492 plus strand	1562375
ICOSLG	NM_015259	NP_056074	Coding	chr21:44241004 minus strand	1562374
ICOSLG	NM_015259	NP_056074	Coding	chr21:5022492 plus strand	1562375
IFNAR1	NM_000629	NP_000620	Coding	chr21:33324908 plus strand	1562376
IFNAR2	NM_000874	NP_000865	Coding	chr21:33229894 plus strand	1562377
IFNAR2	NM_001289125	NP_001276054	Coding	chr21:33229894 plus strand	1562377
IFNAR2	NM_001289126	NP_001276055	Coding	chr21:33229894 plus strand	1562377
IFNAR2	NM_001289128	NP_001276057	Coding	chr21:33229894 plus strand	1562377
IFNAR2	NM_207584	NP_997467	Coding	chr21:33229894 plus strand	1562377
IFNAR2	NM_207585	NP_997468	Coding	chr21:33229894 plus strand	1562377
IFNGR2	NM_005534	NP_005525	Coding	chr21:33402895 plus strand	1562378
IGSF5	NM_001080444	NP_001073913	Coding	chr21:39745406 plus strand	1562379
IL10RB	NM_000628	NP_000619	Coding	chr21:33266359 plus strand	1562380
ITGB2	NM_000211	NP_000202	Coding	chr21:44921050 minus strand	1562381
ITGB2	NM_001127491	NP_001120963	Coding	chr21:44928838 minus strand	1562382

【１３１８】

ITSN1	NM_001001132	NP_001001132	Coding	chr21:33642477 plus strand	1562383
ITSN1	NM_003024	NP_003015	Coding	chr21:33642477 plus strand	1562383
JAM2	NM_001270407	NP_001257336	Coding	chr21:25639281 plus strand	1562384
JAM2	NM_001270408	NP_001257337	Coding	chr21:25639281 plus strand	1562384
JAM2	NM_021219	NP_067042	Coding	chr21:25639281 plus strand	1562384
KCNE1	NM_000219	NP_000210	Coding	chr21:34512275 minus strand	1562385
KCNE1	NM_001127668	NP_001121140	Coding	chr21:34459604 minus strand	1562386
KCNE1	NM_001127669	NP_001121141	Coding	chr21:34459604 minus strand	1562386
KCNE1	NM_001127670	NP_001121142	Coding	chr21:34455809 minus strand	1562387
KCNE1	NM_001270402	NP_001257331	Coding	chr21:34511339 minus strand	1562388
KCNE1	NM_001270403	NP_001257332	Coding	chr21:34511315 minus strand	1562389
KCNE1	NM_001270404	NP_001257333	Coding	chr21:34511339 minus strand	1562388
KCNE1	NM_001270405	NP_001257334	Coding	chr21:34459938 minus strand	1562390
KCNE2	NM_172201	NP_751951	Coding	chr21:34364023 plus strand	1562391
KCNJ15	NM_001276435	NP_001263364	Coding	chr21:38256697 plus strand	1562392
KCNJ15	NM_001276436	NP_001263365	Coding	chr21:38256697 plus strand	1562392
KCNJ15	NM_001276437	NP_001263366	Coding	chr21:38229914 plus strand	1562393
KCNJ15	NM_001276438	NP_001263367	Coding	chr21:38229914 plus strand	1562393
KCNJ15	NM_001276439	NP_001263368	Coding	chr21:38229914 plus strand	1562393
KCNJ15	NM_002243	NP_002234	Coding	chr21:38256697 plus strand	1562392
KCNJ15	NM_170736	NP_733932	Coding	chr21:38256803 plus strand	1562394
KCNJ15	NM_170737	NP_733933	Coding	chr21:38272419 plus strand	1562395
KCNJ6	NM_002240	NP_002231	Coding	chr21:37916438 minus strand	1562396
KRTAP10-1	NM_198691	NP_941964	Coding	chr21:44540195 minus strand	1562397
KRTAP10-10	NM_181688	NP_859016	Coding	chr21:44637355 plus strand	1562398
KRTAP10-11	NM_198692	NP_941965	Coding	chr21:44646413 plus strand	1562399
KRTAP10-12	NM_198699	NP_941972	Coding	chr21:44697171 plus strand	1562400

【１３１９】

KRTAP10-2	NM_198693	NP_941966	Coding	chr21:44551505 minus strand	1562401
KRTAP10-3	NM_198696	NP_941969	Coding	chr21:44558760 minus strand	1562402
KRTAP10-4	NM_198687	NP_941960	Coding	chr21:44573728 plus strand	1562403
KRTAP10-5	NM_198694	NP_941967	Coding	chr21:44580604 minus strand	1562404
KRTAP10-6	NM_198688	NP_941961	Coding	chr21:44592505 minus strand	1562405
KRTAP10-7	NM_198689	NP_941962	Coding	chr21:44600596 plus strand	1562406
KRTAP10-8	NM_198695	NP_941968	Coding	chr21:44612078 plus strand	1562407
KRTAP10-9	NM_198690	NP_941963	Coding	chr21:44627122 plus strand	1562408
KRTAP11-1	NM_175858	NP_787054	Coding	chr21:30881555 minus strand	1562409
KRTAP12-1	NM_181686	NP_859014	Coding	chr21:44682163 minus strand	1562410
KRTAP12-2	NM_181684	NP_859012	Coding	chr21:44666927 minus strand	1562411
KRTAP12-3	NM_198697	NP_941970	Coding	chr21:44657931 plus strand	1562412
KRTAP12-4	NM_198698	NP_941971	Coding	chr21:44654659 minus strand	1562413
KRTAP13-1	NM_181599	NP_853630	Coding	chr21:30396073 plus strand	1562414
KRTAP13-2	NM_181621	NP_853652	Coding	chr21:30372239 minus strand	1562415
KRTAP13-3	NM_181622	NP_853653	Coding	chr21:30425912 minus strand	1562416
KRTAP13-4	NM_181600	NP_853631	Coding	chr21:30430275 plus strand	1562417
KRTAP15-1	NM_181623	NP_853654	Coding	chr21:30440327 plus strand	1562418
KRTAP19-1	NM_181607	NP_853638	Coding	chr21:30480317 minus strand	1562419
KRTAP19-2	NM_181608	NP_853639	Coding	chr21:30487348 minus strand	1562420
KRTAP19-3	NM_181609	NP_853640	Coding	chr21:30491957 minus strand	1562421
KRTAP19-4	NM_181610	NP_853641	Coding	chr21:30497110 minus strand	1562422
KRTAP19-5	NM_181611	NP_853642	Coding	chr21:30502090 minus strand	1562423
KRTAP19-6	NM_181612	NP_853643	Coding	chr21:30541862 minus strand	1562424
KRTAP19-7	NM_181614	NP_853645	Coding	chr21:30561289 minus strand	1562425
KRTAP19-8	NM_001099219	NP_001092689	Coding	chr21:31038476 minus strand	1562426
KRTAP20-1	NM_181615	NP_853646	Coding	chr21:30616454 plus strand	1562427

【１３２０】

KRTAP20-2	NM_181616	NP_853647	Coding	chr21:30635263 plus strand	1562428
KRTAP20-3	NM_001128077	NP_001121549	Coding	chr21:30642863 plus strand	1562429
KRTAP21-1	NM_181619	NP_853650	Coding	chr21:30755378 minus strand	1562430
KRTAP21-2	NM_181617	NP_853648	Coding	chr21:30747202 minus strand	1562431
KRTAP21-3	NM_001164435	NP_001157907	Coding	chr21:30718777 minus strand	1562432
KRTAP22-1	NM_181620	NP_853651	Coding	chr21:30601120 plus strand	1562433
KRTAP22-2	NM_001164434	NP_001157906	Coding	chr21:30590397 minus strand	1562434
KRTAP23-1	NM_181624	NP_853655	Coding	chr21:30348606 minus strand	1562435
KRTAP24-1	NM_001085455	NP_001078924	Coding	chr21:30282958 minus strand	1562436
KRTAP25-1	NM_001128598	NP_001122070	Coding	chr21:30289514 minus strand	1562437
KRTAP26-1	NM_203405	NP_981950	Coding	chr21:30320289 minus strand	1562438
KRTAP27-1	NM_001077711	NP_001071179	Coding	chr21:30337694 minus strand	1562439
KRTAP6-1	NM_181602	NP_853633	Coding	chr21:30613904 minus strand	1562440
KRTAP6-2	NM_181604	NP_853635	Coding	chr21:30598874 minus strand	1562441
KRTAP6-3	NM_181605	NP_853636	Coding	chr21:30592439 plus strand	1562442
KRTAP7-1	NM_181606	NP_853637	Coding	chr21:30829732 minus strand	1562443
KRTAP8-1	NM_175857	NP_787053	Coding	chr21:30813252 minus strand	1562444
LCA5L	NM_152505	NP_689718	Coding	chr21:39444202 minus strand	1562445
LIPI	NM_001302998	NP_001289927	Coding	chr21:14210891 minus strand	1562446
LIPI	NM_001302999	NP_001289928	Coding	chr21:14210891 minus strand	1562446
LIPI	NM_001303000	NP_001289929	Coding	chr21:14210891 minus strand	1562446
LIPI	NM_001303001	NP_001289930	Coding	chr21:14210891 minus strand	1562446
LIPI	NM_198996	NP_945347	Coding	chr21:14206949 minus strand	1562447
LOC388813	NM_001256579	NP_001243508	Coding	chr21:14643107 minus strand	1562448
LOC400863	NM_001288961	NP_001275890	Coding	chr21:33948925 plus strand	1562449
LRRC3	NM_030891	NP_112153	Coding	chr21:44455509 plus strand	1562450
LSS	NM_001001438	NP_001001438	Coding	chr21:46228824 minus strand	1562451

【１３２１】

LSS	NM_001145436	NP_001138908	Coding	chr21:46228824 minus strand	1562451
LSS	NM_001145437	NP_001138909	Coding	chr21:46228824 minus strand	1562451
LSS	NM_002340	NP_002331	Coding	chr21:46228824 minus strand	1562451
LTN1	NM_015565	NP_056380	Coding	chr21:28992956 minus strand	1562452
MAP3K7CL	NM_001286617	NP_001273546	Coding	chr21:29077470 plus strand	1562453
MAP3K7CL	NM_001286618	NP_001273547	Coding	chr21:29077470 plus strand	1562453
MAP3K7CL	NM_001286619	NP_001273548	Coding	chr21:29092253 plus strand	1562454
MAP3K7CL	NM_001286620	NP_001273549	Coding	chr21:29130484 plus strand	1562455
MAP3K7CL	NM_001286622	NP_001273551	Coding	chr21:29077470 plus strand	1562453
MAP3K7CL	NM_001286623	NP_001273552	Coding	chr21:29077470 plus strand	1562453
MAP3K7CL	NM_001286624	NP_001273553	Coding	chr21:29145558 plus strand	1562456
MAP3K7CL	NM_001286634	NP_001273563	Coding	chr21:29077470 plus strand	1562453
MAP3K7CL	NM_020152	NP_064537	Coding	chr21:29077470 plus strand	1562453
MCM3AP	NM_003906	NP_003897	Coding	chr21:46285394 minus strand	1562457
MIS18A	NM_018944	NP_061817	Coding	chr21:32279065 minus strand	1562458
MORC3	NM_015358	NP_056173	Coding	chr21:36320188 plus strand	1562459
MRAP	NM_001285394	NP_001272323	Coding	chr21:32291812 plus strand	1562460
MRAP	NM_178817	NP_848932	Coding	chr21:32291812 plus strand	1562460
MRAP	NM_206898	NP_996781	Coding	chr21:32291812 plus strand	1562460
MRPL39	NM_017446	NP_059142	Coding	chr21:25607489 minus strand	1562461
MRPL39	NM_080794	NP_542984	Coding	chr21:25607489 minus strand	1562461
MRPS6	NM_032476	NP_115865	Coding	chr21:34073522 plus strand	1562462
MX1	NM_001144925	NP_001138397	Coding	chr21:41420557 plus strand	1562463
MX1	NM_001178046	NP_001171517	Coding	chr21:41426030 plus strand	1562464
MX1	NM_001282920	NP_001269849	Coding	chr21:41432049 plus strand	1562465
MX1	NM_002462	NP_002453	Coding	chr21:41426030 plus strand	1562464
MX2	NM_002463	NP_002454	Coding	chr21:41362022 plus strand	1562466

【１３２２】

N6AMT1	NM_013240	NP_037372	Coding	chr21:28885373 minus strand	1562467
N6AMT1	NM_182749	NP_877426	Coding	chr21:28885373 minus strand	1562467
NCAM2	NM_004540	NP_004531	Coding	chr21:20998314 plus strand	1562468
NDUFV3	NM_001001503	NP_001001503	Coding	chr21:42893267 plus strand	1562469
NDUFV3	NM_021075	NP_066553	Coding	chr21:42893267 plus strand	1562469
NRIP1	NM_003489	NP_003480	Coding	chr21:15064805 minus strand	1562470
OLIG1	NM_138983	NP_620450	Coding	chr21:33070143 plus strand	1562471
OLIG2	NM_005806	NP_005797	Coding	chr21:33025907 plus strand	1562472
PAXBP1	NM_013329	NP_037461	Coding	chr21:32771858 minus strand	1562473
PAXBP1	NM_016631	NP_057715	Coding	chr21:32771858 minus strand	1562473
PCBP3	NM_001130141	NP_001123613	Coding	chr21:45849960 plus strand	1562474
PCBP3	NM_020528	NP_065389	Coding	chr21:45849960 plus strand	1562474
PCNT	NM_006031	NP_006022	Coding	chr21:46324121 plus strand	1562475
PCP4	NM_006198	NP_006189	Coding	chr21:39867420 plus strand	1562476
PDE9A	NM_001001567	NP_001001567	Coding	chr21:42653751 plus strand	1562477
PDE9A	NM_001001568	NP_001001568	Coding	chr21:42653751 plus strand	1562477
PDE9A	NM_001001569	NP_001001569	Coding	chr21:42653751 plus strand	1562477
PDE9A	NM_001001570	NP_001001570	Coding	chr21:42653751 plus strand	1562477
PDE9A	NM_001001571	NP_001001571	Coding	chr21:42653751 plus strand	1562477
PDE9A	NM_001001572	NP_001001572	Coding	chr21:42653751 plus strand	1562477
PDE9A	NM_001001573	NP_001001573	Coding	chr21:42653751 plus strand	1562477
PDE9A	NM_001001574	NP_001001574	Coding	chr21:42653751 plus strand	1562477
PDE9A	NM_001001575	NP_001001575	Coding	chr21:42653751 plus strand	1562477
PDE9A	NM_001001576	NP_001001576	Coding	chr21:42653751 plus strand	1562477
PDE9A	NM_001001577	NP_001001577	Coding	chr21:42653751 plus strand	1562477
PDE9A	NM_001001578	NP_001001578	Coding	chr21:42653751 plus strand	1562477
PDE9A	NM_001001579	NP_001001579	Coding	chr21:42653751 plus strand	1562477

【１３２３】

PDE9A	NM_001001580	NP_001001580	Coding	chr21:42653751 plus strand	1562477
PDE9A	NM_001001581	NP_001001581	Coding	chr21:42653751 plus strand	1562477
PDE9A	NM_001001582	NP_001001582	Coding	chr21:42653751 plus strand	1562477
PDE9A	NM_001001583	NP_001001583	Coding	chr21:42653751 plus strand	1562477
PDE9A	NM_001001584	NP_001001584	Coding	chr21:42653751 plus strand	1562477
PDE9A	NM_001001585	NP_001001585	Coding	chr21:42653751 plus strand	1562477
PDE9A	NM_002606	NP_002597	Coding	chr21:42653751 plus strand	1562477
PDXK	NM_003681	NP_003672	Coding	chr21:43719096 plus strand	1562478
PFKL	NM_001002021	NP_001002021	Coding	chr21:44300033 plus strand	1562479
PFKL	NM_002626	NP_002617	Coding	chr21:44300033 plus strand	1562479
PIGP	NM_153681	NP_710148	Coding	chr21:37072803 minus strand	1562480
PIGP	NM_153682	NP_710149	Coding	chr21:37073158 minus strand	1562481
PKNOX1	NM_001286258	NP_001273187	Coding	chr21:42974509 plus strand	1562482
PKNOX1	NM_004571	NP_004562	Coding	chr21:42974509 plus strand	1562482
PLAC4	NM_182832	NP_878252	Coding	chr21:41185239 minus strand	1562483
POFUT2	NM_015227	NP_056042	Coding	chr21:45287896 minus strand	1562484
POFUT2	NM_133635	NP_598368	Coding	chr21:45287896 minus strand	1562484
POTED	NM_174981	NP_778146	Coding	chr21:13610176 plus strand	1562485
PRDM15	NM_001040424	NP_001035514	Coding	chr21:41879482 minus strand	1562486
PRDM15	NM_001282934	NP_001269863	Coding	chr21:41879482 minus strand	1562486
PRDM15	NM_022115	NP_071398	Coding	chr21:41879482 minus strand	1562486
PRMT2	NM_001242864	NP_001229793	Coding	chr21:46635594 plus strand	1562487
PRMT2	NM_001242865	NP_001229794	Coding	chr21:46635594 plus strand	1562487
PRMT2	NM_001242866	NP_001229795	Coding	chr21:46635594 plus strand	1562487
PRMT2	NM_001286676	NP_001273605	Coding	chr21:46635594 plus strand	1562487
PRMT2	NM_001286677	NP_001273606	Coding	chr21:46635594 plus strand	1562487
PRMT2	NM_001286678	NP_001273607	Coding	chr21:46635594 plus strand	1562487

【１３２４】

PRMT2	NM_001535	NP_001526	Coding	chr21:46635594 plus strand	1562487
PRMT2	NM_206962	NP_996845	Coding	chr21:46635594 plus strand	1562487
PSMG1	NM_001261824	NP_001248753	Coding	chr21:39183514 minus strand	1562488
PSMG1	NM_003720	NP_003711	Coding	chr21:39183514 minus strand	1562488
PSMG1	NM_203433	NP_982257	Coding	chr21:39183514 minus strand	1562488
PTTG1IP	NM_001286822	NP_001273751	Coding	chr21:44873903 minus strand	1562489
PTTG1IP	NM_004339	NP_004330	Coding	chr21:44873903 minus strand	1562489
PWP2	NM_005049	NP_005040	Coding	chr21:44107326 plus strand	1562490
PWP2	NM_005049	NP_005040	Coding	chr21:5154730 minus strand	1562491
RBM11	NM_144770	NP_658983	Coding	chr21:14216144 plus strand	1562492
RCAN1	NM_001285389	NP_001272318	Coding	chr21:34613843 minus strand	1562493
RCAN1	NM_001285391	NP_001272320	Coding	chr21:34525467 minus strand	1562494
RCAN1	NM_001285392	NP_001272321	Coding	chr21:34525467 minus strand	1562494
RCAN1	NM_001285393	NP_001272322	Coding	chr21:34524637 minus strand	1562495
RCAN1	NM_004414	NP_004405	Coding	chr21:34615142 minus strand	1562496
RCAN1	NM_203417	NP_981962	Coding	chr21:34614446 minus strand	1562497
RCAN1	NM_203418	NP_981963	Coding	chr21:34527010 minus strand	1562498
RIPK4	NM_020639	NP_065690	Coding	chr21:41767089 minus strand	1562499
RIPPLY3	NM_018962	NP_061835	Coding	chr21:37006562 plus strand	1562500
RRP1	NM_003683	NP_003674	Coding	chr21:43789536 plus strand	1562501
RRP1B	NM_015056	NP_055871	Coding	chr21:43659550 plus strand	1562502
RSPH1	NM_001286506	NP_001273435	Coding	chr21:42496354 minus strand	1562503
RSPH1	NM_080860	NP_543136	Coding	chr21:42496354 minus strand	1562503
RUNX1	NM_001001890	NP_001001890	Coding	chr21:34888690 minus strand	1562504
RUNX1	NM_001122607	NP_001116079	Coding	chr21:34888690 minus strand	1562504
RUNX1	NM_001754	NP_001745	Coding	chr21:35049298 minus strand	1562505
RWDD2B	NM_016940	NP_058636	Coding	chr21:29019364 minus strand	1562506

【１３２５】

S100B	NM_006272	NP_006263	Coding	chr21:46605122 minus strand	1562507
SAMSN1	NM_001256370	NP_001243299	Coding	chr21:14583402 minus strand	1562508
SAMSN1	NM_001286523	NP_001273452	Coding	chr21:14546360 minus strand	1562509
SAMSN1	NM_022136	NP_071419	Coding	chr21:14546360 minus strand	1562509
SCAF4	NM_001145444	NP_001138916	Coding	chr21:31732118 minus strand	1562510
SCAF4	NM_001145445	NP_001138917	Coding	chr21:31732118 minus strand	1562510
SCAF4	NM_020706	NP_065757	Coding	chr21:31732118 minus strand	1562510
SETD4	NM_001007259	NP_001007260	Coding	chr21:36060364 minus strand	1562511
SETD4	NM_001007261	NP_001007262	Coding	chr21:36060364 minus strand	1562511
SETD4	NM_001286752	NP_001273681	Coding	chr21:36060818 minus strand	1562512
SETD4	NM_017438	NP_059134	Coding	chr21:36060818 minus strand	1562512
SH3BGR	NM_001001713	NP_001001713	Coding	chr21:39445870 plus strand	1562513
SH3BGR	NM_007341	NP_031367	Coding	chr21:39451853 plus strand	1562514
SIK1	NM_173354	NP_775490	Coding	chr21:43427122 minus strand	1562515
SIK1	NM_173354	NP_775490	Coding	chr21:6111139 plus strand	1562516
SIM2	NM_005069	NP_005060	Coding	chr21:36699132 plus strand	1562517
SIM2	NM_009586	NP_033664	Coding	chr21:36699132 plus strand	1562517
SLC19A1	NM_001205206	NP_001192135	Coding	chr21:45542471 minus strand	1562518
SLC19A1	NM_001205207	NP_001192136	Coding	chr21:45534628 minus strand	1562519
SLC19A1	NM_194255	NP_919231	Coding	chr21:45542471 minus strand	1562518
SLC37A1	NM_018964	NP_061837	Coding	chr21:42499631 plus strand	1562520
SLC5A3	NM_006933	NP_008864	Coding	chr21:34073522 plus strand	1562521
SMIM11	NM_058182	NP_478062	Coding	chr21:34375449 plus strand	1562522
SMIM11	NM_058182	NP_478062	Coding	chr21:7744920 plus strand	1562523
SOD1	NM_000454	NP_000445	Coding	chr21:31659621 plus strand	1562524
SON	NM_001291411	NP_001278340	Coding	chr21:33543037 plus strand	1562525
SON	NM_001291412	NP_001278341	Coding	chr21:33543037 plus strand	1562525
SON	NM_032195	NP_115571	Coding	chr21:33543037 plus strand	1562525

【１３２６】

SON	NM_138927	NP_620305	Coding	chr21:33543037 plus strand	1562525
SPATC1L	NM_001142854	NP_001136326	Coding	chr21:46184459 minus strand	1562526
SPATC1L	NM_032261	NP_115637	Coding	chr21:46184459 minus strand	1562526
SUMO3	NM_001286416	NP_001273345	Coding	chr21:44818129 minus strand	1562527
SUMO3	NM_006936	NP_008867	Coding	chr21:44818129 minus strand	1562527
SYNJ1	NM_001160302	NP_001153774	Coding	chr21:32727939 minus strand	1562528
SYNJ1	NM_001160306	NP_001153778	Coding	chr21:32727939 minus strand	1562528
SYNJ1	NM_003895	NP_003886	Coding	chr21:32728040 minus strand	1562529
SYNJ1	NM_203446	NP_982271	Coding	chr21:32728040 minus strand	1562529
TCP10L	NM_144659	NP_653260	Coding	chr21:32585535 minus strand	1562530
TFF1	NM_003225	NP_003216	Coding	chr21:42366535 minus strand	1562531
TFF2	NM_005423	NP_005414	Coding	chr21:42351099 minus strand	1562532
TFF3	NM_003226	NP_003217	Coding	chr21:42315596 minus strand	1562533
TIAM1	NM_003253	NP_003244	Coding	chr21:31558977 minus strand	1562534
TMEM50B	NM_006134	NP_006125	Coding	chr21:33480009 minus strand	1562535
TMPRSS15	NM_002772	NP_002763	Coding	chr21:18403653 minus strand	1562536
TMPRSS2	NM_001135099	NP_001128571	Coding	chr21:41508065 minus strand	1562537
TMPRSS2	NM_005656	NP_005647	Coding	chr21:41508158 minus strand	1562538
TMPRSS3	NM_001256317	NP_001243246	Coding	chr21:42396091 minus strand	1562539
TMPRSS3	NM_024022	NP_076927	Coding	chr21:42396091 minus strand	1562539
TMPRSS3	NM_032404	NP_115780	Coding	chr21:42389149 minus strand	1562540
TMPRSS3	NM_032405	NP_115781	Coding	chr21:42396091 minus strand	1562539
TPTE	NM_001290224	NP_001277153	Coding	chr21:10521513 plus strand	1562541
TPTE	NM_199259	NP_954868	Coding	chr21:10521513 plus strand	1562541
TPTE	NM_199260	NP_954869	Coding	chr21:10521513 plus strand	1562541
TPTE	NM_199261	NP_954870	Coding	chr21:10521513 plus strand	1562541
TRAPPC10	NM_003274	NP_003265	Coding	chr21:44012324 plus strand	1562542

【１３２７】

TRPM2	NM_003307	NP_003298	Coding	chr21:44353600 plus strand	1562543
TSPEAR	NM_001272037	NP_001258966	Coding	chr21:44711580 minus strand	1562544
TSPEAR	NM_144991	NP_659428	Coding	chr21:44711580 minus strand	1562544
TTC3	NM_001001894	NP_001001894	Coding	chr21:37073270 plus strand	1562545
TTC3	NM_003316	NP_003307	Coding	chr21:37082946 plus strand	1562546
U2AF1	NM_001025203	NP_001020374	Coding	chr21:43107578 minus strand	1562547
U2AF1	NM_001025203	NP_001020374	Coding	chr21:6499256 minus strand	1562548
U2AF1	NM_001025204	NP_001020375	Coding	chr21:43107578 minus strand	1562547
U2AF1	NM_001025204	NP_001020375	Coding	chr21:6499256 minus strand	1562548
U2AF1	NM_006758	NP_006749	Coding	chr21:43107578 minus strand	1562547
U2AF1	NM_006758	NP_006749	Coding	chr21:6499256 minus strand	1562548
UBASH3A	NM_001001895	NP_001001895	Coding	chr21:42403861 plus strand	1562549
UBASH3A	NM_001243467	NP_001230396	Coding	chr21:42403861 plus strand	1562549
UBASH3A	NM_018961	NP_061834	Coding	chr21:42403861 plus strand	1562549
UBE2G2	NM_001202489	NP_001189418	Coding	chr21:44801836 minus strand	1562550
UBE2G2	NM_003343	NP_003334	Coding	chr21:44801836 minus strand	1562550
UBE2G2	NM_182688	NP_872630	Coding	chr21:44801836 minus strand	1562550
UMODL1	NM_001004416	NP_001004416	Coding	chr21:42071316 plus strand	1562551
UMODL1	NM_001199527	NP_001186456	Coding	chr21:42062958 plus strand	1562552
UMODL1	NM_001199528	NP_001186457	Coding	chr21:42062958 plus strand	1562552
UMODL1	NM_173568	NP_775839	Coding	chr21:42071316 plus strand	1562551
URB1	NM_014825	NP_055640	Coding	chr21:32393003 minus strand	1562553
USP16	NM_001001992	NP_001001992	Coding	chr21:29024616 plus strand	1562554
USP16	NM_001032410	NP_001027582	Coding	chr21:29024616 plus strand	1562554
USP16	NM_006447	NP_006438	Coding	chr21:29024616 plus strand	1562554
USP25	NM_001283041	NP_001269970	Coding	chr21:15730024 plus strand	1562555
USP25	NM_001283042	NP_001269971	Coding	chr21:15730024 plus strand	1562555

【１３２８】

USP25	NM_013396	NP_037528	Coding	chr21:15730024 plus strand	1562555
WDR4	NM_001260474	NP_001247403	Coding	chr21:42879583 minus strand	1562556
WDR4	NM_001260475	NP_001247404	Coding	chr21:42879583 minus strand	1562556
WDR4	NM_001260476	NP_001247405	Coding	chr21:42879589 minus strand	1562557
WDR4	NM_001260477	NP_001247406	Coding	chr21:42879275 minus strand	1562558
WDR4	NM_018669	NP_061139	Coding	chr21:42879583 minus strand	1562556
WDR4	NM_033661	NP_387510	Coding	chr21:42879583 minus strand	1562556
WRB	NM_001146218	NP_001139690	Coding	chr21:39387765 plus strand	1562559
WRB	NM_004627	NP_004618	Coding	chr21:39380286 plus strand	1562560
YBEY	NM_001006114	NP_001006114	Coding	chr21:46286352 plus strand	1562561
YBEY	NM_058181	NP_478061	Coding	chr21:46286352 plus strand	1562561
ZBTB21	NM_001098402	NP_001091872	Coding	chr21:42010387 minus strand	1562562
ZBTB21	NM_001098403	NP_001091873	Coding	chr21:42010387 minus strand	1562562
ZBTB21	NM_020727	NP_065778	Coding	chr21:42010387 minus strand	1562562
A4GALT	NM_017436	NP_059132	Coding	chr22:42720870 minus strand	1562563
ACO2	NM_001098	NP_001089	Coding	chr22:41469124 plus strand	1562564
ACR	NM_001097	NP_001088	Coding	chr22:50738223 plus strand	1562565
ADM2	NM_001253845	NP_001240774	Coding	chr22:50481723 plus strand	1562566
ADM2	NM_024866	NP_079142	Coding	chr22:50481555 plus strand	1562567
ADORA2A	NM_000675	NP_000666	Coding	chr22:24427561 plus strand	1562568
ADORA2A	NM_001278497	NP_001265426	Coding	chr22:24432118 plus strand	1562569
ADORA2A	NM_001278498	NP_001265427	Coding	chr22:24432118 plus strand	1562569
ADORA2A	NM_001278499	NP_001265428	Coding	chr22:24427561 plus strand	1562568
ADORA2A	NM_001278500	NP_001265429	Coding	chr22:24423596 plus strand	1562570
ADRBK2	NM_005160	NP_005151	Coding	chr22:25564893 plus strand	1562571
ADSL	NM_000026	NP_000017	Coding	chr22:40346499 plus strand	1562572
ADSL	NM_001123378	NP_001116850	Coding	chr22:40346499 plus strand	1562572

【１３２９】

AIFM3	NM_001018060	NP_001018070	Coding	chr22:20965129 plus strand	1562573
AIFM3	NM_001146288	NP_001139760	Coding	chr22:20967158 plus strand	1562574
AIFM3	NM_144704	NP_653305	Coding	chr22:20965129 plus strand	1562573
ALG12	NM_024105	NP_077010	Coding	chr22:49918458 minus strand	1562575
ANKRD54	NM_138797	NP_620152	Coding	chr22:37844346 minus strand	1562576
AP1B1	NM_001127	NP_001118	Coding	chr22:29388583 minus strand	1562577
AP1B1	NM_001166019	NP_001159491	Coding	chr22:29388583 minus strand	1562577
AP1B1	NM_145730	NP_663782	Coding	chr22:29388583 minus strand	1562577
APOBEC3A	NM_001270406	NP_001257335	Coding	chr22:38957521 plus strand	1562578
APOBEC3A	NM_145699	NP_663745	Coding	chr22:38957521 plus strand	1562578
APOBEC3A_B	NM_001193289	NP_001180218	Coding	chr22:38957521 plus strand	1562579
APOBEC3B	NM_001270411	NP_001257340	Coding	chr22:38982398 plus strand	1562580
APOBEC3B	NM_004900	NP_004891	Coding	chr22:38982398 plus strand	1562580
APOBEC3C	NM_014508	NP_055323	Coding	chr22:39014259 plus strand	1562581
APOBEC3D	NM_152426	NP_689639	Coding	chr22:39021112 plus strand	1562582
APOBEC3F	NM_001006666	NP_001006667	Coding	chr22:39040667 plus strand	1562583
APOBEC3F	NM_145298	NP_660341	Coding	chr22:39040667 plus strand	1562583
APOBEC3G	NM_021822	NP_068594	Coding	chr22:39077004 plus strand	1562584
APOBEC3H	NM_001166002	NP_001159474	Coding	chr22:39097223 plus strand	1562585
APOBEC3H	NM_001166003	NP_001159475	Coding	chr22:39097223 plus strand	1562585
APOBEC3H	NM_001166004	NP_001159476	Coding	chr22:39097223 plus strand	1562585
APOBEC3H	NM_181773	NP_861438	Coding	chr22:39097223 plus strand	1562585
APOL1	NM_001136540	NP_001130012	Coding	chr22:36253070 plus strand	1562586
APOL1	NM_001136541	NP_001130013	Coding	chr22:36253070 plus strand	1562586
APOL1	NM_003661	NP_003652	Coding	chr22:36253070 plus strand	1562586
APOL1	NM_145343	NP_663318	Coding	chr22:36253070 plus strand	1562586
APOL2	NM_030882	NP_112092	Coding	chr22:36239643 minus strand	1562587

【１３３０】

APOL2	NM_145637	NP_663612	Coding	chr22:36239954 minus strand	1562588
APOL3	NM_145640	NP_663615	Coding	chr22:36160929 minus strand	1562589
APOL3	NM_145641	NP_663616	Coding	chr22:36166177 minus strand	1562590
APOL3	NM_145642	NP_663617	Coding	chr22:36166177 minus strand	1562590
APOL4	NM_030643	NP_085146	Coding	chr22:36204833 minus strand	1562591
APOL4	NM_145660	NP_663693	Coding	chr22:36204833 minus strand	1562591
APOL5	NM_030642	NP_085145	Coding	chr22:35717871 plus strand	1562592
APOL6	NM_030641	NP_085144	Coding	chr22:35648376 plus strand	1562593
ARFGAP3	NM_001142293	NP_001135765	Coding	chr22:42857402 minus strand	1562594
ARFGAP3	NM_014570	NP_055385	Coding	chr22:42857402 minus strand	1562594
ARHGAP8	NM_001017526	NP_001017526	Coding	chr22:44752557 plus strand	1562595
ARHGAP8	NM_001198726	NP_001185655	Coding	chr22:44752557 plus strand	1562595
ARHGAP8	NM_181335	NP_851852	Coding	chr22:44752557 plus strand	1562595
ARSA	NM_000487	NP_000478	Coding	chr22:50628173 minus strand	1562596
ARSA	NM_001085425	NP_001078894	Coding	chr22:50628173 minus strand	1562596
ARSA	NM_001085426	NP_001078895	Coding	chr22:50628173 minus strand	1562596
ARSA	NM_001085427	NP_001078896	Coding	chr22:50628173 minus strand	1562596
ARSA	NM_001085428	NP_001078897	Coding	chr22:50628173 minus strand	1562596
ARVCF	NM_001670	NP_001661	Coding	chr22:20016786 minus strand	1562597
ASCC2	NM_001242906	NP_001229835	Coding	chr22:29838304 minus strand	1562598
ASCC2	NM_032204	NP_115580	Coding	chr22:29838304 minus strand	1562598
ASPHD2	NM_020437	NP_065170	Coding	chr22:26429313 plus strand	1562599
ATF4	NM_001675	NP_001666	Coding	chr22:39520558 plus strand	1562600
ATF4	NM_182810	NP_877962	Coding	chr22:39520563 plus strand	1562601
ATP5L2	NM_001165877	NP_001159349	Coding	chr22:42640601 minus strand	1562602
ATP6V1E1	NM_001039366	NP_001034455	Coding	chr22:17628822 minus strand	1562603
ATP6V1E1	NM_001039367	NP_001034456	Coding	chr22:17628822 minus strand	1562603

【１３３１】

ATP6V1E1	NM_001696	NP_001687	Coding	chr22:17628822 minus strand	1562603
ATXN10	NM_001167621	NP_001161093	Coding	chr22:45671797 plus strand	1562604
ATXN10	NM_013236	NP_037368	Coding	chr22:45671797 plus strand	1562604
BAIAP2L2	NM_025045	NP_079321	Coding	chr22:38110669 minus strand	1562605
BCL2L13	NM_001270726	NP_001257655	Coding	chr22:17638583 plus strand	1562606
BCL2L13	NM_001270727	NP_001257656	Coding	chr22:17638583 plus strand	1562606
BCL2L13	NM_001270728	NP_001257657	Coding	chr22:17638583 plus strand	1562606
BCL2L13	NM_001270729	NP_001257658	Coding	chr22:17638583 plus strand	1562606
BCL2L13	NM_001270730	NP_001257659	Coding	chr22:17638583 plus strand	1562606
BCL2L13	NM_001270731	NP_001257660	Coding	chr22:17638583 plus strand	1562606
BCL2L13	NM_001270732	NP_001257661	Coding	chr22:17638583 plus strand	1562606
BCL2L13	NM_001270733	NP_001257662	Coding	chr22:17706657 plus strand	1562607
BCL2L13	NM_001270734	NP_001257663	Coding	chr22:17638583 plus strand	1562606
BCL2L13	NM_001270735	NP_001257664	Coding	chr22:17638583 plus strand	1562606
BCL2L13	NM_015367	NP_056182	Coding	chr22:17638583 plus strand	1562606
BCR	NM_004327	NP_004318	Coding	chr22:23180364 plus strand	1562608
BCR	NM_021574	NP_067585	Coding	chr22:23180364 plus strand	1562608
BID	NM_001196	NP_001187	Coding	chr22:17774495 minus strand	1562609
BID	NM_001244567	NP_001231496	Coding	chr22:17774665 minus strand	1562610
BID	NM_001244569	NP_001231498	Coding	chr22:17774495 minus strand	1562609
BID	NM_001244570	NP_001231499	Coding	chr22:17774495 minus strand	1562609
BID	NM_001244572	NP_001231501	Coding	chr22:17774042 minus strand	1562611
BID	NM_197966	NP_932070	Coding	chr22:17774042 minus strand	1562611
BID	NM_197967	NP_932071	Coding	chr22:17774495 minus strand	1562609
BIK	NM_001197	NP_001188	Coding	chr22:43110747 plus strand	1562612
BPIFC	NM_174932	NP_777592	Coding	chr22:32457386 minus strand	1562613
BRD1	NM_014577	NP_055392	Coding	chr22:49824804 minus strand	1562614

【１３３２】

C1QTNF6	NM_031910	NP_114116	Coding	chr22:37188290 minus strand	1562615
C1QTNF6	NM_182486	NP_872292	Coding	chr22:37188290 minus strand	1562615
C22orf15	NM_182520	NP_872326	Coding	chr22:23763020 plus strand	1562616
C22orf23	NM_001207062	NP_001193991	Coding	chr22:37953669 minus strand	1562617
C22orf23	NM_032561	NP_115950	Coding	chr22:37953647 minus strand	1562618
C22orf24	NM_001302819	NP_001289748	Coding	chr22:31938454 minus strand	1562619
C22orf24	NM_001302820	NP_001289749	Coding	chr22:31938454 minus strand	1562619
C22orf24	NM_015372	NP_056187	Coding	chr22:31945362 minus strand	1562620
C22orf29	NM_024627	NP_078903	Coding	chr22:19854848 minus strand	1562621
C22orf31	NM_015370	NP_056185	Coding	chr22:29061919 minus strand	1562622
C22orf34	NM_001289922	NP_001276851	Coding	chr22:49657542 minus strand	1562623
C22orf39	NM_001166242	NP_001159714	Coding	chr22:19448232 minus strand	1562624
C22orf39	NM_173793	NP_776154	Coding	chr22:19448232 minus strand	1562624
C22orf42	NM_001010859	NP_001010859	Coding	chr22:32159256 minus strand	1562625
C22orf46	NM_001142964	NP_001136436	Coding	chr22:41690542 plus strand	1562626
CABIN1	NM_001199281	NP_001186210	Coding	chr22:24011369 plus strand	1562627
CABIN1	NM_001201429	NP_001188358	Coding	chr22:24011314 plus strand	1562628
CABIN1	NM_012295	NP_036427	Coding	chr22:24011314 plus strand	1562628
CABP7	NM_182527	NP_872333	Coding	chr22:29720354 plus strand	1562629
CACNA1I	NM_001003406	NP_001003406	Coding	chr22:39570752 plus strand	1562630
CACNA1I	NM_021096	NP_066919	Coding	chr22:39570752 plus strand	1562630
CACNG2	NM_006078	NP_006069	Coding	chr22:36702645 minus strand	1562631
CARD10	NM_014550	NP_055365	Coding	chr22:37519203 minus strand	1562632
CBX6	NM_014292	NP_055107	Coding	chr22:38872253 minus strand	1562633
CBX7	NM_175709	NP_783640	Coding	chr22:39152533 minus strand	1562634
CBY1	NM_001002880	NP_001002880	Coding	chr22:38656652 plus strand	1562635
CBY1	NM_015373	NP_056188	Coding	chr22:38656652 plus strand	1562635

【１３３３】

CCDC116	NM_152612	NP_689825	Coding	chr22:21632796 plus strand	1562636
CCDC117	NM_001284263	NP_001271192	Coding	chr22:28772673 plus strand	1562637
CCDC117	NM_001284264	NP_001271193	Coding	chr22:28772673 plus strand	1562637
CCDC117	NM_001284265	NP_001271194	Coding	chr22:28773136 plus strand	1562638
CCDC117	NM_173510	NP_775781	Coding	chr22:28772673 plus strand	1562637
CCDC134	NM_024821	NP_079097	Coding	chr22:41800673 plus strand	1562639
CCDC157	NM_001017437	NP_001017437	Coding	chr22:30356637 plus strand	1562640
CCT8L2	NM_014406	NP_055221	Coding	chr22:16592810 minus strand	1562641
CDC42EP1	NM_152243	NP_689449	Coding	chr22:37560463 plus strand	1562642
CDC45	NM_001178010	NP_001171481	Coding	chr22:19479825 plus strand	1562643
CDC45	NM_001178011	NP_001171482	Coding	chr22:19479825 plus strand	1562643
CDC45	NM_003504	NP_003495	Coding	chr22:19479825 plus strand	1562643
CDPF1	NM_207327	NP_997210	Coding	chr22:46250296 minus strand	1562644
CECR1	NM_001282225	NP_001269154	Coding	chr22:17219585 minus strand	1562645
CECR1	NM_001282226	NP_001269155	Coding	chr22:17219585 minus strand	1562645
CECR1	NM_001282227	NP_001269156	Coding	chr22:17221854 minus strand	1562646
CECR1	NM_001282228	NP_001269157	Coding	chr22:17219585 minus strand	1562645
CECR1	NM_001282229	NP_001269158	Coding	chr22:17219585 minus strand	1562645
CECR1	NM_177405	NP_803124	Coding	chr22:17199783 minus strand	1562647
CECR2	NM_001290046	NP_001276975	Coding	chr22:17359948 plus strand	1562648
CECR2	NM_001290047	NP_001276976	Coding	chr22:17369365 plus strand	1562649
CECR5	NM_017829	NP_060299	Coding	chr22:17165287 minus strand	1562650
CECR5	NM_033070	NP_149061	Coding	chr22:17159279 minus strand	1562651
CECR6	NM_001163079	NP_001156551	Coding	chr22:17121367 minus strand	1562652
CECR6	NM_031890	NP_114096	Coding	chr22:17121323 minus strand	1562653
CELSR1	NM_014246	NP_055061	Coding	chr22:46537170 minus strand	1562654
CENPM	NM_001002876	NP_001002876	Coding	chr22:41947144 minus strand	1562655

【１３３４】

CENPM	NM_001110215	NP_001103685	Coding	chr22:41940219 minus strand	1562656
CENPM	NM_024053	NP_076958	Coding	chr22:41947144 minus strand	1562655
CERK	NM_022766	NP_073603	Coding	chr22:46738255 minus strand	1562657
CHADL	NM_138481	NP_612490	Coding	chr22:41240931 minus strand	1562658
CHCHD10	NM_001301339	NP_001288268	Coding	chr22:23767972 minus strand	1562659
CHCHD10	NM_213720	NP_998885	Coding	chr22:23767972 minus strand	1562659
CHEK2	NM_001005735	NP_001005735	Coding	chr22:28741834 minus strand	1562660
CHEK2	NM_001257387	NP_001244316	Coding	chr22:28741834 minus strand	1562660
CHEK2	NM_007194	NP_009125	Coding	chr22:28741834 minus strand	1562660
CHEK2	NM_145862	NP_665861	Coding	chr22:28741834 minus strand	1562660
CHKB	NM_005198	NP_005189	Coding	chr22:50582999 minus strand	1562661
CLDN5	NM_001130861	NP_001124333	Coding	chr22:19525337 minus strand	1562662
CLDN5	NM_003277	NP_003268	Coding	chr22:19525337 minus strand	1562662
CLTCL1	NM_001835	NP_001826	Coding	chr22:19291716 minus strand	1562663
CLTCL1	NM_007098	NP_009029	Coding	chr22:19291716 minus strand	1562663
COMT	NM_000754	NP_000745	Coding	chr22:19941739 plus strand	1562664
COMT	NM_001135161	NP_001128633	Coding	chr22:19950936 plus strand	1562665
COMT	NM_001135162	NP_001128634	Coding	chr22:19951521 plus strand	1562666
COMT	NM_007310	NP_009294	Coding	chr22:19962546 plus strand	1562667
CPT1B	NM_001145134	NP_001138606	Coding	chr22:50578667 minus strand	1562668
CPT1B	NM_001145135	NP_001138607	Coding	chr22:50578667 minus strand	1562668
CPT1B	NM_001145137	NP_001138609	Coding	chr22:50578077 minus strand	1562669
CPT1B	NM_004377	NP_004368	Coding	chr22:50578465 minus strand	1562670
CPT1B	NM_152245	NP_689451	Coding	chr22:50578667 minus strand	1562668
CPT1B	NM_152246	NP_689452	Coding	chr22:50578465 minus strand	1562670
CRELD2	NM_001135101	NP_001128573	Coding	chr22:49918629 plus strand	1562671
CRELD2	NM_001284317	NP_001271246	Coding	chr22:49918629 plus strand	1562671

【１３３５】

CRELD2	NM_001284318	NP_001271247	Coding	chr22:49918629 plus strand	1562671
CRELD2	NM_024324	NP_077300	Coding	chr22:49918629 plus strand	1562671
CRKL	NM_005207	NP_005198	Coding	chr22:20917425 plus strand	1562672
CRYBA4	NM_001886	NP_001877	Coding	chr22:26621963 plus strand	1562673
CRYBB1	NM_001887	NP_001878	Coding	chr22:26618027 minus strand	1562674
CRYBB2	NM_000496	NP_000487	Coding	chr22:25219644 plus strand	1562675
CRYBB3	NM_004076	NP_004067	Coding	chr22:25199849 plus strand	1562676
CSDC2	NM_014460	NP_055275	Coding	chr22:41561009 plus strand	1562677
CSF2RB	NM_000395	NP_000386	Coding	chr22:36913632 plus strand	1562678
CSNK1E	NM_001894	NP_001885	Coding	chr22:38318084 minus strand	1562679
CSNK1E	NM_152221	NP_689407	Coding	chr22:38317408 minus strand	1562680
CYB5R3	NM_000398	NP_000389	Coding	chr22:42649399 minus strand	1562681
CYB5R3	NM_001129819	NP_001123291	Coding	chr22:42646989 minus strand	1562682
CYB5R3	NM_001171660	NP_001165131	Coding	chr22:42644634 minus strand	1562683
CYB5R3	NM_001171661	NP_001165132	Coding	chr22:42646989 minus strand	1562682
CYB5R3	NM_007326	NP_015565	Coding	chr22:42646989 minus strand	1562682
CYP2D6	NM_000106	NP_000097	Coding	chr22:42130881 minus strand	1562684
CYP2D6	NM_001025161	NP_001020332	Coding	chr22:42144554 minus strand	1562685
CYP2D6	NM_001025161	NP_001020332	Coding	chr22:42130881 minus strand	1562684
CYTH4	NM_013385	NP_037517	Coding	chr22:37282453 plus strand	1562686
DDT	NM_001084392	NP_001077861	Coding	chr22:23974491 minus strand	1562687
DDT	NM_001355	NP_001346	Coding	chr22:23961500 plus strand	1562688
DDT	NM_001355	NP_001346	Coding	chr22:23979828 minus strand	1562689
DDTL	NM_001084393	NP_001077862	Coding	chr22:23966837 plus strand	1562690
DDX17	NM_001098504	NP_001091974	Coding	chr22:38506340 minus strand	1562691
DDX17	NM_006386	NP_006377	Coding	chr22:38506340 minus strand	1562691
DENND6B	NM_001001794	NP_001001794	Coding	chr22:50327060 minus strand	1562692

【１３３６】

DEPDC5	NM_001007188	NP_001007189	Coding	chr22:31754022 plus strand	1562693
DEPDC5	NM_001136029	NP_001129501	Coding	chr22:31754861 plus strand	1562694
DEPDC5	NM_001242896	NP_001229825	Coding	chr22:31754022 plus strand	1562693
DEPDC5	NM_001242897	NP_001229826	Coding	chr22:31753950 plus strand	1562695
DEPDC5	NM_014662	NP_055477	Coding	chr22:31754861 plus strand	1562694
DERL3	NM_001002862	NP_001002862	Coding	chr22:23839012 minus strand	1562696
DERL3	NM_001135751	NP_001129223	Coding	chr22:23839012 minus strand	1562696
DERL3	NM_198440	NP_940842	Coding	chr22:23839012 minus strand	1562696
DESI1	NM_015704	NP_056519	Coding	chr22:41621057 minus strand	1562697
DGCR14	NM_022719	NP_073210	Coding	chr22:19144677 minus strand	1562698
DGCR2	NM_001173533	NP_001167004	Coding	chr22:19122454 minus strand	1562699
DGCR2	NM_001173534	NP_001167005	Coding	chr22:19122454 minus strand	1562699
DGCR2	NM_001184781	NP_001171710	Coding	chr22:19122454 minus strand	1562699
DGCR2	NM_005137	NP_005128	Coding	chr22:19122454 minus strand	1562699
DGCR6	NM_005675	NP_005666	Coding	chr22:18906222 plus strand	1562700
DGCR6L	NM_033257	NP_150282	Coding	chr22:20320105 minus strand	1562701
DGCR8	NM_001190326	NP_001177255	Coding	chr22:20080231 plus strand	1562702
DGCR8	NM_022720	NP_073557	Coding	chr22:20080231 plus strand	1562702
DMC1	NM_001278208	NP_001265137	Coding	chr22:38568409 minus strand	1562703
DMC1	NM_007068	NP_008999	Coding	chr22:38570196 minus strand	1562704
DNAJB7	NM_145174	NP_660157	Coding	chr22:40862126 minus strand	1562705
DNAL4	NM_005740	NP_005731	Coding	chr22:38794156 minus strand	1562706
DRG1	NM_004147	NP_004138	Coding	chr22:31399552 plus strand	1562707
DRICH1	NM_016449	NP_057533	Coding	chr22:23632321 minus strand	1562708
DUSP18	NM_152511	NP_689724	Coding	chr22:30667885 minus strand	1562709
EFCAB6	NM_022785	NP_073622	Coding	chr22:43812337 minus strand	1562710
EFCAB6	NM_198856	NP_942153	Coding	chr22:43812337 minus strand	1562710

【１３３７】

EIF3D	NM_003753	NP_003744	Coding	chr22:36529230 minus strand	1562711
EIF3L	NM_001242923	NP_001229852	Coding	chr22:37849371 plus strand	1562712
EIF3L	NM_016091	NP_057175	Coding	chr22:37849371 plus strand	1562712
EIF4ENIF1	NM_001164501	NP_001157973	Coding	chr22:31489561 minus strand	1562713
EIF4ENIF1	NM_001164502	NP_001157974	Coding	chr22:31489888 minus strand	1562714
EIF4ENIF1	NM_019843	NP_062817	Coding	chr22:31489888 minus strand	1562714
ELFN2	NM_052906	NP_443138	Coding	chr22:37427470 minus strand	1562715
EMID1	NM_001267895	NP_001254824	Coding	chr22:29205911 plus strand	1562716
EMID1	NM_133455	NP_597712	Coding	chr22:29205911 plus strand	1562716
ENTHD1	NM_152512	NP_689725	Coding	chr22:39893790 minus strand	1562717
EP300	NM_001429	NP_001420	Coding	chr22:41092609 plus strand	1562718
EWSR1	NM_001163285	NP_001156757	Coding	chr22:29268008 plus strand	1562719
EWSR1	NM_001163286	NP_001156758	Coding	chr22:29268008 plus strand	1562719
EWSR1	NM_001163287	NP_001156759	Coding	chr22:29268008 plus strand	1562719
EWSR1	NM_005243	NP_005234	Coding	chr22:29268008 plus strand	1562719
EWSR1	NM_013986	NP_053733	Coding	chr22:29268008 plus strand	1562719
FAM109B	NM_001002034	NP_001002034	Coding	chr22:42074250 plus strand	1562720
FAM118A	NM_001104595	NP_001098065	Coding	chr22:45309199 plus strand	1562721
FAM118A	NM_017911	NP_060381	Coding	chr22:45309903 plus strand	1562722
FAM19A5	NM_001082967	NP_001076436	Coding	chr22:48489459 plus strand	1562723
FAM19A5	NM_015381	NP_056196	Coding	chr22:48576305 plus strand	1562724
FAM227A	NM_001013647	NP_001013669	Coding	chr22:38656629 minus strand	1562725
FAM227A	NM_001291030	NP_001277959	Coding	chr22:38656629 minus strand	1562725
FAM83F	NM_138435	NP_612444	Coding	chr22:39994948 plus strand	1562726
FBLN1	NM_001996	NP_001987	Coding	chr22:45502838 plus strand	1562727
FBLN1	NM_006485	NP_006476	Coding	chr22:45502838 plus strand	1562727
FBLN1	NM_006486	NP_006477	Coding	chr22:45502838 plus strand	1562727

【１３３８】

FBLN1	NM_006487	NP_006478	Coding	chr22:45502838 plus strand	1562727
FBXO7	NM_001033024	NP_001028196	Coding	chr22:32475236 plus strand	1562728
FBXO7	NM_001257990	NP_001244919	Coding	chr22:32475236 plus strand	1562728
FBXO7	NM_012179	NP_036311	Coding	chr22:32474719 plus strand	1562729
FOXRED2	NM_001102371	NP_001095841	Coding	chr22:36507101 minus strand	1562730
FOXRED2	NM_024955	NP_079231	Coding	chr22:36507043 minus strand	1562731
GAB4	NM_001037814	NP_001032903	Coding	chr22:17008222 minus strand	1562732
GAL3ST1	NM_004861	NP_004852	Coding	chr22:30564889 minus strand	1562733
GALR3	NM_003614	NP_003605	Coding	chr22:37823381 plus strand	1562734
GAS2L1	NM_001278730	NP_001265659	Coding	chr22:29306994 plus strand	1562735
GAS2L1	NM_006478	NP_006469	Coding	chr22:29306994 plus strand	1562735
GAS2L1	NM_152236	NP_689422	Coding	chr22:29306994 plus strand	1562735
GATSL3	NM_001037666	NP_001032755	Coding	chr22:30289627 minus strand	1562736
GCAT	NM_001171690	NP_001165161	Coding	chr22:37807904 plus strand	1562737
GCAT	NM_014291	NP_055106	Coding	chr22:37807904 plus strand	1562737
GGA1	NM_001001560	NP_001001560	Coding	chr22:37608473 plus strand	1562738
GGA1	NM_001172687	NP_001166158	Coding	chr22:37608473 plus strand	1562738
GGA1	NM_001172688	NP_001166159	Coding	chr22:37609039 plus strand	1562739
GGA1	NM_013365	NP_037497	Coding	chr22:37608473 plus strand	1562738
GGT1	NM_001288833	NP_001275762	Coding	chr22:24603156 plus strand	1562740
GGT1	NM_013421	NP_038265	Coding	chr22:24603156 plus strand	1562740
GGT1	NM_013430	NP_038347	Coding	chr22:24583749 plus strand	1562741
GGT5	NM_001099781	NP_001093251	Coding	chr22:24245142 minus strand	1562742
GGT5	NM_001099782	NP_001093252	Coding	chr22:24245142 minus strand	1562742
GGT5	NM_001302464	NP_001289393	Coding	chr22:24245142 minus strand	1562742
GGT5	NM_001302465	NP_001289394	Coding	chr22:24245142 minus strand	1562742
GGT5	NM_004121	NP_004112	Coding	chr22:24245142 minus strand	1562742

【１３３９】

GGTLC2	NM_001282879	NP_001269808	Coding	chr22:22644619 plus strand	1562743
GGTLC2	NM_199127	NP_954578	Coding	chr22:22646311 plus strand	1562744
GNAZ	NM_002073	NP_002064	Coding	chr22:23070482 plus strand	1562745
GNB1L	NM_053004	NP_443730	Coding	chr22:19854939 minus strand	1562746
GP1BB	NM_000407	NP_000398	Coding	chr22:19723542 plus strand	1562747
GRAMD4	NM_015124	NP_055939	Coding	chr22:46626760 plus strand	1562748
GRAP2	NM_001291824	NP_001278753	Coding	chr22:39926590 plus strand	1562749
GRAP2	NM_001291825	NP_001278754	Coding	chr22:39946816 plus strand	1562750
GRAP2	NM_001291826	NP_001278755	Coding	chr22:39926590 plus strand	1562749
GRAP2	NM_001291828	NP_001278757	Coding	chr22:39926627 plus strand	1562751
GRAP2	NM_004810	NP_004801	Coding	chr22:39901081 plus strand	1562752
GSC2	NM_005315	NP_005306	Coding	chr22:19150283 minus strand	1562753
GSTT2	NM_000854	NP_000845	Coding	chr22:23961301 minus strand	1562754
GSTT2	NM_000854	NP_000845	Coding	chr22:23980027 plus strand	1562755
GSTT2	NM_001302670	NP_001289599	Coding	chr22:23961301 minus strand	1562754
GSTT2	NM_001302670	NP_001289599	Coding	chr22:23980027 plus strand	1562755
GSTT2B	NM_001080843	NP_001074312	Coding	chr22:23961181 minus strand	1562756
GSTT2B	NM_001080843	NP_001074312	Coding	chr22:23980147 plus strand	1562757
GTPBP1	NM_004286	NP_004277	Coding	chr22:38705801 plus strand	1562758
GTSE1	NM_016426	NP_057510	Coding	chr22:46296740 plus strand	1562759
GUCD1	NM_001284251	NP_001271180	Coding	chr22:24555935 minus strand	1562760
GUCD1	NM_001284252	NP_001271181	Coding	chr22:24555935 minus strand	1562760
GUCD1	NM_001284253	NP_001271182	Coding	chr22:24555935 minus strand	1562760
GUCD1	NM_001284254	NP_001271183	Coding	chr22:24555307 minus strand	1562761
GUCD1	NM_001284255	NP_001271184	Coding	chr22:24555307 minus strand	1562761
GUCD1	NM_001284256	NP_001271185	Coding	chr22:24555307 minus strand	1562761
GUCD1	NM_001284257	NP_001271186	Coding	chr22:24555307 minus strand	1562761

【１３４０】

GUCD1	NM_031444	NP_113632	Coding	chr22:24555307 minus strand	1562761
H1F0	NM_005318	NP_005309	Coding	chr22:37805106 plus strand	1562762
HDAC10	NM_001159286	NP_001152758	Coding	chr22:50251405 minus strand	1562763
HDAC10	NM_032019	NP_114408	Coding	chr22:50251405 minus strand	1562763
HIC2	NM_015094	NP_055909	Coding	chr22:21417403 plus strand	1562764
HIRA	NM_003325	NP_003316	Coding	chr22:19431696 minus strand	1562765
HMGXB4	NM_001003681	NP_001003681	Coding	chr22:35257451 plus strand	1562766
HMOX1	NM_002133	NP_002124	Coding	chr22:35381066 plus strand	1562767
HORMAD2	NM_152510	NP_689723	Coding	chr22:30080463 plus strand	1562768
HPS4	NM_022081	NP_071364	Coding	chr22:26483863 minus strand	1562769
HPS4	NM_152841	NP_690054	Coding	chr22:26479681 minus strand	1562770
HSCB	NM_172002	NP_741999	Coding	chr22:28742054 plus strand	1562771
IFT27	NM_001177701	NP_001171172	Coding	chr22:36776133 minus strand	1562772
IFT27	NM_006860	NP_006851	Coding	chr22:36776133 minus strand	1562772
IGLL1	NM_020070	NP_064455	Coding	chr22:23580308 minus strand	1562773
IGLL1	NM_152855	NP_690594	Coding	chr22:23580308 minus strand	1562773
IGLL5	NM_001178126	NP_001171597	Coding	chr22:22887779 plus strand	1562774
IGLL5	NM_001256296	NP_001243225	Coding	chr22:22887779 plus strand	1562774
IL17RA	NM_001289905	NP_001276834	Coding	chr22:17084958 plus strand	1562775
IL17RA	NM_014339	NP_055154	Coding	chr22:17084958 plus strand	1562775
IL17REL	NM_001001694	NP_001001694	Coding	chr22:50012626 minus strand	1562776
IL2RB	NM_000878	NP_000869	Coding	chr22:37149922 minus strand	1562777
INPP5J	NM_001002837	NP_001002837	Coding	chr22:31122922 plus strand	1562778
INPP5J	NM_001284285	NP_001271214	Coding	chr22:31122922 plus strand	1562778
INPP5J	NM_001284286	NP_001271215	Coding	chr22:31122922 plus strand	1562778
INPP5J	NM_001284287	NP_001271216	Coding	chr22:31122922 plus strand	1562778
INPP5J	NM_001284288	NP_001271217	Coding	chr22:31122922 plus strand	1562778

【１３４１】

INPP5J	NM_001284289	NP_001271218	Coding	chr22:31122922 plus strand	1562778
ISX	NM_001008494	NP_001008494	Coding	chr22:35066136 plus strand	1562779
JOSD1	NM_014876	NP_055691	Coding	chr22:38700454 minus strand	1562780
KCNJ4	NM_004981	NP_004972	Coding	chr22:38444028 minus strand	1562781
KCNJ4	NM_152868	NP_690607	Coding	chr22:38455199 minus strand	1562782
KCTD17	NM_001282684	NP_001269613	Coding	chr22:37051735 plus strand	1562783
KCTD17	NM_001282685	NP_001269614	Coding	chr22:37051735 plus strand	1562783
KCTD17	NM_001282686	NP_001269615	Coding	chr22:37051735 plus strand	1562783
KCTD17	NM_024681	NP_078957	Coding	chr22:37051735 plus strand	1562783
KDELR3	NM_006855	NP_006846	Coding	chr22:38468061 plus strand	1562784
KDELR3	NM_016657	NP_057839	Coding	chr22:38468061 plus strand	1562784
KIAA0930	NM_001009880	NP_001009880	Coding	chr22:45240769 minus strand	1562785
KIAA0930	NM_015264	NP_056079	Coding	chr22:45212466 minus strand	1562786
KIAA1644	NM_001099294	NP_001092764	Coding	chr22:44312851 minus strand	1562787
KIAA1671	NM_001145206	NP_001138678	Coding	chr22:25027973 plus strand	1562788
KLHDC7B	NM_138433	NP_612442	Coding	chr22:50548032 plus strand	1562789
KLHL22	NM_032775	NP_116164	Coding	chr22:20495883 minus strand	1562790
KREMEN1	NM_001039570	NP_001034659	Coding	chr22:29073077 plus strand	1562791
KREMEN1	NM_032045	NP_114434	Coding	chr22:29073077 plus strand	1562791
L3MBTL2	NM_031488	NP_113676	Coding	chr22:41205308 plus strand	1562792
LARGE	NM_004737	NP_004728	Coding	chr22:33920428 minus strand	1562793
LARGE	NM_133642	NP_598397	Coding	chr22:33920428 minus strand	1562793
LDOC1L	NM_032287	NP_115663	Coding	chr22:44498125 minus strand	1562794
LGALS1	NM_002305	NP_002296	Coding	chr22:37675605 plus strand	1562795
LGALS2	NM_006498	NP_006489	Coding	chr22:37580017 minus strand	1562796
LIF	NM_001257135	NP_001244064	Coding	chr22:30246851 minus strand	1562797
LIF	NM_002309	NP_002300	Coding	chr22:30246851 minus strand	1562797

【１３４２】

LIMK2	NM_001031801	NP_001026971	Coding	chr22:31248361 plus strand	1562798
LIMK2	NM_005569	NP_005560	Coding	chr22:31212263 plus strand	1562799
LIMK2	NM_016733	NP_057952	Coding	chr22:31248361 plus strand	1562798
LMF2	NM_033200	NP_149977	Coding	chr22:50507706 minus strand	1562800
LOC101929372	NM_001288707	NP_001275636	Coding	chr22:17589192 minus strand	1562801
LOC388849	NM_001243537	NP_001230466	Coding	chr22:20149908 minus strand	1562802
LOC391322	NM_001144931	NP_001138403	Coding	chr22:23966893 plus strand	1562803
LOC400927-CSNK1E	NM_001289912	NP_001276841	Coding	chr22:38398522 minus strand	1562804
LRP5L	NM_001135772	NP_001129244	Coding	chr22:25381577 minus strand	1562805
LRP5L	NM_182492	NP_872298	Coding	chr22:25362557 minus strand	1562806
LRRC74B	NM_001291006	NP_001277935	Coding	chr22:21045959 plus strand	1562807
LRRC75B	NM_207644	NP_997527	Coding	chr22:24593068 minus strand	1562808
LZTR1	NM_006767	NP_006758	Coding	chr22:20982268 plus strand	1562809
MAFF	NM_001161572	NP_001155044	Coding	chr22:38201931 plus strand	1562810
MAFF	NM_001161573	NP_001155045	Coding	chr22:38203019 plus strand	1562811
MAFF	NM_001161574	NP_001155046	Coding	chr22:38201931 plus strand	1562810
MAFF	NM_012323	NP_036455	Coding	chr22:38201931 plus strand	1562810
MAPK1	NM_002745	NP_002736	Coding	chr22:21867680 minus strand	1562812
MAPK1	NM_138957	NP_620407	Coding	chr22:21867680 minus strand	1562812
MAPK11	NM_002751	NP_002742	Coding	chr22:50270393 minus strand	1562813
MAPK12	NM_002969	NP_002960	Coding	chr22:50261660 minus strand	1562814
MAPK8IP2	NM_012324	NP_036456	Coding	chr22:50600684 plus strand	1562815
MB	NM_005368	NP_005359	Coding	chr22:35617337 minus strand	1562816
MB	NM_203377	NP_976311	Coding	chr22:35623354 minus strand	1562817
MB	NM_203378	NP_976312	Coding	chr22:35617508 minus strand	1562818
MCAT	NM_014507	NP_055322	Coding	chr22:43143397 minus strand	1562819
MCAT	NM_173467	NP_775738	Coding	chr22:43143397 minus strand	1562819

【１３４３】

MCHR1	NM_005297	NP_005288	Coding	chr22:40679177 plus strand	1562820
MCM5	NM_006739	NP_006730	Coding	chr22:35400122 plus strand	1562821
MED15	NM_001003891	NP_001003891	Coding	chr22:20507541 plus strand	1562822
MED15	NM_001293234	NP_001280163	Coding	chr22:20507541 plus strand	1562822
MED15	NM_001293235	NP_001280164	Coding	chr22:20507541 plus strand	1562822
MED15	NM_001293236	NP_001280165	Coding	chr22:20507541 plus strand	1562822
MED15	NM_001293237	NP_001280166	Coding	chr22:20508047 plus strand	1562823
MED15	NM_015889	NP_056973	Coding	chr22:20507541 plus strand	1562822
MEI1	NM_152513	NP_689726	Coding	chr22:41699513 plus strand	1562824
MFNG	NM_001166343	NP_001159815	Coding	chr22:37486387 minus strand	1562825
MFNG	NM_002405	NP_002396	Coding	chr22:37486440 minus strand	1562826
MGAT3	NM_001098270	NP_001091740	Coding	chr22:39487223 plus strand	1562827
MGAT3	NM_002409	NP_002400	Coding	chr22:39457319 plus strand	1562828
MICAL3	NM_001122731	NP_001116203	Coding	chr22:17906886 minus strand	1562829
MICAL3	NM_001136004	NP_001129476	Coding	chr22:17906886 minus strand	1562829
MICAL3	NM_015241	NP_056056	Coding	chr22:18024559 minus strand	1562830
MICALL1	NM_033386	NP_203744	Coding	chr22:37906147 plus strand	1562831
MIEF1	NM_019008	NP_061881	Coding	chr22:39502278 plus strand	1562832
MIF	NM_002415	NP_002406	Coding	chr22:23894377 plus strand	1562833
MIOX	NM_017584	NP_060054	Coding	chr22:50486783 plus strand	1562834
MKL1	NM_001282660	NP_001269589	Coding	chr22:40463440 minus strand	1562835
MKL1	NM_001282661	NP_001269590	Coding	chr22:40636719 minus strand	1562836
MKL1	NM_001282662	NP_001269591	Coding	chr22:40636719 minus strand	1562836
MKL1	NM_020831	NP_065882	Coding	chr22:40636719 minus strand	1562836
MLC1	NM_015166	NP_055981	Coding	chr22:50085929 minus strand	1562837
MLC1	NM_139202	NP_631941	Coding	chr22:50085352 minus strand	1562838
MMP11	NM_005940	NP_005931	Coding	chr22:23772848 plus strand	1562839

【１３４４】

MN1	NM_002430	NP_002421	Coding	chr22:27801498 minus strand	1562840
MORC2	NM_014941	NP_055756	Coding	chr22:30968201 minus strand	1562841
MOV10L1	NM_001164104	NP_001157576	Coding	chr22:50090005 plus strand	1562842
MOV10L1	NM_001164105	NP_001157577	Coding	chr22:50090255 plus strand	1562843
MOV10L1	NM_001164106	NP_001157578	Coding	chr22:50147054 plus strand	1562844
MOV10L1	NM_018995	NP_061868	Coding	chr22:50090005 plus strand	1562842
MPPED1	NM_001044370	NP_001037835	Coding	chr22:43412013 plus strand	1562845
MPST	NM_001013436	NP_001013454	Coding	chr22:37019641 plus strand	1562846
MPST	NM_001130517	NP_001123989	Coding	chr22:37019641 plus strand	1562846
MPST	NM_021126	NP_066949	Coding	chr22:37019749 plus strand	1562847
MRPL40	NM_003776	NP_003767	Coding	chr22:19432512 plus strand	1562848
MTFP1	NM_001003704	NP_001003704	Coding	chr22:30425622 plus strand	1562849
MTFP1	NM_016498	NP_057582	Coding	chr22:30425622 plus strand	1562849
MTMR3	NM_021090	NP_066576	Coding	chr22:29883168 plus strand	1562850
MTMR3	NM_153050	NP_694690	Coding	chr22:29883168 plus strand	1562850
MTMR3	NM_153051	NP_694691	Coding	chr22:29883168 plus strand	1562850
MYH9	NM_002473	NP_002464	Coding	chr22:36388067 minus strand	1562851
MYO18B	NM_032608	NP_115997	Coding	chr22:25742152 plus strand	1562852
NAGA	NM_000262	NP_000253	Coding	chr22:42070842 minus strand	1562853
NCAPH2	NM_001185011	NP_001171940	Coding	chr22:50508215 plus strand	1562854
NCAPH2	NM_014551	NP_055366	Coding	chr22:50508215 plus strand	1562854
NCAPH2	NM_152299	NP_689512	Coding	chr22:50508215 plus strand	1562854
NCF4	NM_000631	NP_000622	Coding	chr22:36860987 plus strand	1562855
NCF4	NM_013416	NP_038202	Coding	chr22:36860987 plus strand	1562855
NDUFA6	NM_002490	NP_002481	Coding	chr22:42090884 minus strand	1562856
NEFH	NM_021076	NP_066554	Coding	chr22:29480191 plus strand	1562857
NF2	NM_000268	NP_000259	Coding	chr22:29603555 plus strand	1562858

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NF2	NM_016418	NP_057502	Coding	chr22:29603555 plus strand	1562858
NF2	NM_181825	NP_861546	Coding	chr22:29603555 plus strand	1562858
NF2	NM_181828	NP_861966	Coding	chr22:29603555 plus strand	1562858
NF2	NM_181829	NP_861967	Coding	chr22:29603555 plus strand	1562858
NF2	NM_181830	NP_861968	Coding	chr22:29603555 plus strand	1562858
NF2	NM_181831	NP_861969	Coding	chr22:29603555 plus strand	1562858
NF2	NM_181832	NP_861970	Coding	chr22:29603555 plus strand	1562858
NF2	NM_181833	NP_861971	Coding	chr22:29603555 plus strand	1562858
NFAM1	NM_145912	NP_666017	Coding	chr22:42432395 minus strand	1562859
NHP2L1	NM_001003796	NP_001003796	Coding	chr22:41688909 minus strand	1562860
NHP2L1	NM_005008	NP_004999	Coding	chr22:41688909 minus strand	1562860
NIPSNAP1	NM_001202502	NP_001189431	Coding	chr22:29581096 minus strand	1562861
NIPSNAP1	NM_003634	NP_003625	Coding	chr22:29581337 minus strand	1562862
NOL12	NM_024313	NP_077289	Coding	chr22:37686336 plus strand	1562863
NPTXR	NM_014293	NP_055108	Coding	chr22:38844012 minus strand	1562864
NUP50	NM_007172	NP_009103	Coding	chr22:45163844 plus strand	1562865
NUP50	NM_153645	NP_705931	Coding	chr22:45164670 plus strand	1562866
ODF3B	NM_001014440	NP_001014440	Coding	chr22:50532579 minus strand	1562867
OR11H1	NM_001005239	NP_001005239	Coding	chr22:15528158 plus strand	1562868
OSBP2	NM_001282738	NP_001269667	Coding	chr22:30693781 plus strand	1562869
OSBP2	NM_001282739	NP_001269668	Coding	chr22:30694805 plus strand	1562870
OSBP2	NM_001282740	NP_001269669	Coding	chr22:30764252 plus strand	1562871
OSBP2	NM_001282741	NP_001269670	Coding	chr22:30822515 plus strand	1562872
OSBP2	NM_001282742	NP_001269671	Coding	chr22:30881680 plus strand	1562873
OSBP2	NM_030758	NP_110385	Coding	chr22:30694805 plus strand	1562870
OSM	NM_020530	NP_065391	Coding	chr22:30266840 minus strand	1562874
P2RX6	NM_001159554	NP_001153026	Coding	chr22:21015152 plus strand	1562875

【１３４６】

P2RX6	NM_005446	NP_005437	Coding	chr22:21015174 plus strand	1562876
PACSIN2	NM_001184970	NP_001171899	Coding	chr22:43015178 minus strand	1562877
PACSIN2	NM_001184971	NP_001171900	Coding	chr22:42959881 minus strand	1562878
PACSIN2	NM_007229	NP_009160	Coding	chr22:42947041 minus strand	1562879
PANX2	NM_001160300	NP_001153772	Coding	chr22:50170730 plus strand	1562880
PANX2	NM_052839	NP_443071	Coding	chr22:50170730 plus strand	1562880
PARVB	NM_001003828	NP_001003828	Coding	chr22:43999210 plus strand	1562881
PARVB	NM_001243385	NP_001230314	Coding	chr22:44069116 plus strand	1562882
PARVB	NM_001243386	NP_001230315	Coding	chr22:44026303 plus strand	1562883
PARVB	NM_013327	NP_037459	Coding	chr22:44024276 plus strand	1562884
PARVG	NM_001137605	NP_001131077	Coding	chr22:44172955 plus strand	1562885
PARVG	NM_022141	NP_071424	Coding	chr22:44180889 plus strand	1562886
PATZ1	NM_014323	NP_055138	Coding	chr22:31346263 minus strand	1562887
PATZ1	NM_032050	NP_114439	Coding	chr22:31346263 minus strand	1562887
PATZ1	NM_032051	NP_114440	Coding	chr22:31346263 minus strand	1562887
PATZ1	NM_032052	NP_114441	Coding	chr22:31346263 minus strand	1562887
PDGFB	NM_002608	NP_002599	Coding	chr22:39244952 minus strand	1562888
PDGFB	NM_033016	NP_148937	Coding	chr22:39240909 minus strand	1562889
PDXP	NM_020315	NP_064711	Coding	chr22:37658729 plus strand	1562890
PES1	NM_001243225	NP_001230154	Coding	chr22:30591940 minus strand	1562891
PES1	NM_001282327	NP_001269256	Coding	chr22:30607013 minus strand	1562892
PES1	NM_001282328	NP_001269257	Coding	chr22:30607013 minus strand	1562892
PES1	NM_014303	NP_055118	Coding	chr22:30591940 minus strand	1562891
PEX26	NM_001127649	NP_001121121	Coding	chr22:18077993 plus strand	1562893
PEX26	NM_001199319	NP_001186248	Coding	chr22:18077919 plus strand	1562894
PEX26	NM_017929	NP_060399	Coding	chr22:18077919 plus strand	1562894
PHF21B	NM_001135862	NP_001129334	Coding	chr22:45009928 minus strand	1562895

【１３４７】

PHF21B	NM_001242450	NP_001229379	Coding	chr22:45008993 minus strand	1562896
PHF21B	NM_001284296	NP_001271225	Coding	chr22:45008993 minus strand	1562896
PHF21B	NM_138415	NP_612424	Coding	chr22:45009700 minus strand	1562897
PHF5A	NM_032758	NP_116147	Coding	chr22:41468704 minus strand	1562898
PI4KA	NM_058004	NP_477352	Coding	chr22:20858812 minus strand	1562899
PICK1	NM_001039583	NP_001034672	Coding	chr22:38057254 plus strand	1562900
PICK1	NM_001039584	NP_001034673	Coding	chr22:38057254 plus strand	1562900
PICK1	NM_012407	NP_036539	Coding	chr22:38057254 plus strand	1562900
PIK3IP1	NM_001135911	NP_001129383	Coding	chr22:31292534 minus strand	1562901
PIK3IP1	NM_052880	NP_443112	Coding	chr22:31292534 minus strand	1562901
PIM3	NM_001001852	NP_001001852	Coding	chr22:49960494 plus strand	1562902
PISD	NM_014338	NP_055153	Coding	chr22:31630824 minus strand	1562903
PITPNB	NM_001284277	NP_001271206	Coding	chr22:27919306 minus strand	1562904
PITPNB	NM_001284278	NP_001271207	Coding	chr22:27919214 minus strand	1562905
PITPNB	NM_012399	NP_036531	Coding	chr22:27919306 minus strand	1562904
PIWIL3	NM_001008496	NP_001008496	Coding	chr22:24774720 minus strand	1562906
PIWIL3	NM_001255975	NP_001242904	Coding	chr22:24774720 minus strand	1562906
PKDREJ	NM_006071	NP_006062	Coding	chr22:46263322 minus strand	1562907
PLA2G3	NM_015715	NP_056530	Coding	chr22:31140607 minus strand	1562908
PLA2G6	NM_001004426	NP_001004426	Coding	chr22:38181754 minus strand	1562909
PLA2G6	NM_001199562	NP_001186491	Coding	chr22:38181829 minus strand	1562910
PLA2G6	NM_003560	NP_003551	Coding	chr22:38181754 minus strand	1562909
PLXNB2	NM_012401	NP_036533	Coding	chr22:50307572 minus strand	1562911
PMM1	NM_002676	NP_002667	Coding	chr22:41589867 minus strand	1562912
PNPLA3	NM_025225	NP_079501	Coding	chr22:43923738 plus strand	1562913
PNPLA5	NM_001177675	NP_001171146	Coding	chr22:43892013 minus strand	1562914
PNPLA5	NM_138814	NP_620169	Coding	chr22:43892013 minus strand	1562914

【１３４８】

POLDIP3	NM_001278657	NP_001265586	Coding	chr22:42614962 minus strand	1562915
POLDIP3	NM_032311	NP_115687	Coding	chr22:42614962 minus strand	1562915
POLDIP3	NM_178136	NP_835237	Coding	chr22:42614962 minus strand	1562915
POLR2F	NM_001301129	NP_001288058	Coding	chr22:37953662 plus strand	1562916
POLR2F	NM_001301130	NP_001288059	Coding	chr22:37953662 plus strand	1562916
POLR2F	NM_001301131	NP_001288060	Coding	chr22:37953662 plus strand	1562916
POLR2F	NM_021974	NP_068809	Coding	chr22:37953662 plus strand	1562916
POLR3H	NM_001018050	NP_001018060	Coding	chr22:41544489 minus strand	1562917
POLR3H	NM_001018052	NP_001018062	Coding	chr22:41544489 minus strand	1562917
POLR3H	NM_001282884	NP_001269813	Coding	chr22:41544606 minus strand	1562918
POLR3H	NM_001282885	NP_001269814	Coding	chr22:41544489 minus strand	1562917
POLR3H	NM_138338	NP_612211	Coding	chr22:41544489 minus strand	1562917
POTEH	NM_001136213	NP_001129685	Coding	chr22:15690025 plus strand	1562919
PPARA	NM_001001928	NP_001001928	Coding	chr22:46150595 plus strand	1562920
PPARA	NM_005036	NP_005027	Coding	chr22:46150595 plus strand	1562920
PPIL2	NM_014337	NP_055152	Coding	chr22:21665983 plus strand	1562921
PPIL2	NM_148175	NP_680480	Coding	chr22:21665983 plus strand	1562921
PPIL2	NM_148176	NP_680481	Coding	chr22:21665983 plus strand	1562921
PPM1F	NM_014634	NP_055449	Coding	chr22:21952878 minus strand	1562922
PPP6R2	NM_001242898	NP_001229827	Coding	chr22:50343316 plus strand	1562923
PPP6R2	NM_001242899	NP_001229828	Coding	chr22:50343316 plus strand	1562923
PPP6R2	NM_001242900	NP_001229829	Coding	chr22:50343316 plus strand	1562923
PPP6R2	NM_014678	NP_055493	Coding	chr22:50343316 plus strand	1562923
PRAME	NM_001291715	NP_001278644	Coding	chr22:22557754 minus strand	1562924
PRAME	NM_001291716	NP_001278645	Coding	chr22:22557754 minus strand	1562924
PRAME	NM_001291717	NP_001278646	Coding	chr22:22559361 minus strand	1562925
PRAME	NM_001291719	NP_001278648	Coding	chr22:22557754 minus strand	1562924

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PRAME	NM_006115	NP_006106	Coding	chr22:22559361 minus strand	1562925
PRAME	NM_206953	NP_996836	Coding	chr22:22559361 minus strand	1562925
PRAME	NM_206954	NP_996837	Coding	chr22:22559361 minus strand	1562925
PRAME	NM_206955	NP_996838	Coding	chr22:22559361 minus strand	1562925
PRAME	NM_206956	NP_996839	Coding	chr22:22559361 minus strand	1562925
PRODH	NM_001195226	NP_001182155	Coding	chr22:18936451 minus strand	1562926
PRODH	NM_016335	NP_057419	Coding	chr22:18936553 minus strand	1562927
PRR14L	NM_173566	NP_775837	Coding	chr22:31750134 minus strand	1562928
PRR34	NM_018280	NP_060750	Coding	chr22:46054144 minus strand	1562929
PRR5	NM_001017528	NP_001017528	Coding	chr22:44668546 plus strand	1562930
PRR5	NM_001017529	NP_001017529	Coding	chr22:44668546 plus strand	1562930
PRR5	NM_001017530	NP_001017530	Coding	chr22:44676807 plus strand	1562931
PRR5	NM_001198721	NP_001185650	Coding	chr22:44676807 plus strand	1562931
PRR5	NM_015366	NP_056181	Coding	chr22:44676807 plus strand	1562931
PRR5	NM_181333	NP_851850	Coding	chr22:44702197 plus strand	1562932
PRR5-ARHGAP8	NM_181334	NP_851851	Coding	chr22:44702197 plus strand	1562933
PVALB	NM_002854	NP_002845	Coding	chr22:36819473 minus strand	1562934
RAB36	NM_004914	NP_004905	Coding	chr22:23145325 plus strand	1562935
RABL2B	NM_001003789	NP_001003789	Coding	chr22:50783659 minus strand	1562936
RABL2B	NM_001130919	NP_001124391	Coding	chr22:50783659 minus strand	1562936
RABL2B	NM_001130920	NP_001124392	Coding	chr22:50783659 minus strand	1562936
RABL2B	NM_001130921	NP_001124393	Coding	chr22:50783659 minus strand	1562936
RABL2B	NM_001130922	NP_001124394	Coding	chr22:50783659 minus strand	1562936
RABL2B	NM_001130923	NP_001124395	Coding	chr22:50783659 minus strand	1562936
RABL2B	NM_007081	NP_009012	Coding	chr22:50783659 minus strand	1562936
RAC2	NM_002872	NP_002863	Coding	chr22:37244299 minus strand	1562937
RANBP1	NM_001278639	NP_001265568	Coding	chr22:20115937 plus strand	1562938

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RANBP1	NM_001278640	NP_001265569	Coding	chr22:20117423 plus strand	1562939
RANBP1	NM_001278641	NP_001265570	Coding	chr22:20117952 plus strand	1562940
RANBP1	NM_002882	NP_002873	Coding	chr22:20117423 plus strand	1562939
RANGAP1	NM_001278651	NP_001265580	Coding	chr22:41286017 minus strand	1562941
RANGAP1	NM_002883	NP_002874	Coding	chr22:41286251 minus strand	1562942
RASD2	NM_014310	NP_055125	Coding	chr22:35541304 plus strand	1562943
RASL10A	NM_006477	NP_006468	Coding	chr22:29315756 minus strand	1562944
RBFOX2	NM_001031695	NP_001026865	Coding	chr22:35840583 minus strand	1562945
RBFOX2	NM_001082576	NP_001076045	Coding	chr22:35840583 minus strand	1562945
RBFOX2	NM_001082577	NP_001076046	Coding	chr22:35840583 minus strand	1562945
RBFOX2	NM_001082578	NP_001076047	Coding	chr22:36028537 minus strand	1562946
RBFOX2	NM_001082579	NP_001076048	Coding	chr22:36028537 minus strand	1562946
RBFOX2	NM_014309	NP_055124	Coding	chr22:35840583 minus strand	1562945
RBX1	NM_014248	NP_055063	Coding	chr22:40951346 plus strand	1562947
RFPL1	NM_021026	NP_066306	Coding	chr22:29438582 plus strand	1562948
RFPL2	NM_001098527	NP_001091997	Coding	chr22:32203477 minus strand	1562949
RFPL2	NM_001159545	NP_001153017	Coding	chr22:32204731 minus strand	1562950
RFPL2	NM_001159546	NP_001153018	Coding	chr22:32202550 minus strand	1562951
RFPL2	NM_006605	NP_006596	Coding	chr22:32193479 minus strand	1562952
RFPL3	NM_001098535	NP_001092005	Coding	chr22:32357866 plus strand	1562953
RFPL3	NM_006604	NP_006595	Coding	chr22:32354884 plus strand	1562954
RGL4	NM_153615	NP_705843	Coding	chr22:23690860 plus strand	1562955
RHBDD3	NM_012265	NP_036397	Coding	chr22:29267925 minus strand	1562956
RIBC2	NM_015653	NP_056468	Coding	chr22:45413690 plus strand	1562957
RIMBP3	NM_015672	NP_056487	Coding	chr22:18611919 minus strand	1562958
RIMBP3B	NM_001128635	NP_001122107	Coding	chr22:21383750 plus strand	1562959
RIMBP3B	NM_001128635	NP_001122107	Coding	chr22:21551084 minus strand	1562960

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RIMBP3C	NM_001128633	NP_001122105	Coding	chr22:21383373 plus strand	1562961
RIMBP3C	NM_001128633	NP_001122105	Coding	chr22:21551461 minus strand	1562962
RNF185	NM_001135825	NP_001129297	Coding	chr22:31160151 plus strand	1562963
RNF185	NM_152267	NP_689480	Coding	chr22:31160151 plus strand	1562963
RNF215	NM_001017981	NP_001017981	Coding	chr22:30387313 minus strand	1562964
RPL3	NM_000967	NP_000958	Coding	chr22:39319665 minus strand	1562965
RPL3	NM_001033853	NP_001029025	Coding	chr22:39319665 minus strand	1562965
RPS19BP1	NM_194326	NP_919307	Coding	chr22:39532855 minus strand	1562966
RRP7A	NM_015703	NP_056518	Coding	chr22:42519823 minus strand	1562967
RSPH14	NM_014433	NP_055248	Coding	chr22:23142054 minus strand	1562968
RTCB	NM_014306	NP_055121	Coding	chr22:32412287 minus strand	1562969
RTN4R	NM_023004	NP_075380	Coding	chr22:20268293 minus strand	1562970
SAMM50	NM_015380	NP_056195	Coding	chr22:43955380 plus strand	1562971
SBF1	NM_002972	NP_002963	Coding	chr22:50475035 minus strand	1562972
SCARF2	NM_153334	NP_699165	Coding	chr22:20437859 minus strand	1562973
SCARF2	NM_182895	NP_878315	Coding	chr22:20437859 minus strand	1562973
SCO2	NM_001169109	NP_001162580	Coding	chr22:50526439 minus strand	1562974
SCO2	NM_001169110	NP_001162581	Coding	chr22:50526145 minus strand	1562975
SCO2	NM_001169111	NP_001162582	Coding	chr22:50525604 minus strand	1562976
SCO2	NM_005138	NP_005129	Coding	chr22:50525605 minus strand	1562977
SCUBE1	NM_173050	NP_766638	Coding	chr22:43343388 minus strand	1562978
SDF2L1	NM_022044	NP_071327	Coding	chr22:21642252 plus strand	1562979
SEC14L2	NM_001204204	NP_001191133	Coding	chr22:30396940 plus strand	1562980
SEC14L2	NM_001291932	NP_001278861	Coding	chr22:30396940 plus strand	1562980
SEC14L2	NM_012429	NP_036561	Coding	chr22:30396940 plus strand	1562980
SEC14L2	NM_033382	NP_203740	Coding	chr22:30396940 plus strand	1562980
SEC14L3	NM_001257378	NP_001244307	Coding	chr22:30472047 minus strand	1562981

【１３５２】

SEC14L3	NM_001257379	NP_001244308	Coding	chr22:30472047 minus strand	1562981
SEC14L3	NM_001257382	NP_001244311	Coding	chr22:30472047 minus strand	1562981
SEC14L3	NM_174975	NP_777635	Coding	chr22:30472047 minus strand	1562981
SEC14L4	NM_001161368	NP_001154840	Coding	chr22:30505711 minus strand	1562982
SEC14L4	NM_174977	NP_777637	Coding	chr22:30505711 minus strand	1562982
SEC14L6	NM_001193336	NP_001180265	Coding	chr22:30546682 minus strand	1562983
SELM	NM_080430	NP_536355	Coding	chr22:31107565 minus strand	1562984
SELO	NM_031454	NP_113642	Coding	chr22:50200978 plus strand	1562985
SEPT3	NM_019106	NP_061979	Coding	chr22:41976926 plus strand	1562986
SEPT3	NM_145733	NP_663786	Coding	chr22:41976926 plus strand	1562986
SEPT5	NM_001009939	NP_001009939	Coding	chr22:19718434 plus strand	1562987
SEPT5	NM_002688	NP_002679	Coding	chr22:19714463 plus strand	1562988
SERHL2	NM_001284334	NP_001271263	Coding	chr22:42553861 plus strand	1562989
SERHL2	NM_014509	NP_055324	Coding	chr22:42553861 plus strand	1562989
SERPIND1	NM_000185	NP_000176	Coding	chr22:20774094 plus strand	1562990
SEZ6L	NM_001184773	NP_001171702	Coding	chr22:26169473 plus strand	1562991
SEZ6L	NM_001184774	NP_001171703	Coding	chr22:26169473 plus strand	1562991
SEZ6L	NM_001184775	NP_001171704	Coding	chr22:26169473 plus strand	1562991
SEZ6L	NM_001184776	NP_001171705	Coding	chr22:26169473 plus strand	1562991
SEZ6L	NM_001184777	NP_001171706	Coding	chr22:26169473 plus strand	1562991
SEZ6L	NM_021115	NP_066938	Coding	chr22:26169473 plus strand	1562991
SF3A1	NM_005877	NP_005868	Coding	chr22:30356947 minus strand	1562992
SFI1	NM_001007467	NP_001007468	Coding	chr22:31496138 plus strand	1562993
SFI1	NM_001258325	NP_001245254	Coding	chr22:31496138 plus strand	1562993
SFI1	NM_001258326	NP_001245255	Coding	chr22:31496138 plus strand	1562993
SFI1	NM_001258327	NP_001245256	Coding	chr22:31496138 plus strand	1562993
SFI1	NM_014775	NP_055590	Coding	chr22:31496138 plus strand	1562993

【１３５３】

SGSM1	NM_001039948	NP_001035037	Coding	chr22:24806168 plus strand	1562994
SGSM1	NM_001098497	NP_001091967	Coding	chr22:24806168 plus strand	1562994
SGSM1	NM_001098498	NP_001091968	Coding	chr22:24806168 plus strand	1562994
SGSM1	NM_133454	NP_597711	Coding	chr22:24806168 plus strand	1562994
SGSM3	NM_001301849	NP_001288778	Coding	chr22:40370561 plus strand	1562995
SGSM3	NM_015705	NP_056520	Coding	chr22:40370561 plus strand	1562995
SH3BP1	NM_018957	NP_061830	Coding	chr22:37639676 plus strand	1562996
SHANK3	NM_033517	NP_277052	Coding	chr22:50674641 plus strand	1562997
SHISA8	NM_001207020	NP_001193949	Coding	chr22:41914667 minus strand	1562998
SLC16A8	NM_013356	NP_037488	Coding	chr22:38083163 minus strand	1562999
SLC25A1	NM_001256534	NP_001243463	Coding	chr22:19178505 minus strand	1563000
SLC25A1	NM_001287387	NP_001274316	Coding	chr22:19178505 minus strand	1563000
SLC25A1	NM_005984	NP_005975	Coding	chr22:19178863 minus strand	1563001
SLC25A17	NM_001282726	NP_001269655	Coding	chr22:40819399 minus strand	1563002
SLC25A17	NM_001282727	NP_001269656	Coding	chr22:40819399 minus strand	1563002
SLC25A17	NM_006358	NP_006349	Coding	chr22:40819399 minus strand	1563002
SLC25A18	NM_031481	NP_113669	Coding	chr22:17563482 plus strand	1563003
SLC2A11	NM_001024938	NP_001020109	Coding	chr22:23856702 plus strand	1563004
SLC2A11	NM_001024939	NP_001020110	Coding	chr22:23857852 plus strand	1563005
SLC2A11	NM_001282864	NP_001269793	Coding	chr22:23856999 plus strand	1563006
SLC2A11	NM_030807	NP_110434	Coding	chr22:23856702 plus strand	1563004
SLC35E4	NM_001001479	NP_001001479	Coding	chr22:30635805 plus strand	1563007
SLC5A1	NM_000343	NP_000334	Coding	chr22:32043031 plus strand	1563008
SLC5A1	NM_001256314	NP_001243243	Coding	chr22:32059169 plus strand	1563009
SLC5A4	NM_014227	NP_055042	Coding	chr22:32255331 minus strand	1563010
SLC7A4	NM_004173	NP_004164	Coding	chr22:21032558 minus strand	1563011
SMARCB1	NM_001007468	NP_001007469	Coding	chr22:23786962 plus strand	1563012

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SMARCB1	NM_003073	NP_003064	Coding	chr22:23786962 plus strand	1563012
SMC1B	NM_001291501	NP_001278430	Coding	chr22:45413619 minus strand	1563013
SMC1B	NM_148674	NP_683515	Coding	chr22:45413619 minus strand	1563013
SMDT1	NM_033318	NP_201575	Coding	chr22:42079690 plus strand	1563014
SMTN	NM_001207017	NP_001193946	Coding	chr22:31082859 plus strand	1563015
SMTN	NM_001207018	NP_001193947	Coding	chr22:31084995 plus strand	1563016
SMTN	NM_006932	NP_008863	Coding	chr22:31081295 plus strand	1563017
SMTN	NM_134269	NP_599031	Coding	chr22:31081295 plus strand	1563017
SMTN	NM_134270	NP_599032	Coding	chr22:31081295 plus strand	1563017
SNAP29	NM_004782	NP_004773	Coding	chr22:20859003 plus strand	1563018
SNRPD3	NM_001278656	NP_001265585	Coding	chr22:24555649 plus strand	1563019
SNRPD3	NM_004175	NP_004166	Coding	chr22:24555649 plus strand	1563019
SOX10	NM_006941	NP_008872	Coding	chr22:37984532 minus strand	1563020
SPECC1L	NM_001145468	NP_001138940	Coding	chr22:24270816 plus strand	1563021
SPECC1L	NM_001254732	NP_001241661	Coding	chr22:24270816 plus strand	1563021
SPECC1L	NM_001254733	NP_001241662	Coding	chr22:24342107 plus strand	1563022
SPECC1L	NM_015330	NP_056145	Coding	chr22:24270816 plus strand	1563021
SREBF2	NM_004599	NP_004590	Coding	chr22:41833078 plus strand	1563023
SRRD	NM_001013694	NP_001013716	Coding	chr22:26483883 plus strand	1563024
SSTR3	NM_001051	NP_001042	Coding	chr22:37212376 minus strand	1563025
SSTR3	NM_001278687	NP_001265616	Coding	chr22:37210689 minus strand	1563026
ST13	NM_001278589	NP_001265518	Coding	chr22:40857008 minus strand	1563027
ST13	NM_003932	NP_003923	Coding	chr22:40857008 minus strand	1563027
SULT4A1	NM_014351	NP_055166	Coding	chr22:43862498 minus strand	1563028
SUN2	NM_001199579	NP_001186508	Coding	chr22:38756019 minus strand	1563029
SUN2	NM_001199580	NP_001186509	Coding	chr22:38755462 minus strand	1563030
SUN2	NM_015374	NP_056189	Coding	chr22:38756019 minus strand	1563029

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SUSD2	NM_019601	NP_062547	Coding	chr22:24181475 plus strand	1563031
SYCE3	NM_001123225	NP_001116697	Coding	chr22:50562899 minus strand	1563032
SYN3	NM_001135774	NP_001129246	Coding	chr22:33058391 minus strand	1563033
SYN3	NM_003490	NP_003481	Coding	chr22:33006821 minus strand	1563034
SYN3	NM_133633	NP_598344	Coding	chr22:33006821 minus strand	1563034
SYNGR1	NM_004711	NP_004702	Coding	chr22:39349948 plus strand	1563035
SYNGR1	NM_145731	NP_663783	Coding	chr22:39349948 plus strand	1563035
SYNGR1	NM_145738	NP_663791	Coding	chr22:39364169 plus strand	1563036
TAB1	NM_006116	NP_006107	Coding	chr22:39399753 plus strand	1563037
TAB1	NM_153497	NP_705717	Coding	chr22:39399753 plus strand	1563037
TANGO2	NM_001283106	NP_001270035	Coding	chr22:20016999 plus strand	1563038
TANGO2	NM_001283116	NP_001270045	Coding	chr22:20021068 plus strand	1563039
TANGO2	NM_001283129	NP_001270058	Coding	chr22:20021068 plus strand	1563039
TANGO2	NM_001283148	NP_001270077	Coding	chr22:20021068 plus strand	1563039
TANGO2	NM_001283154	NP_001270083	Coding	chr22:20021068 plus strand	1563039
TANGO2	NM_001283179	NP_001270108	Coding	chr22:20016999 plus strand	1563038
TANGO2	NM_001283186	NP_001270115	Coding	chr22:20021068 plus strand	1563039
TANGO2	NM_001283199	NP_001270128	Coding	chr22:20021068 plus strand	1563039
TANGO2	NM_001283215	NP_001270144	Coding	chr22:20021068 plus strand	1563039
TANGO2	NM_001283235	NP_001270164	Coding	chr22:20021068 plus strand	1563039
TANGO2	NM_001283248	NP_001270177	Coding	chr22:20021068 plus strand	1563039
TANGO2	NM_152906	NP_690870	Coding	chr22:20021068 plus strand	1563039
TBC1D10A	NM_001204240	NP_001191169	Coding	chr22:30326966 minus strand	1563040
TBC1D10A	NM_031937	NP_114143	Coding	chr22:30326966 minus strand	1563040
TBC1D22A	NM_001284303	NP_001271232	Coding	chr22:46762616 plus strand	1563041
TBC1D22A	NM_001284304	NP_001271233	Coding	chr22:46762616 plus strand	1563041
TBC1D22A	NM_001284305	NP_001271234	Coding	chr22:46773926 plus strand	1563042

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TBC1D22A	NM_014346	NP_055161	Coding	chr22:46762616 plus strand	1563041
TBX1	NM_005992	NP_005983	Coding	chr22:19756702 plus strand	1563043
TBX1	NM_080646	NP_542377	Coding	chr22:19756702 plus strand	1563043
TBX1	NM_080647	NP_542378	Coding	chr22:19756702 plus strand	1563043
TCF20	NM_005650	NP_005641	Coding	chr22:42215341 minus strand	1563044
TCF20	NM_181492	NP_852469	Coding	chr22:42215341 minus strand	1563044
TCN2	NM_000355	NP_000346	Coding	chr22:30607082 plus strand	1563045
TCN2	NM_001184726	NP_001171655	Coding	chr22:30607082 plus strand	1563045
TEF	NM_001145398	NP_001138870	Coding	chr22:41367332 plus strand	1563046
TEF	NM_003216	NP_003207	Coding	chr22:41381928 plus strand	1563047
TEX33	NM_001163857	NP_001157329	Coding	chr22:37007836 minus strand	1563048
TEX33	NM_178552	NP_848647	Coding	chr22:37007836 minus strand	1563048
TFIP11	NM_001008697	NP_001008697	Coding	chr22:26512471 minus strand	1563049
TFIP11	NM_012143	NP_036275	Coding	chr22:26512471 minus strand	1563049
THAP7	NM_001008695	NP_001008695	Coding	chr22:21002115 minus strand	1563050
THAP7	NM_030573	NP_085050	Coding	chr22:21002115 minus strand	1563050
THOC5	NM_001002877	NP_001002877	Coding	chr22:29553747 minus strand	1563051
THOC5	NM_001002878	NP_001002878	Coding	chr22:29553655 minus strand	1563052
THOC5	NM_001002879	NP_001002879	Coding	chr22:29553655 minus strand	1563052
THOC5	NM_003678	NP_003669	Coding	chr22:29553747 minus strand	1563051
TIMP3	NM_000362	NP_000353	Coding	chr22:32800815 plus strand	1563053
TMEM184B	NM_001195071	NP_001182000	Coding	chr22:38272664 minus strand	1563054
TMEM184B	NM_001195072	NP_001182001	Coding	chr22:38273034 minus strand	1563055
TMEM184B	NM_012264	NP_036396	Coding	chr22:38273034 minus strand	1563055
TMEM191B	NM_001242313	NP_001229242	Coding	chr22:18527801 plus strand	1563056
TMEM191C	NM_001207052	NP_001193981	Coding	chr22:21467169 plus strand	1563057
TMEM211	NM_001001663	NP_001001663	Coding	chr22:24939347 minus strand	1563058

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TMPRSS6	NM_001289000	NP_001275929	Coding	chr22:37109563 minus strand	1563059
TMPRSS6	NM_001289001	NP_001275930	Coding	chr22:37109409 minus strand	1563060
TMPRSS6	NM_153609	NP_705837	Coding	chr22:37103653 minus strand	1563061
TNFRSF13C	NM_052945	NP_443177	Coding	chr22:41926817 minus strand	1563062
TNRC6B	NM_001024843	NP_001020014	Coding	chr22:40044816 plus strand	1563063
TNRC6B	NM_001162501	NP_001155973	Coding	chr22:40177924 plus strand	1563064
TNRC6B	NM_015088	NP_055903	Coding	chr22:40177924 plus strand	1563064
TOB2	NM_016272	NP_057356	Coding	chr22:41447023 minus strand	1563065
TOM1	NM_001135729	NP_001129201	Coding	chr22:35299274 plus strand	1563066
TOM1	NM_001135730	NP_001129202	Coding	chr22:35299803 plus strand	1563067
TOM1	NM_001135732	NP_001129204	Coding	chr22:35299803 plus strand	1563067
TOM1	NM_005488	NP_005479	Coding	chr22:35299803 plus strand	1563067
TOMM22	NM_020243	NP_064628	Coding	chr22:38681948 plus strand	1563068
TOP3B	NM_001282112	NP_001269041	Coding	chr22:21982843 minus strand	1563069
TOP3B	NM_001282113	NP_001269042	Coding	chr22:21982843 minus strand	1563069
TOP3B	NM_003935	NP_003926	Coding	chr22:21982843 minus strand	1563069
TPST2	NM_001008566	NP_001008566	Coding	chr22:26565404 minus strand	1563070
TPST2	NM_003595	NP_003586	Coding	chr22:26590125 minus strand	1563071
TRABD	NM_025204	NP_079480	Coding	chr22:50185930 plus strand	1563072
TRIOBP	NM_001039141	NP_001034230	Coding	chr22:37696987 plus strand	1563073
TRIOBP	NM_007032	NP_008963	Coding	chr22:37746233 plus strand	1563074
TRIOBP	NM_138632	NP_619538	Coding	chr22:37746233 plus strand	1563074
TRMT2A	NM_001257994	NP_001244923	Coding	chr22:20117295 minus strand	1563075
TRMT2A	NM_022727	NP_073564	Coding	chr22:20117295 minus strand	1563075
TRMT2A	NM_182984	NP_892029	Coding	chr22:20117295 minus strand	1563075
TRMU	NM_001282782	NP_001269711	Coding	chr22:46335400 plus strand	1563076
TRMU	NM_001282783	NP_001269712	Coding	chr22:46335400 plus strand	1563076

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TRMU	NM_001282784	NP_001269713	Coding	chr22:46335400 plus strand	1563076
TRMU	NM_001282785	NP_001269714	Coding	chr22:46335400 plus strand	1563076
TRMU	NM_018006	NP_060476	Coding	chr22:46335400 plus strand	1563076
TSPO	NM_000714	NP_000705	Coding	chr22:43151513 plus strand	1563077
TSPO	NM_001256530	NP_001243459	Coding	chr22:43151934 plus strand	1563078
TSPO	NM_001256531	NP_001243460	Coding	chr22:43151932 plus strand	1563079
TSSK2	NM_053006	NP_443732	Coding	chr22:19130807 plus strand	1563080
TST	NM_001270483	NP_001257412	Coding	chr22:37020183 minus strand	1563081
TST	NM_003312	NP_003303	Coding	chr22:37019453 minus strand	1563082
TTC28	NM_001145418	NP_001138890	Coding	chr22:28679865 minus strand	1563083
TTC38	NM_017931	NP_060401	Coding	chr22:46267963 plus strand	1563084
TTLL1	NM_012263	NP_036395	Coding	chr22:43089428 minus strand	1563085
TTLL12	NM_015140	NP_055955	Coding	chr22:43187131 minus strand	1563086
TUBA8	NM_001193414	NP_001180343	Coding	chr22:18110686 plus strand	1563087
TUBA8	NM_018943	NP_061816	Coding	chr22:18110686 plus strand	1563087
TUBGCP6	NM_020461	NP_065194	Coding	chr22:50244971 minus strand	1563088
TXN2	NM_012473	NP_036605	Coding	chr22:36481640 minus strand	1563089
TXNRD2	NM_001282512	NP_001269441	Coding	chr22:19941992 minus strand	1563090
TXNRD2	NM_006440	NP_006431	Coding	chr22:19941992 minus strand	1563090
TYMP	NM_001113755	NP_001107227	Coding	chr22:50530085 minus strand	1563091
TYMP	NM_001113756	NP_001107228	Coding	chr22:50530085 minus strand	1563091
TYMP	NM_001257988	NP_001244917	Coding	chr22:50530085 minus strand	1563091
TYMP	NM_001257989	NP_001244918	Coding	chr22:50530085 minus strand	1563091
TYMP	NM_001953	NP_001944	Coding	chr22:50530085 minus strand	1563091
UBE2L3	NM_001256355	NP_001243284	Coding	chr22:21549446 plus strand	1563092
UBE2L3	NM_001256356	NP_001243285	Coding	chr22:21567546 plus strand	1563093
UBE2L3	NM_003347	NP_003338	Coding	chr22:21567546 plus strand	1563093

【１３５９】

UFD1L	NM_001035247	NP_001030324	Coding	chr22:19479215 minus strand	1563094
UFD1L	NM_005659	NP_005650	Coding	chr22:19479215 minus strand	1563094
UPB1	NM_016327	NP_057411	Coding	chr22:24495282 plus strand	1563095
UPK3A	NM_001167574	NP_001161046	Coding	chr22:45284986 plus strand	1563096
UPK3A	NM_006953	NP_008884	Coding	chr22:45284986 plus strand	1563096
UQCR10	NM_001003684	NP_001003684	Coding	chr22:29767368 plus strand	1563097
UQCR10	NM_013387	NP_037519	Coding	chr22:29767368 plus strand	1563097
USP18	NM_017414	NP_059110	Coding	chr22:18149990 plus strand	1563098
VPREB1	NM_007128	NP_009059	Coding	chr22:22244787 plus strand	1563099
VPREB3	NM_013378	NP_037510	Coding	chr22:23754443 minus strand	1563100
WBP2NL	NM_152613	NP_689826	Coding	chr22:41998724 plus strand	1563101
WNT7B	NM_058238	NP_478679	Coding	chr22:45977128 minus strand	1563102
XBP1	NM_001079539	NP_001073007	Coding	chr22:28800572 minus strand	1563103
XBP1	NM_005080	NP_005071	Coding	chr22:28800572 minus strand	1563103
XKR3	NM_175878	NP_787074	Coding	chr22:16821694 minus strand	1563104
XPNPEP3	NM_001204827	NP_001191756	Coding	chr22:40857080 plus strand	1563105
XPNPEP3	NM_022098	NP_071381	Coding	chr22:40857080 plus strand	1563105
XRCC6	NM_001288976	NP_001275905	Coding	chr22:41621341 plus strand	1563106
XRCC6	NM_001288977	NP_001275906	Coding	chr22:41621162 plus strand	1563107
XRCC6	NM_001288978	NP_001275907	Coding	chr22:41621162 plus strand	1563107
XRCC6	NM_001469	NP_001460	Coding	chr22:41621162 plus strand	1563107
YDJC	NM_001017964	NP_001017964	Coding	chr22:21630051 minus strand	1563108
YPEL1	NM_013313	NP_037445	Coding	chr22:21735782 minus strand	1563109
YWHAH	NM_003405	NP_003396	Coding	chr22:31944492 plus strand	1563110
ZBED4	NM_014838	NP_055653	Coding	chr22:49853848 plus strand	1563111
ZC3H7B	NM_017590	NP_060060	Coding	chr22:41301502 plus strand	1563112
ZDHHC8	NM_001185024	NP_001171953	Coding	chr22:20131840 plus strand	1563113

【１３６０】

ZDHHC8	NM_013373	NP_037505	Coding	chr22:20131840 plus strand	1563113
ZMAT5	NM_001003692	NP_001003692	Coding	chr22:29766980 minus strand	1563114
ZMAT5	NM_019103	NP_061976	Coding	chr22:29766980 minus strand	1563114
ZNF280A	NM_080740	NP_542778	Coding	chr22:22520281 minus strand	1563115
ZNF280B	NM_080764	NP_542942	Coding	chr22:22509187 minus strand	1563116
ZNF70	NM_021916	NP_068735	Coding	chr22:23751092 minus strand	1563117
ZNF74	NM_001256523	NP_001243452	Coding	chr22:20394114 plus strand	1563118
ZNF74	NM_001256524	NP_001243453	Coding	chr22:20394114 plus strand	1563118
ZNF74	NM_001256525	NP_001243454	Coding	chr22:20394114 plus strand	1563118
ZNF74	NM_003426	NP_003417	Coding	chr22:20394114 plus strand	1563118
ZNRF3	NM_001206998	NP_001193927	Coding	chr22:28883766 plus strand	1563119
ZNRF3	NM_032173	NP_115549	Coding	chr22:28917388 plus strand	1563120
ABCB7	NM_001271696	NP_001258625	Coding	chrX:75156340 minus strand	1563121
ABCB7	NM_001271697	NP_001258626	Coding	chrX:75156340 minus strand	1563121
ABCB7	NM_001271698	NP_001258627	Coding	chrX:75156340 minus strand	1563121
ABCB7	NM_001271699	NP_001258628	Coding	chrX:75156340 minus strand	1563121
ABCB7	NM_004299	NP_004290	Coding	chrX:75156340 minus strand	1563121
ABCD1	NM_000033	NP_000024	Coding	chrX:153724867 plus strand	1563122
ACE2	NM_021804	NP_068576	Coding	chrX:15602069 minus strand	1563123
ACOT9	NM_001033583	NP_001028755	Coding	chrX:23743290 minus strand	1563124
ACOT9	NM_001037171	NP_001032248	Coding	chrX:23743290 minus strand	1563124
ACRC	NM_052957	NP_443189	Coding	chrX:71578023 plus strand	1563125
ACSL4	NM_004458	NP_004449	Coding	chrX:109733392 minus strand	1563126
ACSL4	NM_022977	NP_075266	Coding	chrX:109733392 minus strand	1563126
ACTRT1	NM_138289	NP_612146	Coding	chrX:128052403 minus strand	1563127
AFF2	NM_001169122	NP_001162593	Coding	chrX:148500618 plus strand	1563128
AFF2	NM_001169123	NP_001162594	Coding	chrX:148500618 plus strand	1563128
AFF2	NM_001169124	NP_001162595	Coding	chrX:148500618 plus	1563128

【１３６１】

				strand	
AFF2	NM_001169125	NP_001162596	Coding	chrX:148500618 plus strand	1563128
AFF2	NM_001170628	NP_001164099	Coding	chrX:148719090 plus strand	1563129
AFF2	NM_002025	NP_002016	Coding	chrX:148500618 plus strand	1563128
AGTR2	NM_000686	NP_000677	Coding	chrX:116170704 plus strand	1563130
AIFM1	NM_001130846	NP_001124318	Coding	chrX:130138040 minus strand	1563131
AIFM1	NM_001130847	NP_001124319	Coding	chrX:130165887 minus strand	1563132
AIFM1	NM_004208	NP_004199	Coding	chrX:130165887 minus strand	1563132
AIFM1	NM_145812	NP_665811	Coding	chrX:130165887 minus strand	1563132
AIFM1	NM_145813	NP_665812	Coding	chrX:130165887 minus strand	1563132
AKAP14	NM_001008534	NP_001008534	Coding	chrX:119895972 plus strand	1563133
AKAP14	NM_001008535	NP_001008535	Coding	chrX:119895972 plus strand	1563133
AKAP14	NM_178813	NP_848928	Coding	chrX:119895972 plus strand	1563133
AKAP17A	NM_005088	NP_005079	Coding	chrX:1591592 plus strand	1563134
AKAP4	NM_003886	NP_003877	Coding	chrX:50201013 minus strand	1563135
AKAP4	NM_139289	NP_647450	Coding	chrX:50200353 minus strand	1563136
ALAS2	NM_000032	NP_000023	Coding	chrX:55031064 minus strand	1563137
ALAS2	NM_001037967	NP_001033056	Coding	chrX:55031064 minus strand	1563137
ALAS2	NM_001037968	NP_001033057	Coding	chrX:55031064 minus strand	1563137
ALG13	NM_001039210	NP_001034299	Coding	chrX:111681117 plus strand	1563138
ALG13	NM_001099922	NP_001093392	Coding	chrX:111681117 plus strand	1563138
ALG13	NM_001168385	NP_001161857	Coding	chrX:111681117 plus strand	1563138
ALG13	NM_001257230	NP_001244159	Coding	chrX:111681117 plus strand	1563138
ALG13	NM_001257231	NP_001244160	Coding	chrX:111681169 plus strand	1563139
ALG13	NM_001257234	NP_001244163	Coding	chrX:111681169 plus strand	1563139
ALG13	NM_001257235	NP_001244164	Coding	chrX:111681169 plus strand	1563139
ALG13	NM_001257237	NP_001244166	Coding	chrX:111681169 plus strand	1563139
ALG13	NM_001257239	NP_001244168	Coding	chrX:111681656 plus strand	1563140

【１３６２】

ALG13	NM_001257240	NP_001244169	Coding	chrX:111681169 plus strand	1563139
ALG13	NM_001257241	NP_001244170	Coding	chrX:111681169 plus strand	1563139
ALG13	NM_018466	NP_060936	Coding	chrX:111681117 plus strand	1563138
AMELX	NM_001142	NP_001133	Coding	chrX:11293412 plus strand	1563141
AMELX	NM_182680	NP_872621	Coding	chrX:11293412 plus strand	1563141
AMELX	NM_182681	NP_872622	Coding	chrX:11293412 plus strand	1563141
AMER1	NM_152424	NP_689637	Coding	chrX:64205744 minus strand	1563142
AMMECR1	NM_001025580	NP_001020751	Coding	chrX:110318152 minus strand	1563143
AMMECR1	NM_001171689	NP_001165160	Coding	chrX:110440233 minus strand	1563144
AMMECR1	NM_015365	NP_056180	Coding	chrX:110318152 minus strand	1563143
AMOT	NM_001113490	NP_001106962	Coding	chrX:112823126 minus strand	1563145
AMOT	NM_133265	NP_573572	Coding	chrX:112840815 minus strand	1563146
AP1S2	NM_001272071	NP_001259000	Coding	chrX:15855014 minus strand	1563147
AP1S2	NM_003916	NP_003907	Coding	chrX:15855014 minus strand	1563147
APEX2	NM_001271748	NP_001258677	Coding	chrX:55000322 plus strand	1563148
APEX2	NM_014481	NP_055296	Coding	chrX:55000322 plus strand	1563148
APLN	NM_017413	NP_059109	Coding	chrX:129654956 minus strand	1563149
APOO	NM_024122	NP_077027	Coding	chrX:23907940 minus strand	1563150
APOOL	NM_198450	NP_940852	Coding	chrX:85003891 plus strand	1563151
AR	NM_000044	NP_000035	Coding	chrX:67544031 plus strand	1563152
AR	NM_001011645	NP_001011645	Coding	chrX:67568840 plus strand	1563153
ARAF	NM_001256196	NP_001243125	Coding	chrX:47561099 plus strand	1563154
ARAF	NM_001256197	NP_001243126	Coding	chrX:47561099 plus strand	1563154
ARAF	NM_001654	NP_001645	Coding	chrX:47561099 plus strand	1563154
ARHGAP36	NM_001282607	NP_001269536	Coding	chrX:131058241 plus strand	1563155
ARHGAP36	NM_144967	NP_659404	Coding	chrX:131058241 plus strand	1563155
ARHGAP4	NM_001164741	NP_001158213	Coding	chrX:153926260 minus strand	1563156
ARHGAP4	NM_001666	NP_001657	Coding	chrX:153926260 minus strand	1563156
ARHGAP6	NM_001287242	NP_001274171	Coding	chrX:11427785 minus strand	1563157
ARHGAP6	NM_006125	NP_006116	Coding	chrX:11665701 minus strand	1563158
ARHGAP6	NM_013423	NP_038267	Coding	chrX:11265975 minus strand	1563159

【１３６３】

ARHGAP6	NM_013427	NP_038286	Coding	chrX:11665701 minus strand	1563158
ARHGEF6	NM_004840	NP_004831	Coding	chrX:136781344 minus strand	1563160
ARHGEF9	NM_001173479	NP_001166950	Coding	chrX:63785546 minus strand	1563161
ARHGEF9	NM_001173480	NP_001166951	Coding	chrX:63755151 minus strand	1563162
ARHGEF9	NM_015185	NP_056000	Coding	chrX:63755151 minus strand	1563162
ARL13A	NM_001162491	NP_001155963	Coding	chrX:100969707 plus strand	1563163
ARMCX1	NM_016608	NP_057692	Coding	chrX:101550530 plus strand	1563164
ARMCX2	NM_001282231	NP_001269160	Coding	chrX:101659891 minus strand	1563165
ARMCX2	NM_014782	NP_055597	Coding	chrX:101659891 minus strand	1563165
ARMCX2	NM_177949	NP_808818	Coding	chrX:101659891 minus strand	1563165
ARMCX3	NM_016607	NP_057691	Coding	chrX:101623129 plus strand	1563166
ARMCX3	NM_177947	NP_808816	Coding	chrX:101623129 plus strand	1563166
ARMCX3	NM_177948	NP_808817	Coding	chrX:101623360 plus strand	1563167
ARMCX4	NM_001256155	NP_001243084	Coding	chrX:101488043 plus strand	1563168
ARMCX5	NM_001168478	NP_001161950	Coding	chrX:102599497 plus strand	1563169
ARMCX5	NM_001168479	NP_001161951	Coding	chrX:102599167 plus strand	1563170
ARMCX5	NM_001168480	NP_001161952	Coding	chrX:102599167 plus strand	1563170
ARMCX5	NM_001168482	NP_001161954	Coding	chrX:102599497 plus strand	1563169
ARMCX5	NM_001168485	NP_001161957	Coding	chrX:102599167 plus strand	1563170
ARMCX5	NM_022838	NP_073749	Coding	chrX:102599497 plus strand	1563169
ARMCX5-GPRASP2	NM_001199818	NP_001186747	Coding	chrX:102599347 plus strand	1563171
ARMCX6	NM_001009584	NP_001009584	Coding	chrX:101618001 minus strand	1563172
ARMCX6	NM_001184768	NP_001171697	Coding	chrX:101618001 minus strand	1563172
ARMCX6	NM_019007	NP_061880	Coding	chrX:101618001 minus strand	1563172
ARR3	NM_004312	NP_004303	Coding	chrX:70268334 plus strand	1563173
ARSD	NM_001669	NP_001660	Coding	chrX:2929375 minus strand	1563174
ARSE	NM_000047	NP_000038	Coding	chrX:2964453 minus strand	1563175
ARSE	NM_001282628	NP_001269557	Coding	chrX:2964453 minus	1563175

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				strand	
ARSE	NM_001282631	NP_001269560	Coding	chrX:2968310 minus strand	1563176
ARSF	NM_001201538	NP_001188467	Coding	chrX:3040233 plus strand	1563177
ARSF	NM_001201539	NP_001188468	Coding	chrX:3041470 plus strand	1563178
ARSF	NM_004042	NP_004033	Coding	chrX:3066798 plus strand	1563179
ARSH	NM_001011719	NP_001011719	Coding	chrX:3006612 plus strand	1563180
ARX	NM_139058	NP_620689	Coding	chrX:25015948 minus strand	1563181
ASB11	NM_001012428	NP_001012428	Coding	chrX:15314559 minus strand	1563182
ASB11	NM_001201583	NP_001188512	Coding	chrX:15315624 minus strand	1563183
ASB11	NM_080873	NP_543149	Coding	chrX:15315624 minus strand	1563183
ASB12	NM_130388	NP_569059	Coding	chrX:64230631 minus strand	1563184
ASB9	NM_001031739	NP_001026909	Coding	chrX:15270171 minus strand	1563185
ASB9	NM_001168530	NP_001162002	Coding	chrX:15270171 minus strand	1563185
ASB9	NM_001168531	NP_001162003	Coding	chrX:15270467 minus strand	1563186
ASB9	NM_024087	NP_076992	Coding	chrX:15270171 minus strand	1563185
ASMT	NM_001171038	NP_001164509	Coding	chrX:1615047 plus strand	1563187
ASMT	NM_001171039	NP_001164510	Coding	chrX:1615132 plus strand	1563188
ASMT	NM_004043	NP_004034	Coding	chrX:1595454 plus strand	1563189
ASMTL	NM_001173473	NP_001166944	Coding	chrX:1453762 minus strand	1563190
ASMTL	NM_001173474	NP_001166945	Coding	chrX:1452977 minus strand	1563191
ASMTL	NM_004192	NP_004183	Coding	chrX:1452977 minus strand	1563191
ATG4A	NM_052936	NP_443168	Coding	chrX:108091668 plus strand	1563192
ATG4A	NM_178270	NP_840054	Coding	chrX:108091668 plus strand	1563192
ATP11C	NM_001010986	NP_001010986	Coding	chrX:139832288 minus strand	1563193
ATP11C	NM_173694	NP_775965	Coding	chrX:139832288 minus strand	1563193
ATP1B4	NM_001142447	NP_001135919	Coding	chrX:120362084 plus strand	1563194
ATP1B4	NM_012069	NP_036201	Coding	chrX:120362084 plus strand	1563194
ATP2B3	NM_001001344	NP_001001344	Coding	chrX:153536121 plus strand	1563195
ATP2B3	NM_021949	NP_068768	Coding	chrX:153536121 plus strand	1563195
ATP6AP1	NM_001183	NP_001174	Coding	chrX:154428631 plus strand	1563196

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ATP6AP2	NM_005765	NP_005756	Coding	chrX:40580963 plus strand	1563197
ATP7A	NM_000052	NP_000043	Coding	chrX:77910655 plus strand	1563198
ATP7A	NM_001282224	NP_001269153	Coding	chrX:77910655 plus strand	1563198
ATRX	NM_000489	NP_000480	Coding	chrX:77786269 minus strand	1563199
ATRX	NM_138270	NP_612114	Coding	chrX:77786269 minus strand	1563199
ATXN3L	NM_001135995	NP_001129467	Coding	chrX:13320399 minus strand	1563200
AVPR2	NM_000054	NP_000045	Coding	chrX:153905074 plus strand	1563201
AVPR2	NM_001146151	NP_001139623	Coding	chrX:153905074 plus strand	1563201
AWAT1	NM_001013579	NP_001013597	Coding	chrX:70234654 plus strand	1563202
AWAT2	NM_001002254	NP_001002254	Coding	chrX:70049938 minus strand	1563203
BCAP31	NM_001139441	NP_001132913	Coding	chrX:153724127 minus strand	1563204
BCAP31	NM_001139457	NP_001132929	Coding	chrX:153724101 minus strand	1563205
BCAP31	NM_001256447	NP_001243376	Coding	chrX:153724746 minus strand	1563206
BCAP31	NM_005745	NP_005736	Coding	chrX:153724383 minus strand	1563207
BCOR	NM_001123383	NP_001116855	Coding	chrX:40177329 minus strand	1563208
BCOR	NM_001123384	NP_001116856	Coding	chrX:40177329 minus strand	1563208
BCOR	NM_001123385	NP_001116857	Coding	chrX:40097466 minus strand	1563209
BCOR	NM_017745	NP_060215	Coding	chrX:40097466 minus strand	1563209
BCORL1	NM_021946	NP_068765	Coding	chrX:130005187 plus strand	1563210
BEND2	NM_001184767	NP_001171696	Coding	chrX:18220904 minus strand	1563211
BEND2	NM_153346	NP_699177	Coding	chrX:18220904 minus strand	1563211
BEX1	NM_018476	NP_060946	Coding	chrX:103064240 minus strand	1563212
BEX2	NM_001168399	NP_001161871	Coding	chrX:103310955 minus strand	1563213
BEX2	NM_001168400	NP_001161872	Coding	chrX:103310955 minus strand	1563213
BEX2	NM_001168401	NP_001161873	Coding	chrX:103311010 minus strand	1563214
BEX2	NM_032621	NP_116010	Coding	chrX:103311046 minus strand	1563215
BEX4	NM_001080425	NP_001073894	Coding	chrX:103215091 plus strand	1563216
BEX4	NM_001127688	NP_001121160	Coding	chrX:103215091 plus strand	1563216
BEX5	NM_001012978	NP_001012996	Coding	chrX:102156014 minus	1563217

【１３６６】

				strand	
BEX5	NM_001159560	NP_001153032	Coding	chrX:102155790 minus strand	1563218
BGN	NM_001711	NP_001702	Coding	chrX:153494888 plus strand	1563219
BHLHB9	NM_001142524	NP_001135996	Coding	chrX:102720713 plus strand	1563220
BHLHB9	NM_001142525	NP_001135997	Coding	chrX:102720713 plus strand	1563220
BHLHB9	NM_001142526	NP_001135998	Coding	chrX:102720713 plus strand	1563220
BHLHB9	NM_001142527	NP_001135999	Coding	chrX:102720713 plus strand	1563220
BHLHB9	NM_001142528	NP_001136000	Coding	chrX:102720713 plus strand	1563220
BHLHB9	NM_001142529	NP_001136001	Coding	chrX:102745978 plus strand	1563221
BHLHB9	NM_001142530	NP_001136002	Coding	chrX:102745978 plus strand	1563221
BHLHB9	NM_030639	NP_085142	Coding	chrX:102720713 plus strand	1563220
BMP15	NM_005448	NP_005439	Coding	chrX:50910734 plus strand	1563222
BMX	NM_001721	NP_001712	Coding	chrX:15507307 plus strand	1563223
BMX	NM_203281	NP_975010	Coding	chrX:15500776 plus strand	1563224
BRCC3	NM_001018055	NP_001018065	Coding	chrX:155071419 plus strand	1563225
BRCC3	NM_001242640	NP_001229569	Coding	chrX:155071419 plus strand	1563225
BRCC3	NM_024332	NP_077308	Coding	chrX:155071419 plus strand	1563225
BRS3	NM_001727	NP_001718	Coding	chrX:136487965 plus strand	1563226
BRWD3	NM_153252	NP_694984	Coding	chrX:80809734 minus strand	1563227
BTK	NM_000061	NP_000052	Coding	chrX:101386224 minus strand	1563228
BTK	NM_001287344	NP_001274273	Coding	chrX:101390796 minus strand	1563229
BTK	NM_001287345	NP_001274274	Coding	chrX:101386224 minus strand	1563228
C1GALT1C1	NM_001011551	NP_001011551	Coding	chrX:120630150 minus strand	1563230
C1GALT1C1	NM_152692	NP_689905	Coding	chrX:120630150 minus strand	1563230
CA5B	NM_007220	NP_009151	Coding	chrX:15738288 plus strand	1563231
CACNA1F	NM_001256789	NP_001243718	Coding	chrX:49233371 minus strand	1563232
CACNA1F	NM_001256790	NP_001243719	Coding	chrX:49233371 minus strand	1563232
CACNA1F	NM_005183	NP_005174	Coding	chrX:49233371 minus strand	1563232
CAPN6	NM_014289	NP_055104	Coding	chrX:111270546 minus strand	1563233

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CASK	NM_001126054	NP_001119526	Coding	chrX:41923034 minus strand	1563234
CASK	NM_001126055	NP_001119527	Coding	chrX:41923034 minus strand	1563234
CASK	NM_003688	NP_003679	Coding	chrX:41923034 minus strand	1563234
CCDC120	NM_001163321	NP_001156793	Coding	chrX:49058965 plus strand	1563235
CCDC120	NM_001163322	NP_001156794	Coding	chrX:49058965 plus strand	1563235
CCDC120	NM_001163323	NP_001156795	Coding	chrX:49058965 plus strand	1563235
CCDC120	NM_001271835	NP_001258764	Coding	chrX:49058965 plus strand	1563235
CCDC120	NM_001271836	NP_001258765	Coding	chrX:49053431 plus strand	1563236
CCDC120	NM_033626	NP_296375	Coding	chrX:49058965 plus strand	1563235
CCDC160	NM_001101357	NP_001094827	Coding	chrX:134237046 plus strand	1563237
CCDC22	NM_014008	NP_054727	Coding	chrX:49235466 plus strand	1563238
CCNB3	NM_033031	NP_149020	Coding	chrX:50284539 plus strand	1563239
CCNB3	NM_033670	NP_391990	Coding	chrX:50284539 plus strand	1563239
CD40LG	NM_000074	NP_000065	Coding	chrX:136648176 plus strand	1563240
CD99	NM_001122898	NP_001116370	Coding	chrX:2691186 plus strand	1563241
CD99	NM_001277710	NP_001264639	Coding	chrX:2691186 plus strand	1563241
CD99	NM_002414	NP_002405	Coding	chrX:2691186 plus strand	1563241
CD99L2	NM_001184808	NP_001171737	Coding	chrX:150898816 minus strand	1563242
CD99L2	NM_001242614	NP_001229543	Coding	chrX:150898816 minus strand	1563242
CD99L2	NM_031462	NP_113650	Coding	chrX:150898816 minus strand	1563242
CD99L2	NM_134445	NP_604394	Coding	chrX:150898816 minus strand	1563242
CD99L2	NM_134446	NP_604395	Coding	chrX:150898816 minus strand	1563242
CDK16	NM_001170460	NP_001163931	Coding	chrX:47223017 plus strand	1563243
CDK16	NM_006201	NP_006192	Coding	chrX:47218676 plus strand	1563244
CDK16	NM_033018	NP_148978	Coding	chrX:47218128 plus strand	1563245
CDKL5	NM_001037343	NP_001032420	Coding	chrX:18442223 plus strand	1563246
CDKL5	NM_003159	NP_003150	Coding	chrX:18425604 plus strand	1563247
CDR1	NM_004065	NP_004056	Coding	chrX:140784558 minus strand	1563248
CDX4	NM_005193	NP_005184	Coding	chrX:73447253 plus strand	1563249
CENPI	NM_006733	NP_006724	Coding	chrX:101099808 plus strand	1563250
CETN2	NM_004344	NP_004335	Coding	chrX:152830757 minus strand	1563251
CFP	NM_001145252	NP_001138724	Coding	chrX:47629970 minus strand	1563252
CFP	NM_002621	NP_002612	Coding	chrX:47630305 minus strand	1563253
CHDC2	NM_173695	NP_775966	Coding	chrX:36046935 plus strand	1563254

【１３６８】

CHIC1	NM_001039840	NP_001034929	Coding	chrX:73563147 plus strand	1563255
CHIC1	NM_001300884	NP_001287813	Coding	chrX:73563147 plus strand	1563255
CHM	NM_000390	NP_000381	Coding	chrX:86047562 minus strand	1563256
CHM	NM_001145414	NP_001138886	Coding	chrX:86047562 minus strand	1563256
CHRDL1	NM_001143981	NP_001137453	Coding	chrX:110796058 minus strand	1563257
CHRDL1	NM_001143982	NP_001137454	Coding	chrX:110796058 minus strand	1563257
CHRDL1	NM_001143983	NP_001137455	Coding	chrX:110796058 minus strand	1563257
CHRDL1	NM_145234	NP_660277	Coding	chrX:110795848 minus strand	1563258
CHST7	NM_019886	NP_063939	Coding	chrX:46573686 plus strand	1563259
CITED1	NM_001144885	NP_001138357	Coding	chrX:72305914 minus strand	1563260
CITED1	NM_001144886	NP_001138358	Coding	chrX:72307187 minus strand	1563261
CITED1	NM_001144887	NP_001138359	Coding	chrX:72305914 minus strand	1563260
CITED1	NM_004143	NP_004134	Coding	chrX:72306987 minus strand	1563262
CLCN4	NM_001256944	NP_001243873	Coding	chrX:10156944 plus strand	1563263
CLCN4	NM_001830	NP_001821	Coding	chrX:10156944 plus strand	1563263
CLCN5	NM_000084	NP_000075	Coding	chrX:50067559 plus strand	1563264
CLCN5	NM_001127898	NP_001121370	Coding	chrX:49922614 plus strand	1563265
CLCN5	NM_001127899	NP_001121371	Coding	chrX:49922614 plus strand	1563265
CLCN5	NM_001272102	NP_001259031	Coding	chrX:49922614 plus strand	1563265
CLCN5	NM_001282163	NP_001269092	Coding	chrX:50069500 plus strand	1563266
CLDN2	NM_001171092	NP_001164563	Coding	chrX:106900163 plus strand	1563267
CLDN2	NM_001171095	NP_001164566	Coding	chrX:106918359 plus strand	1563268
CLDN2	NM_020384	NP_065117	Coding	chrX:106920375 plus strand	1563269
CLIC2	NM_001289	NP_001280	Coding	chrX:155334681 minus strand	1563270
CMC4	NM_001018024	NP_001018024	Coding	chrX:155071272 minus strand	1563271
CNGA2	NM_005140	NP_005131	Coding	chrX:151734745 plus strand	1563272
CNKSR2	NM_001168647	NP_001162118	Coding	chrX:21374417 plus strand	1563273
CNKSR2	NM_001168648	NP_001162119	Coding	chrX:21374417 plus strand	1563273
CNKSR2	NM_001168649	NP_001162120	Coding	chrX:21374417 plus strand	1563273
CNKSR2	NM_014927	NP_055742	Coding	chrX:21374417 plus strand	1563273
COL4A5	NM_000495	NP_000486	Coding	chrX:108439843 plus strand	1563274
COL4A5	NM_033380	NP_203699	Coding	chrX:108439843 plus strand	1563274

【１３６９】

COL4A6	NM_001287758	NP_001274687	Coding	chrX:108438430 minus strand	1563275
COL4A6	NM_001287759	NP_001274688	Coding	chrX:108438430 minus strand	1563275
COL4A6	NM_001287760	NP_001274689	Coding	chrX:108438430 minus strand	1563275
COL4A6	NM_001847	NP_001838	Coding	chrX:108439497 minus strand	1563276
COL4A6	NM_033641	NP_378667	Coding	chrX:108438430 minus strand	1563275
COX7B	NM_001866	NP_001857	Coding	chrX:77899463 plus strand	1563277
CPXCR1	NM_001184771	NP_001171700	Coding	chrX:88747224 plus strand	1563278
CPXCR1	NM_033048	NP_149037	Coding	chrX:88747224 plus strand	1563278
CRLF2	NM_001012288	NP_001012288	Coding	chrX:1212723 minus strand	1563279
CRLF2	NM_022148	NP_071431	Coding	chrX:1212723 minus strand	1563279
CSAG1	NM_001102576	NP_001096046	Coding	chrX:152733736 minus strand	1563280
CSAG1	NM_153478	NP_705611	Coding	chrX:152733736 minus strand	1563280
CSAG3	NM_001129826	NP_001123298	Coding	chrX:152709188 minus strand	1563281
CSAG3	NM_001129826	NP_001123298	Coding	chrX:152759294 plus strand	1563282
CSAG3	NM_001129828	NP_001123300	Coding	chrX:152709265 minus strand	1563283
CSAG3	NM_001129828	NP_001123300	Coding	chrX:152759217 plus strand	1563284
CSF2RA	NM_001161529	NP_001155001	Coding	chrX:1268799 plus strand	1563285
CSF2RA	NM_001161530	NP_001155002	Coding	chrX:1282677 plus strand	1563286
CSF2RA	NM_001161531	NP_001155003	Coding	chrX:1268799 plus strand	1563285
CSF2RA	NM_001161532	NP_001155004	Coding	chrX:1268799 plus strand	1563285
CSF2RA	NM_006140	NP_006131	Coding	chrX:1268799 plus strand	1563285
CSF2RA	NM_172245	NP_758448	Coding	chrX:1268799 plus strand	1563285
CSF2RA	NM_172246	NP_758449	Coding	chrX:1268799 plus strand	1563285
CSF2RA	NM_172247	NP_758450	Coding	chrX:1282677 plus strand	1563286
CSF2RA	NM_172249	NP_758452	Coding	chrX:1268799 plus strand	1563285
CSTF2	NM_001325	NP_001316	Coding	chrX:100820358 plus strand	1563287
CT45A1	NM_001017417	NP_001017417	Coding	chrX:135713452 plus strand	1563288
CT45A10	NM_001291527	NP_001278456	Coding	chrX:135888993 minus strand	1563289
CT45A10	NM_001291528	NP_001278457	Coding	chrX:135888993 minus strand	1563289
CT45A10	NM_001291529	NP_001278458	Coding	chrX:135893428 minus strand	1563290
CT45A10	NM_001291530	NP_001278459	Coding	chrX:135893428 minus strand	1563290

【１３７０】

CT45A2	NM_152582	NP_689795	Coding	chrX:135820012 minus strand	1563291
CT45A2	NM_152582	NP_689795	Coding	chrX:135854538 minus strand	1563292
CT45A2	NM_152582	NP_689795	Coding	chrX:135871812 minus strand	1563293
CT45A3	NM_001017435	NP_001017435	Coding	chrX:135768191 minus strand	1563294
CT45A4	NM_001017436	NP_001017436	Coding	chrX:135768191 minus strand	1563295
CT45A5	NM_001007551	NP_001007552	Coding	chrX:135785475 minus strand	1563296
CT45A5	NM_001007551	NP_001007552	Coding	chrX:135802749 minus strand	1563297
CT45A5	NM_001007551	NP_001007552	Coding	chrX:135837280 minus strand	1563298
CT45A5	NM_001172288	NP_001165759	Coding	chrX:135785475 minus strand	1563296
CT45A5	NM_001172288	NP_001165759	Coding	chrX:135802749 minus strand	1563297
CT45A5	NM_001172288	NP_001165759	Coding	chrX:135837280 minus strand	1563298
CT45A6	NM_001017438	NP_001017438	Coding	chrX:135785475 minus strand	1563299
CT45A6	NM_001017438	NP_001017438	Coding	chrX:135802749 minus strand	1563300
CT45A6	NM_001017438	NP_001017438	Coding	chrX:135837280 minus strand	1563301
CT45A7	NM_001291543	NP_001278472	Coding	chrX:135785274 minus strand	1563302
CT45A7	NM_001291543	NP_001278472	Coding	chrX:135802548 minus strand	1563303
CT45A7	NM_001291543	NP_001278472	Coding	chrX:135837079 minus strand	1563304
CT45A8	NM_001291535	NP_001278464	Coding	chrX:135820012 minus strand	1563305
CT45A8	NM_001291535	NP_001278464	Coding	chrX:135854538 minus strand	1563306
CT45A8	NM_001291535	NP_001278464	Coding	chrX:135871812 minus strand	1563307
CT45A9	NM_001291540	NP_001278469	Coding	chrX:135820012 minus strand	1563308
CT45A9	NM_001291540	NP_001278469	Coding	chrX:135854538 minus strand	1563309
CT45A9	NM_001291540	NP_001278469	Coding	chrX:135871812 minus strand	1563310
CT47A1	NM_001080146	NP_001073615	Coding	chrX:120932297 minus strand	1563311
CT47A1	NM_001080146	NP_001073615	Coding	chrX:120937158 minus strand	1563312
CT47A1	NM_001080146	NP_001073615	Coding	chrX:120942019 minus strand	1563313
CT47A1	NM_001080146	NP_001073615	Coding	chrX:120946879 minus strand	1563314

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CT47A1	NM_001080146	NP_001073615	Coding	chrX:120951740 minus strand	1563315
CT47A1	NM_001080146	NP_001073615	Coding	chrX:120966344 minus strand	1563316
CT47A1	NM_001080146	NP_001073615	Coding	chrX:120971204 minus strand	1563317
CT47A1	NM_001080146	NP_001073615	Coding	chrX:120976064 minus strand	1563318
CT47A1	NM_001080146	NP_001073615	Coding	chrX:120980924 minus strand	1563319
CT47A1	NM_001080146	NP_001073615	Coding	chrX:120985784 minus strand	1563320
CT47A10	NM_001080137	NP_001073606	Coding	chrX:120932297 minus strand	1563321
CT47A10	NM_001080137	NP_001073606	Coding	chrX:120937158 minus strand	1563322
CT47A10	NM_001080137	NP_001073606	Coding	chrX:120942019 minus strand	1563323
CT47A10	NM_001080137	NP_001073606	Coding	chrX:120946879 minus strand	1563324
CT47A10	NM_001080137	NP_001073606	Coding	chrX:120951740 minus strand	1563325
CT47A10	NM_001080137	NP_001073606	Coding	chrX:120966344 minus strand	1563326
CT47A10	NM_001080137	NP_001073606	Coding	chrX:120971204 minus strand	1563327
CT47A10	NM_001080137	NP_001073606	Coding	chrX:120976064 minus strand	1563328
CT47A10	NM_001080137	NP_001073606	Coding	chrX:120980924 minus strand	1563329
CT47A10	NM_001080137	NP_001073606	Coding	chrX:120985784 minus strand	1563330
CT47A11	NM_173571	NP_775842	Coding	chrX:120932297 minus strand	1563331
CT47A11	NM_173571	NP_775842	Coding	chrX:120937158 minus strand	1563332
CT47A11	NM_173571	NP_775842	Coding	chrX:120942019 minus strand	1563333
CT47A11	NM_173571	NP_775842	Coding	chrX:120946879 minus strand	1563334
CT47A11	NM_173571	NP_775842	Coding	chrX:120951740 minus strand	1563335
CT47A11	NM_173571	NP_775842	Coding	chrX:120966344 minus strand	1563336
CT47A11	NM_173571	NP_775842	Coding	chrX:120971204 minus strand	1563337
CT47A11	NM_173571	NP_775842	Coding	chrX:120976064 minus strand	1563338
CT47A11	NM_173571	NP_775842	Coding	chrX:120980924 minus strand	1563339
CT47A11	NM_173571	NP_775842	Coding	chrX:120985784 minus strand	1563340
CT47A12	NM_001242922	NP_001229851	Coding	chrX:120932297 minus strand	1563341

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CT47A12	NM_001242922	NP_001229851	Coding	chrX:120937158 minus strand	1563342
CT47A12	NM_001242922	NP_001229851	Coding	chrX:120942019 minus strand	1563343
CT47A12	NM_001242922	NP_001229851	Coding	chrX:120946879 minus strand	1563344
CT47A12	NM_001242922	NP_001229851	Coding	chrX:120951740 minus strand	1563345
CT47A12	NM_001242922	NP_001229851	Coding	chrX:120966344 minus strand	1563346
CT47A12	NM_001242922	NP_001229851	Coding	chrX:120971204 minus strand	1563347
CT47A12	NM_001242922	NP_001229851	Coding	chrX:120976064 minus strand	1563348
CT47A12	NM_001242922	NP_001229851	Coding	chrX:120980924 minus strand	1563349
CT47A12	NM_001242922	NP_001229851	Coding	chrX:120985784 minus strand	1563350
CT47A2	NM_001080145	NP_001073614	Coding	chrX:120932297 minus strand	1563351
CT47A2	NM_001080145	NP_001073614	Coding	chrX:120937158 minus strand	1563352
CT47A2	NM_001080145	NP_001073614	Coding	chrX:120942019 minus strand	1563353
CT47A2	NM_001080145	NP_001073614	Coding	chrX:120946879 minus strand	1563354
CT47A2	NM_001080145	NP_001073614	Coding	chrX:120951740 minus strand	1563355
CT47A2	NM_001080145	NP_001073614	Coding	chrX:120966344 minus strand	1563356
CT47A2	NM_001080145	NP_001073614	Coding	chrX:120971204 minus strand	1563357
CT47A2	NM_001080145	NP_001073614	Coding	chrX:120976064 minus strand	1563358
CT47A2	NM_001080145	NP_001073614	Coding	chrX:120980924 minus strand	1563359
CT47A2	NM_001080145	NP_001073614	Coding	chrX:120985784 minus strand	1563360
CT47A3	NM_001080144	NP_001073613	Coding	chrX:120932297 minus strand	1563361
CT47A3	NM_001080144	NP_001073613	Coding	chrX:120937158 minus strand	1563362
CT47A3	NM_001080144	NP_001073613	Coding	chrX:120942019 minus strand	1563363
CT47A3	NM_001080144	NP_001073613	Coding	chrX:120946879 minus strand	1563364
CT47A3	NM_001080144	NP_001073613	Coding	chrX:120951740 minus strand	1563365
CT47A3	NM_001080144	NP_001073613	Coding	chrX:120966344 minus strand	1563366
CT47A3	NM_001080144	NP_001073613	Coding	chrX:120971204 minus strand	1563367
CT47A3	NM_001080144	NP_001073613	Coding	chrX:120976064 minus strand	1563368

【１３７３】

CT47A3	NM_001080144	NP_001073613	Coding	chrX:120980924 minus strand	1563369
CT47A3	NM_001080144	NP_001073613	Coding	chrX:120985784 minus strand	1563370
CT47A4	NM_001080143	NP_001073612	Coding	chrX:120932297 minus strand	1563371
CT47A4	NM_001080143	NP_001073612	Coding	chrX:120937158 minus strand	1563372
CT47A4	NM_001080143	NP_001073612	Coding	chrX:120942019 minus strand	1563373
CT47A4	NM_001080143	NP_001073612	Coding	chrX:120946879 minus strand	1563374
CT47A4	NM_001080143	NP_001073612	Coding	chrX:120951740 minus strand	1563375
CT47A4	NM_001080143	NP_001073612	Coding	chrX:120966344 minus strand	1563376
CT47A4	NM_001080143	NP_001073612	Coding	chrX:120971204 minus strand	1563377
CT47A4	NM_001080143	NP_001073612	Coding	chrX:120976064 minus strand	1563378
CT47A4	NM_001080143	NP_001073612	Coding	chrX:120980924 minus strand	1563379
CT47A4	NM_001080143	NP_001073612	Coding	chrX:120985784 minus strand	1563380
CT47A5	NM_001080142	NP_001073611	Coding	chrX:120932297 minus strand	1563381
CT47A5	NM_001080142	NP_001073611	Coding	chrX:120937158 minus strand	1563382
CT47A5	NM_001080142	NP_001073611	Coding	chrX:120942019 minus strand	1563383
CT47A5	NM_001080142	NP_001073611	Coding	chrX:120946879 minus strand	1563384
CT47A5	NM_001080142	NP_001073611	Coding	chrX:120951740 minus strand	1563385
CT47A5	NM_001080142	NP_001073611	Coding	chrX:120966344 minus strand	1563386
CT47A5	NM_001080142	NP_001073611	Coding	chrX:120971204 minus strand	1563387
CT47A5	NM_001080142	NP_001073611	Coding	chrX:120976064 minus strand	1563388
CT47A5	NM_001080142	NP_001073611	Coding	chrX:120980924 minus strand	1563389
CT47A5	NM_001080142	NP_001073611	Coding	chrX:120985784 minus strand	1563390
CT47A6	NM_001080141	NP_001073610	Coding	chrX:120937158 minus strand	1563391
CT47A6	NM_001080141	NP_001073610	Coding	chrX:120942019 minus strand	1563392
CT47A6	NM_001080141	NP_001073610	Coding	chrX:120946879 minus strand	1563393
CT47A6	NM_001080141	NP_001073610	Coding	chrX:120951740 minus strand	1563394
CT47A6	NM_001080141	NP_001073610	Coding	chrX:120961483 minus strand	1563395

【１３７４】

CT47A6	NM_001080141	NP_001073610	Coding	chrX:120966344 minus strand	1563396
CT47A6	NM_001080141	NP_001073610	Coding	chrX:120971204 minus strand	1563397
CT47A6	NM_001080141	NP_001073610	Coding	chrX:120976064 minus strand	1563398
CT47A6	NM_001080141	NP_001073610	Coding	chrX:120980924 minus strand	1563399
CT47A6	NM_001080141	NP_001073610	Coding	chrX:120985784 minus strand	1563400
CT47A7	NM_001080140	NP_001073609	Coding	chrX:120956600 minus strand	1563401
CT47A8	NM_001080139	NP_001073608	Coding	chrX:120932297 minus strand	1563402
CT47A8	NM_001080139	NP_001073608	Coding	chrX:120937158 minus strand	1563403
CT47A8	NM_001080139	NP_001073608	Coding	chrX:120942019 minus strand	1563404
CT47A8	NM_001080139	NP_001073608	Coding	chrX:120946879 minus strand	1563405
CT47A8	NM_001080139	NP_001073608	Coding	chrX:120951740 minus strand	1563406
CT47A8	NM_001080139	NP_001073608	Coding	chrX:120966344 minus strand	1563407
CT47A8	NM_001080139	NP_001073608	Coding	chrX:120971204 minus strand	1563408
CT47A8	NM_001080139	NP_001073608	Coding	chrX:120976064 minus strand	1563409
CT47A8	NM_001080139	NP_001073608	Coding	chrX:120980924 minus strand	1563410
CT47A8	NM_001080139	NP_001073608	Coding	chrX:120985784 minus strand	1563411
CT47A9	NM_001080138	NP_001073607	Coding	chrX:120932297 minus strand	1563412
CT47A9	NM_001080138	NP_001073607	Coding	chrX:120937158 minus strand	1563413
CT47A9	NM_001080138	NP_001073607	Coding	chrX:120942019 minus strand	1563414
CT47A9	NM_001080138	NP_001073607	Coding	chrX:120946879 minus strand	1563415
CT47A9	NM_001080138	NP_001073607	Coding	chrX:120951740 minus strand	1563416
CT47A9	NM_001080138	NP_001073607	Coding	chrX:120966344 minus strand	1563417
CT47A9	NM_001080138	NP_001073607	Coding	chrX:120971204 minus strand	1563418
CT47A9	NM_001080138	NP_001073607	Coding	chrX:120976064 minus strand	1563419
CT47A9	NM_001080138	NP_001073607	Coding	chrX:120980924 minus strand	1563420
CT47A9	NM_001080138	NP_001073607	Coding	chrX:120985784 minus strand	1563421
CT47B1	NM_001145718	NP_001139190	Coding	chrX:120875925 minus strand	1563422

【１３７５】

CT55	NM_001031705	NP_001026875	Coding	chrX:135171827 minus strand	1563423
CT55	NM_017863	NP_060333	Coding	chrX:135171827 minus strand	1563423
CT83	NM_001017978	NP_001017978	Coding	chrX:116463033 minus strand	1563424
CTAG1A	NM_139250	NP_640343	Coding	chrX:154585153 plus strand	1563425
CTAG1A	NM_139250	NP_640343	Coding	chrX:154619271 minus strand	1563426
CTAG1B	NM_001327	NP_001318	Coding	chrX:154585153 plus strand	1563427
CTAG1B	NM_001327	NP_001318	Coding	chrX:154619271 minus strand	1563428
CTAG2	NM_020994	NP_066274	Coding	chrX:154653579 minus strand	1563429
CTAG2	NM_172377	NP_758965	Coding	chrX:154653579 minus strand	1563429
CTPS2	NM_001144002	NP_001137474	Coding	chrX:16712217 minus strand	1563430
CTPS2	NM_019857	NP_062831	Coding	chrX:16712979 minus strand	1563431
CTPS2	NM_175859	NP_787055	Coding	chrX:16712678 minus strand	1563432
CUL4B	NM_001079872	NP_001073341	Coding	chrX:120560962 minus strand	1563433
CUL4B	NM_003588	NP_003579	Coding	chrX:120575829 minus strand	1563434
CXCR3	NM_001142797	NP_001136269	Coding	chrX:71618517 minus strand	1563435
CXCR3	NM_001504	NP_001495	Coding	chrX:71618517 minus strand	1563435
CXorf21	NM_025159	NP_079435	Coding	chrX:30577916 minus strand	1563436
CXorf22	NM_152632	NP_689845	Coding	chrX:35919733 plus strand	1563437
CXorf23	NM_198279	NP_938020	Coding	chrX:19970264 minus strand	1563438
CXorf30	NM_001098843	NP_001092313	Coding	chrX:36228778 plus strand	1563439
CXorf36	NM_024689	NP_078965	Coding	chrX:45200901 minus strand	1563440
CXorf36	NM_176819	NP_789789	Coding	chrX:45200901 minus strand	1563440
CXorf38	NM_144970	NP_659407	Coding	chrX:40647567 minus strand	1563441
CXorf40A	NM_001171907	NP_001165378	Coding	chrX:149540973 plus strand	1563442
CXorf40A	NM_001171908	NP_001165379	Coding	chrX:149540973 plus strand	1563442
CXorf40A	NM_001171909	NP_001165380	Coding	chrX:149544519 plus strand	1563443
CXorf40A	NM_178124	NP_835225	Coding	chrX:149540973 plus strand	1563442
CXorf40B	NM_001013845	NP_001013867	Coding	chrX:149938498 minus strand	1563444

【１３７６】

CXorf49	NM_001145140	NP_001138612	Coding	chrX:71718285 minus strand	1563445
CXorf49	NM_001145140	NP_001138612	Coding	chrX:71763289 plus strand	1563446
CXorf49B	NM_001145139	NP_001138611	Coding	chrX:71718285 minus strand	1563447
CXorf49B	NM_001145139	NP_001138611	Coding	chrX:71763289 plus strand	1563448
CXorf51A	NM_001144064	NP_001137536	Coding	chrX:146809783 plus strand	1563449
CXorf51A	NM_001144064	NP_001137536	Coding	chrX:146814731 minus strand	1563450
CXorf51B	NM_001244892	NP_001231821	Coding	chrX:146809783 plus strand	1563451
CXorf51B	NM_001244892	NP_001231821	Coding	chrX:146814731 minus strand	1563452
CXorf56	NM_001170569	NP_001164040	Coding	chrX:119565409 minus strand	1563453
CXorf56	NM_001170570	NP_001164041	Coding	chrX:119565434 minus strand	1563454
CXorf56	NM_022101	NP_071384	Coding	chrX:119565434 minus strand	1563454
CXorf57	NM_001184782	NP_001171711	Coding	chrX:106611929 plus strand	1563455
CXorf57	NM_018015	NP_060485	Coding	chrX:106611929 plus strand	1563455
CXorf58	NM_001169574	NP_001163045	Coding	chrX:23908005 plus strand	1563456
CXorf58	NM_152761	NP_689974	Coding	chrX:23908005 plus strand	1563456
CXorf65	NM_001025265	NP_001020436	Coding	chrX:71106788 minus strand	1563457
CXorf66	NM_001013403	NP_001013421	Coding	chrX:139965518 minus strand	1563458
CXorf67	NM_203407	NP_981952	Coding	chrX:51406914 plus strand	1563459
CYBB	NM_000397	NP_000388	Coding	chrX:37780016 plus strand	1563460
CYLC1	NM_001271680	NP_001258609	Coding	chrX:83861125 plus strand	1563461
CYLC1	NM_021118	NP_066941	Coding	chrX:83861125 plus strand	1563461
CYSLTR1	NM_001282186	NP_001269115	Coding	chrX:78327691 minus strand	1563462
CYSLTR1	NM_001282187	NP_001269116	Coding	chrX:78327691 minus strand	1563462
CYSLTR1	NM_001282188	NP_001269117	Coding	chrX:78327691 minus strand	1563462
CYSLTR1	NM_006639	NP_006630	Coding	chrX:78327691 minus strand	1563462
DACH2	NM_001139514	NP_001132986	Coding	chrX:86148450 plus strand	1563463
DACH2	NM_001139515	NP_001132987	Coding	chrX:86262967 plus strand	1563464
DACH2	NM_053281	NP_444511	Coding	chrX:86148450 plus strand	1563463
DCAF12L1	NM_178470	NP_848565	Coding	chrX:126552859 minus strand	1563465
DCAF12L2	NM_001013628	NP_001013650	Coding	chrX:126166097 minus strand	1563466
DCAF8L1	NM_001017930	NP_001017930	Coding	chrX:27981449 minus strand	1563467

【１３７７】

DCAF8L2	NM_001136533	NP_001130005	Coding	chrX:27746808 plus strand	1563468
DCX	NM_000555	NP_000546	Coding	chrX:111411146 minus strand	1563469
DCX	NM_001195553	NP_001182482	Coding	chrX:111412232 minus strand	1563470
DCX	NM_178151	NP_835364	Coding	chrX:111412191 minus strand	1563471
DCX	NM_178152	NP_835365	Coding	chrX:111412232 minus strand	1563470
DCX	NM_178153	NP_835366	Coding	chrX:111412232 minus strand	1563470
DDX26B	NM_182540	NP_872346	Coding	chrX:135520629 plus strand	1563472
DDX3X	NM_001193416	NP_001180345	Coding	chrX:41334161 plus strand	1563473
DDX3X	NM_001193417	NP_001180346	Coding	chrX:41334161 plus strand	1563473
DDX3X	NM_001356	NP_001347	Coding	chrX:41333307 plus strand	1563474
DDX53	NM_182699	NP_874358	Coding	chrX:22999960 plus strand	1563475
DGAT2L6	NM_198512	NP_940914	Coding	chrX:70177485 plus strand	1563476
DGKK	NM_001013742	NP_001013764	Coding	chrX:50470738 minus strand	1563477
DHRSX	NM_145177	NP_660160	Coding	chrX:2500974 minus strand	1563478
DIAPH2	NM_006729	NP_006720	Coding	chrX:96684662 plus strand	1563479
DIAPH2	NM_007309	NP_009293	Coding	chrX:96684662 plus strand	1563479
DKC1	NM_001142463	NP_001135935	Coding	chrX:154762741 plus strand	1563480
DKC1	NM_001288747	NP_001275676	Coding	chrX:154762741 plus strand	1563480
DKC1	NM_001363	NP_001354	Coding	chrX:154762741 plus strand	1563480
DLG3	NM_001166278	NP_001159750	Coding	chrX:70455095 plus strand	1563481
DLG3	NM_020730	NP_065781	Coding	chrX:70452304 plus strand	1563482
DLG3	NM_021120	NP_066943	Coding	chrX:70444854 plus strand	1563483
DMD	NM_000109	NP_000100	Coding	chrX:33339609 minus strand	1563484
DMD	NM_004006	NP_003997	Coding	chrX:33211556 minus strand	1563485
DMD	NM_004009	NP_004000	Coding	chrX:33128428 minus strand	1563486
DMD	NM_004010	NP_004001	Coding	chrX:33128427 minus strand	1563487
DMD	NM_004011	NP_004002	Coding	chrX:32412254 minus strand	1563488
DMD	NM_004012	NP_004003	Coding	chrX:32412254 minus strand	1563488
DMD	NM_004013	NP_004004	Coding	chrX:32155469 minus strand	1563489
DMD	NM_004014	NP_004005	Coding	chrX:31508298 minus strand	1563490
DMD	NM_004015	NP_004006	Coding	chrX:31266907 minus strand	1563491

【１３７８】

DMD	NM_004016	NP_004007	Coding	chrX:31266907 minus strand	1563491
DMD	NM_004017	NP_004008	Coding	chrX:31266907 minus strand	1563491
DMD	NM_004018	NP_004009	Coding	chrX:31266907 minus strand	1563491
DMD	NM_004019	NP_004010	Coding	chrX:31266907 minus strand	1563491
DMD	NM_004020	NP_004011	Coding	chrX:32155469 minus strand	1563489
DMD	NM_004021	NP_004012	Coding	chrX:32155469 minus strand	1563489
DMD	NM_004022	NP_004013	Coding	chrX:32155469 minus strand	1563489
DMD	NM_004023	NP_004014	Coding	chrX:32155469 minus strand	1563489
DMRTC1	NM_033053	NP_149042	Coding	chrX:72845041 plus strand	1563492
DMRTC1	NM_033053	NP_149042	Coding	chrX:72875788 minus strand	1563493
DMRTC1B	NM_001080851	NP_001074320	Coding	chrX:72845041 plus strand	1563494
DMRTC1B	NM_001080851	NP_001074320	Coding	chrX:72875788 minus strand	1563495
DNASE1L1	NM_001009932	NP_001009932	Coding	chrX:154412090 minus strand	1563496
DNASE1L1	NM_001009933	NP_001009933	Coding	chrX:154412090 minus strand	1563496
DNASE1L1	NM_001009934	NP_001009934	Coding	chrX:154412090 minus strand	1563496
DNASE1L1	NM_006730	NP_006721	Coding	chrX:154409239 minus strand	1563497
DOCK11	NM_144658	NP_653259	Coding	chrX:118495908 plus strand	1563498
DRP2	NM_001171184	NP_001164655	Coding	chrX:101219943 plus strand	1563499
DRP2	NM_001939	NP_001930	Coding	chrX:101219943 plus strand	1563499
DUSP21	NM_022076	NP_071359	Coding	chrX:44844002 plus strand	1563500
DUSP9	NM_001395	NP_001386	Coding	chrX:153642442 plus strand	1563501
DYNLT3	NM_006520	NP_006511	Coding	chrX:37847636 minus strand	1563502
EBP	NM_006579	NP_006570	Coding	chrX:48521775 plus strand	1563503
EDA	NM_001005609	NP_001005609	Coding	chrX:69616066 plus strand	1563504
EDA	NM_001005610	NP_001005610	Coding	chrX:69616066 plus strand	1563504
EDA	NM_001005612	NP_001005612	Coding	chrX:69616066 plus strand	1563504
EDA	NM_001005613	NP_001005613	Coding	chrX:69616066 plus strand	1563504
EDA	NM_001399	NP_001390	Coding	chrX:69616066 plus strand	1563504
EDA2R	NM_001199687	NP_001186616	Coding	chrX:66639298 minus strand	1563505
EDA2R	NM_001242310	NP_001229239	Coding	chrX:66616030 minus strand	1563506

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EDA2R	NM_021783	NP_068555	Coding	chrX:66639050 minus strand	1563507
EFHC2	NM_025184	NP_079460	Coding	chrX:44343677 minus strand	1563508
EFNB1	NM_004429	NP_004420	Coding	chrX:68828996 plus strand	1563509
EGFL6	NM_001167890	NP_001161362	Coding	chrX:13569574 plus strand	1563510
EGFL6	NM_015507	NP_056322	Coding	chrX:13569574 plus strand	1563510
EIF1AX	NM_001412	NP_001403	Coding	chrX:20141848 minus strand	1563511
EIF2S3	NM_001415	NP_001406	Coding	chrX:24054947 plus strand	1563512
ELF4	NM_001127197	NP_001120669	Coding	chrX:130110713 minus strand	1563513
ELF4	NM_001421	NP_001412	Coding	chrX:130110500 minus strand	1563514
ELK1	NM_001114123	NP_001107595	Coding	chrX:47650604 minus strand	1563515
ELK1	NM_001257168	NP_001244097	Coding	chrX:47650604 minus strand	1563515
ELK1	NM_005229	NP_005220	Coding	chrX:47650604 minus strand	1563515
EMD	NM_000117	NP_000108	Coding	chrX:154379236 plus strand	1563516
ENOX2	NM_001281736	NP_001268665	Coding	chrX:130903317 minus strand	1563517
ENOX2	NM_006375	NP_006366	Coding	chrX:130903317 minus strand	1563517
ENOX2	NM_182314	NP_872114	Coding	chrX:130903317 minus strand	1563517
ERAS	NM_181532	NP_853510	Coding	chrX:48826512 plus strand	1563518
ERCC6L	NM_017669	NP_060139	Coding	chrX:72239008 minus strand	1563519
ESX1	NM_153448	NP_703149	Coding	chrX:104254918 minus strand	1563520
F8	NM_000132	NP_000123	Coding	chrX:155022723 minus strand	1563521
F8	NM_019863	NP_063916	Coding	chrX:154886302 minus strand	1563522
F8A1	NM_012151	NP_036283	Coding	chrX:154886359 plus strand	1563523
F8A1	NM_012151	NP_036283	Coding	chrX:155382099 plus strand	1563524
F8A1	NM_012151	NP_036283	Coding	chrX:155458615 minus strand	1563525
F8A2	NM_001007523	NP_001007524	Coding	chrX:154886374 plus strand	1563526
F8A2	NM_001007523	NP_001007524	Coding	chrX:155382114 plus strand	1563527
F8A2	NM_001007523	NP_001007524	Coding	chrX:155458600 minus strand	1563528
F8A3	NM_001007524	NP_001007525	Coding	chrX:154886374 plus strand	1563529
F8A3	NM_001007524	NP_001007525	Coding	chrX:155382114 plus strand	1563530

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F8A3	NM_001007524	NP_001007525	Coding	chrX:155458600 minus strand	1563531
F9	NM_000133	NP_000124	Coding	chrX:139530735 plus strand	1563532
FAAH2	NM_174912	NP_777572	Coding	chrX:57286676 plus strand	1563533
FAM104B	NM_001166699	NP_001160171	Coding	chrX:55161195 minus strand	1563534
FAM104B	NM_001166700	NP_001160172	Coding	chrX:55161195 minus strand	1563534
FAM104B	NM_001166701	NP_001160173	Coding	chrX:55161195 minus strand	1563534
FAM104B	NM_001166702	NP_001160174	Coding	chrX:55161134 minus strand	1563535
FAM104B	NM_001166703	NP_001160175	Coding	chrX:55161102 minus strand	1563536
FAM104B	NM_001166704	NP_001160176	Coding	chrX:55161195 minus strand	1563534
FAM104B	NM_138362	NP_612371	Coding	chrX:55161195 minus strand	1563534
FAM120C	NM_001300788	NP_001287717	Coding	chrX:54183281 minus strand	1563537
FAM120C	NM_017848	NP_060318	Coding	chrX:54183258 minus strand	1563538
FAM120C	NM_198456	NP_940858	Coding	chrX:54183281 minus strand	1563537
FAM122B	NM_001166599	NP_001160071	Coding	chrX:134797155 minus strand	1563539
FAM122B	NM_001166600	NP_001160072	Coding	chrX:134797232 minus strand	1563540
FAM122B	NM_001170756	NP_001164227	Coding	chrX:134796355 minus strand	1563541
FAM122B	NM_001170757	NP_001164228	Coding	chrX:134797232 minus strand	1563540
FAM122B	NM_145284	NP_660327	Coding	chrX:134796355 minus strand	1563541
FAM122C	NM_001170779	NP_001164250	Coding	chrX:134807192 plus strand	1563542
FAM122C	NM_001170780	NP_001164251	Coding	chrX:134796412 plus strand	1563543
FAM122C	NM_001170781	NP_001164252	Coding	chrX:134807192 plus strand	1563542
FAM122C	NM_001170782	NP_001164253	Coding	chrX:134807174 plus strand	1563544
FAM122C	NM_001170783	NP_001164254	Coding	chrX:134807192 plus strand	1563542
FAM122C	NM_001170784	NP_001164255	Coding	chrX:134807174 plus strand	1563544
FAM122C	NM_138819	NP_620174	Coding	chrX:134807192 plus strand	1563542
FAM127A	NM_001078171	NP_001071639	Coding	chrX:135032302 plus strand	1563545
FAM127B	NM_001078172	NP_001071640	Coding	chrX:135052191 minus strand	1563546
FAM127B	NM_001134321	NP_001127793	Coding	chrX:135052191 minus	1563546

【１３８１】

				strand	
FAM127C	NM_001078173	NP_001071641	Coding	chrX:135022536 minus strand	1563547
FAM133A	NM_001171109	NP_001164580	Coding	chrX:93674012 plus strand	1563548
FAM133A	NM_001171110	NP_001164581	Coding	chrX:93674012 plus strand	1563548
FAM133A	NM_001171111	NP_001164582	Coding	chrX:93674012 plus strand	1563548
FAM133A	NM_173698	NP_775969	Coding	chrX:93674012 plus strand	1563548
FAM155B	NM_015686	NP_056501	Coding	chrX:69505234 plus strand	1563549
FAM156A	NM_001242489	NP_001229418	Coding	chrX:52995472 minus strand	1563550
FAM156A	NM_001242490	NP_001229419	Coding	chrX:52995472 minus strand	1563550
FAM156A	NM_001242491	NP_001229420	Coding	chrX:52897295 plus strand	1563551
FAM156A	NM_001242491	NP_001229420	Coding	chrX:52958518 minus strand	1563552
FAM156A	NM_001242492	NP_001229421	Coding	chrX:52995472 minus strand	1563550
FAM156A	NM_001242493	NP_001229422	Coding	chrX:52995472 minus strand	1563550
FAM156A	NM_001242494	NP_001229423	Coding	chrX:52995472 minus strand	1563550
FAM156A	NM_001242495	NP_001229424	Coding	chrX:52995472 minus strand	1563550
FAM156A	NM_001242496	NP_001229425	Coding	chrX:52995472 minus strand	1563550
FAM156A	NM_001242497	NP_001229426	Coding	chrX:52995472 minus strand	1563550
FAM156A	NM_014138	NP_054857	Coding	chrX:52995472 minus strand	1563550
FAM156B	NM_001099684	NP_001093154	Coding	chrX:52899382 plus strand	1563553
FAM156B	NM_001099684	NP_001093154	Coding	chrX:52956431 minus strand	1563554
FAM199X	NM_207318	NP_997201	Coding	chrX:104166474 plus strand	1563555
FAM3A	NM_001171132	NP_001164603	Coding	chrX:154516242 minus strand	1563556
FAM3A	NM_001171133	NP_001164604	Coding	chrX:154516242 minus strand	1563556
FAM3A	NM_001171134	NP_001164605	Coding	chrX:154516242 minus strand	1563556
FAM3A	NM_001282311	NP_001269240	Coding	chrX:154516242 minus strand	1563556
FAM3A	NM_001282312	NP_001269241	Coding	chrX:154516242 minus strand	1563556
FAM3A	NM_021806	NP_068578	Coding	chrX:154516242 minus strand	1563556
FAM46D	NM_001170574	NP_001164045	Coding	chrX:80335503 plus strand	1563557
FAM46D	NM_152630	NP_689843	Coding	chrX:80420446 plus strand	1563558
FAM47A	NM_203408	NP_981953	Coding	chrX:34132330 minus strand	1563559
FAM47B	NM_152631	NP_689844	Coding	chrX:34942795 plus strand	1563560

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FAM47C	NM_001013736	NP_001013758	Coding	chrX:37008358 plus strand	1563561
FAM50A	NM_004699	NP_004690	Coding	chrX:154444125 plus strand	1563562
FAM58A	NM_001130997	NP_001124469	Coding	chrX:153599177 minus strand	1563563
FAM58A	NM_152274	NP_689487	Coding	chrX:153599177 minus strand	1563563
FAM9A	NM_001171186	NP_001164657	Coding	chrX:8801337 minus strand	1563564
FAM9A	NM_174951	NP_777611	Coding	chrX:8801383 minus strand	1563565
FAM9B	NM_205849	NP_995321	Coding	chrX:9034127 minus strand	1563566
FAM9C	NM_174901	NP_777561	Coding	chrX:13044798 minus strand	1563567
FANCB	NM_001018113	NP_001018123	Coding	chrX:14873062 minus strand	1563568
FANCB	NM_152633	NP_689846	Coding	chrX:14873062 minus strand	1563568
FATE1	NM_033085	NP_149076	Coding	chrX:151716035 plus strand	1563569
FGD1	NM_004463	NP_004454	Coding	chrX:54496166 minus strand	1563570
FGF13	NM_001139498	NP_001132970	Coding	chrX:139205023 minus strand	1563571
FGF13	NM_001139500	NP_001132972	Coding	chrX:139205023 minus strand	1563571
FGF13	NM_001139501	NP_001132973	Coding	chrX:139205023 minus strand	1563571
FGF13	NM_001139502	NP_001132974	Coding	chrX:138867555 minus strand	1563572
FGF13	NM_004114	NP_004105	Coding	chrX:138711665 minus strand	1563573
FGF13	NM_033642	NP_378668	Coding	chrX:138739353 minus strand	1563574
FGF16	NM_003868	NP_003859	Coding	chrX:77447674 plus strand	1563575
FHL1	NM_001159699	NP_001153171	Coding	chrX:136196895 plus strand	1563576
FHL1	NM_001159700	NP_001153172	Coding	chrX:136148577 plus strand	1563577
FHL1	NM_001159701	NP_001153173	Coding	chrX:136196753 plus strand	1563578
FHL1	NM_001159702	NP_001153174	Coding	chrX:136147399 plus strand	1563579
FHL1	NM_001159703	NP_001153175	Coding	chrX:136147399 plus strand	1563579
FHL1	NM_001159704	NP_001153176	Coding	chrX:136169295 plus strand	1563580
FHL1	NM_001167819	NP_001161291	Coding	chrX:136169636 plus strand	1563581
FHL1	NM_001449	NP_001440	Coding	chrX:136147399 plus strand	1563579
FIGF	NM_004469	NP_004460	Coding	chrX:15384413 minus strand	1563582

【１３８３】

FLJ44635	NM_207422	NP_997305	Coding	chrX:72144183 plus strand	1563583
FLNA	NM_001110556	NP_001104026	Coding	chrX:154374638 minus strand	1563584
FLNA	NM_001456	NP_001447	Coding	chrX:154374638 minus strand	1563584
FMR1	NM_001185075	NP_001172004	Coding	chrX:147911950 plus strand	1563585
FMR1	NM_001185076	NP_001172005	Coding	chrX:147911950 plus strand	1563585
FMR1	NM_001185081	NP_001172010	Coding	chrX:147911950 plus strand	1563585
FMR1	NM_001185082	NP_001172011	Coding	chrX:147911950 plus strand	1563585
FMR1	NM_002024	NP_002015	Coding	chrX:147911950 plus strand	1563585
FMR1NB	NM_152578	NP_689791	Coding	chrX:147981328 plus strand	1563586
FOXO4	NM_001170931	NP_001164402	Coding	chrX:71096148 plus strand	1563587
FOXO4	NM_005938	NP_005929	Coding	chrX:71096148 plus strand	1563587
FOXP3	NM_001114377	NP_001107849	Coding	chrX:49264826 minus strand	1563588
FOXP3	NM_014009	NP_054728	Coding	chrX:49264826 minus strand	1563588
FOXR2	NM_198451	NP_940853	Coding	chrX:55623399 plus strand	1563589
FRMD7	NM_194277	NP_919253	Coding	chrX:132128022 minus strand	1563590
FRMPD3	NM_032428	NP_115804	Coding	chrX:107522449 plus strand	1563591
FRMPD4	NM_014728	NP_055543	Coding	chrX:12138465 plus strand	1563592
FTH1P18	NM_001271682	NP_001258611	Coding	chrX:37043794 minus strand	1563593
FTHL17	NM_031894	NP_114100	Coding	chrX:31072053 minus strand	1563594
FTSJ1	NM_001282157	NP_001269086	Coding	chrX:48476020 plus strand	1563595
FTSJ1	NM_012280	NP_036412	Coding	chrX:48476020 plus strand	1563595
FTSJ1	NM_177439	NP_803188	Coding	chrX:48476020 plus strand	1563595
FUNDC1	NM_173794	NP_776155	Coding	chrX:44542975 minus strand	1563596
FUNDC2	NM_023934	NP_076423	Coding	chrX:155026788 plus strand	1563597
G6PD	NM_000402	NP_000393	Coding	chrX:154547018 minus strand	1563598
G6PD	NM_001042351	NP_001035810	Coding	chrX:154547586 minus strand	1563599
GAB3	NM_001081573	NP_001075042	Coding	chrX:154751083 minus strand	1563600
GAB3	NM_001282283	NP_001269212	Coding	chrX:154751083 minus strand	1563600
GAB3	NM_080612	NP_542179	Coding	chrX:154751083 minus strand	1563600
GABRA3	NM_000808	NP_000799	Coding	chrX:152451359 minus strand	1563601

【１３８４】

GABRE	NM_004961	NP_004952	Coding	chrX:151974679 minus strand	1563602
GABRQ	NM_018558	NP_061028	Coding	chrX:152638182 plus strand	1563603
GAGE1	NM_001040663	NP_001035753	Coding	chrX:49599012 plus strand	1563604
GAGE10	NM_001098413	NP_001091883	Coding	chrX:49303645 plus strand	1563605
GAGE12B	NM_001127345	NP_001120817	Coding	chrX:49532211 plus strand	1563606
GAGE12B	NM_001127345	NP_001120817	Coding	chrX:49541767 plus strand	1563607
GAGE12B	NM_001127345	NP_001120817	Coding	chrX:49551323 plus strand	1563608
GAGE12C	NM_001098408	NP_001091878	Coding	chrX:49532176 plus strand	1563609
GAGE12C	NM_001098408	NP_001091878	Coding	chrX:49541732 plus strand	1563610
GAGE12C	NM_001098408	NP_001091878	Coding	chrX:49551288 plus strand	1563611
GAGE12C	NM_001098408	NP_001091878	Coding	chrX:49560841 plus strand	1563612
GAGE12C	NM_001098408	NP_001091878	Coding	chrX:49570399 plus strand	1563613
GAGE12C	NM_001098408	NP_001091878	Coding	chrX:49579948 plus strand	1563614
GAGE12D	NM_001127199	NP_001120671	Coding	chrX:49322025 plus strand	1563615
GAGE12D	NM_001127199	NP_001120671	Coding	chrX:49532165 plus strand	1563616
GAGE12D	NM_001127199	NP_001120671	Coding	chrX:49541721 plus strand	1563617
GAGE12D	NM_001127199	NP_001120671	Coding	chrX:49551277 plus strand	1563618
GAGE12D	NM_001127199	NP_001120671	Coding	chrX:49560830 plus strand	1563619
GAGE12D	NM_001127199	NP_001120671	Coding	chrX:49570388 plus strand	1563620
GAGE12D	NM_001127199	NP_001120671	Coding	chrX:49579937 plus strand	1563621
GAGE12E	NM_001098418	NP_001091888	Coding	chrX:49532176 plus strand	1563622
GAGE12E	NM_001098418	NP_001091888	Coding	chrX:49541732 plus strand	1563623
GAGE12E	NM_001098418	NP_001091888	Coding	chrX:49551288 plus strand	1563624
GAGE12E	NM_001098418	NP_001091888	Coding	chrX:49560841 plus strand	1563625
GAGE12E	NM_001098418	NP_001091888	Coding	chrX:49570399 plus strand	1563626
GAGE12E	NM_001098418	NP_001091888	Coding	chrX:49579948 plus strand	1563627
GAGE12F	NM_001098405	NP_001091875	Coding	chrX:49341113 plus strand	1563628
GAGE12F	NM_001098405	NP_001091875	Coding	chrX:49532142 plus strand	1563629
GAGE12F	NM_001098405	NP_001091875	Coding	chrX:49541698 plus strand	1563630
GAGE12F	NM_001098405	NP_001091875	Coding	chrX:49551254 plus strand	1563631
GAGE12F	NM_001098405	NP_001091875	Coding	chrX:49560807 plus strand	1563632
GAGE12F	NM_001098405	NP_001091875	Coding	chrX:49570365 plus strand	1563633
GAGE12G	NM_001098409	NP_001091879	Coding	chrX:49341149 plus strand	1563634
GAGE12G	NM_001098409	NP_001091879	Coding	chrX:49532176 plus strand	1563635
GAGE12G	NM_001098409	NP_001091879	Coding	chrX:49541732 plus strand	1563636
GAGE12G	NM_001098409	NP_001091879	Coding	chrX:49551288 plus strand	1563637
GAGE12G	NM_001098409	NP_001091879	Coding	chrX:49560841 plus strand	1563638
GAGE12G	NM_001098409	NP_001091879	Coding	chrX:49570399 plus strand	1563639
GAGE12H	NM_001098410	NP_001091880	Coding	chrX:49532176 plus strand	1563640
GAGE12H	NM_001098410	NP_001091880	Coding	chrX:49541732 plus strand	1563641

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GAGE12H	NM_001098410	NP_001091880	Coding	chrX:49551288 plus strand	1563642
GAGE12H	NM_001098410	NP_001091880	Coding	chrX:49579948 plus strand	1563643
GAGE12I	NM_001477	NP_001468	Coding	chrX:49341209 plus strand	1563644
GAGE12I	NM_001477	NP_001468	Coding	chrX:49560903 plus strand	1563645
GAGE12I	NM_001477	NP_001468	Coding	chrX:49570461 plus strand	1563646
GAGE12J	NM_001098406	NP_001091876	Coding	chrX:49322029 plus strand	1563647
GAGE13	NM_001098412	NP_001091882	Coding	chrX:49331602 plus strand	1563648
GAGE2A	NM_001127212	NP_001120684	Coding	chrX:49589514 plus strand	1563649
GAGE2B	NM_001098411	NP_001091881	Coding	chrX:49589528 plus strand	1563650
GAGE2C	NM_001472	NP_001463	Coding	chrX:49589528 plus strand	1563651
GAGE2D	NM_001098407	NP_001091877	Coding	chrX:49331581 plus strand	1563652
GAGE2E	NM_001127200	NP_001120672	Coding	chrX:49331625 plus strand	1563653
GAGE4	NM_001474	NP_001465	Coding	chrX:49341181 plus strand	1563654
GAGE4	NM_001474	NP_001465	Coding	chrX:49560875 plus strand	1563655
GAGE4	NM_001474	NP_001465	Coding	chrX:49570433 plus strand	1563656
GAGE5	NM_001475	NP_001466	Coding	chrX:49341189 plus strand	1563657
GAGE5	NM_001475	NP_001466	Coding	chrX:49560883 plus strand	1563658
GAGE5	NM_001475	NP_001466	Coding	chrX:49570441 plus strand	1563659
GAGE6	NM_001476	NP_001467	Coding	chrX:49341182 plus strand	1563660
GAGE6	NM_001476	NP_001467	Coding	chrX:49560876 plus strand	1563661
GAGE6	NM_001476	NP_001467	Coding	chrX:49570434 plus strand	1563662
GAGE7	NM_021123	NP_066946	Coding	chrX:49341210 plus strand	1563663
GAGE7	NM_021123	NP_066946	Coding	chrX:49560904 plus strand	1563664
GAGE7	NM_021123	NP_066946	Coding	chrX:49570462 plus strand	1563665
GAGE8	NM_012196	NP_036328	Coding	chrX:49331625 plus strand	1563666
GATA1	NM_002049	NP_002040	Coding	chrX:48786573 plus strand	1563667
GDI1	NM_001493	NP_001484	Coding	chrX:154436912 plus strand	1563668
GDPD2	NM_001171191	NP_001164662	Coding	chrX:70423030 plus strand	1563669
GDPD2	NM_001171192	NP_001164663	Coding	chrX:70423030 plus strand	1563669
GDPD2	NM_001171193	NP_001164664	Coding	chrX:70423030 plus strand	1563669
GDPD2	NM_017711	NP_060181	Coding	chrX:70423030 plus strand	1563669
GEMIN8	NM_001042479	NP_001035944	Coding	chrX:140029916 minus strand	1563670
GEMIN8	NM_001042480	NP_001035945	Coding	chrX:140029916 minus strand	1563670
GEMIN8	NM_017856	NP_060326	Coding	chrX:140029916 minus strand	1563670
GJB1	NM_000166	NP_000157	Coding	chrX:71223205 plus strand	1563671
GJB1	NM_001097642	NP_001091111	Coding	chrX:71215211 plus strand	1563672
GK	NM_000167	NP_000158	Coding	chrX:30653358 plus strand	1563673
GK	NM_001128127	NP_001121599	Coding	chrX:30653358 plus strand	1563673
GK	NM_001205019	NP_001191948	Coding	chrX:30653358 plus strand	1563673

【１３８６】

GK	NM_203391	NP_976325	Coding	chrX:30653358 plus strand	1563673
GLA	NM_000169	NP_000160	Coding	chrX:101408013 minus strand	1563674
GLOD5	NM_001080489	NP_001073958	Coding	chrX:48761749 plus strand	1563675
GLRA2	NM_001118885	NP_001112357	Coding	chrX:14529297 plus strand	1563676
GLRA2	NM_001118886	NP_001112358	Coding	chrX:14529297 plus strand	1563676
GLRA2	NM_001171942	NP_001165413	Coding	chrX:14529297 plus strand	1563676
GLRA2	NM_002063	NP_002054	Coding	chrX:14529297 plus strand	1563676
GLRA4	NM_001024452	NP_001019623	Coding	chrX:103728624 minus strand	1563677
GLRA4	NM_001172285	NP_001165756	Coding	chrX:103728624 minus strand	1563677
GLUD2	NM_012084	NP_036216	Coding	chrX:121047607 plus strand	1563678
GNL3L	NM_001184819	NP_001171748	Coding	chrX:54530210 plus strand	1563679
GNL3L	NM_019067	NP_061940	Coding	chrX:54530210 plus strand	1563679
GPC3	NM_001164617	NP_001158089	Coding	chrX:133985646 minus strand	1563680
GPC3	NM_001164618	NP_001158090	Coding	chrX:133985646 minus strand	1563680
GPC3	NM_001164619	NP_001158091	Coding	chrX:133985646 minus strand	1563680
GPC3	NM_004484	NP_004475	Coding	chrX:133985646 minus strand	1563680
GPC4	NM_001448	NP_001439	Coding	chrX:133415177 minus strand	1563681
GPKOW	NM_015698	NP_056513	Coding	chrX:49123801 minus strand	1563682
GPM6B	NM_001001994	NP_001001994	Coding	chrX:13938712 minus strand	1563683
GPM6B	NM_001001995	NP_001001995	Coding	chrX:13817195 minus strand	1563684
GPM6B	NM_001001996	NP_001001996	Coding	chrX:13817195 minus strand	1563684
GPM6B	NM_005278	NP_005269	Coding	chrX:13817195 minus strand	1563684
GPR101	NM_054021	NP_473362	Coding	chrX:137031674 minus strand	1563685
GPR112	NM_153834	NP_722576	Coding	chrX:136300962 plus strand	1563686
GPR119	NM_178471	NP_848566	Coding	chrX:130385537 minus strand	1563687
GPR143	NM_000273	NP_000264	Coding	chrX:9765965 minus strand	1563688
GPR173	NM_018969	NP_061842	Coding	chrX:53049323 plus strand	1563689
GPR174	NM_032553	NP_115942	Coding	chrX:79170971 plus strand	1563690
GPR34	NM_001097579	NP_001091048	Coding	chrX:41688972 plus strand	1563691
GPR34	NM_005300	NP_005291	Coding	chrX:41688972 plus strand	1563691
GPR50	NM_004224	NP_004215	Coding	chrX:151176583 plus strand	1563692

【１３８７】

GPR64	NM_001079858	NP_001073327	Coding	chrX:19122637 minus strand	1563693
GPR64	NM_001079859	NP_001073328	Coding	chrX:19122637 minus strand	1563693
GPR64	NM_001079860	NP_001073329	Coding	chrX:19122637 minus strand	1563693
GPR64	NM_001184833	NP_001171762	Coding	chrX:19122637 minus strand	1563693
GPR64	NM_001184834	NP_001171763	Coding	chrX:19122637 minus strand	1563693
GPR64	NM_001184835	NP_001171764	Coding	chrX:19122637 minus strand	1563693
GPR64	NM_001184836	NP_001171765	Coding	chrX:19122637 minus strand	1563693
GPR64	NM_001184837	NP_001171766	Coding	chrX:19122637 minus strand	1563693
GPR64	NM_005756	NP_005747	Coding	chrX:19122637 minus strand	1563693
GPR82	NM_080817	NP_543007	Coding	chrX:41724154 plus strand	1563694
GPRASP1	NM_001099410	NP_001092880	Coding	chrX:102651365 plus strand	1563695
GPRASP1	NM_001099411	NP_001092881	Coding	chrX:102651365 plus strand	1563695
GPRASP1	NM_001184727	NP_001171656	Coding	chrX:102651400 plus strand	1563696
GPRASP1	NM_014710	NP_055525	Coding	chrX:102651365 plus strand	1563695
GPRASP2	NM_001004051	NP_001004051	Coding	chrX:102712175 plus strand	1563697
GPRASP2	NM_001184874	NP_001171803	Coding	chrX:102712175 plus strand	1563697
GPRASP2	NM_001184875	NP_001171804	Coding	chrX:102712175 plus strand	1563697
GPRASP2	NM_001184876	NP_001171805	Coding	chrX:102712175 plus strand	1563697
GPRASP2	NM_138437	NP_612446	Coding	chrX:102712175 plus strand	1563697
GRIA3	NM_000828	NP_000819	Coding	chrX:123184242 plus strand	1563698
GRIA3	NM_001256743	NP_001243672	Coding	chrX:123184242 plus strand	1563698
GRIA3	NM_007325	NP_015564	Coding	chrX:123184242 plus strand	1563698
GRIPAP1	NM_020137	NP_064522	Coding	chrX:49002264 minus strand	1563699
GRPR	NM_005314	NP_005305	Coding	chrX:16123300 plus strand	1563700
GSPT2	NM_018094	NP_060564	Coding	chrX:51743384 plus strand	1563701
GTPBP6	NM_012227	NP_036359	Coding	chrX:318819 minus strand	1563702
GUCY2F	NM_001522	NP_001513	Coding	chrX:109482056 minus strand	1563703
GYG2	NM_001079855	NP_001073324	Coding	chrX:2828821 plus strand	1563704
GYG2	NM_001184702	NP_001171631	Coding	chrX:2828821 plus strand	1563704

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GYG2	NM_001184703	NP_001171632	Coding	chrX:2828821 plus strand	1563704
GYG2	NM_001184704	NP_001171633	Coding	chrX:2828821 plus strand	1563704
GYG2	NM_003918	NP_003909	Coding	chrX:2828821 plus strand	1563704
H2AFB1	NM_001017990	NP_001017990	Coding	chrX:154885041 plus strand	1563705
H2AFB1	NM_001017990	NP_001017990	Coding	chrX:155380778 plus strand	1563706
H2AFB1	NM_001017990	NP_001017990	Coding	chrX:155459935 minus strand	1563707
H2AFB2	NM_001017991	NP_001017991	Coding	chrX:154884968 plus strand	1563708
H2AFB2	NM_001017991	NP_001017991	Coding	chrX:155380705 plus strand	1563709
H2AFB2	NM_001017991	NP_001017991	Coding	chrX:155460008 minus strand	1563710
H2AFB3	NM_080720	NP_542451	Coding	chrX:154885041 plus strand	1563711
H2AFB3	NM_080720	NP_542451	Coding	chrX:155380778 plus strand	1563712
H2AFB3	NM_080720	NP_542451	Coding	chrX:155459935 minus strand	1563713
H2BFM	NM_001164416	NP_001157888	Coding	chrX:104039948 plus strand	1563714
H2BFWT	NM_001002916	NP_001002916	Coding	chrX:104013687 minus strand	1563715
HAUS7	NM_017518	NP_059988	Coding	chrX:153470631 minus strand	1563716
HCCS	NM_001122608	NP_001116080	Coding	chrX:11111285 plus strand	1563717
HCCS	NM_001171991	NP_001165462	Coding	chrX:11111285 plus strand	1563717
HCCS	NM_005333	NP_005324	Coding	chrX:11111285 plus strand	1563717
HCFC1	NM_005334	NP_005325	Coding	chrX:153971368 minus strand	1563718
HDAC6	NM_006044	NP_006035	Coding	chrX:48802079 plus strand	1563719
HDAC8	NM_001166418	NP_001159890	Coding	chrX:72573103 minus strand	1563720
HDAC8	NM_001166419	NP_001159891	Coding	chrX:72573103 minus strand	1563720
HDAC8	NM_001166420	NP_001159892	Coding	chrX:72573103 minus strand	1563720
HDAC8	NM_001166422	NP_001159894	Coding	chrX:72573103 minus strand	1563720
HDAC8	NM_001166448	NP_001159920	Coding	chrX:72573103 minus strand	1563720
HDAC8	NM_018486	NP_060956	Coding	chrX:72573103 minus strand	1563720
HDHD1	NM_001135565	NP_001129037	Coding	chrX:7148190 minus strand	1563721
HDHD1	NM_001178135	NP_001171606	Coding	chrX:7148190 minus strand	1563721
HDHD1	NM_001178136	NP_001171607	Coding	chrX:7148190 minus strand	1563721
HDHD1	NM_012080	NP_036212	Coding	chrX:7148190 minus	1563721

【１３８９】

				strand	
HDX	NM_001177478	NP_001170949	Coding	chrX:84502479 minus strand	1563722
HDX	NM_001177479	NP_001170950	Coding	chrX:84502479 minus strand	1563722
HDX	NM_144657	NP_653258	Coding	chrX:84502479 minus strand	1563722
HEPH	NM_001130860	NP_001124332	Coding	chrX:66164229 plus strand	1563723
HEPH	NM_001282141	NP_001269070	Coding	chrX:66164229 plus strand	1563723
HEPH	NM_014799	NP_055614	Coding	chrX:66164229 plus strand	1563723
HEPH	NM_138737	NP_620074	Coding	chrX:66162548 plus strand	1563724
HMGB3	NM_001301228	NP_001288157	Coding	chrX:150983384 plus strand	1563725
HMGB3	NM_001301229	NP_001288158	Coding	chrX:150983274 plus strand	1563726
HMGB3	NM_001301231	NP_001288160	Coding	chrX:150980507 plus strand	1563727
HMGB3	NM_005342	NP_005333	Coding	chrX:150983274 plus strand	1563726
HMGN5	NM_030763	NP_110390	Coding	chrX:81201942 minus strand	1563728
HNRNPH2	NM_001032393	NP_001027565	Coding	chrX:101408132 plus strand	1563729
HNRNPH2	NM_019597	NP_062543	Coding	chrX:101408132 plus strand	1563729
HPRT1	NM_000194	NP_000185	Coding	chrX:134460144 plus strand	1563730
HS6ST2	NM_001077188	NP_001070656	Coding	chrX:132961395 minus strand	1563731
HS6ST2	NM_147175	NP_671704	Coding	chrX:132961395 minus strand	1563731
HSD17B10	NM_001037811	NP_001032900	Coding	chrX:53434376 minus strand	1563732
HSD17B10	NM_004493	NP_004484	Coding	chrX:53434376 minus strand	1563732
HSFX1	NM_016153	NP_057237	Coding	chrX:149595314 minus strand	1563733
HSFX1	NM_016153	NP_057237	Coding	chrX:149774067 plus strand	1563734
HSFX2	NM_001164415	NP_001157887	Coding	chrX:149595310 minus strand	1563735
HSFX2	NM_001164415	NP_001157887	Coding	chrX:149774071 plus strand	1563736
HTATSF1	NM_001163280	NP_001156752	Coding	chrX:136497078 plus strand	1563737
HTATSF1	NM_014500	NP_055315	Coding	chrX:136497511 plus strand	1563738
HTR2C	NM_000868	NP_000859	Coding	chrX:114584077 plus strand	1563739
HTR2C	NM_001256760	NP_001243689	Coding	chrX:114584077 plus strand	1563739
HTR2C	NM_001256761	NP_001243690	Coding	chrX:114584077 plus strand	1563739

【１３９０】

HUWE1	NM_031407	NP_113584	Coding	chrX:53686729 minus strand	1563740
HYPM	NM_012274	NP_036406	Coding	chrX:37990816 plus strand	1563741
IDH3G	NM_004135	NP_004126	Coding	chrX:153794523 minus strand	1563742
IDH3G	NM_174869	NP_777358	Coding	chrX:153794523 minus strand	1563742
IDS	NM_000202	NP_000193	Coding	chrX:149505354 minus strand	1563743
IDS	NM_001166550	NP_001160022	Coding	chrX:149505354 minus strand	1563743
IDS	NM_006123	NP_006114	Coding	chrX:149505354 minus strand	1563743
IGBP1	NM_001551	NP_001542	Coding	chrX:70133467 plus strand	1563744
IGSF1	NM_001170961	NP_001164432	Coding	chrX:131289429 minus strand	1563745
IGSF1	NM_001170962	NP_001164433	Coding	chrX:131289429 minus strand	1563745
IGSF1	NM_001170963	NP_001164434	Coding	chrX:131289061 minus strand	1563746
IGSF1	NM_001555	NP_001546	Coding	chrX:131289429 minus strand	1563745
IGSF1	NM_205833	NP_991402	Coding	chrX:131289429 minus strand	1563745
IKBKG	NM_001099856	NP_001093326	Coding	chrX:154542243 plus strand	1563747
IKBKG	NM_001099857	NP_001093327	Coding	chrX:154547346 plus strand	1563748
IKBKG	NM_001145255	NP_001138727	Coding	chrX:154547346 plus strand	1563748
IKBKG	NM_003639	NP_003630	Coding	chrX:154547846 plus strand	1563749
IL13RA1	NM_001560	NP_001551	Coding	chrX:118727595 plus strand	1563750
IL13RA2	NM_000640	NP_000631	Coding	chrX:115017644 minus strand	1563751
IL1RAPL1	NM_014271	NP_055086	Coding	chrX:28587563 plus strand	1563752
IL1RAPL2	NM_017416	NP_059112	Coding	chrX:104566314 plus strand	1563753
IL2RG	NM_000206	NP_000197	Coding	chrX:71111631 minus strand	1563754
IL3RA	NM_001267713	NP_001254642	Coding	chrX:1336615 plus strand	1563755
IL3RA	NM_002183	NP_002174	Coding	chrX:1336615 plus strand	1563755
IL9R	NM_002186	NP_002177	Coding	chrX:155997580 plus strand	1563756
IL9R	NM_176786	NP_789743	Coding	chrX:155997580 plus strand	1563756
IQSEC2	NM_001111125	NP_001104595	Coding	chrX:53321324 minus strand	1563757
IQSEC2	NM_001243197	NP_001230126	Coding	chrX:53281614 minus strand	1563758
IQSEC2	NM_015075	NP_055890	Coding	chrX:53281614 minus strand	1563758

【１３９１】

IRAK1	NM_001025242	NP_001020413	Coding	chrX:154019891 minus strand	1563759
IRAK1	NM_001025243	NP_001020414	Coding	chrX:154019891 minus strand	1563759
IRAK1	NM_001569	NP_001560	Coding	chrX:154019891 minus strand	1563759
IRS4	NM_003604	NP_003595	Coding	chrX:108736377 minus strand	1563760
ITGB1BP2	NM_012278	NP_036410	Coding	chrX:71301777 plus strand	1563761
ITIH6	NM_198510	NP_940912	Coding	chrX:54798240 minus strand	1563762
ITM2A	NM_001171581	NP_001165052	Coding	chrX:79367552 minus strand	1563763
ITM2A	NM_004867	NP_004858	Coding	chrX:79367552 minus strand	1563763
JADE3	NM_001077445	NP_001070913	Coding	chrX:46912275 plus strand	1563764
JADE3	NM_014735	NP_055550	Coding	chrX:46912432 plus strand	1563765
KAL1	NM_000216	NP_000207	Coding	chrX:8732186 minus strand	1563766
KCND1	NM_004979	NP_004970	Coding	chrX:48971844 minus strand	1563767
KCNE1L	NM_012282	NP_036414	Coding	chrX:109625164 minus strand	1563768
KDM5C	NM_001146702	NP_001140174	Coding	chrX:53225422 minus strand	1563769
KDM5C	NM_001282622	NP_001269551	Coding	chrX:53225422 minus strand	1563769
KDM5C	NM_004187	NP_004178	Coding	chrX:53225422 minus strand	1563769
KDM6A	NM_001291415	NP_001278344	Coding	chrX:44873174 plus strand	1563770
KDM6A	NM_001291416	NP_001278345	Coding	chrX:44873174 plus strand	1563770
KDM6A	NM_001291417	NP_001278346	Coding	chrX:44873174 plus strand	1563770
KDM6A	NM_001291418	NP_001278347	Coding	chrX:44873174 plus strand	1563770
KDM6A	NM_001291421	NP_001278350	Coding	chrX:44873174 plus strand	1563770
KDM6A	NM_021140	NP_066963	Coding	chrX:44873174 plus strand	1563770
KIAA1210	NM_020721	NP_065772	Coding	chrX:119150579 minus strand	1563771
KIAA2022	NM_001008537	NP_001008537	Coding	chrX:74925452 minus strand	1563772
KIF4A	NM_012310	NP_036442	Coding	chrX:70290028 plus strand	1563773
KLF8	NM_001159296	NP_001152768	Coding	chrX:56232436 plus strand	1563774
KLF8	NM_007250	NP_009181	Coding	chrX:56232388 plus strand	1563775
KLHL13	NM_001168299	NP_001161771	Coding	chrX:117985413 minus strand	1563776
KLHL13	NM_001168300	NP_001161772	Coding	chrX:117973797 minus strand	1563777
KLHL13	NM_001168301	NP_001161773	Coding	chrX:118117340 minus strand	1563778
KLHL13	NM_001168302	NP_001161774	Coding	chrX:118116865 minus strand	1563779

【１３９２】

KLHL13	NM_001168303	NP_001161775	Coding	chrX:118116865 minus strand	1563779
KLHL13	NM_033495	NP_277030	Coding	chrX:117973738 minus strand	1563780
KLHL15	NM_030624	NP_085127	Coding	chrX:24027186 minus strand	1563781
KLHL34	NM_153270	NP_695002	Coding	chrX:21658330 minus strand	1563782
KLHL4	NM_019117	NP_061990	Coding	chrX:87517711 plus strand	1563783
KLHL4	NM_057162	NP_476503	Coding	chrX:87517711 plus strand	1563783
KRBOX4	NM_001129898	NP_001123370	Coding	chrX:46447188 plus strand	1563784
KRBOX4	NM_001129899	NP_001123371	Coding	chrX:46447188 plus strand	1563784
KRBOX4	NM_001129900	NP_001123372	Coding	chrX:46447188 plus strand	1563784
KRBOX4	NM_017776	NP_060246	Coding	chrX:46447188 plus strand	1563784
L1CAM	NM_000425	NP_000416	Coding	chrX:153876045 minus strand	1563785
L1CAM	NM_001143963	NP_001137435	Coding	chrX:153875944 minus strand	1563786
L1CAM	NM_001278116	NP_001265045	Coding	chrX:153886174 minus strand	1563787
L1CAM	NM_024003	NP_076493	Coding	chrX:153875944 minus strand	1563786
LAGE3	NM_006014	NP_006005	Coding	chrX:154479257 minus strand	1563788
LAMP2	NM_001122606	NP_001116078	Coding	chrX:120469349 minus strand	1563789
LAMP2	NM_002294	NP_002285	Coding	chrX:120469349 minus strand	1563789
LAMP2	NM_013995	NP_054701	Coding	chrX:120469349 minus strand	1563789
LANCL3	NM_001170331	NP_001163802	Coding	chrX:37571568 plus strand	1563790
LANCL3	NM_198511	NP_940913	Coding	chrX:37571568 plus strand	1563790
LAS1L	NM_001170649	NP_001164120	Coding	chrX:65534806 minus strand	1563791
LAS1L	NM_001170650	NP_001164121	Coding	chrX:65534806 minus strand	1563791
LAS1L	NM_031206	NP_112483	Coding	chrX:65534806 minus strand	1563791
LDOC1	NM_012317	NP_036449	Coding	chrX:141177214 minus strand	1563792
LHFPL1	NM_178175	NP_835469	Coding	chrX:112680147 minus strand	1563793
LOC100129520	NM_001195272	NP_001182201	Coding	chrX:125320119 plus strand	1563794
LOC100288814	NM_001195081	NP_001182010	Coding	chrX:9967357 plus strand	1563795
LOC389895	NM_001271560	NP_001258489	Coding	chrX:140091666 plus strand	1563796
LONRF3	NM_001031855	NP_001027026	Coding	chrX:118974613 plus strand	1563797
LONRF3	NM_001289109	NP_001276038	Coding	chrX:118976331 plus strand	1563798

【１３９３】

LONRF3	NM_024778	NP_079054	Coding	chrX:118974613 plus strand	1563797
LPAR4	NM_001278000	NP_001264929	Coding	chrX:78747708 plus strand	1563799
LPAR4	NM_005296	NP_005287	Coding	chrX:78747708 plus strand	1563799
LRCH2	NM_001243963	NP_001230892	Coding	chrX:115234072 minus strand	1563800
LRCH2	NM_020871	NP_065922	Coding	chrX:115234072 minus strand	1563800
LUZP4	NM_016383	NP_057467	Coding	chrX:115289716 plus strand	1563801
MAGEA1	NM_004988	NP_004979	Coding	chrX:153179283 plus strand	1563802
MAGEA10	NM_001011543	NP_001011543	Coding	chrX:152138578 minus strand	1563803
MAGEA10	NM_001251828	NP_001238757	Coding	chrX:152138578 minus strand	1563803
MAGEA10	NM_021048	NP_066386	Coding	chrX:152138578 minus strand	1563803
MAGEA10-MAGEA5	NM_001204811	NP_001191740	Coding	chrX:152138578 minus strand	1563804
MAGEA11	NM_001011544	NP_001011544	Coding	chrX:149688236 plus strand	1563805
MAGEA11	NM_005366	NP_005357	Coding	chrX:149712077 plus strand	1563806
MAGEA12	NM_001166386	NP_001159858	Coding	chrX:152733861 plus strand	1563807
MAGEA12	NM_001166387	NP_001159859	Coding	chrX:152733778 plus strand	1563808
MAGEA12	NM_005367	NP_005358	Coding	chrX:152733778 plus strand	1563808
MAGEA2	NM_001282501	NP_001269430	Coding	chrX:152714585 plus strand	1563809
MAGEA2	NM_001282501	NP_001269430	Coding	chrX:152753884 minus strand	1563810
MAGEA2	NM_001282502	NP_001269431	Coding	chrX:152714585 plus strand	1563809
MAGEA2	NM_001282502	NP_001269431	Coding	chrX:152753884 minus strand	1563810
MAGEA2	NM_001282504	NP_001269433	Coding	chrX:152714585 plus strand	1563809
MAGEA2	NM_001282504	NP_001269433	Coding	chrX:152753884 minus strand	1563810
MAGEA2	NM_001282505	NP_001269434	Coding	chrX:152714585 plus strand	1563809
MAGEA2	NM_001282505	NP_001269434	Coding	chrX:152753884 minus strand	1563810
MAGEA2	NM_005361	NP_005352	Coding	chrX:152714585 plus strand	1563809
MAGEA2	NM_005361	NP_005352	Coding	chrX:152753884 minus strand	1563810
MAGEA2	NM_175742	NP_786884	Coding	chrX:152714585 plus strand	1563809
MAGEA2	NM_175742	NP_786884	Coding	chrX:152753884 minus strand	1563810

【１３９４】

MAGEA2	NM_175743	NP_786885	Coding	chrX:152714585 plus strand	1563809
MAGEA2	NM_175743	NP_786885	Coding	chrX:152753884 minus strand	1563810
MAGEA2B	NM_153488	NP_705692	Coding	chrX:152716894 plus strand	1563811
MAGEA2B	NM_153488	NP_705692	Coding	chrX:152751575 minus strand	1563812
MAGEA3	NM_005362	NP_005353	Coding	chrX:152698751 plus strand	1563813
MAGEA4	NM_001011548	NP_001011548	Coding	chrX:151912888 plus strand	1563814
MAGEA4	NM_001011549	NP_001011549	Coding	chrX:151916924 plus strand	1563815
MAGEA4	NM_001011550	NP_001011550	Coding	chrX:151918287 plus strand	1563816
MAGEA4	NM_002362	NP_002353	Coding	chrX:151916236 plus strand	1563817
MAGEA5	NM_021049	NP_066387	Coding	chrX:152117939 minus strand	1563818
MAGEA6	NM_005363	NP_005354	Coding	chrX:152769716 minus strand	1563819
MAGEA6	NM_175868	NP_787064	Coding	chrX:152769716 minus strand	1563819
MAGEA8	NM_001166400	NP_001159872	Coding	chrX:149881140 plus strand	1563820
MAGEA8	NM_001166401	NP_001159873	Coding	chrX:149881140 plus strand	1563820
MAGEA8	NM_005364	NP_005355	Coding	chrX:149881140 plus strand	1563820
MAGEA9	NM_005365	NP_005356	Coding	chrX:149587452 minus strand	1563821
MAGEA9	NM_005365	NP_005356	Coding	chrX:149781936 plus strand	1563822
MAGEA9B	NM_001080790	NP_001074259	Coding	chrX:149587459 minus strand	1563823
MAGEA9B	NM_001080790	NP_001074259	Coding	chrX:149781929 plus strand	1563824
MAGEB1	NM_002363	NP_002354	Coding	chrX:30243730 plus strand	1563825
MAGEB1	NM_177404	NP_796379	Coding	chrX:30247153 plus strand	1563826
MAGEB1	NM_177415	NP_803134	Coding	chrX:30243730 plus strand	1563825
MAGEB10	NM_182506	NP_872312	Coding	chrX:27807989 plus strand	1563827
MAGEB16	NM_001099921	NP_001093391	Coding	chrX:35798341 plus strand	1563828
MAGEB17	NM_001277307	NP_001264236	Coding	chrX:16167480 plus strand	1563829
MAGEB18	NM_173699	NP_775970	Coding	chrX:26138342 plus strand	1563830
MAGEB2	NM_002364	NP_002355	Coding	chrX:30215557 plus strand	1563831
MAGEB3	NM_002365	NP_002356	Coding	chrX:30230435 plus strand	1563832
MAGEB4	NM_002367	NP_002358	Coding	chrX:30241939 plus strand	1563833
MAGEB5	NM_001271752	NP_001258681	Coding	chrX:26216168 plus strand	1563834
MAGEB6	NM_173523	NP_775794	Coding	chrX:26192439 plus strand	1563835

【１３９５】

MAGEC1	NM_005462	NP_005453	Coding	chrX:141903855 plus strand	1563836
MAGEC2	NM_016249	NP_057333	Coding	chrX:142205290 minus strand	1563837
MAGEC3	NM_138702	NP_619647	Coding	chrX:141838315 plus strand	1563838
MAGEC3	NM_177456	NP_803251	Coding	chrX:141894665 plus strand	1563839
MAGED1	NM_001005332	NP_001005332	Coding	chrX:51803058 plus strand	1563840
MAGED1	NM_001005333	NP_001005333	Coding	chrX:51893601 plus strand	1563841
MAGED1	NM_006986	NP_008917	Coding	chrX:51893601 plus strand	1563841
MAGED2	NM_014599	NP_055414	Coding	chrX:54808337 plus strand	1563842
MAGED2	NM_177433	NP_803182	Coding	chrX:54807598 plus strand	1563843
MAGED2	NM_201222	NP_957516	Coding	chrX:54809059 plus strand	1563844
MAGED4	NM_001098800	NP_001092270	Coding	chrX:52069272 minus strand	1563845
MAGED4	NM_001098800	NP_001092270	Coding	chrX:52184822 plus strand	1563846
MAGED4	NM_001272061	NP_001258990	Coding	chrX:52069272 minus strand	1563845
MAGED4	NM_001272061	NP_001258990	Coding	chrX:52184822 plus strand	1563846
MAGED4	NM_001272062	NP_001258991	Coding	chrX:52069272 minus strand	1563845
MAGED4	NM_001272062	NP_001258991	Coding	chrX:52184822 plus strand	1563846
MAGED4	NM_001272063	NP_001258992	Coding	chrX:52069272 minus strand	1563845
MAGED4	NM_001272063	NP_001258992	Coding	chrX:52184822 plus strand	1563846
MAGED4B	NM_001242362	NP_001229291	Coding	chrX:52069272 minus strand	1563847
MAGED4B	NM_001242362	NP_001229291	Coding	chrX:52184822 plus strand	1563848
MAGED4B	NM_030801	NP_110428	Coding	chrX:52069272 minus strand	1563847
MAGED4B	NM_030801	NP_110428	Coding	chrX:52184822 plus strand	1563848
MAGED4B	NM_177535	NP_803879	Coding	chrX:52069272 minus strand	1563847
MAGED4B	NM_177535	NP_803879	Coding	chrX:52184822 plus strand	1563848
MAGED4B	NM_177537	NP_803881	Coding	chrX:52069272 minus strand	1563847
MAGED4B	NM_177537	NP_803881	Coding	chrX:52184822 plus strand	1563848
MAGEE1	NM_020932	NP_065983	Coding	chrX:76427652 plus strand	1563849
MAGEE2	NM_138703	NP_619648	Coding	chrX:75785244 minus strand	1563850
MAGEH1	NM_014061	NP_054780	Coding	chrX:55452088 plus strand	1563851
MAGIX	NM_001099681	NP_001093151	Coding	chrX:49162842 plus strand	1563852
MAGIX	NM_001099682	NP_001093152	Coding	chrX:49162842 plus strand	1563852
MAGIX	NM_024859	NP_079135	Coding	chrX:49162842 plus strand	1563852
MAGT1	NM_032121	NP_115497	Coding	chrX:77895568 minus strand	1563853
MAMLD1	NM_001177465	NP_001170936	Coding	chrX:150363277 plus strand	1563854

【１３９６】

MAMLD1	NM_001177466	NP_001170937	Coding	chrX:150445453 plus strand	1563855
MAMLD1	NM_005491	NP_005482	Coding	chrX:150445453 plus strand	1563855
MAOA	NM_000240	NP_000231	Coding	chrX:43654906 plus strand	1563856
MAOA	NM_001270458	NP_001257387	Coding	chrX:43654906 plus strand	1563856
MAOB	NM_000898	NP_000889	Coding	chrX:43882475 minus strand	1563857
MAP3K15	NM_001001671	NP_001001671	Coding	chrX:19515261 minus strand	1563858
MAP7D2	NM_001168465	NP_001161937	Coding	chrX:20116996 minus strand	1563859
MAP7D2	NM_001168466	NP_001161938	Coding	chrX:20116996 minus strand	1563859
MAP7D2	NM_001168467	NP_001161939	Coding	chrX:20116638 minus strand	1563860
MAP7D2	NM_152780	NP_689993	Coding	chrX:20116996 minus strand	1563859
MAP7D3	NM_001173516	NP_001166987	Coding	chrX:136256482 minus strand	1563861
MAP7D3	NM_001173517	NP_001166988	Coding	chrX:136251579 minus strand	1563862
MAP7D3	NM_024597	NP_078873	Coding	chrX:136251579 minus strand	1563862
MBNL3	NM_001170701	NP_001164172	Coding	chrX:132413575 minus strand	1563863
MBNL3	NM_001170702	NP_001164173	Coding	chrX:132413575 minus strand	1563863
MBNL3	NM_001170703	NP_001164174	Coding	chrX:132413608 minus strand	1563864
MBNL3	NM_001170704	NP_001164175	Coding	chrX:132489968 minus strand	1563865
MBNL3	NM_018388	NP_060858	Coding	chrX:132439690 minus strand	1563866
MBNL3	NM_133486	NP_597846	Coding	chrX:132439690 minus strand	1563866
MBTPS2	NM_015884	NP_056968	Coding	chrX:21839537 plus strand	1563867
MCF2	NM_001099855	NP_001093325	Coding	chrX:139708222 minus strand	1563868
MCF2	NM_001171876	NP_001165347	Coding	chrX:139708222 minus strand	1563868
MCF2	NM_001171877	NP_001165348	Coding	chrX:139642841 minus strand	1563869
MCF2	NM_001171878	NP_001165349	Coding	chrX:139642841 minus strand	1563869
MCF2	NM_001171879	NP_001165350	Coding	chrX:139642841 minus strand	1563869
MCF2	NM_005369	NP_005360	Coding	chrX:139642841 minus strand	1563869
MCTS1	NM_001137554	NP_001131026	Coding	chrX:120604696 plus strand	1563870
MCTS1	NM_014060	NP_054779	Coding	chrX:120603888 plus strand	1563871

【１３９７】

MECP2	NM_001110792	NP_001104262	Coding	chrX:154097731 minus strand	1563872
MECP2	NM_004992	NP_004983	Coding	chrX:154097731 minus strand	1563872
MED12	NM_005120	NP_005111	Coding	chrX:71118555 plus strand	1563873
MED14	NM_004229	NP_004220	Coding	chrX:40735552 minus strand	1563874
MED14OS	NM_001289773	NP_001276702	Coding	chrX:40735395 plus strand	1563875
MID1	NM_000381	NP_000372	Coding	chrX:10620634 minus strand	1563876
MID1	NM_001098624	NP_001092094	Coding	chrX:10677739 minus strand	1563877
MID1	NM_001193277	NP_001180206	Coding	chrX:10576917 minus strand	1563878
MID1	NM_001193278	NP_001180207	Coding	chrX:10567603 minus strand	1563879
MID1	NM_001193279	NP_001180208	Coding	chrX:10567603 minus strand	1563879
MID1	NM_001193280	NP_001180209	Coding	chrX:10567603 minus strand	1563879
MID1	NM_001193281	NP_001180210	Coding	chrX:10567603 minus strand	1563879
MID1	NM_033289	NP_150631	Coding	chrX:10620634 minus strand	1563876
MID1	NM_033290	NP_150632	Coding	chrX:10833690 minus strand	1563880
MID1IP1	NM_001098790	NP_001092260	Coding	chrX:38801431 plus strand	1563881
MID1IP1	NM_001098791	NP_001092261	Coding	chrX:38801431 plus strand	1563881
MID1IP1	NM_021242	NP_067065	Coding	chrX:38801431 plus strand	1563881
MID2	NM_012216	NP_036348	Coding	chrX:107825853 plus strand	1563882
MID2	NM_052817	NP_438112	Coding	chrX:107825853 plus strand	1563882
MMGT1	NM_173470	NP_775741	Coding	chrX:135973975 minus strand	1563883
MORC4	NM_001085354	NP_001078823	Coding	chrX:107000244 minus strand	1563884
MORC4	NM_024657	NP_078933	Coding	chrX:107000244 minus strand	1563884
MORF4L2	NM_001142418	NP_001135890	Coding	chrX:103686818 minus strand	1563885
MORF4L2	NM_001142419	NP_001135891	Coding	chrX:103688158 minus strand	1563886
MORF4L2	NM_001142420	NP_001135892	Coding	chrX:103688158 minus strand	1563886
MORF4L2	NM_001142421	NP_001135893	Coding	chrX:103688158 minus strand	1563886
MORF4L2	NM_001142422	NP_001135894	Coding	chrX:103688158 minus strand	1563886
MORF4L2	NM_001142423	NP_001135895	Coding	chrX:103686818 minus strand	1563885
MORF4L2	NM_001142424	NP_001135896	Coding	chrX:103686818 minus strand	1563885

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MORF4L2	NM_001142425	NP_001135897	Coding	chrX:103686818 minus strand	1563885
MORF4L2	NM_001142426	NP_001135898	Coding	chrX:103686818 minus strand	1563885
MORF4L2	NM_001142427	NP_001135899	Coding	chrX:103688158 minus strand	1563886
MORF4L2	NM_001142428	NP_001135900	Coding	chrX:103688158 minus strand	1563886
MORF4L2	NM_001142429	NP_001135901	Coding	chrX:103686818 minus strand	1563885
MORF4L2	NM_001142430	NP_001135902	Coding	chrX:103686818 minus strand	1563885
MORF4L2	NM_001142431	NP_001135903	Coding	chrX:103688158 minus strand	1563886
MORF4L2	NM_001142432	NP_001135904	Coding	chrX:103688158 minus strand	1563886
MORF4L2	NM_012286	NP_036418	Coding	chrX:103686818 minus strand	1563885
MOSPD1	NM_019556	NP_062456	Coding	chrX:134915267 minus strand	1563887
MOSPD2	NM_001177475	NP_001170946	Coding	chrX:14885290 plus strand	1563888
MOSPD2	NM_152581	NP_689794	Coding	chrX:14873404 plus strand	1563889
MPC1L	NM_001195522	NP_001182451	Coding	chrX:40623565 plus strand	1563890
MPP1	NM_001166460	NP_001159932	Coding	chrX:154805527 minus strand	1563891
MPP1	NM_001166461	NP_001159933	Coding	chrX:154805527 minus strand	1563891
MPP1	NM_001166462	NP_001159934	Coding	chrX:154805527 minus strand	1563891
MPP1	NM_002436	NP_002427	Coding	chrX:154805527 minus strand	1563891
MSL3	NM_001193270	NP_001180199	Coding	chrX:11758581 plus strand	1563892
MSL3	NM_001282174	NP_001269103	Coding	chrX:11758158 plus strand	1563893
MSL3	NM_006800	NP_006791	Coding	chrX:11759615 plus strand	1563894
MSL3	NM_078628	NP_523352	Coding	chrX:11758158 plus strand	1563893
MSL3	NM_078629	NP_523353	Coding	chrX:11758158 plus strand	1563893
MSN	NM_002444	NP_002435	Coding	chrX:65667643 plus strand	1563895
MTCP1	NM_001018025	NP_001018025	Coding	chrX:155071272 minus strand	1563896
MTM1	NM_000252	NP_000243	Coding	chrX:150568596 plus strand	1563897
MTMR1	NM_003828	NP_003819	Coding	chrX:150693395 plus strand	1563898
MTMR8	NM_017677	NP_060147	Coding	chrX:64395453 minus strand	1563899
MTRNR2L10	NM_001190708	NP_001177637	Coding	chrX:55182511 minus strand	1563900
MUM1L1	NM_001171020	NP_001164491	Coding	chrX:106168304 plus strand	1563901
MUM1L1	NM_152423	NP_689636	Coding	chrX:106168304 plus strand	1563901

【１３９９】

MXRA5	NM_015419	NP_056234	Coding	chrX:3346643 minus strand	1563902
NAA10	NM_001256119	NP_001243048	Coding	chrX:153935154 minus strand	1563903
NAA10	NM_001256120	NP_001243049	Coding	chrX:153935154 minus strand	1563903
NAA10	NM_003491	NP_003482	Coding	chrX:153935154 minus strand	1563903
NAP1L2	NM_021963	NP_068798	Coding	chrX:73214874 minus strand	1563904
NAP1L3	NM_004538	NP_004529	Coding	chrX:93673683 minus strand	1563905
NDP	NM_000266	NP_000257	Coding	chrX:43973675 minus strand	1563906
NDUFA1	NM_004541	NP_004532	Coding	chrX:119871770 plus strand	1563907
NDUFB11	NM_001135998	NP_001129470	Coding	chrX:47145210 minus strand	1563908
NDUFB11	NM_019056	NP_061929	Coding	chrX:47145210 minus strand	1563908
NGFRAP1	NM_001282674	NP_001269603	Coding	chrX:103376322 plus strand	1563909
NGFRAP1	NM_014380	NP_055195	Coding	chrX:103377180 plus strand	1563910
NGFRAP1	NM_206915	NP_996798	Coding	chrX:103376322 plus strand	1563909
NGFRAP1	NM_206917	NP_996800	Coding	chrX:103376322 plus strand	1563909
NHS	NM_001136024	NP_001129496	Coding	chrX:17635292 plus strand	1563911
NHS	NM_001291867	NP_001278796	Coding	chrX:17375419 plus strand	1563912
NHS	NM_001291868	NP_001278797	Coding	chrX:17635292 plus strand	1563911
NHS	NM_198270	NP_938011	Coding	chrX:17375419 plus strand	1563912
NHSL2	NM_001013627	NP_001013649	Coding	chrX:71911087 plus strand	1563913
NKAP	NM_024528	NP_078804	Coding	chrX:119943772 minus strand	1563914
NKRF	NM_001173487	NP_001166958	Coding	chrX:119605883 minus strand	1563915
NKRF	NM_001173488	NP_001166959	Coding	chrX:119593150 minus strand	1563916
NKRF	NM_017544	NP_060014	Coding	chrX:119605883 minus strand	1563915
NLGN3	NM_001166660	NP_001160132	Coding	chrX:71144830 plus strand	1563917
NLGN3	NM_018977	NP_061850	Coding	chrX:71144830 plus strand	1563917
NLGN3	NM_181303	NP_851820	Coding	chrX:71144830 plus strand	1563917
NLGN4X	NM_001282145	NP_001269074	Coding	chrX:6228882 minus strand	1563918
NLGN4X	NM_001282146	NP_001269075	Coding	chrX:6227203 minus strand	1563919
NLGN4X	NM_020742	NP_065793	Coding	chrX:6227847 minus strand	1563920
NLGN4X	NM_181332	NP_851849	Coding	chrX:6228882 minus strand	1563918

【１４００】

NONO	NM_001145408	NP_001138880	Coding	chrX:71283191 plus strand	1563921
NONO	NM_001145409	NP_001138881	Coding	chrX:71283191 plus strand	1563921
NONO	NM_001145410	NP_001138882	Coding	chrX:71283191 plus strand	1563921
NONO	NM_007363	NP_031389	Coding	chrX:71283191 plus strand	1563921
NOX1	NM_001271815	NP_001258744	Coding	chrX:100874345 minus strand	1563922
NOX1	NM_007052	NP_008983	Coding	chrX:100874345 minus strand	1563922
NOX1	NM_013955	NP_039249	Coding	chrX:100874345 minus strand	1563922
NR0B1	NM_000475	NP_000466	Coding	chrX:30309378 minus strand	1563923
NRK	NM_198465	NP_940867	Coding	chrX:105822542 plus strand	1563924
NSDHL	NM_001129765	NP_001123237	Coding	chrX:152830966 plus strand	1563925
NSDHL	NM_015922	NP_057006	Coding	chrX:152830966 plus strand	1563925
NUDT10	NM_153183	NP_694853	Coding	chrX:51332230 plus strand	1563926
NUDT11	NM_018159	NP_060629	Coding	chrX:51496607 minus strand	1563927
NUP62CL	NM_017681	NP_060151	Coding	chrX:107206440 minus strand	1563928
NXF2	NM_022053	NP_071336	Coding	chrX:102247099 plus strand	1563929
NXF2	NM_022053	NP_071336	Coding	chrX:102440008 minus strand	1563930
NXF2B	NM_001099686	NP_001093156	Coding	chrX:102247099 plus strand	1563931
NXF2B	NM_001099686	NP_001093156	Coding	chrX:102440008 minus strand	1563932
NXF3	NM_022052	NP_071335	Coding	chrX:103093094 minus strand	1563933
NXF5	NM_032946	NP_116564	Coding	chrX:101857577 minus strand	1563934
NXT2	NM_001242617	NP_001229546	Coding	chrX:109536829 plus strand	1563935
NXT2	NM_001242618	NP_001229547	Coding	chrX:109537117 plus strand	1563936
NXT2	NM_018698	NP_061168	Coding	chrX:109535780 plus strand	1563937
NYX	NM_022567	NP_072089	Coding	chrX:41447459 plus strand	1563938
OCRL	NM_000276	NP_000267	Coding	chrX:129540274 plus strand	1563939
OCRL	NM_001587	NP_001578	Coding	chrX:129540274 plus strand	1563939
OFD1	NM_003611	NP_003602	Coding	chrX:13734712 plus strand	1563940
OGT	NM_181672	NP_858058	Coding	chrX:71533061 plus strand	1563941
OGT	NM_181673	NP_858059	Coding	chrX:71533061 plus strand	1563941
OPHN1	NM_002547	NP_002538	Coding	chrX:68433457 minus strand	1563942

【１４０１】

OPN1LW	NM_020061	NP_064445	Coding	chrX:154144223 plus strand	1563943
OPN1MW	NM_000513	NP_000504	Coding	chrX:154182595 plus strand	1563944
OPN1MW	NM_000513	NP_000504	Coding	chrX:154219733 plus strand	1563945
OPN1MW	NM_000513	NP_000504	Coding	chrX:154257537 plus strand	1563946
OPN1MW2	NM_001048181	NP_001041646	Coding	chrX:154182595 plus strand	1563947
OPN1MW2	NM_001048181	NP_001041646	Coding	chrX:154219733 plus strand	1563948
OPN1MW2	NM_001048181	NP_001041646	Coding	chrX:154257537 plus strand	1563949
OR13H1	NM_001004486	NP_001004486	Coding	chrX:131544073 plus strand	1563950
OTC	NM_000531	NP_000522	Coding	chrX:38352482 plus strand	1563951
OTUD5	NM_001136157	NP_001129629	Coding	chrX:48957631 minus strand	1563952
OTUD5	NM_001136158	NP_001129630	Coding	chrX:48957631 minus strand	1563952
OTUD5	NM_001136159	NP_001129631	Coding	chrX:48958386 minus strand	1563953
OTUD5	NM_017602	NP_060072	Coding	chrX:48957631 minus strand	1563952
OTUD6A	NM_207320	NP_997203	Coding	chrX:70062490 plus strand	1563954
P2RY10	NM_014499	NP_055314	Coding	chrX:78945331 plus strand	1563955
P2RY10	NM_198333	NP_938147	Coding	chrX:78945331 plus strand	1563955
P2RY4	NM_002565	NP_002556	Coding	chrX:70259804 minus strand	1563956
P2RY8	NM_178129	NP_835230	Coding	chrX:1537144 minus strand	1563957
PABPC1L2A	NM_001012977	NP_001012995	Coding	chrX:73079512 minus strand	1563958
PABPC1L2B	NM_001042506	NP_001035971	Coding	chrX:73003512 plus strand	1563959
PABPC5	NM_080832	NP_543022	Coding	chrX:91434597 plus strand	1563960
PAGE1	NM_003785	NP_003776	Coding	chrX:49695993 minus strand	1563961
PAGE2	NM_207339	NP_997222	Coding	chrX:55089063 plus strand	1563962
PAGE2B	NM_001015038	NP_001015038	Coding	chrX:55075055 plus strand	1563963
PAGE4	NM_007003	NP_008934	Coding	chrX:49829302 plus strand	1563964
PAGE5	NM_001013435	NP_001013453	Coding	chrX:55220358 plus strand	1563965
PAGE5	NM_130467	NP_569734	Coding	chrX:55220357 plus strand	1563966
PAK3	NM_001128166	NP_001121638	Coding	chrX:110944284 plus strand	1563967
PAK3	NM_001128167	NP_001121639	Coding	chrX:110944284 plus strand	1563967
PAK3	NM_001128168	NP_001121640	Coding	chrX:111123076 plus strand	1563968
PAK3	NM_001128172	NP_001121644	Coding	chrX:111123076 plus strand	1563968

【１４０２】

PAK3	NM_001128173	NP_001121645	Coding	chrX:111123076 plus strand	1563968
PAK3	NM_002578	NP_002569	Coding	chrX:111096146 plus strand	1563969
PASD1	NM_173493	NP_775764	Coding	chrX:151563534 plus strand	1563970
PBDC1	NM_001300888	NP_001287817	Coding	chrX:76172928 plus strand	1563971
PBDC1	NM_016500	NP_057584	Coding	chrX:76172935 plus strand	1563972
PCDH11X	NM_001168360	NP_001161832	Coding	chrX:91835460 plus strand	1563973
PCDH11X	NM_001168361	NP_001161833	Coding	chrX:91835460 plus strand	1563973
PCDH11X	NM_001168362	NP_001161834	Coding	chrX:91835460 plus strand	1563973
PCDH11X	NM_001168363	NP_001161835	Coding	chrX:91835460 plus strand	1563973
PCDH11X	NM_032968	NP_116750	Coding	chrX:91835460 plus strand	1563973
PCDH11X	NM_032969	NP_116751	Coding	chrX:91835460 plus strand	1563973
PCDH19	NM_001105243	NP_001098713	Coding	chrX:100410273 minus strand	1563974
PCDH19	NM_001184880	NP_001171809	Coding	chrX:100410273 minus strand	1563974
PCDH19	NM_020766	NP_065817	Coding	chrX:100410273 minus strand	1563974
PCSK1N	NM_013271	NP_037403	Coding	chrX:48835638 minus strand	1563975
PCYT1B	NM_001163264	NP_001156736	Coding	chrX:24672862 minus strand	1563976
PCYT1B	NM_001163265	NP_001156737	Coding	chrX:24647338 minus strand	1563977
PCYT1B	NM_004845	NP_004836	Coding	chrX:24647338 minus strand	1563977
PDHA1	NM_000284	NP_000275	Coding	chrX:19343892 plus strand	1563978
PDHA1	NM_001173454	NP_001166925	Coding	chrX:19343892 plus strand	1563978
PDHA1	NM_001173455	NP_001166926	Coding	chrX:19343892 plus strand	1563978
PDHA1	NM_001173456	NP_001166927	Coding	chrX:19343892 plus strand	1563978
PDK3	NM_001142386	NP_001135858	Coding	chrX:24465226 plus strand	1563979
PDK3	NM_005391	NP_005382	Coding	chrX:24465226 plus strand	1563979
PDZD11	NM_016484	NP_057568	Coding	chrX:70289948 minus strand	1563980
PDZD4	NM_032512	NP_115901	Coding	chrX:153830548 minus strand	1563981
PFKFB1	NM_001271804	NP_001258733	Coding	chrX:54994078 minus strand	1563982
PFKFB1	NM_001271805	NP_001258734	Coding	chrX:54998534 minus strand	1563983
PFKFB1	NM_002625	NP_002616	Coding	chrX:54994078 minus strand	1563982
PGAM4	NM_001029891	NP_001025062	Coding	chrX:77969638 minus strand	1563984
PGK1	NM_000291	NP_000282	Coding	chrX:78104168 plus strand	1563985
PGRMC1	NM_001282621	NP_001269550	Coding	chrX:119236244 plus strand	1563986
PGRMC1	NM_006667	NP_006658	Coding	chrX:119236244 plus	1563986

【１４０３】

				strand	
PHEX	NM_000444	NP_000435	Coding	chrX:22032443 plus strand	1563987
PHEX	NM_001282754	NP_001269683	Coding	chrX:22032443 plus strand	1563987
PHF6	NM_001015877	NP_001015877	Coding	chrX:134373311 plus strand	1563988
PHF6	NM_032335	NP_115711	Coding	chrX:134373311 plus strand	1563988
PHF6	NM_032458	NP_115834	Coding	chrX:134373311 plus strand	1563988
PHF8	NM_001184896	NP_001171825	Coding	chrX:54045136 minus strand	1563989
PHF8	NM_001184897	NP_001171826	Coding	chrX:54044174 minus strand	1563990
PHF8	NM_001184898	NP_001171827	Coding	chrX:54043194 minus strand	1563991
PHF8	NM_015107	NP_055922	Coding	chrX:54044174 minus strand	1563990
PHKA1	NM_001122670	NP_001116142	Coding	chrX:72714181 minus strand	1563992
PHKA1	NM_001172436	NP_001165907	Coding	chrX:72714181 minus strand	1563992
PHKA1	NM_002637	NP_002628	Coding	chrX:72714181 minus strand	1563992
PHKA2	NM_000292	NP_000283	Coding	chrX:18984362 minus strand	1563993
PIGA	NM_002641	NP_002632	Coding	chrX:15335554 minus strand	1563994
PIGA	NM_020473	NP_065206	Coding	chrX:15335554 minus strand	1563994
PIH1D3	NM_001169154	NP_001162625	Coding	chrX:107206631 plus strand	1563995
PIH1D3	NM_173494	NP_775765	Coding	chrX:107206631 plus strand	1563995
PIM2	NM_006875	NP_006866	Coding	chrX:48919136 minus strand	1563996
PIN4	NM_001170747	NP_001164218	Coding	chrX:72181675 plus strand	1563997
PIN4	NM_006223	NP_006214	Coding	chrX:72181675 plus strand	1563997
PIR	NM_001018109	NP_001018119	Coding	chrX:15493588 minus strand	1563998
PIR	NM_003662	NP_003653	Coding	chrX:15493588 minus strand	1563998
PJA1	NM_001032396	NP_001027568	Coding	chrX:69165522 minus strand	1563999
PJA1	NM_022368	NP_071763	Coding	chrX:69165522 minus strand	1563999
PJA1	NM_145119	NP_660095	Coding	chrX:69165522 minus strand	1563999
PLAC1	NM_021796	NP_068568	Coding	chrX:134658483 minus strand	1564000
PLCXD1	NM_018390	NP_060860	Coding	chrX:281393 plus strand	1564001
PLP1	NM_000533	NP_000524	Coding	chrX:103776825 plus strand	1564002

【１４０４】

PLP1	NM_001128834	NP_001122306	Coding	chrX:103776510 plus strand	1564003
PLP1	NM_199478	NP_955772	Coding	chrX:103776825 plus strand	1564002
PLP2	NM_002668	NP_002659	Coding	chrX:49171836 plus strand	1564004
PLS3	NM_001136025	NP_001129497	Coding	chrX:115593506 plus strand	1564005
PLS3	NM_001172335	NP_001165806	Coding	chrX:115593506 plus strand	1564005
PLS3	NM_001282337	NP_001269266	Coding	chrX:115560849 plus strand	1564006
PLS3	NM_001282338	NP_001269267	Coding	chrX:115593506 plus strand	1564005
PLS3	NM_005032	NP_005023	Coding	chrX:115560849 plus strand	1564006
PLXNA3	NM_017514	NP_059984	Coding	chrX:154458280 plus strand	1564007
PLXNB3	NM_001163257	NP_001156729	Coding	chrX:153764195 plus strand	1564008
PLXNB3	NM_005393	NP_005384	Coding	chrX:153764195 plus strand	1564008
PNCK	NM_001039582	NP_001034671	Coding	chrX:153674361 minus strand	1564009
PNCK	NM_001135740	NP_001129212	Coding	chrX:153673288 minus strand	1564010
PNMA3	NM_001282535	NP_001269464	Coding	chrX:153056408 plus strand	1564011
PNMA3	NM_013364	NP_037496	Coding	chrX:153056408 plus strand	1564011
PNMA5	NM_001103150	NP_001096620	Coding	chrX:152992217 minus strand	1564012
PNMA5	NM_001103151	NP_001096621	Coding	chrX:152992217 minus strand	1564012
PNMA5	NM_001184924	NP_001171853	Coding	chrX:152994127 minus strand	1564013
PNMA5	NM_052926	NP_443158	Coding	chrX:152992217 minus strand	1564012
PNMA6A	NM_032882	NP_116271	Coding	chrX:153072413 plus strand	1564014
PNPLA4	NM_001142389	NP_001135861	Coding	chrX:7927739 minus strand	1564015
PNPLA4	NM_001172672	NP_001166143	Coding	chrX:7927739 minus strand	1564015
PNPLA4	NM_004650	NP_004641	Coding	chrX:7927434 minus strand	1564016
POF1B	NM_024921	NP_079197	Coding	chrX:85379743 minus strand	1564017
POLA1	NM_016937	NP_058633	Coding	chrX:24693946 plus strand	1564018
PORCN	NM_001282167	NP_001269096	Coding	chrX:48508958 plus strand	1564019
PORCN	NM_022825	NP_073736	Coding	chrX:48508958 plus strand	1564019
PORCN	NM_203473	NP_982299	Coding	chrX:48508958 plus strand	1564019
PORCN	NM_203474	NP_982300	Coding	chrX:48509783 plus strand	1564020

【１４０５】

PORCN	NM_203475	NP_982301	Coding	chrX:48508958 plus strand	1564019
POU3F4	NM_000307	NP_000298	Coding	chrX:83508260 plus strand	1564021
PPEF1	NM_006240	NP_006231	Coding	chrX:18690925 plus strand	1564022
PPEF1	NM_152224	NP_689410	Coding	chrX:18690925 plus strand	1564022
PPEF1	NM_152226	NP_689412	Coding	chrX:18690925 plus strand	1564022
PPP1R3F	NM_001184745	NP_001171674	Coding	chrX:49269842 plus strand	1564023
PPP1R3F	NM_033215	NP_149992	Coding	chrX:49269842 plus strand	1564023
PPP2R3B	NM_013239	NP_037371	Coding	chrX:386955 minus strand	1564024
PQBP1	NM_001032381	NP_001027553	Coding	chrX:48897911 plus strand	1564025
PQBP1	NM_001032382	NP_001027554	Coding	chrX:48897911 plus strand	1564025
PQBP1	NM_001032383	NP_001027555	Coding	chrX:48897911 plus strand	1564025
PQBP1	NM_001032384	NP_001027556	Coding	chrX:48898255 plus strand	1564026
PQBP1	NM_001167989	NP_001161461	Coding	chrX:48897911 plus strand	1564025
PQBP1	NM_001167990	NP_001161462	Coding	chrX:48897929 plus strand	1564027
PQBP1	NM_001167992	NP_001161464	Coding	chrX:48898491 plus strand	1564028
PQBP1	NM_005710	NP_005701	Coding	chrX:48898255 plus strand	1564026
PQBP1	NM_144495	NP_652766	Coding	chrX:48897911 plus strand	1564025
PRAF2	NM_007213	NP_009144	Coding	chrX:49074045 minus strand	1564029
PRDX4	NM_006406	NP_006397	Coding	chrX:23667527 plus strand	1564030
PRICKLE3	NM_006150	NP_006141	Coding	chrX:49186323 minus strand	1564031
PRKX	NM_005044	NP_005035	Coding	chrX:3713634 minus strand	1564032
PRPS1	NM_001204402	NP_001191331	Coding	chrX:107628423 plus strand	1564033
PRPS1	NM_002764	NP_002755	Coding	chrX:107628423 plus strand	1564033
PRPS2	NM_001039091	NP_001034180	Coding	chrX:12791354 plus strand	1564034
PRPS2	NM_002765	NP_002756	Coding	chrX:12791354 plus strand	1564034
PRR32	NM_001122716	NP_001116188	Coding	chrX:126819763 plus strand	1564035
PRRG1	NM_000950	NP_000941	Coding	chrX:37349274 plus strand	1564036
PRRG1	NM_001142395	NP_001135867	Coding	chrX:37349274 plus strand	1564036
PRRG1	NM_001173486	NP_001166957	Coding	chrX:37349274 plus strand	1564036
PRRG1	NM_001173489	NP_001166960	Coding	chrX:37349329 plus strand	1564037
PRRG1	NM_001173490	NP_001166961	Coding	chrX:37349329 plus strand	1564037
PRRG3	NM_024082	NP_076987	Coding	chrX:151695257 plus strand	1564038
PSMD10	NM_002814	NP_002805	Coding	chrX:108091644 minus strand	1564039
PSMD10	NM_170750	NP_736606	Coding	chrX:108091644 minus strand	1564039
PTCHD1	NM_173495	NP_775766	Coding	chrX:23334867 plus strand	1564040
RAB33A	NM_004794	NP_004785	Coding	chrX:130171798 plus strand	1564041

【１４０６】

RAB39B	NM_171998	NP_741995	Coding	chrX:155264589 minus strand	1564042
RAB40A	NM_080879	NP_543155	Coding	chrX:103519489 minus strand	1564043
RAB40AL	NM_001031834	NP_001027004	Coding	chrX:102937271 plus strand	1564044
RAB41	NM_001032726	NP_001027898	Coding	chrX:70282171 plus strand	1564045
RAB9A	NM_001195328	NP_001182257	Coding	chrX:13689120 plus strand	1564046
RAB9A	NM_004251	NP_004242	Coding	chrX:13689120 plus strand	1564046
RAB9B	NM_016370	NP_057454	Coding	chrX:103832282 minus strand	1564047
RAI2	NM_001172732	NP_001166203	Coding	chrX:17861337 minus strand	1564048
RAI2	NM_001172739	NP_001166210	Coding	chrX:17861337 minus strand	1564048
RAI2	NM_001172743	NP_001166214	Coding	chrX:17861337 minus strand	1564048
RAI2	NM_021785	NP_068557	Coding	chrX:17861337 minus strand	1564048
RAP2C	NM_001271186	NP_001258115	Coding	chrX:132219480 minus strand	1564049
RAP2C	NM_001271187	NP_001258116	Coding	chrX:132219480 minus strand	1564049
RAP2C	NM_021183	NP_067006	Coding	chrX:132218161 minus strand	1564050
RBBP7	NM_001198719	NP_001185648	Coding	chrX:16869855 minus strand	1564051
RBBP7	NM_002893	NP_002884	Coding	chrX:16870411 minus strand	1564052
RBM10	NM_001204466	NP_001191395	Coding	chrX:47145217 plus strand	1564053
RBM10	NM_001204467	NP_001191396	Coding	chrX:47145217 plus strand	1564053
RBM10	NM_001204468	NP_001191397	Coding	chrX:47145217 plus strand	1564053
RBM10	NM_005676	NP_005667	Coding	chrX:47145217 plus strand	1564053
RBM10	NM_152856	NP_690595	Coding	chrX:47145217 plus strand	1564053
RBM3	NM_006743	NP_006734	Coding	chrX:48574352 plus strand	1564054
RBM41	NM_001171080	NP_001164551	Coding	chrX:107118827 minus strand	1564055
RBM41	NM_018301	NP_060771	Coding	chrX:107118827 minus strand	1564055
RBMX	NM_001164803	NP_001158275	Coding	chrX:136880780 minus strand	1564056
RBMX	NM_002139	NP_002130	Coding	chrX:136880780 minus strand	1564056
RBMX2	NM_016024	NP_057108	Coding	chrX:130401968 plus strand	1564057
RBMXL3	NM_001145346	NP_001138818	Coding	chrX:115189399 plus strand	1564058
RENBP	NM_002910	NP_002901	Coding	chrX:153944780 minus strand	1564059
REPS2	NM_001080975	NP_001074444	Coding	chrX:16946690 plus strand	1564060
REPS2	NM_004726	NP_004717	Coding	chrX:16946690 plus strand	1564060

【１４０７】

RGAG1	NM_020769	NP_065820	Coding	chrX:110419056 plus strand	1564061
RGAG4	NM_001024455	NP_001019626	Coding	chrX:72131901 minus strand	1564062
RGN	NM_001282848	NP_001269777	Coding	chrX:47078354 plus strand	1564063
RGN	NM_001282849	NP_001269778	Coding	chrX:47078354 plus strand	1564063
RGN	NM_004683	NP_004674	Coding	chrX:47078354 plus strand	1564063
RGN	NM_152869	NP_690608	Coding	chrX:47078354 plus strand	1564063
RHOXF1	NM_139282	NP_644811	Coding	chrX:120115937 minus strand	1564064
RHOXF2	NM_032498	NP_115887	Coding	chrX:120077742 minus strand	1564065
RHOXF2	NM_032498	NP_115887	Coding	chrX:120158560 plus strand	1564066
RHOXF2B	NM_001099685	NP_001093155	Coding	chrX:120077742 minus strand	1564067
RHOXF2B	NM_001099685	NP_001093155	Coding	chrX:120158560 plus strand	1564068
RIBC1	NM_001031745	NP_001026915	Coding	chrX:53422855 plus strand	1564069
RIBC1	NM_001267053	NP_001253982	Coding	chrX:53422855 plus strand	1564069
RIBC1	NM_144968	NP_659405	Coding	chrX:53422855 plus strand	1564069
RIPPLY1	NM_001171706	NP_001165177	Coding	chrX:106903331 minus strand	1564070
RIPPLY1	NM_138382	NP_612391	Coding	chrX:106903331 minus strand	1564070
RLIM	NM_016120	NP_057204	Coding	chrX:74614626 minus strand	1564071
RLIM	NM_183353	NP_899196	Coding	chrX:74614626 minus strand	1564071
RNF113A	NM_006978	NP_008909	Coding	chrX:119871828 minus strand	1564072
RNF128	NM_024539	NP_078815	Coding	chrX:106693837 plus strand	1564073
RNF128	NM_194463	NP_919445	Coding	chrX:106726663 plus strand	1564074
RP2	NM_006915	NP_008846	Coding	chrX:46836911 plus strand	1564075
RPA4	NM_013347	NP_037479	Coding	chrX:96883907 plus strand	1564076
RPGR	NM_000328	NP_000319	Coding	chrX:38327535 minus strand	1564077
RPGR	NM_001034853	NP_001030025	Coding	chrX:38327535 minus strand	1564077
RPL10	NM_001256577	NP_001243506	Coding	chrX:154398229 plus strand	1564078
RPL10	NM_001256580	NP_001243509	Coding	chrX:154398229 plus strand	1564078
RPL10	NM_006013	NP_006004	Coding	chrX:154398229 plus strand	1564078
RPL36A	NM_001199972	NP_001186901	Coding	chrX:101390889 plus strand	1564079
RPL36A	NM_021029	NP_066357	Coding	chrX:101390889 plus strand	1564079

【１４０８】

RPL36A-HNRNPH2	NM_001199973	NP_001186902	Coding	chrX:101390889 plus strand	1564080
RPL36A-HNRNPH2	NM_001199974	NP_001186903	Coding	chrX:101390889 plus strand	1564080
RPL39	NM_001000	NP_000991	Coding	chrX:119791659 minus strand	1564081
RPS4X	NM_001007	NP_000998	Coding	chrX:72277291 minus strand	1564082
RPS6KA3	NM_004586	NP_004577	Coding	chrX:20266632 minus strand	1564083
RPS6KA6	NM_014496	NP_055311	Coding	chrX:84187935 minus strand	1564084
RRAGB	NM_006064	NP_006055	Coding	chrX:55717676 plus strand	1564085
RRAGB	NM_016656	NP_057740	Coding	chrX:55717676 plus strand	1564085
RS1	NM_000330	NP_000321	Coding	chrX:18672103 minus strand	1564086
S100G	NM_004057	NP_004048	Coding	chrX:16650157 plus strand	1564087
SAGE1	NM_018666	NP_061136	Coding	chrX:135893633 plus strand	1564088
SASH3	NM_018990	NP_061863	Coding	chrX:129779915 plus strand	1564089
SAT1	NM_002970	NP_002961	Coding	chrX:23783157 plus strand	1564090
SATL1	NM_001012980	NP_001012998	Coding	chrX:85108968 minus strand	1564091
SCML1	NM_001037535	NP_001032624	Coding	chrX:17737448 plus strand	1564092
SCML1	NM_001037536	NP_001032625	Coding	chrX:17737448 plus strand	1564092
SCML1	NM_001037540	NP_001032629	Coding	chrX:17737448 plus strand	1564092
SCML1	NM_006746	NP_006737	Coding	chrX:17737448 plus strand	1564092
SCML2	NM_006089	NP_006080	Coding	chrX:18354724 minus strand	1564093
SEPT6	NM_015129	NP_055944	Coding	chrX:119693370 minus strand	1564094
SEPT6	NM_145799	NP_665798	Coding	chrX:119693370 minus strand	1564094
SEPT6	NM_145800	NP_665799	Coding	chrX:119693370 minus strand	1564094
SEPT6	NM_145802	NP_665801	Coding	chrX:119693370 minus strand	1564094
SERPINA7	NM_000354	NP_000345	Coding	chrX:106038727 minus strand	1564095
SH2D1A	NM_001114937	NP_001108409	Coding	chrX:124346281 plus strand	1564096
SH2D1A	NM_002351	NP_002342	Coding	chrX:124346281 plus strand	1564096
SH3BGRL	NM_003022	NP_003013	Coding	chrX:81201803 plus strand	1564097
SH3KBP1	NM_001024666	NP_001019837	Coding	chrX:19799799 minus strand	1564098
SH3KBP1	NM_001184960	NP_001171889	Coding	chrX:19671001 minus strand	1564099
SH3KBP1	NM_031892	NP_114098	Coding	chrX:19887626 minus strand	1564100

【１４０９】

SHOX	NM_000451	NP_000442	Coding	chrX:624343 plus strand	1564101
SHOX	NM_006883	NP_006874	Coding	chrX:624343 plus strand	1564101
SHROOM2	NM_001649	NP_001640	Coding	chrX:9786455 plus strand	1564102
SHROOM4	NM_020717	NP_065768	Coding	chrX:50814044 minus strand	1564103
SLC10A3	NM_001142391	NP_001135863	Coding	chrX:154490690 minus strand	1564104
SLC10A3	NM_001142392	NP_001135864	Coding	chrX:154490690 minus strand	1564104
SLC10A3	NM_019848	NP_062822	Coding	chrX:154490690 minus strand	1564104
SLC16A2	NM_006517	NP_006508	Coding	chrX:74421492 plus strand	1564105
SLC25A14	NM_001282195	NP_001269124	Coding	chrX:130339887 plus strand	1564106
SLC25A14	NM_001282196	NP_001269125	Coding	chrX:130339887 plus strand	1564106
SLC25A14	NM_001282197	NP_001269126	Coding	chrX:130339887 plus strand	1564106
SLC25A14	NM_001282198	NP_001269127	Coding	chrX:130339887 plus strand	1564106
SLC25A43	NM_145305	NP_660348	Coding	chrX:119399294 plus strand	1564107
SLC25A5	NM_001152	NP_001143	Coding	chrX:119468399 plus strand	1564108
SLC25A53	NM_001012755	NP_001012773	Coding	chrX:104157027 minus strand	1564109
SLC25A6	NM_001636	NP_001627	Coding	chrX:1392146 minus strand	1564110
SLC35A2	NM_001032289	NP_001027460	Coding	chrX:48911958 minus strand	1564111
SLC35A2	NM_001042498	NP_001035963	Coding	chrX:48911958 minus strand	1564111
SLC35A2	NM_001282647	NP_001269576	Coding	chrX:48911958 minus strand	1564111
SLC35A2	NM_001282648	NP_001269577	Coding	chrX:48911958 minus strand	1564111
SLC35A2	NM_001282649	NP_001269578	Coding	chrX:48911958 minus strand	1564111
SLC35A2	NM_001282650	NP_001269579	Coding	chrX:48911958 minus strand	1564111
SLC35A2	NM_001282651	NP_001269580	Coding	chrX:48911958 minus strand	1564111
SLC35A2	NM_005660	NP_005651	Coding	chrX:48911958 minus strand	1564111
SLC38A5	NM_033518	NP_277053	Coding	chrX:48470256 minus strand	1564112
SLC6A14	NM_007231	NP_009162	Coding	chrX:116436578 plus strand	1564113
SLC6A8	NM_001142805	NP_001136277	Coding	chrX:153688296 plus strand	1564114
SLC6A8	NM_001142806	NP_001136278	Coding	chrX:153689510 plus strand	1564115
SLC6A8	NM_005629	NP_005620	Coding	chrX:153688296 plus	1564114

【１４１０】

				strand	
SLC7A3	NM_001048164	NP_001041629	Coding	chrX:70931125 minus strand	1564116
SLC7A3	NM_032803	NP_116192	Coding	chrX:70931125 minus strand	1564116
SLC9A6	NM_001042537	NP_001036002	Coding	chrX:135985426 plus strand	1564117
SLC9A6	NM_001177651	NP_001171122	Coding	chrX:135985423 plus strand	1564118
SLC9A6	NM_006359	NP_006350	Coding	chrX:135985426 plus strand	1564117
SLC9A7	NM_001257291	NP_001244220	Coding	chrX:46759172 minus strand	1564119
SLC9A7	NM_032591	NP_115980	Coding	chrX:46759172 minus strand	1564119
SLITRK2	NM_001144003	NP_001137475	Coding	chrX:145817828 plus strand	1564120
SLITRK2	NM_001144004	NP_001137476	Coding	chrX:145817828 plus strand	1564120
SLITRK2	NM_001144005	NP_001137477	Coding	chrX:145817828 plus strand	1564120
SLITRK2	NM_001144006	NP_001137478	Coding	chrX:145821347 plus strand	1564121
SLITRK2	NM_001144008	NP_001137480	Coding	chrX:145821347 plus strand	1564121
SLITRK2	NM_001144009	NP_001137481	Coding	chrX:145821347 plus strand	1564121
SLITRK2	NM_001144010	NP_001137482	Coding	chrX:145821347 plus strand	1564121
SLITRK2	NM_032539	NP_115928	Coding	chrX:145817828 plus strand	1564120
SLITRK4	NM_001184749	NP_001171678	Coding	chrX:143636107 minus strand	1564122
SLITRK4	NM_001184750	NP_001171679	Coding	chrX:143634503 minus strand	1564123
SLITRK4	NM_173078	NP_775101	Coding	chrX:143635204 minus strand	1564124
SMARCA1	NM_001282874	NP_001269803	Coding	chrX:129523505 minus strand	1564125
SMARCA1	NM_001282875	NP_001269804	Coding	chrX:129523505 minus strand	1564125
SMARCA1	NM_003069	NP_003060	Coding	chrX:129523505 minus strand	1564125
SMC1A	NM_001281463	NP_001268392	Coding	chrX:53422728 minus strand	1564126
SMC1A	NM_006306	NP_006297	Coding	chrX:53422728 minus strand	1564126
SMIM10	NM_001163438	NP_001156910	Coding	chrX:134990937 plus strand	1564127
SMIM9	NM_001162936	NP_001156408	Coding	chrX:154834662 minus strand	1564128
SMPX	NM_014332	NP_055147	Coding	chrX:21758160 minus strand	1564129
SMS	NM_001258423	NP_001245352	Coding	chrX:21940572 plus strand	1564130

【１４１１】

SMS	NM_004595	NP_004586	Coding	chrX:21940572 plus strand	1564130
SNX12	NM_001256185	NP_001243114	Coding	chrX:71073426 minus strand	1564131
SNX12	NM_001256186	NP_001243115	Coding	chrX:71068448 minus strand	1564132
SNX12	NM_001256187	NP_001243116	Coding	chrX:71068448 minus strand	1564132
SNX12	NM_001256188	NP_001243117	Coding	chrX:71068448 minus strand	1564132
SNX12	NM_013346	NP_037478	Coding	chrX:71068448 minus strand	1564132
SOWAHD	NM_001105576	NP_001099046	Coding	chrX:119758612 plus strand	1564133
SOX3	NM_005634	NP_005625	Coding	chrX:140505060 minus strand	1564134
SPACA5	NM_205856	NP_995328	Coding	chrX:48004335 plus strand	1564135
SPACA5	NM_205856	NP_995328	Coding	chrX:48127220 plus strand	1564136
SPACA5B	NM_001079900	NP_001073369	Coding	chrX:48007771 plus strand	1564137
SPACA5B	NM_001079900	NP_001073369	Coding	chrX:48130656 plus strand	1564138
SPANXA1	NM_013453	NP_038481	Coding	chrX:141584738 minus strand	1564139
SPANXA1	NM_013453	NP_038481	Coding	chrX:141589707 plus strand	1564140
SPANXA2	NM_145662	NP_663695	Coding	chrX:141584738 minus strand	1564141
SPANXA2	NM_145662	NP_663695	Coding	chrX:141589707 plus strand	1564142
SPANXB1	NM_032461	NP_115850	Coding	chrX:141002590 plus strand	1564143
SPANXC	NM_022661	NP_073152	Coding	chrX:141242550 minus strand	1564144
SPANXD	NM_032417	NP_115793	Coding	chrX:141698739 minus strand	1564145
SPANXN1	NM_001009614	NP_001009614	Coding	chrX:145247586 plus strand	1564146
SPANXN2	NM_001009615	NP_001009615	Coding	chrX:143720668 minus strand	1564147
SPANXN3	NM_001009609	NP_001009609	Coding	chrX:143517475 minus strand	1564148
SPANXN4	NM_001009613	NP_001009613	Coding	chrX:143025917 plus strand	1564149
SPANXN5	NM_001009616	NP_001009616	Coding	chrX:52797348 minus strand	1564150
SPIN2A	NM_019003	NP_061876	Coding	chrX:57137625 minus strand	1564151
SPIN2B	NM_001006681	NP_001006682	Coding	chrX:57121546 minus strand	1564152
SPIN2B	NM_001006682	NP_001006683	Coding	chrX:57121546 minus strand	1564152
SPIN2B	NM_001006683	NP_001006684	Coding	chrX:57121546 minus strand	1564152
SPIN2B	NM_001282461	NP_001269390	Coding	chrX:57121556 minus strand	1564153

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SPIN2B	NM_001282462	NP_001269391	Coding	chrX:57121556 minus strand	1564153
SPIN3	NM_001010862	NP_001010862	Coding	chrX:56995555 minus strand	1564154
SPIN4	NM_001012968	NP_001012986	Coding	chrX:63351339 minus strand	1564155
SPRY3	NM_005840	NP_005831	Coding	chrX:155767788 plus strand	1564156
SRPK3	NM_001170760	NP_001164231	Coding	chrX:153781000 plus strand	1564157
SRPK3	NM_001170761	NP_001164232	Coding	chrX:153781000 plus strand	1564157
SRPK3	NM_014370	NP_055185	Coding	chrX:153781000 plus strand	1564157
SRPX	NM_001170750	NP_001164221	Coding	chrX:38220924 minus strand	1564158
SRPX	NM_001170751	NP_001164222	Coding	chrX:38220924 minus strand	1564158
SRPX	NM_001170752	NP_001164223	Coding	chrX:38220924 minus strand	1564158
SRPX	NM_006307	NP_006298	Coding	chrX:38220924 minus strand	1564158
SRPX2	NM_014467	NP_055282	Coding	chrX:100644165 plus strand	1564159
SSR4	NM_001204526	NP_001191455	Coding	chrX:153794448 plus strand	1564160
SSR4	NM_001204527	NP_001191456	Coding	chrX:153794174 plus strand	1564161
SSR4	NM_006280	NP_006271	Coding	chrX:153794563 plus strand	1564162
SSX1	NM_001278691	NP_001265620	Coding	chrX:48255316 plus strand	1564163
SSX1	NM_005635	NP_005626	Coding	chrX:48255316 plus strand	1564163
SSX2	NM_001278697	NP_001265626	Coding	chrX:52707227 minus strand	1564164
SSX2	NM_001278697	NP_001265626	Coding	chrX:52751202 plus strand	1564165
SSX2	NM_003147	NP_003138	Coding	chrX:52707227 minus strand	1564164
SSX2	NM_003147	NP_003138	Coding	chrX:52751202 plus strand	1564165
SSX2	NM_175698	NP_783629	Coding	chrX:52707227 minus strand	1564164
SSX2	NM_175698	NP_783629	Coding	chrX:52751202 plus strand	1564165
SSX2B	NM_001164417	NP_001157889	Coding	chrX:52707226 minus strand	1564166
SSX2B	NM_001164417	NP_001157889	Coding	chrX:52751203 plus strand	1564167
SSX2B	NM_001278701	NP_001265630	Coding	chrX:52707226 minus strand	1564166
SSX2B	NM_001278701	NP_001265630	Coding	chrX:52751203 plus strand	1564167
SSX2B	NM_001278702	NP_001265631	Coding	chrX:52707226 minus strand	1564166
SSX2B	NM_001278702	NP_001265631	Coding	chrX:52751203 plus strand	1564167
SSX3	NM_021014	NP_066294	Coding	chrX:48356753 minus strand	1564168

【１４１３】

SSX4	NM_005636	NP_005627	Coding	chrX:48383526 plus strand	1564169
SSX4	NM_005636	NP_005627	Coding	chrX:48411899 minus strand	1564170
SSX4	NM_175729	NP_783856	Coding	chrX:48383526 plus strand	1564169
SSX4	NM_175729	NP_783856	Coding	chrX:48411899 minus strand	1564170
SSX4B	NM_001034832	NP_001030004	Coding	chrX:48383515 plus strand	1564171
SSX4B	NM_001034832	NP_001030004	Coding	chrX:48411910 minus strand	1564172
SSX4B	NM_001040612	NP_001035702	Coding	chrX:48383515 plus strand	1564171
SSX4B	NM_001040612	NP_001035702	Coding	chrX:48411910 minus strand	1564172
SSX5	NM_021015	NP_066295	Coding	chrX:48196763 minus strand	1564173
SSX5	NM_175723	NP_783729	Coding	chrX:48196763 minus strand	1564173
SSX7	NM_173358	NP_775494	Coding	chrX:52654900 minus strand	1564174
STAG2	NM_001042749	NP_001036214	Coding	chrX:123960559 plus strand	1564175
STAG2	NM_001042750	NP_001036215	Coding	chrX:123961705 plus strand	1564176
STAG2	NM_001042751	NP_001036216	Coding	chrX:123961705 plus strand	1564176
STAG2	NM_001282418	NP_001269347	Coding	chrX:123961311 plus strand	1564177
STAG2	NM_006603	NP_006594	Coding	chrX:123961705 plus strand	1564176
STARD8	NM_001142503	NP_001135975	Coding	chrX:68647668 plus strand	1564178
STARD8	NM_001142504	NP_001135976	Coding	chrX:68693639 plus strand	1564179
STARD8	NM_014725	NP_055540	Coding	chrX:68647668 plus strand	1564178
STK26	NM_001042452	NP_001035917	Coding	chrX:132023607 plus strand	1564180
STK26	NM_001042453	NP_001035918	Coding	chrX:132023216 plus strand	1564181
STK26	NM_016542	NP_057626	Coding	chrX:132023216 plus strand	1564181
STS	NM_000351	NP_000342	Coding	chrX:7219430 plus strand	1564182
SUPT20HL1	NM_001136234	NP_001129706	Coding	chrX:24362760 plus strand	1564183
SUPT20HL2	NM_001136233	NP_001129705	Coding	chrX:24313315 minus strand	1564184
SUV39H1	NM_001282166	NP_001269095	Coding	chrX:48695553 plus strand	1564185
SUV39H1	NM_003173	NP_003164	Coding	chrX:48696732 plus strand	1564186
SYAP1	NM_032796	NP_116185	Coding	chrX:16719583 plus strand	1564187
SYN1	NM_006950	NP_008881	Coding	chrX:47619857 minus strand	1564188
SYN1	NM_133499	NP_598006	Coding	chrX:47619857 minus strand	1564188
SYP	NM_003179	NP_003170	Coding	chrX:49200202 minus strand	1564189

【1414】

SYTL4	NM_001129896	NP_001123368	Coding	chrX:100732148 minus strand	1564190
SYTL4	NM_001174068	NP_001167539	Coding	chrX:100731534 minus strand	1564191
SYTL4	NM_080737	NP_542775	Coding	chrX:100731534 minus strand	1564191
SYTL5	NM_001163334	NP_001156806	Coding	chrX:38033533 plus strand	1564192
SYTL5	NM_001163335	NP_001156807	Coding	chrX:38006581 plus strand	1564193
SYTL5	NM_138780	NP_620135	Coding	chrX:38006581 plus strand	1564193
TAB3	NM_152787	NP_690000	Coding	chrX:30889394 minus strand	1564194
TAF1	NM_001286074	NP_001273003	Coding	chrX:71366238 plus strand	1564195
TAF1	NM_004606	NP_004597	Coding	chrX:71366238 plus strand	1564195
TAF1	NM_138923	NP_620278	Coding	chrX:71366238 plus strand	1564195
TAF7L	NM_001168474	NP_001161946	Coding	chrX:101291337 minus strand	1564196
TAF7L	NM_024885	NP_079161	Coding	chrX:101293071 minus strand	1564197
TAF9B	NM_015975	NP_057059	Coding	chrX:78139682 minus strand	1564198
TAZ	NM_000116	NP_000107	Coding	chrX:154411540 plus strand	1564199
TAZ	NM_181311	NP_851828	Coding	chrX:154411540 plus strand	1564199
TAZ	NM_181312	NP_851829	Coding	chrX:154411540 plus strand	1564199
TAZ	NM_181313	NP_851830	Coding	chrX:154411540 plus strand	1564199
TBC1D25	NM_002536	NP_002527	Coding	chrX:48539686 plus strand	1564200
TBC1D8B	NM_017752	NP_060222	Coding	chrX:106802688 plus strand	1564201
TBC1D8B	NM_198881	NP_942582	Coding	chrX:106802688 plus strand	1564201
TBL1X	NM_001139466	NP_001132938	Coding	chrX:9463294 plus strand	1564202
TBL1X	NM_001139467	NP_001132939	Coding	chrX:9463294 plus strand	1564202
TBL1X	NM_001139468	NP_001132940	Coding	chrX:9463294 plus strand	1564202
TBL1X	NM_005647	NP_005638	Coding	chrX:9465160 plus strand	1564203
TBX22	NM_001109878	NP_001103348	Coding	chrX:80014755 plus strand	1564204
TBX22	NM_001109879	NP_001103349	Coding	chrX:80014755 plus strand	1564204
TBX22	NM_016954	NP_058650	Coding	chrX:80022242 plus strand	1564205
TCEAL1	NM_001006639	NP_001006640	Coding	chrX:103628963 plus strand	1564206
TCEAL1	NM_001006640	NP_001006641	Coding	chrX:103628719 plus strand	1564207
TCEAL1	NM_004780	NP_004771	Coding	chrX:103628963 plus strand	1564206
TCEAL2	NM_080390	NP_525129	Coding	chrX:102125687 plus strand	1564208
TCEAL3	NM_001006933	NP_001006934	Coding	chrX:103607905 plus strand	1564209

【1415】

TCEAL3	NM_032926	NP_116315	Coding	chrX:103607905 plus strand	1564209
TCEAL4	NM_001006935	NP_001006936	Coding	chrX:103585490 plus strand	1564210
TCEAL4	NM_001006937	NP_001006938	Coding	chrX:103585490 plus strand	1564210
TCEAL4	NM_001300901	NP_001287830	Coding	chrX:103576230 plus strand	1564211
TCEAL4	NM_024863	NP_079139	Coding	chrX:103585490 plus strand	1564210
TCEAL5	NM_001012979	NP_001012997	Coding	chrX:103276869 minus strand	1564212
TCEAL6	NM_001006938	NP_001006939	Coding	chrX:102142416 minus strand	1564213
TCEAL7	NM_152278	NP_689491	Coding	chrX:103330185 plus strand	1564214
TCEAL8	NM_001006684	NP_001006685	Coding	chrX:103255193 minus strand	1564215
TCEAL8	NM_153333	NP_699164	Coding	chrX:103255193 minus strand	1564215
TCEANC	NM_001297563	NP_001284492	Coding	chrX:13653105 plus strand	1564216
TCEANC	NM_001297564	NP_001284493	Coding	chrX:13653105 plus strand	1564216
TCEANC	NM_152634	NP_689847	Coding	chrX:13653190 plus strand	1564217
TCP11X2	NM_001277423	NP_001264352	Coding	chrX:102215300 plus strand	1564218
TCP11X2	NM_001277423	NP_001264352	Coding	chrX:102471812 minus strand	1564219
TENM1	NM_001163278	NP_001156750	Coding	chrX:124963817 minus strand	1564220
TENM1	NM_001163279	NP_001156751	Coding	chrX:124963817 minus strand	1564220
TENM1	NM_014253	NP_055068	Coding	chrX:124963817 minus strand	1564220
TEX11	NM_001003811	NP_001003811	Coding	chrX:70908717 minus strand	1564221
TEX11	NM_031276	NP_112566	Coding	chrX:70908717 minus strand	1564221
TEX13A	NM_001291277	NP_001278206	Coding	chrX:105220693 minus strand	1564222
TEX13A	NM_031274	NP_112564	Coding	chrX:105220693 minus strand	1564222
TEX13B	NM_031273	NP_112563	Coding	chrX:107982370 minus strand	1564223
TEX28	NM_001205201	NP_001192130	Coding	chrX:154295211 minus strand	1564224
TEX28	NM_001586	NP_001577	Coding	chrX:154295101 minus strand	1564225
TFDP3	NM_016521	NP_057605	Coding	chrX:133218348 minus strand	1564226
TFE3	NM_001282142	NP_001269071	Coding	chrX:49043517 minus strand	1564227
TFE3	NM_006521	NP_006512	Coding	chrX:49043517 minus strand	1564227

【1416】

TGIF2LX	NM_138960	NP_620410	Coding	chrX:89921940 plus strand	1564228
THOC2	NM_001081550	NP_001075019	Coding	chrX:123733054 minus strand	1564229
TIMM17B	NM_001167947	NP_001161419	Coding	chrX:48898143 minus strand	1564230
TIMM17B	NM_005834	NP_005825	Coding	chrX:48898143 minus strand	1564230
TIMM8A	NM_001145951	NP_001139423	Coding	chrX:101348720 minus strand	1564231
TIMM8A	NM_004085	NP_004076	Coding	chrX:101348969 minus strand	1564232
TIMP1	NM_003254	NP_003245	Coding	chrX:47582290 plus strand	1564233
TKTL1	NM_001145933	NP_001139405	Coding	chrX:154295673 plus strand	1564234
TKTL1	NM_001145934	NP_001139406	Coding	chrX:154305056 plus strand	1564235
TKTL1	NM_012253	NP_036385	Coding	chrX:154295673 plus strand	1564234
TLR7	NM_016562	NP_057646	Coding	chrX:12867082 plus strand	1564236
TLR8	NM_016610	NP_057694	Coding	chrX:12906619 plus strand	1564237
TLR8	NM_138636	NP_619542	Coding	chrX:12906619 plus strand	1564237
TMEM164	NM_017698	NP_060168	Coding	chrX:110002634 plus strand	1564238
TMEM164	NM_032227	NP_115603	Coding	chrX:110003113 plus strand	1564239
TMEM185A	NM_001174092	NP_001167563	Coding	chrX:149631912 minus strand	1564240
TMEM185A	NM_001282302	NP_001269231	Coding	chrX:149631912 minus strand	1564240
TMEM185A	NM_032508	NP_115897	Coding	chrX:149631912 minus strand	1564240
TMEM187	NM_003492	NP_003483	Coding	chrX:153972539 plus strand	1564241
TMEM255A	NM_001104544	NP_001098014	Coding	chrX:120311536 minus strand	1564242
TMEM255A	NM_001104545	NP_001098015	Coding	chrX:120311536 minus strand	1564242
TMEM255A	NM_017938	NP_060408	Coding	chrX:120311536 minus strand	1564242
TMEM257	NM_004709	NP_004700	Coding	chrX:145827409 plus strand	1564243
TMEM27	NM_020665	NP_065716	Coding	chrX:15665031 minus strand	1564244
TMEM31	NM_182541	NP_872347	Coding	chrX:103710908 plus strand	1564245
TMEM35	NM_021637	NP_067650	Coding	chrX:101078846 plus strand	1564246
TMEM47	NM_031442	NP_113630	Coding	chrX:34657288 minus strand	1564247
TMLHE	NM_001184797	NP_001171726	Coding	chrX:155612961 minus strand	1564248
TMLHE	NM_018196	NP_060666	Coding	chrX:155612961 minus strand	1564248

【１４１７】

TMSB15A	NM_021992	NP_068832	Coding	chrX:102516771 minus strand	1564249
TMSB15B	NM_194324	NP_919305	Coding	chrX:103962626 plus strand	1564250
TMSB15B	NM_194324	NP_919305	Coding	chrX:104076236 minus strand	1564251
TMSB4X	NM_021109	NP_066932	Coding	chrX:12975106 plus strand	1564252
TNMD	NM_022144	NP_071427	Coding	chrX:100584792 plus strand	1564253
TRAPPC2	NM_001011658	NP_001011658	Coding	chrX:13734635 minus strand	1564254
TRAPPC2	NM_001128835	NP_001122307	Coding	chrX:13734635 minus strand	1564254
TRAPPC2	NM_014563	NP_055378	Coding	chrX:13734635 minus strand	1564254
TREX2	NM_080701	NP_542432	Coding	chrX:153446487 minus strand	1564255
TRMT2B	NM_001167970	NP_001161442	Coding	chrX:101052116 minus strand	1564256
TRMT2B	NM_001167971	NP_001161443	Coding	chrX:101052116 minus strand	1564256
TRMT2B	NM_001167972	NP_001161444	Coding	chrX:101052116 minus strand	1564256
TRMT2B	NM_024917	NP_079193	Coding	chrX:101052116 minus strand	1564256
TRO	NM_001039705	NP_001034794	Coding	chrX:54920562 plus strand	1564257
TRO	NM_001271183	NP_001258112	Coding	chrX:54920562 plus strand	1564257
TRO	NM_001271184	NP_001258113	Coding	chrX:54920823 plus strand	1564258
TRO	NM_016157	NP_057241	Coding	chrX:54920562 plus strand	1564257
TRO	NM_177556	NP_808224	Coding	chrX:54920562 plus strand	1564257
TRO	NM_177557	NP_808225	Coding	chrX:54920562 plus strand	1564257
TRPC5	NM_012471	NP_036603	Coding	chrX:112082776 minus strand	1564259
TRPC5OS	NM_001195576	NP_001182505	Coding	chrX:111876050 plus strand	1564260
TRPC5OS	NM_001195577	NP_001182506	Coding	chrX:111881896 plus strand	1564261
TRPC5OS	NM_001195578	NP_001182507	Coding	chrX:111876199 plus strand	1564262
TSC22D3	NM_001015881	NP_001015881	Coding	chrX:107716481 minus strand	1564263
TSC22D3	NM_004089	NP_004080	Coding	chrX:107717061 minus strand	1564264
TSC22D3	NM_198057	NP_932174	Coding	chrX:107775787 minus strand	1564265
TSPAN6	NM_001278740	NP_001265669	Coding	chrX:100636732 minus strand	1564266
TSPAN6	NM_001278741	NP_001265670	Coding	chrX:100637104 minus strand	1564267
TSPAN6	NM_001278742	NP_001265671	Coding	chrX:100637104 minus strand	1564267
TSPAN6	NM_001278743	NP_001265672	Coding	chrX:100637104 minus	1564267

【1418】

				strand	
TSPAN6	NM_003270	NP_003261	Coding	chrX:100636857 minus strand	1564268
TSPAN7	NM_004615	NP_004606	Coding	chrX:38561477 plus strand	1564269
TSPYL2	NM_022117	NP_071400	Coding	chrX:53082359 plus strand	1564270
TSR2	NM_058163	NP_477511	Coding	chrX:54440419 plus strand	1564271
TXLNG	NM_001168683	NP_001162154	Coding	chrX:16786431 plus strand	1564272
TXLNG	NM_018360	NP_060830	Coding	chrX:16786431 plus strand	1564272
UBA1	NM_003334	NP_003325	Coding	chrX:47193801 plus strand	1564273
UBA1	NM_153280	NP_695012	Coding	chrX:47190799 plus strand	1564274
UBE2A	NM_001282161	NP_001269090	Coding	chrX:119574466 plus strand	1564275
UBE2A	NM_003336	NP_003327	Coding	chrX:119574466 plus strand	1564275
UBE2A	NM_181762	NP_861427	Coding	chrX:119574466 plus strand	1564275
UBE2NL	NM_001012989	NP_001013007	Coding	chrX:143884070 plus strand	1564276
UBL4A	NM_014235	NP_055050	Coding	chrX:154486670 minus strand	1564277
UBQLN2	NM_013444	NP_038472	Coding	chrX:56563592 plus strand	1564278
UPF3B	NM_023010	NP_075386	Coding	chrX:119853028 minus strand	1564279
UPF3B	NM_080632	NP_542199	Coding	chrX:119853028 minus strand	1564279
UPRT	NM_145052	NP_659489	Coding	chrX:75274058 plus strand	1564280
USP11	NM_004651	NP_004642	Coding	chrX:47232914 plus strand	1564281
USP26	NM_031907	NP_114113	Coding	chrX:133028272 minus strand	1564282
USP27X	NM_001145073	NP_001138545	Coding	chrX:49879866 plus strand	1564283
USP51	NM_201286	NP_958443	Coding	chrX:55489198 minus strand	1564284
USP9X	NM_001039590	NP_001034679	Coding	chrX:41085634 plus strand	1564285
USP9X	NM_001039591	NP_001034680	Coding	chrX:41085634 plus strand	1564285
UTP14A	NM_001166221	NP_001159693	Coding	chrX:129906120 plus strand	1564286
UTP14A	NM_006649	NP_006640	Coding	chrX:129906120 plus strand	1564286
UXT	NM_004182	NP_004173	Coding	chrX:47659180 minus strand	1564287
UXT	NM_153477	NP_705582	Coding	chrX:47659180 minus strand	1564287
VAMP7	NM_001145149	NP_001138621	Coding	chrX:155881279 plus strand	1564288
VAMP7	NM_001185183	NP_001172112	Coding	chrX:155881279 plus strand	1564288
VAMP7	NM_005638	NP_005629	Coding	chrX:155881279 plus strand	1564288
VBP1	NM_003372	NP_003363	Coding	chrX:155216423 plus strand	1564289

【１４１９】

VCX	NM_013452	NP_038480	Coding	chrX:7842261 plus strand	1564290
VCX2	NM_016378	NP_057462	Coding	chrX:8171267 minus strand	1564291
VCX3A	NM_016379	NP_057463	Coding	chrX:6535118 minus strand	1564292
VCX3B	NM_001001888	NP_001001888	Coding	chrX:8464829 plus strand	1564293
VGLL1	NM_016267	NP_057351	Coding	chrX:136532151 plus strand	1564294
VMA21	NM_001017980	NP_001017980	Coding	chrX:151397184 plus strand	1564295
VSIG1	NM_001170553	NP_001164024	Coding	chrX:108044969 plus strand	1564296
VSIG1	NM_182607	NP_872413	Coding	chrX:108044969 plus strand	1564296
VSIG4	NM_001100431	NP_001093901	Coding	chrX:66040125 minus strand	1564297
VSIG4	NM_001184830	NP_001171759	Coding	chrX:66040125 minus strand	1564297
VSIG4	NM_001184831	NP_001171760	Coding	chrX:66040125 minus strand	1564297
VSIG4	NM_001257403	NP_001244332	Coding	chrX:66040125 minus strand	1564297
VSIG4	NM_007268	NP_009199	Coding	chrX:66040125 minus strand	1564297
WAS	NM_000377	NP_000368	Coding	chrX:48683796 plus strand	1564298
WBP5	NM_001006612	NP_001006613	Coding	chrX:103356451 plus strand	1564299
WBP5	NM_001006613	NP_001006614	Coding	chrX:103356451 plus strand	1564299
WBP5	NM_001006614	NP_001006615	Coding	chrX:103356451 plus strand	1564299
WBP5	NM_016303	NP_057387	Coding	chrX:103356451 plus strand	1564299
WDR13	NM_001166426	NP_001159898	Coding	chrX:48597835 plus strand	1564300
WDR13	NM_017883	NP_060353	Coding	chrX:48597491 plus strand	1564301
WDR44	NM_001184965	NP_001171894	Coding	chrX:118346072 plus strand	1564302
WDR44	NM_001184966	NP_001171895	Coding	chrX:118346072 plus strand	1564302
WDR44	NM_019045	NP_061918	Coding	chrX:118346072 plus strand	1564302
WDR45	NM_001029896	NP_001025067	Coding	chrX:49079905 minus strand	1564303
WDR45	NM_007075	NP_009006	Coding	chrX:49101121 minus strand	1564304
WNK3	NM_001002838	NP_001002838	Coding	chrX:54358005 minus strand	1564305
WNK3	NM_020922	NP_065973	Coding	chrX:54358005 minus strand	1564305
WWC3	NM_015691	NP_056506	Coding	chrX:10015754 plus strand	1564306
XAGE1B	NM_001097594	NP_001091063	Coding	chrX:52495667 plus strand	1564307
XAGE1B	NM_001097594	NP_001091063	Coding	chrX:52517221 minus	1564308

【１４２０】

				strand	
XAGE1B	NM_001097596	NP_001091065	Coding	chrX:52495820 plus strand	1564309
XAGE1B	NM_001097596	NP_001091065	Coding	chrX:52517068 minus strand	1564310
XAGE1E	NM_001097604	NP_001091073	Coding	chrX:52495667 plus strand	1564311
XAGE1E	NM_001097604	NP_001091073	Coding	chrX:52517221 minus strand	1564312
XAGE1E	NM_001097605	NP_001091074	Coding	chrX:52495820 plus strand	1564313
XAGE1E	NM_001097605	NP_001091074	Coding	chrX:52517068 minus strand	1564314
XAGE2	NM_130777	NP_570133	Coding	chrX:52369009 plus strand	1564315
XAGE3	NM_130776	NP_570132	Coding	chrX:52867301 minus strand	1564316
XAGE3	NM_133179	NP_573440	Coding	chrX:52868088 minus strand	1564317
XAGE5	NM_130775	NP_570131	Coding	chrX:52812203 plus strand	1564318
XG	NM_001141919	NP_001135391	Coding	chrX:2752051 plus strand	1564319
XG	NM_001141920	NP_001135392	Coding	chrX:2752051 plus strand	1564319
XG	NM_175569	NP_780778	Coding	chrX:2752051 plus strand	1564319
XIAP	NM_001167	NP_001158	Coding	chrX:123860166 plus strand	1564320
XIAP	NM_001204401	NP_001191330	Coding	chrX:123859811 plus strand	1564321
XK	NM_021083	NP_066569	Coding	chrX:37685879 plus strand	1564322
XKRX	NM_212559	NP_997724	Coding	chrX:100928909 minus strand	1564323
XPNPEP2	NM_003399	NP_003390	Coding	chrX:129738969 plus strand	1564324
YIPF6	NM_001195214	NP_001182143	Coding	chrX:68498781 plus strand	1564325
YIPF6	NM_173834	NP_776195	Coding	chrX:68498781 plus strand	1564325
YY2	NM_206923	NP_996806	Coding	chrX:21855986 plus strand	1564326
ZBED1	NM_001171135	NP_001164606	Coding	chrX:2500539 minus strand	1564327
ZBED1	NM_001171136	NP_001164607	Coding	chrX:2500967 minus strand	1564328
ZBED1	NM_004729	NP_004720	Coding	chrX:2500967 minus strand	1564328
ZBTB33	NM_001184742	NP_001171671	Coding	chrX:120250754 plus strand	1564329
ZBTB33	NM_006777	NP_006768	Coding	chrX:120250751 plus strand	1564330
ZC3H12B	NM_001010888	NP_001010888	Coding	chrX:65488734 plus strand	1564331
ZC4H2	NM_001178032	NP_001171503	Coding	chrX:65034744 minus strand	1564332
ZC4H2	NM_001178033	NP_001171504	Coding	chrX:64976533 minus strand	1564333
ZC4H2	NM_001243804	NP_001230733	Coding	chrX:65034744 minus strand	1564332
ZC4H2	NM_018684	NP_061154	Coding	chrX:64976533 minus strand	1564333

【１４２１】

ZCCHC12	NM_173798	NP_776159	Coding	chrX:118823823 plus strand	1564334
ZCCHC13	NM_203303	NP_976048	Coding	chrX:74304189 plus strand	1564335
ZCCHC16	NM_001004308	NP_001004308	Coding	chrX:112083024 plus strand	1564336
ZCCHC18	NM_001143978	NP_001137450	Coding	chrX:104112525 plus strand	1564337
ZCCHC5	NM_152694	NP_689907	Coding	chrX:78659328 minus strand	1564338
ZDHHC15	NM_001146256	NP_001139728	Coding	chrX:75523502 minus strand	1564339
ZDHHC15	NM_001146257	NP_001139729	Coding	chrX:75523502 minus strand	1564339
ZDHHC15	NM_144969	NP_659406	Coding	chrX:75523502 minus strand	1564339
ZDHHC9	NM_001008222	NP_001008223	Coding	chrX:129843585 minus strand	1564340
ZDHHC9	NM_016032	NP_057116	Coding	chrX:129843934 minus strand	1564341
ZFP92	NM_001136273	NP_001129745	Coding	chrX:153418322 plus strand	1564342
ZFX	NM_001178084	NP_001171555	Coding	chrX:24149723 plus strand	1564343
ZFX	NM_001178085	NP_001171556	Coding	chrX:24149728 plus strand	1564344
ZFX	NM_001178086	NP_001171557	Coding	chrX:24149644 plus strand	1564345
ZFX	NM_001178095	NP_001171566	Coding	chrX:24149644 plus strand	1564345
ZFX	NM_003410	NP_003401	Coding	chrX:24149736 plus strand	1564346
ZIC3	NM_003413	NP_003404	Coding	chrX:137566186 plus strand	1564347
ZMAT1	NM_001011657	NP_001011657	Coding	chrX:101932066 minus strand	1564348
ZMAT1	NM_001282400	NP_001269329	Coding	chrX:101932066 minus strand	1564348
ZMAT1	NM_001282401	NP_001269330	Coding	chrX:101932066 minus strand	1564348
ZMYM3	NM_001171162	NP_001164633	Coding	chrX:71255197 minus strand	1564349
ZMYM3	NM_001171163	NP_001164634	Coding	chrX:71254649 minus strand	1564350
ZMYM3	NM_005096	NP_005087	Coding	chrX:71254649 minus strand	1564350
ZMYM3	NM_201599	NP_963893	Coding	chrX:71254188 minus strand	1564351
ZNF157	NM_003446	NP_003437	Coding	chrX:47370599 plus strand	1564352
ZNF182	NM_001007088	NP_001007089	Coding	chrX:48003978 minus strand	1564353
ZNF182	NM_001178099	NP_001171570	Coding	chrX:48003995 minus strand	1564354
ZNF182	NM_006962	NP_008893	Coding	chrX:48003978 minus strand	1564353
ZNF185	NM_001178106	NP_001171577	Coding	chrX:152914441 plus strand	1564355
ZNF185	NM_001178107	NP_001171578	Coding	chrX:152914441 plus	1564355

【１４２２】

				strand	
ZNF185	NM_001178108	NP_001171579	Coding	chrX:152914441 plus strand	1564355
ZNF185	NM_001178109	NP_001171580	Coding	chrX:152914441 plus strand	1564355
ZNF185	NM_001178110	NP_001171581	Coding	chrX:152914441 plus strand	1564355
ZNF185	NM_001178113	NP_001171584	Coding	chrX:152917864 plus strand	1564356
ZNF185	NM_001178115	NP_001171586	Coding	chrX:152941670 plus strand	1564357
ZNF185	NM_007150	NP_009081	Coding	chrX:152914441 plus strand	1564355
ZNF275	NM_001080485	NP_001073954	Coding	chrX:153334154 plus strand	1564358
ZNF280C	NM_017666	NP_060136	Coding	chrX:130268948 minus strand	1564359
ZNF41	NM_007130	NP_009061	Coding	chrX:47482946 minus strand	1564360
ZNF41	NM_153380	NP_700359	Coding	chrX:47482946 minus strand	1564360
ZNF449	NM_152695	NP_689908	Coding	chrX:135344770 plus strand	1564361
ZNF630	NM_001037735	NP_001032824	Coding	chrX:48071141 minus strand	1564362
ZNF630	NM_001190255	NP_001177184	Coding	chrX:48071658 minus strand	1564363
ZNF630	NM_001282201	NP_001269130	Coding	chrX:48071658 minus strand	1564363
ZNF630	NM_001282202	NP_001269131	Coding	chrX:48071658 minus strand	1564363
ZNF645	NM_152577	NP_689790	Coding	chrX:22272912 plus strand	1564364
ZNF674	NM_001039891	NP_001034980	Coding	chrX:46545457 minus strand	1564365
ZNF674	NM_001146291	NP_001139763	Coding	chrX:46545457 minus strand	1564365
ZNF674	NM_001190417	NP_001177346	Coding	chrX:46545457 minus strand	1564365
ZNF711	NM_021998	NP_068838	Coding	chrX:85243990 plus strand	1564366
ZNF75D	NM_001185063	NP_001171992	Coding	chrX:135296039 minus strand	1564367
ZNF75D	NM_007131	NP_009062	Coding	chrX:135344087 minus strand	1564368
ZNF81	NM_007137	NP_009068	Coding	chrX:47836901 plus strand	1564369
ZRSR2	NM_005089	NP_005080	Coding	chrX:15790450 plus strand	1564370
ZXDA	NM_007156	NP_009087	Coding	chrX:57910633 minus strand	1564371
ZXDB	NM_007157	NP_009088	Coding	chrX:57591835 plus strand	1564372

【１４２３】

以下の表２は、非コード標的遺伝子およびそのＴＳＳ位置を記載する。

表２．非コード標的遺伝子、標的転写物、およびＴＳＳ位置

表中、「Ｔａｒｇｅｔ　Ｇｅｎｅ」は「標的遺伝子」、「Ｔａｒｇｅｔ　ｔｒａｎｓｃｒｉｐｔ　ＲＥＦ．ＩＤ　Ｎｏ．」は「標的転写物参照ＩＤ番号」、「Ｃｈｒｏｍｏｓｏｍｅ」は「染色体」、「Ｎａｔｕｒｅ　ｏｆ　ｔａｒｇｅｔ　ｔｒａｎｓｃｒｉｐｔ」は「標的転写物の性質」、「Ｔｒａｎｓｃｒｉｐｔ　ＴＳＳ　ｌｏｃａｔｉｏｎ」は「転写物ＴＳＳ位置」、「ＳＥＱ　ＩＤ　ｏｆ　ＴＳＳ　ｃｏｒｅ」は「ＴＳＳコアの配列番号」、「Ｎｏｎ－ｃｏｄｉｎｇ」は「非コード」、「ｍｉｎｕｓ　ｓｔｒａｎｄ」は「マイ

ナス鎖」、「ｐｌｕｓ　ｓｔｒａｎｄ」は「プラス鎖」をそれぞれ表す。

【１４２４】

【表２】

Target Gene	Target transcript REF. ID No.	Chromosome	Nature of target transcript	Transcript TSS location	SEQ ID of TSS core
AADACL3	NR_111984	1	Non-coding	chr1:12716114 plus strand	1879189
ACTG1P4	NR_024438	1	Non-coding	chr1:103569403 plus strand	1879190
ADAM15	NR_048579	1	Non-coding	chr1:155051271 plus strand	1879191
ADAM15	NR_048578	1	Non-coding	chr1:155051271 plus strand	1879191
ADAM15	NR_048577	1	Non-coding	chr1:155051271 plus strand	1879191
ADAMTSL4-AS1	NR_104133	1	Non-coding	chr1:150574552 minus strand	1879192
AGBL4-IT1	NR_046839	1	Non-coding	chr1:49472085 minus strand	1879193
AK2	NR_037592	1	Non-coding	chr1:33036911 minus strand	1879194
AK2	NR_037591	1	Non-coding	chr1:33036911 minus strand	1879194
AKNAD1	NR_049760	1	Non-coding	chr1:108858242 minus strand	1879195
AKR7A2P1	NR_002796	1	Non-coding	chr1:112923349 plus strand	1879196
AKR7L	NR_040288	1	Non-coding	chr1:19274074 minus strand	1879197
AKR7L	NR_040289	1	Non-coding	chr1:19274074 minus strand	1879197
ANGEL2	NR_125333	1	Non-coding	chr1:213015875 minus strand	1879198
ANKRD36BP1	NR_026844	1	Non-coding	chr1:168247430 minus strand	1879199
AP4B1-AS1	NR_125965	1	Non-coding	chr1:113812611 plus strand	1879200
AP4B1-AS1	NR_037864	1	Non-coding	chr1:113856634 plus strand	1879201
APH1A	NR_045035	1	Non-coding	chr1:150269209 minus strand	1879202
APH1A	NR_045034	1	Non-coding	chr1:150269209 minus strand	1879202
APH1A	NR_045033	1	Non-coding	chr1:150269209 minus strand	1879202
APITD1	NR_036462	1	Non-coding	chr1:10430746 plus strand	1879203
APITD1-CORT	NR_037187	1	Non-coding	chr1:10430746 plus strand	1879204
ASB17	NR_026546	1	Non-coding	chr1:75932431 minus strand	1879205
ASH1L-AS1	NR_027023	1	Non-coding	chr1:155561980 plus strand	1879206
ATP1A1-AS1	NR_024126	1	Non-coding	chr1:116418559 minus strand	1879207

【１４２５】

ATP1A1-AS1	NR_024124	1	Non-coding	chr1:116418575 minus strand	1879208
ATP1A1-AS1	NR_027645	1	Non-coding	chr1:116418575 minus strand	1879208
ATP1A1-AS1	NR_024125	1	Non-coding	chr1:116418583 minus strand	1879209
ATP1A1-AS1	NR_027646	1	Non-coding	chr1:116418622 minus strand	1879210
AURKAPS1	NR_001587	1	Non-coding	chr1:220267715 minus strand	1879211
AXDND1	NR_073544	1	Non-coding	chr1:179365971 plus strand	1879212
AZIN2	NR_126031	1	Non-coding	chr1:33082177 plus strand	1879213
BLACAT1	NR_103783	1	Non-coding	chr1:205456086 minus strand	1879214
BROX	NR_109927	1	Non-coding	chr1:222712552 plus strand	1879215
BSDC1	NR_125352	1	Non-coding	chr1:32394461 minus strand	1879216
C1orf140	NR_024236	1	Non-coding	chr1:221336296 minus strand	1879217
C1orf141	NR_075077	1	Non-coding	chr1:67134971 minus strand	1879218
C1orf145	NR_073155	1	Non-coding	chr1:228213655 minus strand	1879219
C1orf145	NR_073154	1	Non-coding	chr1:228213664 minus strand	1879220
C1orf220	NR_033186	1	Non-coding	chr1:178542795 plus strand	1879221
C1orf50	NR_040733	1	Non-coding	chr1:42767244 plus strand	1879222
C1orf52	NR_024113	1	Non-coding	chr1:85259672 minus strand	1879223
C1orf86	NR_046427	1	Non-coding	chr1:2194775 minus strand	1879224
CADM3-AS1	NR_037870	1	Non-coding	chr1:159202422 minus strand	1879225
CAMTA1	NR_038934	1	Non-coding	chr1:6785323 plus strand	1879226
CASP9	NR_102733	1	Non-coding	chr1:15524445 minus strand	1879227
CASP9	NR_102732	1	Non-coding	chr1:15524445 minus strand	1879227
CCDC163P	NR_033298	1	Non-coding	chr1:45500079 minus strand	1879228
CCDC163P	NR_033297	1	Non-coding	chr1:45500079 minus strand	1879228
CCDC163P	NR_033296	1	Non-coding	chr1:45500079 minus strand	1879228
CCT3	NR_036564	1	Non-coding	chr1:156338415 minus strand	1879229
CCT3	NR_036565	1	Non-coding	chr1:156338415 minus strand	1879229

【1426】

CD160	NR_103845	1	Non-coding	chr1:145719445 plus strand	1879230
CD55	NR_125349	1	Non-coding	chr1:207321471 plus strand	1879231
CD58	NR_026665	1	Non-coding	chr1:116571093 minus strand	1879232
CHD1L	NR_046070	1	Non-coding	chr1:147242640 plus strand	1879233
CHIAP2	NR_003928	1	Non-coding	chr1:111280523 plus strand	1879234
CHIT1	NR_045784	1	Non-coding	chr1:203229732 minus strand	1879235
CHIT1	NR_045785	1	Non-coding	chr1:203229732 minus strand	1879235
CHRM3-AS1	NR_046582	1	Non-coding	chr1:239899872 minus strand	1879236
CHRM3-AS2	NR_103776	1	Non-coding	chr1:239719119 minus strand	1879237
CKS1B	NR_024163	1	Non-coding	chr1:154974641 plus strand	1879238
CLCA3P	NR_024604	1	Non-coding	chr1:86634275 plus strand	1879239
CLCA4	NR_024602	1	Non-coding	chr1:86547075 plus strand	1879240
CLCN6	NR_046428	1	Non-coding	chr1:11806095 plus strand	1879241
CMPK1	NR_046395	1	Non-coding	chr1:47333796 plus strand	1879242
CMPK1	NR_046394	1	Non-coding	chr1:47333796 plus strand	1879242
CNIH4	NR_102347	1	Non-coding	chr1:224356810 plus strand	1879243
CRB1	NR_047564	1	Non-coding	chr1:197268203 plus strand	1879244
CRB1	NR_047563	1	Non-coding	chr1:197268203 plus strand	1879244
CREB3L4	NR_045658	1	Non-coding	chr1:153967838 plus strand	1879245
CROCCP2	NR_026752	1	Non-coding	chr1:16630906 minus strand	1879246
CROCCP3	NR_023386	1	Non-coding	chr1:16492701 minus strand	1879247
CSMD2-AS1	NR_038372	1	Non-coding	chr1:33868955 plus strand	1879248
CTPS1	NR_125440	1	Non-coding	chr1:40979298 plus strand	1879249
CYCSP52	NR_001560	1	Non-coding	chr1:157128361 plus strand	1879250
CYMP	NR_003599	1	Non-coding	chr1:110480765 plus strand	1879251
CYP4Z2P	NR_002788	1	Non-coding	chr1:46900475 minus strand	1879252
DAB1-AS1	NR_104365	1	Non-coding	chr1:57860542 plus strand	1879253

【1427】

DAB1-AS1	NR_104362	1	Non-coding	chr1:57860542 plus strand	1879253
DAB1-AS1	NR_104363	1	Non-coding	chr1:57860542 plus strand	1879253
DAB1-AS1	NR_104364	1	Non-coding	chr1:57860542 plus strand	1879253
DCAF8	NR_028106	1	Non-coding	chr1:160262487 minus strand	1879254
DCAF8	NR_028103	1	Non-coding	chr1:160262528 minus strand	1879255
DCAF8	NR_028105	1	Non-coding	chr1:160262528 minus strand	1879255
DCAF8	NR_028104	1	Non-coding	chr1:160262528 minus strand	1879255
DDX11L1	NR_046018	1	Non-coding	chr1:11873 plus strand	1879256
DENND1B	NR_125340	1	Non-coding	chr1:197775493 minus strand	1879257
DEPDC1-AS1	NR_110671	1	Non-coding	chr1:68496675 plus strand	1879258
DESI2	NR_123735	1	Non-coding	chr1:244653047 plus strand	1879259
DESI2	NR_123736	1	Non-coding	chr1:244653047 plus strand	1879259
DFFB	NR_104222	1	Non-coding	chr1:3857266 plus strand	1879260
DHX9	NR_033302	1	Non-coding	chr1:182839303 plus strand	1879261
DISC1-IT1	NR_126441	1	Non-coding	chr1:231925833 plus strand	1879262
DISC2	NR_002227	1	Non-coding	chr1:231818517 minus strand	1879263
DLEU2L	NR_002771	1	Non-coding	chr1:63548979 plus strand	1879264
DNAJA1P5	NR_033424	1	Non-coding	chr1:101872010 plus strand	1879265
DNAJC16	NR_109898	1	Non-coding	chr1:15526812 plus strand	1879266
DNM3OS	NR_038397	1	Non-coding	chr1:172144835 minus strand	1879267
DNM3OS	NR_103486	1	Non-coding	chr1:172144835 minus strand	1879267
DPYD-AS1	NR_046590	1	Non-coding	chr1:97095922 plus strand	1879268
DPYD-AS2	NR_046591	1	Non-coding	chr1:97796920 plus strand	1879269
DRD5P2	NR_111001	1	Non-coding	chr1:144276762 minus strand	1879270
DRD5P2	NR_111001	1	Non-coding	chr1:144689613 plus strand	1879271
DUSP10	NR_111939	1	Non-coding	chr1:221736900 minus strand	1879272
DUSP10	NR_111940	1	Non-coding	chr1:221742176 minus strand	1879273

【１４２８】

DUSP5P1	NR_002834	1	Non-coding	chr1:228644909 plus strand	1879274
EDN2	NR_126098	1	Non-coding	chr1:41484683 minus strand	1879275
EFCAB14-AS1	NR_038828	1	Non-coding	chr1:46674035 plus strand	1879276
EFCAB14-AS1	NR_038827	1	Non-coding	chr1:46674035 plus strand	1879276
EFCAB2	NR_026587	1	Non-coding	chr1:244970328 plus strand	1879277
ELOVL1	NR_046117	1	Non-coding	chr1:43368074 minus strand	1879278
EMBP1	NR_003955	1	Non-coding	chr1:121519111 plus strand	1879279
ENO1-AS1	NR_038351	1	Non-coding	chr1:8878834 plus strand	1879280
ERI3-IT1	NR_046817	1	Non-coding	chr1:44244283 minus strand	1879281
ERI3-IT1	NR_110056	1	Non-coding	chr1:44244283 minus strand	1879281
ERICH3-AS1	NR_121671	1	Non-coding	chr1:74577429 plus strand	1879282
ERICH3-AS1	NR_121670	1	Non-coding	chr1:74589734 plus strand	1879283
ESPNP	NR_026567	1	Non-coding	chr1:16720157 minus strand	1879284
EXTL2	NR_048570	1	Non-coding	chr1:100895179 minus strand	1879285
EYA3	NR_104214	1	Non-coding	chr1:28088637 minus strand	1879286
FAAHP1	NR_045483	1	Non-coding	chr1:46433826 plus strand	1879287
FALEC	NR_051960	1	Non-coding	chr1:150515756 plus strand	1879288
FAM138A	NR_026818	1	Non-coding	chr1:36081 minus strand	1879289
FAM138C	NR_026822	1	Non-coding	chr1:36081 minus strand	1879290
FAM138D	NR_026823	1	Non-coding	chr1:206597 minus strand	1879291
FAM138F	NR_026820	1	Non-coding	chr1:36081 minus strand	1879292
FAM212B-AS1	NR_038952	1	Non-coding	chr1:111739840 plus strand	1879293
FAM212B-AS1	NR_038951	1	Non-coding	chr1:111739840 plus strand	1879293
FAM213B	NR_036637	1	Non-coding	chr1:2586459 plus strand	1879294
FAM213B	NR_036638	1	Non-coding	chr1:2586459 plus strand	1879294
FAM231D	NR_111934	1	Non-coding	chr1:143792815 plus strand	1879295
FAM231D	NR_111934	1	Non-coding	chr1:149701424 plus strand	1879296

【１４２９】

FAM41C	NR_027055	1	Non-coding	chr1:876802 minus strand	1879297
FAM87B	NR_103536	1	Non-coding	chr1:817370 plus strand	1879298
FBXO28	NR_049764	1	Non-coding	chr1:224114086 plus strand	1879299
FCGR1B	NR_045213	1	Non-coding	chr1:121087344 plus strand	1879300
FCGR1C	NR_027484	1	Non-coding	chr1:143874742 plus strand	1879301
FCGR2C	NR_047648	1	Non-coding	chr1:161581338 plus strand	1879302
FCRL2	NR_125358	1	Non-coding	chr1:157777132 minus strand	1879303
FGGY	NR_103473	1	Non-coding	chr1:59297011 plus strand	1879304
FLG-AS1	NR_103778	1	Non-coding	chr1:152313458 plus strand	1879305
FLG-AS1	NR_103779	1	Non-coding	chr1:152337067 plus strand	1879306
FLJ23867	NR_026900	1	Non-coding	chr1:180198008 plus strand	1879307
FLJ27354	NR_033981	1	Non-coding	chr1:89632894 minus strand	1879308
FLJ31662	NR_033966	1	Non-coding	chr1:95474736 plus strand	1879309
FLJ37453	NR_024279	1	Non-coding	chr1:15848147 minus strand	1879310
FLVCR1-AS1	NR_027286	1	Non-coding	chr1:212858138 minus strand	1879311
FLVCR1-AS1	NR_027285	1	Non-coding	chr1:212858138 minus strand	1879311
FMO6P	NR_002601	1	Non-coding	chr1:171137739 plus strand	1879312
FMO9P	NR_002925	1	Non-coding	chr1:166603915 plus strand	1879313
FMOD	NR_103757	1	Non-coding	chr1:203351429 minus strand	1879314
FOXD2-AS1	NR_026878	1	Non-coding	chr1:47434641 minus strand	1879315
FOXD3-AS1	NR_121634	1	Non-coding	chr1:63322458 minus strand	1879316
FOXD3-AS1	NR_121635	1	Non-coding	chr1:63322458 minus strand	1879316
FOXD3-AS1	NR_121636	1	Non-coding	chr1:63323675 minus strand	1879317
FOXD3-AS1	NR_121637	1	Non-coding	chr1:63324441 minus strand	1879318
GALNT2	NR_120373	1	Non-coding	chr1:230067194 plus strand	1879319
GAS5	NR_002578	1	Non-coding	chr1:173867987 minus strand	1879320
GAS5-AS1	NR_037605	1	Non-coding	chr1:173863247 plus strand	1879321

【１４３０】

GBAP1	NR_002188	1	Non-coding	chr1:155227534 minus strand	1879322
GBP1P1	NR_003133	1	Non-coding	chr1:89407678 plus strand	1879323
GCSAML-AS1	NR_027309	1	Non-coding	chr1:247530804 minus strand	1879324
GEMIN8P4	NR_002830	1	Non-coding	chr1:89994966 minus strand	1879325
GGPS1	NR_036605	1	Non-coding	chr1:235328553 plus strand	1879326
GJA9-MYCBP	NR_037637	1	Non-coding	chr1:38881626 minus strand	1879327
GJA9-MYCBP	NR_037636	1	Non-coding	chr1:38881626 minus strand	1879327
GJA9-MYCBP	NR_037635	1	Non-coding	chr1:38881626 minus strand	1879327
GJA9-MYCBP	NR_037634	1	Non-coding	chr1:38881626 minus strand	1879327
GJA9-MYCBP	NR_037633	1	Non-coding	chr1:38881626 minus strand	1879327
GM140	NR_046249	1	Non-coding	chr1:181236387 plus strand	1879328
GNG12-AS1	NR_040077	1	Non-coding	chr1:67832287 plus strand	1879329
GNRHR2	NR_002328	1	Non-coding	chr1:145919012 plus strand	1879330
GNRHR2	NR_104034	1	Non-coding	chr1:145919189 plus strand	1879331
GNRHR2	NR_104033	1	Non-coding	chr1:145919343 plus strand	1879332
GORAB	NR_027397	1	Non-coding	chr1:170532121 plus strand	1879333
GPR89A	NR_036541	1	Non-coding	chr1:145607959 plus strand	1879334
GS1-279B7.1	NR_038424	1	Non-coding	chr1:185335039 minus strand	1879335
GSTM3	NR_024537	1	Non-coding	chr1:109741038 minus strand	1879336
GSTM4	NR_024538	1	Non-coding	chr1:109656075 plus strand	1879337
H3F3AP4	NR_002315	1	Non-coding	chr1:226062726 plus strand	1879338
HAO2-IT1	NR_046780	1	Non-coding	chr1:119368945 plus strand	1879339
HCN3	NR_073074	1	Non-coding	chr1:155277426 plus strand	1879340
HHLA3	NR_027404	1	Non-coding	chr1:70354809 plus strand	1879341
HIPK1-AS1	NR_110725	1	Non-coding	chr1:113929258 minus strand	1879342
HIPK1-AS1	NR_110726	1	Non-coding	chr1:113929525 minus strand	1879343
HIST2H2BA	NR_027337	1	Non-coding	chr1:121117251 minus strand	1879344

【１４３１】

HIST2H2BC	NR_036461	1	Non-coding	chr1:149850773 minus strand	1879345
HIVEP3	NR_038260	1	Non-coding	chr1:41918825 minus strand	1879346
HIVEP3	NR_038261	1	Non-coding	chr1:42035925 minus strand	1879347
HLX-AS1	NR_046901	1	Non-coding	chr1:220880140 minus strand	1879348
HMGB4	NR_033264	1	Non-coding	chr1:33864078 plus strand	1879349
HNRNPU-AS1	NR_026778	1	Non-coding	chr1:244846941 minus strand	1879350
HSD3BP4	NR_033781	1	Non-coding	chr1:119563879 plus strand	1879351
HSD52	NR_027120	1	Non-coding	chr1:59146807 minus strand	1879352
HSPA7	NR_024151	1	Non-coding	chr1:161606058 plus strand	1879353
HYDIN2	NR_103556	1	Non-coding	chr1:146547488 plus strand	1879354
IBA57-AS1	NR_103539	1	Non-coding	chr1:228164848 minus strand	1879355
IBA57-AS1	NR_103540	1	Non-coding	chr1:228165512 minus strand	1879356
IL12RB2	NR_047584	1	Non-coding	chr1:67307363 plus strand	1879357
IL12RB2	NR_047583	1	Non-coding	chr1:67307363 plus strand	1879357
INTS7	NR_037667	1	Non-coding	chr1:212035660 minus strand	1879358
IPO9-AS1	NR_046696	1	Non-coding	chr1:201829559 minus strand	1879359
ITGB3BP	NR_045147	1	Non-coding	chr1:63523273 minus strand	1879360
ITPKB-IT1	NR_103784	1	Non-coding	chr1:226675068 minus strand	1879361
KCNA3	NR_109846	1	Non-coding	chr1:110671775 minus strand	1879362
KCNA3	NR_109845	1	Non-coding	chr1:110673454 minus strand	1879363
KCNC4	NR_036437	1	Non-coding	chr1:110210713 plus strand	1879364
KCNC4-AS1	NR_046546	1	Non-coding	chr1:110209987 minus strand	1879365
KCND3-IT1	NR_046783	1	Non-coding	chr1:111856905 minus strand	1879366
KDM4A-AS1	NR_033827	1	Non-coding	chr1:43707341 minus strand	1879367
KHDRBS1	NR_073499	1	Non-coding	chr1:32013693 plus strand	1879368
KHDRBS1	NR_073498	1	Non-coding	chr1:32013693 plus strand	1879368
KLHDC9	NR_033385	1	Non-coding	chr1:161098360 plus strand	1879369

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KLHDC9	NR_033386	1	Non-coding	chr1:161098360 plus strand	1879369
LAMTOR5-AS1	NR_102697	1	Non-coding	chr1:110407808 plus strand	1879370
LEMD1	NR_037583	1	Non-coding	chr1:205422086 minus strand	1879371
LEMD1-AS1	NR_038425	1	Non-coding	chr1:205373251 plus strand	1879372
LGALS8-AS1	NR_034040	1	Non-coding	chr1:236524508 minus strand	1879373
LHX4-AS1	NR_037642	1	Non-coding	chr1:180274681 minus strand	1879374
LINC00115	NR_024321	1	Non-coding	chr1:827522 minus strand	1879375
LINC00184	NR_033927	1	Non-coding	chr1:234629310 plus strand	1879376
LINC00210	NR_048550	1	Non-coding	chr1:217892899 plus strand	1879377
LINC00260	NR_046213	1	Non-coding	chr1:203730576 plus strand	1879378
LINC00272	NR_034131	1	Non-coding	chr1:182407620 plus strand	1879379
LINC00303	NR_027902	1	Non-coding	chr1:204041264 minus strand	1879380
LINC00337	NR_103534	1	Non-coding	chr1:6236239 plus strand	1879381
LINC00339	NR_023918	1	Non-coding	chr1:22025190 plus strand	1879382
LINC00339	NR_023919	1	Non-coding	chr1:22025503 plus strand	1879383
LINC00339	NR_109762	1	Non-coding	chr1:22025503 plus strand	1879383
LINC00339	NR_109760	1	Non-coding	chr1:22025503 plus strand	1879383
LINC00339	NR_109759	1	Non-coding	chr1:22025503 plus strand	1879383
LINC00339	NR_109761	1	Non-coding	chr1:22025503 plus strand	1879383
LINC00466	NR_038252	1	Non-coding	chr1:63317230 minus strand	1879384
LINC00467	NR_026761	1	Non-coding	chr1:211382754 plus strand	1879385
LINC00538	NR_046189	1	Non-coding	chr1:213924748 plus strand	1879386
LINC00582	NR_034037	1	Non-coding	chr1:231612090 minus strand	1879387
LINC00622	NR_036540	1	Non-coding	chr1:119599291 minus strand	1879388
LINC00623	NR_024584	1	Non-coding	chr1:120912237 plus strand	1879389
LINC00623	NR_024511	1	Non-coding	chr1:120913216 plus strand	1879390
LINC00623	NR_024510	1	Non-coding	chr1:120913216 plus strand	1879390

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LINC00623	NR_109754	1	Non-coding	chr1:120913216 plus strand	1879390
LINC00624	NR_038423	1	Non-coding	chr1:147517875 minus strand	1879391
LINC00626	NR_024160	1	Non-coding	chr1:168786940 plus strand	1879392
LINC00628	NR_027022	1	Non-coding	chr1:204369719 minus strand	1879393
LINC00853	NR_047498	1	Non-coding	chr1:47179249 plus strand	1879394
LINC00862	NR_040064	1	Non-coding	chr1:200373792 minus strand	1879395
LINC00869	NR_111950	1	Non-coding	chr1:149607011 plus strand	1879396
LINC00869	NR_111952	1	Non-coding	chr1:149607011 plus strand	1879396
LINC00869	NR_111951	1	Non-coding	chr1:149607011 plus strand	1879396
LINC00869	NR_111953	1	Non-coding	chr1:149607011 plus strand	1879396
LINC00970	NR_104091	1	Non-coding	chr1:169087005 minus strand	1879397
LINC00982	NR_015440	1	Non-coding	chr1:3067725 minus strand	1879398
LINC00982	NR_024371	1	Non-coding	chr1:3067725 minus strand	1879398
LINC01031	NR_125789	1	Non-coding	chr1:193304744 plus strand	1879399
LINC01032	NR_126003	1	Non-coding	chr1:192948257 minus strand	1879400
LINC01036	NR_126347	1	Non-coding	chr1:187092841 plus strand	1879401
LINC01057	NR_104131	1	Non-coding	chr1:94820281 minus strand	1879402
LINC01128	NR_047526	1	Non-coding	chr1:827590 plus strand	1879403
LINC01128	NR_047524	1	Non-coding	chr1:827590 plus strand	1879403
LINC01128	NR_047523	1	Non-coding	chr1:827590 plus strand	1879403
LINC01128	NR_047521	1	Non-coding	chr1:827590 plus strand	1879403
LINC01128	NR_047519	1	Non-coding	chr1:827590 plus strand	1879403
LINC01128	NR_047525	1	Non-coding	chr1:827797 plus strand	1879404
LINC01132	NR_038856	1	Non-coding	chr1:234724041 plus strand	1879405
LINC01133	NR_038849	1	Non-coding	chr1:159961223 plus strand	1879406
LINC01134	NR_024455	1	Non-coding	chr1:3900403 plus strand	1879407
LINC01135	NR_034014	1	Non-coding	chr1:58785150 plus strand	1879408

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LINC01135	NR_034015	1	Non-coding	chr1:58785150 plus strand	1879408
LINC01135	NR_108106	1	Non-coding	chr1:58785150 plus strand	1879408
LINC01136	NR_034151	1	Non-coding	chr1:203305325 minus strand	1879409
LINC01136	NR_034150	1	Non-coding	chr1:203305325 minus strand	1879409
LINC01137	NR_038842	1	Non-coding	chr1:37474443 minus strand	1879410
LINC01138	NR_027468	1	Non-coding	chr1:148459920 minus strand	1879411
LINC01138	NR_104014	1	Non-coding	chr1:148459920 minus strand	1879411
LINC01139	NR_015407	1	Non-coding	chr1:238486017 minus strand	1879412
LINC01140	NR_026989	1	Non-coding	chr1:87129764 plus strand	1879413
LINC01140	NR_026988	1	Non-coding	chr1:87129764 plus strand	1879413
LINC01140	NR_026987	1	Non-coding	chr1:87131925 plus strand	1879414
LINC01140	NR_026986	1	Non-coding	chr1:87131925 plus strand	1879414
LINC01140	NR_026985	1	Non-coding	chr1:87131925 plus strand	1879414
LINC01141	NR_033887	1	Non-coding	chr1:20428794 minus strand	1879415
LINC01142	NR_026957	1	Non-coding	chr1:170284208 minus strand	1879416
LINC01144	NR_024270	1	Non-coding	chr1:45303909 plus strand	1879417
LINC01160	NR_034126	1	Non-coding	chr1:111608318 minus strand	1879418
LINC01221	NR_126351	1	Non-coding	chr1:199016132 plus strand	1879419
LINC01222	NR_110525	1	Non-coding	chr1:199018964 minus strand	1879420
LINC01225	NR_034112	1	Non-coding	chr1:31500084 plus strand	1879421
LINC01226	NR_027085	1	Non-coding	chr1:31518434 plus strand	1879422
LINC01307	NR_126402	1	Non-coding	chr1:101323836 plus strand	1879423
LINC01341	NR_015422	1	Non-coding	chr1:246789616 plus strand	1879424
LINC01342	NR_038869	1	Non-coding	chr1:1137016 plus strand	1879425
LINC01343	NR_038928	1	Non-coding	chr1:38214767 minus strand	1879426
LINC01344	NR_104175	1	Non-coding	chr1:182314061 minus strand	1879427
LINC01346	NR_040065	1	Non-coding	chr1:3940611 plus strand	1879428

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LINC01347	NR_029401	1	Non-coding	chr1:243101744 minus strand	1879429
LINC01348	NR_027454	1	Non-coding	chr1:235069818 minus strand	1879430
LINC01349	NR_038914	1	Non-coding	chr1:100647004 minus strand	1879431
LINC01350	NR_110793	1	Non-coding	chr1:185628488 minus strand	1879432
LINC01351	NR_110716	1	Non-coding	chr1:190478259 plus strand	1879433
LINC01351	NR_110717	1	Non-coding	chr1:190478550 plus strand	1879434
LINC01352	NR_110797	1	Non-coding	chr1:220829254 plus strand	1879435
LINC01353	NR_117097	1	Non-coding	chr1:203287151 plus strand	1879436
LINC01353	NR_117098	1	Non-coding	chr1:203287699 plus strand	1879437
LINC01354	NR_038426	1	Non-coding	chr1:234531779 minus strand	1879438
LINC01355	NR_110616	1	Non-coding	chr1:23285518 minus strand	1879439
LINC01356	NR_103746	1	Non-coding	chr1:112850643 minus strand	1879440
LINC01358	NR_110626	1	Non-coding	chr1:59020475 plus strand	1879441
LINC01359	NR_119383	1	Non-coding	chr1:65002476 minus strand	1879442
LINC01360	NR_110677	1	Non-coding	chr1:73306169 plus strand	1879443
LINC01360	NR_110676	1	Non-coding	chr1:73306169 plus strand	1879443
LINC01361	NR_110632	1	Non-coding	chr1:82984922 minus strand	1879444
LINC01361	NR_110633	1	Non-coding	chr1:82986208 minus strand	1879445
LINC01363	NR_110811	1	Non-coding	chr1:167195805 minus strand	1879446
LINC01364	NR_038324	1	Non-coding	chr1:87371655 minus strand	1879447
LINC01389	NR_126355	1	Non-coding	chr1:47437317 minus strand	1879448
LINC01397	NR_126382	1	Non-coding	chr1:110082687 plus strand	1879449
LINC01398	NR_121680	1	Non-coding	chr1:46449704 minus strand	1879450
LINC01461	NR_125761	1	Non-coding	chr1:84621031 minus strand	1879451
LINC01525	NR_126408	1	Non-coding	chr1:117295465 plus strand	1879452
LINC01555	NR_027379	1	Non-coding	chr1:84635020 minus strand	1879453
LOC100129046	NR_034091	1	Non-coding	chr1:93591967 plus strand	1879454

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LOC100129138	NR_033990	1	Non-coding	chr1:104073022 plus strand	1879455
LOC100129534	NR_024489	1	Non-coding	chr1:2352661 minus strand	1879456
LOC100129620	NR_033940	1	Non-coding	chr1:99004275 plus strand	1879457
LOC100130093	NR_024486	1	Non-coding	chr1:227728538 plus strand	1879458
LOC100130093	NR_024485	1	Non-coding	chr1:227728538 plus strand	1879458
LOC100130331	NR_027247	1	Non-coding	chr1:237862174 plus strand	1879459
LOC100130417	NR_026874	1	Non-coding	chr1:919692 minus strand	1879460
LOC100130417	NR_122045	1	Non-coding	chr1:919692 minus strand	1879460
LOC100131564	NR_034089	1	Non-coding	chr1:93345811 minus strand	1879461
LOC100132057	NR_111930	1	Non-coding	chr1:148402482 plus strand	1879462
LOC100132062	NR_028325	1	Non-coding	chr1:495445 minus strand	1879463
LOC100132111	NR_024237	1	Non-coding	chr1:151838468 plus strand	1879464
LOC100132287	NR_028322	1	Non-coding	chr1:495445 minus strand	1879465
LOC100133331	NR_028327	1	Non-coding	chr1:730351 minus strand	1879466
LOC100147773	NR_125374	1	Non-coding	chr1:165768928 plus strand	1879467
LOC100288069	NR_033908	1	Non-coding	chr1:778688 minus strand	1879468
LOC100422212	NR_104294	1	Non-coding	chr1:163423191 minus strand	1879469
LOC100505666	NR_040772	1	Non-coding	chr1:155051165 minus strand	1879470
LOC100505666	NR_040773	1	Non-coding	chr1:155063991 minus strand	1879471
LOC100505795	NR_038072	1	Non-coding	chr1:164774641 minus strand	1879472
LOC100505887	NR_104620	1	Non-coding	chr1:6724744 plus strand	1879473
LOC100505887	NR_104621	1	Non-coding	chr1:6727526 plus strand	1879474
LOC100505918	NR_037851	1	Non-coding	chr1:168422656 minus strand	1879475
LOC100506022	NR_104623	1	Non-coding	chr1:9428916 minus strand	1879476
LOC100506022	NR_104622	1	Non-coding	chr1:9428996 minus strand	1879477
LOC100506023	NR_037845	1	Non-coding	chr1:173477155 minus strand	1879478
LOC100506730	NR_037847	1	Non-coding	chr1:19295736 minus strand	1879479

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LOC100506747	NR_036557	1	Non-coding	chr1:203007265 minus strand	1879480
LOC100506801	NR_038404	1	Non-coding	chr1:21293289 plus strand	1879481
LOC100506985	NR_109781	1	Non-coding	chr1:24556024 minus strand	1879482
LOC100507564	NR_038953	1	Non-coding	chr1:53238609 plus strand	1879483
LOC100507634	NR_038320	1	Non-coding	chr1:55215407 plus strand	1879484
LOC100996251	NR_103777	1	Non-coding	chr1:113073102 minus strand	1879485
LOC100996263	NR_121626	1	Non-coding	chr1:117605770 minus strand	1879486
LOC100996583	NR_121638	1	Non-coding	chr1:2566534 plus strand	1879487
LOC100996635	NR_110621	1	Non-coding	chr1:95510115 plus strand	1879488
LOC100996635	NR_110622	1	Non-coding	chr1:95510115 plus strand	1879488
LOC101060524	NR_111000	1	Non-coding	chr1:144276762 minus strand	1879489
LOC101060524	NR_111000	1	Non-coding	chr1:144689613 plus strand	1879490
LOC101926944	NR_110627	1	Non-coding	chr1:59772794 plus strand	1879491
LOC101926964	NR_110628	1	Non-coding	chr1:60825584 minus strand	1879492
LOC101927139	NR_123718	1	Non-coding	chr1:66050718 minus strand	1879493
LOC101927143	NR_110669	1	Non-coding	chr1:224213279 minus strand	1879494
LOC101927164	NR_110668	1	Non-coding	chr1:224219612 plus strand	1879495
LOC101927244	NR_125938	1	Non-coding	chr1:70706452 plus strand	1879496
LOC101927342	NR_125939	1	Non-coding	chr1:76011323 plus strand	1879497
LOC101927412	NR_125940	1	Non-coding	chr1:80535754 plus strand	1879498
LOC101927412	NR_125941	1	Non-coding	chr1:80535754 plus strand	1879498
LOC101927412	NR_125942	1	Non-coding	chr1:80641286 plus strand	1879499
LOC101927434	NR_125943	1	Non-coding	chr1:81557702 minus strand	1879500
LOC101927468	NR_120331	1	Non-coding	chr1:148247071 minus strand	1879501
LOC101927478	NR_110630	1	Non-coding	chr1:229508429 plus strand	1879502
LOC101927560	NR_119374	1	Non-coding	chr1:83860546 minus strand	1879503
LOC101927587	NR_119375	1	Non-coding	chr1:83860996 minus strand	1879504

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LOC101927604	NR_110681	1	Non-coding	chr1:230874845 plus strand	1879505
LOC101927683	NR_110683	1	Non-coding	chr1:232742715 minus strand	1879506
LOC101927765	NR_125962	1	Non-coding	chr1:234373403 minus strand	1879507
LOC101927765	NR_125961	1	Non-coding	chr1:234373593 minus strand	1879508
LOC101927787	NR_125944	1	Non-coding	chr1:234646288 plus strand	1879509
LOC101927851	NR_125945	1	Non-coding	chr1:234963999 minus strand	1879510
LOC101927876	NR_125946	1	Non-coding	chr1:18065656 plus strand	1879511
LOC101928009	NR_110685	1	Non-coding	chr1:153174517 plus strand	1879512
LOC101928034	NR_125947	1	Non-coding	chr1:153545741 plus strand	1879513
LOC101928043	NR_110692	1	Non-coding	chr1:22026048 minus strand	1879514
LOC101928068	NR_111907	1	Non-coding	chr1:244970869 minus strand	1879515
LOC101928118	NR_125949	1	Non-coding	chr1:95233982 minus strand	1879516
LOC101928118	NR_125948	1	Non-coding	chr1:95233982 minus strand	1879516
LOC101928163	NR_110799	1	Non-coding	chr1:23521929 plus strand	1879517
LOC101928226	NR_125950	1	Non-coding	chr1:248697061 plus strand	1879518
LOC101928241	NR_110693	1	Non-coding	chr1:96374125 minus strand	1879519
LOC101928270	NR_125951	1	Non-coding	chr1:99487804 minus strand	1879520
LOC101928303	NR_110698	1	Non-coding	chr1:26225319 plus strand	1879521
LOC101928324	NR_125953	1	Non-coding	chr1:26467537 minus strand	1879522
LOC101928324	NR_125952	1	Non-coding	chr1:26467537 minus strand	1879522
LOC101928370	NR_104626	1	Non-coding	chr1:101236528 minus strand	1879523
LOC101928372	NR_110695	1	Non-coding	chr1:160932464 plus strand	1879524
LOC101928404	NR_110699	1	Non-coding	chr1:163161674 plus strand	1879525
LOC101928460	NR_110758	1	Non-coding	chr1:29350114 minus strand	1879526
LOC101928476	NR_125955	1	Non-coding	chr1:105618935 minus strand	1879527
LOC101928476	NR_125954	1	Non-coding	chr1:105618935 minus strand	1879527
LOC101928565	NR_125956	1	Non-coding	chr1:168495644 minus strand	1879528

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LOC101928626	NR_125957	1	Non-coding	chr1:629009 minus strand	1879529
LOC101928650	NR_125958	1	Non-coding	chr1:170532609 minus strand	1879530
LOC101928673	NR_125960	1	Non-coding	chr1:173461362 minus strand	1879531
LOC101928696	NR_121196	1	Non-coding	chr1:174954261 minus strand	1879532
LOC101928718	NR_125963	1	Non-coding	chr1:111755509 minus strand	1879533
LOC101928751	NR_125964	1	Non-coding	chr1:175877342 plus strand	1879534
LOC101928778	NR_110722	1	Non-coding	chr1:177700523 plus strand	1879535
LOC101928973	NR_125966	1	Non-coding	chr1:181174483 plus strand	1879536
LOC101928977	NR_125970	1	Non-coding	chr1:115977276 minus strand	1879537
LOC101928979	NR_125967	1	Non-coding	chr1:146052595 plus strand	1879538
LOC101928979	NR_125968	1	Non-coding	chr1:146052595 plus strand	1879538
LOC101928995	NR_125969	1	Non-coding	chr1:115919375 plus strand	1879539
LOC101929023	NR_125972	1	Non-coding	chr1:116478826 minus strand	1879540
LOC101929023	NR_125973	1	Non-coding	chr1:116478826 minus strand	1879540
LOC101929099	NR_110786	1	Non-coding	chr1:117059490 minus strand	1879541
LOC101929147	NR_125977	1	Non-coding	chr1:119140395 plus strand	1879542
LOC101929147	NR_125974	1	Non-coding	chr1:119140395 plus strand	1879542
LOC101929147	NR_125976	1	Non-coding	chr1:119140395 plus strand	1879542
LOC101929147	NR_125975	1	Non-coding	chr1:119140395 plus strand	1879542
LOC101929181	NR_104624	1	Non-coding	chr1:11609530 plus strand	1879543
LOC101929224	NR_110787	1	Non-coding	chr1:200669506 plus strand	1879544
LOC101929406	NR_110790	1	Non-coding	chr1:30037612 minus strand	1879545
LOC101929441	NR_123739	1	Non-coding	chr1:204141407 plus strand	1879546
LOC101929464	NR_125978	1	Non-coding	chr1:33350351 plus strand	1879547
LOC101929516	NR_125979	1	Non-coding	chr1:39565069 plus strand	1879548
LOC101929541	NR_125982	1	Non-coding	chr1:212234736 minus strand	1879549
LOC101929541	NR_125983	1	Non-coding	chr1:212234736 minus strand	1879549

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LOC101929541	NR_125984	1	Non-coding	chr1:212285021 minus strand	1879550
LOC101929565	NR_125985	1	Non-coding	chr1:212545693 plus strand	1879551
LOC101929592	NR_125986	1	Non-coding	chr1:43727343 minus strand	1879552
LOC101929626	NR_125987	1	Non-coding	chr1:46133370 plus strand	1879553
LOC101929631	NR_110794	1	Non-coding	chr1:218043504 plus strand	1879554
LOC101929721	NR_125988	1	Non-coding	chr1:49257410 plus strand	1879555
LOC101929771	NR_125989	1	Non-coding	chr1:221840666 minus strand	1879556
LOC102606465	NR_109849	1	Non-coding	chr1:101025845 plus strand	1879557
LOC102723661	NR_125991	1	Non-coding	chr1:95992067 plus strand	1879558
LOC102723833	NR_125992	1	Non-coding	chr1:216072464 plus strand	1879559
LOC102723833	NR_125993	1	Non-coding	chr1:216072464 plus strand	1879559
LOC102724312	NR_125994	1	Non-coding	chr1:1434573 minus strand	1879560
LOC102724312	NR_125995	1	Non-coding	chr1:1434573 minus strand	1879560
LOC102724312	NR_125996	1	Non-coding	chr1:1434573 minus strand	1879560
LOC102724450	NR_125997	1	Non-coding	chr1:6205780 minus strand	1879561
LOC102724539	NR_125998	1	Non-coding	chr1:8208671 plus strand	1879562
LOC102724552	NR_125999	1	Non-coding	chr1:8424644 plus strand	1879563
LOC102724558	NR_120328	1	Non-coding	chr1:146486331 plus strand	1879564
LOC102724601	NR_121197	1	Non-coding	chr1:174159287 minus strand	1879565
LOC102724659	NR_126000	1	Non-coding	chr1:11779619 minus strand	1879566
LOC102724661	NR_126001	1	Non-coding	chr1:177351585 plus strand	1879567
LOC102724919	NR_126002	1	Non-coding	chr1:186435160 plus strand	1879568
LOC103021295	NR_110982	1	Non-coding	chr1:205957924 plus strand	1879569
LOC103021296	NR_110984	1	Non-coding	chr1:205934912 plus strand	1879570
LOC103021296	NR_110983	1	Non-coding	chr1:205935127 plus strand	1879571
LOC103091866	NR_111954	1	Non-coding	chr1:145216071 minus strand	1879572
LOC103091866	NR_111955	1	Non-coding	chr1:145216071 minus strand	1879572

【１４４１】

LOC103091866	NR_111956	1	Non-coding	chr1:145216071 minus strand	1879572
LOC103091866	NR_111957	1	Non-coding	chr1:145216071 minus strand	1879572
LOC103091866	NR_111958	1	Non-coding	chr1:145216071 minus strand	1879572
LOC115110	NR_037844	1	Non-coding	chr1:2557011 minus strand	1879573
LOC148413	NR_015434	1	Non-coding	chr1:1399529 plus strand	1879574
LOC148696	NR_026817	1	Non-coding	chr1:207818378 plus strand	1879575
LOC148709	NR_002929	1	Non-coding	chr1:202861753 plus strand	1879576
LOC255654	NR_040002	1	Non-coding	chr1:246524287 minus strand	1879577
LOC284578	NR_027086	1	Non-coding	chr1:205556635 minus strand	1879578
LOC284581	NR_046097	1	Non-coding	chr1:205862078 plus strand	1879579
LOC284581	NR_046098	1	Non-coding	chr1:205890019 plus strand	1879580
LOC284632	NR_027087	1	Non-coding	chr1:24200239 plus strand	1879581
LOC284648	NR_036490	1	Non-coding	chr1:182615139 plus strand	1879582
LOC284661	NR_027088	1	Non-coding	chr1:4412050 plus strand	1879583
LOC339529	NR_033883	1	Non-coding	chr1:243917401 plus strand	1879584
LOC339539	NR_104171	1	Non-coding	chr1:42857621 plus strand	1879585
LOC343052	NR_126565	1	Non-coding	chr1:153793946 plus strand	1879586
LOC388692	NR_111933	1	Non-coding	chr1:143792494 plus strand	1879587
LOC388692	NR_111933	1	Non-coding	chr1:149701103 plus strand	1879588
LOC400794	NR_026744	1	Non-coding	chr1:165582104 minus strand	1879589
LOC440600	NR_036595	1	Non-coding	chr1:110339171 minus strand	1879590
LOC440602	NR_108042	1	Non-coding	chr1:110490258 minus strand	1879591
LOC440700	NR_036683	1	Non-coding	chr1:165698749 plus strand	1879592
LOC440704	NR_033922	1	Non-coding	chr1:190624889 plus strand	1879593
LOC643441	NR_038846	1	Non-coding	chr1:113206253 minus strand	1879594
LOC644961	NR_033926	1	Non-coding	chr1:27323873 plus strand	1879595
LOC645166	NR_027354	1	Non-coding	chr1:143422592 minus strand	1879596

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LOC645166	NR_027356	1	Non-coding	chr1:143424684 minus strand	1879597
LOC645166	NR_027355	1	Non-coding	chr1:143424684 minus strand	1879597
LOC645166	NR_027354	1	Non-coding	chr1:144248205 minus strand	1879598
LOC645166	NR_027356	1	Non-coding	chr1:144250297 minus strand	1879599
LOC645166	NR_027355	1	Non-coding	chr1:144250297 minus strand	1879599
LOC645166	NR_027356	1	Non-coding	chr1:144716078 plus strand	1879600
LOC645166	NR_027355	1	Non-coding	chr1:144716078 plus strand	1879600
LOC645166	NR_027354	1	Non-coding	chr1:144718170 plus strand	1879601
LOC645354	NR_111945	1	Non-coding	chr1:13099717 minus strand	1879602
LOC645354	NR_111945	1	Non-coding	chr1:13127068 plus strand	1879603
LOC646268	NR_033946	1	Non-coding	chr1:158140640 minus strand	1879604
LOC646471	NR_024498	1	Non-coding	chr1:25823606 minus strand	1879605
LOC646626	NR_045484	1	Non-coding	chr1:85276357 plus strand	1879606
LOC649324	NR_111947	1	Non-coding	chr1:13099717 minus strand	1879607
LOC649324	NR_111947	1	Non-coding	chr1:13127068 plus strand	1879608
LOC653160	NR_037869	1	Non-coding	chr1:34978706 minus strand	1879609
LOC653513	NR_037182	1	Non-coding	chr1:148929140 plus strand	1879610
LOC653513	NR_037182	1	Non-coding	chr1:149201146 minus strand	1879611
LOC728989	NR_024442	1	Non-coding	chr1:147043039 minus strand	1879612
LOC729737	NR_039983	1	Non-coding	chr1:140566 minus strand	1879613
LOC729867	NR_123725	1	Non-coding	chr1:160208869 minus strand	1879614
LOC729930	NR_077244	1	Non-coding	chr1:89290362 minus strand	1879615
LOC729970	NR_033998	1	Non-coding	chr1:94928027 plus strand	1879616
LOC729987	NR_046088	1	Non-coding	chr1:98210710 plus strand	1879617
LOC730102	NR_037167	1	Non-coding	chr1:178038007 minus strand	1879618
LYPLAL1-AS1	NR_038845	1	Non-coding	chr1:219173788 minus strand	1879619
LYST	NR_102436	1	Non-coding	chr1:235883708 minus strand	1879620

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MARCKSL1	NR_052852	1	Non-coding	chr1:32336239 minus strand	1879621
MATN1-AS1	NR_034182	1	Non-coding	chr1:30718771 plus strand	1879622
MDS2	NR_027042	1	Non-coding	chr1:23627333 plus strand	1879623
MEAF6	NR_073092	1	Non-coding	chr1:37514819 minus strand	1879624
MEAF6	NR_073091	1	Non-coding	chr1:37514819 minus strand	1879624
MEAF6	NR_073090	1	Non-coding	chr1:37514819 minus strand	1879624
MFSD2A	NR_109896	1	Non-coding	chr1:39955111 plus strand	1879625
MGAT4EP	NR_038135	1	Non-coding	chr1:202820256 plus strand	1879626
MGC27382	NR_027310	1	Non-coding	chr1:78229598 plus strand	1879627
MGC34796	NR_073400	1	Non-coding	chr1:61654241 plus strand	1879628
MIB2	NR_033183	1	Non-coding	chr1:1615414 plus strand	1879629
MINOS1	NR_033758	1	Non-coding	chr1:19596976 plus strand	1879630
MINOS1	NR_033757	1	Non-coding	chr1:19596976 plus strand	1879630
MIR101-1	NR_029516	1	Non-coding	chr1:65058508 minus strand	1879631
MIR1182	NR_031593	1	Non-coding	chr1:231019924 minus strand	1879632
MIR1231	NR_031599	1	Non-coding	chr1:201808610 plus strand	1879633
MIR1255B2	NR_031702	1	Non-coding	chr1:167998659 plus strand	1879634
MIR1256	NR_031657	1	Non-coding	chr1:20988432 minus strand	1879635
MIR1262	NR_031664	1	Non-coding	chr1:68183610 minus strand	1879636
MIR1273D	NR_036176	1	Non-coding	chr1:10227717 plus strand	1879637
MIR1273F	NR_039971	1	Non-coding	chr1:52928673 plus strand	1879638
MIR1273G	NR_039972	1	Non-coding	chr1:52940313 plus strand	1879639
MIR1278	NR_031691	1	Non-coding	chr1:193136502 plus strand	1879640
MIR1290	NR_031622	1	Non-coding	chr1:18897148 minus strand	1879641
MIR1295A	NR_031627	1	Non-coding	chr1:171101806 minus strand	1879642
MIR1295B	NR_049854	1	Non-coding	chr1:171101738 plus strand	1879643
MIR1302-10	NR_036267	1	Non-coding	chr1:30365 plus strand	1879644

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MIR1302-11	NR_036268	1	Non-coding	chr1:30365 plus strand	1879645
MIR1302-2	NR_036051	1	Non-coding	chr1:30365 plus strand	1879646
MIR1302-9	NR_036266	1	Non-coding	chr1:30365 plus strand	1879647
MIR135B	NR_029893	1	Non-coding	chr1:205448398 minus strand	1879648
MIR137	NR_029679	1	Non-coding	chr1:98046171 minus strand	1879649
MIR137HG	NR_046105	1	Non-coding	chr1:98049693 minus strand	1879650
MIR1537	NR_031718	1	Non-coding	chr1:235853060 minus strand	1879651
MIR181A1	NR_029626	1	Non-coding	chr1:198859153 minus strand	1879652
MIR181A1HG	NR_040073	1	Non-coding	chr1:198937429 minus strand	1879653
MIR181B1	NR_029612	1	Non-coding	chr1:198858982 minus strand	1879654
MIR186	NR_029707	1	Non-coding	chr1:71067716 minus strand	1879655
MIR190B	NR_030600	1	Non-coding	chr1:154193743 minus strand	1879656
MIR194-1	NR_029711	1	Non-coding	chr1:220118241 minus strand	1879657
MIR197	NR_029583	1	Non-coding	chr1:109598892 plus strand	1879658
MIR1976	NR_031740	1	Non-coding	chr1:26554541 plus strand	1879659
MIR199A2	NR_029618	1	Non-coding	chr1:172144644 minus strand	1879660
MIR200A	NR_029834	1	Non-coding	chr1:1167862 plus strand	1879661
MIR200B	NR_029639	1	Non-coding	chr1:1167103 plus strand	1879662
MIR205	NR_029622	1	Non-coding	chr1:209432132 plus strand	1879663
MIR214	NR_029627	1	Non-coding	chr1:172138907 minus strand	1879664
MIR215	NR_029628	1	Non-coding	chr1:220117962 minus strand	1879665
MIR2682	NR_039604	1	Non-coding	chr1:98045351 minus strand	1879666
MIR29B2	NR_029518	1	Non-coding	chr1:207802523 minus strand	1879667
MIR29C	NR_029832	1	Non-coding	chr1:207801939 minus strand	1879668
MIR30C1	NR_029833	1	Non-coding	chr1:40757283 plus strand	1879669
MIR30E	NR_029846	1	Non-coding	chr1:40754354 plus strand	1879670
MIR3115	NR_036057	1	Non-coding	chr1:23044304 plus strand	1879671

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MIR3116-1	NR_036058	1	Non-coding	chr1:62078785 plus strand	1879672
MIR3116-2	NR_036059	1	Non-coding	chr1:62078856 minus strand	1879673
MIR3117	NR_036060	1	Non-coding	chr1:66628439 plus strand	1879674
MIR3119-1	NR_036064	1	Non-coding	chr1:170151462 minus strand	1879675
MIR3119-2	NR_036065	1	Non-coding	chr1:170151377 plus strand	1879676
MIR3120	NR_036066	1	Non-coding	chr1:172138807 plus strand	1879677
MIR3121	NR_036067	1	Non-coding	chr1:180438390 minus strand	1879678
MIR3122	NR_036068	1	Non-coding	chr1:212077612 plus strand	1879679
MIR3123	NR_036069	1	Non-coding	chr1:241132271 plus strand	1879680
MIR3124	NR_036070	1	Non-coding	chr1:248826376 plus strand	1879681
MIR320B1	NR_031564	1	Non-coding	chr1:116671748 plus strand	1879682
MIR320B2	NR_031574	1	Non-coding	chr1:224257141 minus strand	1879683
MIR34A	NR_029610	1	Non-coding	chr1:9151777 minus strand	1879684
MIR3605	NR_037400	1	Non-coding	chr1:33332492 minus strand	1879685
MIR3620	NR_037415	1	Non-coding	chr1:228097262 plus strand	1879686
MIR3658	NR_037431	1	Non-coding	chr1:165907920 plus strand	1879687
MIR3659	NR_037432	1	Non-coding	chr1:38089230 plus strand	1879688
MIR3671	NR_037443	1	Non-coding	chr1:65057842 minus strand	1879689
MIR3675	NR_037446	1	Non-coding	chr1:16548913 plus strand	1879690
MIR3675	NR_037446	1	Non-coding	chr1:16681254 plus strand	1879691
MIR3675	NR_037446	1	Non-coding	chr1:16859021 minus strand	1879692
MIR378F	NR_039615	1	Non-coding	chr1:23929069 plus strand	1879693
MIR378G	NR_039620	1	Non-coding	chr1:94745900 minus strand	1879694
MIR3916	NR_037480	1	Non-coding	chr1:247202060 minus strand	1879695
MIR3917	NR_037481	1	Non-coding	chr1:25906454 minus strand	1879696
MIR3972	NR_039768	1	Non-coding	chr1:17277888 plus strand	1879697
MIR4251	NR_036215	1	Non-coding	chr1:3127974 plus strand	1879698

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MIR4252	NR_036218	1	Non-coding	chr1:6429896 minus strand	1879699
MIR4253	NR_036214	1	Non-coding	chr1:22863226 minus strand	1879700
MIR4254	NR_036216	1	Non-coding	chr1:31758735 minus strand	1879701
MIR4255	NR_036217	1	Non-coding	chr1:37161562 plus strand	1879702
MIR4256	NR_036210	1	Non-coding	chr1:112461833 minus strand	1879703
MIR4257	NR_036211	1	Non-coding	chr1:150551928 plus strand	1879704
MIR4258	NR_036212	1	Non-coding	chr1:154975692 plus strand	1879705
MIR4260	NR_036213	1	Non-coding	chr1:209623510 minus strand	1879706
MIR429	NR_029957	1	Non-coding	chr1:1169004 plus strand	1879707
MIR4417	NR_039612	1	Non-coding	chr1:5564070 plus strand	1879708
MIR4418	NR_039613	1	Non-coding	chr1:22266238 plus strand	1879709
MIR4419A	NR_039614	1	Non-coding	chr1:23057934 minus strand	1879710
MIR4420	NR_039616	1	Non-coding	chr1:30739232 minus strand	1879711
MIR4421	NR_039617	1	Non-coding	chr1:51059836 plus strand	1879712
MIR4422	NR_039618	1	Non-coding	chr1:55225640 plus strand	1879713
MIR4423	NR_039619	1	Non-coding	chr1:85133793 plus strand	1879714
MIR4424	NR_039622	1	Non-coding	chr1:178677748 plus strand	1879715
MIR4425	NR_039623	1	Non-coding	chr1:25023502 plus strand	1879716
MIR4426	NR_039624	1	Non-coding	chr1:192716327 plus strand	1879717
MIR4427	NR_039625	1	Non-coding	chr1:233624151 plus strand	1879718
MIR4428	NR_039626	1	Non-coding	chr1:237471118 plus strand	1879719
MIR4454	NR_039659	1	Non-coding	chr1:229174801 minus strand	1879720
MIR4632	NR_039775	1	Non-coding	chr1:12191712 plus strand	1879721
MIR4654	NR_039798	1	Non-coding	chr1:162157106 plus strand	1879722
MIR4666A	NR_039812	1	Non-coding	chr1:228462073 plus strand	1879723
MIR4671	NR_039818	1	Non-coding	chr1:234306466 plus strand	1879724
MIR4677	NR_039824	1	Non-coding	chr1:243346175 plus strand	1879725

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MIR4684	NR_039832	1	Non-coding	chr1:22719516 plus strand	1879726
MIR4689	NR_039838	1	Non-coding	chr1:5862741 minus strand	1879727
MIR4695	NR_039844	1	Non-coding	chr1:18883275 minus strand	1879728
MIR4711	NR_039861	1	Non-coding	chr1:59733296 minus strand	1879729
MIR4735	NR_039888	1	Non-coding	chr1:196582481 minus strand	1879730
MIR4742	NR_039896	1	Non-coding	chr1:224398311 minus strand	1879731
MIR4753	NR_039908	1	Non-coding	chr1:235190116 minus strand	1879732
MIR4781	NR_039942	1	Non-coding	chr1:54054078 plus strand	1879733
MIR4794	NR_039957	1	Non-coding	chr1:64579846 plus strand	1879734
MIR488	NR_030163	1	Non-coding	chr1:177029445 minus strand	1879735
MIR5008	NR_049806	1	Non-coding	chr1:227941683 minus strand	1879736
MIR5087	NR_049810	1	Non-coding	chr1:148334554 minus strand	1879737
MIR5095	NR_039970	1	Non-coding	chr1:52934929 plus strand	1879738
MIR5096	NR_039973	1	Non-coding	chr1:15871148 plus strand	1879739
MIR5096	NR_039973	1	Non-coding	chr1:235512822 plus strand	1879740
MIR5187	NR_049819	1	Non-coding	chr1:161227185 plus strand	1879741
MIR5191	NR_049823	1	Non-coding	chr1:201719507 plus strand	1879742
MIR548AC	NR_039621	1	Non-coding	chr1:116560111 minus strand	1879743
MIR548F3	NR_031644	1	Non-coding	chr1:218437632 plus strand	1879744
MIR548N	NR_031666	1	Non-coding	chr1:99712953 minus strand	1879745
MIR551A	NR_030277	1	Non-coding	chr1:3560790 minus strand	1879746
MIR552	NR_030278	1	Non-coding	chr1:34669694 minus strand	1879747
MIR553	NR_030279	1	Non-coding	chr1:100281240 plus strand	1879748
MIR554	NR_030280	1	Non-coding	chr1:151545795 plus strand	1879749
MIR555	NR_030282	1	Non-coding	chr1:155346445 minus strand	1879750
MIR556	NR_030283	1	Non-coding	chr1:162342545 plus strand	1879751
MIR557	NR_030284	1	Non-coding	chr1:168375523 plus strand	1879752

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MIR5581	NR_049844	1	Non-coding	chr1:37500994 minus strand	1879753
MIR5584	NR_049849	1	Non-coding	chr1:44545492 plus strand	1879754
MIR5585	NR_049850	1	Non-coding	chr1:32086948 plus strand	1879755
MIR5697	NR_049882	1	Non-coding	chr1:9967380 plus strand	1879756
MIR5698	NR_049883	1	Non-coding	chr1:154104592 minus strand	1879757
MIR6068	NR_106716	1	Non-coding	chr1:63326984 minus strand	1879758
MIR6077	NR_106967	1	Non-coding	chr1:148388281 plus strand	1879759
MIR6079	NR_106727	1	Non-coding	chr1:43838621 plus strand	1879760
MIR6084	NR_106732	1	Non-coding	chr1:20633678 plus strand	1879761
MIR6127	NR_106742	1	Non-coding	chr1:22633366 minus strand	1879762
MIR6500	NR_106754	1	Non-coding	chr1:51060017 plus strand	1879763
MIR664A	NR_031705	1	Non-coding	chr1:220200619 minus strand	1879764
MIR6723	NR_106781	1	Non-coding	chr1:632413 minus strand	1879765
MIR6726	NR_106784	1	Non-coding	chr1:1296170 minus strand	1879766
MIR6727	NR_106785	1	Non-coding	chr1:1312566 minus strand	1879767
MIR6728	NR_106786	1	Non-coding	chr1:8866590 minus strand	1879768
MIR6729	NR_106787	1	Non-coding	chr1:12029157 plus strand	1879769
MIR6730	NR_106788	1	Non-coding	chr1:12579023 minus strand	1879770
MIR6731	NR_106789	1	Non-coding	chr1:24919416 minus strand	1879771
MIR6732	NR_106790	1	Non-coding	chr1:37480229 plus strand	1879772
MIR6733	NR_106791	1	Non-coding	chr1:43171712 minus strand	1879773
MIR6734	NR_106792	1	Non-coding	chr1:43364715 minus strand	1879774
MIR6735	NR_106793	1	Non-coding	chr1:43448538 plus strand	1879775
MIR6736	NR_106794	1	Non-coding	chr1:145850645 minus strand	1879776
MIR6737	NR_106795	1	Non-coding	chr1:153962420 minus strand	1879777
MIR6738	NR_106796	1	Non-coding	chr1:155951336 minus strand	1879778
MIR6739	NR_106797	1	Non-coding	chr1:201863372 plus strand	1879779

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MIR6740	NR_106798	1	Non-coding	chr1:202003123 plus strand	1879780
MIR6741	NR_106799	1	Non-coding	chr1:225922142 minus strand	1879781
MIR6742	NR_106800	1	Non-coding	chr1:228397109 minus strand	1879782
MIR6769B	NR_106919	1	Non-coding	chr1:206474802 plus strand	1879783
MIR6808	NR_106866	1	Non-coding	chr1:1339708 minus strand	1879784
MIR6859-1	NR_106918	1	Non-coding	chr1:17436 minus strand	1879785
MIR6859-1	NR_106918	1	Non-coding	chr1:187958 minus strand	1879786
MIR6859-2	NR_107062	1	Non-coding	chr1:17436 minus strand	1879787
MIR6859-2	NR_107062	1	Non-coding	chr1:187958 minus strand	1879788
MIR6859-3	NR_107063	1	Non-coding	chr1:17436 minus strand	1879789
MIR6859-3	NR_107063	1	Non-coding	chr1:187958 minus strand	1879790
MIR6859-4	NR_128720	1	Non-coding	chr1:17436 minus strand	1879791
MIR6859-4	NR_128720	1	Non-coding	chr1:187958 minus strand	1879792
MIR6878	NR_106938	1	Non-coding	chr1:150492344 plus strand	1879793
MIR7156	NR_106978	1	Non-coding	chr1:77060142 plus strand	1879794
MIR760	NR_030621	1	Non-coding	chr1:93846831 plus strand	1879795
MIR761	NR_031580	1	Non-coding	chr1:51836402 minus strand	1879796
MIR7641-2	NR_106988	1	Non-coding	chr1:228610347 minus strand	1879797
MIR7641-2	NR_106988	1	Non-coding	chr1:228612588 minus strand	1879798
MIR7641-2	NR_106988	1	Non-coding	chr1:228614829 minus strand	1879799
MIR7641-2	NR_106988	1	Non-coding	chr1:228617070 minus strand	1879800
MIR7641-2	NR_106988	1	Non-coding	chr1:228619311 minus strand	1879801
MIR7641-2	NR_106988	1	Non-coding	chr1:228621526 minus strand	1879802
MIR7641-2	NR_106988	1	Non-coding	chr1:228623746 minus strand	1879803
MIR7641-2	NR_106988	1	Non-coding	chr1:228625988 minus strand	1879804
MIR7641-2	NR_106988	1	Non-coding	chr1:228630469 minus strand	1879805
MIR7641-2	NR_106988	1	Non-coding	chr1:228646119 minus strand	1879806

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MIR765	NR_030527	1	Non-coding	chr1:156936244 minus strand	1879807
MIR7846	NR_107000	1	Non-coding	chr1:12166942 plus strand	1879808
MIR7852	NR_107006	1	Non-coding	chr1:107897222 plus strand	1879809
MIR7856	NR_107010	1	Non-coding	chr1:86357687 minus strand	1879810
MIR8083	NR_107050	1	Non-coding	chr1:153689793 minus strand	1879811
MIR9-1	NR_029691	1	Non-coding	chr1:156420429 minus strand	1879812
MIR921	NR_030626	1	Non-coding	chr1:166154798 minus strand	1879813
MIR92B	NR_030281	1	Non-coding	chr1:155195176 plus strand	1879814
MIR942	NR_030640	1	Non-coding	chr1:117094642 plus strand	1879815
MKNK1	NR_024174	1	Non-coding	chr1:46604294 minus strand	1879816
MKNK1	NR_024176	1	Non-coding	chr1:46604294 minus strand	1879816
MKNK1-AS1	NR_038403	1	Non-coding	chr1:46538695 plus strand	1879817
MMP23A	NR_002946	1	Non-coding	chr1:1632779 plus strand	1879818
MMP23A	NR_002946	1	Non-coding	chr1:1699938 plus strand	1879819
MORN1	NR_125361	1	Non-coding	chr1:2391751 minus strand	1879820
MPC2	NR_026550	1	Non-coding	chr1:167936201 minus strand	1879821
MROH7	NR_026782	1	Non-coding	chr1:54641739 plus strand	1879822
MROH7	NR_111931	1	Non-coding	chr1:54641739 plus strand	1879822
MROH7-TTC4	NR_037639	1	Non-coding	chr1:54641739 plus strand	1879823
MROH7-TTC4	NR_037640	1	Non-coding	chr1:54641739 plus strand	1879823
MROH7-TTC4	NR_037641	1	Non-coding	chr1:54641739 plus strand	1879823
MRPL9	NR_125331	1	Non-coding	chr1:151763916 minus strand	1879824
MRPS14	NR_037606	1	Non-coding	chr1:175023455 minus strand	1879825
MST1P2	NR_027504	1	Non-coding	chr1:16645573 plus strand	1879826
MSTO1	NR_046295	1	Non-coding	chr1:155610169 plus strand	1879827
MSTO1	NR_046294	1	Non-coding	chr1:155610169 plus strand	1879827
MSTO1	NR_046293	1	Non-coding	chr1:155610169 plus strand	1879827

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MSTO1	NR_046292	1	Non-coding	chr1:155610169 plus strand	1879827
MSTO2P	NR_024117	1	Non-coding	chr1:155610187 plus strand	1879828
MSTO2P	NR_024117	1	Non-coding	chr1:155745767 plus strand	1879829
MTMR9LP	NR_026850	1	Non-coding	chr1:32241710 minus strand	1879830
MTOR-AS1	NR_046600	1	Non-coding	chr1:11143897 plus strand	1879831
MYCBP	NR_037632	1	Non-coding	chr1:38873378 minus strand	1879832
NBPF11	NR_046188	1	Non-coding	chr1:148152190 minus strand	1879833
NBPF11	NR_110864	1	Non-coding	chr1:148152190 minus strand	1879833
NBPF13P	NR_103466	1	Non-coding	chr1:147114346 minus strand	1879834
NBPF18P	NR_103561	1	Non-coding	chr1:152018277 plus strand	1879835
NBPF25P	NR_104217	1	Non-coding	chr1:145607858 minus strand	1879836
NBPF3	NR_046176	1	Non-coding	chr1:21440089 plus strand	1879837
NBPF8	NR_102405	1	Non-coding	chr1:120436350 plus strand	1879838
NBPF8	NR_102404	1	Non-coding	chr1:120436350 plus strand	1879838
NDC1	NR_033142	1	Non-coding	chr1:53838552 minus strand	1879839
NEGR1-IT1	NR_046218	1	Non-coding	chr1:71837012 minus strand	1879840
NENF	NR_026598	1	Non-coding	chr1:212432886 plus strand	1879841
NEXN-AS1	NR_103535	1	Non-coding	chr1:77889539 minus strand	1879842
NFIA-AS1	NR_104180	1	Non-coding	chr1:61253518 minus strand	1879843
NFIA-AS2	NR_110617	1	Non-coding	chr1:60970776 minus strand	1879844
NFIA-AS2	NR_110618	1	Non-coding	chr1:60970776 minus strand	1879844
NFYC-AS1	NR_024567	1	Non-coding	chr1:40692261 minus strand	1879845
NME7	NR_104229	1	Non-coding	chr1:169367963 minus strand	1879846
NPHP4	NR_111987	1	Non-coding	chr1:5992473 minus strand	1879847
NPPA-AS1	NR_037806	1	Non-coding	chr1:11840318 plus strand	1879848
NSUN4	NR_045789	1	Non-coding	chr1:46340176 plus strand	1879849
NSUN4	NR_045791	1	Non-coding	chr1:46340176 plus strand	1879849

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NSUN4	NR_045790	1	Non-coding	chr1:46340176 plus strand	1879849
NUDT4P1	NR_002212	1	Non-coding	chr1:146297816 plus strand	1879850
NUDT4P1	NR_002212	1	Non-coding	chr1:148748599 plus strand	1879851
NUDT4P2	NR_104005	1	Non-coding	chr1:146297772 plus strand	1879852
NUDT4P2	NR_104005	1	Non-coding	chr1:148748555 plus strand	1879853
OLFM3	NR_110212	1	Non-coding	chr1:101847080 minus strand	1879854
OLFM3	NR_110211	1	Non-coding	chr1:101997234 minus strand	1879855
OLFM3	NR_110210	1	Non-coding	chr1:101997234 minus strand	1879855
OR2L1P	NR_002145	1	Non-coding	chr1:247990266 plus strand	1879856
OR2M1P	NR_002141	1	Non-coding	chr1:248122135 plus strand	1879857
OSBPL9	NR_036662	1	Non-coding	chr1:51616873 plus strand	1879858
OVAAL	NR_125716	1	Non-coding	chr1:180558973 plus strand	1879859
PACERR	NR_125801	1	Non-coding	chr1:186680653 plus strand	1879860
PAQR6	NR_073610	1	Non-coding	chr1:156248117 minus strand	1879861
PCAT6	NR_046326	1	Non-coding	chr1:202810945 plus strand	1879862
PCAT6	NR_046325	1	Non-coding	chr1:202810945 plus strand	1879862
PCSK9	NR_110451	1	Non-coding	chr1:55040221 plus strand	1879863
PDIA3P1	NR_002305	1	Non-coding	chr1:147177850 plus strand	1879864
PDZK1P2	NR_111936	1	Non-coding	chr1:148014956 minus strand	1879865
PEA15	NR_123724	1	Non-coding	chr1:160205318 plus strand	1879866
PEF1	NR_033688	1	Non-coding	chr1:31644617 minus strand	1879867
PEF1	NR_033686	1	Non-coding	chr1:31645237 minus strand	1879868
PEX11B	NR_073493	1	Non-coding	chr1:145918458 minus strand	1879869
PEX11B	NR_073492	1	Non-coding	chr1:145918924 minus strand	1879870
PEX11B	NR_073491	1	Non-coding	chr1:145918924 minus strand	1879870
PEX19	NR_036493	1	Non-coding	chr1:160285151 minus strand	1879871
PEX19	NR_036492	1	Non-coding	chr1:160285151 minus strand	1879871

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PFN1P2	NR_003242	1	Non-coding	chr1:120434109 minus strand	1879872
PGCP1	NR_029429	1	Non-coding	chr1:111389851 minus strand	1879873
PHLDA3	NR_073080	1	Non-coding	chr1:201469171 minus strand	1879874
PIFO	NR_125338	1	Non-coding	chr1:111346559 plus strand	1879875
PIK3CD-AS1	NR_027045	1	Non-coding	chr1:9654586 minus strand	1879876
PIK3CD-AS2	NR_126366	1	Non-coding	chr1:9687574 minus strand	1879877
PIK3CD-AS2	NR_126367	1	Non-coding	chr1:9687574 minus strand	1879877
PIK3CD-AS2	NR_126368	1	Non-coding	chr1:9687574 minus strand	1879877
PIN1P1	NR_023916	1	Non-coding	chr1:69919321 plus strand	1879878
PINK1-AS	NR_046507	1	Non-coding	chr1:20652193 minus strand	1879879
PKN2-AS1	NR_110682	1	Non-coding	chr1:88685204 minus strand	1879880
POU2F1	NR_037163	1	Non-coding	chr1:167220885 plus strand	1879881
POU5F1P4	NR_034180	1	Non-coding	chr1:155433179 plus strand	1879882
PPIE	NR_036544	1	Non-coding	chr1:39738844 plus strand	1879883
PPIE	NR_036543	1	Non-coding	chr1:39738844 plus strand	1879883
PPIEL	NR_003929	1	Non-coding	chr1:39559698 minus strand	1879884
PQLC2	NR_109848	1	Non-coding	chr1:19312245 plus strand	1879885
PRKAB2	NR_103870	1	Non-coding	chr1:147172589 minus strand	1879886
PRKAB2	NR_103871	1	Non-coding	chr1:147172589 minus strand	1879886
PRPF38B	NR_037185	1	Non-coding	chr1:108692312 plus strand	1879887
PTBP2	NR_125357	1	Non-coding	chr1:96721604 plus strand	1879888
PTBP2	NR_125356	1	Non-coding	chr1:96722637 plus strand	1879889
PTGER3	NR_028293	1	Non-coding	chr1:71047808 minus strand	1879890
PTGER3	NR_028292	1	Non-coding	chr1:71047808 minus strand	1879890
PTGER3	NR_028294	1	Non-coding	chr1:71047808 minus strand	1879890
PTPN7	NR_037663	1	Non-coding	chr1:202161588 minus strand	1879891
PTPN7	NR_037664	1	Non-coding	chr1:202161588 minus strand	1879891

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PTPRC	NR_052021	1	Non-coding	chr1:198638967 plus strand	1879892
PTPRVP	NR_002930	1	Non-coding	chr1:202168050 plus strand	1879893
RAB13	NR_073553	1	Non-coding	chr1:153986377 minus strand	1879894
RAB4A	NR_073545	1	Non-coding	chr1:229271061 plus strand	1879895
RABGGTB	NR_073562	1	Non-coding	chr1:75786193 plus strand	1879896
RASAL2-AS1	NR_027982	1	Non-coding	chr1:178093993 minus strand	1879897
RBM34	NR_027762	1	Non-coding	chr1:235161256 minus strand	1879898
RCAN3AS	NR_045407	1	Non-coding	chr1:24502360 minus strand	1879899
RCAN3AS	NR_045408	1	Non-coding	chr1:24502360 minus strand	1879899
RCAN3AS	NR_045409	1	Non-coding	chr1:24502360 minus strand	1879899
RCC1	NR_030726	1	Non-coding	chr1:28505942 plus strand	1879900
RCC1	NR_030725	1	Non-coding	chr1:28505942 plus strand	1879900
RGS5	NR_045630	1	Non-coding	chr1:163321791 minus strand	1879901
RHBG	NR_046115	1	Non-coding	chr1:156369188 plus strand	1879902
RHOU	NR_037962	1	Non-coding	chr1:228644646 plus strand	1879903
RNA5S1	NR_023363	1	Non-coding	chr1:228610386 minus strand	1879904
RNA5S1	NR_023363	1	Non-coding	chr1:228612627 minus strand	1879905
RNA5S1	NR_023363	1	Non-coding	chr1:228614868 minus strand	1879906
RNA5S1	NR_023363	1	Non-coding	chr1:228617109 minus strand	1879907
RNA5S1	NR_023363	1	Non-coding	chr1:228619350 minus strand	1879908
RNA5S1	NR_023363	1	Non-coding	chr1:228621565 minus strand	1879909
RNA5S1	NR_023363	1	Non-coding	chr1:228623785 minus strand	1879910
RNA5S1	NR_023363	1	Non-coding	chr1:228626027 minus strand	1879911
RNA5S1	NR_023363	1	Non-coding	chr1:228630508 minus strand	1879912
RNA5S1	NR_023363	1	Non-coding	chr1:228646158 minus strand	1879913
RNA5S10	NR_023372	1	Non-coding	chr1:228610386 minus strand	1879914
RNA5S10	NR_023372	1	Non-coding	chr1:228612627 minus strand	1879915

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RNA5S10	NR_023372	1	Non-coding	chr1:228614868 minus strand	1879916
RNA5S10	NR_023372	1	Non-coding	chr1:228617109 minus strand	1879917
RNA5S10	NR_023372	1	Non-coding	chr1:228619350 minus strand	1879918
RNA5S10	NR_023372	1	Non-coding	chr1:228621565 minus strand	1879919
RNA5S10	NR_023372	1	Non-coding	chr1:228623785 minus strand	1879920
RNA5S10	NR_023372	1	Non-coding	chr1:228626027 minus strand	1879921
RNA5S10	NR_023372	1	Non-coding	chr1:228630508 minus strand	1879922
RNA5S10	NR_023372	1	Non-coding	chr1:228646158 minus strand	1879923
RNA5S11	NR_023373	1	Non-coding	chr1:228610386 minus strand	1879924
RNA5S11	NR_023373	1	Non-coding	chr1:228612627 minus strand	1879925
RNA5S11	NR_023373	1	Non-coding	chr1:228614868 minus strand	1879926
RNA5S11	NR_023373	1	Non-coding	chr1:228617109 minus strand	1879927
RNA5S11	NR_023373	1	Non-coding	chr1:228619350 minus strand	1879928
RNA5S11	NR_023373	1	Non-coding	chr1:228621565 minus strand	1879929
RNA5S11	NR_023373	1	Non-coding	chr1:228623785 minus strand	1879930
RNA5S11	NR_023373	1	Non-coding	chr1:228626027 minus strand	1879931
RNA5S11	NR_023373	1	Non-coding	chr1:228630508 minus strand	1879932
RNA5S11	NR_023373	1	Non-coding	chr1:228646158 minus strand	1879933
RNA5S12	NR_023374	1	Non-coding	chr1:228610386 minus strand	1879934
RNA5S12	NR_023374	1	Non-coding	chr1:228612627 minus strand	1879935
RNA5S12	NR_023374	1	Non-coding	chr1:228614868 minus strand	1879936
RNA5S12	NR_023374	1	Non-coding	chr1:228617109 minus strand	1879937
RNA5S12	NR_023374	1	Non-coding	chr1:228619350 minus strand	1879938
RNA5S12	NR_023374	1	Non-coding	chr1:228621565 minus strand	1879939
RNA5S12	NR_023374	1	Non-coding	chr1:228623785 minus strand	1879940
RNA5S12	NR_023374	1	Non-coding	chr1:228626027 minus strand	1879941
RNA5S12	NR_023374	1	Non-coding	chr1:228630508 minus strand	1879942

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RNA5S12	NR_023374	1	Non-coding	chr1:228646158 minus strand	1879943
RNA5S13	NR_023375	1	Non-coding	chr1:228610386 minus strand	1879944
RNA5S13	NR_023375	1	Non-coding	chr1:228612627 minus strand	1879945
RNA5S13	NR_023375	1	Non-coding	chr1:228614868 minus strand	1879946
RNA5S13	NR_023375	1	Non-coding	chr1:228617109 minus strand	1879947
RNA5S13	NR_023375	1	Non-coding	chr1:228619350 minus strand	1879948
RNA5S13	NR_023375	1	Non-coding	chr1:228621565 minus strand	1879949
RNA5S13	NR_023375	1	Non-coding	chr1:228623785 minus strand	1879950
RNA5S13	NR_023375	1	Non-coding	chr1:228626027 minus strand	1879951
RNA5S13	NR_023375	1	Non-coding	chr1:228630508 minus strand	1879952
RNA5S13	NR_023375	1	Non-coding	chr1:228646158 minus strand	1879953
RNA5S14	NR_023376	1	Non-coding	chr1:228610386 minus strand	1879954
RNA5S14	NR_023376	1	Non-coding	chr1:228612627 minus strand	1879955
RNA5S14	NR_023376	1	Non-coding	chr1:228614868 minus strand	1879956
RNA5S14	NR_023376	1	Non-coding	chr1:228617109 minus strand	1879957
RNA5S14	NR_023376	1	Non-coding	chr1:228619350 minus strand	1879958
RNA5S14	NR_023376	1	Non-coding	chr1:228621565 minus strand	1879959
RNA5S14	NR_023376	1	Non-coding	chr1:228623785 minus strand	1879960
RNA5S14	NR_023376	1	Non-coding	chr1:228626027 minus strand	1879961
RNA5S14	NR_023376	1	Non-coding	chr1:228630508 minus strand	1879962
RNA5S14	NR_023376	1	Non-coding	chr1:228646158 minus strand	1879963
RNA5S15	NR_023377	1	Non-coding	chr1:228610386 minus strand	1879964
RNA5S15	NR_023377	1	Non-coding	chr1:228612627 minus strand	1879965
RNA5S15	NR_023377	1	Non-coding	chr1:228614868 minus strand	1879966
RNA5S15	NR_023377	1	Non-coding	chr1:228617109 minus strand	1879967
RNA5S15	NR_023377	1	Non-coding	chr1:228619350 minus strand	1879968
RNA5S15	NR_023377	1	Non-coding	chr1:228621565 minus strand	1879969

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RNA5S15	NR_023377	1	Non-coding	chr1:228623785 minus strand	1879970
RNA5S15	NR_023377	1	Non-coding	chr1:228626027 minus strand	1879971
RNA5S15	NR_023377	1	Non-coding	chr1:228630508 minus strand	1879972
RNA5S15	NR_023377	1	Non-coding	chr1:228646158 minus strand	1879973
RNA5S16	NR_023378	1	Non-coding	chr1:228610386 minus strand	1879974
RNA5S16	NR_023378	1	Non-coding	chr1:228612627 minus strand	1879975
RNA5S16	NR_023378	1	Non-coding	chr1:228614868 minus strand	1879976
RNA5S16	NR_023378	1	Non-coding	chr1:228617109 minus strand	1879977
RNA5S16	NR_023378	1	Non-coding	chr1:228619350 minus strand	1879978
RNA5S16	NR_023378	1	Non-coding	chr1:228621565 minus strand	1879979
RNA5S16	NR_023378	1	Non-coding	chr1:228623785 minus strand	1879980
RNA5S16	NR_023378	1	Non-coding	chr1:228626027 minus strand	1879981
RNA5S16	NR_023378	1	Non-coding	chr1:228630508 minus strand	1879982
RNA5S16	NR_023378	1	Non-coding	chr1:228646158 minus strand	1879983
RNA5S17	NR_023379	1	Non-coding	chr1:228610386 minus strand	1879984
RNA5S17	NR_023379	1	Non-coding	chr1:228612627 minus strand	1879985
RNA5S17	NR_023379	1	Non-coding	chr1:228614868 minus strand	1879986
RNA5S17	NR_023379	1	Non-coding	chr1:228617109 minus strand	1879987
RNA5S17	NR_023379	1	Non-coding	chr1:228619350 minus strand	1879988
RNA5S17	NR_023379	1	Non-coding	chr1:228621565 minus strand	1879989
RNA5S17	NR_023379	1	Non-coding	chr1:228623785 minus strand	1879990
RNA5S17	NR_023379	1	Non-coding	chr1:228626027 minus strand	1879991
RNA5S17	NR_023379	1	Non-coding	chr1:228630508 minus strand	1879992
RNA5S17	NR_023379	1	Non-coding	chr1:228646158 minus strand	1879993
RNA5S2	NR_023364	1	Non-coding	chr1:228610386 minus strand	1879994
RNA5S2	NR_023364	1	Non-coding	chr1:228612627 minus strand	1879995
RNA5S2	NR_023364	1	Non-coding	chr1:228614868 minus strand	1879996

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RNA5S2	NR_023364	1	Non-coding	chr1:228617109 minus strand	1879997
RNA5S2	NR_023364	1	Non-coding	chr1:228619350 minus strand	1879998
RNA5S2	NR_023364	1	Non-coding	chr1:228621565 minus strand	1879999
RNA5S2	NR_023364	1	Non-coding	chr1:228623785 minus strand	1880000
RNA5S2	NR_023364	1	Non-coding	chr1:228626027 minus strand	1880001
RNA5S2	NR_023364	1	Non-coding	chr1:228630508 minus strand	1880002
RNA5S2	NR_023364	1	Non-coding	chr1:228646158 minus strand	1880003
RNA5S3	NR_023365	1	Non-coding	chr1:228610386 minus strand	1880004
RNA5S3	NR_023365	1	Non-coding	chr1:228612627 minus strand	1880005
RNA5S3	NR_023365	1	Non-coding	chr1:228614868 minus strand	1880006
RNA5S3	NR_023365	1	Non-coding	chr1:228617109 minus strand	1880007
RNA5S3	NR_023365	1	Non-coding	chr1:228619350 minus strand	1880008
RNA5S3	NR_023365	1	Non-coding	chr1:228621565 minus strand	1880009
RNA5S3	NR_023365	1	Non-coding	chr1:228623785 minus strand	1880010
RNA5S3	NR_023365	1	Non-coding	chr1:228626027 minus strand	1880011
RNA5S3	NR_023365	1	Non-coding	chr1:228630508 minus strand	1880012
RNA5S3	NR_023365	1	Non-coding	chr1:228646158 minus strand	1880013
RNA5S4	NR_023366	1	Non-coding	chr1:228610386 minus strand	1880014
RNA5S4	NR_023366	1	Non-coding	chr1:228612627 minus strand	1880015
RNA5S4	NR_023366	1	Non-coding	chr1:228614868 minus strand	1880016
RNA5S4	NR_023366	1	Non-coding	chr1:228617109 minus strand	1880017
RNA5S4	NR_023366	1	Non-coding	chr1:228619350 minus strand	1880018
RNA5S4	NR_023366	1	Non-coding	chr1:228621565 minus strand	1880019
RNA5S4	NR_023366	1	Non-coding	chr1:228623785 minus strand	1880020
RNA5S4	NR_023366	1	Non-coding	chr1:228626027 minus strand	1880021
RNA5S4	NR_023366	1	Non-coding	chr1:228630508 minus strand	1880022
RNA5S4	NR_023366	1	Non-coding	chr1:228646158 minus strand	1880023

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RNA5S5	NR_023367	1	Non-coding	chr1:228610386 minus strand	1880024
RNA5S5	NR_023367	1	Non-coding	chr1:228612627 minus strand	1880025
RNA5S5	NR_023367	1	Non-coding	chr1:228614868 minus strand	1880026
RNA5S5	NR_023367	1	Non-coding	chr1:228617109 minus strand	1880027
RNA5S5	NR_023367	1	Non-coding	chr1:228619350 minus strand	1880028
RNA5S5	NR_023367	1	Non-coding	chr1:228621565 minus strand	1880029
RNA5S5	NR_023367	1	Non-coding	chr1:228623785 minus strand	1880030
RNA5S5	NR_023367	1	Non-coding	chr1:228626027 minus strand	1880031
RNA5S5	NR_023367	1	Non-coding	chr1:228630508 minus strand	1880032
RNA5S5	NR_023367	1	Non-coding	chr1:228646158 minus strand	1880033
RNA5S6	NR_023368	1	Non-coding	chr1:228610386 minus strand	1880034
RNA5S6	NR_023368	1	Non-coding	chr1:228612627 minus strand	1880035
RNA5S6	NR_023368	1	Non-coding	chr1:228614868 minus strand	1880036
RNA5S6	NR_023368	1	Non-coding	chr1:228617109 minus strand	1880037
RNA5S6	NR_023368	1	Non-coding	chr1:228619350 minus strand	1880038
RNA5S6	NR_023368	1	Non-coding	chr1:228621565 minus strand	1880039
RNA5S6	NR_023368	1	Non-coding	chr1:228623785 minus strand	1880040
RNA5S6	NR_023368	1	Non-coding	chr1:228626027 minus strand	1880041
RNA5S6	NR_023368	1	Non-coding	chr1:228630508 minus strand	1880042
RNA5S6	NR_023368	1	Non-coding	chr1:228646158 minus strand	1880043
RNA5S7	NR_023369	1	Non-coding	chr1:228610386 minus strand	1880044
RNA5S7	NR_023369	1	Non-coding	chr1:228612627 minus strand	1880045
RNA5S7	NR_023369	1	Non-coding	chr1:228614868 minus strand	1880046
RNA5S7	NR_023369	1	Non-coding	chr1:228617109 minus strand	1880047
RNA5S7	NR_023369	1	Non-coding	chr1:228619350 minus strand	1880048
RNA5S7	NR_023369	1	Non-coding	chr1:228621565 minus strand	1880049
RNA5S7	NR_023369	1	Non-coding	chr1:228623785 minus strand	1880050

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RNA5S7	NR_023369	1	Non-coding	chr1:228626027 minus strand	1880051
RNA5S7	NR_023369	1	Non-coding	chr1:228630508 minus strand	1880052
RNA5S7	NR_023369	1	Non-coding	chr1:228646158 minus strand	1880053
RNA5S8	NR_023370	1	Non-coding	chr1:228610386 minus strand	1880054
RNA5S8	NR_023370	1	Non-coding	chr1:228612627 minus strand	1880055
RNA5S8	NR_023370	1	Non-coding	chr1:228614868 minus strand	1880056
RNA5S8	NR_023370	1	Non-coding	chr1:228617109 minus strand	1880057
RNA5S8	NR_023370	1	Non-coding	chr1:228619350 minus strand	1880058
RNA5S8	NR_023370	1	Non-coding	chr1:228621565 minus strand	1880059
RNA5S8	NR_023370	1	Non-coding	chr1:228623785 minus strand	1880060
RNA5S8	NR_023370	1	Non-coding	chr1:228626027 minus strand	1880061
RNA5S8	NR_023370	1	Non-coding	chr1:228630508 minus strand	1880062
RNA5S8	NR_023370	1	Non-coding	chr1:228646158 minus strand	1880063
RNA5S9	NR_023371	1	Non-coding	chr1:228628266 minus strand	1880064
RNU11	NR_004407	1	Non-coding	chr1:28648599 plus strand	1880065
RNU1-1	NR_004430	1	Non-coding	chr1:143729570 minus strand	1880066
RNU1-1	NR_004430	1	Non-coding	chr1:146376806 plus strand	1880067
RNU1-1	NR_004430	1	Non-coding	chr1:16514285 minus strand	1880068
RNU1-1	NR_004430	1	Non-coding	chr1:16666948 minus strand	1880069
RNU1-1	NR_004430	1	Non-coding	chr1:16740515 plus strand	1880070
RNU1-1	NR_004430	1	Non-coding	chr1:16895979 plus strand	1880071
RNU1-13P	NR_121646	1	Non-coding	chr1:148388651 minus strand	1880072
RNU1-2	NR_004427	1	Non-coding	chr1:143729570 minus strand	1880073
RNU1-2	NR_004427	1	Non-coding	chr1:146376806 plus strand	1880074
RNU1-2	NR_004427	1	Non-coding	chr1:16514285 minus strand	1880075
RNU1-2	NR_004427	1	Non-coding	chr1:16666948 minus strand	1880076
RNU1-2	NR_004427	1	Non-coding	chr1:16740515 plus strand	1880077

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RNU1-2	NR_004427	1	Non-coding	chr1:16895979 plus strand	1880078
RNU1-27P	NR_004424	1	Non-coding	chr1:143729570 minus strand	1880079
RNU1-27P	NR_004424	1	Non-coding	chr1:146376806 plus strand	1880080
RNU1-27P	NR_004424	1	Non-coding	chr1:16514285 minus strand	1880081
RNU1-27P	NR_004424	1	Non-coding	chr1:16666948 minus strand	1880082
RNU1-27P	NR_004424	1	Non-coding	chr1:16740515 plus strand	1880083
RNU1-27P	NR_004424	1	Non-coding	chr1:16895979 plus strand	1880084
RNU1-28P	NR_004402	1	Non-coding	chr1:143729570 minus strand	1880085
RNU1-28P	NR_004402	1	Non-coding	chr1:146376806 plus strand	1880086
RNU1-28P	NR_004402	1	Non-coding	chr1:16514285 minus strand	1880087
RNU1-28P	NR_004402	1	Non-coding	chr1:16666948 minus strand	1880088
RNU1-28P	NR_004402	1	Non-coding	chr1:16740515 plus strand	1880089
RNU1-28P	NR_004402	1	Non-coding	chr1:16895979 plus strand	1880090
RNU1-3	NR_004408	1	Non-coding	chr1:143729570 minus strand	1880091
RNU1-3	NR_004408	1	Non-coding	chr1:146376806 plus strand	1880092
RNU1-3	NR_004408	1	Non-coding	chr1:16514285 minus strand	1880093
RNU1-3	NR_004408	1	Non-coding	chr1:16666948 minus strand	1880094
RNU1-3	NR_004408	1	Non-coding	chr1:16740515 plus strand	1880095
RNU1-3	NR_004408	1	Non-coding	chr1:16895979 plus strand	1880096
RNU1-4	NR_004421	1	Non-coding	chr1:143729570 minus strand	1880097
RNU1-4	NR_004421	1	Non-coding	chr1:146376806 plus strand	1880098
RNU1-4	NR_004421	1	Non-coding	chr1:16514285 minus strand	1880099
RNU1-4	NR_004421	1	Non-coding	chr1:16666948 minus strand	1880100
RNU1-4	NR_004421	1	Non-coding	chr1:16740515 plus strand	1880101
RNU1-4	NR_004421	1	Non-coding	chr1:16895979 plus strand	1880102
RNU5D-1	NR_002755	1	Non-coding	chr1:44731168 minus strand	1880103
RNU5E-1	NR_002754	1	Non-coding	chr1:11908153 plus strand	1880104

【１４６２】

RNU5F-1	NR_002753	1	Non-coding	chr1:44721901 minus strand	1880105
RNU6-1	NR_004394	1	Non-coding	chr1:10298965 plus strand	1880106
RNU6-2	NR_125730	1	Non-coding	chr1:10298965 plus strand	1880107
RNU6-48P	NR_103808	1	Non-coding	chr1:27325218 plus strand	1880108
RNU6-7	NR_104084	1	Non-coding	chr1:10298965 plus strand	1880109
RNU6-8	NR_104088	1	Non-coding	chr1:10298965 plus strand	1880110
RNU6-9	NR_104080	1	Non-coding	chr1:10298965 plus strand	1880111
RNVU1-10	NR_104082	1	Non-coding	chr1:148362533 minus strand	1880112
RNVU1-14	NR_104075	1	Non-coding	chr1:145281115 plus strand	1880113
RNVU1-15	NR_104076	1	Non-coding	chr1:144412575 plus strand	1880114
RNVU1-17	NR_104078	1	Non-coding	chr1:143699619 minus strand	1880115
RNVU1-18	NR_004400	1	Non-coding	chr1:143729570 minus strand	1880116
RNVU1-18	NR_004400	1	Non-coding	chr1:146376806 plus strand	1880117
RNVU1-18	NR_004400	1	Non-coding	chr1:16514285 minus strand	1880118
RNVU1-18	NR_004400	1	Non-coding	chr1:16666948 minus strand	1880119
RNVU1-18	NR_004400	1	Non-coding	chr1:16740515 plus strand	1880120
RNVU1-18	NR_004400	1	Non-coding	chr1:16895979 plus strand	1880121
RNVU1-19	NR_104086	1	Non-coding	chr1:120850985 minus strand	1880122
RNVU1-20	NR_125392	1	Non-coding	chr1:120942599 plus strand	1880123
RNVU1-3	NR_104081	1	Non-coding	chr1:148402714 plus strand	1880124
RNVU1-4	NR_104073	1	Non-coding	chr1:120942599 plus strand	1880125
RNVU1-6	NR_104085	1	Non-coding	chr1:146052244 minus strand	1880126
RNVU1-7	NR_004426	1	Non-coding	chr1:148038916 minus strand	1880127
RNVU1-8	NR_121645	1	Non-coding	chr1:147084756 minus strand	1880128
ROR1-AS1	NR_110666	1	Non-coding	chr1:64112205 minus strand	1880129
ROR1-AS1	NR_110665	1	Non-coding	chr1:64113791 minus strand	1880130
RPL21P28	NR_026911	1	Non-coding	chr1:212052051 minus strand	1880131

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RPL31P11	NR_002595	1	Non-coding	chr1:161685252 minus strand	1880132
RPS10P7	NR_026667	1	Non-coding	chr1:201519903 plus strand	1880133
RPS14P3	NR_077246	1	Non-coding	chr1:19607806 plus strand	1880134
RPS15AP10	NR_026768	1	Non-coding	chr1:45646685 minus strand	1880135
RPS7P5	NR_036695	1	Non-coding	chr1:240007523 plus strand	1880136
RTCA-AS1	NR_110434	1	Non-coding	chr1:100266174 minus strand	1880137
RTCA-AS1	NR_110435	1	Non-coding	chr1:100266174 minus strand	1880137
RUSC1	NR_103478	1	Non-coding	chr1:155324394 plus strand	1880138
RWDD3	NR_103483	1	Non-coding	chr1:95234154 plus strand	1880139
RWDD3	NR_103484	1	Non-coding	chr1:95234154 plus strand	1880139
RXRG	NR_033824	1	Non-coding	chr1:165445355 minus strand	1880140
SARS	NR_034072	1	Non-coding	chr1:109213892 plus strand	1880141
SCARNA1	NR_002997	1	Non-coding	chr1:27834400 plus strand	1880142
SCARNA2	NR_003023	1	Non-coding	chr1:109100192 plus strand	1880143
SCARNA3	NR_002998	1	Non-coding	chr1:175968540 minus strand	1880144
SCARNA4	NR_003005	1	Non-coding	chr1:155926086 minus strand	1880145
SCNM1	NR_037937	1	Non-coding	chr1:151166021 plus strand	1880146
SCNN1D	NR_037668	1	Non-coding	chr1:1280435 plus strand	1880147
SDHC	NR_103459	1	Non-coding	chr1:161314375 plus strand	1880148
SELL	NR_029467	1	Non-coding	chr1:169708856 minus strand	1880149
SERTAD4-AS1	NR_024337	1	Non-coding	chr1:210234121 minus strand	1880150
SHISA4	NR_030775	1	Non-coding	chr1:201888668 plus strand	1880151
SIKE1	NR_049742	1	Non-coding	chr1:114780687 minus strand	1880152
SIKE1	NR_049741	1	Non-coding	chr1:114780687 minus strand	1880152
SKINTL	NR_026749	1	Non-coding	chr1:48182428 minus strand	1880153
SLAMF1	NR_104401	1	Non-coding	chr1:160647311 minus strand	1880154
SLAMF1	NR_104400	1	Non-coding	chr1:160647311 minus strand	1880154

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SLAMF1	NR_104399	1	Non-coding	chr1:160647311 minus strand	1880154
SLC16A1-AS1	NR_103743	1	Non-coding	chr1:112956414 plus strand	1880155
SLC16A1-AS1	NR_103744	1	Non-coding	chr1:112956414 plus strand	1880155
SLC1A7	NR_109858	1	Non-coding	chr1:53142632 minus strand	1880156
SLC25A3P1	NR_002314	1	Non-coding	chr1:53440020 minus strand	1880157
SLC25A44	NR_104412	1	Non-coding	chr1:156193931 plus strand	1880158
SLC25A44	NR_104411	1	Non-coding	chr1:156193931 plus strand	1880158
SLC25A44	NR_104408	1	Non-coding	chr1:156193931 plus strand	1880158
SLC2A1-AS1	NR_033967	1	Non-coding	chr1:42959048 plus strand	1880159
SLC30A10	NR_046437	1	Non-coding	chr1:219928651 minus strand	1880160
SLC6A9	NR_048548	1	Non-coding	chr1:44017340 minus strand	1880161
SLC6A9	NR_048549	1	Non-coding	chr1:44031492 minus strand	1880162
SLC9A1	NR_046474	1	Non-coding	chr1:27155130 minus strand	1880163
SLFNL1-AS1	NR_037868	1	Non-coding	chr1:41014589 plus strand	1880164
SMG7-AS1	NR_040063	1	Non-coding	chr1:183471982 minus strand	1880165
SNAPIN	NR_052020	1	Non-coding	chr1:153658653 plus strand	1880166
SNAPIN	NR_052019	1	Non-coding	chr1:153658653 plus strand	1880166
SNHG12	NR_024127	1	Non-coding	chr1:28581854 minus strand	1880167
SNHG3	NR_036473	1	Non-coding	chr1:28505942 plus strand	1880168
SNHG3	NR_002909	1	Non-coding	chr1:28505942 plus strand	1880168
SNORA14B	NR_002956	1	Non-coding	chr1:235127937 minus strand	1880169
SNORA16A	NR_003035	1	Non-coding	chr1:28581053 minus strand	1880170
SNORA16B	NR_004389	1	Non-coding	chr1:212352817 plus strand	1880171
SNORA36B	NR_002994	1	Non-coding	chr1:220200676 minus strand	1880172
SNORA44	NR_002976	1	Non-coding	chr1:28580512 minus strand	1880173
SNORA55	NR_002983	1	Non-coding	chr1:39567510 minus strand	1880174
SNORA59A	NR_003025	1	Non-coding	chr1:12507245 plus strand	1880175

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SNORA59B	NR_003022	1	Non-coding	chr1:12507245 plus strand	1880176
SNORA61	NR_002987	1	Non-coding	chr1:28579893 minus strand	1880177
SNORA66	NR_002444	1	Non-coding	chr1:92840718 plus strand	1880178
SNORA73A	NR_002907	1	Non-coding	chr1:28507364 plus strand	1880179
SNORA73B	NR_004404	1	Non-coding	chr1:28508557 plus strand	1880180
SNORA73B	NR_004406	1	Non-coding	chr1:28508557 plus strand	1880180
SNORA77	NR_003019	1	Non-coding	chr1:203729580 plus strand	1880181
SNORA80E	NR_002974	1	Non-coding	chr1:155920042 minus strand	1880182
SNORD103A	NR_004054	1	Non-coding	chr1:30935776 minus strand	1880183
SNORD103A	NR_004054	1	Non-coding	chr1:30949205 minus strand	1880184
SNORD103B	NR_033295	1	Non-coding	chr1:30935776 minus strand	1880185
SNORD103B	NR_033295	1	Non-coding	chr1:30949205 minus strand	1880186
SNORD21	NR_000006	1	Non-coding	chr1:92837288 plus strand	1880187
SNORD38A	NR_001456	1	Non-coding	chr1:44777841 plus strand	1880188
SNORD38B	NR_001457	1	Non-coding	chr1:44778389 plus strand	1880189
SNORD44	NR_002750	1	Non-coding	chr1:173866028 minus strand	1880190
SNORD45A	NR_002749	1	Non-coding	chr1:75787888 plus strand	1880191
SNORD45B	NR_002748	1	Non-coding	chr1:75789476 plus strand	1880192
SNORD45C	NR_003042	1	Non-coding	chr1:75787071 plus strand	1880193
SNORD46	NR_000024	1	Non-coding	chr1:44776491 plus strand	1880194
SNORD47	NR_002746	1	Non-coding	chr1:173864445 minus strand	1880195
SNORD55	NR_000015	1	Non-coding	chr1:44775864 plus strand	1880196
SNORD74	NR_002579	1	Non-coding	chr1:173867745 minus strand	1880197
SNORD75	NR_003941	1	Non-coding	chr1:173866938 minus strand	1880198
SNORD76	NR_003942	1	Non-coding	chr1:173866715 minus strand	1880199
SNORD77	NR_003943	1	Non-coding	chr1:173866371 minus strand	1880200
SNORD78	NR_003944	1	Non-coding	chr1:173865686 minus strand	1880201

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SNORD79	NR_003939	1	Non-coding	chr1:173865430 minus strand	1880202
SNORD80	NR_003940	1	Non-coding	chr1:173864903 minus strand	1880203
SNORD81	NR_003938	1	Non-coding	chr1:173864217 minus strand	1880204
SNORD85	NR_003066	1	Non-coding	chr1:30968237 minus strand	1880205
SNORD99	NR_003077	1	Non-coding	chr1:28578822 minus strand	1880206
SNRPD2P2	NR_033826	1	Non-coding	chr1:231476525 minus strand	1880207
SNX7	NR_033716	1	Non-coding	chr1:98661679 plus strand	1880208
SOAT1	NR_045530	1	Non-coding	chr1:179293713 plus strand	1880209
SPATA17-AS1	NR_125784	1	Non-coding	chr1:217785120 minus strand	1880210
SPATA42	NR_034168	1	Non-coding	chr1:108857216 plus strand	1880211
SPATA42	NR_049777	1	Non-coding	chr1:108857216 plus strand	1880211
SPRR2C	NR_003062	1	Non-coding	chr1:153141493 minus strand	1880212
SRGAP2-AS1	NR_104189	1	Non-coding	chr1:121397905 minus strand	1880213
SRGAP2-AS1	NR_104189	1	Non-coding	chr1:144641368 plus strand	1880214
SRGAP2D	NR_120535	1	Non-coding	chr1:143972638 plus strand	1880215
SRSF10	NR_034035	1	Non-coding	chr1:23980463 minus strand	1880216
SSBP3-AS1	NR_103541	1	Non-coding	chr1:54236442 plus strand	1880217
ST3GAL3	NR_073021	1	Non-coding	chr1:43707532 plus strand	1880218
ST3GAL3	NR_073020	1	Non-coding	chr1:43707532 plus strand	1880218
ST3GAL3	NR_073019	1	Non-coding	chr1:43707532 plus strand	1880218
ST3GAL3	NR_073018	1	Non-coding	chr1:43707532 plus strand	1880218
ST3GAL3	NR_073017	1	Non-coding	chr1:43707532 plus strand	1880218
ST3GAL3	NR_073016	1	Non-coding	chr1:43707532 plus strand	1880218
ST3GAL3	NR_073023	1	Non-coding	chr1:43707532 plus strand	1880218
STRIP1	NR_073071	1	Non-coding	chr1:110034600 plus strand	1880219
SUMO1P3	NR_002190	1	Non-coding	chr1:160317264 plus strand	1880220
SYCP1	NR_104211	1	Non-coding	chr1:114854802 plus strand	1880221

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SYT14	NR_027459	1	Non-coding	chr1:209938173 plus strand	1880222
SZRD1	NR_073503	1	Non-coding	chr1:16367029 plus strand	1880223
SZRD1	NR_073502	1	Non-coding	chr1:16367029 plus strand	1880223
SZRD1	NR_073501	1	Non-coding	chr1:16367029 plus strand	1880223
SZRD1	NR_073500	1	Non-coding	chr1:16367029 plus strand	1880223
TAF1A-AS1	NR_110613	1	Non-coding	chr1:222589919 plus strand	1880224
TAF1A-AS1	NR_110614	1	Non-coding	chr1:222589958 plus strand	1880225
TARS2	NR_073514	1	Non-coding	chr1:150487363 plus strand	1880226
TARS2	NR_073513	1	Non-coding	chr1:150487363 plus strand	1880226
TCEB3-AS1	NR_038280	1	Non-coding	chr1:23778297 minus strand	1880227
TGFB2-AS1	NR_046268	1	Non-coding	chr1:218345678 minus strand	1880228
TGFB2-OT1	NR_125715	1	Non-coding	chr1:218442625 plus strand	1880229
TGFBR3	NR_036634	1	Non-coding	chr1:91886279 minus strand	1880230
THBS3	NR_045553	1	Non-coding	chr1:155207981 minus strand	1880231
TMCO1	NR_045818	1	Non-coding	chr1:165768922 minus strand	1880232
TMED5	NR_030761	1	Non-coding	chr1:93180689 minus strand	1880233
TMEM222	NR_037580	1	Non-coding	chr1:27322144 plus strand	1880234
TMEM222	NR_037577	1	Non-coding	chr1:27322144 plus strand	1880234
TMEM222	NR_037576	1	Non-coding	chr1:27322144 plus strand	1880234
TMEM51-AS1	NR_027136	1	Non-coding	chr1:15152464 minus strand	1880235
TMEM79	NR_026678	1	Non-coding	chr1:156282912 plus strand	1880236
TMEM9	NR_109921	1	Non-coding	chr1:201154555 minus strand	1880237
TMEM9	NR_109920	1	Non-coding	chr1:201154555 minus strand	1880237
TOP1P1	NR_002719	1	Non-coding	chr1:171338895 plus strand	1880238
TP73-AS1	NR_033712	1	Non-coding	chr1:3746771 minus strand	1880239
TP73-AS1	NR_033711	1	Non-coding	chr1:3747373 minus strand	1880240
TP73-AS1	NR_033710	1	Non-coding	chr1:3747373 minus strand	1880240

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TP73-AS1	NR_033709	1	Non-coding	chr1:3747373 minus strand	1880240
TP73-AS1	NR_033708	1	Non-coding	chr1:3747373 minus strand	1880240
TPM3	NR_103461	1	Non-coding	chr1:154183249 minus strand	1880241
TPM3	NR_103460	1	Non-coding	chr1:154192067 minus strand	1880242
TRAF3IP3	NR_109871	1	Non-coding	chr1:209756031 plus strand	1880243
TRAPPC3	NR_073097	1	Non-coding	chr1:36149514 minus strand	1880244
TRAPPC3	NR_073098	1	Non-coding	chr1:36149514 minus strand	1880244
TRIM46	NR_046327	1	Non-coding	chr1:155173786 plus strand	1880245
TRIM46	NR_104150	1	Non-coding	chr1:155173786 plus strand	1880245
TRIM46	NR_046329	1	Non-coding	chr1:155174753 plus strand	1880246
TRNAU1AP	NR_003109	1	Non-coding	chr1:28553016 plus strand	1880247
TROVE2	NR_033393	1	Non-coding	chr1:193059421 plus strand	1880248
TSEN15	NR_023349	1	Non-coding	chr1:184051650 plus strand	1880249
TSEN15	NR_125335	1	Non-coding	chr1:184051650 plus strand	1880249
TSNAX-DISC1	NR_028400	1	Non-coding	chr1:231528652 plus strand	1880250
TSNAX-DISC1	NR_028394	1	Non-coding	chr1:231528652 plus strand	1880250
TSNAX-DISC1	NR_028395	1	Non-coding	chr1:231528652 plus strand	1880250
TSNAX-DISC1	NR_028396	1	Non-coding	chr1:231528652 plus strand	1880250
TSNAX-DISC1	NR_028397	1	Non-coding	chr1:231528652 plus strand	1880250
TSNAX-DISC1	NR_028393	1	Non-coding	chr1:231528652 plus strand	1880250
TSNAX-DISC1	NR_028398	1	Non-coding	chr1:231528652 plus strand	1880250
TSNAX-DISC1	NR_028399	1	Non-coding	chr1:231528652 plus strand	1880250
TTC39A-AS1	NR_123731	1	Non-coding	chr1:51329653 plus strand	1880251
TXNDC12	NR_046406	1	Non-coding	chr1:52056171 minus strand	1880252
TXNDC12	NR_046405	1	Non-coding	chr1:52056171 minus strand	1880252
TXNDC12-AS1	NR_126385	1	Non-coding	chr1:52050917 plus strand	1880253
TYW3	NR_027962	1	Non-coding	chr1:74733177 plus strand	1880254

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UBE2Q1-AS1	NR_046668	1	Non-coding	chr1:154553608 plus strand	1880255
UBXN10-AS1	NR_110078	1	Non-coding	chr1:20186486 minus strand	1880256
UCHL5	NR_037607	1	Non-coding	chr1:193060107 minus strand	1880257
UOX	NR_003927	1	Non-coding	chr1:84397893 minus strand	1880258
UROD	NR_036510	1	Non-coding	chr1:45012132 plus strand	1880259
VAMP4	NR_033704	1	Non-coding	chr1:171742239 minus strand	1880260
VAV3-AS1	NR_046653	1	Non-coding	chr1:107964442 plus strand	1880261
VPS45	NR_103998	1	Non-coding	chr1:150067667 plus strand	1880262
VTCN1	NR_045604	1	Non-coding	chr1:117210960 minus strand	1880263
VTCN1	NR_045603	1	Non-coding	chr1:117210960 minus strand	1880263
WARS2-IT1	NR_126447	1	Non-coding	chr1:119047404 plus strand	1880264
WASH7P	NR_024540	1	Non-coding	chr1:29370 minus strand	1880265
YIPF1	NR_036640	1	Non-coding	chr1:53889814 minus strand	1880266
YIPF1	NR_036639	1	Non-coding	chr1:53889814 minus strand	1880266
ZBTB7B	NR_045515	1	Non-coding	chr1:155002629 plus strand	1880267
ZBTB7B	NR_049765	1	Non-coding	chr1:155002629 plus strand	1880267
ZBTB7B	NR_046206	1	Non-coding	chr1:155002629 plus strand	1880267
ZBTB8A	NR_111980	1	Non-coding	chr1:32539144 plus strand	1880268
ZNF436-AS1	NR_033690	1	Non-coding	chr1:23368970 plus strand	1880269
ZNF436-AS1	NR_033691	1	Non-coding	chr1:23369217 plus strand	1880270
ZNF670-ZNF695	NR_037894	1	Non-coding	chr1:247078813 minus strand	1880271
ZNF678	NR_102302	1	Non-coding	chr1:227563518 plus strand	1880272
ZNF678	NR_033184	1	Non-coding	chr1:227563518 plus strand	1880272
ZNF695	NR_037892	1	Non-coding	chr1:247008093 minus strand	1880273
ZNF847P	NR_036753	1	Non-coding	chr1:227697707 minus strand	1880274
ZRANB2-AS1	NR_038420	1	Non-coding	chr1:71046505 plus strand	1880275
ZRANB2-AS2	NR_046217	1	Non-coding	chr1:71081323 plus strand	1880276

【１４７０】

ABCA12	NR_103740	2	Non-coding	chr2:215138428 minus strand	1880277
ACP1	NR_024080	2	Non-coding	chr2:264868 plus strand	1880278
ACTR3	NR_102318	2	Non-coding	chr2:113889933 plus strand	1880279
ACTR3BP2	NR_027714	2	Non-coding	chr2:91941132 plus strand	1880280
AGBL5	NR_104246	2	Non-coding	chr2:27051622 plus strand	1880281
AGBL5-AS1	NR_046730	2	Non-coding	chr2:27050264 minus strand	1880282
AHCTF1P1	NR_077058	2	Non-coding	chr2:161507902 minus strand	1880283
ALMS1-IT1	NR_046762	2	Non-coding	chr2:73457102 plus strand	1880284
ALMS1P	NR_003683	2	Non-coding	chr2:73644918 plus strand	1880285
ALS2CR12	NR_110620	2	Non-coding	chr2:201357398 minus strand	1880286
ANAPC1P1	NR_037931	2	Non-coding	chr2:86861824 plus strand	1880287
ANKRD20A8P	NR_003366	2	Non-coding	chr2:94857075 minus strand	1880288
ANKRD30BL	NR_027019	2	Non-coding	chr2:132161952 minus strand	1880289
ANKRD30BL	NR_027020	2	Non-coding	chr2:132257969 minus strand	1880290
ANKRD36BP2	NR_015424	2	Non-coding	chr2:88765901 plus strand	1880291
ANKRD44-IT1	NR_046837	2	Non-coding	chr2:197302519 minus strand	1880292
AOX2P	NR_001557	2	Non-coding	chr2:200695722 plus strand	1880293
AP1S3	NR_110905	2	Non-coding	chr2:223837602 minus strand	1880294
AP1S3	NR_110906	2	Non-coding	chr2:223837602 minus strand	1880294
ARL6IP6	NR_024526	2	Non-coding	chr2:152717892 plus strand	1880295
ATAD2B	NR_125717	2	Non-coding	chr2:23927114 minus strand	1880296
ATF2	NR_045768	2	Non-coding	chr2:175168206 minus strand	1880297
ATF2	NR_045769	2	Non-coding	chr2:175168206 minus strand	1880297
ATF2	NR_045770	2	Non-coding	chr2:175168206 minus strand	1880297
ATF2	NR_045771	2	Non-coding	chr2:175168206 minus strand	1880297
ATF2	NR_045772	2	Non-coding	chr2:175168206 minus strand	1880297
ATF2	NR_045773	2	Non-coding	chr2:175168206 minus strand	1880297

【１４７１】

ATF2	NR_045774	2	Non-coding	chr2:175168206 minus strand	1880297
ATG9A	NR_104255	2	Non-coding	chr2:219229688 minus strand	1880298
ATL2	NR_024191	2	Non-coding	chr2:38377290 minus strand	1880299
ATP6V1B1-AS1	NR_110273	2	Non-coding	chr2:70948611 minus strand	1880300
ATP6V1B1-AS1	NR_110274	2	Non-coding	chr2:70948611 minus strand	1880300
AUP1	NR_126510	2	Non-coding	chr2:74529897 minus strand	1880301
AUP1	NR_126511	2	Non-coding	chr2:74529897 minus strand	1880301
BARD1	NR_104212	2	Non-coding	chr2:214809711 minus strand	1880302
BARD1	NR_104215	2	Non-coding	chr2:214809711 minus strand	1880302
BARD1	NR_104216	2	Non-coding	chr2:214809711 minus strand	1880302
BAZ2B	NR_110586	2	Non-coding	chr2:159712435 minus strand	1880303
BCYRN1	NR_001568	2	Non-coding	chr2:47335314 plus strand	1880304
BIRC6-AS2	NR_125793	2	Non-coding	chr2:32574818 minus strand	1880305
BOK-AS1	NR_033346	2	Non-coding	chr2:241559143 minus strand	1880306
BOLA3-AS1	NR_045634	2	Non-coding	chr2:74147980 plus strand	1880307
BOLA3-AS1	NR_045636	2	Non-coding	chr2:74147980 plus strand	1880307
BOLA3-AS1	NR_045637	2	Non-coding	chr2:74147980 plus strand	1880307
BRE-AS1	NR_028308	2	Non-coding	chr2:27891114 minus strand	1880308
C2orf43	NR_104233	2	Non-coding	chr2:20823130 minus strand	1880309
CAPN10-AS1	NR_103792	2	Non-coding	chr2:240586316 minus strand	1880310
CASP8	NR_111983	2	Non-coding	chr2:201258030 plus strand	1880311
CATIP-AS1	NR_110573	2	Non-coding	chr2:218367902 minus strand	1880312
CATIP-AS2	NR_125777	2	Non-coding	chr2:218357966 minus strand	1880313
CCDC115	NR_104471	2	Non-coding	chr2:130342681 minus strand	1880314
CCDC148-AS1	NR_038850	2	Non-coding	chr2:158166649 plus strand	1880315
CCNT2	NR_037649	2	Non-coding	chr2:134918821 plus strand	1880316
CCNT2-AS1	NR_036549	2	Non-coding	chr2:134918606 minus strand	1880317

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CCT7	NR_029402	2	Non-coding	chr2:73234235 plus strand	1880318
CCT7	NR_029403	2	Non-coding	chr2:73234235 plus strand	1880318
CD8A	NR_027353	2	Non-coding	chr2:86791714 minus strand	1880319
CEBPZOS	NR_037879	2	Non-coding	chr2:37196491 plus strand	1880320
CEBPZOS	NR_037880	2	Non-coding	chr2:37196491 plus strand	1880320
CERKL	NR_027689	2	Non-coding	chr2:181657107 minus strand	1880321
CERKL	NR_027690	2	Non-coding	chr2:181657107 minus strand	1880321
CERS6-AS1	NR_045786	2	Non-coding	chr2:168786429 minus strand	1880322
CERS6-AS1	NR_045787	2	Non-coding	chr2:168786429 minus strand	1880322
CFAP221	NR_073132	2	Non-coding	chr2:119544431 plus strand	1880323
CFAP221	NR_073133	2	Non-coding	chr2:119544431 plus strand	1880323
CFLAR-AS1	NR_040030	2	Non-coding	chr2:201157792 minus strand	1880324
CHMP3	NR_036454	2	Non-coding	chr2:86563497 minus strand	1880325
CHN1	NR_038133	2	Non-coding	chr2:175005379 minus strand	1880326
CHRND	NR_046333	2	Non-coding	chr2:232526159 plus strand	1880327
CHRND	NR_046334	2	Non-coding	chr2:232526159 plus strand	1880327
CLIP4	NR_109844	2	Non-coding	chr2:29114877 plus strand	1880328
CLK1	NR_027855	2	Non-coding	chr2:200864744 minus strand	1880329
CLK1	NR_027856	2	Non-coding	chr2:200864744 minus strand	1880329
CMPK2	NR_046236	2	Non-coding	chr2:6866635 minus strand	1880330
COLEC11	NR_045659	2	Non-coding	chr2:3594831 plus strand	1880331
CPS1-IT1	NR_002763	2	Non-coding	chr2:210617570 plus strand	1880332
CXCR2P1	NR_002712	2	Non-coding	chr2:218061290 minus strand	1880333
CYP1B1-AS1	NR_027252	2	Non-coding	chr2:38131104 plus strand	1880334
CYP4F30P	NR_023391	2	Non-coding	chr2:130680049 plus strand	1880335
CYP4F62P	NR_103761	2	Non-coding	chr2:130441681 minus strand	1880336
D2HGDH	NR_109778	2	Non-coding	chr2:241734578 plus strand	1880337

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DARS-AS1	NR_110199	2	Non-coding	chr2:135985175 plus strand	1880338
DARS-AS1	NR_110200	2	Non-coding	chr2:135985175 plus strand	1880338
DBI	NR_104221	2	Non-coding	chr2:119367047 plus strand	1880339
DBIL5P2	NR_036635	2	Non-coding	chr2:63119542 minus strand	1880340
DCAF17	NR_028482	2	Non-coding	chr2:171434250 plus strand	1880341
DCTN1	NR_033935	2	Non-coding	chr2:74392087 minus strand	1880342
DCTN1-AS1	NR_024463	2	Non-coding	chr2:74385717 plus strand	1880343
DDX11L2	NR_024005	2	Non-coding	chr2:113601576 minus strand	1880344
DDX11L2	NR_024004	2	Non-coding	chr2:113603717 minus strand	1880345
DGUOK-AS1	NR_104029	2	Non-coding	chr2:73981439 minus strand	1880346
DGUOK-AS1	NR_104030	2	Non-coding	chr2:73981439 minus strand	1880346
DIRC3	NR_026597	2	Non-coding	chr2:217756593 minus strand	1880347
DIS3L2	NR_046476	2	Non-coding	chr2:231961582 plus strand	1880348
DIS3L2	NR_046477	2	Non-coding	chr2:231961582 plus strand	1880348
DLX2-AS1	NR_126376	2	Non-coding	chr2:172103005 plus strand	1880349
DNAJC10	NR_073365	2	Non-coding	chr2:182716040 plus strand	1880350
DNAJC10	NR_073366	2	Non-coding	chr2:182716040 plus strand	1880350
DNAJC10	NR_073367	2	Non-coding	chr2:182716040 plus strand	1880350
DNAJC27-AS1	NR_034113	2	Non-coding	chr2:24972111 plus strand	1880351
DPP10-AS1	NR_036580	2	Non-coding	chr2:115161343 minus strand	1880352
DTYMK	NR_033255	2	Non-coding	chr2:241686968 minus strand	1880353
E2F6	NR_103490	2	Non-coding	chr2:11466177 minus strand	1880354
ECEL1P2	NR_028501	2	Non-coding	chr2:232387044 minus strand	1880355
ERICH2	NR_110644	2	Non-coding	chr2:170770681 plus strand	1880356
FAHD2CP	NR_003698	2	Non-coding	chr2:96010550 plus strand	1880357
FAM133DP	NR_034169	2	Non-coding	chr2:157380509 minus strand	1880358
FAM138B	NR_026821	2	Non-coding	chr2:113577381 plus strand	1880359

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FAM161A	NR_037710	2	Non-coding	chr2:61854143 minus strand	1880360
FAM228B	NR_111929	2	Non-coding	chr2:24076873 plus strand	1880361
FAM95A	NR_038409	2	Non-coding	chr2:94761184 minus strand	1880362
FAR2P1	NR_026758	2	Non-coding	chr2:130051131 minus strand	1880363
FAR2P2	NR_046258	2	Non-coding	chr2:130428546 minus strand	1880364
FAR2P2	NR_046259	2	Non-coding	chr2:130428546 minus strand	1880364
FAR2P2	NR_046260	2	Non-coding	chr2:130428546 minus strand	1880364
FASTKD1	NR_104020	2	Non-coding	chr2:169573921 minus strand	1880365
FLJ31356	NR_103831	2	Non-coding	chr2:28394672 minus strand	1880366
FLJ33534	NR_040080	2	Non-coding	chr2:11132176 minus strand	1880367
FLJ42351	NR_033871	2	Non-coding	chr2:112644180 minus strand	1880368
FLJ43879	NR_034162	2	Non-coding	chr2:238926269 minus strand	1880369
FTCDNL1	NR_034096	2	Non-coding	chr2:199851173 minus strand	1880370
FTH1P3	NR_002201	2	Non-coding	chr2:27393576 minus strand	1880371
FUNDC2P2	NR_003663	2	Non-coding	chr2:84290681 plus strand	1880372
GACAT1	NR_126369	2	Non-coding	chr2:107754111 plus strand	1880373
GACAT1	NR_126370	2	Non-coding	chr2:107754111 plus strand	1880373
GACAT3	NR_126559	2	Non-coding	chr2:16050426 plus strand	1880374
GALNT14	NR_045602	2	Non-coding	chr2:31138726 minus strand	1880375
GCC2	NR_028063	2	Non-coding	chr2:108449120 plus strand	1880376
GCSHP3	NR_033248	2	Non-coding	chr2:206116572 minus strand	1880377
GGT8P	NR_003503	2	Non-coding	chr2:91775341 plus strand	1880378
GIGYF2	NR_103493	2	Non-coding	chr2:232697304 plus strand	1880379
GIGYF2	NR_103494	2	Non-coding	chr2:232697304 plus strand	1880379
GIGYF2	NR_103495	2	Non-coding	chr2:232697304 plus strand	1880379
GIGYF2	NR_103492	2	Non-coding	chr2:232734416 plus strand	1880380
GPN1	NR_026735	2	Non-coding	chr2:27628995 plus strand	1880381

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GPR1-AS	NR_104359	2	Non-coding	chr2:206203375 plus strand	1880382
GTF3C2-AS1	NR_038427	2	Non-coding	chr2:27335541 plus strand	1880383
GULP1	NR_045562	2	Non-coding	chr2:188292662 plus strand	1880384
GULP1	NR_045563	2	Non-coding	chr2:188292662 plus strand	1880384
H3F3AP4	NR_002315	2	Non-coding	chr2:174719799 plus strand	1880385
HAGLR	NR_110458	2	Non-coding	chr2:176178129 minus strand	1880386
HAGLR	NR_110462	2	Non-coding	chr2:176178129 minus strand	1880386
HAGLR	NR_110463	2	Non-coding	chr2:176178129 minus strand	1880386
HAGLR	NR_110464	2	Non-coding	chr2:176178129 minus strand	1880386
HAGLR	NR_110467	2	Non-coding	chr2:176178129 minus strand	1880386
HAGLR	NR_110468	2	Non-coding	chr2:176178129 minus strand	1880386
HAGLR	NR_110461	2	Non-coding	chr2:176188269 minus strand	1880387
HAGLR	NR_110459	2	Non-coding	chr2:176188572 minus strand	1880388
HAGLR	NR_110460	2	Non-coding	chr2:176188572 minus strand	1880388
HAGLR	NR_110465	2	Non-coding	chr2:176188572 minus strand	1880388
HAGLR	NR_110466	2	Non-coding	chr2:176188572 minus strand	1880388
HAGLR	NR_033979	2	Non-coding	chr2:176188958 minus strand	1880389
HAGLROS	NR_110457	2	Non-coding	chr2:176178165 plus strand	1880390
HAT1	NR_027862	2	Non-coding	chr2:171922424 plus strand	1880391
HCG2040054	NR_120602	2	Non-coding	chr2:47527536 plus strand	1880392
HOXD-AS2	NR_038435	2	Non-coding	chr2:176137098 minus strand	1880393
HS1BP3-IT1	NR_046836	2	Non-coding	chr2:20592548 minus strand	1880394
ID2-AS1	NR_110153	2	Non-coding	chr2:8681861 minus strand	1880395
ID2-AS1	NR_110154	2	Non-coding	chr2:8681863 minus strand	1880396
IDH1-AS1	NR_046452	2	Non-coding	chr2:208255232 plus strand	1880397
IL1R2	NR_048564	2	Non-coding	chr2:101998961 plus strand	1880398
IL1RL1	NR_104167	2	Non-coding	chr2:102337249 plus strand	1880399

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INO80B-WBP1	NR_037849	2	Non-coding	chr2:74455022 plus strand	1880400
IQCA1	NR_073043	2	Non-coding	chr2:236507535 minus strand	1880401
KANSL3	NR_047658	2	Non-coding	chr2:96638060 minus strand	1880402
KANSL3	NR_047653	2	Non-coding	chr2:96638379 minus strand	1880403
KANSL3	NR_047654	2	Non-coding	chr2:96638379 minus strand	1880403
KANSL3	NR_047655	2	Non-coding	chr2:96638379 minus strand	1880403
KANSL3	NR_047656	2	Non-coding	chr2:96638379 minus strand	1880403
KANSL3	NR_047657	2	Non-coding	chr2:96638379 minus strand	1880403
KIF5C	NR_111932	2	Non-coding	chr2:148947829 plus strand	1880404
KLF7	NR_073108	2	Non-coding	chr2:207166186 minus strand	1880405
LANCL1-AS1	NR_110604	2	Non-coding	chr2:210324711 plus strand	1880406
LANCL1-AS1	NR_110605	2	Non-coding	chr2:210324711 plus strand	1880406
LANCL1-AS1	NR_110606	2	Non-coding	chr2:210324711 plus strand	1880406
LBX2-AS1	NR_024606	2	Non-coding	chr2:74502616 plus strand	1880407
LIMS3	NR_027467	2	Non-coding	chr2:109898431 plus strand	1880408
LIMS3	NR_027467	2	Non-coding	chr2:110473075 minus strand	1880409
LIMS3L	NR_038099	2	Non-coding	chr2:109898431 plus strand	1880410
LIMS3L	NR_038099	2	Non-coding	chr2:110473075 minus strand	1880411
LIMS3-LOC440895	NR_027145	2	Non-coding	chr2:109898431 plus strand	1880412
LIMS3-LOC440895	NR_027145	2	Non-coding	chr2:110473075 minus strand	1880413
LINC00116	NR_027063	2	Non-coding	chr2:110222940 minus strand	1880414
LINC00152	NR_024204	2	Non-coding	chr2:87455454 plus strand	1880415
LINC00152	NR_024205	2	Non-coding	chr2:87455454 plus strand	1880415
LINC00152	NR_024206	2	Non-coding	chr2:87455454 plus strand	1880415
LINC00211	NR_110011	2	Non-coding	chr2:37829711 minus strand	1880416
LINC00211	NR_110012	2	Non-coding	chr2:37875863 minus strand	1880417
LINC00276	NR_103814	2	Non-coding	chr2:14400958 minus strand	1880418

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LINC00298	NR_015405	2	Non-coding	chr2:7976814 minus strand	1880419
LINC00299	NR_034135	2	Non-coding	chr2:8328419 minus strand	1880420
LINC00309	NR_033837	2	Non-coding	chr2:64205485 minus strand	1880421
LINC00342	NR_103734	2	Non-coding	chr2:95826981 minus strand	1880422
LINC00471	NR_024079	2	Non-coding	chr2:231514339 minus strand	1880423
LINC00486	NR_027098	2	Non-coding	chr2:32825442 plus strand	1880424
LINC00486	NR_027099	2	Non-coding	chr2:32882698 plus strand	1880425
LINC00486	NR_027100	2	Non-coding	chr2:32882800 plus strand	1880426
LINC00487	NR_038369	2	Non-coding	chr2:6770311 minus strand	1880427
LINC00570	NR_047499	2	Non-coding	chr2:11393980 plus strand	1880428
LINC00607	NR_037195	2	Non-coding	chr2:215843536 minus strand	1880429
LINC00608	NR_015390	2	Non-coding	chr2:218976283 plus strand	1880430
LINC00608	NR_024385	2	Non-coding	chr2:218976283 plus strand	1880430
LINC00954	NR_033875	2	Non-coding	chr2:19868853 plus strand	1880431
LINC01087	NR_108087	2	Non-coding	chr2:131637024 plus strand	1880432
LINC01090	NR_126396	2	Non-coding	chr2:188287691 minus strand	1880433
LINC01101	NR_027181	2	Non-coding	chr2:120466349 minus strand	1880434
LINC01102	NR_015399	2	Non-coding	chr2:104434346 plus strand	1880435
LINC01103	NR_110113	2	Non-coding	chr2:104510509 minus strand	1880436
LINC01104	NR_103730	2	Non-coding	chr2:100208253 plus strand	1880437
LINC01105	NR_026832	2	Non-coding	chr2:5932686 plus strand	1880438
LINC01106	NR_027244	2	Non-coding	chr2:110384536 minus strand	1880439
LINC01107	NR_037809	2	Non-coding	chr2:238555499 minus strand	1880440
LINC01114	NR_038231	2	Non-coding	chr2:104757719 minus strand	1880441
LINC01115	NR_033880	2	Non-coding	chr2:868426 minus strand	1880442
LINC01115	NR_111963	2	Non-coding	chr2:868426 minus strand	1880442
LINC01116	NR_040001	2	Non-coding	chr2:176637574 minus strand	1880443

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LINC01117	NR_110599	2	Non-coding	chr2:176637753 plus strand	1880444
LINC01118	NR_034099	2	Non-coding	chr2:46816667 plus strand	1880445
LINC01119	NR_024452	2	Non-coding	chr2:46827863 plus strand	1880446
LINC01120	NR_036499	2	Non-coding	chr2:131402900 plus strand	1880447
LINC01121	NR_033831	2	Non-coding	chr2:45254941 minus strand	1880448
LINC01122	NR_033873	2	Non-coding	chr2:58520752 plus strand	1880449
LINC01123	NR_046110	2	Non-coding	chr2:109986979 plus strand	1880450
LINC01123	NR_046111	2	Non-coding	chr2:109986979 plus strand	1880450
LINC01123	NR_046112	2	Non-coding	chr2:109986979 plus strand	1880450
LINC01123	NR_046110	2	Non-coding	chr2:110384525 minus strand	1880451
LINC01123	NR_046111	2	Non-coding	chr2:110384525 minus strand	1880451
LINC01123	NR_046112	2	Non-coding	chr2:110384525 minus strand	1880451
LINC01124	NR_027433	2	Non-coding	chr2:170714567 minus strand	1880452
LINC01125	NR_038386	2	Non-coding	chr2:97669742 plus strand	1880453
LINC01126	NR_027251	2	Non-coding	chr2:43227210 plus strand	1880454
LINC01127	NR_103791	2	Non-coding	chr2:101983464 plus strand	1880455
LINC01143	NR_126384	2	Non-coding	chr2:70887870 plus strand	1880456
LINC01158	NR_037883	2	Non-coding	chr2:104851476 minus strand	1880457
LINC01159	NR_110373	2	Non-coding	chr2:104872595 minus strand	1880458
LINC01159	NR_110374	2	Non-coding	chr2:104872595 minus strand	1880458
LINC01185	NR_033980	2	Non-coding	chr2:60881314 minus strand	1880459
LINC01191	NR_034128	2	Non-coding	chr2:113979568 plus strand	1880460
LINC01237	NR_110220	2	Non-coding	chr2:241881362 plus strand	1880461
LINC01246	NR_110500	2	Non-coding	chr2:6633787 minus strand	1880462
LINC01246	NR_110498	2	Non-coding	chr2:6634706 minus strand	1880463
LINC01247	NR_110251	2	Non-coding	chr2:6375422 minus strand	1880464
LINC01248	NR_110580	2	Non-coding	chr2:5691118 minus strand	1880465

【１４７９】

LINC01249	NR_034134	2	Non-coding	chr2:4656222 minus strand	1880466
LINC01250	NR_110228	2	Non-coding	chr2:3126026 minus strand	1880467
LINC01280	NR_110392	2	Non-coding	chr2:216606938 minus strand	1880468
LINC01291	NR_125792	2	Non-coding	chr2:74909130 plus strand	1880469
LINC01304	NR_037881	2	Non-coding	chr2:3974032 minus strand	1880470
LINC01305	NR_038897	2	Non-coding	chr2:174326026 plus strand	1880471
LINC01317	NR_126403	2	Non-coding	chr2:33706885 plus strand	1880472
LINC01320	NR_126404	2	Non-coding	chr2:34677556 plus strand	1880473
LINC01412	NR_110570	2	Non-coding	chr2:144521867 plus strand	1880474
LINC01473	NR_110218	2	Non-coding	chr2:186086317 minus strand	1880475
LINC01494	NR_110238	2	Non-coding	chr2:218930637 minus strand	1880476
LIPT1	NR_037936	2	Non-coding	chr2:99154954 plus strand	1880477
LIPT1	NR_037935	2	Non-coding	chr2:99155073 plus strand	1880478
LMAN2L	NR_024518	2	Non-coding	chr2:96740076 minus strand	1880479
LMAN2L	NR_024519	2	Non-coding	chr2:96740076 minus strand	1880479
LMAN2L	NR_024520	2	Non-coding	chr2:96740076 minus strand	1880479
LMAN2L	NR_024521	2	Non-coding	chr2:96740076 minus strand	1880479
LOC100129175	NR_046086	2	Non-coding	chr2:219002214 plus strand	1880480
LOC100129434	NR_125368	2	Non-coding	chr2:56185770 minus strand	1880481
LOC100130452	NR_034036	2	Non-coding	chr2:196713012 minus strand	1880482
LOC100130691	NR_026966	2	Non-coding	chr2:177392691 minus strand	1880483
LOC100132215	NR_027069	2	Non-coding	chr2:63047711 minus strand	1880484
LOC100132215	NR_033389	2	Non-coding	chr2:63048521 minus strand	1880485
LOC100133920	NR_024443	2	Non-coding	chr2:94587183 minus strand	1880486
LOC100133985	NR_024444	2	Non-coding	chr2:70125316 minus strand	1880487
LOC100271832	NR_027097	2	Non-coding	chr2:32927126 plus strand	1880488
LOC100286922	NR_037694	2	Non-coding	chr2:233755345 minus strand	1880489

【１４８０】

LOC100286922	NR_037695	2	Non-coding	chr2:233755345 minus strand	1880489
LOC100286922	NR_037696	2	Non-coding	chr2:233755345 minus strand	1880489
LOC100287010	NR_037885	2	Non-coding	chr2:104408332 minus strand	1880490
LOC100288570	NR_037627	2	Non-coding	chr2:109947689 plus strand	1880491
LOC100288570	NR_037627	2	Non-coding	chr2:110423816 minus strand	1880492
LOC100288911	NR_037631	2	Non-coding	chr2:36355570 minus strand	1880493
LOC100499194	NR_034130	2	Non-coding	chr2:113979984 minus strand	1880494
LOC100505716	NR_038319	2	Non-coding	chr2:28310459 minus strand	1880495
LOC100505736	NR_120504	2	Non-coding	chr2:28206961 minus strand	1880496
LOC100505984	NR_103775	2	Non-coding	chr2:160271895 minus strand	1880497
LOC100506076	NR_103732	2	Non-coding	chr2:97278716 plus strand	1880498
LOC100506076	NR_103733	2	Non-coding	chr2:97283934 plus strand	1880499
LOC100506076	NR_103733	2	Non-coding	chr2:97424027 minus strand	1880500
LOC100506076	NR_103732	2	Non-coding	chr2:97429244 minus strand	1880501
LOC100506123	NR_040097	2	Non-coding	chr2:97282491 plus strand	1880502
LOC100506123	NR_040097	2	Non-coding	chr2:97425470 minus strand	1880503
LOC100506124	NR_045375	2	Non-coding	chr2:165871941 minus strand	1880504
LOC100506142	NR_104182	2	Non-coding	chr2:46580238 minus strand	1880505
LOC100506274	NR_038432	2	Non-coding	chr2:7421260 plus strand	1880506
LOC100506457	NR_110196	2	Non-coding	chr2:12007115 plus strand	1880507
LOC100506457	NR_110197	2	Non-coding	chr2:12007115 plus strand	1880507
LOC100506457	NR_110198	2	Non-coding	chr2:12007115 plus strand	1880507
LOC100506474	NR_038434	2	Non-coding	chr2:13007013 minus strand	1880508
LOC100507006	NR_120420	2	Non-coding	chr2:64228400 plus strand	1880509
LOC100507073	NR_110156	2	Non-coding	chr2:66574029 plus strand	1880510
LOC100507140	NR_037886	2	Non-coding	chr2:200735177 minus strand	1880511
LOC100507201	NR_110161	2	Non-coding	chr2:81466946 minus strand	1880512

【１４８１】

LOC100507334	NR_037626	2	Non-coding	chr2:110245637 plus strand	1880513
LOC100507443	NR_038437	2	Non-coding	chr2:208119128 plus strand	1880514
LOC100507600	NR_045486	2	Non-coding	chr2:135820190 plus strand	1880515
LOC100630918	NR_038942	2	Non-coding	chr2:85538886 minus strand	1880516
LOC100996579	NR_110163	2	Non-coding	chr2:161244738 plus strand	1880517
LOC100996579	NR_110164	2	Non-coding	chr2:161244738 plus strand	1880517
LOC101060019	NR_110169	2	Non-coding	chr2:66904435 plus strand	1880518
LOC101060091	NR_110174	2	Non-coding	chr2:113890992 minus strand	1880519
LOC101060385	NR_110179	2	Non-coding	chr2:905451 minus strand	1880520
LOC101805491	NR_103805	2	Non-coding	chr2:46429189 plus strand	1880521
LOC101926913	NR_110185	2	Non-coding	chr2:170770766 minus strand	1880522
LOC101926966	NR_110201	2	Non-coding	chr2:15690781 plus strand	1880523
LOC101927027	NR_110204	2	Non-coding	chr2:178413658 plus strand	1880524
LOC101927027	NR_110205	2	Non-coding	chr2:178413658 plus strand	1880524
LOC101927027	NR_110206	2	Non-coding	chr2:178413658 plus strand	1880524
LOC101927043	NR_110207	2	Non-coding	chr2:47345074 minus strand	1880525
LOC101927043	NR_110208	2	Non-coding	chr2:47345074 minus strand	1880525
LOC101927053	NR_110209	2	Non-coding	chr2:96919105 plus strand	1880526
LOC101927055	NR_120594	2	Non-coding	chr2:178776925 plus strand	1880527
LOC101927070	NR_126337	2	Non-coding	chr2:98771898 minus strand	1880528
LOC101927142	NR_110213	2	Non-coding	chr2:100977161 minus strand	1880529
LOC101927196	NR_110215	2	Non-coding	chr2:185738719 minus strand	1880530
LOC101927196	NR_110216	2	Non-coding	chr2:185738719 minus strand	1880530
LOC101927196	NR_110214	2	Non-coding	chr2:185739093 minus strand	1880531
LOC101927196	NR_110217	2	Non-coding	chr2:185740477 minus strand	1880532
LOC101927285	NR_110219	2	Non-coding	chr2:59217707 plus strand	1880533
LOC101927406	NR_110222	2	Non-coding	chr2:194344268 plus strand	1880534

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LOC101927431	NR_110223	2	Non-coding	chr2:194730594 plus strand	1880535
LOC101927438	NR_110224	2	Non-coding	chr2:64863631 minus strand	1880536
LOC101927482	NR_110225	2	Non-coding	chr2:196260023 plus strand	1880537
LOC101927482	NR_110226	2	Non-coding	chr2:196260023 plus strand	1880537
LOC101927492	NR_110227	2	Non-coding	chr2:105102944 minus strand	1880538
LOC101927577	NR_110264	2	Non-coding	chr2:66703227 minus strand	1880539
LOC101927577	NR_110265	2	Non-coding	chr2:66703227 minus strand	1880539
LOC101927619	NR_110267	2	Non-coding	chr2:198375097 minus strand	1880540
LOC101927641	NR_110270	2	Non-coding	chr2:199608067 plus strand	1880541
LOC101927661	NR_110568	2	Non-coding	chr2:67213407 plus strand	1880542
LOC101927701	NR_110271	2	Non-coding	chr2:67825562 minus strand	1880543
LOC101927709	NR_110272	2	Non-coding	chr2:118602966 minus strand	1880544
LOC101927795	NR_110275	2	Non-coding	chr2:200812170 minus strand	1880545
LOC101927865	NR_110283	2	Non-coding	chr2:207254316 minus strand	1880546
LOC101927881	NR_110278	2	Non-coding	chr2:128864599 plus strand	1880547
LOC101927884	NR_110281	2	Non-coding	chr2:75524067 plus strand	1880548
LOC101927907	NR_110284	2	Non-coding	chr2:76985964 plus strand	1880549
LOC101927924	NR_110285	2	Non-coding	chr2:129923176 plus strand	1880550
LOC101927926	NR_110286	2	Non-coding	chr2:77915933 plus strand	1880551
LOC101927948	NR_110287	2	Non-coding	chr2:78088729 plus strand	1880552
LOC101927967	NR_110288	2	Non-coding	chr2:78290731 minus strand	1880553
LOC101927987	NR_110289	2	Non-coding	chr2:79500844 minus strand	1880554
LOC101928020	NR_110291	2	Non-coding	chr2:210029921 plus strand	1880555
LOC101928103	NR_110292	2	Non-coding	chr2:214810228 plus strand	1880556
LOC101928161	NR_110294	2	Non-coding	chr2:133266194 plus strand	1880557
LOC101928222	NR_110235	2	Non-coding	chr2:19990203 plus strand	1880558
LOC101928273	NR_120402	2	Non-coding	chr2:137927932 minus strand	1880559

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LOC101928371	NR_110236	2	Non-coding	chr2:88538719 plus strand	1880560
LOC101928386	NR_110237	2	Non-coding	chr2:143937066 plus strand	1880561
LOC101929231	NR_110240	2	Non-coding	chr2:149587357 plus strand	1880562
LOC101929260	NR_110241	2	Non-coding	chr2:150572221 minus strand	1880563
LOC101929282	NR_110244	2	Non-coding	chr2:150628896 plus strand	1880564
LOC101929282	NR_110245	2	Non-coding	chr2:150628896 plus strand	1880564
LOC101929282	NR_110246	2	Non-coding	chr2:150628896 plus strand	1880564
LOC101929282	NR_110247	2	Non-coding	chr2:150628896 plus strand	1880564
LOC101929319	NR_110248	2	Non-coding	chr2:151379371 minus strand	1880565
LOC101929378	NR_110249	2	Non-coding	chr2:156254931 minus strand	1880566
LOC101929378	NR_110250	2	Non-coding	chr2:156254931 minus strand	1880566
LOC101929452	NR_110252	2	Non-coding	chr2:7077880 minus strand	1880567
LOC101929512	NR_110593	2	Non-coding	chr2:161254643 minus strand	1880568
LOC101929532	NR_110255	2	Non-coding	chr2:162114440 plus strand	1880569
LOC101929551	NR_110256	2	Non-coding	chr2:7899655 minus strand	1880570
LOC101929567	NR_110257	2	Non-coding	chr2:8583792 minus strand	1880571
LOC101929570	NR_110258	2	Non-coding	chr2:162768935 plus strand	1880572
LOC101929596	NR_110259	2	Non-coding	chr2:38515740 minus strand	1880573
LOC101929633	NR_110574	2	Non-coding	chr2:164840748 plus strand	1880574
LOC101929680	NR_110260	2	Non-coding	chr2:166081530 plus strand	1880575
LOC101929715	NR_110597	2	Non-coding	chr2:10449727 plus strand	1880576
LOC101929723	NR_110262	2	Non-coding	chr2:41933723 minus strand	1880577
LOC101929723	NR_110263	2	Non-coding	chr2:41933723 minus strand	1880577
LOC101929733	NR_110575	2	Non-coding	chr2:10878266 plus strand	1880578
LOC101929753	NR_110576	2	Non-coding	chr2:170350943 minus strand	1880579
LOC102723362	NR_110577	2	Non-coding	chr2:22536478 plus strand	1880580
LOC102723824	NR_110584	2	Non-coding	chr2:42170231 minus strand	1880581

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LOC102723854	NR_110585	2	Non-coding	chr2:43039543 minus strand	1880582
LOC102723927	NR_110592	2	Non-coding	chr2:241970682 plus strand	1880583
LOC102724058	NR_110598	2	Non-coding	chr2:165957417 plus strand	1880584
LOC102724321	NR_110600	2	Non-coding	chr2:66922490 minus strand	1880585
LOC102724691	NR_110603	2	Non-coding	chr2:105038496 minus strand	1880586
LOC102724849	NR_110607	2	Non-coding	chr2:215453706 plus strand	1880587
LOC102800447	NR_110564	2	Non-coding	chr2:67086445 plus strand	1880588
LOC150776	NR_026922	2	Non-coding	chr2:131492812 plus strand	1880589
LOC150935	NR_037808	2	Non-coding	chr2:239762859 plus strand	1880590
LOC151121	NR_122040	2	Non-coding	chr2:129273891 minus strand	1880591
LOC151121	NR_122041	2	Non-coding	chr2:129273891 minus strand	1880591
LOC151121	NR_122042	2	Non-coding	chr2:129273891 minus strand	1880591
LOC151174	NR_026925	2	Non-coding	chr2:238231677 minus strand	1880592
LOC151174	NR_026926	2	Non-coding	chr2:238231677 minus strand	1880592
LOC151475	NR_040038	2	Non-coding	chr2:230700529 minus strand	1880593
LOC151484	NR_038238	2	Non-coding	chr2:230886545 plus strand	1880594
LOC1720	NR_033423	2	Non-coding	chr2:82856802 plus strand	1880595
LOC200772	NR_033841	2	Non-coding	chr2:240967451 minus strand	1880596
LOC284950	NR_038888	2	Non-coding	chr2:85815129 plus strand	1880597
LOC285000	NR_038891	2	Non-coding	chr2:105610559 minus strand	1880598
LOC285043	NR_122048	2	Non-coding	chr2:30346645 plus strand	1880599
LOC285074	NR_026846	2	Non-coding	chr2:87076413 minus strand	1880600
LOC339803	NR_036496	2	Non-coding	chr2:61144975 minus strand	1880601
LOC339807	NR_034023	2	Non-coding	chr2:64607311 plus strand	1880602
LOC375196	NR_028386	2	Non-coding	chr2:38960344 minus strand	1880603
LOC388942	NR_033996	2	Non-coding	chr2:41877554 plus strand	1880604
LOC389033	NR_026740	2	Non-coding	chr2:129934317 minus strand	1880605

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LOC400940	NR_026833	2	Non-coding	chr2:5981977 plus strand	1880606
LOC400958	NR_036586	2	Non-coding	chr2:64932447 minus strand	1880607
LOC400997	NR_122074	2	Non-coding	chr2:111115588 minus strand	1880608
LOC401010	NR_002826	2	Non-coding	chr2:131444894 minus strand	1880609
LOC440895	NR_027142	2	Non-coding	chr2:109947689 plus strand	1880610
LOC440895	NR_027143	2	Non-coding	chr2:109947689 plus strand	1880610
LOC440895	NR_027142	2	Non-coding	chr2:110423816 minus strand	1880611
LOC440895	NR_027143	2	Non-coding	chr2:110423816 minus strand	1880611
LOC440910	NR_030728	2	Non-coding	chr2:131279289 plus strand	1880612
LOC442028	NR_037597	2	Non-coding	chr2:94947342 minus strand	1880613
LOC643072	NR_110587	2	Non-coding	chr2:159615293 plus strand	1880614
LOC643072	NR_110588	2	Non-coding	chr2:159615293 plus strand	1880614
LOC643387	NR_026923	2	Non-coding	chr2:238231685 plus strand	1880615
LOC644838	NR_038844	2	Non-coding	chr2:67215319 minus strand	1880616
LOC645949	NR_038837	2	Non-coding	chr2:21710652 minus strand	1880617
LOC646736	NR_046102	2	Non-coding	chr2:226142793 plus strand	1880618
LOC646743	NR_033930	2	Non-coding	chr2:130549915 minus strand	1880619
LOC646743	NR_033930	2	Non-coding	chr2:130570828 plus strand	1880620
LOC654342	NR_027238	2	Non-coding	chr2:91659949 minus strand	1880621
LOC654841	NR_102371	2	Non-coding	chr2:227325164 minus strand	1880622
LOC728323	NR_024437	2	Non-coding	chr2:242088692 plus strand	1880623
LOC728730	NR_037875	2	Non-coding	chr2:39437415 plus strand	1880624
LOC90784	NR_026984	2	Non-coding	chr2:86023868 minus strand	1880625
MDH1B	NR_104261	2	Non-coding	chr2:206765549 minus strand	1880626
MED15P9	NR_033903	2	Non-coding	chr2:130129622 plus strand	1880627
MEIS1-AS3	NR_046438	2	Non-coding	chr2:66433470 minus strand	1880628
MEMO1	NR_126032	2	Non-coding	chr2:32010664 minus strand	1880629

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MEMO1	NR_126034	2	Non-coding	chr2:32011052 minus strand	1880630
MFF	NR_102266	2	Non-coding	chr2:227325150 plus strand	1880631
MGC16025	NR_026664	2	Non-coding	chr2:239195457 minus strand	1880632
MIR10B	NR_029609	2	Non-coding	chr2:176150302 plus strand	1880633
MIR1244-1	NR_036052	2	Non-coding	chr2:231713313 plus strand	1880634
MIR1244-2	NR_036262	2	Non-coding	chr2:231713313 plus strand	1880635
MIR1244-3	NR_036263	2	Non-coding	chr2:231713313 plus strand	1880636
MIR1244-4	NR_128710	2	Non-coding	chr2:231713313 plus strand	1880637
MIR1245A	NR_031647	2	Non-coding	chr2:188978091 plus strand	1880638
MIR1245B	NR_039947	2	Non-coding	chr2:188978161 minus strand	1880639
MIR1246	NR_031648	2	Non-coding	chr2:176601052 minus strand	1880640
MIR1258	NR_031659	2	Non-coding	chr2:179860908 minus strand	1880641
MIR128-1	NR_029672	2	Non-coding	chr2:135665396 plus strand	1880642
MIR1285-2	NR_031617	2	Non-coding	chr2:70253005 minus strand	1880643
MIR1301	NR_031570	2	Non-coding	chr2:25328721 minus strand	1880644
MIR1302-3	NR_031632	2	Non-coding	chr2:113583096 minus strand	1880645
MIR1302-4	NR_031633	2	Non-coding	chr2:207269424 minus strand	1880646
MIR1471	NR_031717	2	Non-coding	chr2:231892298 minus strand	1880647
MIR149	NR_029702	2	Non-coding	chr2:240456000 plus strand	1880648
MIR153-1	NR_029688	2	Non-coding	chr2:219294200 minus strand	1880649
MIR216A	NR_029629	2	Non-coding	chr2:55989059 minus strand	1880650
MIR216B	NR_030623	2	Non-coding	chr2:56000795 minus strand	1880651
MIR217	NR_029630	2	Non-coding	chr2:55983076 minus strand	1880652
MIR217HG	NR_126406	2	Non-coding	chr2:56047326 minus strand	1880653
MIR2355	NR_036227	2	Non-coding	chr2:207110073 minus strand	1880654
MIR2467	NR_039948	2	Non-coding	chr2:239351804 minus strand	1880655
MIR26B	NR_029500	2	Non-coding	chr2:218402645 plus strand	1880656

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MIR3125	NR_036072	2	Non-coding	chr2:12737366 plus strand	1880657
MIR3126	NR_036073	2	Non-coding	chr2:69103681 plus strand	1880658
MIR3127	NR_036074	2	Non-coding	chr2:96798277 plus strand	1880659
MIR3128	NR_036075	2	Non-coding	chr2:177256010 minus strand	1880660
MIR3129	NR_036076	2	Non-coding	chr2:189133111 minus strand	1880661
MIR3130-1	NR_036077	2	Non-coding	chr2:206783308 minus strand	1880662
MIR3130-2	NR_036078	2	Non-coding	chr2:206783233 plus strand	1880663
MIR3131	NR_036081	2	Non-coding	chr2:219058750 minus strand	1880664
MIR3132	NR_036082	2	Non-coding	chr2:219549147 minus strand	1880665
MIR3133	NR_036083	2	Non-coding	chr2:241477904 plus strand	1880666
MIR3606	NR_037401	2	Non-coding	chr2:188995629 plus strand	1880667
MIR3679	NR_037450	2	Non-coding	chr2:134127124 plus strand	1880668
MIR3681	NR_037452	2	Non-coding	chr2:12199129 plus strand	1880669
MIR3682	NR_037453	2	Non-coding	chr2:53849205 minus strand	1880670
MIR375	NR_029867	2	Non-coding	chr2:219001708 minus strand	1880671
MIR4261	NR_036222	2	Non-coding	chr2:10192671 minus strand	1880672
MIR4262	NR_036226	2	Non-coding	chr2:11836986 minus strand	1880673
MIR4263	NR_036230	2	Non-coding	chr2:27996366 plus strand	1880674
MIR4264	NR_036231	2	Non-coding	chr2:79649359 minus strand	1880675
MIR4265	NR_036223	2	Non-coding	chr2:109141588 minus strand	1880676
MIR4266	NR_036224	2	Non-coding	chr2:109313625 minus strand	1880677
MIR4267	NR_036225	2	Non-coding	chr2:110070042 minus strand	1880678
MIR4268	NR_036228	2	Non-coding	chr2:219906565 minus strand	1880679
MIR4269	NR_036229	2	Non-coding	chr2:239305461 plus strand	1880680
MIR4426	NR_039624	2	Non-coding	chr2:55234163 plus strand	1880681
MIR4429	NR_039627	2	Non-coding	chr2:11540677 minus strand	1880682
MIR4430	NR_039628	2	Non-coding	chr2:33418515 plus strand	1880683

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MIR4431	NR_039630	2	Non-coding	chr2:52702615 minus strand	1880684
MIR4432	NR_039631	2	Non-coding	chr2:60387445 minus strand	1880685
MIR4433A	NR_039632	2	Non-coding	chr2:64340758 plus strand	1880686
MIR4433B	NR_106995	2	Non-coding	chr2:64340848 minus strand	1880687
MIR4434	NR_039633	2	Non-coding	chr2:64525512 plus strand	1880688
MIR4435-1	NR_039634	2	Non-coding	chr2:111321091 minus strand	1880689
MIR4435-1	NR_039634	2	Non-coding	chr2:87629754 plus strand	1880690
MIR4435-1HG	NR_015395	2	Non-coding	chr2:111495115 minus strand	1880691
MIR4435-1HG	NR_024373	2	Non-coding	chr2:111495115 minus strand	1880691
MIR4435-2	NR_039636	2	Non-coding	chr2:111321086 minus strand	1880692
MIR4435-2	NR_039636	2	Non-coding	chr2:87629759 plus strand	1880693
MIR4436A	NR_039635	2	Non-coding	chr2:88812369 plus strand	1880694
MIR4436B1	NR_039941	2	Non-coding	chr2:110086523 minus strand	1880695
MIR4436B1	NR_039941	2	Non-coding	chr2:110284852 plus strand	1880696
MIR4436B2	NR_049830	2	Non-coding	chr2:110086523 minus strand	1880697
MIR4436B2	NR_049830	2	Non-coding	chr2:110284852 plus strand	1880698
MIR4437	NR_039637	2	Non-coding	chr2:181305652 minus strand	1880699
MIR4438	NR_039640	2	Non-coding	chr2:213758066 plus strand	1880700
MIR4439	NR_039641	2	Non-coding	chr2:225010540 minus strand	1880701
MIR4440	NR_039642	2	Non-coding	chr2:239068914 minus strand	1880702
MIR4441	NR_039643	2	Non-coding	chr2:239085926 minus strand	1880703
MIR4444-1	NR_039646	2	Non-coding	chr2:177212725 plus strand	1880704
MIR4444-2	NR_049831	2	Non-coding	chr2:177212725 plus strand	1880705
MIR4757	NR_039914	2	Non-coding	chr2:19348428 plus strand	1880706
MIR4765	NR_039922	2	Non-coding	chr2:32635254 plus strand	1880707
MIR4771-1	NR_039928	2	Non-coding	chr2:111771134 minus strand	1880708
MIR4771-1	NR_039928	2	Non-coding	chr2:87194785 plus strand	1880709

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MIR4771-2	NR_039929	2	Non-coding	chr2:111771134 minus strand	1880710
MIR4771-2	NR_039929	2	Non-coding	chr2:87194785 plus strand	1880711
MIR4772	NR_039930	2	Non-coding	chr2:102432288 plus strand	1880712
MIR4773-1	NR_039931	2	Non-coding	chr2:151368333 plus strand	1880713
MIR4773-2	NR_039932	2	Non-coding	chr2:151368411 minus strand	1880714
MIR4774	NR_039933	2	Non-coding	chr2:168582942 plus strand	1880715
MIR4775	NR_039934	2	Non-coding	chr2:207754806 plus strand	1880716
MIR4776-1	NR_039935	2	Non-coding	chr2:212926256 plus strand	1880717
MIR4776-2	NR_039936	2	Non-coding	chr2:212926336 minus strand	1880718
MIR4777	NR_039937	2	Non-coding	chr2:231362707 plus strand	1880719
MIR4778	NR_039938	2	Non-coding	chr2:66358328 minus strand	1880720
MIR4779	NR_039939	2	Non-coding	chr2:86193108 minus strand	1880721
MIR4780	NR_039940	2	Non-coding	chr2:88082599 minus strand	1880722
MIR4782	NR_039943	2	Non-coding	chr2:113721368 minus strand	1880723
MIR4783	NR_039944	2	Non-coding	chr2:127423618 minus strand	1880724
MIR4784	NR_039945	2	Non-coding	chr2:131491236 minus strand	1880725
MIR4785	NR_039946	2	Non-coding	chr2:160407882 minus strand	1880726
MIR4786	NR_039949	2	Non-coding	chr2:239943094 minus strand	1880727
MIR5000	NR_049796	2	Non-coding	chr2:75090811 plus strand	1880728
MIR5001	NR_049797	2	Non-coding	chr2:232550573 minus strand	1880729
MIR5192	NR_049824	2	Non-coding	chr2:62205825 plus strand	1880730
MIR548AD	NR_039629	2	Non-coding	chr2:35471404 plus strand	1880731
MIR548AE1	NR_039638	2	Non-coding	chr2:184378974 plus strand	1880732
MIR548AU	NR_049853	2	Non-coding	chr2:107349525 minus strand	1880733
MIR548BA	NR_107011	2	Non-coding	chr2:49059602 plus strand	1880734
MIR548F2	NR_031643	2	Non-coding	chr2:212426360 minus strand	1880735
MIR548S	NR_036071	2	Non-coding	chr2:11767443 plus strand	1880736

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MIR558	NR_030285	2	Non-coding	chr2:32532152 plus strand	1880737
MIR559	NR_030286	2	Non-coding	chr2:47377674 plus strand	1880738
MIR5590	NR_049856	2	Non-coding	chr2:134857819 plus strand	1880739
MIR561	NR_030287	2	Non-coding	chr2:188297491 plus strand	1880740
MIR562	NR_030288	2	Non-coding	chr2:232172652 plus strand	1880741
MIR5696	NR_049881	2	Non-coding	chr2:101309449 plus strand	1880742
MIR5702	NR_049887	2	Non-coding	chr2:226658793 minus strand	1880743
MIR5703	NR_049888	2	Non-coding	chr2:227472131 plus strand	1880744
MIR6071	NR_106719	2	Non-coding	chr2:85783677 minus strand	1880745
MIR6512	NR_106767	2	Non-coding	chr2:177313882 minus strand	1880746
MIR6513	NR_106768	2	Non-coding	chr2:218280188 minus strand	1880747
MIR663B	NR_031608	2	Non-coding	chr2:132257080 minus strand	1880748
MIR6809	NR_106867	2	Non-coding	chr2:217900628 minus strand	1880749
MIR6810	NR_106868	2	Non-coding	chr2:218341910 plus strand	1880750
MIR6811	NR_106869	2	Non-coding	chr2:237510930 plus strand	1880751
MIR6888	NR_106948	2	Non-coding	chr2:159186834 plus strand	1880752
MIR7157	NR_106979	2	Non-coding	chr2:140586685 minus strand	1880753
MIR7158	NR_106980	2	Non-coding	chr2:5974661 plus strand	1880754
MIR7515	NR_106986	2	Non-coding	chr2:6650372 plus strand	1880755
MIR7515HG	NR_110497	2	Non-coding	chr2:6650519 minus strand	1880756
MIR7704	NR_106991	2	Non-coding	chr2:176188842 plus strand	1880757
MIR7845	NR_106999	2	Non-coding	chr2:207166399 plus strand	1880758
MIR8080	NR_107047	2	Non-coding	chr2:79866583 minus strand	1880759
MIR933	NR_030630	2	Non-coding	chr2:175167709 minus strand	1880760
MIR9500	NR_128707	2	Non-coding	chr2:218823089 plus strand	1880761
MLK7-AS1	NR_033882	2	Non-coding	chr2:173282036 minus strand	1880762
MLPH	NR_104019	2	Non-coding	chr2:237487218 plus strand	1880763

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MRPL30	NR_028356	2	Non-coding	chr2:99181078 plus strand	1880764
MSL3P1	NR_024322	2	Non-coding	chr2:233868409 minus strand	1880765
MTERF4	NR_028049	2	Non-coding	chr2:241102332 minus strand	1880766
MTERF4	NR_028050	2	Non-coding	chr2:241102332 minus strand	1880766
MTERF4	NR_028051	2	Non-coding	chr2:241102332 minus strand	1880766
MTHFD2	NR_027405	2	Non-coding	chr2:74198562 plus strand	1880767
MTX2	NR_027850	2	Non-coding	chr2:176269394 plus strand	1880768
MYADML	NR_003143	2	Non-coding	chr2:33728217 minus strand	1880769
MYCNOS	NR_026766	2	Non-coding	chr2:15941723 minus strand	1880770
MYCNOS	NR_110230	2	Non-coding	chr2:15941723 minus strand	1880770
MYCNUT	NR_125783	2	Non-coding	chr2:15920398 plus strand	1880771
MYO3B	NR_045682	2	Non-coding	chr2:170178144 plus strand	1880772
MYO3B	NR_045683	2	Non-coding	chr2:170178144 plus strand	1880772
MYO3B	NR_045684	2	Non-coding	chr2:170178144 plus strand	1880772
MYT1L-AS1	NR_024468	2	Non-coding	chr2:2319231 plus strand	1880773
NABP1	NR_045622	2	Non-coding	chr2:191678071 plus strand	1880774
NABP1	NR_045623	2	Non-coding	chr2:191678135 plus strand	1880775
NBAS	NR_052013	2	Non-coding	chr2:15561348 minus strand	1880776
NEURL3	NR_104346	2	Non-coding	chr2:96508109 minus strand	1880777
NFU1	NR_045631	2	Non-coding	chr2:69437628 minus strand	1880778
NFU1	NR_045632	2	Non-coding	chr2:69437628 minus strand	1880778
NIFK-AS1	NR_037857	2	Non-coding	chr2:121649653 plus strand	1880779
NIFK-AS1	NR_037858	2	Non-coding	chr2:121649653 plus strand	1880779
NIFK-AS1	NR_037856	2	Non-coding	chr2:121649988 plus strand	1880780
NOL10	NR_048552	2	Non-coding	chr2:10689987 minus strand	1880781
NRIR	NR_126359	2	Non-coding	chr2:6840464 minus strand	1880782
NUP35	NR_109856	2	Non-coding	chr2:183124354 plus strand	1880783

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OR7E91P	NR_002185	2	Non-coding	chr2:71024074 plus strand	1880784
ORC2	NR_033915	2	Non-coding	chr2:200963701 minus strand	1880785
OSGEPL1-AS1	NR_102429	2	Non-coding	chr2:189762779 plus strand	1880786
PABPC1P2	NR_026904	2	Non-coding	chr2:146587056 plus strand	1880787
PAX8-AS1	NR_047570	2	Non-coding	chr2:113235526 plus strand	1880788
PAX8-AS1	NR_015377	2	Non-coding	chr2:113236268 plus strand	1880789
PCBP1-AS1	NR_033872	2	Non-coding	chr2:70087015 minus strand	1880790
PCGEM1	NR_002769	2	Non-coding	chr2:192749844 plus strand	1880791
PDE6D	NR_110994	2	Non-coding	chr2:231781327 minus strand	1880792
PDK1	NR_103731	2	Non-coding	chr2:172555372 plus strand	1880793
PDK1	NR_103729	2	Non-coding	chr2:172555968 plus strand	1880794
PGM5P3-AS1	NR_121190	2	Non-coding	chr2:113542673 minus strand	1880795
PGM5P4-AS1	NR_121185	2	Non-coding	chr2:113542690 minus strand	1880796
PGM5P4-AS1	NR_121186	2	Non-coding	chr2:113542690 minus strand	1880796
PGM5P4-AS1	NR_121187	2	Non-coding	chr2:113542690 minus strand	1880796
PKI55	NR_037701	2	Non-coding	chr2:216216888 plus strand	1880797
PLEKHB2	NR_049789	2	Non-coding	chr2:131104846 plus strand	1880798
PLEKHB2	NR_049790	2	Non-coding	chr2:131104846 plus strand	1880798
PLEKHB2	NR_049791	2	Non-coding	chr2:131104846 plus strand	1880798
PLEKHB2	NR_049792	2	Non-coding	chr2:131104846 plus strand	1880798
PLGLA	NR_003506	2	Non-coding	chr2:106382113 plus strand	1880799
PMS1	NR_110332	2	Non-coding	chr2:189784084 plus strand	1880800
POTEKP	NR_033885	2	Non-coding	chr2:131596773 plus strand	1880801
PP14571	NR_024014	2	Non-coding	chr2:240456700 minus strand	1880802
PPP1R1C	NR_048567	2	Non-coding	chr2:181954240 plus strand	1880803
PPP1R1C	NR_048566	2	Non-coding	chr2:181985823 plus strand	1880804
PPP1R21	NR_024188	2	Non-coding	chr2:48440768 plus strand	1880805

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PQLC3	NR_104231	2	Non-coding	chr2:11155371 plus strand	1880806
PRORSD1P	NR_027258	2	Non-coding	chr2:55282318 plus strand	1880807
PSMD1	NR_034059	2	Non-coding	chr2:231056863 plus strand	1880808
PTH2R	NR_073601	2	Non-coding	chr2:208359844 plus strand	1880809
RAB17	NR_033308	2	Non-coding	chr2:237591126 minus strand	1880810
RAB6C-AS1	NR_036537	2	Non-coding	chr2:129980472 minus strand	1880811
RAPGEF4-AS1	NR_026995	2	Non-coding	chr2:172736206 minus strand	1880812
REG1P	NR_002714	2	Non-coding	chr2:79138427 minus strand	1880813
RGPD4-AS1	NR_024439	2	Non-coding	chr2:107826769 minus strand	1880814
RMDN2-AS1	NR_102712	2	Non-coding	chr2:38036341 minus strand	1880815
RNASEH1-AS1	NR_038429	2	Non-coding	chr2:3558385 plus strand	1880816
RNASEH1-AS1	NR_038430	2	Non-coding	chr2:3558386 plus strand	1880817
RNASEH1-AS1	NR_038431	2	Non-coding	chr2:3558386 plus strand	1880817
RNF144A-AS1	NR_033997	2	Non-coding	chr2:6918682 minus strand	1880818
RNU4ATAC	NR_023343	2	Non-coding	chr2:121530879 plus strand	1880819
RNU6-1	NR_004394	2	Non-coding	chr2:174558072 minus strand	1880820
RNU6-2	NR_125730	2	Non-coding	chr2:174558072 minus strand	1880821
RNU6-31P	NR_046482	2	Non-coding	chr2:200830008 plus strand	1880822
RNU6-7	NR_104084	2	Non-coding	chr2:174558072 minus strand	1880823
RNU6-8	NR_104088	2	Non-coding	chr2:174558072 minus strand	1880824
RNU6-9	NR_104080	2	Non-coding	chr2:174558072 minus strand	1880825
RPL23AP32	NR_002229	2	Non-coding	chr2:54529221 plus strand	1880826
RPL23AP7	NR_000029	2	Non-coding	chr2:113627138 minus strand	1880827
RPL23AP7	NR_024528	2	Non-coding	chr2:113627138 minus strand	1880827
RPL23AP7	NR_024529	2	Non-coding	chr2:113627138 minus strand	1880827
RPL23AP7	NR_024530	2	Non-coding	chr2:113627138 minus strand	1880827
RPL23AP7	NR_024531	2	Non-coding	chr2:113627138 minus strand	1880827

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RQCD1	NR_073390	2	Non-coding	chr2:218568579 plus strand	1880828
RUFY4	NR_034176	2	Non-coding	chr2:218034933 plus strand	1880829
SATB2-AS1	NR_026830	2	Non-coding	chr2:199468097 plus strand	1880830
SCARNA5	NR_003008	2	Non-coding	chr2:233275725 plus strand	1880831
SCARNA6	NR_003006	2	Non-coding	chr2:233288675 plus strand	1880832
SCHLAP1	NR_104319	2	Non-coding	chr2:180692103 plus strand	1880833
SCHLAP1	NR_104320	2	Non-coding	chr2:180692103 plus strand	1880833
SCHLAP1	NR_104321	2	Non-coding	chr2:180692103 plus strand	1880833
SCHLAP1	NR_104322	2	Non-coding	chr2:180692103 plus strand	1880833
SCHLAP1	NR_104323	2	Non-coding	chr2:180692103 plus strand	1880833
SCHLAP1	NR_104324	2	Non-coding	chr2:180692103 plus strand	1880833
SCHLAP1	NR_104325	2	Non-coding	chr2:180692103 plus strand	1880833
SCN7A	NR_045628	2	Non-coding	chr2:166486971 minus strand	1880834
SEMA4F	NR_073398	2	Non-coding	chr2:74654227 plus strand	1880835
SEMA4F	NR_073399	2	Non-coding	chr2:74654227 plus strand	1880835
SEPT10	NR_047585	2	Non-coding	chr2:109614206 minus strand	1880836
SERPINE2	NR_073116	2	Non-coding	chr2:224031478 minus strand	1880837
SH3RF3-AS1	NR_029193	2	Non-coding	chr2:109130119 minus strand	1880838
SH3YL1	NR_104227	2	Non-coding	chr2:261130 minus strand	1880839
SH3YL1	NR_104226	2	Non-coding	chr2:262786 minus strand	1880840
SH3YL1	NR_104225	2	Non-coding	chr2:264392 minus strand	1880841
SH3YL1	NR_104223	2	Non-coding	chr2:264743 minus strand	1880842
SH3YL1	NR_104224	2	Non-coding	chr2:264866 minus strand	1880843
SIX3-AS1	NR_103785	2	Non-coding	chr2:44941507 minus strand	1880844
SIX3-AS1	NR_103786	2	Non-coding	chr2:44941878 minus strand	1880845
SLC25A12	NR_047549	2	Non-coding	chr2:171894306 minus strand	1880846
SLC35F5	NR_104470	2	Non-coding	chr2:113756693 minus strand	1880847

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SLC4A3	NR_048551	2	Non-coding	chr2:219627569 plus strand	1880848
SLC5A6	NR_028323	2	Non-coding	chr2:27212307 minus strand	1880849
SLC8A1-AS1	NR_038441	2	Non-coding	chr2:39917633 plus strand	1880850
SMPD4	NR_033231	2	Non-coding	chr2:130181757 minus strand	1880851
SMPD4	NR_033232	2	Non-coding	chr2:130181757 minus strand	1880851
SMPD4	NR_033230	2	Non-coding	chr2:130182750 minus strand	1880852
SNAR-H	NR_024342	2	Non-coding	chr2:77955026 minus strand	1880853
SNORA36C	NR_003705	2	Non-coding	chr2:69520171 minus strand	1880854
SNORA41	NR_002590	2	Non-coding	chr2:206162227 plus strand	1880855
SNORA70B	NR_003707	2	Non-coding	chr2:61417377 minus strand	1880856
SNORA70F	NR_033309	2	Non-coding	chr2:164687777 minus strand	1880857
SNORA75	NR_002921	2	Non-coding	chr2:231455936 minus strand	1880858
SNORA80B	NR_028374	2	Non-coding	chr2:10446849 minus strand	1880859
SNORD11	NR_003031	2	Non-coding	chr2:202293050 plus strand	1880860
SNORD11B	NR_003694	2	Non-coding	chr2:202291316 plus strand	1880861
SNORD20	NR_002908	2	Non-coding	chr2:231456523 minus strand	1880862
SNORD51	NR_002589	2	Non-coding	chr2:206161880 plus strand	1880863
SNORD53	NR_002741	2	Non-coding	chr2:28927066 plus strand	1880864
SNORD70	NR_003058	2	Non-coding	chr2:202276430 plus strand	1880865
SNORD82	NR_004398	2	Non-coding	chr2:231460442 minus strand	1880866
SNORD89	NR_003070	2	Non-coding	chr2:101273049 minus strand	1880867
SNORD92	NR_003074	2	Non-coding	chr2:28913661 plus strand	1880868
SNORD94	NR_004378	2	Non-coding	chr2:86135869 plus strand	1880869
SNRNP27	NR_037862	2	Non-coding	chr2:69893942 plus strand	1880870
SNX17	NR_049782	2	Non-coding	chr2:27370495 plus strand	1880871
SNX17	NR_049783	2	Non-coding	chr2:27370495 plus strand	1880871
SNX17	NR_049784	2	Non-coding	chr2:27370495 plus strand	1880871

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SNX17	NR_049785	2	Non-coding	chr2:27370495 plus strand	1880871
SNX17	NR_049786	2	Non-coding	chr2:27370495 plus strand	1880871
SNX17	NR_049787	2	Non-coding	chr2:27370495 plus strand	1880871
SNX17	NR_049788	2	Non-coding	chr2:27370495 plus strand	1880871
SPAG16	NR_047659	2	Non-coding	chr2:213284378 plus strand	1880872
SPAG16	NR_047660	2	Non-coding	chr2:213284378 plus strand	1880872
SPATA3-AS1	NR_033879	2	Non-coding	chr2:230996032 minus strand	1880873
SSFA2	NR_109843	2	Non-coding	chr2:181891715 plus strand	1880874
ST3GAL5-AS1	NR_110569	2	Non-coding	chr2:85889279 plus strand	1880875
STARD7-AS1	NR_046322	2	Non-coding	chr2:96208415 plus strand	1880876
STK16	NR_026909	2	Non-coding	chr2:219245478 plus strand	1880877
SULT1C2P1	NR_037191	2	Non-coding	chr2:108322237 plus strand	1880878
TEX41	NR_033870	2	Non-coding	chr2:144667966 plus strand	1880879
TGFA-IT1	NR_046798	2	Non-coding	chr2:70481640 minus strand	1880880
THADA	NR_073394	2	Non-coding	chr2:43596046 minus strand	1880881
THUMPD2	NR_028102	2	Non-coding	chr2:39779276 minus strand	1880882
TISP43	NR_027314	2	Non-coding	chr2:130549895 minus strand	1880883
TISP43	NR_027313	2	Non-coding	chr2:130549898 minus strand	1880884
TISP43	NR_027313	2	Non-coding	chr2:130570845 plus strand	1880885
TISP43	NR_027314	2	Non-coding	chr2:130570848 plus strand	1880886
TMEM150A	NR_033179	2	Non-coding	chr2:85602699 minus strand	1880887
TRIB2	NR_027303	2	Non-coding	chr2:12716871 plus strand	1880888
TSN	NR_048556	2	Non-coding	chr2:121755544 plus strand	1880889
TSN	NR_048557	2	Non-coding	chr2:121755544 plus strand	1880889
TSN	NR_048558	2	Non-coding	chr2:121755544 plus strand	1880889
TSN	NR_048559	2	Non-coding	chr2:121755544 plus strand	1880889
TTC21B-AS1	NR_038983	2	Non-coding	chr2:165933856 plus strand	1880890

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TTC21B-AS1	NR_038984	2	Non-coding	chr2:165933856 plus strand	1880890
TTC31	NR_027749	2	Non-coding	chr2:74483072 plus strand	1880891
TTN-AS1	NR_038272	2	Non-coding	chr2:178522826 plus strand	1880892
TTN-AS1	NR_038271	2	Non-coding	chr2:178523190 plus strand	1880893
TUBA4B	NR_003063	2	Non-coding	chr2:219253242 plus strand	1880894
TYW5	NR_004862	2	Non-coding	chr2:199955736 minus strand	1880895
TYW5	NR_109905	2	Non-coding	chr2:199955736 minus strand	1880895
TYW5	NR_109906	2	Non-coding	chr2:199955736 minus strand	1880895
TYW5	NR_109907	2	Non-coding	chr2:199955736 minus strand	1880895
UBE2F	NR_103498	2	Non-coding	chr2:237966944 plus strand	1880896
UBE2F	NR_103499	2	Non-coding	chr2:237966944 plus strand	1880896
UBE2F	NR_103500	2	Non-coding	chr2:237966944 plus strand	1880896
UBE2F-SCLY	NR_037904	2	Non-coding	chr2:237966944 plus strand	1880897
UGGT1	NR_027671	2	Non-coding	chr2:128091207 plus strand	1880898
USP39	NR_046347	2	Non-coding	chr2:85602841 plus strand	1880899
UXS1	NR_045607	2	Non-coding	chr2:106194339 minus strand	1880900
VWC2L-IT1	NR_047698	2	Non-coding	chr2:214510181 plus strand	1880901
WASH2P	NR_024077	2	Non-coding	chr2:113583652 plus strand	1880902
WDPCP	NR_122106	2	Non-coding	chr2:63438007 minus strand	1880903
WDR92	NR_046234	2	Non-coding	chr2:68157546 minus strand	1880904
XIRP2-AS1	NR_046665	2	Non-coding	chr2:167140955 minus strand	1880905
YY1P2	NR_033658	2	Non-coding	chr2:138897323 plus strand	1880906
ZEB2	NR_033258	2	Non-coding	chr2:144520391 minus strand	1880907
ZEB2-AS1	NR_040248	2	Non-coding	chr2:144519613 plus strand	1880908
ZNF142	NR_073600	2	Non-coding	chr2:218659540 minus strand	1880909
ZNF142	NR_073599	2	Non-coding	chr2:218659632 minus strand	1880910
ZNF385B	NR_104234	2	Non-coding	chr2:179585906 minus strand	1880911

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AADACL2-AS1	NR_110202	3	Non-coding	chr3:151928175 minus strand	1880912
AADACL2-AS1	NR_110203	3	Non-coding	chr3:151928175 minus strand	1880912
AADACP1	NR_026915	3	Non-coding	chr3:151770455 plus strand	1880913
ABCC5-AS1	NR_046570	3	Non-coding	chr3:184006337 plus strand	1880914
ABHD10	NR_073570	3	Non-coding	chr3:111978875 plus strand	1880915
ABHD10	NR_073571	3	Non-coding	chr3:111978875 plus strand	1880915
ABHD14A-ACY1	NR_037192	3	Non-coding	chr3:51975025 plus strand	1880916
ABTB1	NR_033429	3	Non-coding	chr3:127672937 plus strand	1880917
ACAA1	NR_024024	3	Non-coding	chr3:38137242 minus strand	1880918
ACAD9	NR_033426	3	Non-coding	chr3:128879489 plus strand	1880919
ACVR2B-AS1	NR_028389	3	Non-coding	chr3:38454820 minus strand	1880920
ADAMTS9-AS1	NR_110150	3	Non-coding	chr3:64561345 plus strand	1880921
ADAMTS9-AS1	NR_110151	3	Non-coding	chr3:64561345 plus strand	1880921
ADAMTS9-AS2	NR_038264	3	Non-coding	chr3:64684869 plus strand	1880922
ADIPOQ-AS1	NR_046662	3	Non-coding	chr3:186856123 minus strand	1880923
ALDH1L1	NR_072979	3	Non-coding	chr3:126180802 minus strand	1880924
ALDH1L1-AS1	NR_046602	3	Non-coding	chr3:126103639 plus strand	1880925
ALDH1L1-AS2	NR_046383	3	Non-coding	chr3:126180064 plus strand	1880926
ALG3	NR_024533	3	Non-coding	chr3:184248971 minus strand	1880927
ALG3	NR_024534	3	Non-coding	chr3:184248971 minus strand	1880927
ALS2CL	NR_033815	3	Non-coding	chr3:46693704 minus strand	1880928
AMT	NR_028435	3	Non-coding	chr3:49422678 minus strand	1880929
ANKRD18DP	NR_003291	3	Non-coding	chr3:198080671 minus strand	1880930
ARHGAP31-AS1	NR_046748	3	Non-coding	chr3:119322760 minus strand	1880931
ARHGEF26-AS1	NR_037901	3	Non-coding	chr3:154121210 minus strand	1880932
ARHGEF3-AS1	NR_046572	3	Non-coding	chr3:56940039 plus strand	1880933
ARL13B	NR_033427	3	Non-coding	chr3:93980138 plus strand	1880934

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ARL6	NR_103511	3	Non-coding	chr3:97764520 plus strand	1880935
ASTE1	NR_110229	3	Non-coding	chr3:131026854 minus strand	1880936
ATP13A4-AS1	NR_121666	3	Non-coding	chr3:193553212 plus strand	1880937
ATP13A4-AS1	NR_046726	3	Non-coding	chr3:193553411 plus strand	1880938
ATP13A5-AS1	NR_046758	3	Non-coding	chr3:193307243 plus strand	1880939
ATP2B2-IT2	NR_046766	3	Non-coding	chr3:10626807 minus strand	1880940
B4GALT4-AS1	NR_046574	3	Non-coding	chr3:119226485 plus strand	1880941
BHLHE40-AS1	NR_125914	3	Non-coding	chr3:4906501 minus strand	1880942
BHLHE40-AS1	NR_037903	3	Non-coding	chr3:4979961 minus strand	1880943
BHLHE40-AS1	NR_125915	3	Non-coding	chr3:4979961 minus strand	1880943
BHLHE40-AS1	NR_125916	3	Non-coding	chr3:4979961 minus strand	1880943
BPESC1	NR_026783	3	Non-coding	chr3:139104184 plus strand	1880944
BSN-AS2	NR_038866	3	Non-coding	chr3:49554366 minus strand	1880945
C3orf17	NR_027794	3	Non-coding	chr3:113019708 minus strand	1880946
C3orf17	NR_027796	3	Non-coding	chr3:113019708 minus strand	1880946
C3orf35	NR_126512	3	Non-coding	chr3:37399476 plus strand	1880947
C3orf35	NR_126513	3	Non-coding	chr3:37399476 plus strand	1880947
C3orf35	NR_126514	3	Non-coding	chr3:37399476 plus strand	1880947
C3orf35	NR_126515	3	Non-coding	chr3:37399476 plus strand	1880947
C3orf49	NR_026866	3	Non-coding	chr3:63819364 plus strand	1880948
C3orf67-AS1	NR_110820	3	Non-coding	chr3:58824470 plus strand	1880949
CACNA2D3-AS1	NR_046666	3	Non-coding	chr3:54901255 minus strand	1880950
CADM2-AS2	NR_046752	3	Non-coding	chr3:85828050 minus strand	1880951
CCDC12	NR_102269	3	Non-coding	chr3:46976501 minus strand	1880952
CCDC13-AS1	NR_046732	3	Non-coding	chr3:42732574 plus strand	1880953
CCDC37-AS1	NR_103787	3	Non-coding	chr3:126394798 minus strand	1880954
CCDC37-AS1	NR_103788	3	Non-coding	chr3:126394798 minus strand	1880954

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CCDC37-AS1	NR_103789	3	Non-coding	chr3:126394798 minus strand	1880954
CCDC66	NR_024460	3	Non-coding	chr3:56557155 plus strand	1880955
CELSR3-AS1	NR_111921	3	Non-coding	chr3:48663767 plus strand	1880956
CFAP44-AS1	NR_046728	3	Non-coding	chr3:113403997 plus strand	1880957
CHL1	NR_045572	3	Non-coding	chr3:197642 plus strand	1880958
CHL1-AS1	NR_110739	3	Non-coding	chr3:385795 minus strand	1880959
CIDECP	NR_002786	3	Non-coding	chr3:10026136 minus strand	1880960
CLRN1	NR_046380	3	Non-coding	chr3:150972999 minus strand	1880961
CLRN1-AS1	NR_024066	3	Non-coding	chr3:150972677 plus strand	1880962
CLSTN2-AS1	NR_108084	3	Non-coding	chr3:140508789 minus strand	1880963
CNOT10	NR_046352	3	Non-coding	chr3:32685144 plus strand	1880964
CNTN4-AS1	NR_046554	3	Non-coding	chr3:3061145 minus strand	1880965
CNTN4-AS2	NR_046555	3	Non-coding	chr3:2144241 minus strand	1880966
COL6A4P1	NR_027927	3	Non-coding	chr3:15205959 minus strand	1880967
COL6A4P2	NR_027898	3	Non-coding	chr3:130212819 plus strand	1880968
COL6A5	NR_022012	3	Non-coding	chr3:130345515 plus strand	1880969
COPB2	NR_023350	3	Non-coding	chr3:139389680 minus strand	1880970
CP	NR_046371	3	Non-coding	chr3:149222045 minus strand	1880971
CYB561D2	NR_111912	3	Non-coding	chr3:50350694 plus strand	1880972
CYB561D2	NR_111913	3	Non-coding	chr3:50365333 plus strand	1880973
CYB561D2	NR_111914	3	Non-coding	chr3:50365333 plus strand	1880973
DHX30	NR_075079	3	Non-coding	chr3:47802908 plus strand	1880974
DLG1-AS1	NR_038289	3	Non-coding	chr3:197298246 plus strand	1880975
DNAJB8-AS1	NR_037890	3	Non-coding	chr3:128463593 plus strand	1880976
DNAJC19	NR_033721	3	Non-coding	chr3:180989774 minus strand	1880977
DNAJC19	NR_033722	3	Non-coding	chr3:180989774 minus strand	1880977
DNAJC19	NR_033723	3	Non-coding	chr3:180989774 minus strand	1880977

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DNAJC19	NR_046073	3	Non-coding	chr3:180989774 minus strand	1880977
DPPA2P3	NR_027764	3	Non-coding	chr3:193994238 minus strand	1880978
EGFEM1P	NR_021485	3	Non-coding	chr3:168249521 plus strand	1880979
EGOT	NR_004428	3	Non-coding	chr3:4751590 minus strand	1880980
EHHADH-AS1	NR_038990	3	Non-coding	chr3:185162900 plus strand	1880981
EIF1B-AS1	NR_033965	3	Non-coding	chr3:40309698 minus strand	1880982
EMC3-AS1	NR_103821	3	Non-coding	chr3:9986892 plus strand	1880983
ENTPD3-AS1	NR_040100	3	Non-coding	chr3:40453308 minus strand	1880984
EOGT	NR_103826	3	Non-coding	chr3:69013894 minus strand	1880985
ERC2-IT1	NR_024615	3	Non-coding	chr3:55659469 minus strand	1880986
ERICH6-AS1	NR_121675	3	Non-coding	chr3:150703563 plus strand	1880987
ERICH6-AS1	NR_121674	3	Non-coding	chr3:150703974 plus strand	1880988
ESRG	NR_027122	3	Non-coding	chr3:54639857 minus strand	1880989
EXOSC7	NR_023353	3	Non-coding	chr3:44976248 plus strand	1880990
FAM172BP	NR_036433	3	Non-coding	chr3:101518866 plus strand	1880991
FAM86DP	NR_024241	3	Non-coding	chr3:75435115 minus strand	1880992
FAM86HP	NR_024252	3	Non-coding	chr3:130111433 minus strand	1880993
FAM86JP	NR_024250	3	Non-coding	chr3:125916600 plus strand	1880994
FAM86JP	NR_024251	3	Non-coding	chr3:125916600 plus strand	1880994
FGD5-AS1	NR_046252	3	Non-coding	chr3:14947505 minus strand	1880995
FGD5-AS1	NR_046253	3	Non-coding	chr3:14947505 minus strand	1880995
FGD5-AS1	NR_046254	3	Non-coding	chr3:14947505 minus strand	1880995
FGD5-AS1	NR_046255	3	Non-coding	chr3:14947893 minus strand	1880996
FGD5-AS1	NR_046251	3	Non-coding	chr3:14948441 minus strand	1880997
FGD5P1	NR_036481	3	Non-coding	chr3:13933055 plus strand	1880998
FGF12-AS1	NR_046596	3	Non-coding	chr3:192238629 plus strand	1880999
FLJ22763	NR_033977	3	Non-coding	chr3:109136713 plus strand	1881000

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FLJ42393	NR_024413	3	Non-coding	chr3:188178542 plus strand	1881001
FLJ46066	NR_040105	3	Non-coding	chr3:182486362 minus strand	1881002
FOXP1-AS1	NR_126463	3	Non-coding	chr3:71289757 plus strand	1881003
FYTTD1	NR_027840	3	Non-coding	chr3:197750389 plus strand	1881004
GABRR3	NR_047685	3	Non-coding	chr3:98035304 minus strand	1881005
GATA2-AS1	NR_125398	3	Non-coding	chr3:128489202 plus strand	1881006
GHRL	NR_024132	3	Non-coding	chr3:10292947 minus strand	1881007
GHRL	NR_024133	3	Non-coding	chr3:10292947 minus strand	1881007
GHRL	NR_024134	3	Non-coding	chr3:10292947 minus strand	1881007
GHRL	NR_024135	3	Non-coding	chr3:10292947 minus strand	1881007
GHRL	NR_024136	3	Non-coding	chr3:10292947 minus strand	1881007
GHRL	NR_024137	3	Non-coding	chr3:10292947 minus strand	1881007
GHRL	NR_024138	3	Non-coding	chr3:10292947 minus strand	1881007
GHRL	NR_126505	3	Non-coding	chr3:10292947 minus strand	1881007
GHRLOS	NR_004431	3	Non-coding	chr3:10280951 plus strand	1881008
GHRLOS	NR_024144	3	Non-coding	chr3:10280951 plus strand	1881008
GHRLOS	NR_024145	3	Non-coding	chr3:10280951 plus strand	1881008
GHRLOS	NR_073566	3	Non-coding	chr3:10280951 plus strand	1881008
GHRLOS	NR_073567	3	Non-coding	chr3:10280951 plus strand	1881008
GHRLOS	NR_073568	3	Non-coding	chr3:10280951 plus strand	1881008
GK5	NR_033289	3	Non-coding	chr3:142225607 minus strand	1881009
GLYCTK	NR_026699	3	Non-coding	chr3:52287819 plus strand	1881010
GLYCTK	NR_026700	3	Non-coding	chr3:52287819 plus strand	1881010
GLYCTK	NR_026701	3	Non-coding	chr3:52287819 plus strand	1881010
GLYCTK	NR_026702	3	Non-coding	chr3:52287819 plus strand	1881010
GLYCTK-AS1	NR_046719	3	Non-coding	chr3:52289733 minus strand	1881011
GORASP1	NR_103866	3	Non-coding	chr3:39107900 minus strand	1881012

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GORASP1	NR_103867	3	Non-coding	chr3:39107900 minus strand	1881012
GRM7-AS1	NR_046606	3	Non-coding	chr3:7535284 minus strand	1881013
GRM7-AS3	NR_110123	3	Non-coding	chr3:6805449 minus strand	1881014
GRM7-AS3	NR_110125	3	Non-coding	chr3:6805449 minus strand	1881014
H1FX-AS1	NR_026991	3	Non-coding	chr3:129316270 plus strand	1881015
HACL1	NR_104315	3	Non-coding	chr3:15601852 minus strand	1881016
HDAC11-AS1	NR_046690	3	Non-coding	chr3:13480053 minus strand	1881017
HHATL	NR_027753	3	Non-coding	chr3:42701521 minus strand	1881018
HLTF-AS1	NR_046648	3	Non-coding	chr3:149086331 plus strand	1881019
HP09053	NR_110821	3	Non-coding	chr3:99823865 minus strand	1881020
HYAL1	NR_047690	3	Non-coding	chr3:50303601 minus strand	1881021
IGF2BP2-AS1	NR_126326	3	Non-coding	chr3:185713251 plus strand	1881022
IGSF11-AS1	NR_046230	3	Non-coding	chr3:118943075 plus strand	1881023
IL12A-AS1	NR_108088	3	Non-coding	chr3:160207092 minus strand	1881024
IL17RC	NR_037807	3	Non-coding	chr3:9917073 plus strand	1881025
IL17RE	NR_104198	3	Non-coding	chr3:9902827 plus strand	1881026
IP6K2	NR_027437	3	Non-coding	chr3:48717278 minus strand	1881027
IP6K2	NR_027438	3	Non-coding	chr3:48717278 minus strand	1881027
IQCF4	NR_038213	3	Non-coding	chr3:51817602 plus strand	1881028
IQCF4	NR_038214	3	Non-coding	chr3:51817602 plus strand	1881028
IQCF4	NR_038215	3	Non-coding	chr3:51817602 plus strand	1881028
IQCF5-AS1	NR_109984	3	Non-coding	chr3:51873595 plus strand	1881029
IQCJ-SCHIP1-AS1	NR_121669	3	Non-coding	chr3:159768612 minus strand	1881030
ITGA9-AS1	NR_110531	3	Non-coding	chr3:37861780 minus strand	1881031
ITGA9-AS1	NR_110532	3	Non-coding	chr3:37861780 minus strand	1881031
ITIH4-AS1	NR_046615	3	Non-coding	chr3:52823934 plus strand	1881032
ITPR1-AS1	NR_108075	3	Non-coding	chr3:4493163 minus strand	1881033

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KALRN	NR_028136	3	Non-coding	chr3:124094710 plus strand	1881034
KCNAB1-AS1	NR_046618	3	Non-coding	chr3:156446905 minus strand	1881035
KCNAB1-AS2	NR_046617	3	Non-coding	chr3:156227883 minus strand	1881036
KCNMB2-AS1	NR_126560	3	Non-coding	chr3:178860405 minus strand	1881037
KCNMB2-AS1	NR_126561	3	Non-coding	chr3:178860405 minus strand	1881037
KCNMB3	NR_028135	3	Non-coding	chr3:179259891 minus strand	1881038
KIAA2018	NR_111981	3	Non-coding	chr3:113696646 minus strand	1881039
KIF9-AS1	NR_033373	3	Non-coding	chr3:47164369 plus strand	1881040
KLHL6-AS1	NR_046687	3	Non-coding	chr3:183548734 plus strand	1881041
KPNA1	NR_026698	3	Non-coding	chr3:122514939 minus strand	1881042
KRBOX1-AS1	NR_122033	3	Non-coding	chr3:42936785 minus strand	1881043
LAMB2P1	NR_004405	3	Non-coding	chr3:49154401 minus strand	1881044
LARS2-AS1	NR_048543	3	Non-coding	chr3:45509545 minus strand	1881045
LEPREL1-AS1	NR_126419	3	Non-coding	chr3:190120963 plus strand	1881046
LIMD1-AS1	NR_033947	3	Non-coding	chr3:45688882 minus strand	1881047
LINC00312	NR_024065	3	Non-coding	chr3:8571781 plus strand	1881048
LINC00488	NR_026767	3	Non-coding	chr3:109178164 plus strand	1881049
LINC00501	NR_047465	3	Non-coding	chr3:177294441 plus strand	1881050
LINC00506	NR_047469	3	Non-coding	chr3:87089279 plus strand	1881051
LINC00506	NR_104153	3	Non-coding	chr3:87089279 plus strand	1881051
LINC00578	NR_047568	3	Non-coding	chr3:177441920 plus strand	1881052
LINC00606	NR_027102	3	Non-coding	chr3:10764192 minus strand	1881053
LINC00620	NR_027103	3	Non-coding	chr3:13650720 plus strand	1881054
LINC00635	NR_015414	3	Non-coding	chr3:107878068 minus strand	1881055
LINC00635	NR_024276	3	Non-coding	chr3:107878068 minus strand	1881055
LINC00636	NR_015394	3	Non-coding	chr3:107883204 plus strand	1881056
LINC00690	NR_103843	3	Non-coding	chr3:16536317 plus strand	1881057

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LINC00691	NR_026834	3	Non-coding	chr3:24103247 minus strand	1881058
LINC00692	NR_034055	3	Non-coding	chr3:25873695 minus strand	1881059
LINC00693	NR_038840	3	Non-coding	chr3:28575277 plus strand	1881060
LINC00696	NR_027331	3	Non-coding	chr3:52065112 minus strand	1881061
LINC00698	NR_027104	3	Non-coding	chr3:63102687 plus strand	1881062
LINC00852	NR_026829	3	Non-coding	chr3:10284418 plus strand	1881063
LINC00870	NR_038221	3	Non-coding	chr3:72151256 plus strand	1881064
LINC00877	NR_104116	3	Non-coding	chr3:72100455 minus strand	1881065
LINC00879	NR_015400	3	Non-coding	chr3:94938262 plus strand	1881066
LINC00880	NR_034007	3	Non-coding	chr3:157123002 minus strand	1881067
LINC00881	NR_034008	3	Non-coding	chr3:157089880 plus strand	1881068
LINC00882	NR_028303	3	Non-coding	chr3:107240638 minus strand	1881069
LINC00883	NR_028301	3	Non-coding	chr3:107240691 plus strand	1881070
LINC00883	NR_028302	3	Non-coding	chr3:107240691 plus strand	1881070
LINC00884	NR_033929	3	Non-coding	chr3:194487139 plus strand	1881071
LINC00885	NR_034088	3	Non-coding	chr3:196142635 plus strand	1881072
LINC00886	NR_038387	3	Non-coding	chr3:156817062 minus strand	1881073
LINC00887	NR_024480	3	Non-coding	chr3:194312804 minus strand	1881074
LINC00888	NR_038302	3	Non-coding	chr3:183447607 plus strand	1881075
LINC00888	NR_038301	3	Non-coding	chr3:183447650 plus strand	1881076
LINC00901	NR_121607	3	Non-coding	chr3:116921430 plus strand	1881077
LINC00960	NR_040005	3	Non-coding	chr3:75672280 plus strand	1881078
LINC00960	NR_040004	3	Non-coding	chr3:75672390 plus strand	1881079
LINC00969	NR_122105	3	Non-coding	chr3:195688497 plus strand	1881080
LINC00971	NR_033860	3	Non-coding	chr3:84869575 minus strand	1881081
LINC00994	NR_033978	3	Non-coding	chr3:64087363 minus strand	1881082
LINC01014	NR_046786	3	Non-coding	chr3:178419200 plus strand	1881083

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LINC01100	NR_104132	3	Non-coding	chr3:160020648 plus strand	1881084
LINC01192	NR_033945	3	Non-coding	chr3:163303301 minus strand	1881085
LINC01205	NR_109841	3	Non-coding	chr3:109409989 plus strand	1881086
LINC01205	NR_109842	3	Non-coding	chr3:109409989 plus strand	1881086
LINC01206	NR_104146	3	Non-coding	chr3:181952363 plus strand	1881087
LINC01208	NR_109968	3	Non-coding	chr3:176635532 minus strand	1881088
LINC01209	NR_110819	3	Non-coding	chr3:176817001 minus strand	1881089
LINC01210	NR_109987	3	Non-coding	chr3:137771910 plus strand	1881090
LINC01212	NR_110000	3	Non-coding	chr3:69999743 plus strand	1881091
LINC01213	NR_110168	3	Non-coding	chr3:150238518 plus strand	1881092
LINC01213	NR_110167	3	Non-coding	chr3:150238699 plus strand	1881093
LINC01214	NR_110186	3	Non-coding	chr3:150323747 minus strand	1881094
LINC01214	NR_110187	3	Non-coding	chr3:150323747 minus strand	1881094
LINC01215	NR_110030	3	Non-coding	chr3:108125063 plus strand	1881095
LINC01215	NR_110028	3	Non-coding	chr3:108125820 plus strand	1881096
LINC01266	NR_110118	3	Non-coding	chr3:592104 plus strand	1881097
LINC01267	NR_110135	3	Non-coding	chr3:14352568 minus strand	1881098
LINC01279	NR_109779	3	Non-coding	chr3:112601969 minus strand	1881099
LINC01322	NR_125764	3	Non-coding	chr3:165206959 plus strand	1881100
LINC01324	NR_126405	3	Non-coding	chr3:164831480 minus strand	1881101
LINC01327	NR_126353	3	Non-coding	chr3:167392795 plus strand	1881102
LINC01330	NR_033843	3	Non-coding	chr3:167895947 plus strand	1881103
LINC01391	NR_121649	3	Non-coding	chr3:138944020 minus strand	1881104
LINC01471	NR_125397	3	Non-coding	chr3:127537780 minus strand	1881105
LINC01487	NR_125399	3	Non-coding	chr3:155240944 plus strand	1881106
LINC01565	NR_125802	3	Non-coding	chr3:128576086 minus strand	1881107
LINCR-0002	NR_120606	3	Non-coding	chr3:191425523 plus strand	1881108

【１５０７】

LMCD1-AS1	NR_033378	3	Non-coding	chr3:8501658 minus strand	1881109
LMLN	NR_026786	3	Non-coding	chr3:197960199 plus strand	1881110
LMLN	NR_026787	3	Non-coding	chr3:197960199 plus strand	1881110
LMLN-AS1	NR_046669	3	Non-coding	chr3:198039467 minus strand	1881111
LOC100128164	NR_024409	3	Non-coding	chr3:169966734 minus strand	1881112
LOC100128164	NR_027622	3	Non-coding	chr3:169966734 minus strand	1881112
LOC100129550	NR_024618	3	Non-coding	chr3:122886512 plus strand	1881113
LOC100131635	NR_034062	3	Non-coding	chr3:187702365 plus strand	1881114
LOC100289361	NR_034032	3	Non-coding	chr3:143001467 minus strand	1881115
LOC100505920	NR_125404	3	Non-coding	chr3:194206307 minus strand	1881116
LOC100505920	NR_125403	3	Non-coding	chr3:194250153 minus strand	1881117
LOC100507291	NR_121608	3	Non-coding	chr3:139389802 plus strand	1881118
LOC100507291	NR_121609	3	Non-coding	chr3:139389802 plus strand	1881118
LOC100507389	NR_038455	3	Non-coding	chr3:142926674 plus strand	1881119
LOC100507391	NR_037891	3	Non-coding	chr3:194708420 plus strand	1881120
LOC100507537	NR_037902	3	Non-coding	chr3:155293700 minus strand	1881121
LOC100507661	NR_109989	3	Non-coding	chr3:168901944 plus strand	1881122
LOC100996447	NR_104147	3	Non-coding	chr3:158571066 minus strand	1881123
LOC101243545	NR_102265	3	Non-coding	chr3:161426426 plus strand	1881124
LOC101927056	NR_125395	3	Non-coding	chr3:125886077 minus strand	1881125
LOC101927056	NR_125396	3	Non-coding	chr3:125886077 minus strand	1881125
LOC101927123	NR_110147	3	Non-coding	chr3:127390670 minus strand	1881126
LOC101927296	NR_121660	3	Non-coding	chr3:73521321 plus strand	1881127
LOC101927374	NR_110133	3	Non-coding	chr3:79411726 plus strand	1881128
LOC101927394	NR_110131	3	Non-coding	chr3:8016307 minus strand	1881129
LOC101927416	NR_121663	3	Non-coding	chr3:9192492 plus strand	1881130
LOC101927416	NR_121664	3	Non-coding	chr3:9192492 plus strand	1881130

【１５０８】

LOC101927829	NR_110814	3	Non-coding	chr3:20342467 plus strand	1881131
LOC101927854	NR_121667	3	Non-coding	chr3:24151323 plus strand	1881132
LOC101928105	NR_121657	3	Non-coding	chr3:150738985 minus strand	1881133
LOC101928135	NR_110817	3	Non-coding	chr3:35394023 minus strand	1881134
LOC101928323	NR_125400	3	Non-coding	chr3:42654388 minus strand	1881135
LOC101928739	NR_125401	3	Non-coding	chr3:179147973 minus strand	1881136
LOC101928790	NR_110059	3	Non-coding	chr3:179898193 plus strand	1881137
LOC101928790	NR_110060	3	Non-coding	chr3:179899536 plus strand	1881138
LOC101928790	NR_110061	3	Non-coding	chr3:179899536 plus strand	1881138
LOC101928882	NR_109986	3	Non-coding	chr3:180870178 minus strand	1881139
LOC101928992	NR_110043	3	Non-coding	chr3:184773155 minus strand	1881140
LOC101929106	NR_110052	3	Non-coding	chr3:187207629 minus strand	1881141
LOC101929337	NR_125402	3	Non-coding	chr3:194247647 plus strand	1881142
LOC101929579	NR_126332	3	Non-coding	chr3:107382159 minus strand	1881143
LOC101929607	NR_110039	3	Non-coding	chr3:107430929 plus strand	1881144
LOC101929694	NR_110017	3	Non-coding	chr3:112749319 minus strand	1881145
LOC101929717	NR_110823	3	Non-coding	chr3:113167731 minus strand	1881146
LOC101929754	NR_121661	3	Non-coding	chr3:114453592 plus strand	1881147
LOC102723448	NR_110824	3	Non-coding	chr3:11750 plus strand	1881148
LOC102723582	NR_125405	3	Non-coding	chr3:122416205 plus strand	1881149
LOC102724297	NR_125406	3	Non-coding	chr3:46407059 minus strand	1881150
LOC102724550	NR_110826	3	Non-coding	chr3:177816864 plus strand	1881151
LOC102724604	NR_125407	3	Non-coding	chr3:181442486 minus strand	1881152
LOC102724699	NR_125409	3	Non-coding	chr3:186825521 minus strand	1881153
LOC152225	NR_026934	3	Non-coding	chr3:101940858 plus strand	1881154
LOC220729	NR_003266	3	Non-coding	chr3:197627881 minus strand	1881155
LOC253573	NR_033844	3	Non-coding	chr3:186493661 minus strand	1881156

【１５０９】

LOC339874	NR_038976	3	Non-coding	chr3:131381475 minus strand	1881157
LOC344887	NR_033752	3	Non-coding	chr3:185959968 plus strand	1881158
LOC440982	NR_121655	3	Non-coding	chr3:147421326 plus strand	1881159
LOC646903	NR_036538	3	Non-coding	chr3:149971278 plus strand	1881160
LOC647323	NR_033944	3	Non-coding	chr3:194003659 minus strand	1881161
LOC653712	NR_034179	3	Non-coding	chr3:128871541 minus strand	1881162
LOC729083	NR_122070	3	Non-coding	chr3:42770611 plus strand	1881163
LOC90246	NR_026954	3	Non-coding	chr3:128507834 plus strand	1881164
LPP-AS1	NR_046623	3	Non-coding	chr3:188568666 minus strand	1881165
LPP-AS2	NR_036497	3	Non-coding	chr3:188154088 minus strand	1881166
LRRC2-AS1	NR_073385	3	Non-coding	chr3:46557397 plus strand	1881167
LSAMP-AS1	NR_109998	3	Non-coding	chr3:116360023 plus strand	1881168
LZTFL1	NR_075080	3	Non-coding	chr3:45842158 minus strand	1881169
MAGI1-AS1	NR_046575	3	Non-coding	chr3:65893815 plus strand	1881170
MAP3K13	NR_038322	3	Non-coding	chr3:185282940 plus strand	1881171
MASP1	NR_033519	3	Non-coding	chr3:187292022 minus strand	1881172
MBNL1-AS1	NR_027037	3	Non-coding	chr3:152269626 minus strand	1881173
MBNL1-AS1	NR_027038	3	Non-coding	chr3:152269626 minus strand	1881173
MCCC1	NR_120640	3	Non-coding	chr3:183099243 minus strand	1881174
MCCC1	NR_120639	3	Non-coding	chr3:183099587 minus strand	1881175
MCM2	NR_073375	3	Non-coding	chr3:127598356 plus strand	1881176
MFI2-AS1	NR_038285	3	Non-coding	chr3:197002905 plus strand	1881177
MFSD1	NR_110328	3	Non-coding	chr3:158801925 plus strand	1881178
MGC2889	NR_026877	3	Non-coding	chr3:193241778 plus strand	1881179
MIR1224	NR_030410	3	Non-coding	chr3:184241404 plus strand	1881180
MIR1226	NR_031595	3	Non-coding	chr3:47849554 plus strand	1881181
MIR1248	NR_031650	3	Non-coding	chr3:186786671 plus strand	1881182

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MIR1263	NR_031665	3	Non-coding	chr3:164171556 minus strand	1881183
MIR128-2	NR_029824	3	Non-coding	chr3:35744475 plus strand	1881184
MIR1284	NR_031697	3	Non-coding	chr3:71542089 minus strand	1881185
MIR1324	NR_031714	3	Non-coding	chr3:75630762 plus strand	1881186
MIR135A1	NR_029677	3	Non-coding	chr3:52294308 minus strand	1881187
MIR138-1	NR_029700	3	Non-coding	chr3:44114211 plus strand	1881188
MIR15B	NR_029663	3	Non-coding	chr3:160404587 plus strand	1881189
MIR16-2	NR_029525	3	Non-coding	chr3:160404744 plus strand	1881190
MIR191	NR_029690	3	Non-coding	chr3:49020709 minus strand	1881191
MIR198	NR_029584	3	Non-coding	chr3:120395729 minus strand	1881192
MIR2115	NR_031749	3	Non-coding	chr3:48316459 minus strand	1881193
MIR26A1	NR_029499	3	Non-coding	chr3:37969403 plus strand	1881194
MIR28	NR_029502	3	Non-coding	chr3:188688780 plus strand	1881195
MIR3134	NR_036085	3	Non-coding	chr3:15697371 minus strand	1881196
MIR3135A	NR_036086	3	Non-coding	chr3:20137564 plus strand	1881197
MIR3136	NR_036087	3	Non-coding	chr3:69049035 minus strand	1881198
MIR3137	NR_036089	3	Non-coding	chr3:195134580 minus strand	1881199
MIR3714	NR_037465	3	Non-coding	chr3:16933195 plus strand	1881200
MIR378B	NR_036084	3	Non-coding	chr3:10330228 plus strand	1881201
MIR3919	NR_037483	3	Non-coding	chr3:159282645 plus strand	1881202
MIR3921	NR_037486	3	Non-coding	chr3:99964398 minus strand	1881203
MIR3923	NR_037488	3	Non-coding	chr3:79507886 plus strand	1881204
MIR3938	NR_037502	3	Non-coding	chr3:55852594 minus strand	1881205
MIR425	NR_029948	3	Non-coding	chr3:49020234 minus strand	1881206
MIR4270	NR_036232	3	Non-coding	chr3:15496308 minus strand	1881207
MIR4271	NR_036233	3	Non-coding	chr3:49274119 plus strand	1881208
MIR4272	NR_036234	3	Non-coding	chr3:67225463 plus strand	1881209

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MIR4273	NR_036235	3	Non-coding	chr3:75738279 plus strand	1881210
MIR4442	NR_039644	3	Non-coding	chr3:25664939 minus strand	1881211
MIR4443	NR_039645	3	Non-coding	chr3:48196563 plus strand	1881212
MIR4444-1	NR_039646	3	Non-coding	chr3:75214475 plus strand	1881213
MIR4444-2	NR_049831	3	Non-coding	chr3:75214475 plus strand	1881214
MIR4445	NR_039647	3	Non-coding	chr3:109602827 plus strand	1881215
MIR4446	NR_039648	3	Non-coding	chr3:113594875 plus strand	1881216
MIR4447	NR_039649	3	Non-coding	chr3:116850367 minus strand	1881217
MIR4448	NR_039650	3	Non-coding	chr3:183886799 plus strand	1881218
MIR4787	NR_039950	3	Non-coding	chr3:50675079 plus strand	1881219
MIR4788	NR_039951	3	Non-coding	chr3:134437826 plus strand	1881220
MIR4789	NR_039952	3	Non-coding	chr3:175369539 plus strand	1881221
MIR4790	NR_039953	3	Non-coding	chr3:5250255 minus strand	1881222
MIR4791	NR_039954	3	Non-coding	chr3:19314931 minus strand	1881223
MIR4792	NR_039955	3	Non-coding	chr3:24521435 minus strand	1881224
MIR4793	NR_039956	3	Non-coding	chr3:48644280 minus strand	1881225
MIR4795	NR_039958	3	Non-coding	chr3:87226277 minus strand	1881226
MIR4796	NR_039959	3	Non-coding	chr3:114743525 minus strand	1881227
MIR4797	NR_039960	3	Non-coding	chr3:197293948 minus strand	1881228
MIR5002	NR_049798	3	Non-coding	chr3:124132928 plus strand	1881229
MIR5092	NR_049815	3	Non-coding	chr3:125151552 minus strand	1881230
MIR5186	NR_049818	3	Non-coding	chr3:151565995 minus strand	1881231
MIR5193	NR_049825	3	Non-coding	chr3:49806245 minus strand	1881232
MIR544B	NR_036088	3	Non-coding	chr3:124732438 plus strand	1881233
MIR548AB	NR_039611	3	Non-coding	chr3:103524116 minus strand	1881234
MIR548AQ	NR_049838	3	Non-coding	chr3:185767904 minus strand	1881235
MIR548AY	NR_106753	3	Non-coding	chr3:32506389 minus strand	1881236

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MIR548BB	NR_128708	3	Non-coding	chr3:60617870 minus strand	1881237
MIR548II	NR_031687	3	Non-coding	chr3:125790552 minus strand	1881238
MIR551B	NR_030294	3	Non-coding	chr3:168551853 plus strand	1881239
MIR5588	NR_106712	3	Non-coding	chr3:185253272 minus strand	1881240
MIR563	NR_030289	3	Non-coding	chr3:15873770 plus strand	1881241
MIR564	NR_030290	3	Non-coding	chr3:44861887 plus strand	1881242
MIR566	NR_030291	3	Non-coding	chr3:50173325 plus strand	1881243
MIR567	NR_030292	3	Non-coding	chr3:112112800 plus strand	1881244
MIR568	NR_030293	3	Non-coding	chr3:114316569 minus strand	1881245
MIR5682	NR_049861	3	Non-coding	chr3:121049639 plus strand	1881246
MIR5688	NR_049870	3	Non-coding	chr3:85385709 plus strand	1881247
MIR569	NR_030295	3	Non-coding	chr3:171106759 minus strand	1881248
MIR570	NR_030296	3	Non-coding	chr3:195699400 plus strand	1881249
MIR5704	NR_049890	3	Non-coding	chr3:131985931 minus strand	1881250
MIR5787	NR_106714	3	Non-coding	chr3:50227435 plus strand	1881251
MIR6083	NR_106731	3	Non-coding	chr3:124374331 plus strand	1881252
MIR6822	NR_106880	3	Non-coding	chr3:39138205 plus strand	1881253
MIR6823	NR_106881	3	Non-coding	chr3:48550021 minus strand	1881254
MIR6824	NR_106882	3	Non-coding	chr3:48633698 minus strand	1881255
MIR6825	NR_106883	3	Non-coding	chr3:127575331 minus strand	1881256
MIR6826	NR_106884	3	Non-coding	chr3:129272145 plus strand	1881257
MIR6827	NR_106885	3	Non-coding	chr3:134367862 minus strand	1881258
MIR6828	NR_106886	3	Non-coding	chr3:170423102 plus strand	1881259
MIR6829	NR_106887	3	Non-coding	chr3:195882395 minus strand	1881260
MIR6872	NR_106932	3	Non-coding	chr3:50273235 plus strand	1881261
MIR6890	NR_106950	3	Non-coding	chr3:49099914 minus strand	1881262
MIR711	NR_031756	3	Non-coding	chr3:48578977 minus strand	1881263

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MIR7110	NR_106960	3	Non-coding	chr3:123161793 plus strand	1881264
MIR7976	NR_107016	3	Non-coding	chr3:127587176 minus strand	1881265
MIR7977	NR_107017	3	Non-coding	chr3:176515102 plus strand	1881266
MIR8060	NR_107027	3	Non-coding	chr3:96359963 plus strand	1881267
MIR8064	NR_107031	3	Non-coding	chr3:52846552 minus strand	1881268
MIR8076	NR_107043	3	Non-coding	chr3:113432200 minus strand	1881269
MIR885	NR_030614	3	Non-coding	chr3:10394562 minus strand	1881270
MIR922	NR_030627	3	Non-coding	chr3:197674576 minus strand	1881271
MIR944	NR_030642	3	Non-coding	chr3:189829921 plus strand	1881272
MIRLET7G	NR_029660	3	Non-coding	chr3:52268361 minus strand	1881273
MOBP	NR_003090	3	Non-coding	chr3:39467572 plus strand	1881274
MOBP	NR_103504	3	Non-coding	chr3:39467572 plus strand	1881274
MOBP	NR_103505	3	Non-coding	chr3:39467572 plus strand	1881274
MOBP	NR_103506	3	Non-coding	chr3:39467572 plus strand	1881274
MTHFD2P1	NR_077228	3	Non-coding	chr3:95683193 minus strand	1881275
MYLK-AS1	NR_038266	3	Non-coding	chr3:123585512 plus strand	1881276
MYLK-AS1	NR_121654	3	Non-coding	chr3:123585512 plus strand	1881276
MYLK-AS2	NR_046629	3	Non-coding	chr3:123689643 plus strand	1881277
MYNN	NR_033702	3	Non-coding	chr3:169773064 plus strand	1881278
MYNN	NR_033703	3	Non-coding	chr3:169773064 plus strand	1881278
MYRIP	NR_104316	3	Non-coding	chr3:39809659 plus strand	1881279
NAALADL2-AS1	NR_046714	3	Non-coding	chr3:175776333 minus strand	1881280
NAALADL2-AS2	NR_046713	3	Non-coding	chr3:175271096 minus strand	1881281
NAALADL2-AS3	NR_046390	3	Non-coding	chr3:175115242 minus strand	1881282
NCBP2-AS2	NR_024388	3	Non-coding	chr3:196942622 plus strand	1881283
NCK1-AS1	NR_110175	3	Non-coding	chr3:136862063 minus strand	1881284
NCK1-AS1	NR_110176	3	Non-coding	chr3:136862063 minus strand	1881284

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NCK1-AS1	NR_110177	3	Non-coding	chr3:136862063 minus strand	1881284
NLGN1-AS1	NR_046664	3	Non-coding	chr3:173920796 minus strand	1881285
NPHP3-ACAD11	NR_037804	3	Non-coding	chr3:132722459 minus strand	1881286
NPHP3-AS1	NR_002811	3	Non-coding	chr3:132722341 plus strand	1881287
NR1D2	NR_110524	3	Non-coding	chr3:23945259 plus strand	1881288
NRADDP	NR_024046	3	Non-coding	chr3:47011541 plus strand	1881289
NUDT16	NR_033268	3	Non-coding	chr3:131381780 plus strand	1881290
NUDT16P1	NR_002949	3	Non-coding	chr3:131361844 plus strand	1881291
NUDT16P1	NR_027766	3	Non-coding	chr3:131361873 plus strand	1881292
NUP210P1	NR_034158	3	Non-coding	chr3:126662080 plus strand	1881293
OPA1-AS1	NR_046634	3	Non-coding	chr3:193627332 minus strand	1881294
OSBPL10-AS1	NR_049771	3	Non-coding	chr3:31704212 plus strand	1881295
OXSM	NR_026937	3	Non-coding	chr3:25790071 plus strand	1881296
PA2G4P4	NR_003284	3	Non-coding	chr3:156812021 minus strand	1881297
PAQR9-AS1	NR_125393	3	Non-coding	chr3:142964057 plus strand	1881298
PDCL3P4	NR_002941	3	Non-coding	chr3:101712433 plus strand	1881299
PDHB	NR_033384	3	Non-coding	chr3:58433839 minus strand	1881300
PDIA5	NR_028444	3	Non-coding	chr3:123067008 plus strand	1881301
PDZRN3-AS1	NR_046681	3	Non-coding	chr3:73623567 plus strand	1881302
PISRT1	NR_027070	3	Non-coding	chr3:139233522 minus strand	1881303
PLA1A	NR_120610	3	Non-coding	chr3:119597847 plus strand	1881304
PLCD1	NR_024071	3	Non-coding	chr3:38024787 minus strand	1881305
PLCXD2-AS1	NR_046733	3	Non-coding	chr3:111677433 minus strand	1881306
POGLUT1	NR_024265	3	Non-coding	chr3:119468937 plus strand	1881307
PP2D1	NR_027694	3	Non-coding	chr3:20012273 minus strand	1881308
PQLC2L	NR_024016	3	Non-coding	chr3:157543343 plus strand	1881309
PRICKLE2-AS1	NR_045697	3	Non-coding	chr3:64067963 plus strand	1881310

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PRICKLE2-AS2	NR_046701	3	Non-coding	chr3:64103469 plus strand	1881311
PRICKLE2-AS3	NR_046702	3	Non-coding	chr3:64187543 plus strand	1881312
PRKAR2A-AS1	NR_109996	3	Non-coding	chr3:48847936 plus strand	1881313
PRKAR2A-AS1	NR_109997	3	Non-coding	chr3:48847936 plus strand	1881313
PRRT3-AS1	NR_046734	3	Non-coding	chr3:9947403 plus strand	1881314
PSMD6-AS2	NR_038286	3	Non-coding	chr3:64004021 plus strand	1881315
PTPRG-AS1	NR_038281	3	Non-coding	chr3:62318947 minus strand	1881316
PTPRG-AS1	NR_038282	3	Non-coding	chr3:62318947 minus strand	1881316
PTPRG-AS1	NR_038283	3	Non-coding	chr3:62318947 minus strand	1881316
PVRL3-AS1	NR_045114	3	Non-coding	chr3:111069959 minus strand	1881317
QARS	NR_073590	3	Non-coding	chr3:49105129 minus strand	1881318
RARB	NR_110892	3	Non-coding	chr3:25428262 plus strand	1881319
RARB	NR_110893	3	Non-coding	chr3:25428262 plus strand	1881319
RASSF1-AS1	NR_109831	3	Non-coding	chr3:50337510 plus strand	1881320
RBM5	NR_036627	3	Non-coding	chr3:50088907 plus strand	1881321
RBM5-AS1	NR_045388	3	Non-coding	chr3:50100988 minus strand	1881322
RBMS3-AS1	NR_046556	3	Non-coding	chr3:29934156 minus strand	1881323
RBMS3-AS3	NR_109804	3	Non-coding	chr3:29280939 minus strand	1881324
RBSN	NR_126155	3	Non-coding	chr3:15099157 minus strand	1881325
RNF7	NR_037702	3	Non-coding	chr3:141738208 plus strand	1881326
RNF7	NR_037703	3	Non-coding	chr3:141738208 plus strand	1881326
RNU6-1	NR_004394	3	Non-coding	chr3:181231736 plus strand	1881327
RNU6-2	NR_125730	3	Non-coding	chr3:181231736 plus strand	1881328
RNU6-26P	NR_046483	3	Non-coding	chr3:98805084 minus strand	1881329
RNU6-42P	NR_028373	3	Non-coding	chr3:196785086 minus strand	1881330
RNU6-7	NR_104084	3	Non-coding	chr3:181231736 plus strand	1881331
RNU6-8	NR_104088	3	Non-coding	chr3:181231736 plus strand	1881332

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RNU6-9	NR_104080	3	Non-coding	chr3:181231736 plus strand	1881333
RPL32P3	NR_003111	3	Non-coding	chr3:129399439 minus strand	1881334
RPP14	NR_049755	3	Non-coding	chr3:58306244 plus strand	1881335
RPP14	NR_049756	3	Non-coding	chr3:58306244 plus strand	1881335
RPP14	NR_049757	3	Non-coding	chr3:58306244 plus strand	1881335
RPP14	NR_049758	3	Non-coding	chr3:58306244 plus strand	1881335
RUVBL1-AS1	NR_046645	3	Non-coding	chr3:128075809 plus strand	1881336
SATB1-AS1	NR_125803	3	Non-coding	chr3:18445236 plus strand	1881337
SCARNA7	NR_003001	3	Non-coding	chr3:160515236 minus strand	1881338
SDHAP1	NR_003264	3	Non-coding	chr3:195990279 minus strand	1881339
SDHAP2	NR_003265	3	Non-coding	chr3:195658038 plus strand	1881340
SEMA3B	NR_110697	3	Non-coding	chr3:50273118 plus strand	1881341
SEMA3B-AS1	NR_110702	3	Non-coding	chr3:50267371 minus strand	1881342
SEMA5B	NR_046079	3	Non-coding	chr3:123028605 minus strand	1881343
SETMAR	NR_075073	3	Non-coding	chr3:4303303 plus strand	1881344
SETMAR	NR_024022	3	Non-coding	chr3:4303612 plus strand	1881345
SGOL1-AS1	NR_046723	3	Non-coding	chr3:20174243 plus strand	1881346
SH3BP5-AS1	NR_046084	3	Non-coding	chr3:15254183 plus strand	1881347
SLC25A26	NR_028475	3	Non-coding	chr3:66220741 plus strand	1881348
SLC6A1-AS1	NR_046647	3	Non-coding	chr3:11019224 minus strand	1881349
SLC6A6	NR_103507	3	Non-coding	chr3:14402575 plus strand	1881350
SLC9A9-AS1	NR_048544	3	Non-coding	chr3:143342245 plus strand	1881351
SNAR-I	NR_024343	3	Non-coding	chr3:190877929 plus strand	1881352
SNORA4	NR_002588	3	Non-coding	chr3:186787612 plus strand	1881353
SNORA58	NR_002985	3	Non-coding	chr3:131479233 minus strand	1881354
SNORA6	NR_002325	3	Non-coding	chr3:39408390 plus strand	1881355
SNORA62	NR_002324	3	Non-coding	chr3:39411053 plus strand	1881356

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SNORA63	NR_002586	3	Non-coding	chr3:186787298 plus strand	1881357
SNORA7A	NR_002582	3	Non-coding	chr3:12840450 minus strand	1881358
SNORA7B	NR_002992	3	Non-coding	chr3:129397348 minus strand	1881359
SNORA81	NR_002989	3	Non-coding	chr3:186786674 plus strand	1881360
SNORD19	NR_003047	3	Non-coding	chr3:52689239 plus strand	1881361
SNORD19B	NR_003687	3	Non-coding	chr3:52690737 plus strand	1881362
SNORD2	NR_002587	3	Non-coding	chr3:186784795 plus strand	1881363
SNORD66	NR_003055	3	Non-coding	chr3:184325695 plus strand	1881364
SNORD69	NR_003057	3	Non-coding	chr3:52692735 plus strand	1881365
SNRK-AS1	NR_046757	3	Non-coding	chr3:43351962 minus strand	1881366
SNX4	NR_073435	3	Non-coding	chr3:125520214 minus strand	1881367
SOX2-OT	NR_075091	3	Non-coding	chr3:181056679 plus strand	1881368
SOX2-OT	NR_075092	3	Non-coding	chr3:181056679 plus strand	1881368
SOX2-OT	NR_075093	3	Non-coding	chr3:181175143 plus strand	1881369
SOX2-OT	NR_004053	3	Non-coding	chr3:181610333 plus strand	1881370
SOX2-OT	NR_075089	3	Non-coding	chr3:181610333 plus strand	1881370
SOX2-OT	NR_075090	3	Non-coding	chr3:181610333 plus strand	1881370
SRGAP3-AS3	NR_103443	3	Non-coding	chr3:9216894 plus strand	1881371
SSUH2	NR_046358	3	Non-coding	chr3:8644798 minus strand	1881372
ST3GAL6-AS1	NR_046683	3	Non-coding	chr3:98732651 minus strand	1881373
SUCLG2-AS1	NR_109992	3	Non-coding	chr3:67654696 plus strand	1881374
SUCLG2-AS1	NR_109993	3	Non-coding	chr3:67654696 plus strand	1881374
SYNPR-AS1	NR_046677	3	Non-coding	chr3:63550051 minus strand	1881375
TADA3	NR_103488	3	Non-coding	chr3:9793011 minus strand	1881376
TAMM41	NR_104314	3	Non-coding	chr3:11846919 minus strand	1881377
TERC	NR_001566	3	Non-coding	chr3:169765060 minus strand	1881378
TEX264	NR_024012	3	Non-coding	chr3:51671174 plus strand	1881379

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TEX264	NR_103462	3	Non-coding	chr3:51671626 plus strand	1881380
TEX264	NR_103463	3	Non-coding	chr3:51671626 plus strand	1881380
THOC7-AS1	NR_104326	3	Non-coding	chr3:63860644 plus strand	1881381
THRB-AS1	NR_046244	3	Non-coding	chr3:24494086 plus strand	1881382
THUMPD3-AS1	NR_027007	3	Non-coding	chr3:9397490 minus strand	1881383
TIPARP-AS1	NR_027954	3	Non-coding	chr3:156675713 minus strand	1881384
TKT	NR_047580	3	Non-coding	chr3:53256114 minus strand	1881385
TM4SF19-AS1	NR_046724	3	Non-coding	chr3:196318331 plus strand	1881386
TM4SF19-AS1	NR_121665	3	Non-coding	chr3:196318331 plus strand	1881386
TM4SF19-TCTEX1D2	NR_037950	3	Non-coding	chr3:196338420 minus strand	1881387
TM4SF1-AS1	NR_046650	3	Non-coding	chr3:149377777 plus strand	1881388
TM4SF1-AS1	NR_109809	3	Non-coding	chr3:149377777 plus strand	1881388
TM4SF1-AS1	NR_109810	3	Non-coding	chr3:149377777 plus strand	1881388
TMCC1	NR_033361	3	Non-coding	chr3:129688732 minus strand	1881389
TMCC1-AS1	NR_037893	3	Non-coding	chr3:129893870 plus strand	1881390
TMEM108-AS1	NR_110812	3	Non-coding	chr3:133257121 minus strand	1881391
TMEM212-AS1	NR_046852	3	Non-coding	chr3:171900740 minus strand	1881392
TMEM30C	NR_028357	3	Non-coding	chr3:100185823 plus strand	1881393
TMEM30C	NR_028358	3	Non-coding	chr3:100185823 plus strand	1881393
TMEM39A	NR_073506	3	Non-coding	chr3:119463682 minus strand	1881394
TMEM44-AS1	NR_047573	3	Non-coding	chr3:194584267 plus strand	1881395
TMEM44-AS1	NR_047574	3	Non-coding	chr3:194584267 plus strand	1881395
TMEM44-AS1	NR_047575	3	Non-coding	chr3:194584267 plus strand	1881395
TMPRSS7	NR_026734	3	Non-coding	chr3:112039617 plus strand	1881396
TNFSF10	NR_033994	3	Non-coding	chr3:172523507 minus strand	1881397
TNIK	NR_027767	3	Non-coding	chr3:171460408 minus strand	1881398
TPRA1	NR_073377	3	Non-coding	chr3:127590759 minus strand	1881399

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TPRG1-AS1	NR_046873	3	Non-coding	chr3:188947639 minus strand	1881400
TPRG1-AS2	NR_046722	3	Non-coding	chr3:189240594 minus strand	1881401
TPRXL	NR_002223	3	Non-coding	chr3:13937306 plus strand	1881402
TTLL3	NR_037162	3	Non-coding	chr3:9809959 plus strand	1881403
TUSC7	NR_015391	3	Non-coding	chr3:116709787 plus strand	1881404
UBE2E1-AS1	NR_046652	3	Non-coding	chr3:23806905 minus strand	1881405
UMPS	NR_033434	3	Non-coding	chr3:124730365 plus strand	1881406
UMPS	NR_033437	3	Non-coding	chr3:124730365 plus strand	1881406
VENTXP7	NR_002311	3	Non-coding	chr3:21405725 plus strand	1881407
VIPR1-AS1	NR_046654	3	Non-coding	chr3:42532606 minus strand	1881408
WWTR1-AS1	NR_040250	3	Non-coding	chr3:149658209 plus strand	1881409
XPC	NR_027299	3	Non-coding	chr3:14178672 minus strand	1881410
XXYLT1-AS1	NR_104188	3	Non-coding	chr3:195094587 plus strand	1881411
XXYLT1-AS2	NR_102710	3	Non-coding	chr3:195147870 plus strand	1881412
XXYLT1-AS2	NR_102711	3	Non-coding	chr3:195147870 plus strand	1881412
ZBTB11-AS1	NR_024407	3	Non-coding	chr3:101676429 plus strand	1881413
ZBTB20	NR_121662	3	Non-coding	chr3:114900622 minus strand	1881414
ZBTB20-AS1	NR_038993	3	Non-coding	chr3:114351810 plus strand	1881415
ZBTB20-AS3	NR_126422	3	Non-coding	chr3:114873032 plus strand	1881416
ZBTB20-AS4	NR_046877	3	Non-coding	chr3:115100422 plus strand	1881417
ZIC4	NR_033118	3	Non-coding	chr3:147392430 minus strand	1881418
ZIC4	NR_033119	3	Non-coding	chr3:147392430 minus strand	1881418
ZIC4	NR_040762	3	Non-coding	chr3:147392430 minus strand	1881418
ZNF197-AS1	NR_046658	3	Non-coding	chr3:44624797 minus strand	1881419
ZNF385D-AS1	NR_046731	3	Non-coding	chr3:21542788 plus strand	1881420
ZNF385D-AS2	NR_046876	3	Non-coding	chr3:21957138 plus strand	1881421
ZNF619	NR_026746	3	Non-coding	chr3:40477112 plus strand	1881422

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ZXDC	NR_104249	3	Non-coding	chr3:126475919 minus strand	1881423
ABCA11P	NR_002451	4	Non-coding	chr4:474209 minus strand	1881424
AFAP1-AS1	NR_026892	4	Non-coding	chr4:7754089 plus strand	1881425
AGA	NR_033655	4	Non-coding	chr4:177442503 minus strand	1881426
ANAPC10	NR_046345	4	Non-coding	chr4:145098219 minus strand	1881427
ANXA2P1	NR_001562	4	Non-coding	chr4:153308811 minus strand	1881428
ARHGEF38-IT1	NR_046840	4	Non-coding	chr4:105561590 plus strand	1881429
ATP5I	NR_033743	4	Non-coding	chr4:674338 minus strand	1881430
BMPR1B-AS1	NR_121610	4	Non-coding	chr4:94757533 minus strand	1881431
C4orf26	NR_046430	4	Non-coding	chr4:75556047 plus strand	1881432
C4orf26	NR_046429	4	Non-coding	chr4:75556047 plus strand	1881432
C4orf46	NR_077235	4	Non-coding	chr4:158672255 minus strand	1881433
C4orf46	NR_077234	4	Non-coding	chr4:158672255 minus strand	1881433
CENPU	NR_104593	4	Non-coding	chr4:184734132 minus strand	1881434
CEP170P1	NR_003135	4	Non-coding	chr4:118516339 plus strand	1881435
CETN4P	NR_024041	4	Non-coding	chr4:122732458 minus strand	1881436
COL25A1	NR_045756	4	Non-coding	chr4:109302367 minus strand	1881437
CPEB2-AS1	NR_038857	4	Non-coding	chr4:15002045 minus strand	1881438
CSN1S2AP	NR_003720	4	Non-coding	chr4:70067385 plus strand	1881439
CSN1S2BP	NR_033311	4	Non-coding	chr4:70133603 plus strand	1881440
CTBP1-AS	NR_104331	4	Non-coding	chr4:1210119 plus strand	1881441
CTBP1-AS2	NR_033339	4	Non-coding	chr4:1249439 plus strand	1881442
CXCL1	NR_046035	4	Non-coding	chr4:73869391 plus strand	1881443
DANCR	NR_024031	4	Non-coding	chr4:52712453 plus strand	1881444
DBET	NR_121644	4	Non-coding	chr4:190064501 plus strand	1881445
DCLK2	NR_036614	4	Non-coding	chr4:150078273 plus strand	1881446
DEAR	NR_104273	4	Non-coding	chr4:152337654 plus strand	1881447

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DKFZP434I0714	NR_033797	4	Non-coding	chr4:152536263 plus strand	1881448
EDNRA	NR_045958	4	Non-coding	chr4:147480916 plus strand	1881449
ENOPH1	NR_120457	4	Non-coding	chr4:82430479 plus strand	1881450
EPGN	NR_073117	4	Non-coding	chr4:74308469 plus strand	1881451
EPGN	NR_073114	4	Non-coding	chr4:74308469 plus strand	1881451
EPHA5-AS1	NR_034138	4	Non-coding	chr4:65669960 plus strand	1881452
ETNPPL	NR_027474	4	Non-coding	chr4:108763079 minus strand	1881453
ETNPPL	NR_027475	4	Non-coding	chr4:108763079 minus strand	1881453
F11-AS1	NR_033900	4	Non-coding	chr4:186501058 minus strand	1881454
FAM114A1	NR_033290	4	Non-coding	chr4:38867732 plus strand	1881455
FAM13A-AS1	NR_002806	4	Non-coding	chr4:88709788 plus strand	1881456
FAM193A	NR_046336	4	Non-coding	chr4:2625431 plus strand	1881457
FAM193A	NR_046335	4	Non-coding	chr4:2625431 plus strand	1881457
FAM86EP	NR_024253	4	Non-coding	chr4:3955421 minus strand	1881458
FAM92A1P2	NR_003612	4	Non-coding	chr4:183037664 plus strand	1881459
FBXL5	NR_036464	4	Non-coding	chr4:15655412 minus strand	1881460
FLJ20021	NR_033874	4	Non-coding	chr4:101347776 plus strand	1881461
FLJ36777	NR_027441	4	Non-coding	chr4:7103376 minus strand	1881462
FLJ38576	NR_046264	4	Non-coding	chr4:186191490 minus strand	1881463
FTLP10	NR_015446	4	Non-coding	chr4:68182291 plus strand	1881464
GBA3	NR_102356	4	Non-coding	chr4:22692913 plus strand	1881465
GBA3	NR_102355	4	Non-coding	chr4:22692913 plus strand	1881465
GBA3	NR_102357	4	Non-coding	chr4:22714088 plus strand	1881466
GK3P	NR_026575	4	Non-coding	chr4:165280023 minus strand	1881467
GNPDA2	NR_073094	4	Non-coding	chr4:44726634 minus strand	1881468
GNPDA2	NR_073095	4	Non-coding	chr4:44726634 minus strand	1881468
GPM6A	NR_048571	4	Non-coding	chr4:176002691 minus strand	1881469

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GPR78	NR_045511	4	Non-coding	chr4:8580236 plus strand	1881470
GUSBP5	NR_003675	4	Non-coding	chr4:143559471 plus strand	1881471
HAND2-AS1	NR_003679	4	Non-coding	chr4:173530457 plus strand	1881472
HELQ	NR_123737	4	Non-coding	chr4:83455883 minus strand	1881473
HHIP-AS1	NR_037595	4	Non-coding	chr4:144646019 minus strand	1881474
HNRNPDL	NR_003249	4	Non-coding	chr4:82430225 minus strand	1881475
HTT-AS	NR_045414	4	Non-coding	chr4:3074514 minus strand	1881476
IDUA	NR_110313	4	Non-coding	chr4:986996 plus strand	1881477
IGFBP7-AS1	NR_034081	4	Non-coding	chr4:57109761 plus strand	1881478
IL15	NR_037840	4	Non-coding	chr4:141636595 plus strand	1881479
IL21-AS1	NR_104126	4	Non-coding	chr4:122618982 plus strand	1881480
KCNIP4-IT1	NR_002813	4	Non-coding	chr4:21853188 minus strand	1881481
KLF3-AS1	NR_026804	4	Non-coding	chr4:38664628 minus strand	1881482
KLHL8	NR_120447	4	Non-coding	chr4:87220608 minus strand	1881483
LAMTOR3	NR_024170	4	Non-coding	chr4:99894546 minus strand	1881484
LARP7	NR_049768	4	Non-coding	chr4:112636963 plus strand	1881485
LEF1-AS1	NR_029374	4	Non-coding	chr4:108167524 plus strand	1881486
LEF1-AS1	NR_029373	4	Non-coding	chr4:108172119 plus strand	1881487
LIN54	NR_110253	4	Non-coding	chr4:83010834 minus strand	1881488
LIN54	NR_110254	4	Non-coding	chr4:83010834 minus strand	1881488
LINC00290	NR_033918	4	Non-coding	chr4:181159149 minus strand	1881489
LINC00499	NR_051987	4	Non-coding	chr4:138309710 plus strand	1881490
LINC00504	NR_126435	4	Non-coding	chr4:14888169 minus strand	1881491
LINC00575	NR_024088	4	Non-coding	chr4:82621437 minus strand	1881492
LINC00575	NR_024087	4	Non-coding	chr4:82621437 minus strand	1881492
LINC00613	NR_103762	4	Non-coding	chr4:135888093 minus strand	1881493
LINC00613	NR_103763	4	Non-coding	chr4:135913680 minus strand	1881494

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LINC00616	NR_037866	4	Non-coding	chr4:138130685 minus strand	1881495
LINC00682	NR_104143	4	Non-coding	chr4:41882611 minus strand	1881496
LINC00955	NR_040045	4	Non-coding	chr4:3576868 plus strand	1881497
LINC00989	NR_038826	4	Non-coding	chr4:79492592 plus strand	1881498
LINC01060	NR_033869	4	Non-coding	chr4:188455577 plus strand	1881499
LINC01061	NR_037596	4	Non-coding	chr4:119410660 minus strand	1881500
LINC01085	NR_033931	4	Non-coding	chr4:14111967 plus strand	1881501
LINC01088	NR_038342	4	Non-coding	chr4:78971747 plus strand	1881502
LINC01091	NR_027105	4	Non-coding	chr4:123652784 plus strand	1881503
LINC01091	NR_027106	4	Non-coding	chr4:123774263 plus strand	1881504
LINC01093	NR_039977	4	Non-coding	chr4:184899461 minus strand	1881505
LINC01093	NR_039975	4	Non-coding	chr4:184899461 minus strand	1881505
LINC01093	NR_039976	4	Non-coding	chr4:184899461 minus strand	1881505
LINC01094	NR_038308	4	Non-coding	chr4:78645993 plus strand	1881506
LINC01094	NR_038307	4	Non-coding	chr4:78645993 plus strand	1881506
LINC01094	NR_038306	4	Non-coding	chr4:78645993 plus strand	1881506
LINC01094	NR_038305	4	Non-coding	chr4:78645993 plus strand	1881506
LINC01094	NR_038304	4	Non-coding	chr4:78645993 plus strand	1881506
LINC01094	NR_038303	4	Non-coding	chr4:78645993 plus strand	1881506
LINC01095	NR_038331	4	Non-coding	chr4:146121913 minus strand	1881507
LINC01096	NR_015450	4	Non-coding	chr4:13547824 minus strand	1881508
LINC01097	NR_034054	4	Non-coding	chr4:13531417 minus strand	1881509
LINC01098	NR_028342	4	Non-coding	chr4:177728756 plus strand	1881510
LINC01099	NR_108092	4	Non-coding	chr4:177907936 minus strand	1881511
LINC01099	NR_108093	4	Non-coding	chr4:177907936 minus strand	1881511
LINC01179	NR_121676	4	Non-coding	chr4:165684638 plus strand	1881512
LINC01182	NR_121681	4	Non-coding	chr4:13655178 plus strand	1881513

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LINC01207	NR_038834	4	Non-coding	chr4:164754130 plus strand	1881514
LINC01216	NR_046811	4	Non-coding	chr4:100675113 minus strand	1881515
LINC01256	NR_126401	4	Non-coding	chr4:132591088 plus strand	1881516
LINC01258	NR_110951	4	Non-coding	chr4:38523180 minus strand	1881517
LINC01262	NR_121679	4	Non-coding	chr4:189659605 plus strand	1881518
LINC01365	NR_110660	4	Non-coding	chr4:119804515 minus strand	1881519
LINC01378	NR_125757	4	Non-coding	chr4:117428397 plus strand	1881520
LINC01396	NR_125765	4	Non-coding	chr4:4844436 plus strand	1881521
LINC01587	NR_126519	4	Non-coding	chr4:5524568 plus strand	1881522
LINC01587	NR_126518	4	Non-coding	chr4:5525155 plus strand	1881523
LINC01587	NR_126517	4	Non-coding	chr4:5525155 plus strand	1881523
LNX1-AS1	NR_046622	4	Non-coding	chr4:53500076 plus strand	1881524
LNX1-AS2	NR_046827	4	Non-coding	chr4:53592955 plus strand	1881525
LOC100129917	NR_036512	4	Non-coding	chr4:781848 minus strand	1881526
LOC100129917	NR_036511	4	Non-coding	chr4:781848 minus strand	1881526
LOC100129931	NR_033828	4	Non-coding	chr4:7046231 minus strand	1881527
LOC100130872	NR_024569	4	Non-coding	chr4:1208962 minus strand	1881528
LOC100133461	NR_034136	4	Non-coding	chr4:3677855 minus strand	1881529
LOC100505912	NR_037877	4	Non-coding	chr4:22339666 minus strand	1881530
LOC100506085	NR_037878	4	Non-coding	chr4:169975902 minus strand	1881531
LOC100506122	NR_038838	4	Non-coding	chr4:171040601 plus strand	1881532
LOC100506272	NR_110436	4	Non-coding	chr4:187672641 minus strand	1881533
LOC100506444	NR_125918	4	Non-coding	chr4:53695900 plus strand	1881534
LOC100506746	NR_038841	4	Non-coding	chr4:86934850 minus strand	1881535
LOC100507053	NR_037884	4	Non-coding	chr4:99088856 plus strand	1881536
LOC100507388	NR_121617	4	Non-coding	chr4:74970362 minus strand	1881537
LOC100507487	NR_125882	4	Non-coding	chr4:128428015 plus strand	1881538

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LOC100507639	NR_121625	4	Non-coding	chr4:141332617 minus strand	1881539
LOC100996286	NR_121628	4	Non-coding	chr4:152100752 plus strand	1881540
LOC100996286	NR_121627	4	Non-coding	chr4:152100817 plus strand	1881541
LOC100996694	NR_121639	4	Non-coding	chr4:119939539 plus strand	1881542
LOC101060498	NR_121641	4	Non-coding	chr4:40307184 plus strand	1881543
LOC101060498	NR_121640	4	Non-coding	chr4:40316484 plus strand	1881544
LOC101927087	NR_110838	4	Non-coding	chr4:124558434 minus strand	1881545
LOC101927157	NR_125879	4	Non-coding	chr4:47914226 plus strand	1881546
LOC101927179	NR_125880	4	Non-coding	chr4:47831344 plus strand	1881547
LOC101927179	NR_125881	4	Non-coding	chr4:47831344 plus strand	1881547
LOC101927237	NR_110747	4	Non-coding	chr4:67422000 minus strand	1881548
LOC101927282	NR_110753	4	Non-coding	chr4:129771478 minus strand	1881549
LOC101927305	NR_125883	4	Non-coding	chr4:131764837 plus strand	1881550
LOC101927305	NR_125884	4	Non-coding	chr4:131764837 plus strand	1881550
LOC101927359	NR_125885	4	Non-coding	chr4:133149116 minus strand	1881551
LOC101927636	NR_125886	4	Non-coding	chr4:143912330 plus strand	1881552
LOC101927849	NR_125887	4	Non-coding	chr4:149154294 plus strand	1881553
LOC101928052	NR_125888	4	Non-coding	chr4:162022732 plus strand	1881554
LOC101928131	NR_121677	4	Non-coding	chr4:165743071 minus strand	1881555
LOC101928223	NR_125889	4	Non-coding	chr4:170226590 plus strand	1881556
LOC101928279	NR_125892	4	Non-coding	chr4:4761759 plus strand	1881557
LOC101928306	NR_125893	4	Non-coding	chr4:4920807 plus strand	1881558
LOC101928314	NR_125895	4	Non-coding	chr4:172688917 minus strand	1881559
LOC101928314	NR_125894	4	Non-coding	chr4:172726878 minus strand	1881560
LOC101928509	NR_125896	4	Non-coding	chr4:174220398 minus strand	1881561
LOC101928551	NR_125900	4	Non-coding	chr4:174831727 plus strand	1881562
LOC101928590	NR_125901	4	Non-coding	chr4:175790306 plus strand	1881563

【１５２６】

LOC101928622	NR_125902	4	Non-coding	chr4:34039893 minus strand	1881564
LOC101928809	NR_125906	4	Non-coding	chr4:75980789 plus strand	1881565
LOC101928851	NR_125907	4	Non-coding	chr4:57425871 plus strand	1881566
LOC101928942	NR_125908	4	Non-coding	chr4:81164939 plus strand	1881567
LOC101928978	NR_125909	4	Non-coding	chr4:84299169 minus strand	1881568
LOC101929019	NR_125910	4	Non-coding	chr4:12223450 plus strand	1881569
LOC101929064	NR_110879	4	Non-coding	chr4:86119805 plus strand	1881570
LOC101929095	NR_125911	4	Non-coding	chr4:15427914 minus strand	1881571
LOC101929123	NR_125919	4	Non-coding	chr4:17186057 minus strand	1881572
LOC101929194	NR_125920	4	Non-coding	chr4:92277302 minus strand	1881573
LOC101929199	NR_125921	4	Non-coding	chr4:27217478 plus strand	1881574
LOC101929210	NR_125922	4	Non-coding	chr4:94207556 minus strand	1881575
LOC101929353	NR_125924	4	Non-coding	chr4:100190032 plus strand	1881576
LOC101929448	NR_125925	4	Non-coding	chr4:103425041 plus strand	1881577
LOC101929468	NR_125926	4	Non-coding	chr4:104490964 plus strand	1881578
LOC101929529	NR_125927	4	Non-coding	chr4:105827172 minus strand	1881579
LOC101929577	NR_125928	4	Non-coding	chr4:106022478 minus strand	1881580
LOC101929595	NR_125929	4	Non-coding	chr4:107932119 minus strand	1881581
LOC101929741	NR_125930	4	Non-coding	chr4:118685341 minus strand	1881582
LOC101929762	NR_125931	4	Non-coding	chr4:119212644 minus strand	1881583
LOC102723704	NR_125932	4	Non-coding	chr4:102777036 plus strand	1881584
LOC102723766	NR_125933	4	Non-coding	chr4:184382306 minus strand	1881585
LOC102723766	NR_125934	4	Non-coding	chr4:184382306 minus strand	1881585
LOC102723778	NR_125935	4	Non-coding	chr4:31171143 plus strand	1881586
LOC102723828	NR_125936	4	Non-coding	chr4:31997378 plus strand	1881587
LOC102724776	NR_125937	4	Non-coding	chr4:155354215 plus strand	1881588
LOC152578	NR_040106	4	Non-coding	chr4:52789993 plus strand	1881589

【１５２７】

LOC256880	NR_125923	4	Non-coding	chr4:99950493 plus strand	1881590
LOC285484	NR_037863	4	Non-coding	chr4:6200732 plus strand	1881591
LOC339975	NR_038931	4	Non-coding	chr4:187505613 minus strand	1881592
LOC340017	NR_026992	4	Non-coding	chr4:157572489 plus strand	1881593
LOC344967	NR_027277	4	Non-coding	chr4:40057199 minus strand	1881594
LOC389247	NR_033995	4	Non-coding	chr4:183504515 minus strand	1881595
LOC401127	NR_026854	4	Non-coding	chr4:39480254 plus strand	1881596
LOC401134	NR_033976	4	Non-coding	chr4:65004500 minus strand	1881597
LOC439933	NR_122079	4	Non-coding	chr4:36244115 plus strand	1881598
LOC439933	NR_122080	4	Non-coding	chr4:36256517 plus strand	1881599
LOC441025	NR_033964	4	Non-coding	chr4:75354075 plus strand	1881600
LOC550113	NR_046116	4	Non-coding	chr4:68053507 plus strand	1881601
LOC644145	NR_003935	4	Non-coding	chr4:55820070 plus strand	1881602
LOC645513	NR_037630	4	Non-coding	chr4:119454782 plus strand	1881603
LOC728040	NR_046377	4	Non-coding	chr4:73508802 plus strand	1881604
LOC728175	NR_040108	4	Non-coding	chr4:184353977 minus strand	1881605
LOC729218	NR_109983	4	Non-coding	chr4:118591743 plus strand	1881606
LOC729218	NR_103825	4	Non-coding	chr4:118629928 plus strand	1881607
LOC731424	NR_037867	4	Non-coding	chr4:184847046 minus strand	1881608
LOC90768	NR_027107	4	Non-coding	chr4:182144515 minus strand	1881609
LOC90768	NR_125905	4	Non-coding	chr4:182144515 minus strand	1881609
LOC93622	NR_015433	4	Non-coding	chr4:6674093 plus strand	1881610
LPHN3-AS1	NR_110595	4	Non-coding	chr4:62161765 minus strand	1881611
LRPAP1	NR_110005	4	Non-coding	chr4:3532149 minus strand	1881612
MAEA	NR_123716	4	Non-coding	chr4:1289850 plus strand	1881613
MFAP3L	NR_125890	4	Non-coding	chr4:170033028 minus strand	1881614
MIR1243	NR_031641	4	Non-coding	chr4:113106862 plus strand	1881615

【１５２８】

MIR1255A	NR_031656	4	Non-coding	chr4:101330414 minus strand	1881616
MIR1255B1	NR_031701	4	Non-coding	chr4:36426428 minus strand	1881617
MIR1269A	NR_031673	4	Non-coding	chr4:66276823 plus strand	1881618
MIR1305	NR_031640	4	Non-coding	chr4:182169292 plus strand	1881619
MIR1973	NR_031737	4	Non-coding	chr4:116299724 plus strand	1881620
MIR2054	NR_031746	4	Non-coding	chr4:125507258 plus strand	1881621
MIR218-1	NR_029631	4	Non-coding	chr4:20528274 plus strand	1881622
MIR297	NR_030643	4	Non-coding	chr4:110860647 minus strand	1881623
MIR302A	NR_029835	4	Non-coding	chr4:112648251 minus strand	1881624
MIR302B	NR_029857	4	Non-coding	chr4:112648557 minus strand	1881625
MIR302C	NR_029858	4	Non-coding	chr4:112648430 minus strand	1881626
MIR302D	NR_029859	4	Non-coding	chr4:112648071 minus strand	1881627
MIR3138	NR_036090	4	Non-coding	chr4:10078692 minus strand	1881628
MIR3139	NR_036091	4	Non-coding	chr4:143343459 plus strand	1881629
MIR3140	NR_036092	4	Non-coding	chr4:152489416 minus strand	1881630
MIR367	NR_029860	4	Non-coding	chr4:112647941 minus strand	1881631
MIR3684	NR_037455	4	Non-coding	chr4:98997386 plus strand	1881632
MIR3688-1	NR_037459	4	Non-coding	chr4:159128894 minus strand	1881633
MIR3688-2	NR_039963	4	Non-coding	chr4:159128804 plus strand	1881634
MIR378D1	NR_039608	4	Non-coding	chr4:5923328 minus strand	1881635
MIR3945	NR_037510	4	Non-coding	chr4:184851110 minus strand	1881636
MIR4274	NR_036238	4	Non-coding	chr4:7460027 plus strand	1881637
MIR4275	NR_036237	4	Non-coding	chr4:28819581 plus strand	1881638
MIR4276	NR_036236	4	Non-coding	chr4:174423794 plus strand	1881639
MIR4449	NR_039651	4	Non-coding	chr4:52712681 plus strand	1881640
MIR4450	NR_039654	4	Non-coding	chr4:76573567 plus strand	1881641
MIR4451	NR_039656	4	Non-coding	chr4:85722467 plus strand	1881642

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MIR4452	NR_039657	4	Non-coding	chr4:86542552 minus strand	1881643
MIR4453	NR_039658	4	Non-coding	chr4:152536427 plus strand	1881644
MIR4454	NR_039659	4	Non-coding	chr4:163093628 minus strand	1881645
MIR4455	NR_039660	4	Non-coding	chr4:184938440 minus strand	1881646
MIR4798	NR_039961	4	Non-coding	chr4:7310449 plus strand	1881647
MIR4799	NR_039962	4	Non-coding	chr4:147782594 plus strand	1881648
MIR4800	NR_039964	4	Non-coding	chr4:2250156 minus strand	1881649
MIR4801	NR_039965	4	Non-coding	chr4:37241991 minus strand	1881650
MIR4802	NR_039966	4	Non-coding	chr4:40502119 minus strand	1881651
MIR5091	NR_049814	4	Non-coding	chr4:13627864 plus strand	1881652
MIR5096	NR_039973	4	Non-coding	chr4:78820751 plus strand	1881653
MIR548AG1	NR_039652	4	Non-coding	chr4:60922618 plus strand	1881654
MIR548AH	NR_039655	4	Non-coding	chr4:76575550 plus strand	1881655
MIR548G	NR_031662	4	Non-coding	chr4:147344717 minus strand	1881656
MIR548I2	NR_031688	4	Non-coding	chr4:9556316 minus strand	1881657
MIR548T	NR_036093	4	Non-coding	chr4:173268159 plus strand	1881658
MIR5591	NR_049857	4	Non-coding	chr4:39411909 plus strand	1881659
MIR5705	NR_049891	4	Non-coding	chr4:87300583 minus strand	1881660
MIR571	NR_030297	4	Non-coding	chr4:350156 plus strand	1881661
MIR572	NR_030298	4	Non-coding	chr4:11368826 plus strand	1881662
MIR573	NR_030299	4	Non-coding	chr4:24520290 minus strand	1881663
MIR574	NR_030300	4	Non-coding	chr4:38868031 plus strand	1881664
MIR575	NR_030301	4	Non-coding	chr4:82753430 minus strand	1881665
MIR576	NR_030302	4	Non-coding	chr4:109488697 plus strand	1881666
MIR577	NR_030303	4	Non-coding	chr4:114656758 plus strand	1881667
MIR578	NR_030304	4	Non-coding	chr4:165386241 plus strand	1881668
MIR6082	NR_106730	4	Non-coding	chr4:171186183 plus strand	1881669

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MIR7641-2	NR_106988	4	Non-coding	chr4:56097428 plus strand	1881670
MIR7849	NR_107003	4	Non-coding	chr4:146408582 plus strand	1881671
MIR7978	NR_107018	4	Non-coding	chr4:21464758 minus strand	1881672
MIR8053	NR_107020	4	Non-coding	chr4:47652668 plus strand	1881673
MIR8066	NR_107033	4	Non-coding	chr4:101240872 minus strand	1881674
MIR8082	NR_107049	4	Non-coding	chr4:113152281 plus strand	1881675
MIR943	NR_030641	4	Non-coding	chr4:1986477 minus strand	1881676
MIR95	NR_029511	4	Non-coding	chr4:8005381 minus strand	1881677
MND1	NR_045605	4	Non-coding	chr4:153344648 plus strand	1881678
NCAPG	NR_073124	4	Non-coding	chr4:17810812 plus strand	1881679
NFXL1	NR_103795	4	Non-coding	chr4:47914667 minus strand	1881680
NMU	NR_120489	4	Non-coding	chr4:55636698 minus strand	1881681
NOP14-AS1	NR_015453	4	Non-coding	chr4:2935550 plus strand	1881682
NUP54	NR_103781	4	Non-coding	chr4:76148515 minus strand	1881683
NUP54	NR_103782	4	Non-coding	chr4:76148515 minus strand	1881683
NUP54	NR_103780	4	Non-coding	chr4:76148515 minus strand	1881683
OCIAD2	NR_104589	4	Non-coding	chr4:48906828 minus strand	1881684
PACRGL	NR_047661	4	Non-coding	chr4:20700412 plus strand	1881685
PCAT4	NR_026555	4	Non-coding	chr4:79827470 plus strand	1881686
PCNAP1	NR_028270	4	Non-coding	chr4:99161647 minus strand	1881687
PDGFC	NR_036641	4	Non-coding	chr4:156971394 minus strand	1881688
PDLIM3	NR_047562	4	Non-coding	chr4:185535558 minus strand	1881689
PDLIM5	NR_046186	4	Non-coding	chr4:94451856 plus strand	1881690
PIGG	NR_110293	4	Non-coding	chr4:499199 plus strand	1881691
PP12613	NR_024365	4	Non-coding	chr4:121764584 plus strand	1881692
PPBPP2	NR_026769	4	Non-coding	chr4:74055399 minus strand	1881693
PROL1	NR_126503	4	Non-coding	chr4:70397881 plus strand	1881694

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RCHY1	NR_103725	4	Non-coding	chr4:75509296 minus strand	1881695
RCHY1	NR_037913	4	Non-coding	chr4:75514430 minus strand	1881696
RCHY1	NR_103724	4	Non-coding	chr4:75514430 minus strand	1881696
RCHY1	NR_103723	4	Non-coding	chr4:75514430 minus strand	1881696
RCHY1	NR_037914	4	Non-coding	chr4:75514430 minus strand	1881696
RNU6-33P	NR_046491	4	Non-coding	chr4:88684954 minus strand	1881697
RNU6-34P	NR_046492	4	Non-coding	chr4:96152403 minus strand	1881698
RNU6-35P	NR_046493	4	Non-coding	chr4:109992324 plus strand	1881699
RPL21P44	NR_027153	4	Non-coding	chr4:53987282 minus strand	1881700
RPL34-AS1	NR_026968	4	Non-coding	chr4:108620457 minus strand	1881701
RXFP1	NR_045584	4	Non-coding	chr4:158521713 plus strand	1881702
RXFP1	NR_045583	4	Non-coding	chr4:158521713 plus strand	1881702
RXFP1	NR_045582	4	Non-coding	chr4:158521713 plus strand	1881702
RXFP1	NR_045581	4	Non-coding	chr4:158521713 plus strand	1881702
RXFP1	NR_045579	4	Non-coding	chr4:158521713 plus strand	1881702
RXFP1	NR_045580	4	Non-coding	chr4:158521713 plus strand	1881702
SCARNA22	NR_003004	4	Non-coding	chr4:1974635 plus strand	1881703
SCOC-AS1	NR_033939	4	Non-coding	chr4:140373392 minus strand	1881704
SEC24B-AS1	NR_039978	4	Non-coding	chr4:109433817 minus strand	1881705
SEPSECS-AS1	NR_037934	4	Non-coding	chr4:25160671 plus strand	1881706
SLC7A11-AS1	NR_038380	4	Non-coding	chr4:138089013 plus strand	1881707
SLC9B1	NR_047515	4	Non-coding	chr4:103019739 minus strand	1881708
SLC9B1	NR_047513	4	Non-coding	chr4:103019739 minus strand	1881708
SLED1	NR_003542	4	Non-coding	chr4:184799046 minus strand	1881709
SLIT2-IT1	NR_037876	4	Non-coding	chr4:20392188 plus strand	1881710
SMAD1-AS1	NR_126371	4	Non-coding	chr4:145517194 minus strand	1881711
SMAD1-AS2	NR_108077	4	Non-coding	chr4:145502980 minus strand	1881712

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SMARCA5-AS1	NR_104027	4	Non-coding	chr4:143514837 minus strand	1881713
SMARCAD1	NR_045644	4	Non-coding	chr4:94208083 plus strand	1881714
SNCA-AS1	NR_045481	4	Non-coding	chr4:89836400 plus strand	1881715
SNHG8	NR_034010	4	Non-coding	chr4:118278761 plus strand	1881716
SNHG8	NR_003584	4	Non-coding	chr4:118278761 plus strand	1881716
SNHG8	NR_034011	4	Non-coding	chr4:118278761 plus strand	1881716
SNORA24	NR_002963	4	Non-coding	chr4:118279189 plus strand	1881717
SNORA26	NR_003016	4	Non-coding	chr4:52713248 plus strand	1881718
SNORD73A	NR_000007	4	Non-coding	chr4:151103826 plus strand	1881719
SPATA18	NR_123728	4	Non-coding	chr4:52051330 plus strand	1881720
SPINK2	NR_073419	4	Non-coding	chr4:56821473 minus strand	1881721
SPINK2	NR_073417	4	Non-coding	chr4:56821473 minus strand	1881721
SPINK2	NR_073418	4	Non-coding	chr4:56821869 minus strand	1881722
SRD5A3-AS1	NR_037969	4	Non-coding	chr4:55385580 minus strand	1881723
STPG2-AS1	NR_102713	4	Non-coding	chr4:97366925 plus strand	1881724
STX18-AS1	NR_037888	4	Non-coding	chr4:4542130 plus strand	1881725
STX18-IT1	NR_126434	4	Non-coding	chr4:4481700 minus strand	1881726
SYT14P1	NR_027094	4	Non-coding	chr4:68063297 minus strand	1881727
TAPT1-AS1	NR_027697	4	Non-coding	chr4:16226662 plus strand	1881728
TAPT1-AS1	NR_027696	4	Non-coding	chr4:16226662 plus strand	1881728
TET2-AS1	NR_126420	4	Non-coding	chr4:105352881 minus strand	1881729
THAP9-AS1	NR_034077	4	Non-coding	chr4:82900916 minus strand	1881730
THAP9-AS1	NR_034076	4	Non-coding	chr4:82900916 minus strand	1881730
THAP9-AS1	NR_034075	4	Non-coding	chr4:82900916 minus strand	1881730
TMED11P	NR_033768	4	Non-coding	chr4:1123164 minus strand	1881731
TMEM165	NR_073070	4	Non-coding	chr4:55395912 plus strand	1881732
TMPRSS11BNL	NR_104048	4	Non-coding	chr4:68218080 minus strand	1881733

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TMPRSS11GP	NR_033737	4	Non-coding	chr4:67997439 minus strand	1881734
TNRC18P1	NR_077215	4	Non-coding	chr4:140643080 minus strand	1881735
UBA6-AS1	NR_015439	4	Non-coding	chr4:67701277 plus strand	1881736
UCHL1-AS1	NR_102709	4	Non-coding	chr4:41256727 minus strand	1881737
UFSP2	NR_028085	4	Non-coding	chr4:185425985 minus strand	1881738
UGDH-AS1	NR_047679	4	Non-coding	chr4:39527838 plus strand	1881739
UGT2A3	NR_024010	4	Non-coding	chr4:68951791 minus strand	1881740
USP17L6P	NR_027279	4	Non-coding	chr4:9367873 plus strand	1881741
USP17L9P	NR_046416	4	Non-coding	chr4:9358381 plus strand	1881742
USP46-AS1	NR_125363	4	Non-coding	chr4:52659405 plus strand	1881743
WDFY3-AS2	NR_015359	4	Non-coding	chr4:84966817 plus strand	1881744
WWC2-AS1	NR_126473	4	Non-coding	chr4:183240634 minus strand	1881745
WWC2-AS2	NR_024008	4	Non-coding	chr4:183099199 minus strand	1881746
ZNF718	NR_110527	4	Non-coding	chr4:124475 plus strand	1881747
ZNF718	NR_110528	4	Non-coding	chr4:124475 plus strand	1881747
ZNF718	NR_110529	4	Non-coding	chr4:124475 plus strand	1881747
ZNF876P	NR_027481	4	Non-coding	chr4:212599 plus strand	1881748
AACSP1	NR_024035	5	Non-coding	chr5:178776276 minus strand	1881749
ADAMTS19-AS1	NR_125748	5	Non-coding	chr5:129460689 minus strand	1881750
ARHGAP26-AS1	NR_046680	5	Non-coding	chr5:142868910 minus strand	1881751
ARRDC3-AS1	NR_027435	5	Non-coding	chr5:91380346 plus strand	1881752
ATG12	NR_073603	5	Non-coding	chr5:115841851 minus strand	1881753
ATG12	NR_033363	5	Non-coding	chr5:115841851 minus strand	1881753
ATG12	NR_033362	5	Non-coding	chr5:115841851 minus strand	1881753
BRD9	NR_027633	5	Non-coding	chr5:892824 minus strand	1881754
C1QTNF3-AMACR	NR_037951	5	Non-coding	chr5:34124528 minus strand	1881755
C5orf38	NR_122126	5	Non-coding	chr5:2752130 plus strand	1881756

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C5orf38	NR_122125	5	Non-coding	chr5:2752130 plus strand	1881756
C5orf56	NR_045116	5	Non-coding	chr5:132410772 plus strand	1881757
C5orf64	NR_126525	5	Non-coding	chr5:61637780 plus strand	1881758
C5orf64	NR_126524	5	Non-coding	chr5:61637780 plus strand	1881758
C5orf64	NR_126523	5	Non-coding	chr5:61637780 plus strand	1881758
C5orf66-AS1	NR_105050	5	Non-coding	chr5:135040047 minus strand	1881759
C5orf66-AS1	NR_105049	5	Non-coding	chr5:135040047 minus strand	1881759
C5orf66-AS2	NR_037895	5	Non-coding	chr5:135248177 minus strand	1881760
CAST	NR_104285	5	Non-coding	chr5:96743539 plus strand	1881761
CCNO	NR_125348	5	Non-coding	chr5:55232991 minus strand	1881762
CCNO	NR_125346	5	Non-coding	chr5:55233717 minus strand	1881763
CCNO	NR_125347	5	Non-coding	chr5:55233717 minus strand	1881763
CKMT2-AS1	NR_034121	5	Non-coding	chr5:81301569 minus strand	1881764
CKMT2-AS1	NR_034122	5	Non-coding	chr5:81301569 minus strand	1881764
CKMT2-AS1	NR_034123	5	Non-coding	chr5:81301569 minus strand	1881764
CLTB	NR_045724	5	Non-coding	chr5:176416569 minus strand	1881765
CRSP8P	NR_003665	5	Non-coding	chr5:80351966 minus strand	1881766
CSF1R	NR_109969	5	Non-coding	chr5:150086640 minus strand	1881767
CTB-113P19.1	NR_109873	5	Non-coding	chr5:151676944 plus strand	1881768
CTB-174D11.1	NR_109897	5	Non-coding	chr5:169013226 plus strand	1881769
CTB-178M22.2	NR_109894	5	Non-coding	chr5:168232372 minus strand	1881770
CTB-7E3.1	NR_108020	5	Non-coding	chr5:166926370 minus strand	1881771
CTC-338M12.4	NR_109909	5	Non-coding	chr5:181246540 plus strand	1881772
CTC-436P18.1	NR_109908	5	Non-coding	chr5:61162315 plus strand	1881773
CTD-2151A2.1	NR_110562	5	Non-coding	chr5:99533989 plus strand	1881774
CTD-2194D22.4	NR_109912	5	Non-coding	chr5:1887330 plus strand	1881775
CTD-2201E9.1	NR_109935	5	Non-coding	chr5:9511332 plus strand	1881776

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CTD-2201I18.1	NR_109930	5	Non-coding	chr5:80083665 minus strand	1881777
CTD-2270F17.1	NR_109899	5	Non-coding	chr5:170389492 plus strand	1881778
CTD-2297D10.2	NR_109915	5	Non-coding	chr5:5140054 minus strand	1881779
CTD-2350J17.1	NR_109945	5	Non-coding	chr5:15615002 minus strand	1881780
CTD-3080P12.3	NR_109911	5	Non-coding	chr5:1178605 minus strand	1881781
CTNND2	NR_109988	5	Non-coding	chr5:11904043 minus strand	1881782
DCP2	NR_038352	5	Non-coding	chr5:112976709 plus strand	1881783
DDX46	NR_125341	5	Non-coding	chr5:134758733 plus strand	1881784
DHFR	NR_110936	5	Non-coding	chr5:80654981 minus strand	1881785
DMGDH	NR_104002	5	Non-coding	chr5:79069674 minus strand	1881786
DMGDH	NR_104003	5	Non-coding	chr5:79069674 minus strand	1881786
ECSCR	NR_121659	5	Non-coding	chr5:139462743 minus strand	1881787
EGFLAM-AS2	NR_102750	5	Non-coding	chr5:38403471 minus strand	1881788
EGFLAM-AS2	NR_102749	5	Non-coding	chr5:38403471 minus strand	1881788
EGFLAM-AS4	NR_046219	5	Non-coding	chr5:38290986 minus strand	1881789
ENC1	NR_046318	5	Non-coding	chr5:74641424 minus strand	1881790
EPB41L4A-AS1	NR_015370	5	Non-coding	chr5:112160525 plus strand	1881791
EPB41L4A-AS2	NR_027706	5	Non-coding	chr5:112419582 plus strand	1881792
EXOC3-AS1	NR_126522	5	Non-coding	chr5:443160 minus strand	1881793
FAM153C	NR_038353	5	Non-coding	chr5:178006965 plus strand	1881794
FAM169A	NR_046462	5	Non-coding	chr5:74866387 minus strand	1881795
FAM172A	NR_028080	5	Non-coding	chr5:94111699 minus strand	1881796
FAM173B	NR_047670	5	Non-coding	chr5:10249909 minus strand	1881797
FAM173B	NR_047669	5	Non-coding	chr5:10249909 minus strand	1881797
FAM173B	NR_047668	5	Non-coding	chr5:10249909 minus strand	1881797
FAM193B	NR_024019	5	Non-coding	chr5:177554547 minus strand	1881798
FASTKD3	NR_073608	5	Non-coding	chr5:7869037 minus strand	1881799

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FASTKD3	NR_036553	5	Non-coding	chr5:7869037 minus strand	1881799
FBLL1	NR_024356	5	Non-coding	chr5:168529576 plus strand	1881800
FGF10-AS1	NR_108034	5	Non-coding	chr5:44388731 plus strand	1881801
FLJ16171	NR_046113	5	Non-coding	chr5:174995731 minus strand	1881802
FLJ31104	NR_102755	5	Non-coding	chr5:55995166 plus strand	1881803
FLJ32255	NR_104643	5	Non-coding	chr5:42993333 minus strand	1881804
FLJ33360	NR_028351	5	Non-coding	chr5:6337292 minus strand	1881805
GDNF-AS1	NR_103441	5	Non-coding	chr5:37840437 plus strand	1881806
GDNF-AS1	NR_103442	5	Non-coding	chr5:37869906 plus strand	1881807
GFM2	NR_104006	5	Non-coding	chr5:74767371 minus strand	1881808
GMCL1P1	NR_003281	5	Non-coding	chr5:178187432 minus strand	1881809
GPR98	NR_003149	5	Non-coding	chr5:90558799 plus strand	1881810
GRIA1	NR_047578	5	Non-coding	chr5:153490523 plus strand	1881811
GTF2H2B	NR_033417	5	Non-coding	chr5:69560222 plus strand	1881812
GTF2H2B	NR_033417	5	Non-coding	chr5:70415369 plus strand	1881813
GUSBP1	NR_027028	5	Non-coding	chr5:21459479 plus strand	1881814
GUSBP1	NR_027026	5	Non-coding	chr5:21459479 plus strand	1881814
GUSBP1	NR_027027	5	Non-coding	chr5:21459479 plus strand	1881814
GUSBP3	NR_027386	5	Non-coding	chr5:69710527 minus strand	1881815
GUSBP3	NR_027386	5	Non-coding	chr5:70585802 minus strand	1881816
GUSBP9	NR_033968	5	Non-coding	chr5:70500903 minus strand	1881817
GUSBP9	NR_033968	5	Non-coding	chr5:70555323 minus strand	1881818
GUSBP9	NR_033968	5	Non-coding	chr5:71259295 minus strand	1881819
HEIH	NR_045680	5	Non-coding	chr5:180831618 minus strand	1881820
HINT1	NR_073488	5	Non-coding	chr5:131165348 minus strand	1881821
HINT1	NR_024610	5	Non-coding	chr5:131165348 minus strand	1881821
HINT1	NR_024611	5	Non-coding	chr5:131165348 minus strand	1881821

【１５３７】

HMMR-AS1	NR_109892	5	Non-coding	chr5:163494058 minus strand	1881822
HTR4	NR_104445	5	Non-coding	chr5:148654527 minus strand	1881823
IL6ST	NR_120480	5	Non-coding	chr5:55994993 minus strand	1881824
IL7R	NR_120485	5	Non-coding	chr5:35856874 plus strand	1881825
IPO11-LRRC70	NR_073584	5	Non-coding	chr5:62578734 plus strand	1881826
ITGA2	NR_073107	5	Non-coding	chr5:52989325 plus strand	1881827
ITGA2	NR_073106	5	Non-coding	chr5:52989325 plus strand	1881827
ITGA2	NR_073105	5	Non-coding	chr5:52989325 plus strand	1881827
ITGA2	NR_073104	5	Non-coding	chr5:52989325 plus strand	1881827
ITGA2	NR_073103	5	Non-coding	chr5:52989325 plus strand	1881827
JAKMIP2-AS1	NR_038902	5	Non-coding	chr5:147559993 plus strand	1881828
KCNN2	NR_103458	5	Non-coding	chr5:114433529 plus strand	1881829
KIAA1191	NR_109799	5	Non-coding	chr5:176361807 minus strand	1881830
KIAA1191	NR_109798	5	Non-coding	chr5:176361807 minus strand	1881830
KIAA1191	NR_109800	5	Non-coding	chr5:176361807 minus strand	1881830
KIAA1191	NR_109796	5	Non-coding	chr5:176361807 minus strand	1881830
KIAA1191	NR_109797	5	Non-coding	chr5:176361807 minus strand	1881830
LIFR-AS1	NR_103554	5	Non-coding	chr5:38556785 plus strand	1881831
LIFR-AS1	NR_103553	5	Non-coding	chr5:38556785 plus strand	1881831
LINC00461	NR_024384	5	Non-coding	chr5:88673328 minus strand	1881832
LINC00461	NR_024383	5	Non-coding	chr5:88678445 minus strand	1881833
LINC00461	NR_015436	5	Non-coding	chr5:88684803 minus strand	1881834
LINC00491	NR_103756	5	Non-coding	chr5:102671464 minus strand	1881835
LINC00491	NR_103755	5	Non-coding	chr5:102671464 minus strand	1881835
LINC00491	NR_103754	5	Non-coding	chr5:102671464 minus strand	1881835
LINC00491	NR_103753	5	Non-coding	chr5:102671464 minus strand	1881835
LINC00492	NR_047462	5	Non-coding	chr5:102581367 plus strand	1881836

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LINC00603	NR_104633	5	Non-coding	chr5:40052290 plus strand	1881837
LINC00847	NR_027183	5	Non-coding	chr5:180830956 plus strand	1881838
LINC00847	NR_045679	5	Non-coding	chr5:180830956 plus strand	1881838
LINC00847	NR_045678	5	Non-coding	chr5:180830956 plus strand	1881838
LINC00992	NR_046089	5	Non-coding	chr5:117415511 plus strand	1881839
LINC01017	NR_104618	5	Non-coding	chr5:3504004 minus strand	1881840
LINC01018	NR_024423	5	Non-coding	chr5:6582135 plus strand	1881841
LINC01018	NR_024424	5	Non-coding	chr5:6583275 plus strand	1881842
LINC01019	NR_033898	5	Non-coding	chr5:3536094 minus strand	1881843
LINC01020	NR_026994	5	Non-coding	chr5:5034358 plus strand	1881844
LINC01021	NR_038848	5	Non-coding	chr5:27472291 plus strand	1881845
LINC01023	NR_046368	5	Non-coding	chr5:108728261 minus strand	1881846
LINC01024	NR_102740	5	Non-coding	chr5:140108012 minus strand	1881847
LINC01024	NR_102739	5	Non-coding	chr5:140108012 minus strand	1881847
LINC01024	NR_102741	5	Non-coding	chr5:140108012 minus strand	1881847
LINC01033	NR_126379	5	Non-coding	chr5:54320943 plus strand	1881848
LINC01170	NR_125774	5	Non-coding	chr5:124438520 minus strand	1881849
LINC01184	NR_015360	5	Non-coding	chr5:128083074 minus strand	1881850
LINC01187	NR_108022	5	Non-coding	chr5:170199141 minus strand	1881851
LINC01194	NR_033383	5	Non-coding	chr5:12574856 plus strand	1881852
LINC01202	NR_126372	5	Non-coding	chr5:162001196 minus strand	1881853
LINC01265	NR_104631	5	Non-coding	chr5:38720273 minus strand	1881854
LINC01331	NR_126354	5	Non-coding	chr5:74536976 minus strand	1881855
LINC01333	NR_105010	5	Non-coding	chr5:74322485 plus strand	1881856
LINC01335	NR_105009	5	Non-coding	chr5:74308325 minus strand	1881857
LINC01336	NR_126375	5	Non-coding	chr5:75052643 minus strand	1881858
LINC01337	NR_125754	5	Non-coding	chr5:80622524 minus strand	1881859

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LINC01338	NR_105016	5	Non-coding	chr5:82859836 minus strand	1881860
LINC01339	NR_120601	5	Non-coding	chr5:90290071 minus strand	1881861
LINC01340	NR_105028	5	Non-coding	chr5:97504695 plus strand	1881862
LINC01366	NR_026945	5	Non-coding	chr5:170331392 plus strand	1881863
LINC01366	NR_108024	5	Non-coding	chr5:170331392 plus strand	1881863
LINC01366	NR_108025	5	Non-coding	chr5:170331392 plus strand	1881863
LINC01377	NR_104617	5	Non-coding	chr5:3177834 plus strand	1881864
LINC01386	NR_126410	5	Non-coding	chr5:73472966 minus strand	1881865
LINC01411	NR_125806	5	Non-coding	chr5:174336353 plus strand	1881866
LINC01470	NR_109877	5	Non-coding	chr5:152972349 minus strand	1881867
LINC01484	NR_108027	5	Non-coding	chr5:173746209 minus strand	1881868
LINC01485	NR_108028	5	Non-coding	chr5:173790942 minus strand	1881869
LINC01511	NR_125810	5	Non-coding	chr5:1380073 minus strand	1881870
LINC01554	NR_026936	5	Non-coding	chr5:95852231 plus strand	1881871
LINC01574	NR_108030	5	Non-coding	chr5:176743204 plus strand	1881872
LINCR-0003	NR_120607	5	Non-coding	chr5:57570341 plus strand	1881873
LOC100130744	NR_046285	5	Non-coding	chr5:14712693 plus strand	1881874
LOC100132062	NR_028325	5	Non-coding	chr5:181323505 plus strand	1881875
LOC100132287	NR_028322	5	Non-coding	chr5:181323505 plus strand	1881876
LOC100132356	NR_034127	5	Non-coding	chr5:43066971 minus strand	1881877
LOC100133050	NR_027503	5	Non-coding	chr5:100388254 minus strand	1881878
LOC100268168	NR_026683	5	Non-coding	chr5:172958775 minus strand	1881879
LOC100268168	NR_026682	5	Non-coding	chr5:172959368 minus strand	1881880
LOC100272216	NR_027439	5	Non-coding	chr5:69633201 minus strand	1881881
LOC100272216	NR_027439	5	Non-coding	chr5:70530454 minus strand	1881882
LOC100287592	NR_104653	5	Non-coding	chr5:50970187 minus strand	1881883
LOC100288152	NR_125375	5	Non-coding	chr5:473235 plus strand	1881884

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LOC100289230	NR_036530	5	Non-coding	chr5:98929133 plus strand	1881885
LOC100289673	NR_033175	5	Non-coding	chr5:109883181 plus strand	1881886
LOC100303749	NR_028474	5	Non-coding	chr5:65945573 minus strand	1881887
LOC100505625	NR_103771	5	Non-coding	chr5:6707711 minus strand	1881888
LOC100505658	NR_038333	5	Non-coding	chr5:141558310 plus strand	1881889
LOC100505811	NR_104609	5	Non-coding	chr5:118282573 plus strand	1881890
LOC100505878	NR_105017	5	Non-coding	chr5:86746817 plus strand	1881891
LOC100506406	NR_104630	5	Non-coding	chr5:35938800 plus strand	1881892
LOC100506526	NR_105000	5	Non-coding	chr5:61735698 minus strand	1881893
LOC100506548	NR_037665	5	Non-coding	chr5:40829142 minus strand	1881894
LOC100506639	NR_102752	5	Non-coding	chr5:43067022 plus strand	1881895
LOC100506674	NR_109865	5	Non-coding	chr5:44808793 minus strand	1881896
LOC100506674	NR_109864	5	Non-coding	chr5:44808793 minus strand	1881896
LOC100506674	NR_109863	5	Non-coding	chr5:44808793 minus strand	1881896
LOC100506674	NR_109862	5	Non-coding	chr5:44808793 minus strand	1881896
LOC100506688	NR_104615	5	Non-coding	chr5:997340 minus strand	1881897
LOC100506688	NR_104614	5	Non-coding	chr5:997340 minus strand	1881897
LOC100506858	NR_104616	5	Non-coding	chr5:2312201 minus strand	1881898
LOC100507387	NR_038402	5	Non-coding	chr5:176119548 plus strand	1881899
LOC100996325	NR_103444	5	Non-coding	chr5:612210 minus strand	1881900
LOC100996385	NR_103794	5	Non-coding	chr5:176062055 minus strand	1881901
LOC101926905	NR_105056	5	Non-coding	chr5:141078031 minus strand	1881902
LOC101926940	NR_104632	5	Non-coding	chr5:39520430 plus strand	1881903
LOC101926941	NR_120664	5	Non-coding	chr5:142325292 plus strand	1881904
LOC101926960	NR_104636	5	Non-coding	chr5:42175345 minus strand	1881905
LOC101926960	NR_104635	5	Non-coding	chr5:42175345 minus strand	1881905
LOC101926975	NR_110558	5	Non-coding	chr5:142745599 plus strand	1881906

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LOC101927023	NR_110559	5	Non-coding	chr5:112228282 plus strand	1881907
LOC101927100	NR_109875	5	Non-coding	chr5:115602154 plus strand	1881908
LOC101927100	NR_109874	5	Non-coding	chr5:115602154 plus strand	1881908
LOC101927115	NR_109876	5	Non-coding	chr5:151958897 plus strand	1881909
LOC101927190	NR_104675	5	Non-coding	chr5:116374570 minus strand	1881910
LOC101927280	NR_104610	5	Non-coding	chr5:118562117 minus strand	1881911
LOC101927379	NR_109881	5	Non-coding	chr5:122730560 minus strand	1881912
LOC101927421	NR_109882	5	Non-coding	chr5:125036830 plus strand	1881913
LOC101927460	NR_109887	5	Non-coding	chr5:125493260 plus strand	1881914
LOC101927488	NR_105039	5	Non-coding	chr5:126285175 minus strand	1881915
LOC101927488	NR_105040	5	Non-coding	chr5:126285175 minus strand	1881915
LOC101927697	NR_109888	5	Non-coding	chr5:158409773 minus strand	1881916
LOC101927740	NR_109890	5	Non-coding	chr5:159100482 plus strand	1881917
LOC101927766	NR_109891	5	Non-coding	chr5:159871384 minus strand	1881918
LOC101927835	NR_105064	5	Non-coding	chr5:164467402 minus strand	1881919
LOC101927934	NR_105045	5	Non-coding	chr5:134506551 plus strand	1881920
LOC101928445	NR_110560	5	Non-coding	chr5:179603741 minus strand	1881921
LOC101928505	NR_104668	5	Non-coding	chr5:57650659 plus strand	1881922
LOC101928539	NR_109900	5	Non-coding	chr5:57899162 minus strand	1881923
LOC101928569	NR_104669	5	Non-coding	chr5:58122341 minus strand	1881924
LOC101928600	NR_109904	5	Non-coding	chr5:58558243 minus strand	1881925
LOC101928651	NR_109910	5	Non-coding	chr5:61698432 minus strand	1881926
LOC101928769	NR_105001	5	Non-coding	chr5:66511604 minus strand	1881927
LOC101928794	NR_111908	5	Non-coding	chr5:67004154 minus strand	1881928
LOC101929034	NR_104602	5	Non-coding	chr5:1856568 minus strand	1881929
LOC101929153	NR_104619	5	Non-coding	chr5:4773480 plus strand	1881930
LOC101929154	NR_105012	5	Non-coding	chr5:77884655 plus strand	1881931

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LOC101929154	NR_105013	5	Non-coding	chr5:77958246 plus strand	1881932
LOC101929284	NR_109932	5	Non-coding	chr5:8839731 plus strand	1881933
LOC101929380	NR_105018	5	Non-coding	chr5:87120147 plus strand	1881934
LOC101929412	NR_104606	5	Non-coding	chr5:10502728 minus strand	1881935
LOC101929454	NR_109944	5	Non-coding	chr5:15266560 minus strand	1881936
LOC101929505	NR_104625	5	Non-coding	chr5:16441102 minus strand	1881937
LOC101929524	NR_109946	5	Non-coding	chr5:16615925 plus strand	1881938
LOC101929645	NR_109948	5	Non-coding	chr5:29065243 plus strand	1881939
LOC101929681	NR_104628	5	Non-coding	chr5:29395976 minus strand	1881940
LOC101929696	NR_105052	5	Non-coding	chr5:139746223 minus strand	1881941
LOC101929696	NR_105053	5	Non-coding	chr5:139746223 minus strand	1881941
LOC102467073	NR_104613	5	Non-coding	chr5:271524 minus strand	1881942
LOC102467080	NR_104659	5	Non-coding	chr5:54703324 minus strand	1881943
LOC102467080	NR_104658	5	Non-coding	chr5:54744258 minus strand	1881944
LOC102467081	NR_104662	5	Non-coding	chr5:55024169 minus strand	1881945
LOC102467147	NR_104664	5	Non-coding	chr5:56481769 minus strand	1881946
LOC102467212	NR_104670	5	Non-coding	chr5:103541985 minus strand	1881947
LOC102467213	NR_104671	5	Non-coding	chr5:107011014 minus strand	1881948
LOC102467214	NR_104672	5	Non-coding	chr5:112628435 plus strand	1881949
LOC102467216	NR_104673	5	Non-coding	chr5:112682888 minus strand	1881950
LOC102467217	NR_104674	5	Non-coding	chr5:115672652 minus strand	1881951
LOC102467223	NR_104678	5	Non-coding	chr5:116762209 minus strand	1881952
LOC102467224	NR_104997	5	Non-coding	chr5:117730360 plus strand	1881953
LOC102467225	NR_104998	5	Non-coding	chr5:118596187 plus strand	1881954
LOC102467226	NR_104999	5	Non-coding	chr5:121322549 plus strand	1881955
LOC102467655	NR_105003	5	Non-coding	chr5:68189875 plus strand	1881956
LOC102477328	NR_105007	5	Non-coding	chr5:72660669 minus strand	1881957

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LOC102503427	NR_105008	5	Non-coding	chr5:72557076 plus strand	1881958
LOC102546226	NR_105021	5	Non-coding	chr5:88439090 minus strand	1881959
LOC102546228	NR_105042	5	Non-coding	chr5:126179576 plus strand	1881960
LOC102546229	NR_105044	5	Non-coding	chr5:134435047 minus strand	1881961
LOC102546294	NR_105057	5	Non-coding	chr5:148383850 minus strand	1881962
LOC102546298	NR_105061	5	Non-coding	chr5:150485992 minus strand	1881963
LOC102546299	NR_105065	5	Non-coding	chr5:164470278 plus strand	1881964
LOC102577426	NR_108031	5	Non-coding	chr5:181191908 minus strand	1881965
LOC153684	NR_015447	5	Non-coding	chr5:43042133 plus strand	1881966
LOC202181	NR_026921	5	Non-coding	chr5:177672277 minus strand	1881967
LOC255187	NR_122044	5	Non-coding	chr5:149063316 plus strand	1881968
LOC257396	NR_034107	5	Non-coding	chr5:53109841 plus strand	1881969
LOC257396	NR_104654	5	Non-coding	chr5:53109841 plus strand	1881969
LOC285593	NR_027109	5	Non-coding	chr5:173579633 plus strand	1881970
LOC285593	NR_027108	5	Non-coding	chr5:173579633 plus strand	1881970
LOC285626	NR_037889	5	Non-coding	chr5:159331517 plus strand	1881971
LOC285627	NR_027110	5	Non-coding	chr5:159466276 minus strand	1881972
LOC285629	NR_027111	5	Non-coding	chr5:160938626 minus strand	1881973
LOC285692	NR_027112	5	Non-coding	chr5:9903824 minus strand	1881974
LOC285696	NR_027253	5	Non-coding	chr5:17217422 minus strand	1881975
LOC340074	NR_027127	5	Non-coding	chr5:135653935 minus strand	1881976
LOC340107	NR_037896	5	Non-coding	chr5:24840583 minus strand	1881977
LOC340113	NR_033832	5	Non-coding	chr5:32947442 plus strand	1881978
LOC389332	NR_024418	5	Non-coding	chr5:136193163 minus strand	1881979
LOC401177	NR_033975	5	Non-coding	chr5:17387310 minus strand	1881980
LOC441081	NR_073404	5	Non-coding	chr5:70486500 plus strand	1881981
LOC442132	NR_033906	5	Non-coding	chr5:7306714 minus strand	1881982

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LOC553103	NR_110997	5	Non-coding	chr5:132369916 minus strand	1881983
LOC642366	NR_046243	5	Non-coding	chr5:51383332 minus strand	1881984
LOC643201	NR_036494	5	Non-coding	chr5:176199295 minus strand	1881985
LOC644762	NR_110534	5	Non-coding	chr5:149932977 minus strand	1881986
LOC644936	NR_004845	5	Non-coding	chr5:80300478 minus strand	1881987
LOC647859	NR_026578	5	Non-coding	chr5:71093070 minus strand	1881988
LOC648987	NR_034086	5	Non-coding	chr5:43018811 minus strand	1881989
LOC648987	NR_104649	5	Non-coding	chr5:43018811 minus strand	1881989
LOC648987	NR_034085	5	Non-coding	chr5:43018811 minus strand	1881989
LOC648987	NR_104650	5	Non-coding	chr5:43019643 minus strand	1881990
LOC648987	NR_104651	5	Non-coding	chr5:43067439 minus strand	1881991
LOC728554	NR_003615	5	Non-coding	chr5:177875260 plus strand	1881992
LOC728613	NR_003713	5	Non-coding	chr5:1634005 minus strand	1881993
LOC729080	NR_033244	5	Non-coding	chr5:141896695 minus strand	1881994
LOC729506	NR_039984	5	Non-coding	chr5:8457564 minus strand	1881995
LOC731157	NR_105024	5	Non-coding	chr5:90409999 plus strand	1881996
LSP1P3	NR_033961	5	Non-coding	chr5:28926869 plus strand	1881997
LUCAT1	NR_103549	5	Non-coding	chr5:91314402 minus strand	1881998
LUCAT1	NR_103548	5	Non-coding	chr5:91314402 minus strand	1881998
LYRM7	NR_121658	5	Non-coding	chr5:131170913 plus strand	1881999
MEF2C-AS1	NR_109941	5	Non-coding	chr5:88883329 plus strand	1882000
MEF2C-AS1	NR_104031	5	Non-coding	chr5:88889307 plus strand	1882001
MEF2C-AS1	NR_109940	5	Non-coding	chr5:88889307 plus strand	1882001
MGC32805	NR_051996	5	Non-coding	chr5:122479087 minus strand	1882002
MIR103A1	NR_029520	5	Non-coding	chr5:168560973 minus strand	1882003
MIR103B1	NR_031721	5	Non-coding	chr5:168560903 plus strand	1882004
MIR1229	NR_031598	5	Non-coding	chr5:179798346 minus strand	1882005

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MIR1244-1	NR_036052	5	Non-coding	chr5:118974585 plus strand	1882006
MIR1244-2	NR_036262	5	Non-coding	chr5:118974585 plus strand	1882007
MIR1244-3	NR_036263	5	Non-coding	chr5:118974585 plus strand	1882008
MIR1244-4	NR_128710	5	Non-coding	chr5:118974585 plus strand	1882009
MIR1271	NR_031569	5	Non-coding	chr5:176367945 plus strand	1882010
MIR1289-2	NR_031621	5	Non-coding	chr5:133427706 minus strand	1882011
MIR1294	NR_031626	5	Non-coding	chr5:154347105 plus strand	1882012
MIR1303	NR_031638	5	Non-coding	chr5:154685775 plus strand	1882013
MIR143	NR_029684	5	Non-coding	chr5:149428917 plus strand	1882014
MIR143HG	NR_105059	5	Non-coding	chr5:149406844 plus strand	1882015
MIR143HG	NR_105060	5	Non-coding	chr5:149406844 plus strand	1882015
MIR145	NR_029686	5	Non-coding	chr5:149430645 plus strand	1882016
MIR146A	NR_029701	5	Non-coding	chr5:160485351 plus strand	1882017
MIR218-2	NR_029632	5	Non-coding	chr5:168768255 minus strand	1882018
MIR2277	NR_031754	5	Non-coding	chr5:93620788 minus strand	1882019
MIR3141	NR_036094	5	Non-coding	chr5:154596072 minus strand	1882020
MIR3142	NR_036095	5	Non-coding	chr5:160474401 plus strand	1882021
MIR340	NR_029885	5	Non-coding	chr5:180015397 minus strand	1882022
MIR3607	NR_037402	5	Non-coding	chr5:86620496 plus strand	1882023
MIR3650	NR_037423	5	Non-coding	chr5:38557561 minus strand	1882024
MIR3655	NR_037428	5	Non-coding	chr5:140647843 plus strand	1882025
MIR3660	NR_037433	5	Non-coding	chr5:90016720 minus strand	1882026
MIR3661	NR_037434	5	Non-coding	chr5:134225756 plus strand	1882027
MIR378A	NR_029870	5	Non-coding	chr5:149732824 plus strand	1882028
MIR378E	NR_039609	5	Non-coding	chr5:170028487 plus strand	1882029
MIR378H	NR_039667	5	Non-coding	chr5:154829457 plus strand	1882030
MIR3912	NR_037474	5	Non-coding	chr5:171386760 minus strand	1882031

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MIR3936	NR_037500	5	Non-coding	chr5:132365599 minus strand	1882032
MIR3977	NR_039773	5	Non-coding	chr5:82840154 plus strand	1882033
MIR4277	NR_036240	5	Non-coding	chr5:1708868 minus strand	1882034
MIR4278	NR_036242	5	Non-coding	chr5:6827921 minus strand	1882035
MIR4279	NR_036241	5	Non-coding	chr5:31936159 minus strand	1882036
MIR4280	NR_036243	5	Non-coding	chr5:87114954 minus strand	1882037
MIR4281	NR_036239	5	Non-coding	chr5:176629500 minus strand	1882038
MIR4454	NR_039659	5	Non-coding	chr5:12667858 plus strand	1882039
MIR4454	NR_039659	5	Non-coding	chr5:136301856 minus strand	1882040
MIR4454	NR_039659	5	Non-coding	chr5:7269354 minus strand	1882041
MIR4456	NR_039661	5	Non-coding	chr5:535882 minus strand	1882042
MIR4457	NR_039662	5	Non-coding	chr5:1309377 minus strand	1882043
MIR4458	NR_039663	5	Non-coding	chr5:8460924 plus strand	1882044
MIR4458HG	NR_039989	5	Non-coding	chr5:8457686 plus strand	1882045
MIR4459	NR_039664	5	Non-coding	chr5:54075583 minus strand	1882046
MIR4460	NR_039665	5	Non-coding	chr5:129397147 minus strand	1882047
MIR4461	NR_039666	5	Non-coding	chr5:134928038 plus strand	1882048
MIR449A	NR_029960	5	Non-coding	chr5:55170622 minus strand	1882049
MIR449B	NR_030387	5	Non-coding	chr5:55170742 minus strand	1882050
MIR449C	NR_031572	5	Non-coding	chr5:55172353 minus strand	1882051
MIR4633	NR_039776	5	Non-coding	chr5:129097687 plus strand	1882052
MIR4634	NR_039777	5	Non-coding	chr5:174751733 plus strand	1882053
MIR4635	NR_039778	5	Non-coding	chr5:1062974 minus strand	1882054
MIR4636	NR_039779	5	Non-coding	chr5:9053895 minus strand	1882055
MIR4637	NR_039780	5	Non-coding	chr5:14826012 minus strand	1882056
MIR4638	NR_039781	5	Non-coding	chr5:181222633 minus strand	1882057
MIR4803	NR_039967	5	Non-coding	chr5:72169466 plus strand	1882058

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MIR4804	NR_039968	5	Non-coding	chr5:72878590 plus strand	1882059
MIR5003	NR_049799	5	Non-coding	chr5:172662164 plus strand	1882060
MIR5197	NR_049829	5	Non-coding	chr5:143679859 plus strand	1882061
MIR548AE2	NR_039639	5	Non-coding	chr5:58530109 minus strand	1882062
MIR548F3	NR_031644	5	Non-coding	chr5:110513915 minus strand	1882063
MIR548P	NR_031686	5	Non-coding	chr5:100816565 minus strand	1882064
MIR5687	NR_049869	5	Non-coding	chr5:55508926 minus strand	1882065
MIR5692C1	NR_049867	5	Non-coding	chr5:135803075 minus strand	1882066
MIR5706	NR_049892	5	Non-coding	chr5:119154636 plus strand	1882067
MIR579	NR_030305	5	Non-coding	chr5:32394475 minus strand	1882068
MIR580	NR_030306	5	Non-coding	chr5:36147988 minus strand	1882069
MIR581	NR_030307	5	Non-coding	chr5:53951599 minus strand	1882070
MIR582	NR_030308	5	Non-coding	chr5:59703703 minus strand	1882071
MIR583	NR_030309	5	Non-coding	chr5:96079137 plus strand	1882072
MIR584	NR_030310	5	Non-coding	chr5:149062409 minus strand	1882073
MIR585	NR_030311	5	Non-coding	chr5:169263694 minus strand	1882074
MIR6075	NR_106723	5	Non-coding	chr5:1510856 minus strand	1882075
MIR6131	NR_106747	5	Non-coding	chr5:10478036 plus strand	1882076
MIR6499	NR_106752	5	Non-coding	chr5:151522148 minus strand	1882077
MIR6830	NR_106888	5	Non-coding	chr5:132217918 minus strand	1882078
MIR6831	NR_106889	5	Non-coding	chr5:140563751 minus strand	1882079
MIR7641-2	NR_106988	5	Non-coding	chr5:34802317 plus strand	1882080
MIR8056	NR_107023	5	Non-coding	chr5:173347454 plus strand	1882081
MIR8089	NR_107056	5	Non-coding	chr5:181043484 minus strand	1882082
MIR874	NR_030588	5	Non-coding	chr5:137647649 minus strand	1882083
MIR887	NR_030616	5	Non-coding	chr5:15935181 plus strand	1882084
MIR9-2	NR_030741	5	Non-coding	chr5:88666939 minus strand	1882085

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NBPF22P	NR_003719	5	Non-coding	chr5:86282443 plus strand	1882086
NCRUPAR	NR_028375	5	Non-coding	chr5:76712402 plus strand	1882087
NDUFA2	NR_033697	5	Non-coding	chr5:140647785 minus strand	1882088
NIM1K	NR_072980	5	Non-coding	chr5:43192851 plus strand	1882089
NIPBL-AS1	NR_046262	5	Non-coding	chr5:36876694 minus strand	1882090
NNT-AS1	NR_073113	5	Non-coding	chr5:43603230 minus strand	1882091
NPY6R	NR_002713	5	Non-coding	chr5:137801192 plus strand	1882092
NR2F1-AS1	NR_109825	5	Non-coding	chr5:93571343 minus strand	1882093
NR2F1-AS1	NR_109820	5	Non-coding	chr5:93581320 minus strand	1882094
NR2F1-AS1	NR_021491	5	Non-coding	chr5:93581320 minus strand	1882094
NR2F1-AS1	NR_109822	5	Non-coding	chr5:93581320 minus strand	1882094
NR2F1-AS1	NR_109821	5	Non-coding	chr5:93581320 minus strand	1882094
NR2F1-AS1	NR_109823	5	Non-coding	chr5:93581320 minus strand	1882094
NR2F1-AS1	NR_109824	5	Non-coding	chr5:93581320 minus strand	1882094
NR2F1-AS1	NR_021490	5	Non-coding	chr5:93581320 minus strand	1882094
NR2F1-AS1	NR_109818	5	Non-coding	chr5:93581320 minus strand	1882094
NR2F1-AS1	NR_109819	5	Non-coding	chr5:93581320 minus strand	1882094
NREP-AS1	NR_046678	5	Non-coding	chr5:111912507 plus strand	1882095
NSA2	NR_073403	5	Non-coding	chr5:74766990 plus strand	1882096
NSUN2	NR_037947	5	Non-coding	chr5:6633360 minus strand	1882097
OSMR-AS1	NR_109951	5	Non-coding	chr5:38845829 minus strand	1882098
OXCT1-AS1	NR_046635	5	Non-coding	chr5:41870029 plus strand	1882099
P4HA2-AS1	NR_047470	5	Non-coding	chr5:132184875 plus strand	1882100
PAIP2	NR_109830	5	Non-coding	chr5:139341831 plus strand	1882101
PAM	NR_033440	5	Non-coding	chr5:102865822 plus strand	1882102
PART1	NR_024617	5	Non-coding	chr5:60487712 plus strand	1882103
PART1	NR_028509	5	Non-coding	chr5:60487931 plus strand	1882104

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PART1	NR_028508	5	Non-coding	chr5:60487931 plus strand	1882104
PCDHB17	NR_001280	5	Non-coding	chr5:141155998 plus strand	1882105
PCDHB18	NR_001281	5	Non-coding	chr5:141234365 plus strand	1882106
PCDHB19P	NR_001282	5	Non-coding	chr5:141240120 plus strand	1882107
PCDHGB8P	NR_001297	5	Non-coding	chr5:141426285 plus strand	1882108
PDCD6	NR_073609	5	Non-coding	chr5:271620 plus strand	1882109
PDLIM7	NR_103804	5	Non-coding	chr5:177497605 minus strand	1882110
PHYKPL	NR_103510	5	Non-coding	chr5:178232822 minus strand	1882111
PHYKPL	NR_103509	5	Non-coding	chr5:178232822 minus strand	1882111
PHYKPL	NR_103508	5	Non-coding	chr5:178232822 minus strand	1882111
PMCHL1	NR_003921	5	Non-coding	chr5:22142351 plus strand	1882112
PMCHL2	NR_003922	5	Non-coding	chr5:71375784 plus strand	1882113
PP7080	NR_024158	5	Non-coding	chr5:472965 minus strand	1882114
PPAP2A	NR_103485	5	Non-coding	chr5:55535078 minus strand	1882115
PPP1R2P3	NR_038443	5	Non-coding	chr5:156850537 plus strand	1882116
PPP2R2B	NR_073526	5	Non-coding	chr5:146878785 minus strand	1882117
PPP2R2B	NR_073527	5	Non-coding	chr5:146878927 minus strand	1882118
PPP2R2B-IT1	NR_047115	5	Non-coding	chr5:146919506 minus strand	1882119
PRLR	NR_037910	5	Non-coding	chr5:35118122 minus strand	1882120
PRR7-AS1	NR_038916	5	Non-coding	chr5:177447944 minus strand	1882121
PRR7-AS1	NR_038915	5	Non-coding	chr5:177447944 minus strand	1882121
RAB24	NR_109790	5	Non-coding	chr5:177303744 minus strand	1882122
RAB24	NR_109789	5	Non-coding	chr5:177303744 minus strand	1882122
RAB9BP1	NR_000039	5	Non-coding	chr5:105099473 plus strand	1882123
RAD1	NR_026591	5	Non-coding	chr5:34915626 minus strand	1882124
RASGRF2-AS1	NR_105015	5	Non-coding	chr5:80960907 minus strand	1882125
REEP2	NR_073449	5	Non-coding	chr5:138439000 plus strand	1882126

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REEP2	NR_073448	5	Non-coding	chr5:138439000 plus strand	1882126
RGMB-AS1	NR_033932	5	Non-coding	chr5:98773084 minus strand	1882127
RGS7BP	NR_073511	5	Non-coding	chr5:64575649 plus strand	1882128
RNF138P1	NR_001575	5	Non-coding	chr5:55534542 minus strand	1882129
ROPN1L-AS1	NR_102746	5	Non-coding	chr5:10441851 minus strand	1882130
SAP30L	NR_024084	5	Non-coding	chr5:154445956 plus strand	1882131
SAP30L-AS1	NR_037897	5	Non-coding	chr5:154445822 minus strand	1882132
SCAMP1	NR_110885	5	Non-coding	chr5:78360502 plus strand	1882133
SCAMP1-AS1	NR_105014	5	Non-coding	chr5:78360541 minus strand	1882134
SCARNA18	NR_003139	5	Non-coding	chr5:83064337 minus strand	1882135
SDHAP3	NR_003263	5	Non-coding	chr5:1594531 minus strand	1882136
SEMA6A-AS1	NR_109879	5	Non-coding	chr5:116447497 plus strand	1882137
SERINC5	NR_126060	5	Non-coding	chr5:80256082 minus strand	1882138
SERINC5	NR_126061	5	Non-coding	chr5:80256082 minus strand	1882138
SLC12A2	NR_046207	5	Non-coding	chr5:128083790 plus strand	1882139
SLC38A9	NR_047649	5	Non-coding	chr5:55693053 minus strand	1882140
SMA4	NR_029426	5	Non-coding	chr5:69844811 plus strand	1882141
SMA4	NR_024054	5	Non-coding	chr5:70225795 minus strand	1882142
SMA4	NR_029426	5	Non-coding	chr5:70290177 minus strand	1882143
SMA5	NR_034021	5	Non-coding	chr5:70585722 minus strand	1882144
SMAD5-AS1	NR_026763	5	Non-coding	chr5:136134890 minus strand	1882145
SNHG18	NR_045196	5	Non-coding	chr5:9546199 plus strand	1882146
SNHG4	NR_003141	5	Non-coding	chr5:139273751 plus strand	1882147
SNHG4	NR_036536	5	Non-coding	chr5:139273751 plus strand	1882147
SNORA13	NR_002922	5	Non-coding	chr5:112161484 plus strand	1882148
SNORA47	NR_003014	5	Non-coding	chr5:77080571 minus strand	1882149
SNORA74A	NR_002915	5	Non-coding	chr5:139278779 plus strand	1882150

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SNORA74B	NR_002988	5	Non-coding	chr5:173020725 plus strand	1882151
SNORD123	NR_003689	5	Non-coding	chr5:9548826 plus strand	1882152
SNORD63	NR_002913	5	Non-coding	chr5:138561110 minus strand	1882153
SNORD72	NR_002583	5	Non-coding	chr5:40832735 minus strand	1882154
SNORD95	NR_002591	5	Non-coding	chr5:181243376 minus strand	1882155
SNORD96A	NR_002592	5	Non-coding	chr5:181241889 minus strand	1882156
SPATA9	NR_125330	5	Non-coding	chr5:95683010 minus strand	1882157
SPATA9	NR_125329	5	Non-coding	chr5:95683010 minus strand	1882157
SPATA9	NR_125327	5	Non-coding	chr5:95683010 minus strand	1882157
SPATA9	NR_125328	5	Non-coding	chr5:95683010 minus strand	1882157
SRA1	NR_045587	5	Non-coding	chr5:140557456 minus strand	1882158
SRA1	NR_045586	5	Non-coding	chr5:140558093 minus strand	1882159
STARD4-AS1	NR_040093	5	Non-coding	chr5:111512225 plus strand	1882160
TARS	NR_047678	5	Non-coding	chr5:33440775 plus strand	1882161
TARS	NR_047677	5	Non-coding	chr5:33440775 plus strand	1882161
TARS	NR_047676	5	Non-coding	chr5:33440775 plus strand	1882161
TCF7	NR_033449	5	Non-coding	chr5:134115658 plus strand	1882162
TMEM161B	NR_110266	5	Non-coding	chr5:88268879 minus strand	1882163
TMEM161B-AS1	NR_039993	5	Non-coding	chr5:88268881 plus strand	1882164
TMEM161B-AS1	NR_039995	5	Non-coding	chr5:88268881 plus strand	1882164
TMEM161B-AS1	NR_105019	5	Non-coding	chr5:88269015 plus strand	1882165
TMEM161B-AS1	NR_039994	5	Non-coding	chr5:88269015 plus strand	1882165
TMEM161B-AS1	NR_105020	5	Non-coding	chr5:88392194 plus strand	1882166
TRAPPC13	NR_003545	5	Non-coding	chr5:65624730 plus strand	1882167
TRIM41	NR_045218	5	Non-coding	chr5:181223262 plus strand	1882168
TRIM52-AS1	NR_102760	5	Non-coding	chr5:181261211 plus strand	1882169
TRIM52-AS1	NR_102762	5	Non-coding	chr5:181261211 plus strand	1882169

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TRIM52-AS1	NR_102761	5	Non-coding	chr5:181261211 plus strand	1882169
TRIM52-AS1	NR_102759	5	Non-coding	chr5:181261211 plus strand	1882169
TSLP	NR_045089	5	Non-coding	chr5:111070079 plus strand	1882170
UGT3A2	NR_031764	5	Non-coding	chr5:36066921 minus strand	1882171
VDAC1	NR_036625	5	Non-coding	chr5:134004966 minus strand	1882172
VDAC1	NR_036624	5	Non-coding	chr5:134004966 minus strand	1882172
VTRNA1-1	NR_026703	5	Non-coding	chr5:140711275 plus strand	1882173
VTRNA1-2	NR_026704	5	Non-coding	chr5:140718925 plus strand	1882174
VTRNA1-3	NR_026705	5	Non-coding	chr5:140726158 plus strand	1882175
VTRNA2-1	NR_030583	5	Non-coding	chr5:136080597 minus strand	1882176
WNT8A	NR_125351	5	Non-coding	chr5:138083891 plus strand	1882177
ZBED3-AS1	NR_024398	5	Non-coding	chr5:77086797 plus strand	1882178
ZCCHC10	NR_125337	5	Non-coding	chr5:133026583 minus strand	1882179
ZNF131	NR_123719	5	Non-coding	chr5:43120900 plus strand	1882180
ZNF131	NR_123720	5	Non-coding	chr5:43121493 plus strand	1882181
ZNF300P1	NR_026867	5	Non-coding	chr5:150946584 minus strand	1882182
ABHD16A	NR_033488	6	Non-coding	chr6:31703073 minus strand	1882183
ABHD16A	NR_033489	6	Non-coding	chr6:31703360 minus strand	1882184
ADCY10P1	NR_026938	6	Non-coding	chr6:41101033 plus strand	1882185
AGER	NR_038190	6	Non-coding	chr6:32184322 minus strand	1882186
AGPAT4-IT1	NR_024277	6	Non-coding	chr6:161161982 minus strand	1882187
AIRN	NR_047514	6	Non-coding	chr6:160007664 minus strand	1882188
AIRN	NR_047511	6	Non-coding	chr6:160007664 minus strand	1882188
AMD1	NR_109768	6	Non-coding	chr6:110874783 plus strand	1882189
APOM	NR_045828	6	Non-coding	chr6:31652409 plus strand	1882190
ARMC2-AS1	NR_104137	6	Non-coding	chr6:108924103 minus strand	1882191
ATG5	NR_104403	6	Non-coding	chr6:106316266 minus strand	1882192

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ATG5	NR_104402	6	Non-coding	chr6:106316266 minus strand	1882192
ATP6V0CP3	NR_037141	6	Non-coding	chr6:42727575 plus strand	1882193
ATP6V1G2-DDX39B	NR_037853	6	Non-coding	chr6:31546848 minus strand	1882194
BLOC1S5-TXNDC5	NR_037616	6	Non-coding	chr6:8064414 minus strand	1882195
BPHL	NR_026648	6	Non-coding	chr6:3118375 plus strand	1882196
BPHL	NR_026649	6	Non-coding	chr6:3118375 plus strand	1882196
BPHL	NR_026650	6	Non-coding	chr6:3118691 plus strand	1882197
BRD7P3	NR_002730	6	Non-coding	chr6:118501372 plus strand	1882198
BTN2A3P	NR_027795	6	Non-coding	chr6:26421390 plus strand	1882199
BVES-AS1	NR_037157	6	Non-coding	chr6:105137686 plus strand	1882200
C2-AS1	NR_104191	6	Non-coding	chr6:31941724 minus strand	1882201
C6orf164	NR_026784	6	Non-coding	chr6:87397123 plus strand	1882202
C6orf201	NR_104464	6	Non-coding	chr6:4079205 plus strand	1882203
C6orf201	NR_104463	6	Non-coding	chr6:4079205 plus strand	1882203
C6orf52	NR_026737	6	Non-coding	chr6:10694606 minus strand	1882204
C6orf52	NR_026736	6	Non-coding	chr6:10694797 minus strand	1882205
CAHM	NR_037593	6	Non-coding	chr6:163413950 minus strand	1882206
CASC15	NR_015410	6	Non-coding	chr6:21666443 plus strand	1882207
CASC6	NR_104154	6	Non-coding	chr6:91690428 minus strand	1882208
CCDC162P	NR_028595	6	Non-coding	chr6:109294302 plus strand	1882209
CD24	NR_117090	6	Non-coding	chr6:106975465 minus strand	1882210
CD24	NR_117089	6	Non-coding	chr6:106975627 minus strand	1882211
CDYL	NR_026590	6	Non-coding	chr6:4706158 plus strand	1882212
CENPW	NR_104462	6	Non-coding	chr6:126339788 plus strand	1882213
CLIC5	NR_045674	6	Non-coding	chr6:45937597 minus strand	1882214
CLIC5	NR_045673	6	Non-coding	chr6:45937597 minus strand	1882214
CLIC5	NR_045672	6	Non-coding	chr6:45937597 minus strand	1882214

【１５５４】

CLPSL2	NR_104469	6	Non-coding	chr6:35776593 plus strand	1882215
CLPSL2	NR_104467	6	Non-coding	chr6:35776593 plus strand	1882215
CMAHP	NR_002174	6	Non-coding	chr6:25137823 minus strand	1882216
CMAHP	NR_027626	6	Non-coding	chr6:25138392 minus strand	1882217
COX7A2	NR_029466	6	Non-coding	chr6:75243928 minus strand	1882218
CYP21A1P	NR_040090	6	Non-coding	chr6:32005635 plus strand	1882219
DACT2	NR_104425	6	Non-coding	chr6:168319754 minus strand	1882220
DDX39B	NR_037852	6	Non-coding	chr6:31542475 minus strand	1882221
DKFZp451B082	NR_033862	6	Non-coding	chr6:163347033 minus strand	1882222
DTNBP1	NR_036448	6	Non-coding	chr6:15663058 minus strand	1882223
DUSP22	NR_104475	6	Non-coding	chr6:292056 plus strand	1882224
DUSP22	NR_104474	6	Non-coding	chr6:292056 plus strand	1882224
DUSP22	NR_104473	6	Non-coding	chr6:292056 plus strand	1882224
ECI2	NR_028588	6	Non-coding	chr6:4135597 minus strand	1882225
EEF1E1-BLOC1S5	NR_037618	6	Non-coding	chr6:8102595 minus strand	1882226
EFHC1	NR_033327	6	Non-coding	chr6:52420195 plus strand	1882227
EGFL8	NR_037860	6	Non-coding	chr6:32164604 plus strand	1882228
ELOVL2-AS1	NR_038964	6	Non-coding	chr6:11043757 plus strand	1882229
ELOVL2-AS1	NR_038963	6	Non-coding	chr6:11043757 plus strand	1882229
ELOVL2-AS1	NR_038962	6	Non-coding	chr6:11044690 plus strand	1882230
EXOC2	NR_073064	6	Non-coding	chr6:693141 minus strand	1882231
EZR-AS1	NR_102425	6	Non-coding	chr6:158817978 plus strand	1882232
FBXL4	NR_103836	6	Non-coding	chr6:98948006 minus strand	1882233
FBXL4	NR_103837	6	Non-coding	chr6:98948006 minus strand	1882233
FILIP1	NR_110608	6	Non-coding	chr6:75493829 minus strand	1882234
FLJ34503	NR_027060	6	Non-coding	chr6:113904386 plus strand	1882235
FLJ38122	NR_104177	6	Non-coding	chr6:170272473 plus strand	1882236

【１５５５】

FLJ46906	NR_033896	6	Non-coding	chr6:138691667 plus strand	1882237
FOXCUT	NR_125804	6	Non-coding	chr6:1605530 plus strand	1882238
FOXP4-AS1	NR_126417	6	Non-coding	chr6:41546243 minus strand	1882239
FOXP4-AS1	NR_126416	6	Non-coding	chr6:41547545 minus strand	1882240
FOXP4-AS1	NR_126415	6	Non-coding	chr6:41548621 minus strand	1882241
FRMD1	NR_110312	6	Non-coding	chr6:168081557 minus strand	1882242
GFOD1	NR_038459	6	Non-coding	chr6:13472063 minus strand	1882243
GGNBP1	NR_028361	6	Non-coding	chr6:33583698 plus strand	1882244
GMDS-AS1	NR_046229	6	Non-coding	chr6:2245752 plus strand	1882245
GSTA7P	NR_033760	6	Non-coding	chr6:52745159 minus strand	1882246
GSTM2P1	NR_002932	6	Non-coding	chr6:111047554 minus strand	1882247
GUSBP2	NR_003504	6	Non-coding	chr6:26956554 minus strand	1882248
GUSBP4	NR_003660	6	Non-coding	chr6:57961446 minus strand	1882249
GUSBP4	NR_125727	6	Non-coding	chr6:57961446 minus strand	1882249
GUSBP4	NR_125728	6	Non-coding	chr6:57961446 minus strand	1882249
GUSBP4	NR_125729	6	Non-coding	chr6:57961446 minus strand	1882249
HACE1	NR_104424	6	Non-coding	chr6:104859919 minus strand	1882250
HCG11	NR_026790	6	Non-coding	chr6:26521705 plus strand	1882251
HCG14	NR_104117	6	Non-coding	chr6:28896529 plus strand	1882252
HCG17	NR_052012	6	Non-coding	chr6:30326134 minus strand	1882253
HCG18	NR_024053	6	Non-coding	chr6:30327156 minus strand	1882254
HCG18	NR_024052	6	Non-coding	chr6:30327156 minus strand	1882254
HCG18	NR_102327	6	Non-coding	chr6:30327156 minus strand	1882254
HCG18	NR_102326	6	Non-coding	chr6:30327156 minus strand	1882254
HCG22	NR_003948	6	Non-coding	chr6:31053449 plus strand	1882255
HCG23	NR_044996	6	Non-coding	chr6:32390509 plus strand	1882256
HCG25	NR_044997	6	Non-coding	chr6:33249535 plus strand	1882257

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HCG26	NR_002812	6	Non-coding	chr6:31471228 plus strand	1882258
HCG27	NR_026791	6	Non-coding	chr6:31197759 plus strand	1882259
HCG4	NR_002139	6	Non-coding	chr6:29793073 minus strand	1882260
HCG4B	NR_001317	6	Non-coding	chr6:29927215 minus strand	1882261
HCG8	NR_103542	6	Non-coding	chr6:30013922 minus strand	1882262
HCG9	NR_028032	6	Non-coding	chr6:29975114 plus strand	1882263
HCP5	NR_040662	6	Non-coding	chr6:31463179 plus strand	1882264
HDAC2	NR_073443	6	Non-coding	chr6:113970724 minus strand	1882265
HDAC2	NR_033441	6	Non-coding	chr6:113971195 minus strand	1882266
HIST1H2APS1	NR_045125	6	Non-coding	chr6:25732432 plus strand	1882267
HLA-DPB2	NR_001435	6	Non-coding	chr6:33112515 plus strand	1882268
HLA-DRB6	NR_001298	6	Non-coding	chr6:32560002 minus strand	1882269
HLA-F-AS1	NR_026973	6	Non-coding	chr6:29749049 minus strand	1882270
HLA-F-AS1	NR_026972	6	Non-coding	chr6:29749049 minus strand	1882270
HLA-H	NR_001434	6	Non-coding	chr6:29887759 plus strand	1882271
HLA-J	NR_024240	6	Non-coding	chr6:30005970 plus strand	1882272
HLA-L	NR_027822	6	Non-coding	chr6:30259561 plus strand	1882273
HMGA1P7	NR_037938	6	Non-coding	chr6:134117680 minus strand	1882274
HMGCLL1	NR_109869	6	Non-coding	chr6:55579214 minus strand	1882275
HMGCLL1	NR_109867	6	Non-coding	chr6:55579214 minus strand	1882275
HMGN3-AS1	NR_040671	6	Non-coding	chr6:79233673 plus strand	1882276
HTATSF1P2	NR_033884	6	Non-coding	chr6:3024771 minus strand	1882277
HULC	NR_004855	6	Non-coding	chr6:8652208 plus strand	1882278
HYMAI	NR_002768	6	Non-coding	chr6:144008730 minus strand	1882279
IFITM4P	NR_001590	6	Non-coding	chr6:29751148 minus strand	1882280
IRF4	NR_046000	6	Non-coding	chr6:391738 plus strand	1882281
JARID2-AS1	NR_120502	6	Non-coding	chr6:15248696 minus strand	1882282

【１５５７】

KATNBL1P6	NR_003954	6	Non-coding	chr6:146803824 minus strand	1882283
KCNQ5-AS1	NR_046621	6	Non-coding	chr6:73143514 minus strand	1882284
KCNQ5-IT1	NR_120503	6	Non-coding	chr6:72630494 plus strand	1882285
KCTD20	NR_104481	6	Non-coding	chr6:36442766 plus strand	1882286
KCTD20	NR_104480	6	Non-coding	chr6:36442766 plus strand	1882286
KHDC1	NR_027005	6	Non-coding	chr6:73310365 minus strand	1882287
KIF25-AS1	NR_103750	6	Non-coding	chr6:167997077 minus strand	1882288
KLHDC3	NR_040101	6	Non-coding	chr6:43014102 plus strand	1882289
KLHL32	NR_104421	6	Non-coding	chr6:96924619 plus strand	1882290
KU-MEL-3	NR_122107	6	Non-coding	chr6:4610564 plus strand	1882291
LATS1	NR_073033	6	Non-coding	chr6:149716425 minus strand	1882292
LINC00222	NR_033376	6	Non-coding	chr6:108751653 plus strand	1882293
LINC00240	NR_026775	6	Non-coding	chr6:26956992 plus strand	1882294
LINC00242	NR_026781	6	Non-coding	chr6:169798825 minus strand	1882295
LINC00266-3	NR_109817	6	Non-coding	chr6:148159 minus strand	1882296
LINC00271	NR_026805	6	Non-coding	chr6:135497800 plus strand	1882297
LINC00326	NR_026969	6	Non-coding	chr6:133088079 plus strand	1882298
LINC00336	NR_027908	6	Non-coding	chr6:33593338 minus strand	1882299
LINC00472	NR_026807	6	Non-coding	chr6:71420745 minus strand	1882300
LINC00472	NR_121612	6	Non-coding	chr6:71420745 minus strand	1882300
LINC00472	NR_121613	6	Non-coding	chr6:71420745 minus strand	1882300
LINC00472	NR_121614	6	Non-coding	chr6:71420745 minus strand	1882300
LINC00473	NR_026861	6	Non-coding	chr6:165988039 minus strand	1882301
LINC00473	NR_026860	6	Non-coding	chr6:165988039 minus strand	1882301
LINC00518	NR_027793	6	Non-coding	chr6:10434822 minus strand	1882302
LINC00574	NR_026780	6	Non-coding	chr6:169790072 plus strand	1882303
LINC00577	NR_046407	6	Non-coding	chr6:104940527 minus strand	1882304

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LINC00581	NR_103790	6	Non-coding	chr6:21511892 minus strand	1882305
LINC00602	NR_027284	6	Non-coding	chr6:165987550 plus strand	1882306
LINC00951	NR_038887	6	Non-coding	chr6:40356006 minus strand	1882307
LINC01010	NR_038217	6	Non-coding	chr6:134437715 plus strand	1882308
LINC01010	NR_038216	6	Non-coding	chr6:134437715 plus strand	1882308
LINC01010	NR_038219	6	Non-coding	chr6:134438389 plus strand	1882309
LINC01010	NR_038218	6	Non-coding	chr6:134438389 plus strand	1882309
LINC01011	NR_026856	6	Non-coding	chr6:2987966 plus strand	1882310
LINC01011	NR_026855	6	Non-coding	chr6:2987966 plus strand	1882310
LINC01012	NR_038294	6	Non-coding	chr6:27694034 plus strand	1882311
LINC01012	NR_038293	6	Non-coding	chr6:27694034 plus strand	1882311
LINC01012	NR_038292	6	Non-coding	chr6:27694078 plus strand	1882312
LINC01013	NR_038981	6	Non-coding	chr6:132133977 plus strand	1882313
LINC01015	NR_037180	6	Non-coding	chr6:29529405 plus strand	1882314
LINC01015	NR_037179	6	Non-coding	chr6:29529405 plus strand	1882314
LINC01015	NR_037181	6	Non-coding	chr6:29529405 plus strand	1882314
LINC01016	NR_038989	6	Non-coding	chr6:33896907 minus strand	1882315
LINC01108	NR_108097	6	Non-coding	chr6:14285454 minus strand	1882316
LINC01108	NR_108096	6	Non-coding	chr6:14285454 minus strand	1882316
LINC01268	NR_038863	6	Non-coding	chr6:113873347 minus strand	1882317
LINC01276	NR_120347	6	Non-coding	chr6:41502443 plus strand	1882318
LINC01277	NR_038987	6	Non-coding	chr6:143037582 minus strand	1882319
LINC01312	NR_027030	6	Non-coding	chr6:133821146 plus strand	1882320
LINC01512	NR_024478	6	Non-coding	chr6:43891027 plus strand	1882321
LINC01526	NR_126363	6	Non-coding	chr6:81814192 minus strand	1882322
LINC01556	NR_103538	6	Non-coding	chr6:28943783 plus strand	1882323
LINC01558	NR_026773	6	Non-coding	chr6:167796859 minus strand	1882324

【１５５９】

LINC01564	NR_125841	6	Non-coding	chr6:53628379 plus strand	1882325
LOC100128176	NR_038408	6	Non-coding	chr6:148964684 minus strand	1882326
LOC100129461	NR_126015	6	Non-coding	chr6:5003815 plus strand	1882327
LOC100129461	NR_126016	6	Non-coding	chr6:5003815 plus strand	1882327
LOC100129461	NR_126017	6	Non-coding	chr6:5003815 plus strand	1882327
LOC100129461	NR_126018	6	Non-coding	chr6:5029971 plus strand	1882328
LOC100129461	NR_126019	6	Non-coding	chr6:5029971 plus strand	1882328
LOC100129518	NR_037166	6	Non-coding	chr6:159762332 minus strand	1882329
LOC100129636	NR_125387	6	Non-coding	chr6:29036020 plus strand	1882330
LOC100130476	NR_049793	6	Non-coding	chr6:137868233 minus strand	1882331
LOC100131047	NR_038401	6	Non-coding	chr6:38953107 minus strand	1882332
LOC100131289	NR_038929	6	Non-coding	chr6:27761743 plus strand	1882333
LOC100131532	NR_027434	6	Non-coding	chr6:169962622 plus strand	1882334
LOC100132735	NR_038399	6	Non-coding	chr6:139771072 plus strand	1882335
LOC100270746	NR_026776	6	Non-coding	chr6:27020306 minus strand	1882336
LOC100287632	NR_037662	6	Non-coding	chr6:118782707 plus strand	1882337
LOC100289495	NR_040022	6	Non-coding	chr6:166342630 plus strand	1882338
LOC100294145	NR_037177	6	Non-coding	chr6:32894175 plus strand	1882339
LOC100294145	NR_037178	6	Non-coding	chr6:32894175 plus strand	1882339
LOC100422737	NR_033557	6	Non-coding	chr6:106787425 minus strand	1882340
LOC100505530	NR_126057	6	Non-coding	chr6:37507347 plus strand	1882341
LOC100505635	NR_125831	6	Non-coding	chr6:39897380 minus strand	1882342
LOC100506188	NR_109774	6	Non-coding	chr6:57263346 minus strand	1882343
LOC100506207	NR_038979	6	Non-coding	chr6:8435622 plus strand	1882344
LOC100506207	NR_038980	6	Non-coding	chr6:8435622 plus strand	1882344
LOC100506804	NR_040081	6	Non-coding	chr6:75285013 plus strand	1882345
LOC100507194	NR_038296	6	Non-coding	chr6:3195767 minus strand	1882346

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LOC100507194	NR_038295	6	Non-coding	chr6:3195767 minus strand	1882346
LOC100507406	NR_121618	6	Non-coding	chr6:137739037 minus strand	1882347
LOC100507406	NR_121619	6	Non-coding	chr6:137739037 minus strand	1882347
LOC100507477	NR_121622	6	Non-coding	chr6:139976318 plus strand	1882348
LOC100507477	NR_121623	6	Non-coding	chr6:139976318 plus strand	1882348
LOC100507506	NR_103764	6	Non-coding	chr6:4136071 plus strand	1882349
LOC100507547	NR_037172	6	Non-coding	chr6:32154365 minus strand	1882350
LOC100507547	NR_037170	6	Non-coding	chr6:32154365 minus strand	1882350
LOC100507547	NR_037171	6	Non-coding	chr6:32154365 minus strand	1882350
LOC100507547	NR_037169	6	Non-coding	chr6:32154365 minus strand	1882350
LOC100507557	NR_038246	6	Non-coding	chr6:145734868 plus strand	1882351
LOC100507557	NR_038245	6	Non-coding	chr6:145814875 plus strand	1882352
LOC100507557	NR_038244	6	Non-coding	chr6:145814875 plus strand	1882352
LOC101926898	NR_125837	6	Non-coding	chr6:46492051 plus strand	1882353
LOC101926915	NR_125838	6	Non-coding	chr6:46276323 plus strand	1882354
LOC101926962	NR_110658	6	Non-coding	chr6:46903470 plus strand	1882355
LOC101927020	NR_125839	6	Non-coding	chr6:49811539 plus strand	1882356
LOC101927048	NR_110843	6	Non-coding	chr6:49824766 minus strand	1882357
LOC101927082	NR_125840	6	Non-coding	chr6:51621869 plus strand	1882358
LOC101927136	NR_110840	6	Non-coding	chr6:53573275 minus strand	1882359
LOC101927189	NR_125842	6	Non-coding	chr6:53929981 plus strand	1882360
LOC101927211	NR_110742	6	Non-coding	chr6:57172213 minus strand	1882361
LOC101927314	NR_110757	6	Non-coding	chr6:97305585 plus strand	1882362
LOC101927365	NR_125843	6	Non-coding	chr6:99424870 plus strand	1882363
LOC101927640	NR_121193	6	Non-coding	chr6:112236595 plus strand	1882364
LOC101927686	NR_125844	6	Non-coding	chr6:113650075 minus strand	1882365
LOC101927691	NR_110853	6	Non-coding	chr6:868497 plus strand	1882366

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LOC101927730	NR_110841	6	Non-coding	chr6:2883987 plus strand	1882367
LOC101927768	NR_125845	6	Non-coding	chr6:113969700 plus strand	1882368
LOC101927919	NR_110854	6	Non-coding	chr6:117675284 minus strand	1882369
LOC101927950	NR_110842	6	Non-coding	chr6:5695272 minus strand	1882370
LOC101927972	NR_125846	6	Non-coding	chr6:5458075 minus strand	1882371
LOC101927972	NR_125847	6	Non-coding	chr6:5458075 minus strand	1882371
LOC101927972	NR_125848	6	Non-coding	chr6:5458075 minus strand	1882371
LOC101927990	NR_110844	6	Non-coding	chr6:123439603 plus strand	1882372
LOC101928140	NR_125849	6	Non-coding	chr6:128027864 plus strand	1882373
LOC101928191	NR_125851	6	Non-coding	chr6:10954089 minus strand	1882374
LOC101928231	NR_125852	6	Non-coding	chr6:134478897 minus strand	1882375
LOC101928253	NR_125853	6	Non-coding	chr6:12001244 minus strand	1882376
LOC101928280	NR_125854	6	Non-coding	chr6:68329899 minus strand	1882377
LOC101928304	NR_125855	6	Non-coding	chr6:134540005 minus strand	1882378
LOC101928304	NR_125856	6	Non-coding	chr6:134540005 minus strand	1882378
LOC101928307	NR_125872	6	Non-coding	chr6:68634324 minus strand	1882379
LOC101928353	NR_125857	6	Non-coding	chr6:70394201 plus strand	1882380
LOC101928461	NR_125858	6	Non-coding	chr6:136629113 plus strand	1882381
LOC101928489	NR_110889	6	Non-coding	chr6:73696131 minus strand	1882382
LOC101928491	NR_110855	6	Non-coding	chr6:17511265 minus strand	1882383
LOC101928516	NR_110856	6	Non-coding	chr6:74069450 plus strand	1882384
LOC101928519	NR_110860	6	Non-coding	chr6:19180480 minus strand	1882385
LOC101928540	NR_125859	6	Non-coding	chr6:75383185 plus strand	1882386
LOC101928661	NR_125860	6	Non-coding	chr6:146598931 minus strand	1882387
LOC101928663	NR_110862	6	Non-coding	chr6:25261407 minus strand	1882388
LOC101928663	NR_110863	6	Non-coding	chr6:25261407 minus strand	1882388
LOC101928911	NR_110869	6	Non-coding	chr6:87784859 plus strand	1882389

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LOC101928936	NR_110867	6	Non-coding	chr6:88539369 minus strand	1882390
LOC101929057	NR_111915	6	Non-coding	chr6:89638531 plus strand	1882391
LOC101929122	NR_121668	6	Non-coding	chr6:159170007 minus strand	1882392
LOC101929239	NR_110872	6	Non-coding	chr6:163054161 minus strand	1882393
LOC101929239	NR_110871	6	Non-coding	chr6:163054161 minus strand	1882393
LOC101929297	NR_125862	6	Non-coding	chr6:166236968 plus strand	1882394
LOC101929420	NR_110870	6	Non-coding	chr6:168242937 plus strand	1882395
LOC101929504	NR_125863	6	Non-coding	chr6:169182740 minus strand	1882396
LOC101929555	NR_110873	6	Non-coding	chr6:41023280 minus strand	1882397
LOC101929705	NR_125865	6	Non-coding	chr6:44003650 minus strand	1882398
LOC101929705	NR_125864	6	Non-coding	chr6:44074652 minus strand	1882399
LOC101930010	NR_125866	6	Non-coding	chr6:56843985 plus strand	1882400
LOC102723649	NR_125867	6	Non-coding	chr6:137665645 plus strand	1882401
LOC102723831	NR_125868	6	Non-coding	chr6:151228457 minus strand	1882402
LOC102723883	NR_125869	6	Non-coding	chr6:68055350 plus strand	1882403
LOC102724000	NR_121615	6	Non-coding	chr6:71421026 plus strand	1882404
LOC102724053	NR_125873	6	Non-coding	chr6:159383530 plus strand	1882405
LOC102724096	NR_125874	6	Non-coding	chr6:4190029 minus strand	1882406
LOC102724201	NR_125875	6	Non-coding	chr6:84689457 plus strand	1882407
LOC102724201	NR_125877	6	Non-coding	chr6:84689457 plus strand	1882407
LOC102724201	NR_125876	6	Non-coding	chr6:84689457 plus strand	1882407
LOC102724511	NR_125878	6	Non-coding	chr6:170160641 plus strand	1882408
LOC103352541	NR_121624	6	Non-coding	chr6:139991261 minus strand	1882409
LOC153910	NR_027311	6	Non-coding	chr6:142637836 minus strand	1882410
LOC153910	NR_027312	6	Non-coding	chr6:142637889 minus strand	1882411
LOC154449	NR_002787	6	Non-coding	chr6:170262569 minus strand	1882412
LOC285740	NR_110149	6	Non-coding	chr6:143562051 minus strand	1882413

【１５６３】

LOC285740	NR_110148	6	Non-coding	chr6:143562051 minus strand	1882413
LOC285740	NR_027114	6	Non-coding	chr6:143562051 minus strand	1882413
LOC285740	NR_027113	6	Non-coding	chr6:143569339 minus strand	1882414
LOC285762	NR_046100	6	Non-coding	chr6:119491302 minus strand	1882415
LOC285766	NR_126020	6	Non-coding	chr6:205484 minus strand	1882416
LOC285768	NR_027116	6	Non-coding	chr6:1101332 minus strand	1882417
LOC285768	NR_027115	6	Non-coding	chr6:1101332 minus strand	1882417
LOC285804	NR_126021	6	Non-coding	chr6:170276762 minus strand	1882418
LOC285819	NR_038992	6	Non-coding	chr6:26482509 minus strand	1882419
LOC285847	NR_027117	6	Non-coding	chr6:35736947 minus strand	1882420
LOC401242	NR_033379	6	Non-coding	chr6:28863677 minus strand	1882421
LOC401286	NR_117091	6	Non-coding	chr6:167679223 minus strand	1882422
LOC441178	NR_117092	6	Non-coding	chr6:167683787 minus strand	1882423
LOC643623	NR_038906	6	Non-coding	chr6:125674352 plus strand	1882424
LOC645434	NR_033919	6	Non-coding	chr6:139474596 minus strand	1882425
LOC729603	NR_003288	6	Non-coding	chr6:160093081 plus strand	1882426
LOC729658	NR_122120	6	Non-coding	chr6:163192002 minus strand	1882427
LOC730101	NR_024403	6	Non-coding	chr6:52664400 plus strand	1882428
LOC730101	NR_024405	6	Non-coding	chr6:52664400 plus strand	1882428
LPAL2	NR_028093	6	Non-coding	chr6:160511124 minus strand	1882429
LPAL2	NR_028092	6	Non-coding	chr6:160511124 minus strand	1882429
LST1	NR_029461	6	Non-coding	chr6:31586178 plus strand	1882430
LST1	NR_029462	6	Non-coding	chr6:31586178 plus strand	1882430
LY6G6E	NR_024541	6	Non-coding	chr6:31714065 minus strand	1882431
LY6G6E	NR_003673	6	Non-coding	chr6:31714065 minus strand	1882431
LY86-AS1	NR_026970	6	Non-coding	chr6:6622826 minus strand	1882432
LYRM2	NR_028495	6	Non-coding	chr6:89638497 minus strand	1882433

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LYRM2	NR_028493	6	Non-coding	chr6:89638497 minus strand	1882433
LYRM2	NR_028494	6	Non-coding	chr6:89638497 minus strand	1882433
LYRM4	NR_104418	6	Non-coding	chr6:5260950 minus strand	1882434
LYRM4	NR_104417	6	Non-coding	chr6:5260950 minus strand	1882434
MANEA-AS1	NR_047502	6	Non-coding	chr6:95577451 minus strand	1882435
MANEA-AS1	NR_104136	6	Non-coding	chr6:95577451 minus strand	1882435
MAP3K4	NR_120425	6	Non-coding	chr6:160991726 plus strand	1882436
MAPK13	NR_072996	6	Non-coding	chr6:36130483 plus strand	1882437
MBOAT1	NR_073465	6	Non-coding	chr6:20212464 minus strand	1882438
MCHR2-AS1	NR_038384	6	Non-coding	chr6:99994037 plus strand	1882439
MIR1202	NR_031606	6	Non-coding	chr6:155946796 plus strand	1882440
MIR1236	NR_031601	6	Non-coding	chr6:31956940 minus strand	1882441
MIR1273C	NR_036100	6	Non-coding	chr6:154853359 plus strand	1882442
MIR1275	NR_031681	6	Non-coding	chr6:34000051 minus strand	1882443
MIR133B	NR_029903	6	Non-coding	chr6:52148922 plus strand	1882444
MIR1913	NR_031734	6	Non-coding	chr6:166509433 minus strand	1882445
MIR206	NR_029713	6	Non-coding	chr6:52144348 plus strand	1882446
MIR2113	NR_031579	6	Non-coding	chr6:98024530 plus strand	1882447
MIR219A1	NR_029633	6	Non-coding	chr6:33207834 plus strand	1882448
MIR30A	NR_029504	6	Non-coding	chr6:71403621 minus strand	1882449
MIR30C2	NR_029598	6	Non-coding	chr6:71377031 minus strand	1882450
MIR3135B	NR_039668	6	Non-coding	chr6:32749979 minus strand	1882451
MIR3143	NR_036096	6	Non-coding	chr6:27147625 plus strand	1882452
MIR3144	NR_036098	6	Non-coding	chr6:120015178 plus strand	1882453
MIR3145	NR_036099	6	Non-coding	chr6:138435294 minus strand	1882454
MIR3662	NR_037435	6	Non-coding	chr6:134979432 minus strand	1882455
MIR3668	NR_037441	6	Non-coding	chr6:140205251 plus strand	1882456

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MIR3691	NR_037462	6	Non-coding	chr6:5148322 minus strand	1882457
MIR3692	NR_037463	6	Non-coding	chr6:157529131 plus strand	1882458
MIR3918	NR_037482	6	Non-coding	chr6:158764753 minus strand	1882459
MIR3925	NR_037491	6	Non-coding	chr6:36622512 minus strand	1882460
MIR3934	NR_037498	6	Non-coding	chr6:33698127 plus strand	1882461
MIR3939	NR_037504	6	Non-coding	chr6:166997912 minus strand	1882462
MIR4282	NR_036244	6	Non-coding	chr6:72967753 minus strand	1882463
MIR4459	NR_039664	6	Non-coding	chr6:132914328 minus strand	1882464
MIR4462	NR_039669	6	Non-coding	chr6:37555422 minus strand	1882465
MIR4463	NR_039670	6	Non-coding	chr6:75428406 plus strand	1882466
MIR4464	NR_039671	6	Non-coding	chr6:90312741 plus strand	1882467
MIR4465	NR_039675	6	Non-coding	chr6:140683813 plus strand	1882468
MIR4466	NR_039676	6	Non-coding	chr6:156779731 minus strand	1882469
MIR4639	NR_039782	6	Non-coding	chr6:16141555 plus strand	1882470
MIR4640	NR_039783	6	Non-coding	chr6:30890882 plus strand	1882471
MIR4641	NR_039784	6	Non-coding	chr6:41598722 plus strand	1882472
MIR4642	NR_039785	6	Non-coding	chr6:44435640 plus strand	1882473
MIR4643	NR_039786	6	Non-coding	chr6:91521659 plus strand	1882474
MIR4644	NR_039787	6	Non-coding	chr6:170330760 plus strand	1882475
MIR4645	NR_039788	6	Non-coding	chr6:2854107 minus strand	1882476
MIR4646	NR_039789	6	Non-coding	chr6:31701091 minus strand	1882477
MIR4647	NR_039790	6	Non-coding	chr6:44254285 minus strand	1882478
MIR5004	NR_049800	6	Non-coding	chr6:33438330 plus strand	1882479
MIR548A1	NR_030312	6	Non-coding	chr6:18571783 plus strand	1882480
MIR548A2	NR_030317	6	Non-coding	chr6:135239159 plus strand	1882481
MIR548AI	NR_039672	6	Non-coding	chr6:99124608 plus strand	1882482
MIR548AJ1	NR_039673	6	Non-coding	chr6:132115263 minus strand	1882483

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MIR548B	NR_030315	6	Non-coding	chr6:119069143 minus strand	1882484
MIR548H5	NR_039610	6	Non-coding	chr6:131792171 plus strand	1882485
MIR548U	NR_036097	6	Non-coding	chr6:57390131 plus strand	1882486
MIR5683	NR_049863	6	Non-coding	chr6:6169333 plus strand	1882487
MIR5685	NR_049866	6	Non-coding	chr6:53276992 plus strand	1882488
MIR5689	NR_049872	6	Non-coding	chr6:10439716 plus strand	1882489
MIR5690	NR_049873	6	Non-coding	chr6:35664789 minus strand	1882490
MIR586	NR_030313	6	Non-coding	chr6:45197770 minus strand	1882491
MIR587	NR_030314	6	Non-coding	chr6:106784124 plus strand	1882492
MIR588	NR_030316	6	Non-coding	chr6:126484630 plus strand	1882493
MIR6720	NR_106778	6	Non-coding	chr6:1390411 minus strand	1882494
MIR6721	NR_106779	6	Non-coding	chr6:32170116 minus strand	1882495
MIR6780B	NR_106894	6	Non-coding	chr6:43434541 plus strand	1882496
MIR6832	NR_106890	6	Non-coding	chr6:31633786 plus strand	1882497
MIR6833	NR_106891	6	Non-coding	chr6:32179815 plus strand	1882498
MIR6834	NR_106892	6	Non-coding	chr6:33290244 plus strand	1882499
MIR6835	NR_106893	6	Non-coding	chr6:34240672 plus strand	1882500
MIR6873	NR_106933	6	Non-coding	chr6:33287289 minus strand	1882501
MIR6891	NR_106951	6	Non-coding	chr6:31355316 minus strand	1882502
MIR7111	NR_106961	6	Non-coding	chr6:35470507 plus strand	1882503
MIR7159	NR_106982	6	Non-coding	chr6:33899134 plus strand	1882504
MIR7161	NR_106981	6	Non-coding	chr6:158609706 plus strand	1882505
MIR7641-2	NR_106988	6	Non-coding	chr6:109753216 minus strand	1882506
MIR7641-2	NR_106988	6	Non-coding	chr6:153420476 plus strand	1882507
MIR7641-2	NR_106988	6	Non-coding	chr6:165409600 plus strand	1882508
MIR7641-2	NR_106988	6	Non-coding	chr6:4428001 plus strand	1882509
MIR7853	NR_107007	6	Non-coding	chr6:6169435 minus strand	1882510

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MIR877	NR_030615	6	Non-coding	chr6:30584331 plus strand	1882511
MLIP-IT1	NR_046832	6	Non-coding	chr6:53998889 plus strand	1882512
MLLT4-AS1	NR_027906	6	Non-coding	chr6:167826796 minus strand	1882513
MOCS1	NR_033233	6	Non-coding	chr6:39934551 minus strand	1882514
MPC1	NR_073093	6	Non-coding	chr6:166383013 minus strand	1882515
MRS2	NR_104423	6	Non-coding	chr6:24402907 plus strand	1882516
MSH5-SAPCD1	NR_037846	6	Non-coding	chr6:31739947 plus strand	1882517
MTRF1L	NR_126056	6	Non-coding	chr6:153002815 minus strand	1882518
NBAT1	NR_034143	6	Non-coding	chr6:22147193 minus strand	1882519
NCOA7-AS1	NR_126386	6	Non-coding	chr6:125818858 minus strand	1882520
NEDD9	NR_073131	6	Non-coding	chr6:11382348 minus strand	1882521
NHEG1	NR_027994	6	Non-coding	chr6:136993231 minus strand	1882522
NRM	NR_073072	6	Non-coding	chr6:30690723 minus strand	1882523
NRM	NR_073065	6	Non-coding	chr6:30691129 minus strand	1882524
NRM	NR_073066	6	Non-coding	chr6:30691129 minus strand	1882524
NUP43	NR_104456	6	Non-coding	chr6:149746572 minus strand	1882525
OPN5	NR_033806	6	Non-coding	chr6:47787067 plus strand	1882526
OPRM1	NR_104351	6	Non-coding	chr6:154039410 plus strand	1882527
OPRM1	NR_104349	6	Non-coding	chr6:154039410 plus strand	1882527
OPRM1	NR_104350	6	Non-coding	chr6:154039410 plus strand	1882527
OPRM1	NR_104348	6	Non-coding	chr6:154039410 plus strand	1882527
OSTCP1	NR_028496	6	Non-coding	chr6:158857632 minus strand	1882528
PACRG-AS1	NR_028390	6	Non-coding	chr6:163324473 minus strand	1882529
PANDAR	NR_109836	6	Non-coding	chr6:36675126 minus strand	1882530
PDE10A	NR_045597	6	Non-coding	chr6:165662100 minus strand	1882531
PHF1	NR_027692	6	Non-coding	chr6:33410995 plus strand	1882532
PIP5K1P1	NR_027712	6	Non-coding	chr6:7986101 plus strand	1882533

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POPDC3	NR_024539	6	Non-coding	chr6:105176255 minus strand	1882534
PPIL6	NR_104429	6	Non-coding	chr6:109441171 minus strand	1882535
PPP1R10	NR_072994	6	Non-coding	chr6:30617307 minus strand	1882536
PPT2-EGFL8	NR_037861	6	Non-coding	chr6:32153998 plus strand	1882537
PSMB8-AS1	NR_037173	6	Non-coding	chr6:32844085 plus strand	1882538
PSMB8-AS1	NR_037176	6	Non-coding	chr6:32844085 plus strand	1882538
PSMB8-AS1	NR_037175	6	Non-coding	chr6:32844085 plus strand	1882538
PSMB8-AS1	NR_037174	6	Non-coding	chr6:32844085 plus strand	1882538
PSORS1C3	NR_026816	6	Non-coding	chr6:31177899 minus strand	1882539
PTK7	NR_072998	6	Non-coding	chr6:43076267 plus strand	1882540
PTK7	NR_072997	6	Non-coding	chr6:43076267 plus strand	1882540
RAB23	NR_103822	6	Non-coding	chr6:57222314 minus strand	1882541
RAET1E-AS1	NR_045126	6	Non-coding	chr6:149863497 plus strand	1882542
RAET1E-AS1	NR_045127	6	Non-coding	chr6:149890102 plus strand	1882543
RAET1G	NR_130110	6	Non-coding	chr6:149923152 minus strand	1882544
RAET1K	NR_024045	6	Non-coding	chr6:150005144 minus strand	1882545
RIPPLY2	NR_103525	6	Non-coding	chr6:83853542 plus strand	1882546
RN7SK	NR_001445	6	Non-coding	chr6:52995619 plus strand	1882547
RNF146	NR_045102	6	Non-coding	chr6:127266737 plus strand	1882548
RNF146	NR_045103	6	Non-coding	chr6:127266837 plus strand	1882549
RNF217	NR_104440	6	Non-coding	chr6:124983363 plus strand	1882550
RNF217-AS1	NR_026876	6	Non-coding	chr6:124963027 minus strand	1882551
RNF8	NR_046399	6	Non-coding	chr6:37353971 plus strand	1882552
RPS16P5	NR_046241	6	Non-coding	chr6:53337617 minus strand	1882553
RPS18P9	NR_077247	6	Non-coding	chr6:149593615 plus strand	1882554
RPS6KA2-AS1	NR_046644	6	Non-coding	chr6:166903697 plus strand	1882555
RPS6KA2-IT1	NR_046793	6	Non-coding	chr6:166465383 minus strand	1882556

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RUNX2	NR_103532	6	Non-coding	chr6:45328316 plus strand	1882557
RUNX2	NR_103533	6	Non-coding	chr6:45328316 plus strand	1882557
SAPCD1-AS1	NR_126423	6	Non-coding	chr6:31765588 minus strand	1882558
SCARNA27	NR_003703	6	Non-coding	chr6:8086533 minus strand	1882559
SERAC1	NR_073096	6	Non-coding	chr6:158168280 minus strand	1882560
SERPINB1	NR_073112	6	Non-coding	chr6:2842049 minus strand	1882561
SERPINB1	NR_073111	6	Non-coding	chr6:2842049 minus strand	1882561
SERPINB9P1	NR_033851	6	Non-coding	chr6:2876510 minus strand	1882562
SFT2D1	NR_130112	6	Non-coding	chr6:166342606 minus strand	1882563
SFT2D1	NR_130113	6	Non-coding	chr6:166342606 minus strand	1882563
SFT2D1	NR_130114	6	Non-coding	chr6:166342606 minus strand	1882563
SLC22A23	NR_104448	6	Non-coding	chr6:3445013 minus strand	1882564
SLC25A51P1	NR_026540	6	Non-coding	chr6:65787878 plus strand	1882565
SLC35B3	NR_109914	6	Non-coding	chr6:8435567 minus strand	1882566
SLC35B3	NR_109913	6	Non-coding	chr6:8435567 minus strand	1882566
SNHG5	NR_003038	6	Non-coding	chr6:85678733 minus strand	1882567
SNORA20	NR_002960	6	Non-coding	chr6:159780381 minus strand	1882568
SNORA29	NR_002965	6	Non-coding	chr6:159785733 minus strand	1882569
SNORA33	NR_002436	6	Non-coding	chr6:132817218 plus strand	1882570
SNORA38	NR_002971	6	Non-coding	chr6:31623078 plus strand	1882571
SNORD100	NR_002435	6	Non-coding	chr6:132816801 plus strand	1882572
SNORD101	NR_002434	6	Non-coding	chr6:132815306 plus strand	1882573
SNORD117	NR_003140	6	Non-coding	chr6:31536449 minus strand	1882574
SNORD32B	NR_003049	6	Non-coding	chr6:29582251 plus strand	1882575
SNORD48	NR_002745	6	Non-coding	chr6:31835262 plus strand	1882576
SNORD50A	NR_002743	6	Non-coding	chr6:85677368 minus strand	1882577
SNORD50B	NR_003044	6	Non-coding	chr6:85677659 minus strand	1882578

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SNORD52	NR_002742	6	Non-coding	chr6:31837075 plus strand	1882579
SNORD84	NR_003065	6	Non-coding	chr6:31541178 minus strand	1882580
SNRPC	NR_029472	6	Non-coding	chr6:34757093 plus strand	1882581
SNX14	NR_123729	6	Non-coding	chr6:85594132 minus strand	1882582
SRPK1	NR_034069	6	Non-coding	chr6:35921180 minus strand	1882583
SRSF3	NR_036610	6	Non-coding	chr6:36594312 plus strand	1882584
SSR1	NR_120448	6	Non-coding	chr6:7313314 minus strand	1882585
STK19	NR_026717	6	Non-coding	chr6:31971174 plus strand	1882586
STK19	NR_026717	6	Non-coding	chr6:32013269 plus strand	1882587
STXBP5-AS1	NR_034115	6	Non-coding	chr6:147204614 minus strand	1882588
SYNE1-AS1	NR_120501	6	Non-coding	chr6:152380529 plus strand	1882589
SYNJ2-IT1	NR_046796	6	Non-coding	chr6:158001106 plus strand	1882590
TAAR3	NR_028511	6	Non-coding	chr6:132609302 minus strand	1882591
TAB2	NR_125861	6	Non-coding	chr6:149217923 plus strand	1882592
TARID	NR_109982	6	Non-coding	chr6:133889006 minus strand	1882593
TBC1D22B	NR_130108	6	Non-coding	chr6:37257703 plus strand	1882594
TBC1D32	NR_104452	6	Non-coding	chr6:121334500 minus strand	1882595
TDRG1	NR_024015	6	Non-coding	chr6:40378423 plus strand	1882596
TFAP2A-AS1	NR_033910	6	Non-coding	chr6:10412317 plus strand	1882597
TJAP1	NR_027394	6	Non-coding	chr6:43477522 plus strand	1882598
TMEM14B	NR_104454	6	Non-coding	chr6:10747758 plus strand	1882599
TMEM217	NR_104443	6	Non-coding	chr6:37258155 minus strand	1882600
TMEM217	NR_104442	6	Non-coding	chr6:37258155 minus strand	1882600
TNXA	NR_001284	6	Non-coding	chr6:32013023 minus strand	1882601
TOB2P1	NR_002936	6	Non-coding	chr6:28218929 minus strand	1882602
TPI1P3	NR_027338	6	Non-coding	chr6:116038730 plus strand	1882603
TRAF3IP2	NR_028338	6	Non-coding	chr6:111606274 minus strand	1882604

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TRAF3IP2-AS1	NR_034110	6	Non-coding	chr6:111483471 plus strand	1882605
TRAF3IP2-AS1	NR_034109	6	Non-coding	chr6:111483471 plus strand	1882605
TRAF3IP2-AS1	NR_034108	6	Non-coding	chr6:111483471 plus strand	1882605
TRAF3IP2-AS1	NR_034111	6	Non-coding	chr6:111483471 plus strand	1882605
TRAM2-AS1	NR_103446	6	Non-coding	chr6:52577201 plus strand	1882606
TRAM2-AS1	NR_103447	6	Non-coding	chr6:52577297 plus strand	1882607
TREML3P	NR_027256	6	Non-coding	chr6:41217947 minus strand	1882608
TREML5P	NR_002794	6	Non-coding	chr6:41249376 plus strand	1882609
TRIM31-AS1	NR_126470	6	Non-coding	chr6:30105239 plus strand	1882610
TSG1	NR_015362	6	Non-coding	chr6:93707082 plus strand	1882611
TUBB	NR_120608	6	Non-coding	chr6:30720200 plus strand	1882612
VN1R10P	NR_045612	6	Non-coding	chr6:27324760 plus strand	1882613
VNN2	NR_034174	6	Non-coding	chr6:132758008 minus strand	1882614
VNN2	NR_034173	6	Non-coding	chr6:132758008 minus strand	1882614
VNN2	NR_110146	6	Non-coding	chr6:132758008 minus strand	1882614
VNN2	NR_110145	6	Non-coding	chr6:132758008 minus strand	1882614
VNN2	NR_110144	6	Non-coding	chr6:132758008 minus strand	1882614
VNN2	NR_110143	6	Non-coding	chr6:132758008 minus strand	1882614
WISP3	NR_125354	6	Non-coding	chr6:112054074 plus strand	1882615
WISP3	NR_125353	6	Non-coding	chr6:112054167 plus strand	1882616
ZNF192P1	NR_103448	6	Non-coding	chr6:28161760 plus strand	1882617
ZNF204P	NR_002722	6	Non-coding	chr6:27371525 minus strand	1882618
ZNF204P	NR_024553	6	Non-coding	chr6:27375374 minus strand	1882619
ZNRD1	NR_103864	6	Non-coding	chr6:30061239 plus strand	1882620
ZNRD1-AS1	NR_026751	6	Non-coding	chr6:30061184 minus strand	1882621
ZSCAN12	NR_028077	6	Non-coding	chr6:28399767 minus strand	1882622
ZSCAN12P1	NR_024063	6	Non-coding	chr6:28090806 plus strand	1882623

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ZSCAN16-AS1	NR_103455	6	Non-coding	chr6:28137316 minus strand	1882624
ZSCAN16-AS1	NR_103456	6	Non-coding	chr6:28137316 minus strand	1882624
ABHD11	NR_026910	7	Non-coding	chr7:73738854 minus strand	1882625
ABHD11	NR_026912	7	Non-coding	chr7:73738860 minus strand	1882626
ABHD11-AS1	NR_026690	7	Non-coding	chr7:73735068 plus strand	1882627
ACTR3B	NR_073001	7	Non-coding	chr7:152759748 plus strand	1882628
ACTR3B	NR_073000	7	Non-coding	chr7:152759748 plus strand	1882628
AOAH-IT1	NR_046764	7	Non-coding	chr7:36600120 minus strand	1882629
APTR	NR_038361	7	Non-coding	chr7:77697345 minus strand	1882630
ARHGEF34P	NR_033942	7	Non-coding	chr7:144286003 minus strand	1882631
ASIC3	NR_046401	7	Non-coding	chr7:151048291 plus strand	1882632
ATG9B	NR_073169	7	Non-coding	chr7:151024499 minus strand	1882633
ATP6V0E2	NR_110612	7	Non-coding	chr7:149872967 plus strand	1882634
ATP6V0E2-AS1	NR_027040	7	Non-coding	chr7:149873862 minus strand	1882635
AZGP1P1	NR_036679	7	Non-coding	chr7:99980761 plus strand	1882636
BCAP29	NR_027830	7	Non-coding	chr7:107579976 plus strand	1882637
BCL7B	NR_036682	7	Non-coding	chr7:73557272 minus strand	1882638
BLACE	NR_103545	7	Non-coding	chr7:155367933 minus strand	1882639
BZW2	NR_027624	7	Non-coding	chr7:16646133 plus strand	1882640
C7orf13	NR_026865	7	Non-coding	chr7:156640654 minus strand	1882641
C7orf55	NR_073059	7	Non-coding	chr7:139340449 plus strand	1882642
C7orf55	NR_073060	7	Non-coding	chr7:139340449 plus strand	1882642
C7orf55	NR_073058	7	Non-coding	chr7:139340449 plus strand	1882642
CALU	NR_074086	7	Non-coding	chr7:128739291 plus strand	1882643
CBLL1	NR_024199	7	Non-coding	chr7:107743696 plus strand	1882644
CCDC129	NR_047565	7	Non-coding	chr7:31517363 plus strand	1882645
CCM2	NR_030770	7	Non-coding	chr7:44999745 plus strand	1882646

【１５７３】

CCT6P1	NR_003110	7	Non-coding	chr7:65751104 plus strand	1882647
CCT6P3	NR_033416	7	Non-coding	chr7:65038353 plus strand	1882648
CD36	NR_110501	7	Non-coding	chr7:80646091 plus strand	1882649
CDC14C	NR_003595	7	Non-coding	chr7:48924560 plus strand	1882650
CEP41	NR_046443	7	Non-coding	chr7:130441210 minus strand	1882651
CHN2	NR_120524	7	Non-coding	chr7:29479711 plus strand	1882652
CHN2	NR_120525	7	Non-coding	chr7:29479711 plus strand	1882652
CLCN1	NR_046453	7	Non-coding	chr7:143316125 plus strand	1882653
CLK2P	NR_002711	7	Non-coding	chr7:23586527 minus strand	1882654
COA1	NR_047701	7	Non-coding	chr7:43729541 minus strand	1882655
COPG2IT1	NR_024086	7	Non-coding	chr7:130543452 plus strand	1882656
CRCP	NR_024548	7	Non-coding	chr7:66114817 plus strand	1882657
CYP3A43	NR_103868	7	Non-coding	chr7:99828012 plus strand	1882658
CYP3A43	NR_103869	7	Non-coding	chr7:99828012 plus strand	1882658
CYP3A5	NR_033807	7	Non-coding	chr7:99680026 minus strand	1882659
CYP51A1-AS1	NR_122109	7	Non-coding	chr7:92134562 plus strand	1882660
CYP51A1-AS1	NR_122110	7	Non-coding	chr7:92134562 plus strand	1882660
DDC-AS1	NR_033845	7	Non-coding	chr7:50531758 plus strand	1882661
DKFZp434L192	NR_026929	7	Non-coding	chr7:56496222 plus strand	1882662
DKFZP586I1420	NR_002186	7	Non-coding	chr7:30370049 plus strand	1882663
DLX6-AS1	NR_015448	7	Non-coding	chr7:97014065 minus strand	1882664
DMTF1	NR_024549	7	Non-coding	chr7:87152360 plus strand	1882665
DMTF1	NR_024550	7	Non-coding	chr7:87152360 plus strand	1882665
DNAAF5	NR_075098	7	Non-coding	chr7:726700 plus strand	1882666
DOCK4-AS1	NR_103806	7	Non-coding	chr7:111808504 plus strand	1882667
DPY19L1P1	NR_036680	7	Non-coding	chr7:32719168 minus strand	1882668
DPY19L2P1	NR_002833	7	Non-coding	chr7:35186162 minus strand	1882669

【１５７４】

DPY19L2P2	NR_003561	7	Non-coding	chr7:103280312 minus strand	1882670
DPY19L2P2	NR_027768	7	Non-coding	chr7:103280466 minus strand	1882671
DPY19L2P3	NR_036482	7	Non-coding	chr7:29685153 plus strand	1882672
DPY19L2P4	NR_003551	7	Non-coding	chr7:90119399 plus strand	1882673
DTX2P1-UPK3BP1-PMS2P11	NR_023383	7	Non-coding	chr7:76980821 plus strand	1882674
DUS4L	NR_073005	7	Non-coding	chr7:107563956 plus strand	1882675
DUS4L	NR_073004	7	Non-coding	chr7:107563956 plus strand	1882675
DUS4L	NR_073003	7	Non-coding	chr7:107563956 plus strand	1882675
DUS4L	NR_073002	7	Non-coding	chr7:107563956 plus strand	1882675
EFCAB10	NR_027068	7	Non-coding	chr7:105581529 minus strand	1882676
EGFR-AS1	NR_047551	7	Non-coding	chr7:55188949 minus strand	1882677
EIF3IP1	NR_003024	7	Non-coding	chr7:109960213 minus strand	1882678
ELDR	NR_110426	7	Non-coding	chr7:55255635 minus strand	1882679
ELFN1-AS1	NR_120508	7	Non-coding	chr7:1742310 minus strand	1882680
ELFN1-AS1	NR_120509	7	Non-coding	chr7:1742310 minus strand	1882680
ELFN1-AS1	NR_120510	7	Non-coding	chr7:1742310 minus strand	1882680
ELMO1	NR_038120	7	Non-coding	chr7:36986266 minus strand	1882681
ELMO1-AS1	NR_104120	7	Non-coding	chr7:36997795 plus strand	1882682
EPHA1-AS1	NR_033897	7	Non-coding	chr7:143407812 plus strand	1882683
EPHB6	NR_104001	7	Non-coding	chr7:142862016 plus strand	1882684
ETV1	NR_120445	7	Non-coding	chr7:13990702 minus strand	1882685
EVX1-AS	NR_120507	7	Non-coding	chr7:27247229 minus strand	1882686
FABP5P3	NR_002935	7	Non-coding	chr7:152436894 plus strand	1882687
FAM115D	NR_110549	7	Non-coding	chr7:143647646 minus strand	1882688
FAM115D	NR_110549	7	Non-coding	chr7:143809989 plus strand	1882689
FAM133B	NR_109929	7	Non-coding	chr7:92590394 minus strand	1882690
FAM183B	NR_028347	7	Non-coding	chr7:38687089 minus strand	1882691

【１５７５】

FAM185A	NR_026879	7	Non-coding	chr7:102748951 plus strand	1882692
FAM71F1	NR_104243	7	Non-coding	chr7:128709060 plus strand	1882693
FAM71F1	NR_104242	7	Non-coding	chr7:128715341 plus strand	1882694
FBXL13	NR_105043	7	Non-coding	chr7:103074841 minus strand	1882695
FDPSP2	NR_003262	7	Non-coding	chr7:76475000 minus strand	1882696
FEZF1-AS1	NR_036484	7	Non-coding	chr7:122303657 plus strand	1882697
FKBP14	NR_046478	7	Non-coding	chr7:30026801 minus strand	1882698
FKBP14	NR_046479	7	Non-coding	chr7:30026801 minus strand	1882698
FKBP9P1	NR_027340	7	Non-coding	chr7:55688032 minus strand	1882699
FKBP9P1	NR_027342	7	Non-coding	chr7:55689301 minus strand	1882700
FKBP9P1	NR_027339	7	Non-coding	chr7:55689460 minus strand	1882701
FKBP9P1	NR_003949	7	Non-coding	chr7:55704567 minus strand	1882702
FLJ40288	NR_046323	7	Non-coding	chr7:132648793 plus strand	1882703
FLJ44511	NR_033963	7	Non-coding	chr7:520390 plus strand	1882704
FOXP2	NR_033766	7	Non-coding	chr7:114086309 plus strand	1882705
FOXP2	NR_033767	7	Non-coding	chr7:114414996 plus strand	1882706
GALNTL5	NR_033169	7	Non-coding	chr7:151956378 plus strand	1882707
GATAD1	NR_052016	7	Non-coding	chr7:92447447 plus strand	1882708
GATS	NR_028039	7	Non-coding	chr7:100272232 minus strand	1882709
GATS	NR_028040	7	Non-coding	chr7:100272232 minus strand	1882709
GATS	NR_028038	7	Non-coding	chr7:100272232 minus strand	1882709
GGCT	NR_037669	7	Non-coding	chr7:30504841 minus strand	1882710
GHET1	NR_130107	7	Non-coding	chr7:148987526 plus strand	1882711
GRM8	NR_028041	7	Non-coding	chr7:127243515 minus strand	1882712
GTF2IP1	NR_002206	7	Non-coding	chr7:73154928 plus strand	1882713
GTF2IP1	NR_002206	7	Non-coding	chr7:75237705 minus strand	1882714
GTF2IRD1P1	NR_003934	7	Non-coding	chr7:66844826 minus strand	1882715

【1576】

GUSB	NR_120531	7	Non-coding	chr7:65982314 minus strand	1882716
GUSBP10	NR_030766	7	Non-coding	chr7:57180156 minus strand	1882717
HOTAIRM1	NR_038366	7	Non-coding	chr7:27096093 plus strand	1882718
HOTAIRM1	NR_038367	7	Non-coding	chr7:27096093 plus strand	1882718
HOTTIP	NR_037843	7	Non-coding	chr7:27200420 plus strand	1882719
HOXA10	NR_037939	7	Non-coding	chr7:27180261 minus strand	1882720
HOXA10-AS	NR_046609	7	Non-coding	chr7:27168898 plus strand	1882721
HOXA10-HOXA9	NR_037940	7	Non-coding	chr7:27180261 minus strand	1882722
HOXA11-AS	NR_002795	7	Non-coding	chr7:27185407 plus strand	1882723
HOXA-AS2	NR_122069	7	Non-coding	chr7:27121918 plus strand	1882724
HOXA-AS3	NR_038832	7	Non-coding	chr7:27140363 plus strand	1882725
HOXA-AS3	NR_038831	7	Non-coding	chr7:27147162 plus strand	1882726
HPVC1	NR_004422	7	Non-coding	chr7:54202421 minus strand	1882727
HTR5A-AS1	NR_038945	7	Non-coding	chr7:155071557 minus strand	1882728
HUS1	NR_037917	7	Non-coding	chr7:47979625 minus strand	1882729
HYALP1	NR_002731	7	Non-coding	chr7:123814138 plus strand	1882730
IFRD1	NR_120333	7	Non-coding	chr7:112450507 plus strand	1882731
INHBA-AS1	NR_027118	7	Non-coding	chr7:41693915 plus strand	1882732
INHBA-AS1	NR_027119	7	Non-coding	chr7:41693947 plus strand	1882733
INMT-FAM188B	NR_037598	7	Non-coding	chr7:30752134 plus strand	1882734
INTS4P2	NR_027392	7	Non-coding	chr7:65647853 plus strand	1882735
IQUB	NR_104244	7	Non-coding	chr7:123532948 minus strand	1882736
IQUB	NR_104245	7	Non-coding	chr7:123534664 minus strand	1882737
ISPD-AS1	NR_038946	7	Non-coding	chr7:16210485 plus strand	1882738
ISPD-AS1	NR_038947	7	Non-coding	chr7:16210485 plus strand	1882738
JAZF1-AS1	NR_034097	7	Non-coding	chr7:28180456 plus strand	1882739
JHDM1D-AS1	NR_024451	7	Non-coding	chr7:140177260 plus strand	1882740

【1577】

KIAA0087	NR_022006	7	Non-coding	chr7:26538825 minus strand	1882741
KLHL7	NR_033329	7	Non-coding	chr7:23105733 plus strand	1882742
KLHL7	NR_033328	7	Non-coding	chr7:23105733 plus strand	1882742
KLHL7-AS1	NR_046220	7	Non-coding	chr7:23105703 minus strand	1882743
KMT2E-AS1	NR_024586	7	Non-coding	chr7:105014141 minus strand	1882744
LHFPL3-AS1	NR_034142	7	Non-coding	chr7:104804092 minus strand	1882745
LHFPL3-AS1	NR_034141	7	Non-coding	chr7:104804092 minus strand	1882745
LHFPL3-AS2	NR_027374	7	Non-coding	chr7:104926645 minus strand	1882746
LINC00174	NR_026873	7	Non-coding	chr7:66400408 minus strand	1882747
LINC00244	NR_024119	7	Non-coding	chr7:156540490 plus strand	1882748
LINC00265	NR_026999	7	Non-coding	chr7:39733567 plus strand	1882749
LINC00525	NR_038407	7	Non-coding	chr7:47761475 plus strand	1882750
LINC00689	NR_024394	7	Non-coding	chr7:159008353 plus strand	1882751
LINC00957	NR_072982	7	Non-coding	chr7:44039048 plus strand	1882752
LINC00957	NR_072981	7	Non-coding	chr7:44039048 plus strand	1882752
LINC00957	NR_015401	7	Non-coding	chr7:44039048 plus strand	1882752
LINC00996	NR_034033	7	Non-coding	chr7:150433653 plus strand	1882753
LINC00997	NR_036501	7	Non-coding	chr7:32758285 plus strand	1882754
LINC00998	NR_024412	7	Non-coding	chr7:113118582 minus strand	1882755
LINC00998	NR_015442	7	Non-coding	chr7:113118582 minus strand	1882755
LINC01000	NR_024368	7	Non-coding	chr7:128641240 plus strand	1882756
LINC01003	NR_027387	7	Non-coding	chr7:152464123 plus strand	1882757
LINC01004	NR_039981	7	Non-coding	chr7:104991165 minus strand	1882758
LINC01005	NR_039987	7	Non-coding	chr7:64030102 minus strand	1882759
LINC01006	NR_103858	7	Non-coding	chr7:156603195 minus strand	1882760
LINC01007	NR_103749	7	Non-coding	chr7:101569006 minus strand	1882761
LINC01007	NR_103748	7	Non-coding	chr7:101569006 minus strand	1882761

【１５７８】

LINC01007	NR_103747	7	Non-coding	chr7:101569006 minus strand	1882761
LINC01162	NR_126381	7	Non-coding	chr7:20835430 plus strand	1882762
LINC01176	NR_108081	7	Non-coding	chr7:30390884 plus strand	1882763
LINC01287	NR_125776	7	Non-coding	chr7:153412234 minus strand	1882764
LINC01372	NR_108104	7	Non-coding	chr7:67335975 plus strand	1882765
LINC01392	NR_126407	7	Non-coding	chr7:115231355 minus strand	1882766
LINC01393	NR_120521	7	Non-coding	chr7:115078957 plus strand	1882767
LINC01445	NR_120515	7	Non-coding	chr7:54330696 plus strand	1882768
LINC01445	NR_120516	7	Non-coding	chr7:54330696 plus strand	1882768
LINC01446	NR_038371	7	Non-coding	chr7:53811931 minus strand	1882769
LINC01447	NR_108090	7	Non-coding	chr7:47621938 plus strand	1882770
LINC01448	NR_110833	7	Non-coding	chr7:42706447 minus strand	1882771
LINC01449	NR_110832	7	Non-coding	chr7:41101603 plus strand	1882772
LINC01450	NR_110831	7	Non-coding	chr7:40979939 minus strand	1882773
LINC01510	NR_120506	7	Non-coding	chr7:116614820 minus strand	1882774
LINC-PINT	NR_034120	7	Non-coding	chr7:130913310 minus strand	1882775
LINC-PINT	NR_110473	7	Non-coding	chr7:130913310 minus strand	1882775
LINC-PINT	NR_110472	7	Non-coding	chr7:130913310 minus strand	1882775
LINC-PINT	NR_024153	7	Non-coding	chr7:131107030 minus strand	1882776
LINC-PINT	NR_109855	7	Non-coding	chr7:131109916 minus strand	1882777
LINC-PINT	NR_015431	7	Non-coding	chr7:131109916 minus strand	1882777
LINC-PINT	NR_109850	7	Non-coding	chr7:131109916 minus strand	1882777
LINC-PINT	NR_109851	7	Non-coding	chr7:131109916 minus strand	1882777
LINC-PINT	NR_109852	7	Non-coding	chr7:131109916 minus strand	1882777
LINC-PINT	NR_109853	7	Non-coding	chr7:131109916 minus strand	1882777
LINC-PINT	NR_109854	7	Non-coding	chr7:131109916 minus strand	1882777
LOC100093631	NR_003580	7	Non-coding	chr7:73154923 plus strand	1882778

【１５７９】

LOC100101148	NR_104007	7	Non-coding	chr7:72969681 plus strand	1882779
LOC100101148	NR_104007	7	Non-coding	chr7:75395413 minus strand	1882780
LOC100128317	NR_126026	7	Non-coding	chr7:81626216 minus strand	1882781
LOC100128317	NR_126025	7	Non-coding	chr7:81691406 minus strand	1882782
LOC100128885	NR_077227	7	Non-coding	chr7:64574694 plus strand	1882783
LOC100129148	NR_033999	7	Non-coding	chr7:139427526 minus strand	1882784
LOC100129603	NR_126024	7	Non-coding	chr7:3158573 minus strand	1882785
LOC100130673	NR_038454	7	Non-coding	chr7:32458494 minus strand	1882786
LOC100130849	NR_038450	7	Non-coding	chr7:56882146 minus strand	1882787
LOC100131257	NR_034022	7	Non-coding	chr7:7096786 minus strand	1882788
LOC100133091	NR_029411	7	Non-coding	chr7:76549340 plus strand	1882789
LOC100240728	NR_108095	7	Non-coding	chr7:56483319 minus strand	1882790
LOC100287704	NR_028348	7	Non-coding	chr7:63349069 plus strand	1882791
LOC100287834	NR_028349	7	Non-coding	chr7:63349069 plus strand	1882792
LOC100287834	NR_028349	7	Non-coding	chr7:63399041 minus strand	1882793
LOC100505921	NR_110018	7	Non-coding	chr7:7968752 minus strand	1882794
LOC100505938	NR_125740	7	Non-coding	chr7:8262224 plus strand	1882795
LOC100506136	NR_038948	7	Non-coding	chr7:96664338 minus strand	1882796
LOC100506178	NR_038393	7	Non-coding	chr7:22563336 plus strand	1882797
LOC100506302	NR_126344	7	Non-coding	chr7:155644406 minus strand	1882798
LOC100506497	NR_038965	7	Non-coding	chr7:28979966 plus strand	1882799
LOC100506585	NR_038966	7	Non-coding	chr7:157854584 plus strand	1882800
LOC100506682	NR_110024	7	Non-coding	chr7:127476882 plus strand	1882801
LOC100506725	NR_108083	7	Non-coding	chr7:35716436 plus strand	1882802
LOC100506725	NR_108082	7	Non-coding	chr7:35716436 plus strand	1882802
LOC100506860	NR_109780	7	Non-coding	chr7:130913463 plus strand	1882803
LOC100506895	NR_038276	7	Non-coding	chr7:43522542 minus strand	1882804

【１５８０】

LOC100507468	NR_108105	7	Non-coding	chr7:69597495 minus strand	1882805
LOC100507642	NR_108065	7	Non-coding	chr7:149717 plus strand	1882806
LOC100507642	NR_108064	7	Non-coding	chr7:149717 plus strand	1882806
LOC100630923	NR_038967	7	Non-coding	chr7:102363860 plus strand	1882807
LOC100653233	NR_120505	7	Non-coding	chr7:57404766 plus strand	1882808
LOC100996249	NR_110159	7	Non-coding	chr7:112618064 plus strand	1882809
LOC100996249	NR_110160	7	Non-coding	chr7:112618064 plus strand	1882809
LOC100996437	NR_110037	7	Non-coding	chr7:66654518 plus strand	1882810
LOC100996654	NR_110040	7	Non-coding	chr7:54759312 plus strand	1882811
LOC101409256	NR_102424	7	Non-coding	chr7:90396291 plus strand	1882812
LOC101926943	NR_110044	7	Non-coding	chr7:74728918 minus strand	1882813
LOC101926963	NR_110054	7	Non-coding	chr7:602844 plus strand	1882814
LOC101926963	NR_110055	7	Non-coding	chr7:603397 plus strand	1882815
LOC101927021	NR_110069	7	Non-coding	chr7:1160373 plus strand	1882816
LOC101927021	NR_110068	7	Non-coding	chr7:1160373 plus strand	1882816
LOC101927021	NR_110067	7	Non-coding	chr7:1160373 plus strand	1882816
LOC101927021	NR_110066	7	Non-coding	chr7:1160373 plus strand	1882816
LOC101927021	NR_110065	7	Non-coding	chr7:1160373 plus strand	1882816
LOC101927021	NR_110070	7	Non-coding	chr7:1160784 plus strand	1882817
LOC101927181	NR_108066	7	Non-coding	chr7:2437762 plus strand	1882818
LOC101927243	NR_110073	7	Non-coding	chr7:77415197 plus strand	1882819
LOC101927269	NR_110075	7	Non-coding	chr7:80374439 minus strand	1882820
LOC101927354	NR_108073	7	Non-coding	chr7:7255153 plus strand	1882821
LOC101927356	NR_110076	7	Non-coding	chr7:82009176 plus strand	1882822
LOC101927356	NR_110077	7	Non-coding	chr7:82009176 plus strand	1882822
LOC101927378	NR_110079	7	Non-coding	chr7:84532475 plus strand	1882823
LOC101927378	NR_110080	7	Non-coding	chr7:84532475 plus strand	1882823

【１５８１】

LOC101927391	NR_110084	7	Non-coding	chr7:7566065 minus strand	1882824
LOC101927446	NR_110085	7	Non-coding	chr7:90335222 plus strand	1882825
LOC101927497	NR_110088	7	Non-coding	chr7:92836482 plus strand	1882826
LOC101927497	NR_110087	7	Non-coding	chr7:92836482 plus strand	1882826
LOC101927497	NR_110086	7	Non-coding	chr7:92836482 plus strand	1882826
LOC101927550	NR_110102	7	Non-coding	chr7:99013164 plus strand	1882827
LOC101927630	NR_110013	7	Non-coding	chr7:17558909 minus strand	1882828
LOC101927668	NR_110114	7	Non-coding	chr7:20140426 minus strand	1882829
LOC101927746	NR_110115	7	Non-coding	chr7:101308339 plus strand	1882830
LOC101927769	NR_110117	7	Non-coding	chr7:20296707 plus strand	1882831
LOC101927811	NR_110120	7	Non-coding	chr7:20331762 minus strand	1882832
LOC101927811	NR_110119	7	Non-coding	chr7:20331762 minus strand	1882832
LOC101927870	NR_110141	7	Non-coding	chr7:103445206 plus strand	1882833
LOC101927914	NR_110157	7	Non-coding	chr7:157466230 plus strand	1882834
LOC101928012	NR_110158	7	Non-coding	chr7:112622380 plus strand	1882835
LOC101928036	NR_110162	7	Non-coding	chr7:112995643 minus strand	1882836
LOC101928168	NR_120523	7	Non-coding	chr7:29125032 plus strand	1882837
LOC101928211	NR_110180	7	Non-coding	chr7:124352096 minus strand	1882838
LOC101928254	NR_110183	7	Non-coding	chr7:125264291 minus strand	1882839
LOC101928254	NR_110182	7	Non-coding	chr7:125264291 minus strand	1882839
LOC101928283	NR_110188	7	Non-coding	chr7:125184568 plus strand	1882840
LOC101928333	NR_110195	7	Non-coding	chr7:127215126 plus strand	1882841
LOC101928333	NR_110194	7	Non-coding	chr7:127215126 plus strand	1882841
LOC101928401	NR_108099	7	Non-coding	chr7:56538130 minus strand	1882842
LOC101928605	NR_126022	7	Non-coding	chr7:144195320 plus strand	1882843
LOC101928618	NR_108089	7	Non-coding	chr7:36095309 plus strand	1882844
LOC101928700	NR_110829	7	Non-coding	chr7:147097609 minus strand	1882845

【１５８２】

LOC101928782	NR_110836	7	Non-coding	chr7:131910219 plus strand	1882846
LOC101928861	NR_120513	7	Non-coding	chr7:133824888 minus strand	1882847
LOC102659288	NR_110015	7	Non-coding	chr7:17374916 plus strand	1882848
LOC102659288	NR_110014	7	Non-coding	chr7:17374916 plus strand	1882848
LOC102723427	NR_120514	7	Non-coding	chr7:68020252 plus strand	1882849
LOC102723885	NR_120517	7	Non-coding	chr7:88216659 plus strand	1882850
LOC102724094	NR_120519	7	Non-coding	chr7:101017608 minus strand	1882851
LOC102724094	NR_120520	7	Non-coding	chr7:101017608 minus strand	1882851
LOC102724484	NR_120522	7	Non-coding	chr7:29208970 minus strand	1882852
LOC102724555	NR_111922	7	Non-coding	chr7:123624957 minus strand	1882853
LOC154761	NR_015421	7	Non-coding	chr7:143836717 minus strand	1882854
LOC155060	NR_036573	7	Non-coding	chr7:149285280 plus strand	1882855
LOC221946	NR_126168	7	Non-coding	chr7:5513853 plus strand	1882856
LOC285889	NR_038232	7	Non-coding	chr7:156445588 minus strand	1882857
LOC349160	NR_046103	7	Non-coding	chr7:137164341 minus strand	1882858
LOC401312	NR_122075	7	Non-coding	chr7:22665533 minus strand	1882859
LOC401320	NR_038889	7	Non-coding	chr7:30577779 minus strand	1882860
LOC401324	NR_038864	7	Non-coding	chr7:35313854 plus strand	1882861
LOC407835	NR_002144	7	Non-coding	chr7:129126270 plus strand	1882862
LOC441204	NR_015364	7	Non-coding	chr7:26403487 plus strand	1882863
LOC441242	NR_103527	7	Non-coding	chr7:65750915 minus strand	1882864
LOC441242	NR_038378	7	Non-coding	chr7:65770810 minus strand	1882865
LOC442497	NR_033960	7	Non-coding	chr7:379424 plus strand	1882866
LOC493754	NR_111973	7	Non-coding	chr7:66592407 minus strand	1882867
LOC493754	NR_111972	7	Non-coding	chr7:66592407 minus strand	1882867
LOC493754	NR_111974	7	Non-coding	chr7:66592407 minus strand	1882867
LOC493754	NR_111975	7	Non-coding	chr7:66592407 minus strand	1882867

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LOC493754	NR_111976	7	Non-coding	chr7:66592407 minus strand	1882867
LOC493754	NR_111978	7	Non-coding	chr7:66592407 minus strand	1882867
LOC493754	NR_111977	7	Non-coding	chr7:66592407 minus strand	1882867
LOC493754	NR_111979	7	Non-coding	chr7:66592407 minus strand	1882867
LOC541473	NR_003602	7	Non-coding	chr7:72969633 plus strand	1882868
LOC541473	NR_003602	7	Non-coding	chr7:75395461 minus strand	1882869
LOC641746	NR_033245	7	Non-coding	chr7:64582609 plus strand	1882870
LOC646762	NR_024278	7	Non-coding	chr7:29685138 minus strand	1882871
LOC650226	NR_029420	7	Non-coding	chr7:56448375 minus strand	1882872
LOC728743	NR_027237	7	Non-coding	chr7:150405751 plus strand	1882873
LSM5	NR_024466	7	Non-coding	chr7:32490863 minus strand	1882874
MACC1-AS1	NR_046756	7	Non-coding	chr7:20141915 plus strand	1882875
MAGI2-AS2	NR_046689	7	Non-coding	chr7:79008987 plus strand	1882876
MAGI2-AS3	NR_038345	7	Non-coding	chr7:79452956 plus strand	1882877
MAGI2-AS3	NR_038346	7	Non-coding	chr7:79452956 plus strand	1882877
MAGI2-AS3	NR_038343	7	Non-coding	chr7:79453959 plus strand	1882878
MAGI2-AS3	NR_038344	7	Non-coding	chr7:79453959 plus strand	1882878
MDH2	NR_104165	7	Non-coding	chr7:76048018 plus strand	1882879
MEOX2-AS1	NR_110094	7	Non-coding	chr7:15688377 plus strand	1882880
MESTIT1	NR_004382	7	Non-coding	chr7:130491172 minus strand	1882881
MGC16142	NR_026902	7	Non-coding	chr7:92538474 plus strand	1882882
MGC27345	NR_046216	7	Non-coding	chr7:128307763 minus strand	1882883
MGC72080	NR_002822	7	Non-coding	chr7:97972326 minus strand	1882884
MIR106B	NR_029831	7	Non-coding	chr7:100094074 minus strand	1882885
MIR1183	NR_031594	7	Non-coding	chr7:21471057 plus strand	1882886
MIR1200	NR_031604	7	Non-coding	chr7:36919432 minus strand	1882887
MIR1285-1	NR_031616	7	Non-coding	chr7:92204098 minus strand	1882888

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MIR129-1	NR_029596	7	Non-coding	chr7:128207871 plus strand	1882889
MIR1302-6	NR_031635	7	Non-coding	chr7:18127309 minus strand	1882890
MIR148A	NR_029597	7	Non-coding	chr7:25949986 minus strand	1882891
MIR153-2	NR_029689	7	Non-coding	chr7:157574422 minus strand	1882892
MIR182	NR_029614	7	Non-coding	chr7:129770492 minus strand	1882893
MIR183	NR_029615	7	Non-coding	chr7:129775014 minus strand	1882894
MIR196B	NR_029911	7	Non-coding	chr7:27169563 minus strand	1882895
MIR25	NR_029498	7	Non-coding	chr7:100093643 minus strand	1882896
MIR29A	NR_029503	7	Non-coding	chr7:130876810 minus strand	1882897
MIR29B1	NR_029517	7	Non-coding	chr7:130877539 minus strand	1882898
MIR3146	NR_036101	7	Non-coding	chr7:19705436 minus strand	1882899
MIR3147	NR_036102	7	Non-coding	chr7:57405024 plus strand	1882900
MIR335	NR_029899	7	Non-coding	chr7:130496110 plus strand	1882901
MIR339	NR_029898	7	Non-coding	chr7:1023026 minus strand	1882902
MIR3609	NR_037403	7	Non-coding	chr7:98881649 plus strand	1882903
MIR3654	NR_037427	7	Non-coding	chr7:133034915 minus strand	1882904
MIR3666	NR_037439	7	Non-coding	chr7:114653344 plus strand	1882905
MIR3683	NR_037454	7	Non-coding	chr7:7067045 minus strand	1882906
MIR3907	NR_037468	7	Non-coding	chr7:151433639 minus strand	1882907
MIR3914-1	NR_037477	7	Non-coding	chr7:71307770 minus strand	1882908
MIR3914-2	NR_037479	7	Non-coding	chr7:71307673 plus strand	1882909
MIR3943	NR_037508	7	Non-coding	chr7:43150894 plus strand	1882910
MIR4283-1	NR_036246	7	Non-coding	chr7:56955864 minus strand	1882911
MIR4283-1	NR_036246	7	Non-coding	chr7:63621089 plus strand	1882912
MIR4283-2	NR_036270	7	Non-coding	chr7:56955864 minus strand	1882913
MIR4283-2	NR_036270	7	Non-coding	chr7:63621089 plus strand	1882914
MIR4284	NR_036247	7	Non-coding	chr7:73711316 plus strand	1882915

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MIR4285	NR_036245	7	Non-coding	chr7:102293102 plus strand	1882916
MIR4467	NR_039677	7	Non-coding	chr7:102471468 plus strand	1882917
MIR4468	NR_039678	7	Non-coding	chr7:138123757 plus strand	1882918
MIR4648	NR_039791	7	Non-coding	chr7:2527073 plus strand	1882919
MIR4649	NR_039792	7	Non-coding	chr7:44110848 plus strand	1882920
MIR4650-1	NR_039793	7	Non-coding	chr7:67114397 minus strand	1882921
MIR4650-1	NR_039793	7	Non-coding	chr7:72697902 plus strand	1882922
MIR4650-2	NR_039794	7	Non-coding	chr7:67114397 minus strand	1882923
MIR4650-2	NR_039794	7	Non-coding	chr7:72697902 plus strand	1882924
MIR4651	NR_039795	7	Non-coding	chr7:75915196 plus strand	1882925
MIR4652	NR_039796	7	Non-coding	chr7:93716927 plus strand	1882926
MIR4653	NR_039797	7	Non-coding	chr7:101159472 plus strand	1882927
MIR4655	NR_039799	7	Non-coding	chr7:1844253 minus strand	1882928
MIR4656	NR_039800	7	Non-coding	chr7:4788639 minus strand	1882929
MIR4657	NR_039801	7	Non-coding	chr7:44881800 minus strand	1882930
MIR4658	NR_039802	7	Non-coding	chr7:100156669 minus strand	1882931
MIR489	NR_030164	7	Non-coding	chr7:93484019 minus strand	1882932
MIR490	NR_030165	7	Non-coding	chr7:136903166 plus strand	1882933
MIR5090	NR_049813	7	Non-coding	chr7:102465741 plus strand	1882934
MIR548F4	NR_031645	7	Non-coding	chr7:147378121 minus strand	1882935
MIR548N	NR_031666	7	Non-coding	chr7:34940834 minus strand	1882936
MIR548O	NR_031669	7	Non-coding	chr7:102405855 minus strand	1882937
MIR550A1	NR_030319	7	Non-coding	chr7:30289793 plus strand	1882938
MIR550A2	NR_030320	7	Non-coding	chr7:32732980 plus strand	1882939
MIR550A3	NR_039600	7	Non-coding	chr7:29680828 minus strand	1882940
MIR550B1	NR_037513	7	Non-coding	chr7:30289890 minus strand	1882941
MIR550B2	NR_037514	7	Non-coding	chr7:32733077 minus strand	1882942

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MIR5692A1	NR_049875	7	Non-coding	chr7:97963657 plus strand	1882943
MIR5692A2	NR_049876	7	Non-coding	chr7:97963662 plus strand	1882944
MIR5692C2	NR_049868	7	Non-coding	chr7:97964481 minus strand	1882945
MIR5707	NR_049893	7	Non-coding	chr7:158591615 plus strand	1882946
MIR589	NR_030318	7	Non-coding	chr7:5495917 minus strand	1882947
MIR590	NR_030321	7	Non-coding	chr7:74191197 plus strand	1882948
MIR591	NR_030322	7	Non-coding	chr7:96219756 minus strand	1882949
MIR592	NR_030323	7	Non-coding	chr7:127058184 minus strand	1882950
MIR593	NR_030324	7	Non-coding	chr7:128081860 plus strand	1882951
MIR595	NR_030325	7	Non-coding	chr7:158532813 minus strand	1882952
MIR6132	NR_106748	7	Non-coding	chr7:117020210 plus strand	1882953
MIR6133	NR_106749	7	Non-coding	chr7:133290880 plus strand	1882954
MIR6509	NR_106764	7	Non-coding	chr7:135207078 minus strand	1882955
MIR653	NR_030388	7	Non-coding	chr7:93482855 minus strand	1882956
MIR671	NR_030407	7	Non-coding	chr7:151238420 plus strand	1882957
MIR6836	NR_106895	7	Non-coding	chr7:2257577 minus strand	1882958
MIR6837	NR_106896	7	Non-coding	chr7:44051765 plus strand	1882959
MIR6838	NR_106897	7	Non-coding	chr7:44073433 minus strand	1882960
MIR6839	NR_106898	7	Non-coding	chr7:64679063 plus strand	1882961
MIR6840	NR_106899	7	Non-coding	chr7:100356650 plus strand	1882962
MIR6874	NR_106934	7	Non-coding	chr7:5711910 minus strand	1882963
MIR6875	NR_106935	7	Non-coding	chr7:100868035 plus strand	1882964
MIR6892	NR_106952	7	Non-coding	chr7:143382685 plus strand	1882965
MIR93	NR_029510	7	Non-coding	chr7:100093847 minus strand	1882966
MIR96	NR_029512	7	Non-coding	chr7:129774769 minus strand	1882967
MKLN1-AS	NR_125364	7	Non-coding	chr7:131327779 minus strand	1882968
MKRN1	NR_117084	7	Non-coding	chr7:140479569 minus strand	1882969

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MMD2	NR_072989	7	Non-coding	chr7:4959213 minus strand	1882970
MNX1-AS1	NR_038835	7	Non-coding	chr7:157010856 plus strand	1882971
MOXD2P	NR_024346	7	Non-coding	chr7:142247067 minus strand	1882972
MYH16	NR_002147	7	Non-coding	chr7:99273300 plus strand	1882973
NCAPG2	NR_104054	7	Non-coding	chr7:158704831 minus strand	1882974
NCF1B	NR_003186	7	Non-coding	chr7:73220638 plus strand	1882975
NCF1C	NR_003187	7	Non-coding	chr7:75171998 minus strand	1882976
NDUFA5	NR_104168	7	Non-coding	chr7:123557904 minus strand	1882977
NDUFA5	NR_104169	7	Non-coding	chr7:123557904 minus strand	1882977
NDUFA5	NR_111925	7	Non-coding	chr7:123557904 minus strand	1882977
NDUFA5	NR_111926	7	Non-coding	chr7:123601651 minus strand	1882978
NDUFB2-AS1	NR_024454	7	Non-coding	chr7:140697077 minus strand	1882979
NPSR1-AS1	NR_033665	7	Non-coding	chr7:34758272 minus strand	1882980
NPSR1-AS1	NR_033664	7	Non-coding	chr7:34758272 minus strand	1882980
NPSR1-AS1	NR_015356	7	Non-coding	chr7:34834331 minus strand	1882981
NSUN5P1	NR_033322	7	Non-coding	chr7:75410321 plus strand	1882982
NSUN5P1	NR_104013	7	Non-coding	chr7:75410321 plus strand	1882982
NSUN5P2	NR_033323	7	Non-coding	chr7:72954763 minus strand	1882983
OR2A1-AS1	NR_126023	7	Non-coding	chr7:144195320 plus strand	1882984
OR2A1-AS1	NR_126023	7	Non-coding	chr7:144355718 minus strand	1882985
OR2A20P	NR_002158	7	Non-coding	chr7:144251603 minus strand	1882986
OR2A20P	NR_002158	7	Non-coding	chr7:144299372 plus strand	1882987
OR2A9P	NR_002157	7	Non-coding	chr7:144251455 minus strand	1882988
OR2A9P	NR_002157	7	Non-coding	chr7:144299520 plus strand	1882989
OR6W1P	NR_002140	7	Non-coding	chr7:143063785 minus strand	1882990
OSBPL3	NR_104112	7	Non-coding	chr7:24892621 minus strand	1882991
OSBPL3	NR_104111	7	Non-coding	chr7:24892621 minus strand	1882991

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PAXIP1-AS1	NR_028090	7	Non-coding	chr7:155003432 plus strand	1882992
PAXIP1-AS2	NR_024477	7	Non-coding	chr7:154928516 plus strand	1882993
PAXIP1-AS2	NR_024476	7	Non-coding	chr7:154928516 plus strand	1882993
PCOLCE-AS1	NR_038910	7	Non-coding	chr7:100604038 minus strand	1882994
PER4	NR_002790	7	Non-coding	chr7:9634269 plus strand	1882995
PHF14	NR_033435	7	Non-coding	chr7:10973871 plus strand	1882996
PHF14	NR_033436	7	Non-coding	chr7:10973871 plus strand	1882996
PHKG1	NR_047689	7	Non-coding	chr7:56092996 minus strand	1882997
PMS2	NR_003085	7	Non-coding	chr7:6009106 minus strand	1882998
PMS2CL	NR_002217	7	Non-coding	chr7:6735304 plus strand	1882999
PMS2L2	NR_003614	7	Non-coding	chr7:75358997 minus strand	1883000
PMS2P1	NR_003613	7	Non-coding	chr7:100336307 minus strand	1883001
PMS2P3	NR_028059	7	Non-coding	chr7:75528123 minus strand	1883002
PMS2P4	NR_022007	7	Non-coding	chr7:67302442 minus strand	1883003
PMS2P4	NR_046299	7	Non-coding	chr7:67302442 minus strand	1883003
PMS2P4	NR_046297	7	Non-coding	chr7:67302442 minus strand	1883003
PMS2P5	NR_027777	7	Non-coding	chr7:74890767 plus strand	1883004
PMS2P5	NR_027776	7	Non-coding	chr7:74890767 plus strand	1883004
PMS2P5	NR_027775	7	Non-coding	chr7:74890767 plus strand	1883004
PMS2P9	NR_028058	7	Non-coding	chr7:77039479 plus strand	1883005
POLM	NR_104299	7	Non-coding	chr7:44082540 minus strand	1883006
POLR2J4	NR_003655	7	Non-coding	chr7:44019149 minus strand	1883007
POT1	NR_003103	7	Non-coding	chr7:124929983 minus strand	1883008
POT1	NR_003104	7	Non-coding	chr7:124929983 minus strand	1883008
POT1	NR_003102	7	Non-coding	chr7:124929983 minus strand	1883008
POT1-AS1	NR_125718	7	Non-coding	chr7:124929872 plus strand	1883009
POT1-AS1	NR_125719	7	Non-coding	chr7:124929872 plus strand	1883009

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POU6F2-AS1	NR_046711	7	Non-coding	chr7:39406346 minus strand	1883010
PRKAG2-AS1	NR_038926	7	Non-coding	chr7:151877041 plus strand	1883011
PSMG3-AS1	NR_027329	7	Non-coding	chr7:1570072 plus strand	1883012
PSMG3-AS1	NR_027328	7	Non-coding	chr7:1570072 plus strand	1883012
PSMG3-AS1	NR_021487	7	Non-coding	chr7:1570072 plus strand	1883012
PVRIG2P	NR_103728	7	Non-coding	chr7:100352317 plus strand	1883013
RABGEF1	NR_104676	7	Non-coding	chr7:66682090 plus strand	1883014
RASA4CP	NR_024116	7	Non-coding	chr7:44040623 minus strand	1883015
RBAKDN	NR_015343	7	Non-coding	chr7:5072059 plus strand	1883016
RNF216-IT1	NR_046834	7	Non-coding	chr7:5680461 minus strand	1883017
RNF216P1	NR_015449	7	Non-coding	chr7:4973984 plus strand	1883018
RNF216P1	NR_023385	7	Non-coding	chr7:4973984 plus strand	1883018
RNF216P1	NR_023384	7	Non-coding	chr7:4973984 plus strand	1883018
RNU6-1	NR_004394	7	Non-coding	chr7:123790711 minus strand	1883019
RNU6-10P	NR_046484	7	Non-coding	chr7:92701814 minus strand	1883020
RNU6-2	NR_125730	7	Non-coding	chr7:123790711 minus strand	1883021
RNU6-7	NR_104084	7	Non-coding	chr7:123790711 minus strand	1883022
RNU6-8	NR_104088	7	Non-coding	chr7:123790711 minus strand	1883023
RNU6-9	NR_104080	7	Non-coding	chr7:123790711 minus strand	1883024
RNY1	NR_004391	7	Non-coding	chr7:148987248 minus strand	1883025
RNY3	NR_004392	7	Non-coding	chr7:148983754 plus strand	1883026
RNY4	NR_004393	7	Non-coding	chr7:148963314 plus strand	1883027
RNY5	NR_001571	7	Non-coding	chr7:148941487 plus strand	1883028
RP9P	NR_003500	7	Non-coding	chr7:32943170 minus strand	1883029
RPL13AP17	NR_003680	7	Non-coding	chr7:78347241 plus strand	1883030
RPL19P12	NR_026660	7	Non-coding	chr7:103142403 minus strand	1883031
RPL23P8	NR_026673	7	Non-coding	chr7:20827297 plus strand	1883032

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RPS2P32	NR_026676	7	Non-coding	chr7:23490387 plus strand	1883033
SBDSP1	NR_001588	7	Non-coding	chr7:72829372 plus strand	1883034
SBDSP1	NR_024109	7	Non-coding	chr7:72829372 plus strand	1883034
SBDSP1	NR_024110	7	Non-coding	chr7:72829372 plus strand	1883034
SBDSP1	NR_024111	7	Non-coding	chr7:72829372 plus strand	1883034
SEPT7-AS1	NR_120512	7	Non-coding	chr7:35800625 minus strand	1883035
SEPT7-AS1	NR_120511	7	Non-coding	chr7:35800625 minus strand	1883035
SEPT7P2	NR_024271	7	Non-coding	chr7:45769018 minus strand	1883036
SLC25A13	NR_027662	7	Non-coding	chr7:96322147 minus strand	1883037
SLC26A4-AS1	NR_028137	7	Non-coding	chr7:107661798 minus strand	1883038
SLC26A5	NR_120441	7	Non-coding	chr7:103443211 minus strand	1883039
SLC26A5	NR_120442	7	Non-coding	chr7:103443211 minus strand	1883039
SLC26A5	NR_120443	7	Non-coding	chr7:103443211 minus strand	1883039
SND1-IT1	NR_027330	7	Non-coding	chr7:127997508 plus strand	1883040
SNHG15	NR_003697	7	Non-coding	chr7:44986660 minus strand	1883041
SNORA14A	NR_002955	7	Non-coding	chr7:75943782 plus strand	1883042
SNORA15	NR_002957	7	Non-coding	chr7:56060469 plus strand	1883043
SNORA22	NR_002961	7	Non-coding	chr7:65755525 plus strand	1883044
SNORA5A	NR_002919	7	Non-coding	chr7:45104482 minus strand	1883045
SNORA5B	NR_002990	7	Non-coding	chr7:45106099 minus strand	1883046
SNORA5C	NR_002991	7	Non-coding	chr7:45105042 minus strand	1883047
SNORA9	NR_002952	7	Non-coding	chr7:44985510 minus strand	1883048
SNORD93	NR_003075	7	Non-coding	chr7:22856612 plus strand	1883049
SNX10	NR_037670	7	Non-coding	chr7:26291894 plus strand	1883050
SPDYE7P	NR_003666	7	Non-coding	chr7:72869091 minus strand	1883051
SPDYE8P	NR_003664	7	Non-coding	chr7:73029762 minus strand	1883052
SPDYE8P	NR_003664	7	Non-coding	chr7:73057907 minus strand	1883053

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SPDYE8P	NR_003664	7	Non-coding	chr7:73086034 minus strand	1883054
SPDYE8P	NR_003664	7	Non-coding	chr7:75307379 plus strand	1883055
SPDYE8P	NR_003664	7	Non-coding	chr7:75335346 plus strand	1883056
SSBP1	NR_046269	7	Non-coding	chr7:141738320 plus strand	1883057
ST7-AS1	NR_002330	7	Non-coding	chr7:116954334 minus strand	1883058
ST7-AS2	NR_109980	7	Non-coding	chr7:117090781 minus strand	1883059
ST7-AS2	NR_002331	7	Non-coding	chr7:117145592 minus strand	1883060
ST7-AS2	NR_109981	7	Non-coding	chr7:117145592 minus strand	1883060
ST7-OT3	NR_002332	7	Non-coding	chr7:117182680 plus strand	1883061
ST7-OT4	NR_002329	7	Non-coding	chr7:116953898 plus strand	1883062
STAG3L1	NR_040583	7	Non-coding	chr7:75359199 plus strand	1883063
STAG3L2	NR_040584	7	Non-coding	chr7:74890612 minus strand	1883064
STAG3L3	NR_040582	7	Non-coding	chr7:73005943 minus strand	1883065
STAG3L4	NR_040586	7	Non-coding	chr7:67302637 plus strand	1883066
STAG3L4	NR_040585	7	Non-coding	chr7:67302637 plus strand	1883066
STAG3L5P	NR_103720	7	Non-coding	chr7:100336078 plus strand	1883067
STAG3L5P-PVRIG2P-PILRB	NR_036569	7	Non-coding	chr7:100336064 plus strand	1883068
STAG3L5P-PVRIG2P-PILRB	NR_036570	7	Non-coding	chr7:100336064 plus strand	1883068
STEAP2-AS1	NR_110029	7	Non-coding	chr7:90211635 minus strand	1883069
STK31	NR_048542	7	Non-coding	chr7:23710166 plus strand	1883070
TAF6	NR_033792	7	Non-coding	chr7:100119372 minus strand	1883071
TBXAS1	NR_029394	7	Non-coding	chr7:139829152 plus strand	1883072
TFAMP1	NR_001288	7	Non-coding	chr7:1614469 plus strand	1883073
TMEM139	NR_104252	7	Non-coding	chr7:143284898 plus strand	1883074
TMEM139	NR_104251	7	Non-coding	chr7:143284898 plus strand	1883074
TMEM139	NR_104250	7	Non-coding	chr7:143284898 plus strand	1883074
TMEM139	NR_104253	7	Non-coding	chr7:143284898 plus strand	1883074

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TMEM139	NR_104254	7	Non-coding	chr7:143284898 plus strand	1883074
TMEM139	NR_040003	7	Non-coding	chr7:143284949 plus strand	1883075
TMEM168	NR_109840	7	Non-coding	chr7:112790423 minus strand	1883076
TNPO3	NR_034053	7	Non-coding	chr7:129055173 minus strand	1883077
TP53TG1	NR_015381	7	Non-coding	chr7:87345492 minus strand	1883078
TPI1P2	NR_002187	7	Non-coding	chr7:129055222 plus strand	1883079
TRG-AS1	NR_040085	7	Non-coding	chr7:38341576 plus strand	1883080
TRY2P	NR_036483	7	Non-coding	chr7:142272249 minus strand	1883081
TSL	NR_122122	7	Non-coding	chr7:27615973 plus strand	1883082
TSL	NR_122123	7	Non-coding	chr7:27615973 plus strand	1883082
UPP1	NR_109837	7	Non-coding	chr7:48089253 plus strand	1883083
VSTM2A-OT1	NR_038994	7	Non-coding	chr7:54556969 plus strand	1883084
WBSCR22	NR_037776	7	Non-coding	chr7:73683567 plus strand	1883085
WBSCR22	NR_045512	7	Non-coding	chr7:73683567 plus strand	1883085
WDR86-AS1	NR_109857	7	Non-coding	chr7:151409160 plus strand	1883086
WDR86-AS1	NR_034013	7	Non-coding	chr7:151409160 plus strand	1883086
WDR86-AS1	NR_034012	7	Non-coding	chr7:151409160 plus strand	1883086
WEE2-AS1	NR_015392	7	Non-coding	chr7:141738230 minus strand	1883087
WNT2	NR_024047	7	Non-coding	chr7:117323289 minus strand	1883088
YWHAEP1	NR_029404	7	Non-coding	chr7:64433692 plus strand	1883089
ZAN	NR_111917	7	Non-coding	chr7:100733625 plus strand	1883090
ZAN	NR_111919	7	Non-coding	chr7:100733625 plus strand	1883090
ZAN	NR_111918	7	Non-coding	chr7:100733625 plus strand	1883090
ZNF107	NR_104148	7	Non-coding	chr7:64666082 plus strand	1883091
ZNF107	NR_104149	7	Non-coding	chr7:64666082 plus strand	1883091
ZNF138	NR_073389	7	Non-coding	chr7:64794387 plus strand	1883092
ZNF138	NR_073391	7	Non-coding	chr7:64794387 plus strand	1883092

【１５９３】

ZNF273	NR_003099	7	Non-coding	chr7:64903241 plus strand	1883093
ZNF733P	NR_003952	7	Non-coding	chr7:63304056 minus strand	1883094
ZNF767P	NR_027789	7	Non-coding	chr7:149624790 minus strand	1883095
ZNF767P	NR_027788	7	Non-coding	chr7:149624790 minus strand	1883095
ZNF815P	NR_023382	7	Non-coding	chr7:5823159 plus strand	1883096
ZNF890P	NR_034163	7	Non-coding	chr7:5144546 minus strand	1883097
ZNRF2P1	NR_003502	7	Non-coding	chr7:32727949 plus strand	1883098
ZNRF2P2	NR_027347	7	Non-coding	chr7:29685821 minus strand	1883099
ADAM3A	NR_024106	8	Non-coding	chr8:39522989 minus strand	1883100
ADAM3A	NR_024107	8	Non-coding	chr8:39522989 minus strand	1883100
ADAM3A	NR_001569	8	Non-coding	chr8:39522989 minus strand	1883100
ADAM3A	NR_073423	8	Non-coding	chr8:39522989 minus strand	1883100
ADAM5	NR_001448	8	Non-coding	chr8:39314662 plus strand	1883101
ADAM9	NR_027638	8	Non-coding	chr8:38996985 plus strand	1883102
ADAM9	NR_027639	8	Non-coding	chr8:38996985 plus strand	1883102
ADAM9	NR_027878	8	Non-coding	chr8:38996985 plus strand	1883102
ASAP1-IT1	NR_002765	8	Non-coding	chr8:130296533 minus strand	1883103
ASAP1-IT2	NR_045385	8	Non-coding	chr8:130084768 minus strand	1883104
BAALC-AS1	NR_109954	8	Non-coding	chr8:103172140 minus strand	1883105
BAALC-AS2	NR_027071	8	Non-coding	chr8:103141342 minus strand	1883106
BIN3-IT1	NR_027715	8	Non-coding	chr8:22642209 minus strand	1883107
BMP1	NR_033403	8	Non-coding	chr8:22165139 plus strand	1883108
BMP1	NR_033404	8	Non-coding	chr8:22165139 plus strand	1883108
BREA2	NR_015445	8	Non-coding	chr8:143697114 plus strand	1883109
C8orf31	NR_126399	8	Non-coding	chr8:143039208 plus strand	1883110
C8orf31	NR_126398	8	Non-coding	chr8:143039208 plus strand	1883110
C8orf37-AS1	NR_038201	8	Non-coding	chr8:95268835 plus strand	1883111

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C8orf37-AS1	NR_038208	8	Non-coding	chr8:95268835 plus strand	1883111
C8orf37-AS1	NR_038205	8	Non-coding	chr8:95268835 plus strand	1883111
C8orf37-AS1	NR_038207	8	Non-coding	chr8:95268835 plus strand	1883111
C8orf37-AS1	NR_038206	8	Non-coding	chr8:95268835 plus strand	1883111
C8orf37-AS1	NR_038204	8	Non-coding	chr8:95268835 plus strand	1883111
C8orf37-AS1	NR_038203	8	Non-coding	chr8:95268835 plus strand	1883111
C8orf37-AS1	NR_038202	8	Non-coding	chr8:95268835 plus strand	1883111
C8orf37-AS1	NR_038209	8	Non-coding	chr8:95268835 plus strand	1883111
C8orf49	NR_103552	8	Non-coding	chr8:11761255 plus strand	1883112
C8orf59	NR_120681	8	Non-coding	chr8:85220422 minus strand	1883113
CASC11	NR_117101	8	Non-coding	chr8:127733967 minus strand	1883114
CASC11	NR_117102	8	Non-coding	chr8:127733967 minus strand	1883114
CASC19	NR_120364	8	Non-coding	chr8:127197627 minus strand	1883115
CASC21	NR_117099	8	Non-coding	chr8:127244636 plus strand	1883116
CASC8	NR_117100	8	Non-coding	chr8:127482139 minus strand	1883117
CASC8	NR_024393	8	Non-coding	chr8:127482139 minus strand	1883117
CASC9	NR_103848	8	Non-coding	chr8:75278481 minus strand	1883118
CASC9	NR_103850	8	Non-coding	chr8:75278481 minus strand	1883118
CASC9	NR_103849	8	Non-coding	chr8:75278889 minus strand	1883119
CCAR2	NR_033902	8	Non-coding	chr8:22604631 plus strand	1883120
CCAT1	NR_108049	8	Non-coding	chr8:127219268 minus strand	1883121
CCAT2	NR_109834	8	Non-coding	chr8:127400398 plus strand	1883122
CDC42P3	NR_102426	8	Non-coding	chr8:142995827 plus strand	1883123
CHRAC1	NR_023360	8	Non-coding	chr8:140511297 plus strand	1883124
CHRAC1	NR_040712	8	Non-coding	chr8:140511981 plus strand	1883125
CLU	NR_038335	8	Non-coding	chr8:27611437 minus strand	1883126
CLU	NR_045494	8	Non-coding	chr8:27611751 minus strand	1883127

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CSGALNACT1	NR_024040	8	Non-coding	chr8:19682750 minus strand	1883128
DEFA10P	NR_029386	8	Non-coding	chr8:6969113 minus strand	1883129
DEFA11P	NR_073421	8	Non-coding	chr8:7029489 minus strand	1883130
DEFA8P	NR_073407	8	Non-coding	chr8:6951599 minus strand	1883131
DEFA9P	NR_073408	8	Non-coding	chr8:6960161 minus strand	1883132
DEFB109P1	NR_024044	8	Non-coding	chr8:12400365 minus strand	1883133
DEFB109P1	NR_024044	8	Non-coding	chr8:7312845 plus strand	1883134
DEFB109P1B	NR_003668	8	Non-coding	chr8:7312845 plus strand	1883135
DEFB109P1B	NR_003668	8	Non-coding	chr8:7997521 minus strand	1883136
DEFT1P	NR_036686	8	Non-coding	chr8:6989721 minus strand	1883137
DEFT1P	NR_036686	8	Non-coding	chr8:7008824 minus strand	1883138
DEFT1P2	NR_036687	8	Non-coding	chr8:6989721 minus strand	1883139
DEFT1P2	NR_036687	8	Non-coding	chr8:7008824 minus strand	1883140
DLGAP2-AS1	NR_103863	8	Non-coding	chr8:1621664 minus strand	1883141
EFCAB1	NR_024605	8	Non-coding	chr8:48735311 minus strand	1883142
ENPP2	NR_045555	8	Non-coding	chr8:119593008 minus strand	1883143
ENY2	NR_036472	8	Non-coding	chr8:109334322 plus strand	1883144
ENY2	NR_036471	8	Non-coding	chr8:109334322 plus strand	1883144
ERICH1-AS1	NR_073397	8	Non-coding	chr8:737604 plus strand	1883145
EXTL3	NR_073469	8	Non-coding	chr8:28701472 plus strand	1883146
EXTL3	NR_073468	8	Non-coding	chr8:28701472 plus strand	1883146
EXTL3-AS1	NR_126027	8	Non-coding	chr8:28701464 minus strand	1883147
FAM167A-AS1	NR_026814	8	Non-coding	chr8:11368401 plus strand	1883148
FAM183CP	NR_024473	8	Non-coding	chr8:29921512 plus strand	1883149
FAM49B	NR_046359	8	Non-coding	chr8:129939872 minus strand	1883150
FAM49B	NR_046360	8	Non-coding	chr8:130016651 minus strand	1883151
FAM49B	NR_046361	8	Non-coding	chr8:130016651 minus strand	1883151

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FAM66A	NR_026789	8	Non-coding	chr8:12362018 plus strand	1883152
FAM66B	NR_027423	8	Non-coding	chr8:7355354 minus strand	1883153
FAM66D	NR_027425	8	Non-coding	chr8:12115781 plus strand	1883154
FAM66E	NR_027424	8	Non-coding	chr8:7955012 plus strand	1883155
FAM83A-AS1	NR_024479	8	Non-coding	chr8:123202743 minus strand	1883156
FAM83H-AS1	NR_033849	8	Non-coding	chr8:143734139 plus strand	1883157
FAM86B1	NR_003494	8	Non-coding	chr8:12194115 minus strand	1883158
FAM86B3P	NR_024361	8	Non-coding	chr8:8228569 plus strand	1883159
FAM86B3P	NR_024363	8	Non-coding	chr8:8228569 plus strand	1883159
FAM86B3P	NR_024362	8	Non-coding	chr8:8228569 plus strand	1883159
FAM87A	NR_103537	8	Non-coding	chr8:383174 minus strand	1883160
FAM90A10P	NR_046351	8	Non-coding	chr8:7769583 plus strand	1883161
FAM90A25P	NR_073395	8	Non-coding	chr8:12418032 minus strand	1883162
FAM90A2P	NR_046354	8	Non-coding	chr8:12177267 minus strand	1883163
FAM90A7P	NR_046343	8	Non-coding	chr8:7559104 minus strand	1883164
FAM90A7P	NR_046343	8	Non-coding	chr8:7574398 minus strand	1883165
FAM92A1	NR_104268	8	Non-coding	chr8:93700506 plus strand	1883166
FAM92A1	NR_104267	8	Non-coding	chr8:93700506 plus strand	1883166
FBXO43	NR_036491	8	Non-coding	chr8:100145871 minus strand	1883167
FER1L6-AS1	NR_040044	8	Non-coding	chr8:124040782 minus strand	1883168
FER1L6-AS2	NR_103547	8	Non-coding	chr8:124171522 minus strand	1883169
FLJ39080	NR_033830	8	Non-coding	chr8:74599865 plus strand	1883170
FLJ42969	NR_033962	8	Non-coding	chr8:101052053 plus strand	1883171
FLJ46284	NR_046114	8	Non-coding	chr8:92786060 minus strand	1883172
FNTA	NR_033698	8	Non-coding	chr8:43056298 plus strand	1883173
GDAP1	NR_046346	8	Non-coding	chr8:74350382 plus strand	1883174
GS1-24F4.2	NR_045217	8	Non-coding	chr8:6835553 plus strand	1883175

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HAS2-AS1	NR_002835	8	Non-coding	chr8:121639345 plus strand	1883176
HPYR1	NR_026684	8	Non-coding	chr8:132561479 minus strand	1883177
IKBKB	NR_033818	8	Non-coding	chr8:42271301 plus strand	1883178
IKBKB	NR_033819	8	Non-coding	chr8:42271301 plus strand	1883178
IKBKB	NR_040009	8	Non-coding	chr8:42271301 plus strand	1883178
INTS8	NR_073445	8	Non-coding	chr8:94823289 plus strand	1883179
INTS8	NR_073444	8	Non-coding	chr8:94823289 plus strand	1883179
INTS9	NR_026826	8	Non-coding	chr8:28890181 minus strand	1883180
KBTBD11-OT1	NR_126346	8	Non-coding	chr8:1971396 plus strand	1883181
KCNK9	NR_104210	8	Non-coding	chr8:139703056 minus strand	1883182
KIAA1875	NR_024207	8	Non-coding	chr8:144107725 plus strand	1883183
KLF10	NR_103760	8	Non-coding	chr8:102653964 minus strand	1883184
KLF10	NR_103759	8	Non-coding	chr8:102653964 minus strand	1883184
LINC00051	NR_024378	8	Non-coding	chr8:142198355 plus strand	1883185
LINC00208	NR_040035	8	Non-coding	chr8:11576534 plus strand	1883186
LINC00251	NR_038901	8	Non-coding	chr8:65180340 minus strand	1883187
LINC00293	NR_027013	8	Non-coding	chr8:46840885 plus strand	1883188
LINC00293	NR_027012	8	Non-coding	chr8:46840885 plus strand	1883188
LINC00534	NR_051989	8	Non-coding	chr8:90221487 plus strand	1883189
LINC00535	NR_033858	8	Non-coding	chr8:93700433 minus strand	1883190
LINC00536	NR_046215	8	Non-coding	chr8:116325059 minus strand	1883191
LINC00588	NR_026772	8	Non-coding	chr8:57279542 plus strand	1883192
LINC00589	NR_026765	8	Non-coding	chr8:29748109 minus strand	1883193
LINC00599	NR_024281	8	Non-coding	chr8:9903329 minus strand	1883194
LINC00681	NR_102423	8	Non-coding	chr8:12794242 plus strand	1883195
LINC00824	NR_121672	8	Non-coding	chr8:128564679 minus strand	1883196
LINC00824	NR_121673	8	Non-coding	chr8:128564679 minus strand	1883196

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LINC00861	NR_038447	8	Non-coding	chr8:125951197 minus strand	1883197
LINC00861	NR_038446	8	Non-coding	chr8:125951197 minus strand	1883197
LINC00964	NR_027321	8	Non-coding	chr8:124942007 plus strand	1883198
LINC00965	NR_027000	8	Non-coding	chr8:7263492 minus strand	1883199
LINC00965	NR_027000	8	Non-coding	chr8:7271114 minus strand	1883200
LINC00965	NR_027000	8	Non-coding	chr8:7286358 minus strand	1883201
LINC00967	NR_039979	8	Non-coding	chr8:66192113 plus strand	1883202
LINC00968	NR_038236	8	Non-coding	chr8:56559823 minus strand	1883203
LINC00977	NR_033916	8	Non-coding	chr8:129241240 minus strand	1883204
LINC01030	NR_104062	8	Non-coding	chr8:90606063 minus strand	1883205
LINC01111	NR_105006	8	Non-coding	chr8:76406653 plus strand	1883206
LINC01151	NR_126348	8	Non-coding	chr8:122694106 minus strand	1883207
LINC01288	NR_125746	8	Non-coding	chr8:34783920 plus strand	1883208
LINC01289	NR_038875	8	Non-coding	chr8:63769429 plus strand	1883209
LINC01298	NR_046232	8	Non-coding	chr8:95216374 minus strand	1883210
LINC01299	NR_033893	8	Non-coding	chr8:65562666 minus strand	1883211
LINC01300	NR_024441	8	Non-coding	chr8:141340548 plus strand	1883212
LINC01301	NR_103854	8	Non-coding	chr8:60413818 minus strand	1883213
LINC01419	NR_122034	8	Non-coding	chr8:83403757 plus strand	1883214
LINCR-0001	NR_120604	8	Non-coding	chr8:10474564 plus strand	1883215
LOC100128993	NR_038919	8	Non-coding	chr8:19245522 minus strand	1883216
LOC100130298	NR_034003	8	Non-coding	chr8:60967748 minus strand	1883217
LOC100130964	NR_046245	8	Non-coding	chr8:39563111 plus strand	1883218
LOC100132891	NR_033652	8	Non-coding	chr8:71843122 plus strand	1883219
LOC100132891	NR_033651	8	Non-coding	chr8:71844115 plus strand	1883220
LOC100133669	NR_026913	8	Non-coding	chr8:143018390 minus strand	1883221
LOC100287015	NR_040040	8	Non-coding	chr8:6406548 minus strand	1883222

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LOC100287098	NR_109770	8	Non-coding	chr8:144435167 plus strand	1883223
LOC100287846	NR_037168	8	Non-coding	chr8:47189306 plus strand	1883224
LOC100288181	NR_038925	8	Non-coding	chr8:142726973 minus strand	1883225
LOC100288748	NR_034034	8	Non-coding	chr8:94639467 minus strand	1883226
LOC100500773	NR_036611	8	Non-coding	chr8:95948348 minus strand	1883227
LOC100505718	NR_039986	8	Non-coding	chr8:69104190 minus strand	1883228
LOC100505739	NR_110433	8	Non-coding	chr8:69448244 minus strand	1883229
LOC100506753	NR_126338	8	Non-coding	chr8:102864270 plus strand	1883230
LOC100506753	NR_126339	8	Non-coding	chr8:102864270 plus strand	1883230
LOC100506990	NR_040092	8	Non-coding	chr8:12437012 plus strand	1883231
LOC100506990	NR_040091	8	Non-coding	chr8:12437012 plus strand	1883231
LOC100507156	NR_038323	8	Non-coding	chr8:23336207 plus strand	1883232
LOC100507316	NR_120682	8	Non-coding	chr8:143281700 minus strand	1883233
LOC100507316	NR_120683	8	Non-coding	chr8:143281700 minus strand	1883233
LOC100507420	NR_121620	8	Non-coding	chr8:37493913 minus strand	1883234
LOC100507420	NR_121621	8	Non-coding	chr8:37521386 minus strand	1883235
LOC100507530	NR_125386	8	Non-coding	chr8:6708209 minus strand	1883236
LOC100507651	NR_038235	8	Non-coding	chr8:57218275 plus strand	1883237
LOC100996348	NR_121632	8	Non-coding	chr8:85463054 minus strand	1883238
LOC100996348	NR_121633	8	Non-coding	chr8:85463054 minus strand	1883238
LOC100996348	NR_121631	8	Non-coding	chr8:85464333 minus strand	1883239
LOC100996348	NR_121630	8	Non-coding	chr8:85464915 minus strand	1883240
LOC101241902	NR_077236	8	Non-coding	chr8:78724374 minus strand	1883241
LOC101926892	NR_110653	8	Non-coding	chr8:70471133 plus strand	1883242
LOC101926908	NR_110656	8	Non-coding	chr8:72732044 plus strand	1883243
LOC101926926	NR_125388	8	Non-coding	chr8:73356461 minus strand	1883244
LOC101927003	NR_125389	8	Non-coding	chr8:78558503 minus strand	1883245

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LOC101927040	NR_110954	8	Non-coding	chr8:79871737 minus strand	1883246
LOC101927066	NR_125390	8	Non-coding	chr8:97446497 minus strand	1883247
LOC101927067	NR_125410	8	Non-coding	chr8:79768141 plus strand	1883248
LOC101927221	NR_125415	8	Non-coding	chr8:102239450 plus strand	1883249
LOC101927459	NR_125417	8	Non-coding	chr8:111027433 minus strand	1883250
LOC101927459	NR_125416	8	Non-coding	chr8:111027433 minus strand	1883250
LOC101927487	NR_125418	8	Non-coding	chr8:111236203 minus strand	1883251
LOC101927543	NR_125419	8	Non-coding	chr8:120761252 plus strand	1883252
LOC101927588	NR_125420	8	Non-coding	chr8:124247398 minus strand	1883253
LOC101927657	NR_125421	8	Non-coding	chr8:126325494 plus strand	1883254
LOC101927798	NR_125422	8	Non-coding	chr8:133777352 minus strand	1883255
LOC101927815	NR_125423	8	Non-coding	chr8:2623365 minus strand	1883256
LOC101927815	NR_125425	8	Non-coding	chr8:2728451 minus strand	1883257
LOC101927815	NR_125426	8	Non-coding	chr8:2728451 minus strand	1883257
LOC101927822	NR_125424	8	Non-coding	chr8:133886495 plus strand	1883258
LOC101927845	NR_125427	8	Non-coding	chr8:134849934 plus strand	1883259
LOC101927915	NR_125428	8	Non-coding	chr8:137413588 minus strand	1883260
LOC101929066	NR_125430	8	Non-coding	chr8:18084867 plus strand	1883261
LOC101929066	NR_125429	8	Non-coding	chr8:18084867 plus strand	1883261
LOC101929128	NR_125431	8	Non-coding	chr8:9188998 plus strand	1883262
LOC101929172	NR_104677	8	Non-coding	chr8:21298238 plus strand	1883263
LOC101929217	NR_105004	8	Non-coding	chr8:48620402 plus strand	1883264
LOC101929229	NR_125432	8	Non-coding	chr8:10840025 plus strand	1883265
LOC101929237	NR_125433	8	Non-coding	chr8:22877971 plus strand	1883266
LOC101929268	NR_105002	8	Non-coding	chr8:48551566 plus strand	1883267
LOC101929294	NR_125808	8	Non-coding	chr8:24548618 minus strand	1883268
LOC101929315	NR_125809	8	Non-coding	chr8:24514868 minus strand	1883269

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LOC101929415	NR_125813	8	Non-coding	chr8:56445806 plus strand	1883270
LOC101929450	NR_125815	8	Non-coding	chr8:29748308 plus strand	1883271
LOC101929450	NR_125814	8	Non-coding	chr8:29748308 plus strand	1883271
LOC101929450	NR_125816	8	Non-coding	chr8:29748308 plus strand	1883271
LOC101929470	NR_125817	8	Non-coding	chr8:29828504 minus strand	1883272
LOC101929488	NR_125818	8	Non-coding	chr8:57343786 plus strand	1883273
LOC101929528	NR_105005	8	Non-coding	chr8:58272101 minus strand	1883274
LOC101929550	NR_125819	8	Non-coding	chr8:35710320 minus strand	1883275
LOC101929622	NR_125820	8	Non-coding	chr8:37717578 plus strand	1883276
LOC101929709	NR_125822	8	Non-coding	chr8:89757711 minus strand	1883277
LOC101929897	NR_125823	8	Non-coding	chr8:42270961 minus strand	1883278
LOC102723701	NR_125821	8	Non-coding	chr8:37737426 minus strand	1883279
LOC102723729	NR_125824	8	Non-coding	chr8:41578368 minus strand	1883280
LOC102724612	NR_125825	8	Non-coding	chr8:63465848 plus strand	1883281
LOC102724623	NR_125826	8	Non-coding	chr8:64368558 minus strand	1883282
LOC102724710	NR_125827	8	Non-coding	chr8:92655494 minus strand	1883283
LOC102724804	NR_125829	8	Non-coding	chr8:96386648 minus strand	1883284
LOC102724804	NR_125828	8	Non-coding	chr8:96387438 minus strand	1883285
LOC102724874	NR_125830	8	Non-coding	chr8:77450696 plus strand	1883286
LOC104054148	NR_126152	8	Non-coding	chr8:101984431 plus strand	1883287
LOC157273	NR_040039	8	Non-coding	chr8:9325050 plus strand	1883288
LOC254896	NR_046173	8	Non-coding	chr8:23084354 plus strand	1883289
LOC286059	NR_038873	8	Non-coding	chr8:23068228 plus strand	1883290
LOC286083	NR_111948	8	Non-coding	chr8:1302607 minus strand	1883291
LOC286094	NR_026706	8	Non-coding	chr8:135234130 plus strand	1883292
LOC286094	NR_120395	8	Non-coding	chr8:135234130 plus strand	1883292
LOC286094	NR_120396	8	Non-coding	chr8:135234130 plus strand	1883292

【１６０２】

LOC286114	NR_033894	8	Non-coding	chr8:20973985 plus strand	1883293
LOC286177	NR_038874	8	Non-coding	chr8:57261225 plus strand	1883294
LOC286189	NR_038877	8	Non-coding	chr8:68331491 minus strand	1883295
LOC286190	NR_038881	8	Non-coding	chr8:70608576 plus strand	1883296
LOC340357	NR_015383	8	Non-coding	chr8:12811401 minus strand	1883297
LOC389641	NR_033928	8	Non-coding	chr8:23225220 plus strand	1883298
LOC392196	NR_003275	8	Non-coding	chr8:12129297 minus strand	1883299
LOC392232	NR_033867	8	Non-coding	chr8:72251634 minus strand	1883300
LOC401463	NR_015374	8	Non-coding	chr8:64577263 minus strand	1883301
LOC649352	NR_046415	8	Non-coding	chr8:12379789 minus strand	1883302
LOC728024	NR_003671	8	Non-coding	chr8:37748046 minus strand	1883303
LOC729732	NR_047662	8	Non-coding	chr8:12665611 minus strand	1883304
LRRC6	NR_073525	8	Non-coding	chr8:132675617 minus strand	1883305
LSM1	NR_045492	8	Non-coding	chr8:38176730 minus strand	1883306
LSM1	NR_045493	8	Non-coding	chr8:38176730 minus strand	1883306
LZTS1-AS1	NR_047509	8	Non-coding	chr8:20275772 plus strand	1883307
MAFA-AS1	NR_126358	8	Non-coding	chr8:143417678 plus strand	1883308
MIR1204	NR_031609	8	Non-coding	chr8:127795961 plus strand	1883309
MIR1205	NR_031610	8	Non-coding	chr8:127960632 plus strand	1883310
MIR1206	NR_031611	8	Non-coding	chr8:128008897 plus strand	1883311
MIR1207	NR_031612	8	Non-coding	chr8:128049151 plus strand	1883312
MIR1208	NR_031613	8	Non-coding	chr8:128150115 plus strand	1883313
MIR1234	NR_031600	8	Non-coding	chr8:144400165 minus strand	1883314
MIR124-1	NR_029668	8	Non-coding	chr8:9903472 minus strand	1883315
MIR124-2	NR_029669	8	Non-coding	chr8:64379148 plus strand	1883316
MIR124-2HG	NR_034102	8	Non-coding	chr8:64373217 plus strand	1883317
MIR124-2HG	NR_109792	8	Non-coding	chr8:64373327 plus strand	1883318

【１６０３】

MIR124-2HG	NR_034103	8	Non-coding	chr8:64377326 plus strand	1883319
MIR124-2HG	NR_109793	8	Non-coding	chr8:64377332 plus strand	1883320
MIR1273A	NR_031675	8	Non-coding	chr8:100024084 minus strand	1883321
MIR1302-7	NR_031636	8	Non-coding	chr8:141786313 minus strand	1883322
MIR1302-7	NR_031636	8	Non-coding	chr8:143040361 plus strand	1883323
MIR1322	NR_031711	8	Non-coding	chr8:10825443 minus strand	1883324
MIR151A	NR_029892	8	Non-coding	chr8:140732653 minus strand	1883325
MIR2052	NR_031744	8	Non-coding	chr8:74705692 plus strand	1883326
MIR2053	NR_031745	8	Non-coding	chr8:112643492 plus strand	1883327
MIR30B	NR_029666	8	Non-coding	chr8:134800607 minus strand	1883328
MIR30D	NR_029599	8	Non-coding	chr8:134804945 minus strand	1883329
MIR3148	NR_036104	8	Non-coding	chr8:29957348 minus strand	1883330
MIR3150A	NR_036105	8	Non-coding	chr8:95072913 plus strand	1883331
MIR3150B	NR_037484	8	Non-coding	chr8:95072996 minus strand	1883332
MIR3151	NR_036106	8	Non-coding	chr8:103154613 plus strand	1883333
MIR320A	NR_029714	8	Non-coding	chr8:22245043 minus strand	1883334
MIR3610	NR_037404	8	Non-coding	chr8:116874800 minus strand	1883335
MIR3622A	NR_037417	8	Non-coding	chr8:27701676 plus strand	1883336
MIR3622B	NR_037418	8	Non-coding	chr8:27701767 minus strand	1883337
MIR3674	NR_037445	8	Non-coding	chr8:1801124 plus strand	1883338
MIR3686	NR_037457	8	Non-coding	chr8:129484142 minus strand	1883339
MIR378D2	NR_039602	8	Non-coding	chr8:93916119 minus strand	1883340
MIR383	NR_029875	8	Non-coding	chr8:14853510 minus strand	1883341
MIR3926-1	NR_037492	8	Non-coding	chr8:12727304 minus strand	1883342
MIR3926-2	NR_037495	8	Non-coding	chr8:12727236 plus strand	1883343
MIR4286	NR_036248	8	Non-coding	chr8:10666977 plus strand	1883344
MIR4287	NR_036249	8	Non-coding	chr8:27886116 minus strand	1883345

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MIR4288	NR_036250	8	Non-coding	chr8:28505182 minus strand	1883346
MIR4469	NR_039679	8	Non-coding	chr8:42896275 minus strand	1883347
MIR4470	NR_039680	8	Non-coding	chr8:61714787 plus strand	1883348
MIR4471	NR_039681	8	Non-coding	chr8:100382762 plus strand	1883349
MIR4472-1	NR_039682	8	Non-coding	chr8:142176338 plus strand	1883350
MIR4659A	NR_039803	8	Non-coding	chr8:6745163 plus strand	1883351
MIR4659B	NR_039807	8	Non-coding	chr8:6745240 minus strand	1883352
MIR4660	NR_039804	8	Non-coding	chr8:9048444 plus strand	1883353
MIR4661	NR_039805	8	Non-coding	chr8:91205484 plus strand	1883354
MIR4662A	NR_039806	8	Non-coding	chr8:124821984 plus strand	1883355
MIR4662B	NR_039809	8	Non-coding	chr8:124822058 minus strand	1883356
MIR4663	NR_039808	8	Non-coding	chr8:123215863 minus strand	1883357
MIR4664	NR_039810	8	Non-coding	chr8:143733153 minus strand	1883358
MIR486-1	NR_030161	8	Non-coding	chr8:41660508 minus strand	1883359
MIR486-2	NR_106984	8	Non-coding	chr8:41660443 plus strand	1883360
MIR5194	NR_049826	8	Non-coding	chr8:130008453 minus strand	1883361
MIR548A3	NR_030330	8	Non-coding	chr8:104484465 minus strand	1883362
MIR548AA1	NR_037516	8	Non-coding	chr8:123348033 plus strand	1883363
MIR548AO	NR_049801	8	Non-coding	chr8:41271143 minus strand	1883364
MIR548AZ	NR_106755	8	Non-coding	chr8:119325170 plus strand	1883365
MIR548D1	NR_030382	8	Non-coding	chr8:123348130 minus strand	1883366
MIR548H4	NR_031680	8	Non-coding	chr8:27048963 minus strand	1883367
MIR548I3	NR_031689	8	Non-coding	chr8:8089089 minus strand	1883368
MIR548V	NR_036103	8	Non-coding	chr8:17681657 minus strand	1883369
MIR5680	NR_049859	8	Non-coding	chr8:102125431 plus strand	1883370
MIR5681A	NR_049860	8	Non-coding	chr8:74548542 plus strand	1883371
MIR5681B	NR_049871	8	Non-coding	chr8:74548609 minus strand	1883372

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MIR5692A1	NR_049875	8	Non-coding	chr8:12719126 plus strand	1883373
MIR5692A2	NR_049876	8	Non-coding	chr8:12719131 plus strand	1883374
MIR5708	NR_049894	8	Non-coding	chr8:80241388 plus strand	1883375
MIR596	NR_030326	8	Non-coding	chr8:1817230 plus strand	1883376
MIR597	NR_030327	8	Non-coding	chr8:9741671 plus strand	1883377
MIR598	NR_030328	8	Non-coding	chr8:11035302 minus strand	1883378
MIR599	NR_030329	8	Non-coding	chr8:99536730 minus strand	1883379
MIR661	NR_030383	8	Non-coding	chr8:143945279 minus strand	1883380
MIR6841	NR_106900	8	Non-coding	chr8:24953867 minus strand	1883381
MIR6842	NR_106901	8	Non-coding	chr8:27433369 plus strand	1883382
MIR6843	NR_106902	8	Non-coding	chr8:27610751 minus strand	1883383
MIR6844	NR_106903	8	Non-coding	chr8:124508576 minus strand	1883384
MIR6845	NR_106904	8	Non-coding	chr8:143837816 minus strand	1883385
MIR6846	NR_106905	8	Non-coding	chr8:144057380 minus strand	1883386
MIR6847	NR_106906	8	Non-coding	chr8:144079873 plus strand	1883387
MIR6848	NR_106907	8	Non-coding	chr8:144317315 minus strand	1883388
MIR6849	NR_106908	8	Non-coding	chr8:144400345 minus strand	1883389
MIR6850	NR_106909	8	Non-coding	chr8:144791991 minus strand	1883390
MIR6876	NR_106936	8	Non-coding	chr8:25345401 plus strand	1883391
MIR6893	NR_106953	8	Non-coding	chr8:144435619 minus strand	1883392
MIR7112	NR_107057	8	Non-coding	chr8:144262737 minus strand	1883393
MIR7160	NR_106983	8	Non-coding	chr8:2076588 plus strand	1883394
MIR7641-2	NR_106988	8	Non-coding	chr8:28530449 plus strand	1883395
MIR7641-2	NR_106988	8	Non-coding	chr8:92167511 minus strand	1883396
MIR7705	NR_106992	8	Non-coding	chr8:100703024 minus strand	1883397
MIR7848	NR_107002	8	Non-coding	chr8:133046581 minus strand	1883398
MIR8055	NR_107022	8	Non-coding	chr8:6622220 minus strand	1883399

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MIR8084	NR_107051	8	Non-coding	chr8:93029750 plus strand	1883400
MIR875	NR_030596	8	Non-coding	chr8:99536861 minus strand	1883401
MIR937	NR_030633	8	Non-coding	chr8:143813042 minus strand	1883402
MIR939	NR_030635	8	Non-coding	chr8:144394230 minus strand	1883403
MROH5	NR_102364	8	Non-coding	chr8:141507230 minus strand	1883404
MROH5	NR_102363	8	Non-coding	chr8:141507230 minus strand	1883404
NACAP1	NR_002182	8	Non-coding	chr8:101368892 plus strand	1883405
NCRNA00250	NR_126028	8	Non-coding	chr8:134838068 plus strand	1883406
NKX3-1	NR_046072	8	Non-coding	chr8:23682921 minus strand	1883407
NRG1-IT1	NR_104158	8	Non-coding	chr8:32025735 plus strand	1883408
NRG1-IT1	NR_104156	8	Non-coding	chr8:32026217 plus strand	1883409
NRG1-IT1	NR_104157	8	Non-coding	chr8:32026217 plus strand	1883409
NRG1-IT3	NR_047475	8	Non-coding	chr8:32440745 plus strand	1883410
OTUD6B-AS1	NR_110438	8	Non-coding	chr8:91070189 minus strand	1883411
OTUD6B-AS1	NR_110439	8	Non-coding	chr8:91070189 minus strand	1883411
PCAT1	NR_045262	8	Non-coding	chr8:127013153 plus strand	1883412
PCAT2	NR_119373	8	Non-coding	chr8:127082221 minus strand	1883413
PRNCR1	NR_109833	8	Non-coding	chr8:127079873 plus strand	1883414
PSCA	NR_033343	8	Non-coding	chr8:142670307 plus strand	1883415
PTTG3P	NR_002734	8	Non-coding	chr8:66768005 minus strand	1883416
PVT1	NR_003367	8	Non-coding	chr8:127890627 plus strand	1883417
R3HCC1	NR_125897	8	Non-coding	chr8:23288091 plus strand	1883418
RAD21-AS1	NR_033886	8	Non-coding	chr8:116874423 plus strand	1883419
RBM12B-AS1	NR_027259	8	Non-coding	chr8:93740110 plus strand	1883420
RBPMS-AS1	NR_046205	8	Non-coding	chr8:30385401 minus strand	1883421
REXO1L2P	NR_003594	8	Non-coding	chr8:85655676 minus strand	1883422
REXO1L2P	NR_003594	8	Non-coding	chr8:85662513 minus strand	1883423

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REXO1L2P	NR_003594	8	Non-coding	chr8:85714843 plus strand	1883424
REXO1L2P	NR_003594	8	Non-coding	chr8:85736297 plus strand	1883425
REXO1L2P	NR_003594	8	Non-coding	chr8:85745532 minus strand	1883426
REXO1L2P	NR_003594	8	Non-coding	chr8:85763899 minus strand	1883427
REXO1L2P	NR_003594	8	Non-coding	chr8:85776093 minus strand	1883428
REXO1L2P	NR_003594	8	Non-coding	chr8:85791368 minus strand	1883429
REXO1L2P	NR_003594	8	Non-coding	chr8:85803561 minus strand	1883430
REXO1L2P	NR_003594	8	Non-coding	chr8:85827942 minus strand	1883431
RGS20	NR_104579	8	Non-coding	chr8:53880871 plus strand	1883432
RGS20	NR_104578	8	Non-coding	chr8:53880871 plus strand	1883432
RHPN1-AS1	NR_026785	8	Non-coding	chr8:143368635 minus strand	1883433
RNF139-AS1	NR_108048	8	Non-coding	chr8:124474354 minus strand	1883434
RNF139-AS1	NR_108047	8	Non-coding	chr8:124474563 minus strand	1883435
RNF170	NR_027669	8	Non-coding	chr8:42896723 minus strand	1883436
RNF170	NR_027668	8	Non-coding	chr8:42896723 minus strand	1883436
RNF5P1	NR_003129	8	Non-coding	chr8:38601257 minus strand	1883437
RNU105C	NR_004385	8	Non-coding	chr8:54330685 plus strand	1883438
RPL23AP53	NR_003572	8	Non-coding	chr8:232318 minus strand	1883439
RRS1-AS1	NR_040434	8	Non-coding	chr8:66428977 minus strand	1883440
SAMD12	NR_109794	8	Non-coding	chr8:118621995 minus strand	1883441
SAMD12-AS1	NR_038210	8	Non-coding	chr8:118621000 plus strand	1883442
SBF1P1	NR_027765	8	Non-coding	chr8:55455321 minus strand	1883443
SDR16C6P	NR_103832	8	Non-coding	chr8:56390710 minus strand	1883444
SHARPIN	NR_038270	8	Non-coding	chr8:144104235 minus strand	1883445
SLC25A32	NR_102338	8	Non-coding	chr8:103415335 minus strand	1883446
SLC25A32	NR_102337	8	Non-coding	chr8:103415335 minus strand	1883446
SLC52A2	NR_045600	8	Non-coding	chr8:144358580 plus strand	1883447

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SNHG6	NR_002599	8	Non-coding	chr8:66925542 minus strand	1883448
SNORA72	NR_002581	8	Non-coding	chr8:98042217 minus strand	1883449
SNORD13	NR_003041	8	Non-coding	chr8:33513474 plus strand	1883450
SNORD54	NR_002437	8	Non-coding	chr8:56073901 minus strand	1883451
SNORD87	NR_002598	8	Non-coding	chr8:66922549 minus strand	1883452
SPIDR	NR_104581	8	Non-coding	chr8:47260877 plus strand	1883453
STAU2-AS1	NR_038406	8	Non-coding	chr8:73420073 plus strand	1883454
TATDN1	NR_027427	8	Non-coding	chr8:124539088 minus strand	1883455
TCEA1	NR_109902	8	Non-coding	chr8:54022456 minus strand	1883456
TCEA1	NR_109901	8	Non-coding	chr8:54022456 minus strand	1883456
TDH	NR_001578	8	Non-coding	chr8:11339636 plus strand	1883457
TMED10P1	NR_002807	8	Non-coding	chr8:144994864 plus strand	1883458
TMEM249	NR_047684	8	Non-coding	chr8:144354931 minus strand	1883459
TMEM67	NR_024522	8	Non-coding	chr8:93754843 plus strand	1883460
TMEM70	NR_033334	8	Non-coding	chr8:73976141 plus strand	1883461
TMEM75	NR_103558	8	Non-coding	chr8:127948723 minus strand	1883462
TNFRSF10B	NR_027140	8	Non-coding	chr8:23069187 minus strand	1883463
TPD52	NR_105033	8	Non-coding	chr8:80080831 minus strand	1883464
TPD52	NR_105037	8	Non-coding	chr8:80171200 minus strand	1883465
TPD52	NR_105036	8	Non-coding	chr8:80171200 minus strand	1883465
TPD52	NR_105035	8	Non-coding	chr8:80171659 minus strand	1883466
TPD52	NR_105034	8	Non-coding	chr8:80171659 minus strand	1883466
UBE2W	NR_073120	8	Non-coding	chr8:73878910 minus strand	1883467
UBE2W	NR_073119	8	Non-coding	chr8:73878910 minus strand	1883467
UBE2W	NR_073121	8	Non-coding	chr8:73878910 minus strand	1883467
UG0898H09	NR_027378	8	Non-coding	chr8:62977860 plus strand	1883468
UQCRB	NR_045639	8	Non-coding	chr8:96235634 minus strand	1883469

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VPS13B	NR_047582	8	Non-coding	chr8:99013265 plus strand	1883470
WISP1	NR_037944	8	Non-coding	chr8:133191038 plus strand	1883471
YTHDF3	NR_102434	8	Non-coding	chr8:63168552 plus strand	1883472
YTHDF3-AS1	NR_102684	8	Non-coding	chr8:63168442 minus strand	1883473
ZFAND1	NR_033196	8	Non-coding	chr8:81721304 minus strand	1883474
ZFAND1	NR_033195	8	Non-coding	chr8:81721304 minus strand	1883474
ZFAND1	NR_033194	8	Non-coding	chr8:81721304 minus strand	1883474
ZFAND1	NR_033193	8	Non-coding	chr8:81721304 minus strand	1883474
ZFAT	NR_110323	8	Non-coding	chr8:134713049 minus strand	1883475
ZFAT-AS1	NR_002438	8	Non-coding	chr8:134598070 plus strand	1883476
ZFHX4-AS1	NR_024360	8	Non-coding	chr8:76683275 minus strand	1883477
ZFPM2-AS1	NR_125796	8	Non-coding	chr8:106060503 minus strand	1883478
ZFPM2-AS1	NR_125797	8	Non-coding	chr8:106060503 minus strand	1883478
ZHX1	NR_037874	8	Non-coding	chr8:123274487 minus strand	1883479
ZHX1	NR_037873	8	Non-coding	chr8:123275541 minus strand	1883480
ZNF252P	NR_023392	8	Non-coding	chr8:145002899 minus strand	1883481
ZNF252P-AS1	NR_026974	8	Non-coding	chr8:145002810 plus strand	1883482
ZNF707	NR_110192	8	Non-coding	chr8:143684451 plus strand	1883483
ZNF707	NR_110193	8	Non-coding	chr8:143684451 plus strand	1883483
ZNF707	NR_110191	8	Non-coding	chr8:143684451 plus strand	1883483
ZNF707	NR_110190	8	Non-coding	chr8:143684451 plus strand	1883483
ADAMTS13	NR_024514	9	Non-coding	chr9:133414338 plus strand	1883484
AIF1L	NR_033701	9	Non-coding	chr9:131096475 plus strand	1883485
ALG2	NR_024532	9	Non-coding	chr9:99221964 minus strand	1883486
ANKRD19P	NR_026868	9	Non-coding	chr9:92809610 plus strand	1883487
ANXA2P2	NR_003573	9	Non-coding	chr9:33624224 plus strand	1883488
APTX	NR_036579	9	Non-coding	chr9:33001576 minus strand	1883489

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APTX	NR_036578	9	Non-coding	chr9:33001612 minus strand	1883490
APTX	NR_036577	9	Non-coding	chr9:33001641 minus strand	1883491
APTX	NR_036576	9	Non-coding	chr9:33001641 minus strand	1883491
AQP7P1	NR_002817	9	Non-coding	chr9:63334520 minus strand	1883492
AQP7P3	NR_026558	9	Non-coding	chr9:40498781 minus strand	1883493
AQP7P3	NR_026558	9	Non-coding	chr9:63334279 minus strand	1883494
AQP7P3	NR_026558	9	Non-coding	chr9:65877573 plus strand	1883495
ARRDC1-AS1	NR_122036	9	Non-coding	chr9:137618529 minus strand	1883496
ARRDC1-AS1	NR_122035	9	Non-coding	chr9:137618895 minus strand	1883497
ASTN2-AS1	NR_033973	9	Non-coding	chr9:116504282 plus strand	1883498
ATP8B5P	NR_003582	9	Non-coding	chr9:35406754 plus strand	1883499
ATP8B5P	NR_003581	9	Non-coding	chr9:35406754 plus strand	1883499
ATP8B5P	NR_110320	9	Non-coding	chr9:35406754 plus strand	1883499
B4GALT1-AS1	NR_108110	9	Non-coding	chr9:33166947 plus strand	1883500
B4GALT1-AS1	NR_108109	9	Non-coding	chr9:33166947 plus strand	1883500
B4GALT1-AS1	NR_108108	9	Non-coding	chr9:33167858 plus strand	1883501
BANCR	NR_047671	9	Non-coding	chr9:69307056 minus strand	1883502
C9orf135-AS1	NR_038833	9	Non-coding	chr9:69820739 minus strand	1883503
C9orf173	NR_046340	9	Non-coding	chr9:137251260 plus strand	1883504
C9orf173	NR_046339	9	Non-coding	chr9:137251260 plus strand	1883504
C9orf173-AS1	NR_038389	9	Non-coding	chr9:137253497 minus strand	1883505
C9orf41-AS1	NR_121183	9	Non-coding	chr9:74952964 plus strand	1883506
C9orf84	NR_109816	9	Non-coding	chr9:111795008 minus strand	1883507
C9orf92	NR_073471	9	Non-coding	chr9:16276313 minus strand	1883508
CBWD5	NR_104600	9	Non-coding	chr9:65675833 plus strand	1883509
CCBL1	NR_109829	9	Non-coding	chr9:128882075 minus strand	1883510
CCDC183-AS1	NR_024580	9	Non-coding	chr9:136808848 minus strand	1883511

【１６１１】

CD274	NR_052005	9	Non-coding	chr9:5450502 plus strand	1883512
CDC37L1-AS1	NR_121597	9	Non-coding	chr9:4679480 minus strand	1883513
CDC37L1-AS1	NR_121598	9	Non-coding	chr9:4679480 minus strand	1883513
CDK5RAP2	NR_073558	9	Non-coding	chr9:120580170 minus strand	1883514
CDK5RAP2	NR_073557	9	Non-coding	chr9:120580170 minus strand	1883514
CDK5RAP2	NR_073556	9	Non-coding	chr9:120580170 minus strand	1883514
CDK5RAP2	NR_073554	9	Non-coding	chr9:120580170 minus strand	1883514
CDK5RAP2	NR_073555	9	Non-coding	chr9:120580170 minus strand	1883514
CDKN2A-AS1	NR_024274	9	Non-coding	chr9:21967138 plus strand	1883515
CDKN2B-AS1	NR_047538	9	Non-coding	chr9:21994790 plus strand	1883516
CDKN2B-AS1	NR_047537	9	Non-coding	chr9:21994790 plus strand	1883516
CDKN2B-AS1	NR_047536	9	Non-coding	chr9:21994790 plus strand	1883516
CDKN2B-AS1	NR_003529	9	Non-coding	chr9:21994790 plus strand	1883516
CDKN2B-AS1	NR_047533	9	Non-coding	chr9:21994790 plus strand	1883516
CDKN2B-AS1	NR_047543	9	Non-coding	chr9:21994790 plus strand	1883516
CDKN2B-AS1	NR_047532	9	Non-coding	chr9:21994790 plus strand	1883516
CDKN2B-AS1	NR_047535	9	Non-coding	chr9:21994790 plus strand	1883516
CDKN2B-AS1	NR_047534	9	Non-coding	chr9:21994790 plus strand	1883516
CDKN2B-AS1	NR_047541	9	Non-coding	chr9:21994790 plus strand	1883516
CDKN2B-AS1	NR_047540	9	Non-coding	chr9:21994790 plus strand	1883516
CDKN2B-AS1	NR_047539	9	Non-coding	chr9:21994790 plus strand	1883516
CDKN2B-AS1	NR_047542	9	Non-coding	chr9:21994790 plus strand	1883516
CDKN2B-AS1	NR_120536	9	Non-coding	chr9:21994790 plus strand	1883516
CELP	NR_001275	9	Non-coding	chr9:133082538 plus strand	1883517
CNTFR-AS1	NR_024369	9	Non-coding	chr9:34568011 plus strand	1883518
CNTNAP3P2	NR_111893	9	Non-coding	chr9:67059459 plus strand	1883519
CRB2	NR_104603	9	Non-coding	chr9:123368778 plus strand	1883520

【１６１２】

CTSL3P	NR_027917	9	Non-coding	chr9:87772914 plus strand	1883521
CTSLP8	NR_033405	9	Non-coding	chr9:87844744 plus strand	1883522
DBH-AS1	NR_102735	9	Non-coding	chr9:133657408 minus strand	1883523
DDX11L5	NR_051986	9	Non-coding	chr9:11986 plus strand	1883524
DENND4C	NR_073201	9	Non-coding	chr9:19230764 plus strand	1883525
DKFZP434A062	NR_026964	9	Non-coding	chr9:136327323 minus strand	1883526
DNAJB5-AS1	NR_109756	9	Non-coding	chr9:34989379 minus strand	1883527
DNAJC25	NR_037148	9	Non-coding	chr9:111631351 plus strand	1883528
DNLZ	NR_073565	9	Non-coding	chr9:136363811 minus strand	1883529
DOLPP1	NR_072983	9	Non-coding	chr9:129081103 plus strand	1883530
EBLN3	NR_036592	9	Non-coding	chr9:37079895 plus strand	1883531
EGFL7	NR_046367	9	Non-coding	chr9:136658855 plus strand	1883532
EGFL7	NR_045111	9	Non-coding	chr9:136662926 plus strand	1883533
EGFL7	NR_045110	9	Non-coding	chr9:136662926 plus strand	1883533
EHMT1-IT1	NR_024341	9	Non-coding	chr9:137763021 plus strand	1883534
EXD3	NR_104599	9	Non-coding	chr9:137423262 minus strand	1883535
EXD3	NR_104598	9	Non-coding	chr9:137423262 minus strand	1883535
EXOSC2	NR_104230	9	Non-coding	chr9:130693759 plus strand	1883536
FAM138A	NR_026818	9	Non-coding	chr9:35864 minus strand	1883537
FAM138C	NR_026822	9	Non-coding	chr9:35864 minus strand	1883538
FAM138F	NR_026820	9	Non-coding	chr9:35864 minus strand	1883539
FAM201A	NR_027294	9	Non-coding	chr9:38621087 plus strand	1883540
FAM205BP	NR_024481	9	Non-coding	chr9:34838586 minus strand	1883541
FAM221B	NR_052026	9	Non-coding	chr9:35828747 minus strand	1883542
FAM225A	NR_024366	9	Non-coding	chr9:113112895 plus strand	1883543
FAM225B	NR_024376	9	Non-coding	chr9:113111677 minus strand	1883544
FAM27B	NR_027422	9	Non-coding	chr9:67726743 minus strand	1883545

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FAM27C	NR_027421	9	Non-coding	chr9:61854083 plus strand	1883546
FAM27E2	NR_103714	9	Non-coding	chr9:41647673 plus strand	1883547
FAM27E3	NR_103833	9	Non-coding	chr9:67719179 minus strand	1883548
FAM74A1	NR_026803	9	Non-coding	chr9:39371064 plus strand	1883549
FAM74A1	NR_026803	9	Non-coding	chr9:60929781 plus strand	1883550
FAM74A1	NR_026803	9	Non-coding	chr9:61205405 plus strand	1883551
FAM74A3	NR_026801	9	Non-coding	chr9:66977317 minus strand	1883552
FAM74A4	NR_026802	9	Non-coding	chr9:61205259 plus strand	1883553
FAM74A4	NR_110998	9	Non-coding	chr9:61205259 plus strand	1883553
FAM74A6	NR_110999	9	Non-coding	chr9:60929781 plus strand	1883554
FAM74A6	NR_110999	9	Non-coding	chr9:61205405 plus strand	1883555
FAM74A7	NR_126166	9	Non-coding	chr9:42198861 plus strand	1883556
FAM95B1	NR_026759	9	Non-coding	chr9:40323570 plus strand	1883557
FAM95B1	NR_026759	9	Non-coding	chr9:64463598 plus strand	1883558
FAM95B1	NR_026759	9	Non-coding	chr9:66052734 minus strand	1883559
FAM95C	NR_047651	9	Non-coding	chr9:38545372 minus strand	1883560
FLJ41200	NR_033863	9	Non-coding	chr9:13431329 minus strand	1883561
FLJ43315	NR_033856	9	Non-coding	chr9:64016949 plus strand	1883562
FOCAD-AS1	NR_121601	9	Non-coding	chr9:20684750 minus strand	1883563
FPGS	NR_110170	9	Non-coding	chr9:127802857 plus strand	1883564
GARNL3	NR_104591	9	Non-coding	chr9:127264476 plus strand	1883565
GAS2L1P2	NR_002942	9	Non-coding	chr9:97081945 minus strand	1883566
GGTA1P	NR_003191	9	Non-coding	chr9:121500027 minus strand	1883567
GGTA1P	NR_045211	9	Non-coding	chr9:121500027 minus strand	1883567
GLIDR	NR_126046	9	Non-coding	chr9:39810159 minus strand	1883568
GLIDR	NR_015363	9	Non-coding	chr9:39810159 minus strand	1883568
GLIDR	NR_126044	9	Non-coding	chr9:39810159 minus strand	1883568

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GLIDR	NR_126045	9	Non-coding	chr9:39810159 minus strand	1883568
GLIPR2	NR_104638	9	Non-coding	chr9:36136535 plus strand	1883569
GLIPR2	NR_104637	9	Non-coding	chr9:36136535 plus strand	1883569
GLIPR2	NR_104641	9	Non-coding	chr9:36136535 plus strand	1883569
GLIPR2	NR_104640	9	Non-coding	chr9:36136535 plus strand	1883569
GLIPR2	NR_104639	9	Non-coding	chr9:36136535 plus strand	1883569
GLIS3-AS1	NR_026663	9	Non-coding	chr9:3898645 plus strand	1883570
GNA14-AS1	NR_121184	9	Non-coding	chr9:77447648 plus strand	1883571
GSN-AS1	NR_103560	9	Non-coding	chr9:121285530 minus strand	1883572
GXYLT1P3	NR_121572	9	Non-coding	chr9:40348498 plus strand	1883573
GXYLT1P3	NR_121572	9	Non-coding	chr9:66027819 minus strand	1883574
HIATL2	NR_002894	9	Non-coding	chr9:97013580 minus strand	1883575
HSDL2	NR_036651	9	Non-coding	chr9:112379908 plus strand	1883576
IARS	NR_073446	9	Non-coding	chr9:92293756 minus strand	1883577
IDNK	NR_046422	9	Non-coding	chr9:83623048 plus strand	1883578
IDNK	NR_046421	9	Non-coding	chr9:83623048 plus strand	1883578
IFNA22P	NR_036676	9	Non-coding	chr9:21278563 minus strand	1883579
IFT74-AS1	NR_121605	9	Non-coding	chr9:26956307 minus strand	1883580
IL11RA	NR_052010	9	Non-coding	chr9:34653896 plus strand	1883581
INVS	NR_051962	9	Non-coding	chr9:100099219 plus strand	1883582
KGFLP1	NR_003674	9	Non-coding	chr9:62376255 plus strand	1883583
KGFLP1	NR_047527	9	Non-coding	chr9:62376255 plus strand	1883583
KGFLP2	NR_003670	9	Non-coding	chr9:39874566 minus strand	1883584
LINC00032	NR_026679	9	Non-coding	chr9:27282793 minus strand	1883585
LINC00092	NR_024129	9	Non-coding	chr9:96021755 minus strand	1883586
LINC00094	NR_015427	9	Non-coding	chr9:134025438 plus strand	1883587
LINC00474	NR_024032	9	Non-coding	chr9:115925098 minus strand	1883588

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LINC00475	NR_027341	9	Non-coding	chr9:92141466 plus strand	1883589
LINC00476	NR_023390	9	Non-coding	chr9:95875977 minus strand	1883590
LINC00476	NR_023389	9	Non-coding	chr9:95875977 minus strand	1883590
LINC00583	NR_038194	9	Non-coding	chr9:13927970 plus strand	1883591
LINC00587	NR_103830	9	Non-coding	chr9:102519636 plus strand	1883592
LINC00950	NR_024006	9	Non-coding	chr9:35860273 plus strand	1883593
LINC00961	NR_024283	9	Non-coding	chr9:35909482 plus strand	1883594
LINC00963	NR_038955	9	Non-coding	chr9:129488659 plus strand	1883595
LINC01189	NR_046203	9	Non-coding	chr9:62452489 plus strand	1883596
LINC01230	NR_110643	9	Non-coding	chr9:1048142 plus strand	1883597
LINC01231	NR_121585	9	Non-coding	chr9:3181588 plus strand	1883598
LINC01239	NR_038977	9	Non-coding	chr9:22646199 plus strand	1883599
LINC01241	NR_121604	9	Non-coding	chr9:25780055 plus strand	1883600
LINC01242	NR_046204	9	Non-coding	chr9:30408454 minus strand	1883601
LINC01251	NR_109755	9	Non-coding	chr9:33738416 minus strand	1883602
LINC01410	NR_121647	9	Non-coding	chr9:62801464 plus strand	1883603
LINC01474	NR_121120	9	Non-coding	chr9:72874109 minus strand	1883604
LINC01474	NR_121181	9	Non-coding	chr9:72874109 minus strand	1883604
LINC01474	NR_121180	9	Non-coding	chr9:72874109 minus strand	1883604
LINC01492	NR_121578	9	Non-coding	chr9:103325033 minus strand	1883605
LINC01501	NR_034157	9	Non-coding	chr9:90582746 minus strand	1883606
LINC01502	NR_034017	9	Non-coding	chr9:135574924 plus strand	1883607
LINC01502	NR_034016	9	Non-coding	chr9:135574924 plus strand	1883607
LINC01502	NR_109814	9	Non-coding	chr9:135574924 plus strand	1883607
LINC01503	NR_120685	9	Non-coding	chr9:129336922 plus strand	1883608
LINC01503	NR_120686	9	Non-coding	chr9:129336922 plus strand	1883608
LINC01504	NR_110953	9	Non-coding	chr9:72305435 plus strand	1883609

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LINC01504	NR_110952	9	Non-coding	chr9:72305435 plus strand	1883609
LINC01505	NR_104145	9	Non-coding	chr9:106616057 plus strand	1883610
LINC01506	NR_109769	9	Non-coding	chr9:68546602 minus strand	1883611
LINC01507	NR_121213	9	Non-coding	chr9:79824529 plus strand	1883612
LINC01507	NR_121212	9	Non-coding	chr9:79975022 plus strand	1883613
LINC01508	NR_109795	9	Non-coding	chr9:90433489 minus strand	1883614
LINC01509	NR_121581	9	Non-coding	chr9:107466585 minus strand	1883615
LINC01573	NR_121577	9	Non-coding	chr9:136547841 plus strand	1883616
LOC100128076	NR_015444	9	Non-coding	chr9:92132833 plus strand	1883617
LOC100128361	NR_036505	9	Non-coding	chr9:92618049 plus strand	1883618
LOC100128593	NR_033913	9	Non-coding	chr9:136746160 plus strand	1883619
LOC100129034	NR_027406	9	Non-coding	chr9:124353472 plus strand	1883620
LOC100129316	NR_033912	9	Non-coding	chr9:91075132 minus strand	1883621
LOC100132077	NR_033937	9	Non-coding	chr9:94332475 plus strand	1883622
LOC100132352	NR_034006	9	Non-coding	chr9:40992336 plus strand	1883623
LOC100132781	NR_038890	9	Non-coding	chr9:96868899 plus strand	1883624
LOC100133077	NR_121583	9	Non-coding	chr9:137892570 minus strand	1883625
LOC100272217	NR_027440	9	Non-coding	chr9:130579494 minus strand	1883626
LOC100288842	NR_027442	9	Non-coding	chr9:120793496 plus strand	1883627
LOC100499484	NR_036526	9	Non-coding	chr9:97238425 plus strand	1883628
LOC100499484-C9ORF174	NR_036529	9	Non-coding	chr9:97238425 plus strand	1883629
LOC100499484-C9ORF174	NR_036528	9	Non-coding	chr9:97238425 plus strand	1883629
LOC100499484-C9ORF174	NR_036527	9	Non-coding	chr9:97238425 plus strand	1883629
LOC100506100	NR_046240	9	Non-coding	chr9:128724461 plus strand	1883630
LOC100506834	NR_049794	9	Non-coding	chr9:86948697 plus strand	1883631
LOC100507346	NR_038982	9	Non-coding	chr9:95463608 plus strand	1883632
LOC101448202	NR_103451	9	Non-coding	chr9:134872618 minus strand	1883633

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LOC101927069	NR_110647	9	Non-coding	chr9:68975841 minus strand	1883634
LOC101927358	NR_121182	9	Non-coding	chr9:74371530 plus strand	1883635
LOC101927450	NR_109771	9	Non-coding	chr9:79145666 minus strand	1883636
LOC101927502	NR_109772	9	Non-coding	chr9:81689712 plus strand	1883637
LOC101927575	NR_110995	9	Non-coding	chr9:84063442 plus strand	1883638
LOC101927623	NR_110996	9	Non-coding	chr9:86127539 plus strand	1883639
LOC101927827	NR_121564	9	Non-coding	chr9:42586534 minus strand	1883640
LOC101927847	NR_109791	9	Non-coding	chr9:89969415 plus strand	1883641
LOC101927954	NR_121565	9	Non-coding	chr9:93014944 minus strand	1883642
LOC101928381	NR_121570	9	Non-coding	chr9:63017994 plus strand	1883643
LOC101928381	NR_121570	9	Non-coding	chr9:64745366 minus strand	1883644
LOC101928381	NR_121570	9	Non-coding	chr9:65791120 plus strand	1883645
LOC101928438	NR_109802	9	Non-coding	chr9:99819889 minus strand	1883646
LOC101928523	NR_109803	9	Non-coding	chr9:103999708 plus strand	1883647
LOC101928525	NR_121579	9	Non-coding	chr9:135506447 minus strand	1883648
LOC101928748	NR_110950	9	Non-coding	chr9:115138409 minus strand	1883649
LOC101928775	NR_109805	9	Non-coding	chr9:115744239 minus strand	1883650
LOC101928786	NR_121582	9	Non-coding	chr9:138045071 minus strand	1883651
LOC101928797	NR_109806	9	Non-coding	chr9:117648605 plus strand	1883652
LOC101929116	NR_121584	9	Non-coding	chr9:126275915 minus strand	1883653
LOC101929331	NR_121587	9	Non-coding	chr9:129282415 plus strand	1883654
LOC101929563	NR_121602	9	Non-coding	chr9:23672399 minus strand	1883655
LOC102723709	NR_121606	9	Non-coding	chr9:61869138 minus strand	1883656
LOC102723709	NR_121606	9	Non-coding	chr9:67711676 plus strand	1883657
LOC102724238	NR_126048	9	Non-coding	chr9:39873852 plus strand	1883658
LOC102724238	NR_126048	9	Non-coding	chr9:62376870 minus strand	1883659
LOC103908605	NR_126050	9	Non-coding	chr9:42569349 minus strand	1883660

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LOC103908605	NR_126050	9	Non-coding	chr9:62532367 plus strand	1883661
LOC158435	NR_033838	9	Non-coding	chr9:96065838 plus strand	1883662
LOC286297	NR_046175	9	Non-coding	chr9:63127100 minus strand	1883663
LOC286297	NR_046175	9	Non-coding	chr9:65878507 minus strand	1883664
LOC286359	NR_026847	9	Non-coding	chr9:97396691 minus strand	1883665
LOC286367	NR_024011	9	Non-coding	chr9:104774351 plus strand	1883666
LOC286370	NR_038882	9	Non-coding	chr9:90041499 minus strand	1883667
LOC340512	NR_126029	9	Non-coding	chr9:107102988 minus strand	1883668
LOC389705	NR_003920	9	Non-coding	chr9:14993326 plus strand	1883669
LOC389765	NR_029410	9	Non-coding	chr9:85806001 plus strand	1883670
LOC392364	NR_040117	9	Non-coding	chr9:87859056 minus strand	1883671
LOC401557	NR_046107	9	Non-coding	chr9:135181608 plus strand	1883672
LOC403323	NR_122076	9	Non-coding	chr9:62898087 minus strand	1883673
LOC403323	NR_122077	9	Non-coding	chr9:62898087 minus strand	1883673
LOC440173	NR_027471	9	Non-coding	chr9:87042126 minus strand	1883674
LOC440896	NR_015361	9	Non-coding	chr9:41107812 minus strand	1883675
LOC441454	NR_028350	9	Non-coding	chr9:96909074 plus strand	1883676
LOC441455	NR_026792	9	Non-coding	chr9:96725820 plus strand	1883677
LOC494127	NR_036691	9	Non-coding	chr9:87085225 minus strand	1883678
LOC51145	NR_122032	9	Non-coding	chr9:125745929 minus strand	1883679
LOC554249	NR_126049	9	Non-coding	chr9:39873856 plus strand	1883680
LOC554249	NR_126049	9	Non-coding	chr9:62376866 minus strand	1883681
LOC642236	NR_033907	9	Non-coding	chr9:63858641 minus strand	1883682
LOC642929	NR_027472	9	Non-coding	chr9:66164906 minus strand	1883683
LOC642943	NR_111003	9	Non-coding	chr9:92882566 plus strand	1883684
LOC728673	NR_126047	9	Non-coding	chr9:62897375 plus strand	1883685
LRRC37A5P	NR_034087	9	Non-coding	chr9:111613553 minus strand	1883686

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LURAP1L-AS1	NR_125775	9	Non-coding	chr9:12814389 minus strand	1883687
MAMDC2	NR_125850	9	Non-coding	chr9:70043580 plus strand	1883688
MAMDC2-AS1	NR_040076	9	Non-coding	chr9:70175888 minus strand	1883689
MAN1B1	NR_045720	9	Non-coding	chr9:137086926 plus strand	1883690
MAN1B1	NR_045721	9	Non-coding	chr9:137086926 plus strand	1883690
MAN1B1-AS1	NR_027447	9	Non-coding	chr9:137086817 minus strand	1883691
MELK	NR_046337	9	Non-coding	chr9:36572861 plus strand	1883692
MGC50722	NR_111982	9	Non-coding	chr9:136304094 minus strand	1883693
MIR101-2	NR_029836	9	Non-coding	chr9:4850296 plus strand	1883694
MIR126	NR_029695	9	Non-coding	chr9:136670601 plus strand	1883695
MIR1268A	NR_031672	9	Non-coding	chr9:128352046 plus strand	1883696
MIR1299	NR_031629	9	Non-coding	chr9:40929092 minus strand	1883697
MIR1302-10	NR_036267	9	Non-coding	chr9:30143 plus strand	1883698
MIR1302-11	NR_036268	9	Non-coding	chr9:30143 plus strand	1883699
MIR1302-2	NR_036051	9	Non-coding	chr9:30143 plus strand	1883700
MIR1302-8	NR_031637	9	Non-coding	chr9:97363681 minus strand	1883701
MIR1302-9	NR_036266	9	Non-coding	chr9:30143 plus strand	1883702
MIR147A	NR_029604	9	Non-coding	chr9:120245050 minus strand	1883703
MIR181A2	NR_029611	9	Non-coding	chr9:124692441 plus strand	1883704
MIR181A2HG	NR_038975	9	Non-coding	chr9:124658435 plus strand	1883705
MIR181B2	NR_029782	9	Non-coding	chr9:124693709 plus strand	1883706
MIR199B	NR_029619	9	Non-coding	chr9:128244830 minus strand	1883707
MIR204	NR_029621	9	Non-coding	chr9:70810084 minus strand	1883708
MIR219A2	NR_029837	9	Non-coding	chr9:128392714 minus strand	1883709
MIR219B	NR_039815	9	Non-coding	chr9:128392620 plus strand	1883710
MIR2278	NR_031755	9	Non-coding	chr9:94809961 plus strand	1883711
MIR23B	NR_029664	9	Non-coding	chr9:95085207 plus strand	1883712

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MIR24-1	NR_029496	9	Non-coding	chr9:95086020 plus strand	1883713
MIR27B	NR_029665	9	Non-coding	chr9:95085444 plus strand	1883714
MIR2861	NR_036055	9	Non-coding	chr9:127785917 plus strand	1883715
MIR3074	NR_036109	9	Non-coding	chr9:95086094 minus strand	1883716
MIR31	NR_029505	9	Non-coding	chr9:21512185 minus strand	1883717
MIR3152	NR_036107	9	Non-coding	chr9:18573305 plus strand	1883718
MIR3153	NR_036108	9	Non-coding	chr9:89312224 plus strand	1883719
MIR3154	NR_036110	9	Non-coding	chr9:128245030 minus strand	1883720
MIR31HG	NR_027054	9	Non-coding	chr9:21559698 minus strand	1883721
MIR32	NR_029506	9	Non-coding	chr9:109046298 minus strand	1883722
MIR3621	NR_037416	9	Non-coding	chr9:137169270 minus strand	1883723
MIR3651	NR_037424	9	Non-coding	chr9:92292547 minus strand	1883724
MIR3689A	NR_037460	9	Non-coding	chr9:134850644 minus strand	1883725
MIR3689B	NR_037469	9	Non-coding	chr9:134850272 minus strand	1883726
MIR3689C	NR_039691	9	Non-coding	chr9:134849369 minus strand	1883727
MIR3689D1	NR_039693	9	Non-coding	chr9:134849682 minus strand	1883728
MIR3689D2	NR_039694	9	Non-coding	chr9:134850356 minus strand	1883729
MIR3689E	NR_039695	9	Non-coding	chr9:134850641 minus strand	1883730
MIR3689F	NR_039696	9	Non-coding	chr9:134850807 minus strand	1883731
MIR3910-1	NR_037472	9	Non-coding	chr9:91636250 plus strand	1883732
MIR3910-2	NR_037489	9	Non-coding	chr9:91636345 minus strand	1883733
MIR3911	NR_037473	9	Non-coding	chr9:127690795 minus strand	1883734
MIR3927	NR_037493	9	Non-coding	chr9:109511545 minus strand	1883735
MIR3960	NR_039767	9	Non-coding	chr9:127785832 plus strand	1883736
MIR4289	NR_036252	9	Non-coding	chr9:88745905 minus strand	1883737
MIR4290	NR_036253	9	Non-coding	chr9:90023535 minus strand	1883738
MIR4291	NR_036254	9	Non-coding	chr9:93819356 plus strand	1883739

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MIR4292	NR_036251	9	Non-coding	chr9:136830956 plus strand	1883740
MIR4473	NR_039684	9	Non-coding	chr9:20411238 minus strand	1883741
MIR4474	NR_039685	9	Non-coding	chr9:20502342 minus strand	1883742
MIR4475	NR_039686	9	Non-coding	chr9:36823599 minus strand	1883743
MIR4476	NR_039687	9	Non-coding	chr9:36893531 minus strand	1883744
MIR4477A	NR_039688	9	Non-coding	chr9:41233754 plus strand	1883745
MIR4477A	NR_039688	9	Non-coding	chr9:63819654 minus strand	1883746
MIR4477B	NR_039689	9	Non-coding	chr9:41233835 minus strand	1883747
MIR4477B	NR_039689	9	Non-coding	chr9:63819573 plus strand	1883748
MIR4478	NR_039690	9	Non-coding	chr9:122120167 minus strand	1883749
MIR4479	NR_039697	9	Non-coding	chr9:136886732 plus strand	1883750
MIR4540	NR_039766	9	Non-coding	chr9:36864308 minus strand	1883751
MIR455	NR_030255	9	Non-coding	chr9:114209433 plus strand	1883752
MIR4665	NR_039811	9	Non-coding	chr9:6007825 plus strand	1883753
MIR4667	NR_039813	9	Non-coding	chr9:35608093 plus strand	1883754
MIR4668	NR_039814	9	Non-coding	chr9:111932099 plus strand	1883755
MIR4669	NR_039816	9	Non-coding	chr9:134379410 plus strand	1883756
MIR4670	NR_039817	9	Non-coding	chr9:92528058 minus strand	1883757
MIR4672	NR_039819	9	Non-coding	chr9:127869495 minus strand	1883758
MIR4673	NR_039820	9	Non-coding	chr9:136519626 minus strand	1883759
MIR4674	NR_039821	9	Non-coding	chr9:136546259 minus strand	1883760
MIR491	NR_030166	9	Non-coding	chr9:20716104 plus strand	1883761
MIR548AU	NR_049853	9	Non-coding	chr9:93594840 plus strand	1883762
MIR548AW	NR_049862	9	Non-coding	chr9:132945706 plus strand	1883763
MIR600	NR_030331	9	Non-coding	chr9:123111643 minus strand	1883764
MIR600HG	NR_026677	9	Non-coding	chr9:123115477 minus strand	1883765
MIR601	NR_030332	9	Non-coding	chr9:123402603 minus strand	1883766

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MIR602	NR_030333	9	Non-coding	chr9:137838418 plus strand	1883767
MIR6081	NR_106729	9	Non-coding	chr9:95065349 plus strand	1883768
MIR6722	NR_106780	9	Non-coding	chr9:136746970 minus strand	1883769
MIR6851	NR_106910	9	Non-coding	chr9:33467935 minus strand	1883770
MIR6852	NR_106911	9	Non-coding	chr9:35710741 minus strand	1883771
MIR6853	NR_106912	9	Non-coding	chr9:35732921 plus strand	1883772
MIR6854	NR_106913	9	Non-coding	chr9:98229217 minus strand	1883773
MIR6855	NR_106914	9	Non-coding	chr9:129869604 plus strand	1883774
MIR6856	NR_106915	9	Non-coding	chr9:130626296 plus strand	1883775
MIR6877	NR_106937	9	Non-coding	chr9:133051995 plus strand	1883776
MIR7-1	NR_029605	9	Non-coding	chr9:83969857 minus strand	1883777
MIR7114	NR_106964	9	Non-coding	chr9:137450086 minus strand	1883778
MIR7150	NR_106972	9	Non-coding	chr9:123485622 minus strand	1883779
MIR7702	NR_106989	9	Non-coding	chr9:111271214 minus strand	1883780
MIR8081	NR_107048	9	Non-coding	chr9:106600927 plus strand	1883781
MIR873	NR_030618	9	Non-coding	chr9:28888955 minus strand	1883782
MIR876	NR_030597	9	Non-coding	chr9:28863706 minus strand	1883783
MIRLET7A1	NR_029476	9	Non-coding	chr9:94175956 plus strand	1883784
MIRLET7D	NR_029481	9	Non-coding	chr9:94178833 plus strand	1883785
MIRLET7DHG	NR_046165	9	Non-coding	chr9:94204566 minus strand	1883786
MIRLET7DHG	NR_046163	9	Non-coding	chr9:94204566 minus strand	1883786
MIRLET7F1	NR_029483	9	Non-coding	chr9:94176346 plus strand	1883787
MRPS2	NR_051970	9	Non-coding	chr9:135500630 plus strand	1883788
MRPS2	NR_051969	9	Non-coding	chr9:135500630 plus strand	1883788
MRPS2	NR_051968	9	Non-coding	chr9:135500630 plus strand	1883788
MRPS2	NR_051967	9	Non-coding	chr9:135500630 plus strand	1883788
NAMA	NR_102271	9	Non-coding	chr9:99375257 minus strand	1883789

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NAMA	NR_102270	9	Non-coding	chr9:99375257 minus strand	1883789
NMRK1	NR_023352	9	Non-coding	chr9:75088217 minus strand	1883790
NOL8	NR_046106	9	Non-coding	chr9:92325594 minus strand	1883791
NRON	NR_045006	9	Non-coding	chr9:126410504 minus strand	1883792
NTMT1	NR_104596	9	Non-coding	chr9:129626152 plus strand	1883793
OBP2A	NR_120603	9	Non-coding	chr9:135546138 plus strand	1883794
OBP2B	NR_110243	9	Non-coding	chr9:133209250 minus strand	1883795
OBP2B	NR_110242	9	Non-coding	chr9:133209250 minus strand	1883795
PAPPA-AS1	NR_103711	9	Non-coding	chr9:116400606 minus strand	1883796
PAX5	NR_103999	9	Non-coding	chr9:37034479 minus strand	1883797
PAX5	NR_104000	9	Non-coding	chr9:37034479 minus strand	1883797
PBX3	NR_024122	9	Non-coding	chr9:125747337 plus strand	1883798
PBX3	NR_024123	9	Non-coding	chr9:125747337 plus strand	1883798
PCA3	NR_015342	9	Non-coding	chr9:76764437 plus strand	1883799
PCAT7	NR_121566	9	Non-coding	chr9:94555044 plus strand	1883800
PCAT7	NR_121567	9	Non-coding	chr9:94555044 plus strand	1883800
PCAT7	NR_121568	9	Non-coding	chr9:94555044 plus strand	1883800
PCAT7	NR_121569	9	Non-coding	chr9:94555044 plus strand	1883800
PCSK5	NR_120409	9	Non-coding	chr9:75890643 plus strand	1883801
PGM5-AS1	NR_015423	9	Non-coding	chr9:68357866 minus strand	1883802
PGM5-AS1	NR_121192	9	Non-coding	chr9:68357866 minus strand	1883802
PGM5-AS1	NR_121191	9	Non-coding	chr9:68357866 minus strand	1883802
PGM5P2	NR_002836	9	Non-coding	chr9:41074625 minus strand	1883803
PGM5P3-AS1	NR_121190	9	Non-coding	chr9:72689 plus strand	1883804
PGM5P3-AS1	NR_121189	9	Non-coding	chr9:72689 plus strand	1883804
PGM5P3-AS1	NR_121188	9	Non-coding	chr9:72689 plus strand	1883804
PHF19	NR_104601	9	Non-coding	chr9:120868911 minus strand	1883805

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PHPT1	NR_109808	9	Non-coding	chr9:136848815 plus strand	1883806
PHPT1	NR_109807	9	Non-coding	chr9:136848815 plus strand	1883806
PLIN2	NR_038064	9	Non-coding	chr9:19127606 minus strand	1883807
POLE3	NR_027261	9	Non-coding	chr9:113410675 minus strand	1883808
PPP1R26-AS1	NR_038969	9	Non-coding	chr9:135472249 minus strand	1883809
PSMD5-AS1	NR_024408	9	Non-coding	chr9:120843041 plus strand	1883810
PTENP1	NR_023917	9	Non-coding	chr9:33677420 minus strand	1883811
PTENP1-AS	NR_103745	9	Non-coding	chr9:33677267 plus strand	1883812
PTGER4P2-CDK2AP2P2	NR_024496	9	Non-coding	chr9:62838444 plus strand	1883813
PTGES2-AS1	NR_024425	9	Non-coding	chr9:128128528 plus strand	1883814
PTPN3	NR_026918	9	Non-coding	chr9:109417783 minus strand	1883815
PTPRD-AS1	NR_121599	9	Non-coding	chr9:8858017 plus strand	1883816
PTPRD-AS1	NR_121600	9	Non-coding	chr9:8858017 plus strand	1883816
PTPRD-AS2	NR_110696	9	Non-coding	chr9:10613205 plus strand	1883817
RALGAPA1P	NR_104269	9	Non-coding	chr9:105519823 plus strand	1883818
RBM18	NR_027126	9	Non-coding	chr9:122264864 minus strand	1883819
RBM18	NR_027125	9	Non-coding	chr9:122264864 minus strand	1883819
REXO4	NR_103995	9	Non-coding	chr9:133418096 minus strand	1883820
REXO4	NR_103996	9	Non-coding	chr9:133418096 minus strand	1883820
RFX3-AS1	NR_121586	9	Non-coding	chr9:3668085 plus strand	1883821
RMRP	NR_003051	9	Non-coding	chr9:35658018 minus strand	1883822
RNU6-14P	NR_046485	9	Non-coding	chr9:15776286 minus strand	1883823
RNU6ATAC	NR_023344	9	Non-coding	chr9:134164564 minus strand	1883824
RORB-AS1	NR_125791	9	Non-coding	chr9:74498553 minus strand	1883825
RPSAP9	NR_026890	9	Non-coding	chr9:76398598 plus strand	1883826
RUSC2	NR_052015	9	Non-coding	chr9:35489951 plus strand	1883827
SCARNA8	NR_003009	9	Non-coding	chr9:19063786 minus strand	1883828

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SIGMAR1	NR_104108	9	Non-coding	chr9:34637826 minus strand	1883829
SLC25A25	NR_049766	9	Non-coding	chr9:128098481 plus strand	1883830
SLC25A25-AS1	NR_033374	9	Non-coding	chr9:128118734 minus strand	1883831
SLC25A51	NR_024873	9	Non-coding	chr9:37904353 minus strand	1883832
SLC25A51	NR_024872	9	Non-coding	chr9:37904353 minus strand	1883832
SLC28A3	NR_037638	9	Non-coding	chr9:84340779 minus strand	1883833
SLC2A8	NR_073416	9	Non-coding	chr9:127397137 plus strand	1883834
SLC35D2	NR_104627	9	Non-coding	chr9:96383710 minus strand	1883835
SMC2-AS1	NR_121580	9	Non-coding	chr9:104092474 minus strand	1883836
SMC5-AS1	NR_039990	9	Non-coding	chr9:70258874 minus strand	1883837
SNHG7	NR_024543	9	Non-coding	chr9:136728184 minus strand	1883838
SNHG7	NR_024542	9	Non-coding	chr9:136728184 minus strand	1883838
SNHG7	NR_003672	9	Non-coding	chr9:136728184 minus strand	1883838
SNORA17	NR_002958	9	Non-coding	chr9:136726879 minus strand	1883839
SNORA43	NR_002975	9	Non-coding	chr9:136726237 minus strand	1883840
SNORA65	NR_002449	9	Non-coding	chr9:127448637 minus strand	1883841
SNORA70C	NR_003708	9	Non-coding	chr9:117181201 minus strand	1883842
SNORA84	NR_003704	9	Non-coding	chr9:92292593 minus strand	1883843
SNORD121A	NR_003685	9	Non-coding	chr9:33952854 minus strand	1883844
SNORD121B	NR_102370	9	Non-coding	chr9:33934375 minus strand	1883845
SNORD24	NR_002447	9	Non-coding	chr9:133349395 plus strand	1883846
SNORD36A	NR_002448	9	Non-coding	chr9:133350455 plus strand	1883847
SNORD36B	NR_000017	9	Non-coding	chr9:133350093 plus strand	1883848
SNORD36C	NR_000016	9	Non-coding	chr9:133350845 plus strand	1883849
SNORD62A	NR_002914	9	Non-coding	chr9:131485664 plus strand	1883850
SNORD62A	NR_002914	9	Non-coding	chr9:131490485 plus strand	1883851
SNORD62B	NR_003050	9	Non-coding	chr9:131485664 plus strand	1883852

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SNORD62B	NR_003050	9	Non-coding	chr9:131490485 plus strand	1883853
SNORD90	NR_003071	9	Non-coding	chr9:122880319 minus strand	1883854
SPATA31D5P	NR_026851	9	Non-coding	chr9:81913436 plus strand	1883855
ST6GALNAC6	NR_104629	9	Non-coding	chr9:127905348 minus strand	1883856
STKLD1	NR_103997	9	Non-coding	chr9:133376412 plus strand	1883857
STOM	NR_073037	9	Non-coding	chr9:121370304 minus strand	1883858
STRBP	NR_033234	9	Non-coding	chr9:123268564 minus strand	1883859
STX17-AS1	NR_038853	9	Non-coding	chr9:99906601 minus strand	1883860
SUGT1P1	NR_003667	9	Non-coding	chr9:33511166 minus strand	1883861
SURF6	NR_103874	9	Non-coding	chr9:133336210 minus strand	1883862
TBC1D2	NR_051978	9	Non-coding	chr9:98255721 minus strand	1883863
TLE4	NR_104239	9	Non-coding	chr9:79571772 plus strand	1883864
TMEM246-AS1	NR_121573	9	Non-coding	chr9:101468438 plus strand	1883865
TMEM246-AS1	NR_121576	9	Non-coding	chr9:101468438 plus strand	1883865
TMEM246-AS1	NR_121575	9	Non-coding	chr9:101469321 plus strand	1883866
TMEM246-AS1	NR_121574	9	Non-coding	chr9:101469321 plus strand	1883866
TOPORS-AS1	NR_033991	9	Non-coding	chr9:32551143 plus strand	1883867
TOPORS-AS1	NR_033992	9	Non-coding	chr9:32551716 plus strand	1883868
TOPORS-AS1	NR_102377	9	Non-coding	chr9:32552233 plus strand	1883869
TOPORS-AS1	NR_102376	9	Non-coding	chr9:32552233 plus strand	1883869
TRMT10B	NR_104612	9	Non-coding	chr9:37753802 plus strand	1883870
TUBBP5	NR_027156	9	Non-coding	chr9:138150112 plus strand	1883871
UBAP1	NR_033243	9	Non-coding	chr9:34179004 plus strand	1883872
UHRF2	NR_046386	9	Non-coding	chr9:6413150 plus strand	1883873
UNQ6494	NR_024280	9	Non-coding	chr9:89639782 plus strand	1883874
URM1	NR_049743	9	Non-coding	chr9:128371318 plus strand	1883875
VLDLR-AS1	NR_015375	9	Non-coding	chr9:2622373 minus strand	1883876

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VPS13A-AS1	NR_026668	9	Non-coding	chr9:77177917 minus strand	1883877
XPA	NR_027302	9	Non-coding	chr9:97697409 minus strand	1883878
ZCCHC7	NR_110317	9	Non-coding	chr9:37120471 plus strand	1883879
ZNF189	NR_103480	9	Non-coding	chr9:101398853 plus strand	1883880
ZNF658B	NR_003528	9	Non-coding	chr9:39464526 minus strand	1883881
ACTA2-AS1	NR_125373	10	Non-coding	chr10:88932683 plus strand	1883882
ACTR3BP5	NR_045000	10	Non-coding	chr10:38696595 plus strand	1883883
ADARB2-AS1	NR_033387	10	Non-coding	chr10:1526629 plus strand	1883884
ADD3-AS1	NR_038943	10	Non-coding	chr10:110008381 minus strand	1883885
AGAP7P	NR_126580	10	Non-coding	chr10:46109494 plus strand	1883886
AKR1C6P	NR_026743	10	Non-coding	chr10:4916273 minus strand	1883887
AKR1C8P	NR_027916	10	Non-coding	chr10:5185187 minus strand	1883888
AKR1E2	NR_073125	10	Non-coding	chr10:4826176 plus strand	1883889
AKR1E2	NR_073127	10	Non-coding	chr10:4826176 plus strand	1883889
AKR1E2	NR_073126	10	Non-coding	chr10:4826176 plus strand	1883889
ANAPC16	NR_038392	10	Non-coding	chr10:72215999 plus strand	1883890
ANAPC16	NR_038391	10	Non-coding	chr10:72215999 plus strand	1883890
ANKRD30BP3	NR_033891	10	Non-coding	chr10:45154661 plus strand	1883891
ANTXRLP1	NR_103828	10	Non-coding	chr10:46269608 minus strand	1883892
ANTXRLP1	NR_103827	10	Non-coding	chr10:46269608 minus strand	1883892
ANXA2P3	NR_001446	10	Non-coding	chr10:64825527 plus strand	1883893
ARHGAP19-SLIT1	NR_037909	10	Non-coding	chr10:97292673 minus strand	1883894
ARHGAP22	NR_045675	10	Non-coding	chr10:48656265 minus strand	1883895
ASB13	NR_037164	10	Non-coding	chr10:5666595 minus strand	1883896
ASB13	NR_024581	10	Non-coding	chr10:5666595 minus strand	1883896
ASCC1	NR_045564	10	Non-coding	chr10:72217134 minus strand	1883897
ATE1	NR_110006	10	Non-coding	chr10:121928801 minus strand	1883898

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ATE1-AS1	NR_120495	10	Non-coding	chr10:121928311 plus strand	1883899
ATRNL1	NR_074088	10	Non-coding	chr10:115093364 plus strand	1883900
BEND3P3	NR_027512	10	Non-coding	chr10:79682974 plus strand	1883901
BLNK	NR_047683	10	Non-coding	chr10:96271516 minus strand	1883902
BLNK	NR_047682	10	Non-coding	chr10:96271516 minus strand	1883902
BLNK	NR_047681	10	Non-coding	chr10:96271516 minus strand	1883902
BLNK	NR_047680	10	Non-coding	chr10:96271516 minus strand	1883902
BMS1P4	NR_026592	10	Non-coding	chr10:73730514 minus strand	1883903
BMS1P5	NR_003611	10	Non-coding	chr10:46786732 plus strand	1883904
BMS1P6	NR_024495	10	Non-coding	chr10:47553523 minus strand	1883905
C10orf25	NR_126421	10	Non-coding	chr10:45000910 minus strand	1883906
C10orf32-ASMT	NR_037644	10	Non-coding	chr10:102854209 plus strand	1883907
C10orf71-AS1	NR_108038	10	Non-coding	chr10:49298893 minus strand	1883908
CALHM2	NR_024552	10	Non-coding	chr10:103452405 minus strand	1883909
CALHM2	NR_046344	10	Non-coding	chr10:103452405 minus strand	1883909
CALML3-AS1	NR_120496	10	Non-coding	chr10:5526246 minus strand	1883910
CALML3-AS1	NR_120497	10	Non-coding	chr10:5526246 minus strand	1883910
CASC2	NR_026941	10	Non-coding	chr10:118046820 plus strand	1883911
CASC2	NR_026940	10	Non-coding	chr10:118046820 plus strand	1883911
CASC2	NR_026939	10	Non-coding	chr10:118046820 plus strand	1883911
CCAR1	NR_104262	10	Non-coding	chr10:68721143 plus strand	1883912
CCDC147-AS1	NR_108036	10	Non-coding	chr10:104353575 minus strand	1883913
CCDC7	NR_109827	10	Non-coding	chr10:32446081 plus strand	1883914
CCDC7	NR_109826	10	Non-coding	chr10:32446081 plus strand	1883914
CCNYL2	NR_103829	10	Non-coding	chr10:42472240 minus strand	1883915
CELF2-AS1	NR_126062	10	Non-coding	chr10:11344674 minus strand	1883916
CELF2-AS2	NR_046108	10	Non-coding	chr10:11105488 minus strand	1883917

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CFL1P1	NR_028492	10	Non-coding	chr10:87818312 plus strand	1883918
CREM	NR_051974	10	Non-coding	chr10:35126840 plus strand	1883919
CREM	NR_051973	10	Non-coding	chr10:35126840 plus strand	1883919
CREM	NR_051975	10	Non-coding	chr10:35126840 plus strand	1883919
CREM	NR_051971	10	Non-coding	chr10:35195901 plus strand	1883920
CREM	NR_051972	10	Non-coding	chr10:35195901 plus strand	1883920
CTAGE7P	NR_044994	10	Non-coding	chr10:130106008 plus strand	1883921
CTGLF12P	NR_029396	10	Non-coding	chr10:48031640 minus strand	1883922
CTSLP2	NR_033407	10	Non-coding	chr10:47583419 minus strand	1883923
CUZD1	NR_037912	10	Non-coding	chr10:122846175 minus strand	1883924
DCLRE1C	NR_110297	10	Non-coding	chr10:14954432 minus strand	1883925
DLG5-AS1	NR_024585	10	Non-coding	chr10:77926811 plus strand	1883926
DMBT1P1	NR_003570	10	Non-coding	chr10:122756693 plus strand	1883927
DNA2	NR_102264	10	Non-coding	chr10:68472121 minus strand	1883928
DNAJC9-AS1	NR_038373	10	Non-coding	chr10:73247366 plus strand	1883929
DNMBP-AS1	NR_024130	10	Non-coding	chr10:99927208 plus strand	1883930
DYDC2	NR_070309	10	Non-coding	chr10:80344744 plus strand	1883931
DYDC2	NR_070308	10	Non-coding	chr10:80344744 plus strand	1883931
ECD	NR_024203	10	Non-coding	chr10:73168095 minus strand	1883932
EDRF1	NR_110859	10	Non-coding	chr10:125719514 plus strand	1883933
EDRF1	NR_110857	10	Non-coding	chr10:125719514 plus strand	1883933
EDRF1	NR_110858	10	Non-coding	chr10:125719514 plus strand	1883933
EDRF1-AS1	NR_120633	10	Non-coding	chr10:125752060 minus strand	1883934
EMX2OS	NR_002791	10	Non-coding	chr10:117545068 minus strand	1883935
ENKUR	NR_072992	10	Non-coding	chr10:25016156 minus strand	1883936
ENKUR	NR_072993	10	Non-coding	chr10:25016156 minus strand	1883936
ENTPD1-AS1	NR_038444	10	Non-coding	chr10:96090235 minus strand	1883937

【１６３０】

EPC1	NR_104160	10	Non-coding	chr10:32347218 minus strand	1883938
EPC1	NR_104159	10	Non-coding	chr10:32347218 minus strand	1883938
FAM133CP	NR_027508	10	Non-coding	chr10:58715014 plus strand	1883939
FAM170B-AS1	NR_038973	10	Non-coding	chr10:49121838 plus strand	1883940
FAM21EP	NR_038275	10	Non-coding	chr10:50067803 minus strand	1883941
FAM24B	NR_037911	10	Non-coding	chr10:122879641 minus strand	1883942
FAM24B-CUZD1	NR_037915	10	Non-coding	chr10:122879641 minus strand	1883943
FAM25BP	NR_104039	10	Non-coding	chr10:46369086 plus strand	1883944
FAM35BP	NR_027632	10	Non-coding	chr10:46651976 minus strand	1883945
FAM35DP	NR_027634	10	Non-coding	chr10:47689699 plus strand	1883946
FAM53B-AS1	NR_120630	10	Non-coding	chr10:124704027 plus strand	1883947
FAM53B-AS1	NR_120631	10	Non-coding	chr10:124704027 plus strand	1883947
FANK1-AS1	NR_102707	10	Non-coding	chr10:125973273 minus strand	1883948
FAS	NR_028036	10	Non-coding	chr10:88990530 plus strand	1883949
FAS	NR_028034	10	Non-coding	chr10:88990530 plus strand	1883949
FAS	NR_028035	10	Non-coding	chr10:88990530 plus strand	1883949
FAS	NR_028033	10	Non-coding	chr10:88990530 plus strand	1883949
FAS-AS1	NR_028371	10	Non-coding	chr10:88992975 minus strand	1883950
FGFR2	NR_073009	10	Non-coding	chr10:121598458 minus strand	1883951
FLJ37035	NR_033847	10	Non-coding	chr10:125719493 minus strand	1883952
FLJ37201	NR_026835	10	Non-coding	chr10:89697928 minus strand	1883953
FRMPD2B	NR_033172	10	Non-coding	chr10:46876673 plus strand	1883954
GATA3-AS1	NR_104329	10	Non-coding	chr10:8052491 minus strand	1883955
GATA3-AS1	NR_104330	10	Non-coding	chr10:8052495 minus strand	1883956
GATA3-AS1	NR_104328	10	Non-coding	chr10:8052495 minus strand	1883956
GATA3-AS1	NR_104336	10	Non-coding	chr10:8053422 minus strand	1883957
GATA3-AS1	NR_104327	10	Non-coding	chr10:8053449 minus strand	1883958

【１６３１】

GATA3-AS1	NR_024256	10	Non-coding	chr10:8053484 minus strand	1883959
GLUD1P3	NR_048575	10	Non-coding	chr10:73731540 plus strand	1883960
GLUD1P7	NR_111968	10	Non-coding	chr10:46786770 minus strand	1883961
GOLGA2P6	NR_120609	10	Non-coding	chr10:30371907 minus strand	1883962
GPR123-AS1	NR_111905	10	Non-coding	chr10:133086697 minus strand	1883963
GPR158-AS1	NR_027333	10	Non-coding	chr10:25176276 minus strand	1883964
GRID1-AS1	NR_038986	10	Non-coding	chr10:85577730 plus strand	1883965
GUCY2GP	NR_028134	10	Non-coding	chr10:112356595 minus strand	1883966
HECTD2	NR_104291	10	Non-coding	chr10:91410284 plus strand	1883967
HECTD2-AS1	NR_024467	10	Non-coding	chr10:91611460 minus strand	1883968
HNRNPA1P33	NR_003277	10	Non-coding	chr10:46415914 plus strand	1883969
HNRNPA3P1	NR_002726	10	Non-coding	chr10:43790417 minus strand	1883970
HSD17B7P2	NR_003086	10	Non-coding	chr10:38356379 plus strand	1883971
HSPA14	NR_103464	10	Non-coding	chr10:14838159 plus strand	1883972
IDI2-AS1	NR_027708	10	Non-coding	chr10:1022636 plus strand	1883973
IDI2-AS1	NR_024629	10	Non-coding	chr10:1022636 plus strand	1883973
IDI2-AS1	NR_024628	10	Non-coding	chr10:1022636 plus strand	1883973
IDI2-AS1	NR_027709	10	Non-coding	chr10:1022636 plus strand	1883973
IKZF5	NR_073479	10	Non-coding	chr10:123008850 minus strand	1883974
IKZF5	NR_073476	10	Non-coding	chr10:123008850 minus strand	1883974
IKZF5	NR_073475	10	Non-coding	chr10:123008850 minus strand	1883974
IKZF5	NR_073478	10	Non-coding	chr10:123008850 minus strand	1883974
IKZF5	NR_073477	10	Non-coding	chr10:123008850 minus strand	1883974
IL15RA	NR_046362	10	Non-coding	chr10:5978187 minus strand	1883975
JMJD1C-AS1	NR_027182	10	Non-coding	chr10:63465228 plus strand	1883976
KCNIP2-AS1	NR_045118	10	Non-coding	chr10:101819067 plus strand	1883977
KCNMA1-AS1	NR_120655	10	Non-coding	chr10:76888043 plus strand	1883978

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KCNMA1-AS2	NR_120654	10	Non-coding	chr10:77140830 plus strand	1883979
KCNMA1-AS3	NR_126365	10	Non-coding	chr10:77350871 plus strand	1883980
KIN	NR_045609	10	Non-coding	chr10:7788027 minus strand	1883981
KLF6	NR_027653	10	Non-coding	chr10:3785281 minus strand	1883982
LBX1-AS1	NR_029380	10	Non-coding	chr10:101229593 plus strand	1883983
LINC00200	NR_015376	10	Non-coding	chr10:1159767 plus strand	1883984
LINC00202-1	NR_026795	10	Non-coding	chr10:26942001 minus strand	1883985
LINC00202-2	NR_026794	10	Non-coding	chr10:26643107 plus strand	1883986
LINC00263	NR_026762	10	Non-coding	chr10:100373575 plus strand	1883987
LINC00264	NR_026793	10	Non-coding	chr10:26589864 plus strand	1883988
LINC00502	NR_047467	10	Non-coding	chr10:91045807 plus strand	1883989
LINC00595	NR_073447	10	Non-coding	chr10:78267327 plus strand	1883990
LINC00601	NR_073453	10	Non-coding	chr10:126421879 minus strand	1883991
LINC00619	NR_033923	10	Non-coding	chr10:43845305 plus strand	1883992
LINC00700	NR_040253	10	Non-coding	chr10:2014348 minus strand	1883993
LINC00701	NR_038884	10	Non-coding	chr10:2315074 minus strand	1883994
LINC00702	NR_108040	10	Non-coding	chr10:4243912 minus strand	1883995
LINC00703	NR_108054	10	Non-coding	chr10:4384245 plus strand	1883996
LINC00703	NR_108055	10	Non-coding	chr10:4384245 plus strand	1883996
LINC00703	NR_108056	10	Non-coding	chr10:4406468 plus strand	1883997
LINC00704	NR_024475	10	Non-coding	chr10:4678070 minus strand	1883998
LINC00705	NR_015425	10	Non-coding	chr10:4656155 plus strand	1883999
LINC00706	NR_108074	10	Non-coding	chr10:6779180 minus strand	1884000
LINC00707	NR_038291	10	Non-coding	chr10:6779597 plus strand	1884001
LINC00708	NR_108058	10	Non-coding	chr10:8268305 minus strand	1884002
LINC00709	NR_108039	10	Non-coding	chr10:9275612 plus strand	1884003
LINC00710	NR_024410	10	Non-coding	chr10:10952163 minus strand	1884004

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LINC00710	NR_024411	10	Non-coding	chr10:10952163 minus strand	1884004
LINC00710	NR_015413	10	Non-coding	chr10:10952163 minus strand	1884004
LINC00836	NR_108067	10	Non-coding	chr10:25651711 plus strand	1884005
LINC00836	NR_108068	10	Non-coding	chr10:25651711 plus strand	1884005
LINC00836	NR_108069	10	Non-coding	chr10:25651711 plus strand	1884005
LINC00837	NR_038374	10	Non-coding	chr10:28796050 minus strand	1884006
LINC00837	NR_038376	10	Non-coding	chr10:28796050 minus strand	1884006
LINC00837	NR_038375	10	Non-coding	chr10:28796050 minus strand	1884006
LINC00838	NR_038932	10	Non-coding	chr10:33772680 minus strand	1884007
LINC00839	NR_026827	10	Non-coding	chr10:42475490 plus strand	1884008
LINC00840	NR_038268	10	Non-coding	chr10:43859410 plus strand	1884009
LINC00841	NR_033846	10	Non-coding	chr10:43909303 plus strand	1884010
LINC00842	NR_033957	10	Non-coding	chr10:46398361 plus strand	1884011
LINC00844	NR_108046	10	Non-coding	chr10:58999517 plus strand	1884012
LINC00845	NR_108052	10	Non-coding	chr10:61016274 plus strand	1884013
LINC00856	NR_038985	10	Non-coding	chr10:78248624 plus strand	1884014
LINC00857	NR_038464	10	Non-coding	chr10:80207709 plus strand	1884015
LINC00858	NR_038220	10	Non-coding	chr10:84279979 plus strand	1884016
LINC00864	NR_046091	10	Non-coding	chr10:87407700 minus strand	1884017
LINC00865	NR_038382	10	Non-coding	chr10:89829492 plus strand	1884018
LINC00866	NR_108035	10	Non-coding	chr10:97849798 minus strand	1884019
LINC00867	NR_108045	10	Non-coding	chr10:118357107 plus strand	1884020
LINC00948	NR_038199	10	Non-coding	chr10:59753445 minus strand	1884021
LINC00948	NR_038200	10	Non-coding	chr10:59753445 minus strand	1884021
LINC00959	NR_034125	10	Non-coding	chr10:130110817 minus strand	1884022
LINC00993	NR_104061	10	Non-coding	chr10:37309185 plus strand	1884023
LINC00999	NR_024497	10	Non-coding	chr10:38428145 plus strand	1884024

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LINC01163	NR_120619	10	Non-coding	chr10:128285949 plus strand	1884025
LINC01164	NR_038365	10	Non-coding	chr10:131790199 minus strand	1884026
LINC01166	NR_120626	10	Non-coding	chr10:132947296 minus strand	1884027
LINC01166	NR_120627	10	Non-coding	chr10:132965289 minus strand	1884028
LINC01167	NR_125763	10	Non-coding	chr10:132962237 minus strand	1884029
LINC01168	NR_046231	10	Non-coding	chr10:132965533 plus strand	1884030
LINC01264	NR_126352	10	Non-coding	chr10:42981507 minus strand	1884031
LINC01375	NR_110655	10	Non-coding	chr10:89957373 minus strand	1884032
LINC01435	NR_125760	10	Non-coding	chr10:108069293 minus strand	1884033
LINC01452	NR_110138	10	Non-coding	chr10:35778301 plus strand	1884034
LINC01468	NR_120642	10	Non-coding	chr10:52455272 minus strand	1884035
LINC01468	NR_120641	10	Non-coding	chr10:52470533 minus strand	1884036
LINC01475	NR_120618	10	Non-coding	chr10:99531177 minus strand	1884037
LINC01514	NR_120620	10	Non-coding	chr10:101176321 plus strand	1884038
LINC01515	NR_120647	10	Non-coding	chr10:65571424 plus strand	1884039
LINC01516	NR_120649	10	Non-coding	chr10:25113057 plus strand	1884040
LINC01517	NR_120652	10	Non-coding	chr10:28743649 plus strand	1884041
LINC01518	NR_120658	10	Non-coding	chr10:42691759 minus strand	1884042
LINC01518	NR_120656	10	Non-coding	chr10:42691759 minus strand	1884042
LINC01518	NR_120657	10	Non-coding	chr10:42691759 minus strand	1884042
LINC01518	NR_120659	10	Non-coding	chr10:42691759 minus strand	1884042
LINC01519	NR_120668	10	Non-coding	chr10:85198905 minus strand	1884043
LINC01519	NR_120667	10	Non-coding	chr10:85198938 minus strand	1884044
LINC01520	NR_120671	10	Non-coding	chr10:85449591 plus strand	1884045
LINC01552	NR_103721	10	Non-coding	chr10:23239792 minus strand	1884046
LINC01553	NR_024340	10	Non-coding	chr10:59960913 minus strand	1884047
LINC01561	NR_103717	10	Non-coding	chr10:120597948 plus strand	1884048

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LOC100129055	NR_024524	10	Non-coding	chr10:38175670 plus strand	1884049
LOC100130992	NR_038921	10	Non-coding	chr10:22252071 plus strand	1884050
LOC100288974	NR_033857	10	Non-coding	chr10:79904897 plus strand	1884051
LOC100499489	NR_036533	10	Non-coding	chr10:22437929 minus strand	1884052
LOC101926942	NR_110657	10	Non-coding	chr10:90540805 minus strand	1884053
LOC101927419	NR_120621	10	Non-coding	chr10:101263550 minus strand	1884054
LOC101927472	NR_120622	10	Non-coding	chr10:104323363 plus strand	1884055
LOC101927523	NR_120624	10	Non-coding	chr10:104480275 minus strand	1884056
LOC101927549	NR_120625	10	Non-coding	chr10:105820333 minus strand	1884057
LOC101927692	NR_120628	10	Non-coding	chr10:114764787 plus strand	1884058
LOC101927762	NR_120629	10	Non-coding	chr10:933025 plus strand	1884059
LOC101927964	NR_120632	10	Non-coding	chr10:4051725 plus strand	1884060
LOC101928150	NR_120634	10	Non-coding	chr10:6618715 plus strand	1884061
LOC101928272	NR_120635	10	Non-coding	chr10:9295593 minus strand	1884062
LOC101928298	NR_120636	10	Non-coding	chr10:10058721 plus strand	1884063
LOC101928322	NR_120637	10	Non-coding	chr10:10462349 minus strand	1884064
LOC101928453	NR_120638	10	Non-coding	chr10:14074283 plus strand	1884065
LOC101928834	NR_120646	10	Non-coding	chr10:19728550 minus strand	1884066
LOC101928961	NR_111911	10	Non-coding	chr10:67012153 minus strand	1884067
LOC101928994	NR_120648	10	Non-coding	chr10:69232490 minus strand	1884068
LOC101929073	NR_120650	10	Non-coding	chr10:25933710 minus strand	1884069
LOC101929234	NR_110304	10	Non-coding	chr10:75409156 plus strand	1884070
LOC101929279	NR_120653	10	Non-coding	chr10:30211851 plus strand	1884071
LOC101929431	NR_120660	10	Non-coding	chr10:32446056 minus strand	1884072
LOC101929574	NR_120661	10	Non-coding	chr10:80535942 minus strand	1884073
LOC101929646	NR_120669	10	Non-coding	chr10:85432772 minus strand	1884074
LOC101929662	NR_120670	10	Non-coding	chr10:85432862 plus strand	1884075

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LOC102031319	NR_104163	10	Non-coding	chr10:32347363 plus strand	1884076
LOC102723376	NR_110795	10	Non-coding	chr10:11720 plus strand	1884077
LOC102723377	NR_120672	10	Non-coding	chr10:71511920 minus strand	1884078
LOC102723439	NR_120673	10	Non-coding	chr10:74529324 minus strand	1884079
LOC102723703	NR_120662	10	Non-coding	chr10:80531249 plus strand	1884080
LOC102724323	NR_120674	10	Non-coding	chr10:45453121 minus strand	1884081
LOC102724589	NR_120677	10	Non-coding	chr10:114994656 plus strand	1884082
LOC102724719	NR_120678	10	Non-coding	chr10:51068552 minus strand	1884083
LOC103344931	NR_120684	10	Non-coding	chr10:112823495 plus strand	1884084
LOC283038	NR_033848	10	Non-coding	chr10:125683242 plus strand	1884085
LOC283045	NR_104162	10	Non-coding	chr10:62375127 minus strand	1884086
LOC283070	NR_027322	10	Non-coding	chr10:12833132 plus strand	1884087
LOC399715	NR_040079	10	Non-coding	chr10:6326543 plus strand	1884088
LOC399815	NR_027282	10	Non-coding	chr10:122879632 plus strand	1884089
LOC439994	NR_029408	10	Non-coding	chr10:87342410 plus strand	1884090
LOC441666	NR_024380	10	Non-coding	chr10:42368045 minus strand	1884091
LOC642361	NR_029407	10	Non-coding	chr10:79825901 plus strand	1884092
LRRC20	NR_103468	10	Non-coding	chr10:70382650 minus strand	1884093
LRRC20	NR_103467	10	Non-coding	chr10:70382650 minus strand	1884093
LRRC27	NR_026559	10	Non-coding	chr10:132337106 plus strand	1884094
LRRC37A6P	NR_003525	10	Non-coding	chr10:27252306 minus strand	1884095
LRRTM3	NR_111909	10	Non-coding	chr10:67012265 plus strand	1884096
MARK2P9	NR_038243	10	Non-coding	chr10:92418660 plus strand	1884097
MBL1P	NR_002724	10	Non-coding	chr10:79920177 plus strand	1884098
MCU	NR_073062	10	Non-coding	chr10:72692130 plus strand	1884099
MIR107	NR_029524	10	Non-coding	chr10:89592827 minus strand	1884100
MIR1254-1	NR_031655	10	Non-coding	chr10:68759317 plus strand	1884101

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MIR1254-2	NR_039606	10	Non-coding	chr10:23393404 plus strand	1884102
MIR1265	NR_031668	10	Non-coding	chr10:14436575 plus strand	1884103
MIR1287	NR_031619	10	Non-coding	chr10:98395307 minus strand	1884104
MIR1296	NR_031566	10	Non-coding	chr10:63373048 minus strand	1884105
MIR1307	NR_031707	10	Non-coding	chr10:103394401 minus strand	1884106
MIR146B	NR_030169	10	Non-coding	chr10:102436511 plus strand	1884107
MIR1915	NR_031736	10	Non-coding	chr10:21496641 minus strand	1884108
MIR202	NR_030170	10	Non-coding	chr10:133247620 minus strand	1884109
MIR202HG	NR_108079	10	Non-coding	chr10:133247885 minus strand	1884110
MIR202HG	NR_108078	10	Non-coding	chr10:133247885 minus strand	1884110
MIR2110	NR_031747	10	Non-coding	chr10:114174179 minus strand	1884111
MIR3155A	NR_036111	10	Non-coding	chr10:6152195 plus strand	1884112
MIR3155B	NR_039698	10	Non-coding	chr10:6152262 minus strand	1884113
MIR3156-1	NR_036112	10	Non-coding	chr10:45164013 plus strand	1884114
MIR3157	NR_036113	10	Non-coding	chr10:96064399 minus strand	1884115
MIR3158-1	NR_036114	10	Non-coding	chr10:101601416 plus strand	1884116
MIR3158-2	NR_036115	10	Non-coding	chr10:101601497 minus strand	1884117
MIR346	NR_029907	10	Non-coding	chr10:86264788 minus strand	1884118
MIR3611	NR_037405	10	Non-coding	chr10:35079680 minus strand	1884119
MIR3663	NR_037436	10	Non-coding	chr10:117167774 minus strand	1884120
MIR3663HG	NR_121651	10	Non-coding	chr10:117169055 minus strand	1884121
MIR3663HG	NR_121650	10	Non-coding	chr10:117169055 minus strand	1884121
MIR378C	NR_036180	10	Non-coding	chr10:130962668 minus strand	1884122
MIR3924	NR_037490	10	Non-coding	chr10:57304559 minus strand	1884123
MIR3941	NR_037506	10	Non-coding	chr10:122416964 plus strand	1884124
MIR3944	NR_037509	10	Non-coding	chr10:133371663 minus strand	1884125
MIR4293	NR_036181	10	Non-coding	chr10:14383277 minus strand	1884126

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MIR4294	NR_036182	10	Non-coding	chr10:48985587 minus strand	1884127
MIR4295	NR_036177	10	Non-coding	chr10:112634169 plus strand	1884128
MIR4296	NR_036178	10	Non-coding	chr10:125032870 minus strand	1884129
MIR4297	NR_036179	10	Non-coding	chr10:129843374 minus strand	1884130
MIR4454	NR_039659	10	Non-coding	chr10:6635069 plus strand	1884131
MIR4480	NR_039700	10	Non-coding	chr10:12578752 plus strand	1884132
MIR4481	NR_039701	10	Non-coding	chr10:12653197 minus strand	1884133
MIR4482	NR_039702	10	Non-coding	chr10:104268405 minus strand	1884134
MIR4483	NR_039703	10	Non-coding	chr10:113778054 minus strand	1884135
MIR4484	NR_039704	10	Non-coding	chr10:125819739 plus strand	1884136
MIR4675	NR_039822	10	Non-coding	chr10:20551969 plus strand	1884137
MIR4676	NR_039823	10	Non-coding	chr10:72721028 plus strand	1884138
MIR4678	NR_039825	10	Non-coding	chr10:87503880 plus strand	1884139
MIR4679-1	NR_039826	10	Non-coding	chr10:89063335 plus strand	1884140
MIR4679-2	NR_039827	10	Non-coding	chr10:89063411 minus strand	1884141
MIR4680	NR_039828	10	Non-coding	chr10:110898089 plus strand	1884142
MIR4681	NR_039829	10	Non-coding	chr10:119377971 plus strand	1884143
MIR4682	NR_039830	10	Non-coding	chr10:119958512 plus strand	1884144
MIR4683	NR_039831	10	Non-coding	chr10:35641252 minus strand	1884145
MIR4685	NR_039833	10	Non-coding	chr10:98431360 minus strand	1884146
MIR5100	NR_049836	10	Non-coding	chr10:42997562 plus strand	1884147
MIR511	NR_030167	10	Non-coding	chr10:17845106 plus strand	1884148
MIR548AK	NR_039699	10	Non-coding	chr10:12130816 minus strand	1884149
MIR548E	NR_031614	10	Non-coding	chr10:110988925 plus strand	1884150
MIR548F1	NR_031642	10	Non-coding	chr10:54607957 minus strand	1884151
MIR548Q	NR_031752	10	Non-coding	chr10:12725353 minus strand	1884152
MIR5699	NR_049884	10	Non-coding	chr10:641778 minus strand	1884153

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MIR603	NR_030334	10	Non-coding	chr10:24275684 plus strand	1884154
MIR604	NR_030335	10	Non-coding	chr10:29545097 minus strand	1884155
MIR605	NR_030336	10	Non-coding	chr10:51299572 plus strand	1884156
MIR606	NR_030337	10	Non-coding	chr10:75552457 plus strand	1884157
MIR607	NR_030338	10	Non-coding	chr10:96828764 minus strand	1884158
MIR6072	NR_106720	10	Non-coding	chr10:2076089 minus strand	1884159
MIR6078	NR_106726	10	Non-coding	chr10:3991159 plus strand	1884160
MIR608	NR_030339	10	Non-coding	chr10:100974984 plus strand	1884161
MIR609	NR_030340	10	Non-coding	chr10:104218883 minus strand	1884162
MIR6507	NR_106762	10	Non-coding	chr10:98924568 minus strand	1884163
MIR6715A	NR_106771	10	Non-coding	chr10:112299611 plus strand	1884164
MIR6715B	NR_106772	10	Non-coding	chr10:112299688 minus strand	1884165
MIR7151	NR_106973	10	Non-coding	chr10:67403410 minus strand	1884166
MIR7152	NR_106974	10	Non-coding	chr10:71790746 plus strand	1884167
MIR7162	NR_106985	10	Non-coding	chr10:30368665 minus strand	1884168
MIR7641-2	NR_106988	10	Non-coding	chr10:282086 minus strand	1884169
MIR8086	NR_107053	10	Non-coding	chr10:28289350 minus strand	1884170
MIR936	NR_030760	10	Non-coding	chr10:104048186 minus strand	1884171
MIR938	NR_030634	10	Non-coding	chr10:29602346 minus strand	1884172
MKX-AS1	NR_121652	10	Non-coding	chr10:27744614 plus strand	1884173
MYPN	NR_045662	10	Non-coding	chr10:68106116 plus strand	1884174
MYPN	NR_045663	10	Non-coding	chr10:68109432 plus strand	1884175
NEBL-AS1	NR_046283	10	Non-coding	chr10:21173989 plus strand	1884176
NEBL-AS1	NR_046284	10	Non-coding	chr10:21174301 plus strand	1884177
NET1	NR_073040	10	Non-coding	chr10:5446550 plus strand	1884178
NEURL1-AS1	NR_120675	10	Non-coding	chr10:103517442 minus strand	1884179
NEURL1-AS1	NR_120676	10	Non-coding	chr10:103517442 minus strand	1884179

【１６４０】

NRG3-AS1	NR_120666	10	Non-coding	chr10:82232920 minus strand	1884180
NRP1	NR_045259	10	Non-coding	chr10:33334905 minus strand	1884181
NUDT13	NR_104264	10	Non-coding	chr10:73110374 plus strand	1884182
NUDT9P1	NR_002779	10	Non-coding	chr10:91153080 minus strand	1884183
NUTM2A-AS1	NR_024397	10	Non-coding	chr10:87342558 minus strand	1884184
NUTM2B-AS1	NR_120613	10	Non-coding	chr10:79826594 minus strand	1884185
NUTM2B-AS1	NR_120612	10	Non-coding	chr10:79826594 minus strand	1884185
NUTM2B-AS1	NR_120611	10	Non-coding	chr10:79826594 minus strand	1884185
NUTM2D	NR_075100	10	Non-coding	chr10:87357719 plus strand	1884186
OPALIN	NR_104296	10	Non-coding	chr10:96359365 minus strand	1884187
OPALIN	NR_104297	10	Non-coding	chr10:96359365 minus strand	1884187
PAOX	NR_109763	10	Non-coding	chr10:133379236 plus strand	1884188
PAOX	NR_109764	10	Non-coding	chr10:133379236 plus strand	1884188
PAOX	NR_109766	10	Non-coding	chr10:133379236 plus strand	1884188
PAOX	NR_109765	10	Non-coding	chr10:133379236 plus strand	1884188
PARD3-AS1	NR_108043	10	Non-coding	chr10:34815767 plus strand	1884189
PARGP1	NR_029388	10	Non-coding	chr10:45972428 minus strand	1884190
PCGF5	NR_046435	10	Non-coding	chr10:91163011 plus strand	1884191
PCGF5	NR_046310	10	Non-coding	chr10:91220601 plus strand	1884192
PDCD4-AS1	NR_026932	10	Non-coding	chr10:110870904 minus strand	1884193
PIPSL	NR_002319	10	Non-coding	chr10:93961915 minus strand	1884194
PITRM1-AS1	NR_038284	10	Non-coding	chr10:3141600 plus strand	1884195
PLCE1-AS1	NR_033969	10	Non-coding	chr10:94287070 minus strand	1884196
PLCE1-AS2	NR_120616	10	Non-coding	chr10:94108794 minus strand	1884197
PLCE1-AS2	NR_120615	10	Non-coding	chr10:94108794 minus strand	1884197
PNLIPRP2	NR_103727	10	Non-coding	chr10:116620952 plus strand	1884198
POLL	NR_033406	10	Non-coding	chr10:101588270 minus strand	1884199

【１６４１】

PPIAP30	NR_036506	10	Non-coding	chr10:15155347 minus strand	1884200
PPP2R2D	NR_033191	10	Non-coding	chr10:131900643 plus strand	1884201
PRDX3	NR_126102	10	Non-coding	chr10:119178865 minus strand	1884202
PRDX3	NR_126103	10	Non-coding	chr10:119178865 minus strand	1884202
PRDX3	NR_126105	10	Non-coding	chr10:119178865 minus strand	1884202
PRDX3	NR_126106	10	Non-coding	chr10:119178865 minus strand	1884202
PRKCQ-AS1	NR_036502	10	Non-coding	chr10:6580424 plus strand	1884203
PRKCQ-AS1	NR_036503	10	Non-coding	chr10:6580424 plus strand	1884203
PRKG1-AS1	NR_038277	10	Non-coding	chr10:52314128 minus strand	1884204
PROSER2-AS1	NR_038222	10	Non-coding	chr10:11894710 minus strand	1884205
PRR26	NR_027151	10	Non-coding	chr10:649947 plus strand	1884206
PRR26	NR_027152	10	Non-coding	chr10:650076 plus strand	1884207
PSD	NR_073110	10	Non-coding	chr10:102409284 minus strand	1884208
RAB18	NR_046172	10	Non-coding	chr10:27504173 plus strand	1884209
RHOBTB1	NR_024554	10	Non-coding	chr10:61000978 minus strand	1884210
RHOBTB1	NR_024555	10	Non-coding	chr10:61001440 minus strand	1884211
RNU6-1	NR_004394	10	Non-coding	chr10:13217268 plus strand	1884212
RNU6-15P	NR_028372	10	Non-coding	chr10:21321960 plus strand	1884213
RNU6-2	NR_125730	10	Non-coding	chr10:13217268 plus strand	1884214
RNU6-7	NR_104084	10	Non-coding	chr10:13217268 plus strand	1884215
RNU6-8	NR_104088	10	Non-coding	chr10:13217268 plus strand	1884216
RNU6-9	NR_104080	10	Non-coding	chr10:13217268 plus strand	1884217
RPARP-AS1	NR_038938	10	Non-coding	chr10:102449816 plus strand	1884218
RPARP-AS1	NR_038937	10	Non-coding	chr10:102449816 plus strand	1884218
RPL13AP5	NR_026712	10	Non-coding	chr10:96750265 plus strand	1884219
RPL13AP6	NR_026715	10	Non-coding	chr10:110937255 minus strand	1884220
RSU1P2	NR_024472	10	Non-coding	chr10:45154596 minus strand	1884221

【１６４２】

RUFY2	NR_103475	10	Non-coding	chr10:68407189 minus strand	1884222
RUFY2	NR_103476	10	Non-coding	chr10:68407294 minus strand	1884223
SCART1	NR_002934	10	Non-coding	chr10:133453927 plus strand	1884224
SEC23IP	NR_037771	10	Non-coding	chr10:119892572 plus strand	1884225
SEC61A2	NR_024577	10	Non-coding	chr10:12129640 plus strand	1884226
SEC61A2	NR_024576	10	Non-coding	chr10:12129640 plus strand	1884226
SEPT7P9	NR_027269	10	Non-coding	chr10:38402852 minus strand	1884227
SFTA1P	NR_027082	10	Non-coding	chr10:10794914 minus strand	1884228
SFXN4	NR_110305	10	Non-coding	chr10:119165692 minus strand	1884229
SGMS1-AS1	NR_126411	10	Non-coding	chr10:50624950 plus strand	1884230
SH3PXD2A-AS1	NR_038940	10	Non-coding	chr10:103746778 plus strand	1884231
SLC16A12-AS1	NR_120614	10	Non-coding	chr10:89455990 plus strand	1884232
SLC29A3	NR_033414	10	Non-coding	chr10:71319252 plus strand	1884233
SLC29A3	NR_033413	10	Non-coding	chr10:71319252 plus strand	1884233
SLC39A12-AS1	NR_038419	10	Non-coding	chr10:18010562 minus strand	1884234
SLIT1-AS1	NR_038330	10	Non-coding	chr10:97102755 plus strand	1884235
SNORA12	NR_002954	10	Non-coding	chr10:100237302 minus strand	1884236
SNORA19	NR_002917	10	Non-coding	chr10:119060138 minus strand	1884237
SNORD98	NR_003076	10	Non-coding	chr10:68755171 plus strand	1884238
SORCS3-AS1	NR_104028	10	Non-coding	chr10:104666216 minus strand	1884239
SPRNP1	NR_033789	10	Non-coding	chr10:133569958 minus strand	1884240
SRGN	NR_036430	10	Non-coding	chr10:69088071 plus strand	1884241
ST8SIA6-AS1	NR_034129	10	Non-coding	chr10:17386935 plus strand	1884242
STAM	NR_037774	10	Non-coding	chr10:17644124 plus strand	1884243
STAM-AS1	NR_110370	10	Non-coding	chr10:17643918 minus strand	1884244
SUV39H2	NR_034181	10	Non-coding	chr10:14878782 plus strand	1884245
SVIL-AS1	NR_110920	10	Non-coding	chr10:29409533 plus strand	1884246

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SVIL-AS1	NR_003930	10	Non-coding	chr10:29409533 plus strand	1884246
SVIL-AS1	NR_110923	10	Non-coding	chr10:29409533 plus strand	1884246
SVIL-AS1	NR_110924	10	Non-coding	chr10:29409533 plus strand	1884246
SVIL-AS1	NR_110929	10	Non-coding	chr10:29409533 plus strand	1884246
SVIL-AS1	NR_110921	10	Non-coding	chr10:29409533 plus strand	1884246
SVIL-AS1	NR_110922	10	Non-coding	chr10:29409533 plus strand	1884246
SVIL-AS1	NR_110925	10	Non-coding	chr10:29409533 plus strand	1884246
SVIL-AS1	NR_110927	10	Non-coding	chr10:29409533 plus strand	1884246
SVIL-AS1	NR_110926	10	Non-coding	chr10:29409533 plus strand	1884246
SVIL-AS1	NR_110928	10	Non-coding	chr10:29410242 plus strand	1884247
SVILP1	NR_036438	10	Non-coding	chr10:30692273 plus strand	1884248
TCERG1L-AS1	NR_120623	10	Non-coding	chr10:131095217 plus strand	1884249
TEX36-AS1	NR_023362	10	Non-coding	chr10:125574370 plus strand	1884250
TFAM	NR_073073	10	Non-coding	chr10:58385142 plus strand	1884251
TIMM23	NR_073030	10	Non-coding	chr10:45972452 plus strand	1884252
TIMM23	NR_073029	10	Non-coding	chr10:45972452 plus strand	1884252
TIMM23B	NR_110767	10	Non-coding	chr10:49942032 plus strand	1884253
TMEM254	NR_072986	10	Non-coding	chr10:80079244 plus strand	1884254
TMEM254	NR_072987	10	Non-coding	chr10:80079244 plus strand	1884254
TMEM254	NR_072985	10	Non-coding	chr10:80079244 plus strand	1884254
TMEM254	NR_072984	10	Non-coding	chr10:80079244 plus strand	1884254
TMEM254-AS1	NR_027432	10	Non-coding	chr10:80079193 minus strand	1884255
TMEM254-AS1	NR_027431	10	Non-coding	chr10:80079193 minus strand	1884255
TMEM254-AS1	NR_027430	10	Non-coding	chr10:80079193 minus strand	1884255
TMEM254-AS1	NR_027429	10	Non-coding	chr10:80079193 minus strand	1884255
TMEM254-AS1	NR_027428	10	Non-coding	chr10:80079193 minus strand	1884255
TMEM26-AS1	NR_120643	10	Non-coding	chr10:61452638 plus strand	1884256

【１６４４】

TMEM26-AS1	NR_120644	10	Non-coding	chr10:61480040 plus strand	1884257
TMEM26-AS1	NR_120645	10	Non-coding	chr10:61480040 plus strand	1884257
TMEM72-AS1	NR_033842	10	Non-coding	chr10:44959689 minus strand	1884258
TNKS2-AS1	NR_108070	10	Non-coding	chr10:91798196 minus strand	1884259
TNKS2-AS1	NR_108071	10	Non-coding	chr10:91798291 minus strand	1884260
TUBGCP2	NR_046330	10	Non-coding	chr10:133312337 minus strand	1884261
TYSND1	NR_073595	10	Non-coding	chr10:70144728 minus strand	1884262
TYSND1	NR_073594	10	Non-coding	chr10:70146740 minus strand	1884263
TYSND1	NR_073593	10	Non-coding	chr10:70146740 minus strand	1884263
TYSND1	NR_073592	10	Non-coding	chr10:70146740 minus strand	1884263
TYSND1	NR_073591	10	Non-coding	chr10:70146740 minus strand	1884263
TYSND1	NR_073580	10	Non-coding	chr10:70146740 minus strand	1884263
TYSND1	NR_073582	10	Non-coding	chr10:70146740 minus strand	1884263
TYSND1	NR_073581	10	Non-coding	chr10:70146740 minus strand	1884263
UNC5B-AS1	NR_038453	10	Non-coding	chr10:71218228 minus strand	1884264
USP6NL	NR_125732	10	Non-coding	chr10:11611789 minus strand	1884265
VDAC2	NR_033675	10	Non-coding	chr10:75210541 plus strand	1884266
VIM-AS1	NR_108060	10	Non-coding	chr10:17226898 minus strand	1884267
VIM-AS1	NR_108061	10	Non-coding	chr10:17229985 minus strand	1884268
WAC-AS1	NR_033805	10	Non-coding	chr10:28532354 minus strand	1884269
WDR11-AS1	NR_033850	10	Non-coding	chr10:120851179 minus strand	1884270
XPNPEP1	NR_030724	10	Non-coding	chr10:109923553 minus strand	1884271
ZDHHC16	NR_109895	10	Non-coding	chr10:97446130 plus strand	1884272
ZEB1-AS1	NR_024284	10	Non-coding	chr10:31319095 minus strand	1884273
ZFAND4	NR_104256	10	Non-coding	chr10:45672813 minus strand	1884274
ZMIZ1-AS1	NR_015429	10	Non-coding	chr10:79067448 minus strand	1884275
ZMIZ1-AS1	NR_024431	10	Non-coding	chr10:79067448 minus strand	1884275

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ZMIZ1-AS1	NR_024429	10	Non-coding	chr10:79067448 minus strand	1884275
ZNF32-AS1	NR_047557	10	Non-coding	chr10:43643871 plus strand	1884276
ZNF32-AS2	NR_047558	10	Non-coding	chr10:43645941 plus strand	1884277
ZNF32-AS3	NR_038867	10	Non-coding	chr10:43628816 plus strand	1884278
ZNF33BP1	NR_051997	10	Non-coding	chr10:37795175 minus strand	1884279
ZNF37BP	NR_026777	10	Non-coding	chr10:42552870 minus strand	1884280
ZNF438	NR_026560	10	Non-coding	chr10:31031937 minus strand	1884281
ZNF487	NR_026693	10	Non-coding	chr10:43437125 plus strand	1884282
ZNF503	NR_120651	10	Non-coding	chr10:75401894 minus strand	1884283
ZNF503-AS1	NR_038225	10	Non-coding	chr10:75296382 plus strand	1884284
ZNF503-AS1	NR_038224	10	Non-coding	chr10:75296382 plus strand	1884284
ZNF503-AS1	NR_038223	10	Non-coding	chr10:75296382 plus strand	1884284
ZNF503-AS1	NR_038226	10	Non-coding	chr10:75296382 plus strand	1884284
ZNF503-AS2	NR_024421	10	Non-coding	chr10:75401527 plus strand	1884285
ZNF503-AS2	NR_110301	10	Non-coding	chr10:75402896 plus strand	1884286
ZNF503-AS2	NR_110299	10	Non-coding	chr10:75403053 plus strand	1884287
ZNF503-AS2	NR_024422	10	Non-coding	chr10:75403755 plus strand	1884288
ZNF503-AS2	NR_110300	10	Non-coding	chr10:75403876 plus strand	1884289
ZNF503-AS2	NR_110302	10	Non-coding	chr10:75404164 plus strand	1884290
ZSWIM8-AS1	NR_038357	10	Non-coding	chr10:73801399 minus strand	1884291
ACTN3	NR_047663	11	Non-coding	chr11:66546840 plus strand	1884292
AKIP1	NR_045418	11	Non-coding	chr11:8911191 plus strand	1884293
AKIP1	NR_045417	11	Non-coding	chr11:8911191 plus strand	1884293
ALG1L9P	NR_073388	11	Non-coding	chr11:71813859 minus strand	1884294
ALG1L9P	NR_073387	11	Non-coding	chr11:71813859 minus strand	1884294
ALG1L9P	NR_073386	11	Non-coding	chr11:71813859 minus strand	1884294
ALKBH3-AS1	NR_038907	11	Non-coding	chr11:43920944 minus strand	1884295

【１６４６】

AMICA1	NR_104479	11	Non-coding	chr11:118213359 minus strand	1884296
ANKRD13D	NR_030767	11	Non-coding	chr11:67289344 plus strand	1884297
ANKRD42	NR_125355	11	Non-coding	chr11:83193738 plus strand	1884298
ANO1	NR_030691	11	Non-coding	chr11:70085409 plus strand	1884299
ANO1-AS2	NR_103835	11	Non-coding	chr11:70075348 minus strand	1884300
APBB1	NR_047512	11	Non-coding	chr11:6419111 minus strand	1884301
API5	NR_024625	11	Non-coding	chr11:43311954 plus strand	1884302
APLNR	NR_027991	11	Non-coding	chr11:57237453 minus strand	1884303
APLP2	NR_024515	11	Non-coding	chr11:130069820 plus strand	1884304
APLP2	NR_024516	11	Non-coding	chr11:130069820 plus strand	1884304
APOA1-AS	NR_126362	11	Non-coding	chr11:116836116 plus strand	1884305
ARL2-SNX15	NR_037650	11	Non-coding	chr11:65014112 plus strand	1884306
ART5	NR_123732	11	Non-coding	chr11:3642316 minus strand	1884307
ATP5L	NR_033759	11	Non-coding	chr11:118401388 plus strand	1884308
B3GAT3	NR_109991	11	Non-coding	chr11:62622175 minus strand	1884309
BACE1-AS	NR_037803	11	Non-coding	chr11:117291345 plus strand	1884310
BBOX1-AS1	NR_125768	11	Non-coding	chr11:27218768 minus strand	1884311
BBOX1-AS1	NR_125766	11	Non-coding	chr11:27220113 minus strand	1884312
BBOX1-AS1	NR_125767	11	Non-coding	chr11:27220113 minus strand	1884312
BDNF-AS	NR_033313	11	Non-coding	chr11:27506851 plus strand	1884313
BDNF-AS	NR_033312	11	Non-coding	chr11:27506851 plus strand	1884313
BDNF-AS	NR_033314	11	Non-coding	chr11:27506851 plus strand	1884313
BDNF-AS	NR_033315	11	Non-coding	chr11:27506851 plus strand	1884313
BDNF-AS	NR_002832	11	Non-coding	chr11:27506851 plus strand	1884313
BGLT3	NR_121648	11	Non-coding	chr11:5245546 minus strand	1884314
BRSK2	NR_046331	11	Non-coding	chr11:1389898 plus strand	1884315
BSCL2	NR_037949	11	Non-coding	chr11:62709619 minus strand	1884316

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BSCL2	NR_037948	11	Non-coding	chr11:62709619 minus strand	1884316
C11orf21	NR_024621	11	Non-coding	chr11:2301913 minus strand	1884317
C11orf39	NR_126159	11	Non-coding	chr11:131663556 minus strand	1884318
C11orf45	NR_045767	11	Non-coding	chr11:128906231 minus strand	1884319
C11orf49	NR_103472	11	Non-coding	chr11:46936688 plus strand	1884320
C11orf49	NR_103471	11	Non-coding	chr11:46936688 plus strand	1884320
C11orf57	NR_103469	11	Non-coding	chr11:112074243 plus strand	1884321
C11orf73	NR_024598	11	Non-coding	chr11:86302210 plus strand	1884322
C11orf73	NR_024597	11	Non-coding	chr11:86302210 plus strand	1884322
C11orf73	NR_024596	11	Non-coding	chr11:86303355 plus strand	1884323
C11orf74	NR_077243	11	Non-coding	chr11:36594492 plus strand	1884324
C11orf98	NR_104414	11	Non-coding	chr11:62665216 minus strand	1884325
CALCA	NR_125898	11	Non-coding	chr11:14972286 minus strand	1884326
CAND1.11	NR_103765	11	Non-coding	chr11:10308312 plus strand	1884327
CAPN1	NR_040008	11	Non-coding	chr11:65181832 plus strand	1884328
CARS	NR_036542	11	Non-coding	chr11:3057451 minus strand	1884329
CASC23	NR_125366	11	Non-coding	chr11:8016509 minus strand	1884330
CASP12	NR_034066	11	Non-coding	chr11:104898670 minus strand	1884331
CASP12	NR_034065	11	Non-coding	chr11:104898670 minus strand	1884331
CASP12	NR_034071	11	Non-coding	chr11:104898670 minus strand	1884331
CASP12	NR_034061	11	Non-coding	chr11:104898670 minus strand	1884331
CASP12	NR_034064	11	Non-coding	chr11:104898670 minus strand	1884331
CASP12	NR_034063	11	Non-coding	chr11:104898670 minus strand	1884331
CASP12	NR_034068	11	Non-coding	chr11:104898670 minus strand	1884331
CASP12	NR_034067	11	Non-coding	chr11:104898670 minus strand	1884331
CASP12	NR_034070	11	Non-coding	chr11:104898670 minus strand	1884331
CASP5	NR_036562	11	Non-coding	chr11:105023168 minus strand	1884332

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CASP5	NR_024239	11	Non-coding	chr11:105023168 minus strand	1884332
CCDC84	NR_104051	11	Non-coding	chr11:118998132 plus strand	1884333
CCDC84	NR_104050	11	Non-coding	chr11:118998132 plus strand	1884333
CCDC84	NR_104049	11	Non-coding	chr11:118998132 plus strand	1884333
CD6	NR_045638	11	Non-coding	chr11:60971640 plus strand	1884334
CD81-AS1	NR_108080	11	Non-coding	chr11:2377992 minus strand	1884335
CDK2AP2	NR_073484	11	Non-coding	chr11:67508187 minus strand	1884336
CHEK1	NR_045204	11	Non-coding	chr11:125625135 plus strand	1884337
CHEK1	NR_045205	11	Non-coding	chr11:125626228 plus strand	1884338
CNIH2	NR_073079	11	Non-coding	chr11:66278200 plus strand	1884339
CNIH2	NR_073078	11	Non-coding	chr11:66278200 plus strand	1884339
COLCA1	NR_034154	11	Non-coding	chr11:111299814 minus strand	1884340
CREBZF	NR_028027	11	Non-coding	chr11:85665138 minus strand	1884341
CREBZF	NR_028026	11	Non-coding	chr11:85665138 minus strand	1884341
CREBZF	NR_028025	11	Non-coding	chr11:85665138 minus strand	1884341
CREBZF	NR_028024	11	Non-coding	chr11:85665138 minus strand	1884341
CSTF3-AS1	NR_034027	11	Non-coding	chr11:33161656 plus strand	1884342
CYB5R2	NR_126508	11	Non-coding	chr11:7673598 minus strand	1884343
DISC1FP1	NR_104190	11	Non-coding	chr11:90251231 plus strand	1884344
DKFZP434K028	NR_026882	11	Non-coding	chr11:61757664 minus strand	1884345
DKFZp686K1684	NR_033971	11	Non-coding	chr11:31816565 plus strand	1884346
DKFZp779M0652	NR_027134	11	Non-coding	chr11:45771431 plus strand	1884347
DOC2GP	NR_033791	11	Non-coding	chr11:67615664 minus strand	1884348
EFEMP2	NR_037718	11	Non-coding	chr11:65872934 minus strand	1884349
EI24	NR_110769	11	Non-coding	chr11:125569386 plus strand	1884350
EI24	NR_110770	11	Non-coding	chr11:125569386 plus strand	1884350
FAM86C2P	NR_024249	11	Non-coding	chr11:67805336 minus strand	1884351

【１６４９】

FAM99A	NR_026643	11	Non-coding	chr11:1665598 plus strand	1884352
FAM99B	NR_026642	11	Non-coding	chr11:1665596 plus strand	1884353
FAM99B	NR_026642	11	Non-coding	chr11:1685629 minus strand	1884354
FBXO3-AS1	NR_120550	11	Non-coding	chr11:33774698 plus strand	1884355
FDXACB1	NR_038364	11	Non-coding	chr11:111879457 minus strand	1884356
FLJ42102	NR_038862	11	Non-coding	chr11:71423354 minus strand	1884357
FOSL1	NR_125339	11	Non-coding	chr11:65900526 minus strand	1884358
FOXRED1	NR_037647	11	Non-coding	chr11:126269039 plus strand	1884359
FOXRED1	NR_037648	11	Non-coding	chr11:126269144 plus strand	1884360
GRIA4	NR_046356	11	Non-coding	chr11:105610683 plus strand	1884361
GRM5-AS1	NR_049724	11	Non-coding	chr11:88504575 plus strand	1884362
GUCY2EP	NR_024042	11	Non-coding	chr11:76721789 minus strand	1884363
GVINP1	NR_003945	11	Non-coding	chr11:6721879 minus strand	1884364
H19	NR_002196	11	Non-coding	chr11:1997835 minus strand	1884365
HBBP1	NR_001589	11	Non-coding	chr11:5243592 minus strand	1884366
HNRNPKP3	NR_033868	11	Non-coding	chr11:43269369 minus strand	1884367
HNRNPUL2-BSCL2	NR_037946	11	Non-coding	chr11:62727384 minus strand	1884368
HSPB2-C11orf52	NR_037651	11	Non-coding	chr11:111912735 plus strand	1884369
HTR3A	NR_046363	11	Non-coding	chr11:113975074 plus strand	1884370
IFITM3	NR_049759	11	Non-coding	chr11:320914 minus strand	1884371
IGF2-AS	NR_028043	11	Non-coding	chr11:2140527 plus strand	1884372
IGF2-AS	NR_028044	11	Non-coding	chr11:2140527 plus strand	1884372
IL10RA	NR_026691	11	Non-coding	chr11:117986390 plus strand	1884373
INS-IGF2	NR_003512	11	Non-coding	chr11:2161209 minus strand	1884374
JRKL-AS1	NR_047481	11	Non-coding	chr11:96506877 minus strand	1884375
KBTBD4	NR_024222	11	Non-coding	chr11:47579015 minus strand	1884376
KCNQ1DN	NR_024627	11	Non-coding	chr11:2870032 plus strand	1884377

【１６５０】

KCNQ1OT1	NR_002728	11	Non-coding	chr11:2699998 minus strand	1884378
KCTD21-AS1	NR_102281	11	Non-coding	chr11:78139792 plus strand	1884379
KCTD21-AS1	NR_102280	11	Non-coding	chr11:78139792 plus strand	1884379
KDM2A	NR_027473	11	Non-coding	chr11:67119268 plus strand	1884380
KIRREL3-AS2	NR_046986	11	Non-coding	chr11:126940745 plus strand	1884381
KIRREL3-AS3	NR_040078	11	Non-coding	chr11:127002909 plus strand	1884382
KRT8P41	NR_027713	11	Non-coding	chr11:9094362 plus strand	1884383
KRTAP5-AS1	NR_021489	11	Non-coding	chr11:1572740 plus strand	1884384
LDHA	NR_028500	11	Non-coding	chr11:18394388 plus strand	1884385
LINC00167	NR_024233	11	Non-coding	chr11:130002623 plus strand	1884386
LINC00294	NR_015451	11	Non-coding	chr11:33076149 plus strand	1884387
LINC00301	NR_026946	11	Non-coding	chr11:60615750 plus strand	1884388
LINC00678	NR_102708	11	Non-coding	chr11:27634627 minus strand	1884389
LINC00900	NR_034148	11	Non-coding	chr11:115760200 minus strand	1884390
LINC00958	NR_038904	11	Non-coding	chr11:12989548 minus strand	1884391
LINC01001	NR_028326	11	Non-coding	chr11:131920 minus strand	1884392
LINC01150	NR_120534	11	Non-coding	chr11:1896758 plus strand	1884393
LINC01219	NR_126400	11	Non-coding	chr11:1991095 plus strand	1884394
LINC01395	NR_120582	11	Non-coding	chr11:129617269 minus strand	1884395
LINC01488	NR_120545	11	Non-coding	chr11:69485560 plus strand	1884396
LINC01488	NR_120544	11	Non-coding	chr11:69485560 plus strand	1884396
LINC01488	NR_120542	11	Non-coding	chr11:69485560 plus strand	1884396
LINC01488	NR_120543	11	Non-coding	chr11:69485560 plus strand	1884396
LINC01493	NR_120553	11	Non-coding	chr11:38648857 plus strand	1884397
LINC01495	NR_120583	11	Non-coding	chr11:22492019 minus strand	1884398
LINC01499	NR_120584	11	Non-coding	chr11:41714567 plus strand	1884399
LINC01537	NR_126364	11	Non-coding	chr11:72570655 plus strand	1884400

【１６５１】

LMO1	NR_073006	11	Non-coding	chr11:8263878 minus strand	1884401
LOC100126784	NR_015384	11	Non-coding	chr11:19714672 minus strand	1884402
LOC100128239	NR_027276	11	Non-coding	chr11:134032271 plus strand	1884403
LOC100128494	NR_104178	11	Non-coding	chr11:72014290 plus strand	1884404
LOC100129203	NR_110295	11	Non-coding	chr11:95230185 plus strand	1884405
LOC100130987	NR_024469	11	Non-coding	chr11:67317838 plus strand	1884406
LOC100131626	NR_046370	11	Non-coding	chr11:118418815 minus strand	1884407
LOC100131626	NR_046369	11	Non-coding	chr11:118418815 minus strand	1884407
LOC100132078	NR_046085	11	Non-coding	chr11:111418186 minus strand	1884408
LOC100133315	NR_029192	11	Non-coding	chr11:71928447 minus strand	1884409
LOC100506082	NR_047550	11	Non-coding	chr11:4187151 plus strand	1884410
LOC100506258	NR_103855	11	Non-coding	chr11:7465835 minus strand	1884411
LOC100506368	NR_038905	11	Non-coding	chr11:86955620 plus strand	1884412
LOC100506675	NR_120526	11	Non-coding	chr11:32041318 minus strand	1884413
LOC100506675	NR_120527	11	Non-coding	chr11:32041318 minus strand	1884413
LOC100507144	NR_120528	11	Non-coding	chr11:35138032 minus strand	1884414
LOC100507205	NR_038309	11	Non-coding	chr11:42253690 minus strand	1884415
LOC100507283	NR_103862	11	Non-coding	chr11:124800427 plus strand	1884416
LOC100507384	NR_047569	11	Non-coding	chr11:45722307 plus strand	1884417
LOC100507431	NR_125383	11	Non-coding	chr11:130862110 minus strand	1884418
LOC100652768	NR_045215	11	Non-coding	chr11:117201914 minus strand	1884419
LOC100996455	NR_073177	11	Non-coding	chr11:64449056 plus strand	1884420
LOC101054525	NR_073144	11	Non-coding	chr11:101129076 plus strand	1884421
LOC101927120	NR_110137	11	Non-coding	chr11:56848477 plus strand	1884422
LOC101927120	NR_110136	11	Non-coding	chr11:56848477 plus strand	1884422
LOC101927204	NR_110184	11	Non-coding	chr11:59142808 minus strand	1884423
LOC101927495	NR_110189	11	Non-coding	chr11:61588493 plus strand	1884424

【１６５２】

LOC101927708	NR_126335	11	Non-coding	chr11:3571987 minus strand	1884425
LOC101928008	NR_120539	11	Non-coding	chr11:9839141 plus strand	1884426
LOC101928053	NR_120540	11	Non-coding	chr11:10809296 plus strand	1884427
LOC101928069	NR_120586	11	Non-coding	chr11:66480249 minus strand	1884428
LOC101928443	NR_120530	11	Non-coding	chr11:70063924 minus strand	1884429
LOC101928443	NR_120529	11	Non-coding	chr11:70065371 minus strand	1884430
LOC101928535	NR_120552	11	Non-coding	chr11:106250018 plus strand	1884431
LOC101928535	NR_120551	11	Non-coding	chr11:106251406 plus strand	1884432
LOC101928580	NR_120556	11	Non-coding	chr11:74311361 plus strand	1884433
LOC101928812	NR_120557	11	Non-coding	chr11:45355370 plus strand	1884434
LOC101928812	NR_120558	11	Non-coding	chr11:45355370 plus strand	1884434
LOC101928823	NR_120559	11	Non-coding	chr11:112482231 plus strand	1884435
LOC101928823	NR_120560	11	Non-coding	chr11:112484344 plus strand	1884436
LOC101928837	NR_120561	11	Non-coding	chr11:76783062 minus strand	1884437
LOC101928837	NR_120562	11	Non-coding	chr11:76783062 minus strand	1884437
LOC101928847	NR_120563	11	Non-coding	chr11:112963460 minus strand	1884438
LOC101928865	NR_120564	11	Non-coding	chr11:78429836 minus strand	1884439
LOC101928894	NR_120565	11	Non-coding	chr11:46171954 plus strand	1884440
LOC101928896	NR_120566	11	Non-coding	chr11:78533175 plus strand	1884441
LOC101928940	NR_120567	11	Non-coding	chr11:114380039 minus strand	1884442
LOC101928943	NR_120568	11	Non-coding	chr11:47272075 minus strand	1884443
LOC101928943	NR_120569	11	Non-coding	chr11:47272110 minus strand	1884444
LOC101928944	NR_120570	11	Non-coding	chr11:80762803 minus strand	1884445
LOC101928989	NR_120571	11	Non-coding	chr11:82403913 minus strand	1884446
LOC101929089	NR_120574	11	Non-coding	chr11:118530775 minus strand	1884447
LOC101929089	NR_120572	11	Non-coding	chr11:118530775 minus strand	1884447
LOC101929089	NR_120573	11	Non-coding	chr11:118530775 minus strand	1884447

【１６５３】

LOC101929089	NR_120575	11	Non-coding	chr11:118530775 minus strand	1884447
LOC101929089	NR_120576	11	Non-coding	chr11:118531094 minus strand	1884448
LOC101929295	NR_110303	11	Non-coding	chr11:95150538 plus strand	1884449
LOC101929340	NR_120577	11	Non-coding	chr11:124759133 plus strand	1884450
LOC101929340	NR_120579	11	Non-coding	chr11:124762430 plus strand	1884451
LOC101929427	NR_120532	11	Non-coding	chr11:126652777 plus strand	1884452
LOC101929427	NR_120533	11	Non-coding	chr11:126656085 plus strand	1884453
LOC101929473	NR_120578	11	Non-coding	chr11:127067001 plus strand	1884454
LOC101929497	NR_120580	11	Non-coding	chr11:127271069 plus strand	1884455
LOC101929517	NR_120581	11	Non-coding	chr11:128526141 plus strand	1884456
LOC101929653	NR_110140	11	Non-coding	chr11:131540867 minus strand	1884457
LOC102723895	NR_120585	11	Non-coding	chr11:104609302 minus strand	1884458
LOC102724301	NR_120587	11	Non-coding	chr11:119729582 plus strand	1884459
LOC102724784	NR_120590	11	Non-coding	chr11:8768777 plus strand	1884460
LOC103312105	NR_120555	11	Non-coding	chr11:38646356 minus strand	1884461
LOC103312105	NR_120554	11	Non-coding	chr11:38646356 minus strand	1884461
LOC103611081	NR_125382	11	Non-coding	chr11:130870247 minus strand	1884462
LOC143666	NR_026967	11	Non-coding	chr11:575885 minus strand	1884463
LOC171391	NR_126342	11	Non-coding	chr11:777577 plus strand	1884464
LOC171391	NR_126343	11	Non-coding	chr11:777577 plus strand	1884464
LOC221122	NR_026681	11	Non-coding	chr11:44973901 plus strand	1884465
LOC283140	NR_126004	11	Non-coding	chr11:112270748 plus strand	1884466
LOC283177	NR_033852	11	Non-coding	chr11:134436481 plus strand	1884467
LOC283194	NR_033853	11	Non-coding	chr11:59058452 minus strand	1884468
LOC283214	NR_046090	11	Non-coding	chr11:75768647 minus strand	1884469
LOC283299	NR_036678	11	Non-coding	chr11:7905955 minus strand	1884470
LOC338694	NR_104161	11	Non-coding	chr11:69171562 minus strand	1884471

【１６５４】

LOC341056	NR_027288	11	Non-coding	chr11:123017565 plus strand	1884472
LOC387810	NR_104155	11	Non-coding	chr11:112555802 minus strand	1884473
LOC399886	NR_122071	11	Non-coding	chr11:45371396 plus strand	1884474
LOC440028	NR_033972	11	Non-coding	chr11:9759533 minus strand	1884475
LOC440040	NR_027044	11	Non-coding	chr11:49558527 plus strand	1884476
LOC441601	NR_003034	11	Non-coding	chr11:50298462 minus strand	1884477
LOC494141	NR_026541	11	Non-coding	chr11:18209137 plus strand	1884478
LOC494141	NR_026564	11	Non-coding	chr11:18209137 plus strand	1884478
LOC494141	NR_026563	11	Non-coding	chr11:18209284 plus strand	1884479
LOC643733	NR_034079	11	Non-coding	chr11:104918175 minus strand	1884480
LOC643733	NR_034078	11	Non-coding	chr11:104918175 minus strand	1884480
LOC643923	NR_028328	11	Non-coding	chr11:107591744 plus strand	1884481
LOC644656	NR_036539	11	Non-coding	chr11:9460698 minus strand	1884482
LOC646522	NR_120444	11	Non-coding	chr11:133810376 minus strand	1884483
LOC646813	NR_024504	11	Non-coding	chr11:50409146 plus strand	1884484
LOC649133	NR_038829	11	Non-coding	chr11:120265932 minus strand	1884485
LRP4-AS1	NR_038909	11	Non-coding	chr11:46846410 plus strand	1884486
LRRC4C	NR_047673	11	Non-coding	chr11:40293130 minus strand	1884487
LRRC4C	NR_047674	11	Non-coding	chr11:40293130 minus strand	1884487
LRTOMT	NR_026886	11	Non-coding	chr11:72080330 plus strand	1884488
MALAT1	NR_002819	11	Non-coding	chr11:65497761 plus strand	1884489
MDK	NR_073039	11	Non-coding	chr11:46381654 plus strand	1884490
MIR100	NR_029515	11	Non-coding	chr11:122152308 minus strand	1884491
MIR100HG	NR_024430	11	Non-coding	chr11:122203062 minus strand	1884492
MIR1237	NR_031602	11	Non-coding	chr11:64368601 plus strand	1884493
MIR125B1	NR_029671	11	Non-coding	chr11:122099844 minus strand	1884494
MIR1260B	NR_036125	11	Non-coding	chr11:96341437 plus strand	1884495

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MIR1261	NR_031663	11	Non-coding	chr11:90869202 minus strand	1884496
MIR129-2	NR_029697	11	Non-coding	chr11:43581393 plus strand	1884497
MIR1304	NR_031639	11	Non-coding	chr11:93733764 minus strand	1884498
MIR130A	NR_029673	11	Non-coding	chr11:57641197 plus strand	1884499
MIR1343	NR_039836	11	Non-coding	chr11:34941836 plus strand	1884500
MIR139	NR_029603	11	Non-coding	chr11:72615130 minus strand	1884501
MIR1908	NR_031729	11	Non-coding	chr11:61815240 minus strand	1884502
MIR192	NR_029578	11	Non-coding	chr11:64891246 minus strand	1884503
MIR194-2	NR_029829	11	Non-coding	chr11:64891439 minus strand	1884504
MIR210	NR_029623	11	Non-coding	chr11:568198 minus strand	1884505
MIR210HG	NR_038262	11	Non-coding	chr11:568457 minus strand	1884506
MIR302E	NR_031683	11	Non-coding	chr11:7234765 plus strand	1884507
MIR3159	NR_036116	11	Non-coding	chr11:18387786 plus strand	1884508
MIR3160-1	NR_036117	11	Non-coding	chr11:46451889 minus strand	1884509
MIR3160-2	NR_036118	11	Non-coding	chr11:46451806 plus strand	1884510
MIR3161	NR_036119	11	Non-coding	chr11:48096781 plus strand	1884511
MIR3162	NR_036120	11	Non-coding	chr11:59595158 minus strand	1884512
MIR3163	NR_036121	11	Non-coding	chr11:66934506 minus strand	1884513
MIR3164	NR_036122	11	Non-coding	chr11:69083175 plus strand	1884514
MIR3165	NR_036123	11	Non-coding	chr11:72072302 minus strand	1884515
MIR3166	NR_036124	11	Non-coding	chr11:88176501 plus strand	1884516
MIR3167	NR_036126	11	Non-coding	chr11:126988542 minus strand	1884517
MIR326	NR_029891	11	Non-coding	chr11:75335186 minus strand	1884518
MIR34B	NR_029839	11	Non-coding	chr11:111512937 plus strand	1884519
MIR34C	NR_029840	11	Non-coding	chr11:111513438 plus strand	1884520
MIR3654	NR_037427	11	Non-coding	chr11:62560306 minus strand	1884521
MIR3656	NR_037429	11	Non-coding	chr11:119018943 plus strand	1884522

【１６５６】

MIR3664	NR_037437	11	Non-coding	chr11:70872368 minus strand	1884523
MIR3920	NR_037485	11	Non-coding	chr11:101519905 minus strand	1884524
MIR3973	NR_039769	11	Non-coding	chr11:36010097 plus strand	1884525
MIR4298	NR_036185	11	Non-coding	chr11:1859536 minus strand	1884526
MIR4299	NR_036184	11	Non-coding	chr11:11656722 minus strand	1884527
MIR4300	NR_036186	11	Non-coding	chr11:81890836 minus strand	1884528
MIR4301	NR_036183	11	Non-coding	chr11:113450088 minus strand	1884529
MIR4459	NR_039664	11	Non-coding	chr11:72879919 plus strand	1884530
MIR4485	NR_039705	11	Non-coding	chr11:10508326 minus strand	1884531
MIR4486	NR_039706	11	Non-coding	chr11:19575309 plus strand	1884532
MIR4487	NR_039707	11	Non-coding	chr11:47400969 plus strand	1884533
MIR4488	NR_039708	11	Non-coding	chr11:61508595 plus strand	1884534
MIR4489	NR_039709	11	Non-coding	chr11:65649191 plus strand	1884535
MIR4490	NR_039711	11	Non-coding	chr11:90555857 minus strand	1884536
MIR4491	NR_039712	11	Non-coding	chr11:111347756 plus strand	1884537
MIR4492	NR_039713	11	Non-coding	chr11:118910707 plus strand	1884538
MIR4493	NR_039714	11	Non-coding	chr11:123381512 minus strand	1884539
MIR4686	NR_039834	11	Non-coding	chr11:2173062 plus strand	1884540
MIR4687	NR_039835	11	Non-coding	chr11:3856061 plus strand	1884541
MIR4688	NR_039837	11	Non-coding	chr11:46376401 plus strand	1884542
MIR4690	NR_039839	11	Non-coding	chr11:65636309 plus strand	1884543
MIR4691	NR_039840	11	Non-coding	chr11:68033896 plus strand	1884544
MIR4692	NR_039841	11	Non-coding	chr11:72783529 plus strand	1884545
MIR4693	NR_039842	11	Non-coding	chr11:103849905 plus strand	1884546
MIR4694	NR_039843	11	Non-coding	chr11:19760083 minus strand	1884547
MIR4696	NR_039845	11	Non-coding	chr11:74720337 minus strand	1884548
MIR4697	NR_039846	11	Non-coding	chr11:133898581 minus strand	1884549

【１６５７】

MIR4697HG	NR_024344	11	Non-coding	chr11:133901740 minus strand	1884550
MIR483	NR_030158	11	Non-coding	chr11:2134209 minus strand	1884551
MIR548AL	NR_039710	11	Non-coding	chr11:74399236 plus strand	1884552
MIR548K	NR_031624	11	Non-coding	chr11:70283954 plus strand	1884553
MIR548L	NR_031630	11	Non-coding	chr11:94466580 minus strand	1884554
MIR5579	NR_049841	11	Non-coding	chr11:79422226 minus strand	1884555
MIR5582	NR_049846	11	Non-coding	chr11:46753192 minus strand	1884556
MIR5691	NR_049874	11	Non-coding	chr11:9090379 minus strand	1884557
MIR6073	NR_106721	11	Non-coding	chr11:15969621 minus strand	1884558
MIR6090	NR_106738	11	Non-coding	chr11:128522389 plus strand	1884559
MIR610	NR_030341	11	Non-coding	chr11:28056814 plus strand	1884560
MIR611	NR_030342	11	Non-coding	chr11:61792561 minus strand	1884561
MIR612	NR_030343	11	Non-coding	chr11:65444457 plus strand	1884562
MIR6124	NR_106739	11	Non-coding	chr11:12163682 plus strand	1884563
MIR6128	NR_106743	11	Non-coding	chr11:56743872 plus strand	1884564
MIR6503	NR_106758	11	Non-coding	chr11:60209156 minus strand	1884565
MIR6514	NR_106769	11	Non-coding	chr11:62792771 minus strand	1884566
MIR670	NR_031577	11	Non-coding	chr11:43559655 plus strand	1884567
MIR6716	NR_106773	11	Non-coding	chr11:118643999 plus strand	1884568
MIR6743	NR_106801	11	Non-coding	chr11:209335 plus strand	1884569
MIR6744	NR_106802	11	Non-coding	chr11:1256604 plus strand	1884570
MIR6745	NR_106803	11	Non-coding	chr11:47179737 minus strand	1884571
MIR6746	NR_106804	11	Non-coding	chr11:61878278 minus strand	1884572
MIR6747	NR_106805	11	Non-coding	chr11:62567071 minus strand	1884573
MIR6748	NR_106806	11	Non-coding	chr11:62789814 plus strand	1884574
MIR6749	NR_106807	11	Non-coding	chr11:64902455 minus strand	1884575
MIR675	NR_030533	11	Non-coding	chr11:1996831 minus strand	1884576

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MIR6750	NR_106808	11	Non-coding	chr11:64898437 minus strand	1884577
MIR6751	NR_106809	11	Non-coding	chr11:65129978 minus strand	1884578
MIR6752	NR_106810	11	Non-coding	chr11:67490244 plus strand	1884579
MIR6753	NR_106811	11	Non-coding	chr11:68044793 plus strand	1884580
MIR6754	NR_106812	11	Non-coding	chr11:71473502 plus strand	1884581
MIR6755	NR_106813	11	Non-coding	chr11:86278332 plus strand	1884582
MIR6756	NR_106814	11	Non-coding	chr11:119313012 minus strand	1884583
MIR6860	NR_106920	11	Non-coding	chr11:67045642 plus strand	1884584
MIR6879	NR_106939	11	Non-coding	chr11:65018504 plus strand	1884585
MIR708	NR_030598	11	Non-coding	chr11:79402109 minus strand	1884586
MIR7113	NR_106963	11	Non-coding	chr11:68032863 plus strand	1884587
MIR7154	NR_106976	11	Non-coding	chr11:45691776 minus strand	1884588
MIR7155	NR_106977	11	Non-coding	chr11:64341904 minus strand	1884589
MIR7641-1	NR_106987	11	Non-coding	chr11:104252590 plus strand	1884590
MIR7641-2	NR_106988	11	Non-coding	chr11:124636497 plus strand	1884591
MIR7847	NR_107001	11	Non-coding	chr11:1880044 plus strand	1884592
MIR8052	NR_107019	11	Non-coding	chr11:130666734 plus strand	1884593
MIR8054	NR_107021	11	Non-coding	chr11:23419190 minus strand	1884594
MIR8068	NR_107035	11	Non-coding	chr11:28477548 minus strand	1884595
MIR8070	NR_107037	11	Non-coding	chr11:11783222 minus strand	1884596
MIR8087	NR_107054	11	Non-coding	chr11:27515047 minus strand	1884597
MIRLET7A2	NR_029477	11	Non-coding	chr11:122146593 minus strand	1884598
MPZL3	NR_104405	11	Non-coding	chr11:118252368 minus strand	1884599
MPZL3	NR_104404	11	Non-coding	chr11:118252368 minus strand	1884599
MRGPRF-AS1	NR_120541	11	Non-coding	chr11:69012353 plus strand	1884600
MRGPRG-AS1	NR_027138	11	Non-coding	chr11:3218331 plus strand	1884601
MRPL11	NR_120589	11	Non-coding	chr11:66438848 minus strand	1884602

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MRPL11	NR_120588	11	Non-coding	chr11:66438848 minus strand	1884602
MRPL23-AS1	NR_024471	11	Non-coding	chr11:1989920 minus strand	1884603
MRPL49	NR_037567	11	Non-coding	chr11:65122182 plus strand	1884604
MRPL49	NR_037568	11	Non-coding	chr11:65122243 plus strand	1884605
MRVI1-AS1	NR_034094	11	Non-coding	chr11:10541235 plus strand	1884606
MRVI1-AS1	NR_034093	11	Non-coding	chr11:10541235 plus strand	1884606
MRVI1-AS1	NR_046375	11	Non-coding	chr11:10541235 plus strand	1884606
MRVI1-AS1	NR_046374	11	Non-coding	chr11:10541235 plus strand	1884606
MS4A14	NR_049734	11	Non-coding	chr11:60396013 plus strand	1884607
MS4A14	NR_049733	11	Non-coding	chr11:60396013 plus strand	1884607
MS4A14	NR_049732	11	Non-coding	chr11:60396013 plus strand	1884607
MS4A14	NR_049731	11	Non-coding	chr11:60396013 plus strand	1884607
MS4A15	NR_103481	11	Non-coding	chr11:60756866 plus strand	1884608
NAV2-AS2	NR_046672	11	Non-coding	chr11:20049303 minus strand	1884609
NAV2-AS4	NR_033989	11	Non-coding	chr11:19524078 minus strand	1884610
NAV2-AS5	NR_049725	11	Non-coding	chr11:19507229 minus strand	1884611
NCAM1-AS1	NR_034101	11	Non-coding	chr11:113273901 minus strand	1884612
NEAT1	NR_028272	11	Non-coding	chr11:65422797 plus strand	1884613
NOX4	NR_120406	11	Non-coding	chr11:89491565 minus strand	1884614
NTM-IT	NR_046820	11	Non-coding	chr11:132284301 plus strand	1884615
NUMA1	NR_104476	11	Non-coding	chr11:72080474 minus strand	1884616
OR10V2P	NR_045005	11	Non-coding	chr11:59748811 plus strand	1884617
OR51B5	NR_038321	11	Non-coding	chr11:5505652 minus strand	1884618
OR5AK4P	NR_036445	11	Non-coding	chr11:57037533 plus strand	1884619
OR5E1P	NR_027711	11	Non-coding	chr11:7849050 plus strand	1884620
OR7E12P	NR_044999	11	Non-coding	chr11:3391915 minus strand	1884621
OR7E14P	NR_045002	11	Non-coding	chr11:17051885 plus strand	1884622

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OR7E2P	NR_045004	11	Non-coding	chr11:86857954 minus strand	1884623
OR7E5P	NR_027688	11	Non-coding	chr11:55986405 minus strand	1884624
OR8G1	NR_045681	11	Non-coding	chr11:124249675 plus strand	1884625
OTUB1	NR_003089	11	Non-coding	chr11:63985852 plus strand	1884626
OVOL1-AS1	NR_108085	11	Non-coding	chr11:65790868 minus strand	1884627
P4HA3	NR_110031	11	Non-coding	chr11:74311676 minus strand	1884628
PAFAH1B2	NR_110269	11	Non-coding	chr11:117144283 plus strand	1884629
PAFAH1B2	NR_110268	11	Non-coding	chr11:117144283 plus strand	1884629
PAFAH1B2	NR_110282	11	Non-coding	chr11:117144283 plus strand	1884629
PAUPAR	NR_117094	11	Non-coding	chr11:31826566 plus strand	1884630
PDZD3	NR_033122	11	Non-coding	chr11:119185456 plus strand	1884631
PGAP2	NR_045927	11	Non-coding	chr11:3797818 plus strand	1884632
PGAP2	NR_045926	11	Non-coding	chr11:3797818 plus strand	1884632
PGAP2	NR_045925	11	Non-coding	chr11:3797818 plus strand	1884632
PGAP2	NR_045923	11	Non-coding	chr11:3797818 plus strand	1884632
PGAP2	NR_104271	11	Non-coding	chr11:3797818 plus strand	1884632
PGAP2	NR_104270	11	Non-coding	chr11:3797818 plus strand	1884632
PGAP2	NR_027017	11	Non-coding	chr11:3797958 plus strand	1884633
PGAP2	NR_027018	11	Non-coding	chr11:3808009 plus strand	1884634
PGAP2	NR_045929	11	Non-coding	chr11:3808535 plus strand	1884635
PGAP2	NR_027016	11	Non-coding	chr11:3808535 plus strand	1884635
PGAP2	NR_104272	11	Non-coding	chr11:3808535 plus strand	1884635
PGR	NR_073143	11	Non-coding	chr11:101129063 minus strand	1884636
PGR	NR_073142	11	Non-coding	chr11:101129063 minus strand	1884636
PGR	NR_073141	11	Non-coding	chr11:101129063 minus strand	1884636
PKNOX2-AS1	NR_125759	11	Non-coding	chr11:125164609 minus strand	1884637
POLD3	NR_046409	11	Non-coding	chr11:74592529 plus strand	1884638

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POLD3	NR_046410	11	Non-coding	chr11:74592604 plus strand	1884639
POLD4	NR_046413	11	Non-coding	chr11:67353596 minus strand	1884640
POLD4	NR_046412	11	Non-coding	chr11:67353596 minus strand	1884640
POLD4	NR_046411	11	Non-coding	chr11:67353596 minus strand	1884640
PPFIA1	NR_045286	11	Non-coding	chr11:70270699 plus strand	1884641
PRDM11	NR_046338	11	Non-coding	chr11:45094012 plus strand	1884642
PRSS23	NR_120593	11	Non-coding	chr11:86800239 plus strand	1884643
PRSS23	NR_120592	11	Non-coding	chr11:86800239 plus strand	1884643
PRSS23	NR_120591	11	Non-coding	chr11:86800239 plus strand	1884643
RAB30-AS1	NR_038903	11	Non-coding	chr11:83072065 plus strand	1884644
RIC3	NR_045405	11	Non-coding	chr11:8169043 minus strand	1884645
RNF121	NR_024147	11	Non-coding	chr11:71928721 plus strand	1884646
RNF121	NR_024148	11	Non-coding	chr11:71928721 plus strand	1884646
RNU2-2P	NR_002761	11	Non-coding	chr11:62841761 minus strand	1884647
RNU6-16P	NR_046486	11	Non-coding	chr11:88612911 minus strand	1884648
RNU6-45P	NR_046496	11	Non-coding	chr11:63970469 plus strand	1884649
RNU6-46P	NR_046497	11	Non-coding	chr11:67895630 plus strand	1884650
RPL23AP64	NR_003040	11	Non-coding	chr11:119003593 minus strand	1884651
RPLP0P2	NR_002775	11	Non-coding	chr11:61615035 plus strand	1884652
RTN3	NR_049751	11	Non-coding	chr11:63681449 plus strand	1884653
RTN3	NR_049750	11	Non-coding	chr11:63681449 plus strand	1884653
SAA3P	NR_026576	11	Non-coding	chr11:18116132 minus strand	1884654
SBF2-AS1	NR_036485	11	Non-coding	chr11:9758292 plus strand	1884655
SCARNA9	NR_002569	11	Non-coding	chr11:93721513 plus strand	1884656
SCN4B	NR_024527	11	Non-coding	chr11:118145469 minus strand	1884657
SDHD	NR_077060	11	Non-coding	chr11:112086823 plus strand	1884658
SEC14L1P1	NR_026952	11	Non-coding	chr11:43897302 plus strand	1884659

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SENCR	NR_038908	11	Non-coding	chr11:128696023 minus strand	1884660
SERGEF	NR_104041	11	Non-coding	chr11:18013162 minus strand	1884661
SERGEF	NR_104040	11	Non-coding	chr11:18013162 minus strand	1884661
SF1	NR_033649	11	Non-coding	chr11:64778844 minus strand	1884662
SF1	NR_033650	11	Non-coding	chr11:64778844 minus strand	1884662
SHANK2	NR_110766	11	Non-coding	chr11:70661840 minus strand	1884663
SHANK2-AS1	NR_046567	11	Non-coding	chr11:70631093 plus strand	1884664
SHANK2-AS3	NR_073536	11	Non-coding	chr11:70862789 plus strand	1884665
SLC15A3	NR_027391	11	Non-coding	chr11:60951785 minus strand	1884666
SLC22A20	NR_033396	11	Non-coding	chr11:65213839 plus strand	1884667
SLC29A2	NR_125343	11	Non-coding	chr11:66371820 minus strand	1884668
SLC3A2	NR_037193	11	Non-coding	chr11:62881698 plus strand	1884669
SNHG1	NR_003098	11	Non-coding	chr11:62855888 minus strand	1884670
SNORA1	NR_003026	11	Non-coding	chr11:93732133 minus strand	1884671
SNORA18	NR_002959	11	Non-coding	chr11:93733597 minus strand	1884672
SNORA23	NR_002962	11	Non-coding	chr11:9428765 plus strand	1884673
SNORA25	NR_003028	11	Non-coding	chr11:93730646 minus strand	1884674
SNORA32	NR_003032	11	Non-coding	chr11:93731099 minus strand	1884675
SNORA40	NR_002973	11	Non-coding	chr11:93735236 minus strand	1884676
SNORA45A	NR_002580	11	Non-coding	chr11:8684226 plus strand	1884677
SNORA45B	NR_002977	11	Non-coding	chr11:8685438 plus strand	1884678
SNORA52	NR_002585	11	Non-coding	chr11:811680 plus strand	1884679
SNORA54	NR_002982	11	Non-coding	chr11:2963893 minus strand	1884680
SNORA57	NR_004390	11	Non-coding	chr11:62665421 plus strand	1884681
SNORA70E	NR_033347	11	Non-coding	chr11:83041598 minus strand	1884682
SNORA8	NR_002920	11	Non-coding	chr11:93732499 minus strand	1884683
SNORD14A	NR_000022	11	Non-coding	chr11:17074744 minus strand	1884684

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SNORD14B	NR_001452	11	Non-coding	chr11:17075868 minus strand	1884685
SNORD14C	NR_001453	11	Non-coding	chr11:123059422 minus strand	1884686
SNORD14D	NR_001454	11	Non-coding	chr11:123058995 minus strand	1884687
SNORD14E	NR_003125	11	Non-coding	chr11:123058156 minus strand	1884688
SNORD15A	NR_000005	11	Non-coding	chr11:75400390 plus strand	1884689
SNORD15B	NR_000025	11	Non-coding	chr11:75404420 plus strand	1884690
SNORD22	NR_000008	11	Non-coding	chr11:62853035 minus strand	1884691
SNORD25	NR_002565	11	Non-coding	chr11:62855631 minus strand	1884692
SNORD26	NR_002564	11	Non-coding	chr11:62855366 minus strand	1884693
SNORD27	NR_002563	11	Non-coding	chr11:62855083 minus strand	1884694
SNORD28	NR_002562	11	Non-coding	chr11:62854695 minus strand	1884695
SNORD29	NR_002559	11	Non-coding	chr11:62853968 minus strand	1884696
SNORD30	NR_002561	11	Non-coding	chr11:62853732 minus strand	1884697
SNORD31	NR_002560	11	Non-coding	chr11:62853393 minus strand	1884698
SNORD5	NR_003033	11	Non-coding	chr11:93733300 minus strand	1884699
SNORD6	NR_003036	11	Non-coding	chr11:93731573 minus strand	1884700
SNORD67	NR_003056	11	Non-coding	chr11:46762499 minus strand	1884701
SNORD97	NR_004403	11	Non-coding	chr11:10801608 minus strand	1884702
SPTY2D1-AS1	NR_038360	11	Non-coding	chr11:18599803 plus strand	1884703
SRSF8	NR_103726	11	Non-coding	chr11:95066876 plus strand	1884704
SSSCA1-AS1	NR_038923	11	Non-coding	chr11:65570413 minus strand	1884705
ST3GAL4-AS1	NR_033839	11	Non-coding	chr11:126355587 minus strand	1884706
TBC1D10C	NR_046266	11	Non-coding	chr11:67403975 plus strand	1884707
TBRG1	NR_016021	11	Non-coding	chr11:124622845 plus strand	1884708
TIMM8B	NR_028383	11	Non-coding	chr11:112086798 minus strand	1884709
TM7SF2	NR_102367	11	Non-coding	chr11:65111853 plus strand	1884710
TMEM134	NR_073413	11	Non-coding	chr11:67469277 minus strand	1884711

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TMEM134	NR_073412	11	Non-coding	chr11:67469277 minus strand	1884711
TMEM134	NR_073411	11	Non-coding	chr11:67469277 minus strand	1884711
TMEM134	NR_073410	11	Non-coding	chr11:67469277 minus strand	1884711
TMEM134	NR_073409	11	Non-coding	chr11:67469277 minus strand	1884711
TMEM135	NR_033149	11	Non-coding	chr11:87037843 plus strand	1884712
TMEM138	NR_028473	11	Non-coding	chr11:61362000 plus strand	1884713
TMEM218	NR_047589	11	Non-coding	chr11:125111708 minus strand	1884714
TMEM218	NR_047592	11	Non-coding	chr11:125111708 minus strand	1884714
TMEM218	NR_047591	11	Non-coding	chr11:125111708 minus strand	1884714
TMEM218	NR_047590	11	Non-coding	chr11:125111708 minus strand	1884714
TMEM218	NR_047588	11	Non-coding	chr11:125111708 minus strand	1884714
TMEM218	NR_047587	11	Non-coding	chr11:125111763 minus strand	1884715
TMEM218	NR_047586	11	Non-coding	chr11:125111763 minus strand	1884715
TMEM41B	NR_028491	11	Non-coding	chr11:9314768 minus strand	1884716
TMEM9B-AS1	NR_073431	11	Non-coding	chr11:8964674 plus strand	1884717
TMPRSS4	NR_110734	11	Non-coding	chr11:118077011 plus strand	1884718
TMPRSS4-AS1	NR_038318	11	Non-coding	chr11:118086793 minus strand	1884719
TMPRSS5	NR_110047	11	Non-coding	chr11:113706373 minus strand	1884720
TMPRSS5	NR_110046	11	Non-coding	chr11:113706373 minus strand	1884720
TMX2	NR_026593	11	Non-coding	chr11:57712522 plus strand	1884721
TMX2	NR_037645	11	Non-coding	chr11:57712522 plus strand	1884721
TMX2-CTNND1	NR_037646	11	Non-coding	chr11:57712522 plus strand	1884722
TOLLIP-AS1	NR_029409	11	Non-coding	chr11:1309707 plus strand	1884723
TRIM51HP	NR_038174	11	Non-coding	chr11:55298232 minus strand	1884724
TRIM53AP	NR_028346	11	Non-coding	chr11:89841996 plus strand	1884725
TRIM53AP	NR_028346	11	Non-coding	chr11:90002508 minus strand	1884726
TRPC2	NR_002720	11	Non-coding	chr11:3626459 plus strand	1884727

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TSSC2	NR_024248	11	Non-coding	chr11:3380960 plus strand	1884728
TUB-AS1	NR_120537	11	Non-coding	chr11:8060037 plus strand	1884729
TUB-AS1	NR_120538	11	Non-coding	chr11:8060037 plus strand	1884729
USH1C	NR_123738	11	Non-coding	chr11:17544416 minus strand	1884730
USP2-AS1	NR_034160	11	Non-coding	chr11:119381777 plus strand	1884731
VPS51	NR_073519	11	Non-coding	chr11:65096114 plus strand	1884732
WT1-AS	NR_120549	11	Non-coding	chr11:32435517 plus strand	1884733
WT1-AS	NR_120547	11	Non-coding	chr11:32435517 plus strand	1884733
WT1-AS	NR_023920	11	Non-coding	chr11:32435517 plus strand	1884733
WT1-AS	NR_120548	11	Non-coding	chr11:32435517 plus strand	1884733
WT1-AS	NR_120546	11	Non-coding	chr11:32436038 plus strand	1884734
WTAPP1	NR_038390	11	Non-coding	chr11:102783675 plus strand	1884735
ZBED5-AS1	NR_034137	11	Non-coding	chr11:10858216 plus strand	1884736
ZFP91-CNTF	NR_024091	11	Non-coding	chr11:58579113 plus strand	1884737
ZNF195	NR_040083	11	Non-coding	chr11:3379222 minus strand	1884738
ZNF195	NR_046381	11	Non-coding	chr11:3379222 minus strand	1884738
ZNF195	NR_046382	11	Non-coding	chr11:3379222 minus strand	1884738
A2M-AS1	NR_026971	12	Non-coding	chr12:9065176 plus strand	1884739
A2MP1	NR_040112	12	Non-coding	chr12:9234207 minus strand	1884740
ACTR6	NR_048569	12	Non-coding	chr12:100200776 plus strand	1884741
ACTR6	NR_048568	12	Non-coding	chr12:100200776 plus strand	1884741
ADAM1A	NR_036636	12	Non-coding	chr12:111899062 plus strand	1884742
AGAP2-AS1	NR_027032	12	Non-coding	chr12:57726239 plus strand	1884743
ALDH1L2	NR_027752	12	Non-coding	chr12:105084563 minus strand	1884744
AMN1	NR_103523	12	Non-coding	chr12:31729174 minus strand	1884745
AMN1	NR_103522	12	Non-coding	chr12:31729174 minus strand	1884745
ARHGEF25	NR_046223	12	Non-coding	chr12:57611434 plus strand	1884746

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ARL6IP4	NR_103512	12	Non-coding	chr12:122980059 plus strand	1884747
ARNTL2-AS1	NR_109975	12	Non-coding	chr12:27446634 minus strand	1884748
ASIC1	NR_046389	12	Non-coding	chr12:50057636 plus strand	1884749
ATF7	NR_073163	12	Non-coding	chr12:53626415 minus strand	1884750
BCDIN3D-AS1	NR_027499	12	Non-coding	chr12:49828542 plus strand	1884751
BCDIN3D-AS1	NR_027501	12	Non-coding	chr12:49828542 plus strand	1884751
BCDIN3D-AS1	NR_027500	12	Non-coding	chr12:49828542 plus strand	1884751
BEST3	NR_104220	12	Non-coding	chr12:69689277 minus strand	1884752
BLOC1S1	NR_037655	12	Non-coding	chr12:55716033 plus strand	1884753
BLOC1S1	NR_037656	12	Non-coding	chr12:55716291 plus strand	1884754
BLOC1S1	NR_037657	12	Non-coding	chr12:55716291 plus strand	1884754
BLOC1S1-RDH5	NR_037658	12	Non-coding	chr12:55716033 plus strand	1884755
C12orf42	NR_103526	12	Non-coding	chr12:103496010 minus strand	1884756
C12orf43	NR_104409	12	Non-coding	chr12:121016502 minus strand	1884757
C12orf57	NR_126035	12	Non-coding	chr12:6943816 plus strand	1884758
C12orf79	NR_046159	12	Non-coding	chr12:92141713 minus strand	1884759
C12orf79	NR_046160	12	Non-coding	chr12:92142671 minus strand	1884760
C1RL-AS1	NR_026947	12	Non-coding	chr12:7108307 plus strand	1884761
CACNA1C-AS1	NR_045725	12	Non-coding	chr12:2691157 minus strand	1884762
CACNA1C-AS2	NR_046579	12	Non-coding	chr12:2672220 minus strand	1884763
CACNA1C-AS4	NR_046578	12	Non-coding	chr12:2223481 minus strand	1884764
CACNA1C-IT2	NR_046768	12	Non-coding	chr12:2048351 plus strand	1884765
CACNA1C-IT3	NR_046769	12	Non-coding	chr12:2269775 plus strand	1884766
CALCOCO1	NR_026554	12	Non-coding	chr12:53727523 minus strand	1884767
CAPRIN2	NR_038177	12	Non-coding	chr12:30754514 minus strand	1884768
CASC18	NR_110108	12	Non-coding	chr12:105704202 plus strand	1884769
CASC18	NR_110109	12	Non-coding	chr12:105704202 plus strand	1884769

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CASC18	NR_110111	12	Non-coding	chr12:105706773 plus strand	1884770
CASC18	NR_110110	12	Non-coding	chr12:105706773 plus strand	1884770
CCDC59	NR_033192	12	Non-coding	chr12:82358805 minus strand	1884771
CCDC62	NR_027918	12	Non-coding	chr12:122774508 plus strand	1884772
CCND2-AS1	NR_125790	12	Non-coding	chr12:4276184 minus strand	1884773
CD27-AS1	NR_015382	12	Non-coding	chr12:6451517 minus strand	1884774
CDCA3	NR_123727	12	Non-coding	chr12:6852066 minus strand	1884775
CDK2AP1	NR_073008	12	Non-coding	chr12:123271102 minus strand	1884776
CDK2AP1	NR_073007	12	Non-coding	chr12:123272316 minus strand	1884777
CEP83-AS1	NR_027035	12	Non-coding	chr12:94460002 plus strand	1884778
CERS5	NR_104035	12	Non-coding	chr12:50167533 minus strand	1884779
CISTR	NR_104333	12	Non-coding	chr12:53751835 minus strand	1884780
CISTR	NR_104332	12	Non-coding	chr12:53757034 minus strand	1884781
CLEC2D	NR_036693	12	Non-coding	chr12:9669707 plus strand	1884782
CLEC7A	NR_125336	12	Non-coding	chr12:10130269 minus strand	1884783
CLIP1-AS1	NR_045382	12	Non-coding	chr12:122395541 plus strand	1884784
CLLU1	NR_027933	12	Non-coding	chr12:92421530 plus strand	1884785
CLLU1	NR_027932	12	Non-coding	chr12:92421530 plus strand	1884785
CNOT2	NR_037615	12	Non-coding	chr12:70243713 plus strand	1884786
COPZ1	NR_073424	12	Non-coding	chr12:54325089 plus strand	1884787
CSRNP2	NR_045072	12	Non-coding	chr12:51083654 minus strand	1884788
DDX11-AS1	NR_038927	12	Non-coding	chr12:31073847 minus strand	1884789
DDX12P	NR_033399	12	Non-coding	chr12:9448172 minus strand	1884790
DENND5B-AS1	NR_046909	12	Non-coding	chr12:31589922 plus strand	1884791
DSTNP2	NR_033796	12	Non-coding	chr12:6884681 plus strand	1884792
DYNLL1-AS1	NR_038854	12	Non-coding	chr12:120495946 minus strand	1884793
DYRK4	NR_104115	12	Non-coding	chr12:4590071 plus strand	1884794

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EP400NL	NR_003290	12	Non-coding	chr12:132084282 plus strand	1884795
ERC1	NR_027946	12	Non-coding	chr12:991207 plus strand	1884796
ERC1	NR_027948	12	Non-coding	chr12:991207 plus strand	1884796
ERC1	NR_027949	12	Non-coding	chr12:991207 plus strand	1884796
FAM138D	NR_026823	12	Non-coding	chr12:38133 minus strand	1884797
FAM186B	NR_027450	12	Non-coding	chr12:49605627 minus strand	1884798
FAM222A-AS1	NR_026661	12	Non-coding	chr12:109773487 minus strand	1884799
FAM222A-AS1	NR_026662	12	Non-coding	chr12:109773487 minus strand	1884799
FAM66C	NR_026788	12	Non-coding	chr12:8180208 plus strand	1884800
FAM86FP	NR_024254	12	Non-coding	chr12:8242946 minus strand	1884801
FLJ12825	NR_026655	12	Non-coding	chr12:54058253 plus strand	1884802
FLJ13224	NR_026806	12	Non-coding	chr12:31324315 plus strand	1884803
FLJ37505	NR_033987	12	Non-coding	chr12:127881616 plus strand	1884804
FLJ41278	NR_033988	12	Non-coding	chr12:64883773 plus strand	1884805
FZD10-AS1	NR_033834	12	Non-coding	chr12:130161678 minus strand	1884806
GATC	NR_033684	12	Non-coding	chr12:120446437 plus strand	1884807
GLIPR1L2	NR_072995	12	Non-coding	chr12:75391069 plus strand	1884808
GLYCAM1	NR_003039	12	Non-coding	chr12:54610462 minus strand	1884809
GNN	NR_027249	12	Non-coding	chr12:103930211 minus strand	1884810
GOLGA2P5	NR_036632	12	Non-coding	chr12:100173343 minus strand	1884811
GOLGA2P5	NR_024261	12	Non-coding	chr12:100173343 minus strand	1884811
H2AFJ	NR_027716	12	Non-coding	chr12:14774335 plus strand	1884812
HNF1A-AS1	NR_024345	12	Non-coding	chr12:120972292 minus strand	1884813
HOTAIR	NR_003716	12	Non-coding	chr12:53968756 minus strand	1884814
HOTAIR	NR_047518	12	Non-coding	chr12:53968914 minus strand	1884815
HOTAIR	NR_047517	12	Non-coding	chr12:53974956 minus strand	1884816
HOXC13-AS	NR_047507	12	Non-coding	chr12:53939643 minus strand	1884817

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HOXC5	NR_003084	12	Non-coding	chr12:54016851 plus strand	1884818
HOXC-AS1	NR_047504	12	Non-coding	chr12:54000010 minus strand	1884819
HOXC-AS2	NR_047505	12	Non-coding	chr12:53996785 minus strand	1884820
HOXC-AS3	NR_047506	12	Non-coding	chr12:53985519 minus strand	1884821
HRK	NR_073189	12	Non-coding	chr12:116881427 minus strand	1884822
HTR7P1	NR_002774	12	Non-coding	chr12:13000441 plus strand	1884823
IFFO1	NR_036467	12	Non-coding	chr12:6556083 minus strand	1884824
IFNG-AS1	NR_104125	12	Non-coding	chr12:67989444 plus strand	1884825
IFNG-AS1	NR_104124	12	Non-coding	chr12:67989444 plus strand	1884825
ITGB7	NR_104181	12	Non-coding	chr12:53207307 minus strand	1884826
KLRAP1	NR_028045	12	Non-coding	chr12:10599835 minus strand	1884827
KLRF1	NR_120305	12	Non-coding	chr12:9827480 plus strand	1884828
KRT19P2	NR_036685	12	Non-coding	chr12:94834453 plus strand	1884829
KRT73-AS1	NR_126005	12	Non-coding	chr12:52609850 plus strand	1884830
KRT8	NR_045962	12	Non-coding	chr12:52949866 minus strand	1884831
LARP4	NR_033200	12	Non-coding	chr12:50400808 plus strand	1884832
LETMD1	NR_045018	12	Non-coding	chr12:51048298 plus strand	1884833
LETMD1	NR_045020	12	Non-coding	chr12:51048298 plus strand	1884833
LETMD1	NR_045019	12	Non-coding	chr12:51048298 plus strand	1884833
LETMD1	NR_045017	12	Non-coding	chr12:51048316 plus strand	1884834
LGR5	NR_110596	12	Non-coding	chr12:71439769 plus strand	1884835
LHX5-AS1	NR_126425	12	Non-coding	chr12:113472002 plus strand	1884836
LINC00173	NR_027345	12	Non-coding	chr12:116533421 plus strand	1884837
LINC00173	NR_027346	12	Non-coding	chr12:116533434 plus strand	1884838
LINC00477	NR_029451	12	Non-coding	chr12:24584168 minus strand	1884839
LINC00485	NR_033855	12	Non-coding	chr12:102824399 minus strand	1884840
LINC00507	NR_046392	12	Non-coding	chr12:127915409 plus strand	1884841

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LINC00508	NR_126452	12	Non-coding	chr12:127983891 minus strand	1884842
LINC00592	NR_027358	12	Non-coding	chr12:52210929 plus strand	1884843
LINC00612	NR_034140	12	Non-coding	chr12:9065070 minus strand	1884844
LINC00615	NR_038868	12	Non-coding	chr12:90918022 plus strand	1884845
LINC00934	NR_024246	12	Non-coding	chr12:119303380 minus strand	1884846
LINC00935	NR_029448	12	Non-coding	chr12:48727434 plus strand	1884847
LINC00935	NR_029449	12	Non-coding	chr12:48727434 plus strand	1884847
LINC00936	NR_028138	12	Non-coding	chr12:89708954 plus strand	1884848
LINC00937	NR_024420	12	Non-coding	chr12:8390752 minus strand	1884849
LINC00938	NR_028408	12	Non-coding	chr12:45727921 minus strand	1884850
LINC00939	NR_034132	12	Non-coding	chr12:125983374 minus strand	1884851
LINC00940	NR_036546	12	Non-coding	chr12:1936576 minus strand	1884852
LINC00941	NR_040245	12	Non-coding	chr12:30795680 plus strand	1884853
LINC00942	NR_028415	12	Non-coding	chr12:1500490 plus strand	1884854
LINC00943	NR_038256	12	Non-coding	chr12:126737006 plus strand	1884855
LINC00944	NR_033878	12	Non-coding	chr12:126772262 minus strand	1884856
LINC00987	NR_036466	12	Non-coding	chr12:9240002 plus strand	1884857
LINC01089	NR_002809	12	Non-coding	chr12:121803484 minus strand	1884858
LINC01234	NR_110026	12	Non-coding	chr12:113773683 minus strand	1884859
LINC01234	NR_110025	12	Non-coding	chr12:113773683 minus strand	1884859
LINC01252	NR_033890	12	Non-coding	chr12:11548029 plus strand	1884860
LINC01257	NR_026670	12	Non-coding	chr12:131165010 plus strand	1884861
LINC01405	NR_036513	12	Non-coding	chr12:110936601 plus strand	1884862
LINC01465	NR_121682	12	Non-coding	chr12:62603434 minus strand	1884863
LINC01479	NR_120456	12	Non-coding	chr12:67929234 plus strand	1884864
LINC01481	NR_120461	12	Non-coding	chr12:70243360 minus strand	1884865
LINC01481	NR_120459	12	Non-coding	chr12:70243360 minus strand	1884865

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LINC01481	NR_120460	12	Non-coding	chr12:70243360 minus strand	1884865
LINC01486	NR_120462	12	Non-coding	chr12:109359488 minus strand	1884866
LINC01489	NR_120466	12	Non-coding	chr12:15001832 plus strand	1884867
LINC01490	NR_120468	12	Non-coding	chr12:80763153 plus strand	1884868
LINC01490	NR_120470	12	Non-coding	chr12:80763153 plus strand	1884868
LINC01490	NR_120469	12	Non-coding	chr12:80763153 plus strand	1884868
LINC01498	NR_120483	12	Non-coding	chr12:108473689 minus strand	1884869
LINC01559	NR_036555	12	Non-coding	chr12:13376745 minus strand	1884870
LLPH-AS1	NR_125724	12	Non-coding	chr12:66130750 plus strand	1884871
LMO3	NR_045014	12	Non-coding	chr12:16608214 minus strand	1884872
LMO3	NR_045013	12	Non-coding	chr12:16608214 minus strand	1884872
LMO3	NR_045012	12	Non-coding	chr12:16608214 minus strand	1884872
LOC100049716	NR_122124	12	Non-coding	chr12:630890 plus strand	1884873
LOC100128554	NR_015398	12	Non-coding	chr12:126442480 plus strand	1884874
LOC100129223	NR_126055	12	Non-coding	chr12:3492819 minus strand	1884875
LOC100129940	NR_120478	12	Non-coding	chr12:65881578 minus strand	1884876
LOC100130075	NR_073494	12	Non-coding	chr12:68805494 minus strand	1884877
LOC100130238	NR_024563	12	Non-coding	chr12:132275390 plus strand	1884878
LOC100190940	NR_024457	12	Non-coding	chr12:130042342 minus strand	1884879
LOC100240734	NR_026657	12	Non-coding	chr12:54102208 plus strand	1884880
LOC100240735	NR_026658	12	Non-coding	chr12:54081823 minus strand	1884881
LOC100287944	NR_040246	12	Non-coding	chr12:106774831 minus strand	1884882
LOC100288778	NR_028269	12	Non-coding	chr12:17756 minus strand	1884883
LOC100288798	NR_125379	12	Non-coding	chr12:46383675 plus strand	1884884
LOC100288798	NR_125380	12	Non-coding	chr12:46383675 plus strand	1884884
LOC100288798	NR_125378	12	Non-coding	chr12:46383675 plus strand	1884884
LOC100288798	NR_125377	12	Non-coding	chr12:46383675 plus strand	1884884

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LOC100288798	NR_125381	12	Non-coding	chr12:46384106 plus strand	1884885
LOC100335030	NR_033267	12	Non-coding	chr12:49389173 plus strand	1884886
LOC100505978	NR_038912	12	Non-coding	chr12:106684700 minus strand	1884887
LOC100506125	NR_110019	12	Non-coding	chr12:48789146 plus strand	1884888
LOC100506125	NR_110020	12	Non-coding	chr12:48789575 plus strand	1884889
LOC100506159	NR_104634	12	Non-coding	chr12:9943495 minus strand	1884890
LOC100506314	NR_038920	12	Non-coding	chr12:12979836 plus strand	1884891
LOC100506393	NR_040098	12	Non-coding	chr12:20014684 plus strand	1884892
LOC100506551	NR_103809	12	Non-coding	chr12:116987337 minus strand	1884893
LOC100506606	NR_103860	12	Non-coding	chr12:29317848 minus strand	1884894
LOC100506844	NR_038269	12	Non-coding	chr12:57936164 minus strand	1884895
LOC100506869	NR_126341	12	Non-coding	chr12:58591701 plus strand	1884896
LOC100507065	NR_120431	12	Non-coding	chr12:65642372 minus strand	1884897
LOC100507065	NR_120432	12	Non-coding	chr12:65642372 minus strand	1884897
LOC100507065	NR_120433	12	Non-coding	chr12:65642372 minus strand	1884897
LOC100507065	NR_120434	12	Non-coding	chr12:65642372 minus strand	1884897
LOC100507091	NR_038290	12	Non-coding	chr12:123081383 plus strand	1884898
LOC100507175	NR_103861	12	Non-coding	chr12:67520081 plus strand	1884899
LOC100507195	NR_120458	12	Non-coding	chr12:68451484 minus strand	1884900
LOC100507250	NR_038930	12	Non-coding	chr12:68686859 minus strand	1884901
LOC100507377	NR_038300	12	Non-coding	chr12:74292631 minus strand	1884902
LOC100507424	NR_038933	12	Non-coding	chr12:2836815 plus strand	1884903
LOC100652999	NR_046221	12	Non-coding	chr12:53513983 plus strand	1884904
LOC100996671	NR_110036	12	Non-coding	chr12:126690318 minus strand	1884905
LOC100996671	NR_110035	12	Non-coding	chr12:126690318 minus strand	1884905
LOC100996671	NR_110034	12	Non-coding	chr12:126690318 minus strand	1884905
LOC100996679	NR_104647	12	Non-coding	chr12:128118141 minus strand	1884906

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LOC101593348	NR_103497	12	Non-coding	chr12:122226441 plus strand	1884907
LOC101927058	NR_110042	12	Non-coding	chr12:42646498 minus strand	1884908
LOC101927267	NR_120449	12	Non-coding	chr12:49324576 minus strand	1884909
LOC101927292	NR_110048	12	Non-coding	chr12:49911952 plus strand	1884910
LOC101927318	NR_110591	12	Non-coding	chr12:49962783 minus strand	1884911
LOC101927318	NR_110590	12	Non-coding	chr12:49962922 minus strand	1884912
LOC101927318	NR_110589	12	Non-coding	chr12:49962924 minus strand	1884913
LOC101927415	NR_110049	12	Non-coding	chr12:123584327 minus strand	1884914
LOC101927464	NR_110053	12	Non-coding	chr12:126095991 plus strand	1884915
LOC101927583	NR_120450	12	Non-coding	chr12:57621903 minus strand	1884916
LOC101927592	NR_104646	12	Non-coding	chr12:127060397 minus strand	1884917
LOC101927616	NR_110057	12	Non-coding	chr12:127340072 minus strand	1884918
LOC101927637	NR_120451	12	Non-coding	chr12:127636467 minus strand	1884919
LOC101927653	NR_120452	12	Non-coding	chr12:58781716 minus strand	1884920
LOC101927694	NR_104648	12	Non-coding	chr12:128118216 plus strand	1884921
LOC101927735	NR_110058	12	Non-coding	chr12:129208600 plus strand	1884922
LOC101927901	NR_110063	12	Non-coding	chr12:67729475 minus strand	1884923
LOC101927905	NR_120455	12	Non-coding	chr12:8235414 plus strand	1884924
LOC101927905	NR_120454	12	Non-coding	chr12:8235414 plus strand	1884924
LOC101928002	NR_110072	12	Non-coding	chr12:69738568 minus strand	1884925
LOC101928030	NR_120481	12	Non-coding	chr12:9381422 minus strand	1884926
LOC101928100	NR_120430	12	Non-coding	chr12:10363768 plus strand	1884927
LOC101928137	NR_110130	12	Non-coding	chr12:73159189 plus strand	1884928
LOC101928162	NR_120463	12	Non-coding	chr12:10750233 plus strand	1884929
LOC101928416	NR_120467	12	Non-coding	chr12:132329849 plus strand	1884930
LOC101928441	NR_120471	12	Non-coding	chr12:23175635 plus strand	1884931
LOC101928449	NR_110089	12	Non-coding	chr12:81953718 plus strand	1884932

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LOC101928471	NR_120473	12	Non-coding	chr12:24223270 plus strand	1884933
LOC101928471	NR_120472	12	Non-coding	chr12:24223270 plus strand	1884933
LOC101928530	NR_110919	12	Non-coding	chr12:132887841 plus strand	1884934
LOC101928597	NR_110091	12	Non-coding	chr12:133037222 minus strand	1884935
LOC101928731	NR_110093	12	Non-coding	chr12:93737823 minus strand	1884936
LOC101928731	NR_110092	12	Non-coding	chr12:93737823 minus strand	1884936
LOC101928937	NR_110095	12	Non-coding	chr12:99093358 plus strand	1884937
LOC101929058	NR_126333	12	Non-coding	chr12:103151841 plus strand	1884938
LOC101929084	NR_110103	12	Non-coding	chr12:103547793 plus strand	1884939
LOC101929162	NR_120474	12	Non-coding	chr12:107736554 plus strand	1884940
LOC101929384	NR_120475	12	Non-coding	chr12:203644 plus strand	1884941
LOC101929549	NR_110112	12	Non-coding	chr12:4720102 minus strand	1884942
LOC101929584	NR_120476	12	Non-coding	chr12:5243151 minus strand	1884943
LOC101929584	NR_120477	12	Non-coding	chr12:5243151 minus strand	1884943
LOC101930452	NR_120479	12	Non-coding	chr12:9367463 plus strand	1884944
LOC102723544	NR_120482	12	Non-coding	chr12:257299 minus strand	1884945
LOC102724020	NR_120484	12	Non-coding	chr12:10030606 minus strand	1884946
LOC102724050	NR_120487	12	Non-coding	chr12:54353690 plus strand	1884947
LOC102724050	NR_120486	12	Non-coding	chr12:54353690 plus strand	1884947
LOC102724050	NR_120488	12	Non-coding	chr12:54419784 plus strand	1884948
LOC102724421	NR_120490	12	Non-coding	chr12:67096284 minus strand	1884949
LOC102724663	NR_120491	12	Non-coding	chr12:81279188 plus strand	1884950
LOC102724933	NR_120492	12	Non-coding	chr12:93174365 plus strand	1884951
LOC283332	NR_026948	12	Non-coding	chr12:49911863 minus strand	1884952
LOC283335	NR_033854	12	Non-coding	chr12:53054438 minus strand	1884953
LOC283352	NR_104173	12	Non-coding	chr12:129109689 plus strand	1884954
LOC283352	NR_104172	12	Non-coding	chr12:129109689 plus strand	1884954

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LOC283440	NR_033958	12	Non-coding	chr12:2771669 minus strand	1884955
LOC338797	NR_103736	12	Non-coding	chr12:131347469 plus strand	1884956
LOC374443	NR_046450	12	Non-coding	chr12:9617283 plus strand	1884957
LOC374443	NR_046448	12	Non-coding	chr12:9633418 plus strand	1884958
LOC374443	NR_046449	12	Non-coding	chr12:9642867 plus strand	1884959
LOC374443	NR_046451	12	Non-coding	chr12:9647918 plus strand	1884960
LOC374443	NR_002814	12	Non-coding	chr12:9648046 plus strand	1884961
LOC374443	NR_046447	12	Non-coding	chr12:9648046 plus strand	1884961
LOC374443	NR_046446	12	Non-coding	chr12:9648046 plus strand	1884961
LOC374443	NR_046445	12	Non-coding	chr12:9648046 plus strand	1884961
LOC374443	NR_046444	12	Non-coding	chr12:9648046 plus strand	1884961
LOC400043	NR_026656	12	Non-coding	chr12:54126070 plus strand	1884962
LOC414300	NR_121211	12	Non-coding	chr12:105107642 minus strand	1884963
LOC440117	NR_033970	12	Non-coding	chr12:126874690 minus strand	1884964
LOC574538	NR_033859	12	Non-coding	chr12:149166 minus strand	1884965
LOC642846	NR_024374	12	Non-coding	chr12:9283656 plus strand	1884966
LOC643339	NR_040096	12	Non-coding	chr12:93377736 minus strand	1884967
LOC643711	NR_077241	12	Non-coding	chr12:97753598 minus strand	1884968
LOC643711	NR_077240	12	Non-coding	chr12:97756517 minus strand	1884969
LOC643770	NR_038383	12	Non-coding	chr12:98503855 minus strand	1884970
LOC728084	NR_038385	12	Non-coding	chr12:89019692 minus strand	1884971
LOC728739	NR_037629	12	Non-coding	chr12:107903771 minus strand	1884972
LOH12CR2	NR_024061	12	Non-coding	chr12:12357067 minus strand	1884973
MAPKAPK5-AS1	NR_015404	12	Non-coding	chr12:111842902 minus strand	1884974
MED21	NR_073464	12	Non-coding	chr12:27022521 plus strand	1884975
MED21	NR_073463	12	Non-coding	chr12:27022521 plus strand	1884975
MFAP5	NR_123734	12	Non-coding	chr12:8662888 minus strand	1884976

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MFAP5	NR_123733	12	Non-coding	chr12:8662888 minus strand	1884976
MGST1	NR_048545	12	Non-coding	chr12:16347642 plus strand	1884977
MGST1	NR_048547	12	Non-coding	chr12:16347777 plus strand	1884978
MIR1178	NR_031589	12	Non-coding	chr12:119713724 minus strand	1884979
MIR1228	NR_031597	12	Non-coding	chr12:57194503 plus strand	1884980
MIR1244-1	NR_036052	12	Non-coding	chr12:12111951 plus strand	1884981
MIR1244-1	NR_036052	12	Non-coding	chr12:9239551 minus strand	1884982
MIR1244-2	NR_036262	12	Non-coding	chr12:12111951 plus strand	1884983
MIR1244-2	NR_036262	12	Non-coding	chr12:9239551 minus strand	1884984
MIR1244-3	NR_036263	12	Non-coding	chr12:12111951 plus strand	1884985
MIR1244-3	NR_036263	12	Non-coding	chr12:9239551 minus strand	1884986
MIR1244-4	NR_128710	12	Non-coding	chr12:12111951 plus strand	1884987
MIR1244-4	NR_128710	12	Non-coding	chr12:9239551 minus strand	1884988
MIR1251	NR_031653	12	Non-coding	chr12:97491908 plus strand	1884989
MIR1252	NR_031700	12	Non-coding	chr12:79419256 plus strand	1884990
MIR1279	NR_031692	12	Non-coding	chr12:69273218 minus strand	1884991
MIR1291	NR_031623	12	Non-coding	chr12:48654530 minus strand	1884992
MIR1293	NR_031625	12	Non-coding	chr12:50234212 minus strand	1884993
MIR1302-1	NR_031631	12	Non-coding	chr12:112695176 minus strand	1884994
MIR135A2	NR_029678	12	Non-coding	chr12:97563811 plus strand	1884995
MIR141	NR_029682	12	Non-coding	chr12:6964096 plus strand	1884996
MIR148B	NR_029894	12	Non-coding	chr12:54337215 plus strand	1884997
MIR1827	NR_031728	12	Non-coding	chr12:100189883 plus strand	1884998
MIR196A2	NR_029617	12	Non-coding	chr12:53991737 plus strand	1884999
MIR200C	NR_029779	12	Non-coding	chr12:6963698 plus strand	1885000
MIR26A2	NR_029847	12	Non-coding	chr12:57824692 minus strand	1885001
MIR3198-2	NR_039851	12	Non-coding	chr12:54231476 minus strand	1885002

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MIR331	NR_029895	12	Non-coding	chr12:95308419 plus strand	1885003
MIR3612	NR_037406	12	Non-coding	chr12:128294091 plus strand	1885004
MIR3649	NR_037422	12	Non-coding	chr12:1660380 minus strand	1885005
MIR3652	NR_037425	12	Non-coding	chr12:103930424 plus strand	1885006
MIR3657	NR_037430	12	Non-coding	chr12:112037715 minus strand	1885007
MIR3685	NR_037456	12	Non-coding	chr12:95309922 plus strand	1885008
MIR3908	NR_037470	12	Non-coding	chr12:123536408 plus strand	1885009
MIR3913-1	NR_037475	12	Non-coding	chr12:69584823 minus strand	1885010
MIR3913-2	NR_037476	12	Non-coding	chr12:69584722 plus strand	1885011
MIR3922	NR_037487	12	Non-coding	chr12:104591632 plus strand	1885012
MIR3974	NR_039770	12	Non-coding	chr12:17673298 plus strand	1885013
MIR4302	NR_036188	12	Non-coding	chr12:25874079 minus strand	1885014
MIR4303	NR_036189	12	Non-coding	chr12:97995448 minus strand	1885015
MIR4304	NR_036187	12	Non-coding	chr12:123010728 minus strand	1885016
MIR4419B	NR_039720	12	Non-coding	chr12:128244505 plus strand	1885017
MIR4472-2	NR_039683	12	Non-coding	chr12:116428318 minus strand	1885018
MIR4494	NR_039715	12	Non-coding	chr12:47364269 minus strand	1885019
MIR4495	NR_039716	12	Non-coding	chr12:97939121 minus strand	1885020
MIR4496	NR_039717	12	Non-coding	chr12:108635809 plus strand	1885021
MIR4497	NR_039718	12	Non-coding	chr12:109833347 plus strand	1885022
MIR4498	NR_039719	12	Non-coding	chr12:120155499 minus strand	1885023
MIR4698	NR_039847	12	Non-coding	chr12:47187811 plus strand	1885024
MIR4699	NR_039848	12	Non-coding	chr12:81158387 plus strand	1885025
MIR4700	NR_039849	12	Non-coding	chr12:120723192 plus strand	1885026
MIR4701	NR_039850	12	Non-coding	chr12:48772037 minus strand	1885027
MIR492	NR_030171	12	Non-coding	chr12:94834397 plus strand	1885028
MIR5188	NR_049820	12	Non-coding	chr12:124915546 plus strand	1885029

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MIR548AQ	NR_049838	12	Non-coding	chr12:121596528 plus strand	1885030
MIR548C	NR_030347	12	Non-coding	chr12:64622508 plus strand	1885031
MIR548Z	NR_037515	12	Non-coding	chr12:64622605 minus strand	1885032
MIR5700	NR_049885	12	Non-coding	chr12:94561788 plus strand	1885033
MIR6074	NR_106722	12	Non-coding	chr12:66023726 minus strand	1885034
MIR6125	NR_106740	12	Non-coding	chr12:62260358 plus strand	1885035
MIR613	NR_030344	12	Non-coding	chr12:12764648 plus strand	1885036
MIR614	NR_030345	12	Non-coding	chr12:12915828 plus strand	1885037
MIR615	NR_030753	12	Non-coding	chr12:54033949 plus strand	1885038
MIR616	NR_030346	12	Non-coding	chr12:57519259 minus strand	1885039
MIR617	NR_030348	12	Non-coding	chr12:80832629 minus strand	1885040
MIR618	NR_030349	12	Non-coding	chr12:80935833 minus strand	1885041
MIR619	NR_030350	12	Non-coding	chr12:108837006 minus strand	1885042
MIR620	NR_030351	12	Non-coding	chr12:116148654 minus strand	1885043
MIR6502	NR_106757	12	Non-coding	chr12:66251081 plus strand	1885044
MIR6505	NR_106760	12	Non-coding	chr12:48132796 plus strand	1885045
MIR6757	NR_106815	12	Non-coding	chr12:53056943 plus strand	1885046
MIR6758	NR_106816	12	Non-coding	chr12:57512687 plus strand	1885047
MIR6759	NR_106817	12	Non-coding	chr12:57748682 minus strand	1885048
MIR6760	NR_106818	12	Non-coding	chr12:111304141 plus strand	1885049
MIR6761	NR_106819	12	Non-coding	chr12:111799833 plus strand	1885050
MIR6762	NR_106820	12	Non-coding	chr12:113291522 plus strand	1885051
MIR6763	NR_106821	12	Non-coding	chr12:132581996 plus strand	1885052
MIR6861	NR_106921	12	Non-coding	chr12:112163321 minus strand	1885053
MIR6880	NR_106940	12	Non-coding	chr12:124337242 minus strand	1885054
MIR7106	NR_106956	12	Non-coding	chr12:113159177 minus strand	1885055
MIR7107	NR_106957	12	Non-coding	chr12:121444352 minus strand	1885056

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MIR7641-2	NR_106988	12	Non-coding	chr12:104125274 plus strand	1885057
MIR7641-2	NR_106988	12	Non-coding	chr12:13046190 plus strand	1885058
MIR7844	NR_106998	12	Non-coding	chr12:94571352 minus strand	1885059
MIR7851	NR_107005	12	Non-coding	chr12:42323859 minus strand	1885060
MIR8072	NR_107039	12	Non-coding	chr12:123364843 minus strand	1885061
MIR920	NR_030625	12	Non-coding	chr12:24212420 plus strand	1885062
MIRLET7I	NR_029661	12	Non-coding	chr12:62603685 plus strand	1885063
MKRN9P	NR_033410	12	Non-coding	chr12:87784711 minus strand	1885064
MLF2	NR_026581	12	Non-coding	chr12:6753470 minus strand	1885065
MMAB	NR_038118	12	Non-coding	chr12:109573553 minus strand	1885066
MMP19	NR_073606	12	Non-coding	chr12:55842983 minus strand	1885067
MPHOSPH9	NR_103517	12	Non-coding	chr12:123233238 minus strand	1885068
MRPL42	NR_038159	12	Non-coding	chr12:93467489 plus strand	1885069
MRPL42	NR_038160	12	Non-coding	chr12:93467489 plus strand	1885069
MRPL42	NR_038161	12	Non-coding	chr12:93467489 plus strand	1885069
MRS2P2	NR_024072	12	Non-coding	chr12:71850983 minus strand	1885070
NACA	NR_045277	12	Non-coding	chr12:56725282 minus strand	1885071
NECAP1	NR_024260	12	Non-coding	chr12:8082210 plus strand	1885072
OR7E47P	NR_120437	12	Non-coding	chr12:52079695 plus strand	1885073
OR7E47P	NR_120438	12	Non-coding	chr12:52084745 plus strand	1885074
OR7E47P	NR_120439	12	Non-coding	chr12:52084745 plus strand	1885074
OR7E47P	NR_120440	12	Non-coding	chr12:52093568 plus strand	1885075
OVCH1-AS1	NR_073171	12	Non-coding	chr12:29389293 plus strand	1885076
OVCH1-AS1	NR_073172	12	Non-coding	chr12:29389293 plus strand	1885076
OVCH1-AS1	NR_073170	12	Non-coding	chr12:29389293 plus strand	1885076
P2RX4	NR_046373	12	Non-coding	chr12:121209860 plus strand	1885077
P2RX4	NR_046372	12	Non-coding	chr12:121209860 plus strand	1885077

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P2RX7	NR_033953	12	Non-coding	chr12:121132818 plus strand	1885078
P2RX7	NR_033955	12	Non-coding	chr12:121132827 plus strand	1885079
P2RX7	NR_033956	12	Non-coding	chr12:121132827 plus strand	1885079
P2RX7	NR_033952	12	Non-coding	chr12:121132827 plus strand	1885079
P2RX7	NR_033951	12	Non-coding	chr12:121132827 plus strand	1885079
P2RX7	NR_033950	12	Non-coding	chr12:121132827 plus strand	1885079
P2RX7	NR_033949	12	Non-coding	chr12:121132827 plus strand	1885079
P2RX7	NR_033948	12	Non-coding	chr12:121132827 plus strand	1885079
P2RX7	NR_033954	12	Non-coding	chr12:121132827 plus strand	1885079
PARP11	NR_104461	12	Non-coding	chr12:3873448 minus strand	1885080
PCBP2-OT1	NR_109828	12	Non-coding	chr12:53464467 plus strand	1885081
PCED1B-AS1	NR_026544	12	Non-coding	chr12:47216443 minus strand	1885082
PGAM1P5	NR_077225	12	Non-coding	chr12:95649254 plus strand	1885083
PLBD1-AS1	NR_120465	12	Non-coding	chr12:14567731 plus strand	1885084
PLCZ1	NR_073075	12	Non-coding	chr12:18738059 minus strand	1885085
PLEKHA8P1	NR_037144	12	Non-coding	chr12:45216006 minus strand	1885086
PLXNC1	NR_037687	12	Non-coding	chr12:94262520 plus strand	1885087
POC1B	NR_037660	12	Non-coding	chr12:89525567 minus strand	1885088
POC1B	NR_037659	12	Non-coding	chr12:89526262 minus strand	1885089
POU5F1P3	NR_036440	12	Non-coding	chr12:8134852 minus strand	1885090
POU6F1	NR_026893	12	Non-coding	chr12:51217693 minus strand	1885091
PRH1-PRR4	NR_037918	12	Non-coding	chr12:11171625 minus strand	1885092
PSMD9	NR_048555	12	Non-coding	chr12:121888730 plus strand	1885093
PTGES3	NR_104219	12	Non-coding	chr12:56687997 minus strand	1885094
PTPRR	NR_073474	12	Non-coding	chr12:70754608 minus strand	1885095
PXN-AS1	NR_038924	12	Non-coding	chr12:120201290 plus strand	1885096
RAB3IP	NR_103519	12	Non-coding	chr12:69738685 plus strand	1885097

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RAB3IP	NR_103520	12	Non-coding	chr12:69739389 plus strand	1885098
RACGAP1P	NR_026583	12	Non-coding	chr12:45065411 minus strand	1885099
RAD52	NR_123713	12	Non-coding	chr12:949722 minus strand	1885100
RASSF3	NR_040718	12	Non-coding	chr12:64610512 plus strand	1885101
RASSF8-AS1	NR_038227	12	Non-coding	chr12:25957585 minus strand	1885102
RASSF8-AS1	NR_038228	12	Non-coding	chr12:25959442 minus strand	1885103
RERG-AS1	NR_046559	12	Non-coding	chr12:15151922 plus strand	1885104
RERGL	NR_104413	12	Non-coding	chr12:18090193 minus strand	1885105
RHNO1	NR_046433	12	Non-coding	chr12:2876257 plus strand	1885106
RHNO1	NR_027365	12	Non-coding	chr12:2877198 plus strand	1885107
RHNO1	NR_046432	12	Non-coding	chr12:2877198 plus strand	1885107
RIMKLB	NR_123740	12	Non-coding	chr12:8681676 plus strand	1885108
RMST	NR_024037	12	Non-coding	chr12:97465020 plus strand	1885109
RNF41	NR_040053	12	Non-coding	chr12:56221931 minus strand	1885110
RNU4-1	NR_003925	12	Non-coding	chr12:120293237 minus strand	1885111
RNU4-2	NR_003137	12	Non-coding	chr12:120291903 minus strand	1885112
RNU6-36P	NR_046494	12	Non-coding	chr12:97721715 plus strand	1885113
RNU7-1	NR_023317	12	Non-coding	chr12:6943815 plus strand	1885114
RPL13AP20	NR_003932	12	Non-coding	chr12:12875476 plus strand	1885115
RPL13P5	NR_002803	12	Non-coding	chr12:6883980 plus strand	1885116
RPSAP52	NR_026825	12	Non-coding	chr12:65826974 minus strand	1885117
RSRC2	NR_036435	12	Non-coding	chr12:122527013 minus strand	1885118
RSRC2	NR_036436	12	Non-coding	chr12:122527013 minus strand	1885118
RSRC2	NR_036434	12	Non-coding	chr12:122527013 minus strand	1885118
SARNP	NR_026723	12	Non-coding	chr12:55817756 minus strand	1885119
SARNP	NR_026722	12	Non-coding	chr12:55817756 minus strand	1885119
SCARNA10	NR_004387	12	Non-coding	chr12:6510221 plus strand	1885120

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SCARNA11	NR_003012	12	Non-coding	chr12:6581609 minus strand	1885121
SCARNA12	NR_003010	12	Non-coding	chr12:6967606 minus strand	1885122
SENP1	NR_051991	12	Non-coding	chr12:48105992 minus strand	1885123
SENP1	NR_051992	12	Non-coding	chr12:48105992 minus strand	1885123
SHMT2	NR_029417	12	Non-coding	chr12:57229572 plus strand	1885124
SHMT2	NR_029416	12	Non-coding	chr12:57230044 plus strand	1885125
SHMT2	NR_029415	12	Non-coding	chr12:57230327 plus strand	1885126
SHMT2	NR_048562	12	Non-coding	chr12:57230365 plus strand	1885127
SKP1P2	NR_036619	12	Non-coding	chr12:16988746 plus strand	1885128
SLC11A2	NR_033422	12	Non-coding	chr12:51026416 minus strand	1885129
SLC11A2	NR_033421	12	Non-coding	chr12:51026416 minus strand	1885129
SLC16A7	NR_073056	12	Non-coding	chr12:59689336 plus strand	1885130
SLC16A7	NR_073055	12	Non-coding	chr12:59689336 plus strand	1885130
SLC4A8	NR_047672	12	Non-coding	chr12:51424809 plus strand	1885131
SLC9A7P1	NR_033801	12	Non-coding	chr12:98457145 minus strand	1885132
SMUG1	NR_045039	12	Non-coding	chr12:54188994 minus strand	1885133
SNORA2A	NR_002950	12	Non-coding	chr12:48656782 minus strand	1885134
SNORA2B	NR_002951	12	Non-coding	chr12:48667593 minus strand	1885135
SNORA34	NR_002968	12	Non-coding	chr12:48654518 minus strand	1885136
SNORA49	NR_002979	12	Non-coding	chr12:132031223 plus strand	1885137
SNORA53	NR_003015	12	Non-coding	chr12:98599634 plus strand	1885138
SNORA70G	NR_033335	12	Non-coding	chr12:68627375 minus strand	1885139
SNORD59A	NR_002737	12	Non-coding	chr12:56645101 minus strand	1885140
SNORD59B	NR_003046	12	Non-coding	chr12:56643754 minus strand	1885141
SNRNP35	NR_104103	12	Non-coding	chr12:123458103 plus strand	1885142
SOCS2-AS1	NR_038263	12	Non-coding	chr12:93571398 minus strand	1885143
SPATS2	NR_120663	12	Non-coding	chr12:49366904 plus strand	1885144

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STAC3	NR_104422	12	Non-coding	chr12:57251193 minus strand	1885145
STAT6	NR_033659	12	Non-coding	chr12:57111413 minus strand	1885146
TAC3	NR_033654	12	Non-coding	chr12:57016560 minus strand	1885147
TBC1D15	NR_027449	12	Non-coding	chr12:71839706 plus strand	1885148
TBX5-AS1	NR_038440	12	Non-coding	chr12:114408194 plus strand	1885149
TESC	NR_031766	12	Non-coding	chr12:117099446 minus strand	1885150
TESC-AS1	NR_120464	12	Non-coding	chr12:117099466 plus strand	1885151
THRIL	NR_110375	12	Non-coding	chr12:125027423 minus strand	1885152
TMEM116	NR_122119	12	Non-coding	chr12:112013219 minus strand	1885153
TMEM198B	NR_036479	12	Non-coding	chr12:55829607 plus strand	1885154
TMEM198B	NR_036478	12	Non-coding	chr12:55829607 plus strand	1885154
TMEM198B	NR_036477	12	Non-coding	chr12:55829607 plus strand	1885154
TMEM198B	NR_036476	12	Non-coding	chr12:55829607 plus strand	1885154
TMEM5-AS1	NR_126167	12	Non-coding	chr12:63822156 minus strand	1885155
TMPO-AS1	NR_027157	12	Non-coding	chr12:98516226 minus strand	1885156
TRHDE-AS1	NR_026837	12	Non-coding	chr12:72273509 minus strand	1885157
TRHDE-AS1	NR_026836	12	Non-coding	chr12:72273509 minus strand	1885157
TWF1	NR_073473	12	Non-coding	chr12:43806375 minus strand	1885158
TWF1	NR_073472	12	Non-coding	chr12:43806375 minus strand	1885158
USP30-AS1	NR_038996	12	Non-coding	chr12:109053965 minus strand	1885159
USP44	NR_125360	12	Non-coding	chr12:95534326 minus strand	1885160
VAMP1	NR_123717	12	Non-coding	chr12:6470899 minus strand	1885161
VEZT	NR_038242	12	Non-coding	chr12:95217745 plus strand	1885162
VEZT	NR_038241	12	Non-coding	chr12:95217745 plus strand	1885162
VPS29	NR_104100	12	Non-coding	chr12:110502140 minus strand	1885163
VPS29	NR_104099	12	Non-coding	chr12:110502140 minus strand	1885163
VPS29	NR_104102	12	Non-coding	chr12:110502140 minus strand	1885163

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VPS29	NR_104101	12	Non-coding	chr12:110502140 minus strand	1885163
YAF2	NR_034000	12	Non-coding	chr12:42238349 minus strand	1885164
ALG11	NR_036571	13	Non-coding	chr13:52012386 plus strand	1885165
ANKRD10	NR_104587	13	Non-coding	chr13:110915107 minus strand	1885166
ANKRD10	NR_104586	13	Non-coding	chr13:110915107 minus strand	1885166
ANKRD20A19P	NR_073430	13	Non-coding	chr13:23949315 minus strand	1885167
ANKRD20A9P	NR_027995	13	Non-coding	chr13:18871969 minus strand	1885168
ANKRD26P3	NR_027248	13	Non-coding	chr13:19344973 minus strand	1885169
ARHGEF7-AS1	NR_046516	13	Non-coding	chr13:111148565 minus strand	1885170
ATP11A-AS1	NR_046661	13	Non-coding	chr13:112754731 minus strand	1885171
ATP11A-AS1	NR_109811	13	Non-coding	chr13:112754731 minus strand	1885171
ATP5EP2	NR_002162	13	Non-coding	chr13:27945205 plus strand	1885172
ATXN8OS	NR_002717	13	Non-coding	chr13:70107212 plus strand	1885173
BASP1P1	NR_033774	13	Non-coding	chr13:22898181 minus strand	1885174
BTF3P11	NR_026983	13	Non-coding	chr13:76928450 plus strand	1885175
C1QTNF9B	NR_104426	13	Non-coding	chr13:23897502 minus strand	1885176
CARKD	NR_040104	13	Non-coding	chr13:110615459 plus strand	1885177
CARKD	NR_040103	13	Non-coding	chr13:110615459 plus strand	1885177
CDADC1	NR_036439	13	Non-coding	chr13:49247910 plus strand	1885178
CENPJ	NR_047594	13	Non-coding	chr13:24922889 minus strand	1885179
CENPJ	NR_047595	13	Non-coding	chr13:24922889 minus strand	1885179
CLDN10-AS1	NR_046533	13	Non-coding	chr13:95533910 minus strand	1885180
CLYBL	NR_104592	13	Non-coding	chr13:99606663 plus strand	1885181
CLYBL-AS1	NR_120384	13	Non-coding	chr13:99729001 minus strand	1885182
CLYBL-AS1	NR_120383	13	Non-coding	chr13:99729001 minus strand	1885182
CLYBL-AS1	NR_046525	13	Non-coding	chr13:99729001 minus strand	1885182
CLYBL-AS2	NR_046526	13	Non-coding	chr13:99690971 minus strand	1885183

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COG6	NR_026745	13	Non-coding	chr13:39655626 plus strand	1885184
COL4A2-AS1	NR_046583	13	Non-coding	chr13:110508179 minus strand	1885185
CPB2-AS1	NR_046227	13	Non-coding	chr13:46052847 plus strand	1885186
CPB2-AS1	NR_046226	13	Non-coding	chr13:46052847 plus strand	1885186
CTAGE10P	NR_003268	13	Non-coding	chr13:49890408 plus strand	1885187
CTAGE11P	NR_027466	13	Non-coding	chr13:75240381 minus strand	1885188
DAOA-AS1	NR_040247	13	Non-coding	chr13:105505681 minus strand	1885189
DGKH	NR_123714	13	Non-coding	chr13:42138041 plus strand	1885190
DGKH	NR_123715	13	Non-coding	chr13:42138041 plus strand	1885190
DIAPH3-AS1	NR_109838	13	Non-coding	chr13:60012717 plus strand	1885191
DIAPH3-AS1	NR_046539	13	Non-coding	chr13:60012717 plus strand	1885191
DIAPH3-AS1	NR_051993	13	Non-coding	chr13:60013302 plus strand	1885192
DIAPH3-AS1	NR_051994	13	Non-coding	chr13:60013302 plus strand	1885192
DIAPH3-AS1	NR_109839	13	Non-coding	chr13:60013302 plus strand	1885192
DIAPH3-AS2	NR_046540	13	Non-coding	chr13:60144697 plus strand	1885193
DLEU1	NR_109974	13	Non-coding	chr13:50082168 plus strand	1885194
DLEU1	NR_002605	13	Non-coding	chr13:50082168 plus strand	1885194
DLEU1	NR_109973	13	Non-coding	chr13:50082168 plus strand	1885194
DLEU1-AS1	NR_125753	13	Non-coding	chr13:50527449 minus strand	1885195
DLEU2	NR_002612	13	Non-coding	chr13:50125541 minus strand	1885196
DLEU7-AS1	NR_046551	13	Non-coding	chr13:50807854 plus strand	1885197
DOCK9-AS1	NR_046663	13	Non-coding	chr13:98832083 plus strand	1885198
DOCK9-AS2	NR_047482	13	Non-coding	chr13:99086722 plus strand	1885199
EBPL	NR_103803	13	Non-coding	chr13:49691487 minus strand	1885200
EBPL	NR_103802	13	Non-coding	chr13:49691487 minus strand	1885200
EDNRB-AS1	NR_103853	13	Non-coding	chr13:77818936 plus strand	1885201
EEF1DP3	NR_027062	13	Non-coding	chr13:31846782 plus strand	1885202

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ENOX1-AS2	NR_120399	13	Non-coding	chr13:43448851 plus strand	1885203
F10-AS1	NR_126424	13	Non-coding	chr13:113130046 minus strand	1885204
F7	NR_051961	13	Non-coding	chr13:113105787 plus strand	1885205
FAM155A-IT1	NR_046848	13	Non-coding	chr13:107835458 minus strand	1885206
FAM230C	NR_027278	13	Non-coding	chr13:18195296 plus strand	1885207
FGF14-AS1	NR_125912	13	Non-coding	chr13:102367529 plus strand	1885208
FGF14-AS2	NR_036487	13	Non-coding	chr13:102394577 plus strand	1885209
FGF14-IT1	NR_036486	13	Non-coding	chr13:102394519 minus strand	1885210
FKSG29	NR_024013	13	Non-coding	chr13:99351419 plus strand	1885211
FNDC3A	NR_103528	13	Non-coding	chr13:48976608 plus strand	1885212
FRY-AS1	NR_103839	13	Non-coding	chr13:32031639 minus strand	1885213
GAS6-AS1	NR_044995	13	Non-coding	chr13:113815609 plus strand	1885214
GAS6-AS2	NR_044993	13	Non-coding	chr13:113864176 plus strand	1885215
GPC5-AS1	NR_049776	13	Non-coding	chr13:92719955 minus strand	1885216
GPC5-AS1	NR_049775	13	Non-coding	chr13:92719974 minus strand	1885217
GPC5-AS1	NR_046520	13	Non-coding	chr13:92721614 minus strand	1885218
GPC5-AS2	NR_120382	13	Non-coding	chr13:92352207 minus strand	1885219
GPC6-AS1	NR_046535	13	Non-coding	chr13:94187991 minus strand	1885220
GPC6-AS2	NR_046536	13	Non-coding	chr13:93858473 minus strand	1885221
GRTP1-AS1	NR_046541	13	Non-coding	chr13:113351672 plus strand	1885222
GRTP1-AS1	NR_120385	13	Non-coding	chr13:113351672 plus strand	1885222
GUCY1B2	NR_003923	13	Non-coding	chr13:51066157 minus strand	1885223
HTR2A-AS1	NR_046612	13	Non-coding	chr13:46852139 plus strand	1885224
HTR2A-AS1	NR_103752	13	Non-coding	chr13:46852139 plus strand	1885224
INTS6-AS1	NR_103812	13	Non-coding	chr13:51453344 plus strand	1885225
LINC00282	NR_027048	13	Non-coding	chr13:51845150 minus strand	1885226
LINC00282	NR_027047	13	Non-coding	chr13:51845150 minus strand	1885226

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LINC00284	NR_026955	13	Non-coding	chr13:44022334 plus strand	1885227
LINC00297	NR_046510	13	Non-coding	chr13:29888405 minus strand	1885228
LINC00327	NR_038995	13	Non-coding	chr13:23469511 plus strand	1885229
LINC00330	NR_038433	13	Non-coding	chr13:44809630 minus strand	1885230
LINC00331	NR_046869	13	Non-coding	chr13:78840050 minus strand	1885231
LINC00332	NR_046870	13	Non-coding	chr13:40181808 plus strand	1885232
LINC00333	NR_046871	13	Non-coding	chr13:84140601 plus strand	1885233
LINC00343	NR_046391	13	Non-coding	chr13:105706829 plus strand	1885234
LINC00343	NR_120418	13	Non-coding	chr13:105706829 plus strand	1885234
LINC00346	NR_027701	13	Non-coding	chr13:110870308 minus strand	1885235
LINC00347	NR_034025	13	Non-coding	chr13:74552842 plus strand	1885236
LINC00347	NR_034024	13	Non-coding	chr13:74552842 plus strand	1885236
LINC00348	NR_047699	13	Non-coding	chr13:71015140 plus strand	1885237
LINC00351	NR_046989	13	Non-coding	chr13:85363602 plus strand	1885238
LINC00353	NR_046991	13	Non-coding	chr13:89564413 minus strand	1885239
LINC00354	NR_046992	13	Non-coding	chr13:111893377 plus strand	1885240
LINC00354	NR_120401	13	Non-coding	chr13:111893495 plus strand	1885241
LINC00358	NR_046995	13	Non-coding	chr13:62029548 minus strand	1885242
LINC00359	NR_051966	13	Non-coding	chr13:96984172 minus strand	1885243
LINC00363	NR_126360	13	Non-coding	chr13:93045340 plus strand	1885244
LINC00366	NR_046999	13	Non-coding	chr13:38567723 plus strand	1885245
LINC00367	NR_104058	13	Non-coding	chr13:20949428 minus strand	1885246
LINC00368	NR_120415	13	Non-coding	chr13:111095837 plus strand	1885247
LINC00371	NR_102432	13	Non-coding	chr13:51172222 minus strand	1885248
LINC00371	NR_102431	13	Non-coding	chr13:51172388 minus strand	1885249
LINC00375	NR_126383	13	Non-coding	chr13:85148057 minus strand	1885250
LINC00376	NR_126409	13	Non-coding	chr13:63328094 minus strand	1885251

【１６８８】

LINC00377	NR_125770	13	Non-coding	chr13:81018390 plus strand	1885252
LINC00378	NR_047003	13	Non-coding	chr13:60672954 plus strand	1885253
LINC00379	NR_047004	13	Non-coding	chr13:91211698 minus strand	1885254
LINC00380	NR_104057	13	Non-coding	chr13:91089617 minus strand	1885255
LINC00381	NR_047005	13	Non-coding	chr13:74419172 plus strand	1885256
LINC00382	NR_120413	13	Non-coding	chr13:79872585 plus strand	1885257
LINC00383	NR_125752	13	Non-coding	chr13:69222345 plus strand	1885258
LINC00392	NR_047009	13	Non-coding	chr13:73564243 plus strand	1885259
LINC00395	NR_047011	13	Non-coding	chr13:63738018 minus strand	1885260
LINC00396	NR_126387	13	Non-coding	chr13:110053284 plus strand	1885261
LINC00397	NR_104059	13	Non-coding	chr13:87810520 minus strand	1885262
LINC00398	NR_047012	13	Non-coding	chr13:30803205 plus strand	1885263
LINC00399	NR_126361	13	Non-coding	chr13:109400695 plus strand	1885264
LINC00400	NR_047013	13	Non-coding	chr13:43113164 plus strand	1885265
LINC00403	NR_120392	13	Non-coding	chr13:111972309 plus strand	1885266
LINC00403	NR_120394	13	Non-coding	chr13:112107118 plus strand	1885267
LINC00408	NR_104118	13	Non-coding	chr13:18905438 plus strand	1885268
LINC00410	NR_027039	13	Non-coding	chr13:90926597 minus strand	1885269
LINC00411	NR_047015	13	Non-coding	chr13:100944364 minus strand	1885270
LINC00412	NR_120429	13	Non-coding	chr13:27237257 minus strand	1885271
LINC00417	NR_047508	13	Non-coding	chr13:18740099 minus strand	1885272
LINC00421	NR_034026	13	Non-coding	chr13:19345048 plus strand	1885273
LINC00423	NR_047020	13	Non-coding	chr13:32911652 minus strand	1885274
LINC00424	NR_047040	13	Non-coding	chr13:21878160 minus strand	1885275
LINC00426	NR_024464	13	Non-coding	chr13:30373914 minus strand	1885276
LINC00428	NR_126388	13	Non-coding	chr13:42872744 minus strand	1885277
LINC00428	NR_126389	13	Non-coding	chr13:42872744 minus strand	1885277

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LINC00431	NR_126378	13	Non-coding	chr13:110966026 plus strand	1885278
LINC00433	NR_047021	13	Non-coding	chr13:88540828 plus strand	1885279
LINC00437	NR_126377	13	Non-coding	chr13:38686675 minus strand	1885280
LINC00441	NR_046414	13	Non-coding	chr13:48303661 minus strand	1885281
LINC00442	NR_026852	13	Non-coding	chr13:19008258 plus strand	1885282
LINC00443	NR_047026	13	Non-coding	chr13:106653879 plus strand	1885283
LINC00446	NR_047028	13	Non-coding	chr13:78012882 plus strand	1885284
LINC00448	NR_047029	13	Non-coding	chr13:62796692 minus strand	1885285
LINC00448	NR_120404	13	Non-coding	chr13:62796692 minus strand	1885285
LINC00448	NR_120403	13	Non-coding	chr13:62807359 minus strand	1885286
LINC00456	NR_125725	13	Non-coding	chr13:97179622 minus strand	1885287
LINC00457	NR_047036	13	Non-coding	chr13:34640685 minus strand	1885288
LINC00458	NR_108063	13	Non-coding	chr13:54132871 minus strand	1885289
LINC00458	NR_108062	13	Non-coding	chr13:54132871 minus strand	1885289
LINC00460	NR_034119	13	Non-coding	chr13:106376562 plus strand	1885290
LINC00462	NR_051983	13	Non-coding	chr13:48580901 minus strand	1885291
LINC00463	NR_120428	13	Non-coding	chr13:25180001 minus strand	1885292
LINC00539	NR_103840	13	Non-coding	chr13:21344786 minus strand	1885293
LINC00539	NR_103841	13	Non-coding	chr13:21344859 minus strand	1885294
LINC00540	NR_103810	13	Non-coding	chr13:22210284 plus strand	1885295
LINC00544	NR_033889	13	Non-coding	chr13:29936530 plus strand	1885296
LINC00545	NR_103813	13	Non-coding	chr13:30882561 plus strand	1885297
LINC00547	NR_040244	13	Non-coding	chr13:37534939 plus strand	1885298
LINC00548	NR_033877	13	Non-coding	chr13:40220502 minus strand	1885299
LINC00550	NR_038878	13	Non-coding	chr13:68885325 minus strand	1885300
LINC00551	NR_051977	13	Non-coding	chr13:106617809 plus strand	1885301
LINC00552	NR_028064	13	Non-coding	chr13:113751089 minus strand	1885302

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LINC00554	NR_047483	13	Non-coding	chr13:99997909 minus strand	1885303
LINC00558	NR_047488	13	Non-coding	chr13:53815418 plus strand	1885304
LINC00559	NR_047489	13	Non-coding	chr13:90119717 minus strand	1885305
LINC00562	NR_047492	13	Non-coding	chr13:47932622 minus strand	1885306
LINC00563	NR_047493	13	Non-coding	chr13:46297844 minus strand	1885307
LINC00565	NR_047495	13	Non-coding	chr13:113928991 minus strand	1885308
LINC00571	NR_047500	13	Non-coding	chr13:38143232 minus strand	1885309
LINC00572	NR_047501	13	Non-coding	chr13:29926651 minus strand	1885310
LINC00598	NR_024506	13	Non-coding	chr13:40481006 minus strand	1885311
LINC00598	NR_024507	13	Non-coding	chr13:40481006 minus strand	1885311
LINC00598	NR_024505	13	Non-coding	chr13:40481006 minus strand	1885311
LINC00676	NR_103846	13	Non-coding	chr13:109728273 plus strand	1885312
LINC01038	NR_125785	13	Non-coding	chr13:79804385 plus strand	1885313
LINC01039	NR_126390	13	Non-coding	chr13:99577111 plus strand	1885314
LINC01044	NR_126345	13	Non-coding	chr13:112331225 minus strand	1885315
LINC01046	NR_125745	13	Non-coding	chr13:21234567 plus strand	1885316
LINC01048	NR_125762	13	Non-coding	chr13:37484784 minus strand	1885317
LINC01049	NR_120414	13	Non-coding	chr13:90493287 plus strand	1885318
LINC01050	NR_125747	13	Non-coding	chr13:42812562 minus strand	1885319
LINC01053	NR_120427	13	Non-coding	chr13:25181331 plus strand	1885320
LINC01054	NR_126391	13	Non-coding	chr13:114333948 minus strand	1885321
LINC01055	NR_125786	13	Non-coding	chr13:45701184 minus strand	1885322
LINC01058	NR_125771	13	Non-coding	chr13:30422244 minus strand	1885323
LINC01065	NR_125788	13	Non-coding	chr13:53151900 minus strand	1885324
LINC01068	NR_125772	13	Non-coding	chr13:79566726 plus strand	1885325
LINC01069	NR_108076	13	Non-coding	chr13:77994773 minus strand	1885326
LINC01070	NR_108094	13	Non-coding	chr13:112197332 plus strand	1885327

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LINC01072	NR_126380	13	Non-coding	chr13:20102700 plus strand	1885328
LINC01075	NR_125787	13	Non-coding	chr13:62212281 plus strand	1885329
LINC01080	NR_104138	13	Non-coding	chr13:80011076 plus strand	1885330
LINC01198	NR_120426	13	Non-coding	chr13:46466776 minus strand	1885331
LINC01232	NR_110731	13	Non-coding	chr13:99499306 minus strand	1885332
LINC01309	NR_126374	13	Non-coding	chr13:103425199 plus strand	1885333
LMO7-AS1	NR_120411	13	Non-coding	chr13:75635994 minus strand	1885334
LMO7-AS1	NR_120410	13	Non-coding	chr13:75635994 minus strand	1885334
LMO7-AS1	NR_120412	13	Non-coding	chr13:75635994 minus strand	1885334
LMO7DN-IT1	NR_126373	13	Non-coding	chr13:75876885 plus strand	1885335
LOC101060553	NR_120398	13	Non-coding	chr13:111153577 minus strand	1885336
LOC101926897	NR_120416	13	Non-coding	chr13:58165826 plus strand	1885337
LOC101927248	NR_120417	13	Non-coding	chr13:94708486 minus strand	1885338
LOC101927284	NR_110754	13	Non-coding	chr13:94760940 plus strand	1885339
LOC101927437	NR_120421	13	Non-coding	chr13:99957165 minus strand	1885340
LOC101928697	NR_126054	13	Non-coding	chr13:19182032 plus strand	1885341
LOC101928730	NR_120422	13	Non-coding	chr13:112273000 minus strand	1885342
LOC101929140	NR_120423	13	Non-coding	chr13:41132927 plus strand	1885343
LOC101929259	NR_120424	13	Non-coding	chr13:45106278 plus strand	1885344
LOC101929657	NR_110306	13	Non-coding	chr13:52128894 plus strand	1885345
LOC103191607	NR_120400	13	Non-coding	chr13:52334294 plus strand	1885346
MCF2L-AS1	NR_034002	13	Non-coding	chr13:112968638 minus strand	1885347
MED4-AS1	NR_046511	13	Non-coding	chr13:48077136 plus strand	1885348
METTL21EP	NR_026965	13	Non-coding	chr13:102880098 plus strand	1885349
MINOS1P1	NR_051980	13	Non-coding	chr13:32498492 minus strand	1885350
MIPEPP3	NR_046461	13	Non-coding	chr13:21298124 plus strand	1885351
MIPEPP3	NR_038939	13	Non-coding	chr13:21298124 plus strand	1885351

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MIR1267	NR_031671	13	Non-coding	chr13:107531248 minus strand	1885352
MIR1297	NR_031628	13	Non-coding	chr13:54312048 minus strand	1885353
MIR15A	NR_029485	13	Non-coding	chr13:50049201 minus strand	1885354
MIR16-1	NR_029486	13	Non-coding	chr13:50049061 minus strand	1885355
MIR17	NR_029487	13	Non-coding	chr13:91350604 plus strand	1885356
MIR17HG	NR_027349	13	Non-coding	chr13:91347819 plus strand	1885357
MIR17HG	NR_027350	13	Non-coding	chr13:91347819 plus strand	1885357
MIR18A	NR_029488	13	Non-coding	chr13:91350750 plus strand	1885358
MIR19A	NR_029489	13	Non-coding	chr13:91350890 plus strand	1885359
MIR19B1	NR_029490	13	Non-coding	chr13:91351191 plus strand	1885360
MIR20A	NR_029492	13	Non-coding	chr13:91351064 plus strand	1885361
MIR2276	NR_031753	13	Non-coding	chr13:24162415 plus strand	1885362
MIR2681	NR_039603	13	Non-coding	chr13:101967746 minus strand	1885363
MIR3168	NR_036127	13	Non-coding	chr13:41101100 minus strand	1885364
MIR3169	NR_036128	13	Non-coding	chr13:61199880 minus strand	1885365
MIR3170	NR_036129	13	Non-coding	chr13:98208523 plus strand	1885366
MIR320D1	NR_031723	13	Non-coding	chr13:40727875 minus strand	1885367
MIR3613	NR_037407	13	Non-coding	chr13:49996501 minus strand	1885368
MIR3665	NR_037438	13	Non-coding	chr13:77698116 minus strand	1885369
MIR4305	NR_036190	13	Non-coding	chr13:39664135 minus strand	1885370
MIR4306	NR_036191	13	Non-coding	chr13:99643058 plus strand	1885371
MIR4499	NR_039721	13	Non-coding	chr13:20433846 minus strand	1885372
MIR4500	NR_039722	13	Non-coding	chr13:87618740 minus strand	1885373
MIR4500HG	NR_033829	13	Non-coding	chr13:87670963 minus strand	1885374
MIR4501	NR_039723	13	Non-coding	chr13:96427228 plus strand	1885375
MIR4502	NR_039724	13	Non-coding	chr13:114273827 plus strand	1885376
MIR4703	NR_039852	13	Non-coding	chr13:51552588 plus strand	1885377

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MIR4704	NR_039853	13	Non-coding	chr13:66218249 plus strand	1885378
MIR4705	NR_039854	13	Non-coding	chr13:102046004 minus strand	1885379
MIR5006	NR_049803	13	Non-coding	chr13:41568395 minus strand	1885380
MIR5007	NR_049804	13	Non-coding	chr13:55174453 plus strand	1885381
MIR548AR	NR_049839	13	Non-coding	chr13:114244504 plus strand	1885382
MIR548AS	NR_049840	13	Non-coding	chr13:92490162 plus strand	1885383
MIR548X2	NR_039692	13	Non-coding	chr13:65966429 minus strand	1885384
MIR5693	NR_049878	13	Non-coding	chr13:51348639 minus strand	1885385
MIR621	NR_030352	13	Non-coding	chr13:40810765 plus strand	1885386
MIR622	NR_030754	13	Non-coding	chr13:90231181 plus strand	1885387
MIR623	NR_030353	13	Non-coding	chr13:99356130 plus strand	1885388
MIR759	NR_031582	13	Non-coding	chr13:52810049 plus strand	1885389
MIR8073	NR_107040	13	Non-coding	chr13:110340957 plus strand	1885390
MIR8075	NR_107042	13	Non-coding	chr13:113262919 plus strand	1885391
MIR8079	NR_107046	13	Non-coding	chr13:44196200 minus strand	1885392
MIR92A1	NR_029508	13	Non-coding	chr13:91351313 plus strand	1885393
MRPS31P5	NR_002816	13	Non-coding	chr13:52194467 minus strand	1885394
MRPS31P5	NR_051965	13	Non-coding	chr13:52194467 minus strand	1885394
MRPS31P5	NR_051964	13	Non-coding	chr13:52194467 minus strand	1885394
MRPS31P5	NR_051963	13	Non-coding	chr13:52194467 minus strand	1885394
MTUS2-AS1	NR_046378	13	Non-coding	chr13:29487750 minus strand	1885395
MYCBP2-AS1	NR_046716	13	Non-coding	chr13:77075513 plus strand	1885396
MYO16-AS1	NR_047700	13	Non-coding	chr13:109167303 minus strand	1885397
N4BP2L2-IT2	NR_026928	13	Non-coding	chr13:32509395 minus strand	1885398
NALCN-AS1	NR_047687	13	Non-coding	chr13:100708324 plus strand	1885399
NDFIP2-AS1	NR_046685	13	Non-coding	chr13:79481231 minus strand	1885400
NEK3	NR_027415	13	Non-coding	chr13:52159861 minus strand	1885401

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NHLRC3	NR_073109	13	Non-coding	chr13:39038310 plus strand	1885402
OR7E156P	NR_002171	13	Non-coding	chr13:63737434 plus strand	1885403
OR7E37P	NR_002163	13	Non-coding	chr13:41442563 plus strand	1885404
PAN3-AS1	NR_029383	13	Non-coding	chr13:28139174 minus strand	1885405
PCCA-AS1	NR_047686	13	Non-coding	chr13:100481015 minus strand	1885406
PCDH9-AS2	NR_046527	13	Non-coding	chr13:66825168 plus strand	1885407
PCDH9-AS3	NR_046636	13	Non-coding	chr13:66977388 plus strand	1885408
PCDH9-AS4	NR_046637	13	Non-coding	chr13:66990885 plus strand	1885409
PDX1-AS1	NR_047484	13	Non-coding	chr13:27921404 minus strand	1885410
PSPC1	NR_003272	13	Non-coding	chr13:19783019 minus strand	1885411
PSPC1	NR_044998	13	Non-coding	chr13:19783019 minus strand	1885411
RBM26-AS1	NR_038991	13	Non-coding	chr13:79406308 plus strand	1885412
RNASEH2B-AS1	NR_046552	13	Non-coding	chr13:50910712 minus strand	1885413
RNF219-AS1	NR_047001	13	Non-coding	chr13:78054854 plus strand	1885414
RNU6-52P	NR_046927	13	Non-coding	chr13:19142981 plus strand	1885415
RNU6-53P	NR_046928	13	Non-coding	chr13:28703807 minus strand	1885416
RNU6-55P	NR_046929	13	Non-coding	chr13:18869291 minus strand	1885417
RNU6-56P	NR_046930	13	Non-coding	chr13:38779423 plus strand	1885418
RNU6-57P	NR_046931	13	Non-coding	chr13:41354659 minus strand	1885419
RNU6-58P	NR_046932	13	Non-coding	chr13:23217534 minus strand	1885420
RNU6-59P	NR_046933	13	Non-coding	chr13:21551410 minus strand	1885421
RNU6-63P	NR_046934	13	Non-coding	chr13:27488137 plus strand	1885422
RNU6-64P	NR_046935	13	Non-coding	chr13:30281764 plus strand	1885423
RNU6-66P	NR_046936	13	Non-coding	chr13:73113018 minus strand	1885424
RNU6-67P	NR_046937	13	Non-coding	chr13:83298167 minus strand	1885425
RNU6-68P	NR_046938	13	Non-coding	chr13:46410453 plus strand	1885426
RNU6-69P	NR_046939	13	Non-coding	chr13:45137965 minus strand	1885427

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RNU6-71P	NR_046940	13	Non-coding	chr13:36267167 plus strand	1885428
RNU6-72P	NR_046941	13	Non-coding	chr13:85584853 minus strand	1885429
RNU6-75P	NR_046942	13	Non-coding	chr13:90781869 minus strand	1885430
RNU6-76P	NR_046943	13	Non-coding	chr13:18880053 plus strand	1885431
RNU6-78P	NR_046944	13	Non-coding	chr13:25517118 plus strand	1885432
RNU6-79P	NR_046945	13	Non-coding	chr13:72881214 minus strand	1885433
RNU6-81P	NR_046946	13	Non-coding	chr13:63783800 plus strand	1885434
RNU6-82P	NR_046947	13	Non-coding	chr13:28232500 plus strand	1885435
RNU6-83P	NR_046948	13	Non-coding	chr13:99025233 plus strand	1885436
SACS-AS1	NR_103450	13	Non-coding	chr13:23418970 plus strand	1885437
SCEL-AS1	NR_126412	13	Non-coding	chr13:77606551 minus strand	1885438
SCEL-AS1	NR_126413	13	Non-coding	chr13:77606551 minus strand	1885438
SLC25A30-AS1	NR_047031	13	Non-coding	chr13:45418161 plus strand	1885439
SMIM2-AS1	NR_104065	13	Non-coding	chr13:44110548 plus strand	1885440
SMIM2-AS1	NR_104064	13	Non-coding	chr13:44142327 plus strand	1885441
SMIM2-IT1	NR_046843	13	Non-coding	chr13:44158222 minus strand	1885442
SNORA27	NR_002575	13	Non-coding	chr13:27255400 plus strand	1885443
SNORA31	NR_002967	13	Non-coding	chr13:45337609 minus strand	1885444
SNORD102	NR_002574	13	Non-coding	chr13:27255063 plus strand	1885445
SOX21-AS1	NR_046514	13	Non-coding	chr13:94712715 plus strand	1885446
SPATA13	NR_104595	13	Non-coding	chr13:23979625 plus strand	1885447
SPATA13-AS1	NR_046531	13	Non-coding	chr13:24254439 minus strand	1885448
SPG20-AS1	NR_045180	13	Non-coding	chr13:36346430 plus strand	1885449
SPG20-AS1	NR_045181	13	Non-coding	chr13:36346430 plus strand	1885449
SPRYD7	NR_023351	13	Non-coding	chr13:49936489 minus strand	1885450
ST13P4	NR_002183	13	Non-coding	chr13:50172017 plus strand	1885451
STARD13-AS	NR_046693	13	Non-coding	chr13:33277553 plus strand	1885452

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SUGT1P3	NR_003365	13	Non-coding	chr13:40921774 minus strand	1885453
TEX26-AS1	NR_038287	13	Non-coding	chr13:30932608 minus strand	1885454
TEX26-AS1	NR_038288	13	Non-coding	chr13:30932608 minus strand	1885454
TEX30	NR_104590	13	Non-coding	chr13:102773821 minus strand	1885455
TFDP1	NR_026580	13	Non-coding	chr13:113584687 plus strand	1885456
TPT1-AS1	NR_024458	13	Non-coding	chr13:45341344 plus strand	1885457
TPTE2	NR_073486	13	Non-coding	chr13:19503277 minus strand	1885458
TPTE2	NR_073487	13	Non-coding	chr13:19536763 minus strand	1885459
TPTE2	NR_073485	13	Non-coding	chr13:19561574 minus strand	1885460
TPTE2P1	NR_026730	13	Non-coding	chr13:24968469 minus strand	1885461
TPTE2P3	NR_002793	13	Non-coding	chr13:52488992 plus strand	1885462
TPTE2P5	NR_038258	13	Non-coding	chr13:40921750 minus strand	1885463
TPTE2P5	NR_038259	13	Non-coding	chr13:40921750 minus strand	1885463
TPTE2P6	NR_002815	13	Non-coding	chr13:24580207 plus strand	1885464
TSC22D1-AS1	NR_038381	13	Non-coding	chr13:44575895 plus strand	1885465
TUSC8	NR_104174	13	Non-coding	chr13:44405984 minus strand	1885466
UBAC2	NR_026644	13	Non-coding	chr13:99200908 plus strand	1885467
UBAC2-AS1	NR_036532	13	Non-coding	chr13:99200755 minus strand	1885468
UBAC2-AS1	NR_036531	13	Non-coding	chr13:99200757 minus strand	1885469
UFM1	NR_104585	13	Non-coding	chr13:38349770 plus strand	1885470
UFM1	NR_104584	13	Non-coding	chr13:38349770 plus strand	1885470
USP12-AS1	NR_046547	13	Non-coding	chr13:27125532 plus strand	1885471
USP12-AS2	NR_046548	13	Non-coding	chr13:27172258 plus strand	1885472
VWA8-AS1	NR_039974	13	Non-coding	chr13:41961168 plus strand	1885473
ZDHHC20	NR_104487	13	Non-coding	chr13:21459370 minus strand	1885474
ZDHHC20	NR_104486	13	Non-coding	chr13:21459370 minus strand	1885474
ABCD4	NR_003256	14	Non-coding	chr14:74303064 minus strand	1885475

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ACOT2	NR_046028	14	Non-coding	chr14:73567619 plus strand	1885476
ACTN1-AS1	NR_073422	14	Non-coding	chr14:68979681 plus strand	1885477
ACYP1	NR_126393	14	Non-coding	chr14:75064049 minus strand	1885478
ACYP1	NR_126395	14	Non-coding	chr14:75064049 minus strand	1885478
ACYP1	NR_126394	14	Non-coding	chr14:75069483 minus strand	1885479
ADAM20P1	NR_037933	14	Non-coding	chr14:70483756 minus strand	1885480
ADAM21P1	NR_003951	14	Non-coding	chr14:70247801 minus strand	1885481
ADAM6	NR_002224	14	Non-coding	chr14:105972269 minus strand	1885482
AP5M1	NR_026895	14	Non-coding	chr14:57268887 plus strand	1885483
APOPT1	NR_126431	14	Non-coding	chr14:103562956 plus strand	1885484
APOPT1	NR_126432	14	Non-coding	chr14:103562956 plus strand	1885484
ARHGAP5-AS1	NR_027263	14	Non-coding	chr14:32076699 minus strand	1885485
ATP5S	NR_033761	14	Non-coding	chr14:50312328 plus strand	1885486
ATXN3	NR_028462	14	Non-coding	chr14:92106621 minus strand	1885487
ATXN3	NR_028461	14	Non-coding	chr14:92106621 minus strand	1885487
ATXN3	NR_028460	14	Non-coding	chr14:92106621 minus strand	1885487
ATXN3	NR_028459	14	Non-coding	chr14:92106621 minus strand	1885487
ATXN3	NR_028458	14	Non-coding	chr14:92106621 minus strand	1885487
ATXN3	NR_028457	14	Non-coding	chr14:92106621 minus strand	1885487
ATXN3	NR_028456	14	Non-coding	chr14:92106621 minus strand	1885487
ATXN3	NR_028455	14	Non-coding	chr14:92106621 minus strand	1885487
ATXN3	NR_028454	14	Non-coding	chr14:92106621 minus strand	1885487
ATXN3	NR_028464	14	Non-coding	chr14:92106621 minus strand	1885487
ATXN3	NR_028463	14	Non-coding	chr14:92106621 minus strand	1885487
ATXN3	NR_028470	14	Non-coding	chr14:92106621 minus strand	1885487
ATXN3	NR_028453	14	Non-coding	chr14:92106621 minus strand	1885487
ATXN3	NR_028467	14	Non-coding	chr14:92106621 minus strand	1885487

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ATXN3	NR_028466	14	Non-coding	chr14:92106621 minus strand	1885487
ATXN3	NR_028465	14	Non-coding	chr14:92106621 minus strand	1885487
ATXN3	NR_031765	14	Non-coding	chr14:92106621 minus strand	1885487
ATXN3	NR_028469	14	Non-coding	chr14:92106621 minus strand	1885487
ATXN3	NR_028468	14	Non-coding	chr14:92106621 minus strand	1885487
BMS1P17	NR_073460	14	Non-coding	chr14:19093337 minus strand	1885488
BMS1P17	NR_073460	14	Non-coding	chr14:19306689 plus strand	1885489
BMS1P18	NR_073459	14	Non-coding	chr14:19093337 minus strand	1885490
BMS1P18	NR_073459	14	Non-coding	chr14:19306689 plus strand	1885491
CFL2	NR_028131	14	Non-coding	chr14:34714823 minus strand	1885492
CFL2	NR_028130	14	Non-coding	chr14:34714823 minus strand	1885492
CRIP2	NR_073082	14	Non-coding	chr14:105472937 plus strand	1885493
CRIP2	NR_073083	14	Non-coding	chr14:105474774 plus strand	1885494
CRIP2	NR_073081	14	Non-coding	chr14:105474774 plus strand	1885494
CRIP2	NR_073084	14	Non-coding	chr14:105475858 plus strand	1885495
CRIP2	NR_073085	14	Non-coding	chr14:105477245 plus strand	1885496
DACT1	NR_046093	14	Non-coding	chr14:58634067 plus strand	1885497
DACT1	NR_046095	14	Non-coding	chr14:58638836 plus strand	1885498
DCAF11	NR_028099	14	Non-coding	chr14:24114776 plus strand	1885499
DCAF11	NR_028100	14	Non-coding	chr14:24115282 plus strand	1885500
DHRS4-AS1	NR_023924	14	Non-coding	chr14:23954197 minus strand	1885501
DHRS4-AS1	NR_023923	14	Non-coding	chr14:23954197 minus strand	1885501
DHRS4-AS1	NR_023921	14	Non-coding	chr14:23954197 minus strand	1885501
DHRS4-AS1	NR_023922	14	Non-coding	chr14:23955112 minus strand	1885502
DHRS4L1	NR_102688	14	Non-coding	chr14:24007008 plus strand	1885503
DHRS4L1	NR_102687	14	Non-coding	chr14:24007008 plus strand	1885503
DHRS4L1	NR_102693	14	Non-coding	chr14:24036411 plus strand	1885504

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DHRS4L1	NR_102692	14	Non-coding	chr14:24036411 plus strand	1885504
DHRS4L1	NR_102691	14	Non-coding	chr14:24036411 plus strand	1885504
DHRS4L1	NR_102689	14	Non-coding	chr14:24036411 plus strand	1885504
DHRS4L1	NR_102694	14	Non-coding	chr14:24036411 plus strand	1885504
DICER1-AS1	NR_015415	14	Non-coding	chr14:95157687 plus strand	1885505
DIO2-AS1	NR_038355	14	Non-coding	chr14:80211418 plus strand	1885506
DIO3OS	NR_002770	14	Non-coding	chr14:101555676 minus strand	1885507
DLST	NR_033814	14	Non-coding	chr14:74881890 plus strand	1885508
DLST	NR_045209	14	Non-coding	chr14:74881890 plus strand	1885508
DUXAP10	NR_110526	14	Non-coding	chr14:19062371 plus strand	1885509
DUXAP10	NR_110526	14	Non-coding	chr14:19337674 minus strand	1885510
ECRP	NR_033909	14	Non-coding	chr14:20919340 plus strand	1885511
ELK2AP	NR_046211	14	Non-coding	chr14:105672807 minus strand	1885512
ESR2	NR_073497	14	Non-coding	chr14:64283075 minus strand	1885513
ESR2	NR_073496	14	Non-coding	chr14:64338550 minus strand	1885514
EXD2	NR_034164	14	Non-coding	chr14:69191476 plus strand	1885515
EXD2	NR_034165	14	Non-coding	chr14:69191765 plus strand	1885516
FAM181A-AS1	NR_027004	14	Non-coding	chr14:93926372 minus strand	1885517
FLJ22447	NR_039985	14	Non-coding	chr14:61570539 plus strand	1885518
FOXG1-AS1	NR_125758	14	Non-coding	chr14:28765319 minus strand	1885519
FOXN3-AS1	NR_036500	14	Non-coding	chr14:89417353 plus strand	1885520
FOXN3-AS2	NR_024620	14	Non-coding	chr14:89576215 plus strand	1885521
FRMD6-AS1	NR_037676	14	Non-coding	chr14:51651744 minus strand	1885522
FRMD6-AS2	NR_051990	14	Non-coding	chr14:51599952 minus strand	1885523
FRMD6-AS2	NR_047477	14	Non-coding	chr14:51599952 minus strand	1885523
FUT8	NR_038167	14	Non-coding	chr14:65410591 plus strand	1885524
FUT8	NR_038170	14	Non-coding	chr14:65412729 plus strand	1885525

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FUT8-AS1	NR_024334	14	Non-coding	chr14:65412617 minus strand	1885526
GMPR2	NR_104265	14	Non-coding	chr14:24232421 plus strand	1885527
GPATCH2L	NR_110314	14	Non-coding	chr14:76154353 plus strand	1885528
GPR33	NR_036675	14	Non-coding	chr14:31487945 minus strand	1885529
GPX2	NR_046320	14	Non-coding	chr14:64942905 minus strand	1885530
GPX2	NR_046321	14	Non-coding	chr14:64942905 minus strand	1885530
HIF1A-AS1	NR_047116	14	Non-coding	chr14:61695823 minus strand	1885531
HIF1A-AS2	NR_045406	14	Non-coding	chr14:61749089 minus strand	1885532
IFT43	NR_045664	14	Non-coding	chr14:75985752 plus strand	1885533
IFT43	NR_045665	14	Non-coding	chr14:75985752 plus strand	1885533
IGBP1P1	NR_002937	14	Non-coding	chr14:34939921 plus strand	1885534
IPO4	NR_051979	14	Non-coding	chr14:24188918 minus strand	1885535
ITPK1-AS1	NR_002808	14	Non-coding	chr14:93067451 plus strand	1885536
KIAA0125	NR_026800	14	Non-coding	chr14:105917978 plus strand	1885537
KTN1	NR_073129	14	Non-coding	chr14:55580206 plus strand	1885538
KTN1	NR_073128	14	Non-coding	chr14:55580206 plus strand	1885538
KTN1-AS1	NR_027123	14	Non-coding	chr14:55580092 minus strand	1885539
LGALS3	NR_003225	14	Non-coding	chr14:55136982 plus strand	1885540
LINC00221	NR_027457	14	Non-coding	chr14:106482438 plus strand	1885541
LINC00226	NR_033375	14	Non-coding	chr14:106287673 plus strand	1885542
LINC00238	NR_024338	14	Non-coding	chr14:66486370 plus strand	1885543
LINC00238	NR_110308	14	Non-coding	chr14:66486370 plus strand	1885543
LINC00238	NR_110307	14	Non-coding	chr14:66486370 plus strand	1885543
LINC00239	NR_026774	14	Non-coding	chr14:101730436 plus strand	1885544
LINC00341	NR_026779	14	Non-coding	chr14:95410090 minus strand	1885545
LINC00520	NR_026797	14	Non-coding	chr14:55796674 minus strand	1885546
LINC00520	NR_026796	14	Non-coding	chr14:55796674 minus strand	1885546

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LINC00521	NR_024182	14	Non-coding	chr14:93997269 plus strand	1885547
LINC00521	NR_024184	14	Non-coding	chr14:93997295 plus strand	1885548
LINC00521	NR_024183	14	Non-coding	chr14:93997295 plus strand	1885548
LINC00523	NR_024096	14	Non-coding	chr14:100657267 plus strand	1885549
LINC00524	NR_126006	14	Non-coding	chr14:101407922 minus strand	1885550
LINC00605	NR_033938	14	Non-coding	chr14:103189028 minus strand	1885551
LINC00609	NR_073454	14	Non-coding	chr14:36070426 plus strand	1885552
LINC00618	NR_104113	14	Non-coding	chr14:96943578 plus strand	1885553
LINC00637	NR_038436	14	Non-coding	chr14:103847720 plus strand	1885554
LINC00638	NR_024396	14	Non-coding	chr14:104821200 plus strand	1885555
LINC00639	NR_039982	14	Non-coding	chr14:38916882 minus strand	1885556
LINC00640	NR_038358	14	Non-coding	chr14:51333392 plus strand	1885557
LINC00641	NR_038970	14	Non-coding	chr14:21205503 minus strand	1885558
LINC00641	NR_038971	14	Non-coding	chr14:21206900 minus strand	1885559
LINC00642	NR_033986	14	Non-coding	chr14:90455229 plus strand	1885560
LINC00643	NR_015358	14	Non-coding	chr14:62117356 plus strand	1885561
LINC00644	NR_104063	14	Non-coding	chr14:62139973 minus strand	1885562
LINC00645	NR_039992	14	Non-coding	chr14:27612587 plus strand	1885563
LINC00648	NR_039996	14	Non-coding	chr14:47795014 minus strand	1885564
LINC00871	NR_102702	14	Non-coding	chr14:46064158 plus strand	1885565
LINC00871	NR_102701	14	Non-coding	chr14:46064158 plus strand	1885565
LINC00871	NR_102699	14	Non-coding	chr14:46471358 plus strand	1885566
LINC00871	NR_102700	14	Non-coding	chr14:46471358 plus strand	1885566
LINC00911	NR_102737	14	Non-coding	chr14:85393878 plus strand	1885567
LINC00911	NR_102738	14	Non-coding	chr14:85393914 plus strand	1885568
LINC01146	NR_046094	14	Non-coding	chr14:88024549 plus strand	1885569
LINC01220	NR_038421	14	Non-coding	chr14:75294403 plus strand	1885570

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LINC01269	NR_125769	14	Non-coding	chr14:70698697 plus strand	1885571
LINC01296	NR_122111	14	Non-coding	chr14:19062376 plus strand	1885572
LINC01296	NR_122112	14	Non-coding	chr14:19062376 plus strand	1885572
LINC01296	NR_122112	14	Non-coding	chr14:19337669 minus strand	1885573
LINC01467	NR_110074	14	Non-coding	chr14:81623061 minus strand	1885574
LINC01500	NR_110547	14	Non-coding	chr14:58828287 plus strand	1885575
LINC01550	NR_015430	14	Non-coding	chr14:97978124 minus strand	1885576
LINC01551	NR_026731	14	Non-coding	chr14:28772703 plus strand	1885577
LINC01551	NR_026732	14	Non-coding	chr14:28772703 plus strand	1885577
LINC01588	NR_126499	14	Non-coding	chr14:49993134 minus strand	1885578
LINC01588	NR_126496	14	Non-coding	chr14:50006519 minus strand	1885579
LINC01588	NR_126500	14	Non-coding	chr14:50006663 minus strand	1885580
LINC01588	NR_126497	14	Non-coding	chr14:50006663 minus strand	1885580
LINC01588	NR_126498	14	Non-coding	chr14:50007520 minus strand	1885581
LOC100128233	NR_103769	14	Non-coding	chr14:65222347 minus strand	1885582
LOC100129345	NR_033943	14	Non-coding	chr14:97686658 minus strand	1885583
LOC100288846	NR_038935	14	Non-coding	chr14:39267061 minus strand	1885584
LOC100289511	NR_029378	14	Non-coding	chr14:69767713 minus strand	1885585
LOC100506071	NR_038356	14	Non-coding	chr14:30889808 minus strand	1885586
LOC100506321	NR_045122	14	Non-coding	chr14:65089917 plus strand	1885587
LOC100506476	NR_109995	14	Non-coding	chr14:73787359 plus strand	1885588
LOC100506499	NR_102736	14	Non-coding	chr14:50039884 minus strand	1885589
LOC100506603	NR_104183	14	Non-coding	chr14:76786724 minus strand	1885590
LOC100506603	NR_104184	14	Non-coding	chr14:76786724 minus strand	1885590
LOC100506700	NR_109999	14	Non-coding	chr14:81450157 minus strand	1885591
LOC100507437	NR_125384	14	Non-coding	chr14:105419739 minus strand	1885592
LOC100507437	NR_125385	14	Non-coding	chr14:105419739 minus strand	1885592

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LOC100508046	NR_110505	14	Non-coding	chr14:18980793 minus strand	1885593
LOC101926933	NR_110002	14	Non-coding	chr14:22929608 plus strand	1885594
LOC101927045	NR_110032	14	Non-coding	chr14:24442952 plus strand	1885595
LOC101927062	NR_110033	14	Non-coding	chr14:26822120 minus strand	1885596
LOC101927081	NR_110041	14	Non-coding	chr14:26873132 plus strand	1885597
LOC101927124	NR_110045	14	Non-coding	chr14:31420757 plus strand	1885598
LOC101927178	NR_110415	14	Non-coding	chr14:35081080 plus strand	1885599
LOC101927418	NR_110050	14	Non-coding	chr14:44911917 minus strand	1885600
LOC101927620	NR_110062	14	Non-coding	chr14:53153353 plus strand	1885601
LOC101927780	NR_110417	14	Non-coding	chr14:61570194 minus strand	1885602
LOC101927780	NR_110416	14	Non-coding	chr14:61570653 minus strand	1885603
LOC101928075	NR_110071	14	Non-coding	chr14:70641298 minus strand	1885604
LOC101928767	NR_110155	14	Non-coding	chr14:85934677 plus strand	1885605
LOC101928791	NR_110121	14	Non-coding	chr14:88026312 minus strand	1885606
LOC101928909	NR_110134	14	Non-coding	chr14:90642628 plus strand	1885607
LOC101929080	NR_110127	14	Non-coding	chr14:95329583 plus strand	1885608
LOC101929241	NR_110166	14	Non-coding	chr14:97458815 plus strand	1885609
LOC101929241	NR_110165	14	Non-coding	chr14:97458815 plus strand	1885609
LOC101929572	NR_110504	14	Non-coding	chr14:19421025 plus strand	1885610
LOC101929718	NR_110139	14	Non-coding	chr14:20999163 minus strand	1885611
LOC102723354	NR_110546	14	Non-coding	chr14:105094146 plus strand	1885612
LOC102723604	NR_126331	14	Non-coding	chr14:51918571 minus strand	1885613
LOC102723809	NR_110550	14	Non-coding	chr14:64540368 minus strand	1885614
LOC102724153	NR_110552	14	Non-coding	chr14:75579588 minus strand	1885615
LOC102724190	NR_110553	14	Non-coding	chr14:77076191 minus strand	1885616
LOC102724814	NR_110555	14	Non-coding	chr14:23561096 plus strand	1885617
LOC102724890	NR_110556	14	Non-coding	chr14:26809347 plus strand	1885618

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LOC102724890	NR_110557	14	Non-coding	chr14:26809347 plus strand	1885618
LOC145474	NR_027046	14	Non-coding	chr14:71487860 plus strand	1885619
LOC254028	NR_122043	14	Non-coding	chr14:20588223 plus strand	1885620
LOC283575	NR_110554	14	Non-coding	chr14:77041048 plus strand	1885621
LOC283585	NR_038445	14	Non-coding	chr14:86905777 plus strand	1885622
LOC642426	NR_046104	14	Non-coding	chr14:18633634 minus strand	1885623
LOC644919	NR_109758	14	Non-coding	chr14:40954710 plus strand	1885624
LOC644919	NR_109757	14	Non-coding	chr14:40954710 plus strand	1885624
LOC730202	NR_122121	14	Non-coding	chr14:96502326 minus strand	1885625
LRR1	NR_037793	14	Non-coding	chr14:49598696 plus strand	1885626
LRR1	NR_037792	14	Non-coding	chr14:49598696 plus strand	1885626
LRRC9	NR_075071	14	Non-coding	chr14:59919712 plus strand	1885627
MAX	NR_073138	14	Non-coding	chr14:65102695 minus strand	1885628
MAX	NR_073137	14	Non-coding	chr14:65102695 minus strand	1885628
MDGA2	NR_103766	14	Non-coding	chr14:47343246 minus strand	1885629
MEG3	NR_033360	14	Non-coding	chr14:100826107 plus strand	1885630
MEG3	NR_033359	14	Non-coding	chr14:100826107 plus strand	1885630
MEG3	NR_033358	14	Non-coding	chr14:100826107 plus strand	1885630
MEG3	NR_002766	14	Non-coding	chr14:100826107 plus strand	1885630
MEG3	NR_046471	14	Non-coding	chr14:100826107 plus strand	1885630
MEG3	NR_003530	14	Non-coding	chr14:100826107 plus strand	1885630
MEG3	NR_046470	14	Non-coding	chr14:100826107 plus strand	1885630
MEG3	NR_046469	14	Non-coding	chr14:100826107 plus strand	1885630
MEG3	NR_046468	14	Non-coding	chr14:100826107 plus strand	1885630
MEG3	NR_046467	14	Non-coding	chr14:100826107 plus strand	1885630
MEG3	NR_046466	14	Non-coding	chr14:100826107 plus strand	1885630
MEG3	NR_046465	14	Non-coding	chr14:100826107 plus strand	1885630

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MEG3	NR_046464	14	Non-coding	chr14:100826107 plus strand	1885630
MEG3	NR_046473	14	Non-coding	chr14:100826107 plus strand	1885630
MEG3	NR_046472	14	Non-coding	chr14:100826107 plus strand	1885630
MEG3	NR_003531	14	Non-coding	chr14:100826131 plus strand	1885631
MEG8	NR_024149	14	Non-coding	chr14:100894769 plus strand	1885632
MEG9	NR_047664	14	Non-coding	chr14:101069910 plus strand	1885633
MHRT	NR_126491	14	Non-coding	chr14:23415449 plus strand	1885634
MIR1185-1	NR_031575	14	Non-coding	chr14:101042976 plus strand	1885635
MIR1185-2	NR_031571	14	Non-coding	chr14:101044197 plus strand	1885636
MIR1193	NR_036132	14	Non-coding	chr14:101030051 plus strand	1885637
MIR1197	NR_031713	14	Non-coding	chr14:101025563 plus strand	1885638
MIR1247	NR_031649	14	Non-coding	chr14:101560422 minus strand	1885639
MIR1260A	NR_031661	14	Non-coding	chr14:77266217 plus strand	1885640
MIR127	NR_029696	14	Non-coding	chr14:100882978 plus strand	1885641
MIR134	NR_029698	14	Non-coding	chr14:101054686 plus strand	1885642
MIR136	NR_029699	14	Non-coding	chr14:100884701 plus strand	1885643
MIR151B	NR_039601	14	Non-coding	chr14:100109514 minus strand	1885644
MIR154	NR_029704	14	Non-coding	chr14:101059754 plus strand	1885645
MIR203A	NR_029620	14	Non-coding	chr14:104117404 plus strand	1885646
MIR203B	NR_039859	14	Non-coding	chr14:104117503 minus strand	1885647
MIR208A	NR_029595	14	Non-coding	chr14:23388666 minus strand	1885648
MIR208B	NR_030624	14	Non-coding	chr14:23418063 minus strand	1885649
MIR2392	NR_039729	14	Non-coding	chr14:100814490 plus strand	1885650
MIR299	NR_029841	14	Non-coding	chr14:101023793 plus strand	1885651
MIR300	NR_030582	14	Non-coding	chr14:101041362 plus strand	1885652
MIR3173	NR_036131	14	Non-coding	chr14:95137986 minus strand	1885653
MIR323A	NR_029890	14	Non-coding	chr14:101025731 plus strand	1885654

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MIR323B	NR_036133	14	Non-coding	chr14:101056218 plus strand	1885655
MIR329-1	NR_029967	14	Non-coding	chr14:101026784 plus strand	1885656
MIR329-2	NR_029968	14	Non-coding	chr14:101027099 plus strand	1885657
MIR337	NR_029889	14	Non-coding	chr14:100874492 plus strand	1885658
MIR342	NR_029888	14	Non-coding	chr14:100109654 plus strand	1885659
MIR345	NR_029906	14	Non-coding	chr14:100307858 plus strand	1885660
MIR369	NR_029862	14	Non-coding	chr14:101065597 plus strand	1885661
MIR370	NR_029863	14	Non-coding	chr14:100911138 plus strand	1885662
MIR376A1	NR_029868	14	Non-coding	chr14:101040781 plus strand	1885663
MIR376A2	NR_030266	14	Non-coding	chr14:101040068 plus strand	1885664
MIR376B	NR_030157	14	Non-coding	chr14:101040435 plus strand	1885665
MIR376C	NR_029861	14	Non-coding	chr14:101039689 plus strand	1885666
MIR377	NR_029869	14	Non-coding	chr14:101062049 plus strand	1885667
MIR379	NR_029871	14	Non-coding	chr14:101022065 plus strand	1885668
MIR380	NR_029872	14	Non-coding	chr14:101025016 plus strand	1885669
MIR381	NR_029873	14	Non-coding	chr14:101045919 plus strand	1885670
MIR381HG	NR_104192	14	Non-coding	chr14:101045156 plus strand	1885671
MIR382	NR_029874	14	Non-coding	chr14:101054305 plus strand	1885672
MIR409	NR_029975	14	Non-coding	chr14:101065299 plus strand	1885673
MIR410	NR_030156	14	Non-coding	chr14:101065911 plus strand	1885674
MIR411	NR_030389	14	Non-coding	chr14:101023324 plus strand	1885675
MIR412	NR_030155	14	Non-coding	chr14:101065446 plus strand	1885676
MIR4307	NR_036193	14	Non-coding	chr14:26908641 plus strand	1885677
MIR4308	NR_036194	14	Non-coding	chr14:54878193 minus strand	1885678
MIR4309	NR_036192	14	Non-coding	chr14:102539643 plus strand	1885679
MIR431	NR_029965	14	Non-coding	chr14:100881006 plus strand	1885680
MIR432	NR_030173	14	Non-coding	chr14:100884482 plus strand	1885681

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MIR433	NR_029966	14	Non-coding	chr14:100881885 plus strand	1885682
MIR4503	NR_039725	14	Non-coding	chr14:36952391 minus strand	1885683
MIR4504	NR_039726	14	Non-coding	chr14:50299946 minus strand	1885684
MIR4505	NR_039727	14	Non-coding	chr14:73758746 plus strand	1885685
MIR4506	NR_039728	14	Non-coding	chr14:93948302 minus strand	1885686
MIR4507	NR_039730	14	Non-coding	chr14:105858175 minus strand	1885687
MIR4706	NR_039855	14	Non-coding	chr14:65044687 plus strand	1885688
MIR4707	NR_039856	14	Non-coding	chr14:22957029 minus strand	1885689
MIR4708	NR_039857	14	Non-coding	chr14:65335183 minus strand	1885690
MIR4709	NR_039858	14	Non-coding	chr14:74480204 minus strand	1885691
MIR4710	NR_039860	14	Non-coding	chr14:104677749 minus strand	1885692
MIR485	NR_030160	14	Non-coding	chr14:101055418 plus strand	1885693
MIR487A	NR_030162	14	Non-coding	chr14:101052445 plus strand	1885694
MIR487B	NR_030267	14	Non-coding	chr14:101046454 plus strand	1885695
MIR493	NR_030172	14	Non-coding	chr14:100869059 plus strand	1885696
MIR494	NR_030174	14	Non-coding	chr14:101029633 plus strand	1885697
MIR495	NR_030175	14	Non-coding	chr14:101033754 plus strand	1885698
MIR496	NR_030176	14	Non-coding	chr14:101060572 plus strand	1885699
MIR5195	NR_049827	14	Non-coding	chr14:106850999 minus strand	1885700
MIR539	NR_030256	14	Non-coding	chr14:101047320 plus strand	1885701
MIR541	NR_030594	14	Non-coding	chr14:101064494 plus strand	1885702
MIR543	NR_030619	14	Non-coding	chr14:101031986 plus strand	1885703
MIR544A	NR_030257	14	Non-coding	chr14:101048657 plus strand	1885704
MIR548H1	NR_031677	14	Non-coding	chr14:64095125 minus strand	1885705
MIR548Y	NR_037503	14	Non-coding	chr14:47761104 minus strand	1885706
MIR5580	NR_049843	14	Non-coding	chr14:53948484 minus strand	1885707
MIR5586	NR_049851	14	Non-coding	chr14:59647020 minus strand	1885708

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MIR5694	NR_049879	14	Non-coding	chr14:67441930 minus strand	1885709
MIR6076	NR_106724	14	Non-coding	chr14:49966398 plus strand	1885710
MIR624	NR_030354	14	Non-coding	chr14:31014742 minus strand	1885711
MIR625	NR_030355	14	Non-coding	chr14:65471101 plus strand	1885712
MIR654	NR_030390	14	Non-coding	chr14:101040218 plus strand	1885713
MIR655	NR_030391	14	Non-coding	chr14:101049549 plus strand	1885714
MIR656	NR_030392	14	Non-coding	chr14:101066723 plus strand	1885715
MIR665	NR_030617	14	Non-coding	chr14:100875032 plus strand	1885716
MIR668	NR_030408	14	Non-coding	chr14:101055257 plus strand	1885717
MIR6717	NR_106774	14	Non-coding	chr14:21023386 minus strand	1885718
MIR6764	NR_106822	14	Non-coding	chr14:100277356 plus strand	1885719
MIR6765	NR_106823	14	Non-coding	chr14:105150864 minus strand	1885720
MIR758	NR_030406	14	Non-coding	chr14:101026019 plus strand	1885721
MIR7641-2	NR_106988	14	Non-coding	chr14:106636710 plus strand	1885722
MIR7641-2	NR_106988	14	Non-coding	chr14:75604208 plus strand	1885723
MIR7641-2	NR_106988	14	Non-coding	chr14:91803934 minus strand	1885724
MIR770	NR_030528	14	Non-coding	chr14:100852389 plus strand	1885725
MIR7703	NR_106990	14	Non-coding	chr14:24143565 minus strand	1885726
MIR7843	NR_106994	14	Non-coding	chr14:72516819 plus strand	1885727
MIR7855	NR_107009	14	Non-coding	chr14:64785686 minus strand	1885728
MIR8071-1	NR_107038	14	Non-coding	chr14:105621115 plus strand	1885729
MIR8071-1	NR_107038	14	Non-coding	chr14:105640167 plus strand	1885730
MIR8071-2	NR_107059	14	Non-coding	chr14:105621115 plus strand	1885731
MIR8071-2	NR_107059	14	Non-coding	chr14:105640167 plus strand	1885732
MIR889	NR_030595	14	Non-coding	chr14:101047900 plus strand	1885733
MOK	NR_073543	14	Non-coding	chr14:102240621 minus strand	1885734
MOK	NR_073542	14	Non-coding	chr14:102240621 minus strand	1885734

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MOK	NR_073541	14	Non-coding	chr14:102240621 minus strand	1885734
MOK	NR_073540	14	Non-coding	chr14:102240621 minus strand	1885734
NKX2-1-AS1	NR_103710	14	Non-coding	chr14:36519277 plus strand	1885735
NRXN3	NR_073547	14	Non-coding	chr14:78170372 plus strand	1885736
NRXN3	NR_073546	14	Non-coding	chr14:79279338 plus strand	1885737
NUBPL	NR_120408	14	Non-coding	chr14:31561384 plus strand	1885738
OTX2	NR_073036	14	Non-coding	chr14:56805663 minus strand	1885739
OTX2	NR_073034	14	Non-coding	chr14:56810476 minus strand	1885740
OTX2-AS1	NR_029385	14	Non-coding	chr14:56813182 plus strand	1885741
POTEG	NR_027480	14	Non-coding	chr14:19434341 minus strand	1885742
POTEH-AS1	NR_046571	14	Non-coding	chr14:19421025 plus strand	1885743
PPP2R5E	NR_104104	14	Non-coding	chr14:63543361 minus strand	1885744
PRMT5-AS1	NR_120600	14	Non-coding	chr14:22919455 plus strand	1885745
PRMT5-AS1	NR_120599	14	Non-coding	chr14:22919455 plus strand	1885745
PSMA3	NR_038123	14	Non-coding	chr14:58244804 plus strand	1885746
PSMA3-AS1	NR_029435	14	Non-coding	chr14:58298137 minus strand	1885747
PSMA3-AS1	NR_029434	14	Non-coding	chr14:58298137 minus strand	1885747
PSMA6	NR_104110	14	Non-coding	chr14:35292316 plus strand	1885748
PTCSC3	NR_049735	14	Non-coding	chr14:36176651 minus strand	1885749
RAB2B	NR_028074	14	Non-coding	chr14:21476973 minus strand	1885750
RN7SL1	NR_002715	14	Non-coding	chr14:49586579 plus strand	1885751
RN7SL2	NR_027260	14	Non-coding	chr14:49862849 minus strand	1885752
RNU1-1	NR_004430	14	Non-coding	chr14:34546713 plus strand	1885753
RNU1-1	NR_004430	14	Non-coding	chr14:34556389 minus strand	1885754
RNU1-2	NR_004427	14	Non-coding	chr14:34546713 plus strand	1885755
RNU1-2	NR_004427	14	Non-coding	chr14:34556389 minus strand	1885756
RNU1-27P	NR_004424	14	Non-coding	chr14:34546713 plus strand	1885757

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RNU1-27P	NR_004424	14	Non-coding	chr14:34556389 minus strand	1885758
RNU1-28P	NR_004402	14	Non-coding	chr14:34546713 plus strand	1885759
RNU1-28P	NR_004402	14	Non-coding	chr14:34556389 minus strand	1885760
RNU1-3	NR_004408	14	Non-coding	chr14:34546713 plus strand	1885761
RNU1-3	NR_004408	14	Non-coding	chr14:34556389 minus strand	1885762
RNU1-4	NR_004421	14	Non-coding	chr14:34546713 plus strand	1885763
RNU1-4	NR_004421	14	Non-coding	chr14:34556389 minus strand	1885764
RNU6-1	NR_004394	14	Non-coding	chr14:32202044 plus strand	1885765
RNU6-1	NR_004394	14	Non-coding	chr14:32203269 minus strand	1885766
RNU6-2	NR_125730	14	Non-coding	chr14:32202044 plus strand	1885767
RNU6-2	NR_125730	14	Non-coding	chr14:32203269 minus strand	1885768
RNU6-7	NR_104084	14	Non-coding	chr14:32202044 plus strand	1885769
RNU6-7	NR_104084	14	Non-coding	chr14:32203269 minus strand	1885770
RNU6-8	NR_104088	14	Non-coding	chr14:32202044 plus strand	1885771
RNU6-8	NR_104088	14	Non-coding	chr14:32203269 minus strand	1885772
RNU6-9	NR_104080	14	Non-coding	chr14:32202044 plus strand	1885773
RNU6-9	NR_104080	14	Non-coding	chr14:32203269 minus strand	1885774
RNVU1-18	NR_004400	14	Non-coding	chr14:34546713 plus strand	1885775
RNVU1-18	NR_004400	14	Non-coding	chr14:34556389 minus strand	1885776
RPL13AP3	NR_004844	14	Non-coding	chr14:55766244 plus strand	1885777
RPPH1	NR_002312	14	Non-coding	chr14:20343411 minus strand	1885778
SALL2	NR_111967	14	Non-coding	chr14:21526408 minus strand	1885779
SALL2	NR_111966	14	Non-coding	chr14:21537216 minus strand	1885780
SALRNA1	NR_126480	14	Non-coding	chr14:60639215 plus strand	1885781
SCARNA13	NR_003002	14	Non-coding	chr14:95533629 minus strand	1885782
SERPINA13P	NR_015340	14	Non-coding	chr14:94640724 plus strand	1885783
SERPINA2	NR_110563	14	Non-coding	chr14:94366702 minus strand	1885784

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SLC22A17	NR_110290	14	Non-coding	chr14:23352912 minus strand	1885785
SLC25A21-AS1	NR_033240	14	Non-coding	chr14:37172025 plus strand	1885786
SLC38A6	NR_033344	14	Non-coding	chr14:60981246 plus strand	1885787
SLC7A7	NR_040448	14	Non-coding	chr14:22815892 minus strand	1885788
SLC7A8	NR_049767	14	Non-coding	chr14:23155458 minus strand	1885789
SLC8A3	NR_104122	14	Non-coding	chr14:70189070 minus strand	1885790
SLIRP	NR_052025	14	Non-coding	chr14:77708070 plus strand	1885791
SNHG10	NR_001459	14	Non-coding	chr14:95534872 minus strand	1885792
SNHG10	NR_003138	14	Non-coding	chr14:95534872 minus strand	1885792
SNHG24	NR_110178	14	Non-coding	chr14:100967651 plus strand	1885793
SNORA11B	NR_003709	14	Non-coding	chr14:91126425 plus strand	1885794
SNORA28	NR_002964	14	Non-coding	chr14:103337848 plus strand	1885795
SNORA79	NR_003021	14	Non-coding	chr14:81202834 minus strand	1885796
SNORD112	NR_003080	14	Non-coding	chr14:100897919 plus strand	1885797
SNORD113-1	NR_003229	14	Non-coding	chr14:100924820 plus strand	1885798
SNORD113-2	NR_003230	14	Non-coding	chr14:100927341 plus strand	1885799
SNORD113-3	NR_003231	14	Non-coding	chr14:100929918 plus strand	1885800
SNORD113-4	NR_003232	14	Non-coding	chr14:100936490 plus strand	1885801
SNORD113-5	NR_003233	14	Non-coding	chr14:100938186 plus strand	1885802
SNORD113-6	NR_003234	14	Non-coding	chr14:100939555 plus strand	1885803
SNORD113-7	NR_003235	14	Non-coding	chr14:100941125 plus strand	1885804
SNORD113-8	NR_003236	14	Non-coding	chr14:100943450 plus strand	1885805
SNORD113-9	NR_003237	14	Non-coding	chr14:100945648 plus strand	1885806
SNORD114-1	NR_003193	14	Non-coding	chr14:100949832 plus strand	1885807
SNORD114-10	NR_003203	14	Non-coding	chr14:100967051 plus strand	1885808
SNORD114-11	NR_003204	14	Non-coding	chr14:100968110 plus strand	1885809
SNORD114-12	NR_003205	14	Non-coding	chr14:100968947 plus strand	1885810

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SNORD114-13	NR_003206	14	Non-coding	chr14:100969878 plus strand	1885811
SNORD114-14	NR_003207	14	Non-coding	chr14:100972102 plus strand	1885812
SNORD114-15	NR_003208	14	Non-coding	chr14:100972669 plus strand	1885813
SNORD114-16	NR_003209	14	Non-coding	chr14:100973594 plus strand	1885814
SNORD114-17	NR_003210	14	Non-coding	chr14:100974805 plus strand	1885815
SNORD114-18	NR_003211	14	Non-coding	chr14:100975824 plus strand	1885816
SNORD114-19	NR_003212	14	Non-coding	chr14:100976476 plus strand	1885817
SNORD114-2	NR_003194	14	Non-coding	chr14:100951855 plus strand	1885818
SNORD114-20	NR_003213	14	Non-coding	chr14:100981003 plus strand	1885819
SNORD114-21	NR_003214	14	Non-coding	chr14:100981974 plus strand	1885820
SNORD114-22	NR_003215	14	Non-coding	chr14:100982925 plus strand	1885821
SNORD114-23	NR_003216	14	Non-coding	chr14:100983875 plus strand	1885822
SNORD114-24	NR_003217	14	Non-coding	chr14:100984776 plus strand	1885823
SNORD114-25	NR_003218	14	Non-coding	chr14:100986056 plus strand	1885824
SNORD114-26	NR_003219	14	Non-coding	chr14:100987045 plus strand	1885825
SNORD114-27	NR_003220	14	Non-coding	chr14:100988160 plus strand	1885826
SNORD114-28	NR_003221	14	Non-coding	chr14:100989129 plus strand	1885827
SNORD114-29	NR_003222	14	Non-coding	chr14:100990090 plus strand	1885828
SNORD114-3	NR_003195	14	Non-coding	chr14:100953348 plus strand	1885829
SNORD114-30	NR_003223	14	Non-coding	chr14:100991918 plus strand	1885830
SNORD114-31	NR_003224	14	Non-coding	chr14:100993235 plus strand	1885831
SNORD114-4	NR_003196	14	Non-coding	chr14:100954343 plus strand	1885832
SNORD114-5	NR_003197	14	Non-coding	chr14:100955369 plus strand	1885833
SNORD114-6	NR_003198	14	Non-coding	chr14:100957165 plus strand	1885834
SNORD114-7	NR_003199	14	Non-coding	chr14:100963053 plus strand	1885835
SNORD114-8	NR_003200	14	Non-coding	chr14:100964780 plus strand	1885836
SNORD114-9	NR_003201	14	Non-coding	chr14:100966028 plus strand	1885837

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SNORD126	NR_003693	14	Non-coding	chr14:20326539 minus strand	1885838
SNORD127	NR_003691	14	Non-coding	chr14:45110874 plus strand	1885839
SNORD56B	NR_001276	14	Non-coding	chr14:71398336 plus strand	1885840
SNORD8	NR_002916	14	Non-coding	chr14:21397401 minus strand	1885841
SNORD9	NR_003029	14	Non-coding	chr14:21392253 minus strand	1885842
TCL1A	NR_049726	14	Non-coding	chr14:95714196 minus strand	1885843
TCL6	NR_028288	14	Non-coding	chr14:95651177 plus strand	1885844
TEX21P	NR_033777	14	Non-coding	chr14:64347611 minus strand	1885845
THTPA	NR_046051	14	Non-coding	chr14:23511759 plus strand	1885846
THTPA	NR_046052	14	Non-coding	chr14:23512809 plus strand	1885847
THTPA	NR_023314	14	Non-coding	chr14:23555981 plus strand	1885848
TUNAR	NR_038861	14	Non-coding	chr14:95876771 plus strand	1885849
UBR7	NR_038150	14	Non-coding	chr14:93207055 plus strand	1885850
VCPKMT	NR_049739	14	Non-coding	chr14:50116579 minus strand	1885851
VCPKMT	NR_049738	14	Non-coding	chr14:50116579 minus strand	1885851
WDR20	NR_038354	14	Non-coding	chr14:102139851 plus strand	1885852
ZC2HC1C	NR_110315	14	Non-coding	chr14:75069576 plus strand	1885853
ZNF410	NR_040251	14	Non-coding	chr14:73886614 plus strand	1885854
ADAMTS7P1	NR_045529	15	Non-coding	chr15:82293282 plus strand	1885855
ADPGK	NR_023318	15	Non-coding	chr15:72783785 minus strand	1885856
ADPGK	NR_023319	15	Non-coding	chr15:72783785 minus strand	1885856
ADPGK-AS1	NR_040107	15	Non-coding	chr15:72782834 plus strand	1885857
AGBL1-AS1	NR_046012	15	Non-coding	chr15:86316968 minus strand	1885858
ANKRD34C-AS1	NR_038997	15	Non-coding	chr15:79283945 minus strand	1885859
ANP32A-IT1	NR_026808	15	Non-coding	chr15:68807101 minus strand	1885860
ANP32AP1	NR_003144	15	Non-coding	chr15:35237325 plus strand	1885861
AP3S2	NR_037582	15	Non-coding	chr15:89894385 minus strand	1885862

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AP3S2	NR_023361	15	Non-coding	chr15:89894385 minus strand	1885862
ASB9P1	NR_033769	15	Non-coding	chr15:92795483 plus strand	1885863
ATP8B4	NR_073598	15	Non-coding	chr15:50113316 minus strand	1885864
ATP8B4	NR_073597	15	Non-coding	chr15:50119222 minus strand	1885865
ATP8B4	NR_073596	15	Non-coding	chr15:50119222 minus strand	1885865
BAHD1	NR_125372	15	Non-coding	chr15:40441150 plus strand	1885866
BBS4	NR_045566	15	Non-coding	chr15:72686178 plus strand	1885867
BBS4	NR_045565	15	Non-coding	chr15:72686178 plus strand	1885867
C15orf40	NR_027650	15	Non-coding	chr15:83011641 minus strand	1885868
C15orf40	NR_027649	15	Non-coding	chr15:83011641 minus strand	1885868
C15orf59-AS1	NR_120353	15	Non-coding	chr15:73768085 plus strand	1885869
C15orf59-AS1	NR_120352	15	Non-coding	chr15:73768213 plus strand	1885870
CALML4	NR_104583	15	Non-coding	chr15:68206110 minus strand	1885871
CATSPER2	NR_110319	15	Non-coding	chr15:43648063 minus strand	1885872
CATSPER2P1	NR_002318	15	Non-coding	chr15:43746298 minus strand	1885873
CCNDBP1	NR_027514	15	Non-coding	chr15:43185267 plus strand	1885874
CCNDBP1	NR_027513	15	Non-coding	chr15:43185267 plus strand	1885874
CCNDBP1	NR_045999	15	Non-coding	chr15:43185267 plus strand	1885874
CCNDBP1	NR_045998	15	Non-coding	chr15:43185267 plus strand	1885874
CERS3-AS1	NR_120374	15	Non-coding	chr15:100372938 plus strand	1885875
CHEK2P2	NR_038836	15	Non-coding	chr15:20282743 plus strand	1885876
CHRNA3	NR_046313	15	Non-coding	chr15:78621295 minus strand	1885877
CHRNA7	NR_046324	15	Non-coding	chr15:32030482 plus strand	1885878
CIB1	NR_102427	15	Non-coding	chr15:90234155 minus strand	1885879
CIB1	NR_102428	15	Non-coding	chr15:90265759 minus strand	1885880
CIB2	NR_125435	15	Non-coding	chr15:78131535 minus strand	1885881
COMMD4	NR_104312	15	Non-coding	chr15:75335995 plus strand	1885882

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COMMD4	NR_104313	15	Non-coding	chr15:75335995 plus strand	1885882
CPEB1-AS1	NR_046096	15	Non-coding	chr15:82647769 plus strand	1885883
CRTC3-AS1	NR_120372	15	Non-coding	chr15:90717140 minus strand	1885884
CSNK1A1P1	NR_027320	15	Non-coding	chr15:36818506 minus strand	1885885
CXADRP2	NR_024387	15	Non-coding	chr15:21373968 minus strand	1885886
DCAF13P3	NR_027642	15	Non-coding	chr15:50944128 plus strand	1885887
DDX11L9	NR_034090	15	Non-coding	chr15:101979093 minus strand	1885888
DDX11L9	NR_051985	15	Non-coding	chr15:101979093 minus strand	1885888
DET1	NR_026645	15	Non-coding	chr15:88546681 minus strand	1885889
DKFZP434L187	NR_026771	15	Non-coding	chr15:30196035 plus strand	1885890
DKFZP434L187	NR_026771	15	Non-coding	chr15:32342677 minus strand	1885891
DNM1P35	NR_024595	15	Non-coding	chr15:75740077 minus strand	1885892
DNM1P41	NR_033787	15	Non-coding	chr15:84170984 minus strand	1885893
DNM1P41	NR_033787	15	Non-coding	chr15:84502574 plus strand	1885894
DNM1P46	NR_003260	15	Non-coding	chr15:99806927 minus strand	1885895
DPH6-AS1	NR_038251	15	Non-coding	chr15:35546194 plus strand	1885896
DYX1C1-CCPG1	NR_037923	15	Non-coding	chr15:55498584 minus strand	1885897
EFTUD1P1	NR_036652	15	Non-coding	chr15:84080186 plus strand	1885898
EHD4-AS1	NR_120332	15	Non-coding	chr15:41921416 plus strand	1885899
EIF3J-AS1	NR_034171	15	Non-coding	chr15:44536900 minus strand	1885900
EIF3J-AS1	NR_034170	15	Non-coding	chr15:44536923 minus strand	1885901
EWSAT1	NR_026949	15	Non-coding	chr15:69080849 plus strand	1885902
FAM138E	NR_026819	15	Non-coding	chr15:101954884 plus strand	1885903
FAM214A	NR_104457	15	Non-coding	chr15:52678634 minus strand	1885904
FAM96A	NR_110310	15	Non-coding	chr15:64094008 minus strand	1885905
FBXO22	NR_037623	15	Non-coding	chr15:75903858 plus strand	1885906
FBXO22-AS1	NR_003136	15	Non-coding	chr15:75933130 minus strand	1885907

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FLJ10038	NR_026891	15	Non-coding	chr15:50354879 minus strand	1885908
FRMD5	NR_104455	15	Non-coding	chr15:44195294 minus strand	1885909
GABARAPL3	NR_028287	15	Non-coding	chr15:90349447 minus strand	1885910
GABPB1-AS1	NR_024490	15	Non-coding	chr15:50354173 plus strand	1885911
GABRB3	NR_103801	15	Non-coding	chr15:26629178 minus strand	1885912
GABRG3-AS1	NR_120343	15	Non-coding	chr15:27161319 minus strand	1885913
GCOM1	NR_104371	15	Non-coding	chr15:57591903 plus strand	1885914
GCOM1	NR_104370	15	Non-coding	chr15:57591903 plus strand	1885914
GCOM1	NR_104369	15	Non-coding	chr15:57591903 plus strand	1885914
GCOM1	NR_104368	15	Non-coding	chr15:57591903 plus strand	1885914
GCOM1	NR_104367	15	Non-coding	chr15:57591903 plus strand	1885914
GOLGA2P10	NR_033936	15	Non-coding	chr15:82513999 minus strand	1885915
GOLGA2P10	NR_103496	15	Non-coding	chr15:82513999 minus strand	1885915
GOLGA2P10	NR_026811	15	Non-coding	chr15:82513999 minus strand	1885915
GOLGA2P7	NR_027001	15	Non-coding	chr15:84230168 minus strand	1885916
GOLGA6L17P	NR_111962	15	Non-coding	chr15:82519589 plus strand	1885917
GOLGA6L5P	NR_003246	15	Non-coding	chr15:84516847 minus strand	1885918
GOLGA6L7P	NR_047567	15	Non-coding	chr15:28848675 minus strand	1885919
GOLGA8A	NR_027409	15	Non-coding	chr15:34437466 minus strand	1885920
GOLGA8B	NR_027410	15	Non-coding	chr15:34583570 minus strand	1885921
GOLGA8CP	NR_027411	15	Non-coding	chr15:20562348 plus strand	1885922
GOLGA8CP	NR_027411	15	Non-coding	chr15:22438026 minus strand	1885923
GOLGA8DP	NR_027407	15	Non-coding	chr15:23157339 plus strand	1885924
GOLGA8EP	NR_033350	15	Non-coding	chr15:22438026 minus strand	1885925
GOLGA8F	NR_033351	15	Non-coding	chr15:28378637 plus strand	1885926
GOLGA8F	NR_033351	15	Non-coding	chr15:28532997 minus strand	1885927
GOLGA8G	NR_033353	15	Non-coding	chr15:28378637 plus strand	1885928

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GOLGA8G	NR_033353	15	Non-coding	chr15:28532997 minus strand	1885929
GOLGA8IP	NR_024074	15	Non-coding	chr15:22617854 minus strand	1885930
GOLGA8IP	NR_024074	15	Non-coding	chr15:30604029 plus strand	1885931
GOLGA8S	NR_038843	15	Non-coding	chr15:23354747 plus strand	1885932
GOLGA8T	NR_033933	15	Non-coding	chr15:30135786 plus strand	1885933
GOLGA8T	NR_033933	15	Non-coding	chr15:32402556 minus strand	1885934
HDDC3	NR_104447	15	Non-coding	chr15:90932569 minus strand	1885935
HERC2P10	NR_072991	15	Non-coding	chr15:30818035 plus strand	1885936
HERC2P2	NR_002824	15	Non-coding	chr15:22494836 plus strand	1885937
HERC2P3	NR_036432	15	Non-coding	chr15:20506180 minus strand	1885938
HERC2P7	NR_036470	15	Non-coding	chr15:22482374 minus strand	1885939
HERC2P9	NR_036443	15	Non-coding	chr15:28654441 plus strand	1885940
HEXA-AS1	NR_027262	15	Non-coding	chr15:72376112 plus strand	1885941
HIGD2B	NR_002780	15	Non-coding	chr15:72686149 minus strand	1885942
HMGN2P46	NR_022014	15	Non-coding	chr15:45511135 plus strand	1885943
HSP90AB4P	NR_073415	15	Non-coding	chr15:58693607 minus strand	1885944
HSP90B2P	NR_073383	15	Non-coding	chr15:99257524 plus strand	1885945
INO80	NR_104038	15	Non-coding	chr15:41116246 minus strand	1885946
IPW	NR_023915	15	Non-coding	chr15:25116544 plus strand	1885947
IQCH-AS1	NR_040055	15	Non-coding	chr15:67520973 minus strand	1885948
IQCH-AS1	NR_040056	15	Non-coding	chr15:67521062 minus strand	1885949
IQCH-AS1	NR_040052	15	Non-coding	chr15:67521844 minus strand	1885950
IQCH-AS1	NR_040051	15	Non-coding	chr15:67521844 minus strand	1885950
IQCH-AS1	NR_040054	15	Non-coding	chr15:67521844 minus strand	1885950
IRAIN	NR_126453	15	Non-coding	chr15:98651221 minus strand	1885951
KIAA0101	NR_109934	15	Non-coding	chr15:64387687 minus strand	1885952
LCTL	NR_103739	15	Non-coding	chr15:66565979 minus strand	1885953

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LINC00052	NR_026869	15	Non-coding	chr15:87576928 plus strand	1885954
LINC00593	NR_026764	15	Non-coding	chr15:69835233 plus strand	1885955
LINC00597	NR_026813	15	Non-coding	chr15:77225404 minus strand	1885956
LINC00923	NR_024172	15	Non-coding	chr15:97874429 minus strand	1885957
LINC00923	NR_024173	15	Non-coding	chr15:97874429 minus strand	1885957
LINC00924	NR_027133	15	Non-coding	chr15:95433092 plus strand	1885958
LINC00924	NR_027132	15	Non-coding	chr15:95433092 plus strand	1885958
LINC00925	NR_015411	15	Non-coding	chr15:89378041 plus strand	1885959
LINC00926	NR_024433	15	Non-coding	chr15:57300364 plus strand	1885960
LINC00927	NR_033833	15	Non-coding	chr15:80341805 minus strand	1885961
LINC00928	NR_027075	15	Non-coding	chr15:89524034 minus strand	1885962
LINC00928	NR_027076	15	Non-coding	chr15:89524034 minus strand	1885962
LINC00928	NR_027077	15	Non-coding	chr15:89524034 minus strand	1885962
LINC00928	NR_027074	15	Non-coding	chr15:89524034 minus strand	1885962
LINC00929	NR_038851	15	Non-coding	chr15:26115812 plus strand	1885963
LINC00929	NR_038852	15	Non-coding	chr15:26115812 plus strand	1885963
LINC00930	NR_021493	15	Non-coding	chr15:92572263 minus strand	1885964
LINC00933	NR_038274	15	Non-coding	chr15:84570648 plus strand	1885965
LINC00933	NR_038273	15	Non-coding	chr15:84571133 plus strand	1885966
LINC01169	NR_110372	15	Non-coding	chr15:66582189 plus strand	1885967
LINC01193	NR_040094	15	Non-coding	chr15:20940437 plus strand	1885968
LINC01197	NR_034095	15	Non-coding	chr15:95327100 minus strand	1885969
LINC01314	NR_120317	15	Non-coding	chr15:80252261 minus strand	1885970
LINC01413	NR_120337	15	Non-coding	chr15:57319137 plus strand	1885971
LINC01491	NR_120336	15	Non-coding	chr15:47846236 minus strand	1885972
LINC01578	NR_037601	15	Non-coding	chr15:92882842 plus strand	1885973
LINC01578	NR_037600	15	Non-coding	chr15:92882842 plus strand	1885973

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LINC01578	NR_037602	15	Non-coding	chr15:92883295 plus strand	1885974
LINC01580	NR_120323	15	Non-coding	chr15:93900700 plus strand	1885975
LINC01580	NR_120322	15	Non-coding	chr15:93900700 plus strand	1885975
LINC01581	NR_120320	15	Non-coding	chr15:94107938 minus strand	1885976
LINC01582	NR_120325	15	Non-coding	chr15:98088753 minus strand	1885977
LINC01583	NR_120367	15	Non-coding	chr15:82088593 plus strand	1885978
LINC01584	NR_120368	15	Non-coding	chr15:86116717 minus strand	1885979
LINC01585	NR_120371	15	Non-coding	chr15:90660233 plus strand	1885980
LINC01586	NR_120369	15	Non-coding	chr15:88604603 minus strand	1885981
LINC01586	NR_120370	15	Non-coding	chr15:88605110 minus strand	1885982
LINGO1-AS1	NR_045123	15	Non-coding	chr15:77641763 plus strand	1885983
LINGO1-AS2	NR_120361	15	Non-coding	chr15:77660050 plus strand	1885984
LINGO1-AS2	NR_120362	15	Non-coding	chr15:77660050 plus strand	1885984
LOC100128714	NR_040082	15	Non-coding	chr15:25902359 plus strand	1885985
LOC100129973	NR_102751	15	Non-coding	chr15:52180025 plus strand	1885986
LOC100131315	NR_109767	15	Non-coding	chr15:32718865 minus strand	1885987
LOC100288637	NR_038253	15	Non-coding	chr15:30646114 plus strand	1885988
LOC100288637	NR_038254	15	Non-coding	chr15:30658716 plus strand	1885989
LOC100288637	NR_038255	15	Non-coding	chr15:30658716 plus strand	1885989
LOC100288637	NR_038253	15	Non-coding	chr15:32423209 minus strand	1885990
LOC100289656	NR_036475	15	Non-coding	chr15:28788242 plus strand	1885991
LOC100419583	NR_125376	15	Non-coding	chr15:44728987 plus strand	1885992
LOC100422556	NR_109775	15	Non-coding	chr15:51924120 minus strand	1885993
LOC100507472	NR_045387	15	Non-coding	chr15:101309304 minus strand	1885994
LOC100996255	NR_102756	15	Non-coding	chr15:32536758 plus strand	1885995
LOC101926911	NR_110104	15	Non-coding	chr15:91022621 plus strand	1885996
LOC101926928	NR_110106	15	Non-coding	chr15:91463338 plus strand	1885997

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LOC101927079	NR_110480	15	Non-coding	chr15:21990079 plus strand	1885998
LOC101927079	NR_110481	15	Non-coding	chr15:22015260 plus strand	1885999
LOC101927153	NR_120321	15	Non-coding	chr15:93856559 plus strand	1886000
LOC101927286	NR_120324	15	Non-coding	chr15:97521811 minus strand	1886001
LOC101927310	NR_110756	15	Non-coding	chr15:97560698 minus strand	1886002
LOC101928134	NR_120326	15	Non-coding	chr15:33310245 minus strand	1886003
LOC101928134	NR_120327	15	Non-coding	chr15:33310659 minus strand	1886004
LOC101928174	NR_120329	15	Non-coding	chr15:34755083 plus strand	1886005
LOC101928227	NR_120330	15	Non-coding	chr15:38040392 plus strand	1886006
LOC101928414	NR_120335	15	Non-coding	chr15:45279222 minus strand	1886007
LOC101928694	NR_120338	15	Non-coding	chr15:58498735 minus strand	1886008
LOC101928988	NR_120344	15	Non-coding	chr15:63928273 plus strand	1886009
LOC101929076	NR_120345	15	Non-coding	chr15:67838879 minus strand	1886010
LOC101929439	NR_120360	15	Non-coding	chr15:76181486 minus strand	1886011
LOC101929586	NR_120363	15	Non-coding	chr15:80562944 minus strand	1886012
LOC101929679	NR_120366	15	Non-coding	chr15:85758725 minus strand	1886013
LOC102723344	NR_120375	15	Non-coding	chr15:63390229 plus strand	1886014
LOC102724034	NR_120378	15	Non-coding	chr15:82444869 minus strand	1886015
LOC102724034	NR_120378	15	Non-coding	chr15:84422617 plus strand	1886016
LOC103171574	NR_120379	15	Non-coding	chr15:84422518 plus strand	1886017
LOC104613533	NR_126501	15	Non-coding	chr15:92471546 minus strand	1886018
LOC145783	NR_015419	15	Non-coding	chr15:56918499 minus strand	1886019
LOC145837	NR_026979	15	Non-coding	chr15:69561719 plus strand	1886020
LOC145845	NR_024264	15	Non-coding	chr15:36886533 minus strand	1886021
LOC283683	NR_040057	15	Non-coding	chr15:22757856 plus strand	1886022
LOC283693	NR_036446	15	Non-coding	chr15:82739780 minus strand	1886023
LOC283731	NR_027073	15	Non-coding	chr15:74129278 minus strand	1886024

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LOC338963	NR_034139	15	Non-coding	chr15:82713993 minus strand	1886025
LOC440300	NR_033738	15	Non-coding	chr15:84191847 plus strand	1886026
LOC440311	NR_077061	15	Non-coding	chr15:94855362 plus strand	1886027
LOC642423	NR_049748	15	Non-coding	chr15:84200689 minus strand	1886028
LOC642423	NR_049748	15	Non-coding	chr15:84472874 plus strand	1886029
LOC642423	NR_049748	15	Non-coding	chr15:85205287 minus strand	1886030
LOC645752	NR_027024	15	Non-coding	chr15:77926846 minus strand	1886031
LOC646214	NR_027053	15	Non-coding	chr15:21297829 minus strand	1886032
LOC646938	NR_036495	15	Non-coding	chr15:78752036 plus strand	1886033
LOC727751	NR_102748	15	Non-coding	chr15:82513995 minus strand	1886034
LOC727751	NR_102747	15	Non-coding	chr15:82513995 minus strand	1886034
LOC727924	NR_015416	15	Non-coding	chr15:21552794 plus strand	1886035
LOC729739	NR_045207	15	Non-coding	chr15:74361551 plus strand	1886036
LOC91450	NR_026998	15	Non-coding	chr15:77994225 minus strand	1886037
LOXL1-AS1	NR_040067	15	Non-coding	chr15:73927786 minus strand	1886038
LOXL1-AS1	NR_040066	15	Non-coding	chr15:73927786 minus strand	1886038
LOXL1-AS1	NR_040070	15	Non-coding	chr15:73927960 minus strand	1886039
LOXL1-AS1	NR_040069	15	Non-coding	chr15:73928248 minus strand	1886040
LOXL1-AS1	NR_040068	15	Non-coding	chr15:73928248 minus strand	1886040
LUNAR1	NR_126487	15	Non-coding	chr15:99014703 plus strand	1886041
MAPKBP1	NR_049762	15	Non-coding	chr15:41774433 plus strand	1886042
MAPKBP1	NR_049761	15	Non-coding	chr15:41774433 plus strand	1886042
MEIS2	NR_051953	15	Non-coding	chr15:37100140 minus strand	1886043
MESDC2	NR_126327	15	Non-coding	chr15:80989878 minus strand	1886044
MESDC2	NR_126328	15	Non-coding	chr15:80989878 minus strand	1886044
MGC15885	NR_026897	15	Non-coding	chr15:62645181 minus strand	1886045
MIR1179	NR_031590	15	Non-coding	chr15:88608106 plus strand	1886046

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MIR1233-1	NR_036050	15	Non-coding	chr15:34382150 minus strand	1886047
MIR1233-1	NR_036050	15	Non-coding	chr15:34528371 minus strand	1886048
MIR1233-2	NR_036261	15	Non-coding	chr15:34382150 minus strand	1886049
MIR1233-2	NR_036261	15	Non-coding	chr15:34528371 minus strand	1886050
MIR1266	NR_031670	15	Non-coding	chr15:52277200 minus strand	1886051
MIR1268A	NR_031672	15	Non-coding	chr15:22225329 minus strand	1886052
MIR1268A	NR_031672	15	Non-coding	chr15:28500841 minus strand	1886053
MIR1272	NR_031674	15	Non-coding	chr15:64762515 minus strand	1886054
MIR1276	NR_031682	15	Non-coding	chr15:85770578 minus strand	1886055
MIR1282	NR_031695	15	Non-coding	chr15:43793759 minus strand	1886056
MIR1302-10	NR_036267	15	Non-coding	chr15:101960596 minus strand	1886057
MIR1302-11	NR_036268	15	Non-coding	chr15:101960596 minus strand	1886058
MIR1302-2	NR_036051	15	Non-coding	chr15:101960596 minus strand	1886059
MIR1302-9	NR_036266	15	Non-coding	chr15:101960596 minus strand	1886060
MIR1469	NR_031715	15	Non-coding	chr15:96333260 plus strand	1886061
MIR147B	NR_030599	15	Non-coding	chr15:45433049 plus strand	1886062
MIR184	NR_029705	15	Non-coding	chr15:79209787 plus strand	1886063
MIR190A	NR_029709	15	Non-coding	chr15:62823956 plus strand	1886064
MIR211	NR_029624	15	Non-coding	chr15:31065141 minus strand	1886065
MIR2116	NR_031750	15	Non-coding	chr15:59171262 minus strand	1886066
MIR3118-2	NR_036062	15	Non-coding	chr15:20832794 plus strand	1886067
MIR3118-2	NR_036062	15	Non-coding	chr15:21406384 plus strand	1886068
MIR3118-2	NR_036062	15	Non-coding	chr15:21843749 plus strand	1886069
MIR3118-3	NR_036063	15	Non-coding	chr15:20832794 plus strand	1886070
MIR3118-3	NR_036063	15	Non-coding	chr15:21406384 plus strand	1886071
MIR3118-3	NR_036063	15	Non-coding	chr15:21843749 plus strand	1886072
MIR3118-4	NR_036134	15	Non-coding	chr15:20832794 plus strand	1886073

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MIR3118-4	NR_036134	15	Non-coding	chr15:21406384 plus strand	1886074
MIR3118-4	NR_036134	15	Non-coding	chr15:21843749 plus strand	1886075
MIR3174	NR_036135	15	Non-coding	chr15:90006754 plus strand	1886076
MIR3175	NR_036136	15	Non-coding	chr15:92904398 plus strand	1886077
MIR3529	NR_039867	15	Non-coding	chr15:88611924 minus strand	1886078
MIR3713	NR_037464	15	Non-coding	chr15:76586646 plus strand	1886079
MIR3942	NR_037507	15	Non-coding	chr15:35372364 minus strand	1886080
MIR422A	NR_029944	15	Non-coding	chr15:63871019 minus strand	1886081
MIR4310	NR_036195	15	Non-coding	chr15:41866551 minus strand	1886082
MIR4311	NR_036196	15	Non-coding	chr15:66040232 plus strand	1886083
MIR4312	NR_036197	15	Non-coding	chr15:68801925 minus strand	1886084
MIR4313	NR_036198	15	Non-coding	chr15:75762315 minus strand	1886085
MIR4508	NR_039731	15	Non-coding	chr15:23562131 minus strand	1886086
MIR4509-1	NR_039732	15	Non-coding	chr15:23197826 plus strand	1886087
MIR4509-1	NR_039732	15	Non-coding	chr15:28426490 plus strand	1886088
MIR4509-1	NR_039732	15	Non-coding	chr15:28490845 minus strand	1886089
MIR4509-2	NR_039733	15	Non-coding	chr15:23197826 plus strand	1886090
MIR4509-2	NR_039733	15	Non-coding	chr15:28426490 plus strand	1886091
MIR4509-2	NR_039733	15	Non-coding	chr15:28490845 minus strand	1886092
MIR4509-3	NR_039734	15	Non-coding	chr15:23197826 plus strand	1886093
MIR4509-3	NR_039734	15	Non-coding	chr15:28426490 plus strand	1886094
MIR4509-3	NR_039734	15	Non-coding	chr15:28490845 minus strand	1886095
MIR4510	NR_039735	15	Non-coding	chr15:35926855 plus strand	1886096
MIR4511	NR_039736	15	Non-coding	chr15:65719332 minus strand	1886097
MIR4512	NR_039737	15	Non-coding	chr15:66497034 minus strand	1886098
MIR4513	NR_039738	15	Non-coding	chr15:74788757 minus strand	1886099
MIR4514	NR_039739	15	Non-coding	chr15:80997473 minus strand	1886100

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MIR4515	NR_039740	15	Non-coding	chr15:83067334 plus strand	1886101
MIR4712	NR_039862	15	Non-coding	chr15:50360328 plus strand	1886102
MIR4713	NR_039863	15	Non-coding	chr15:51242189 plus strand	1886103
MIR4714	NR_039864	15	Non-coding	chr15:98784425 plus strand	1886104
MIR4715	NR_039865	15	Non-coding	chr15:25848825 minus strand	1886105
MIR4716	NR_039866	15	Non-coding	chr15:49169153 minus strand	1886106
MIR5009	NR_049807	15	Non-coding	chr15:89884030 minus strand	1886107
MIR5094	NR_049817	15	Non-coding	chr15:89850721 minus strand	1886108
MIR548AP	NR_049805	15	Non-coding	chr15:85825634 plus strand	1886109
MIR549A	NR_030393	15	Non-coding	chr15:80842073 minus strand	1886110
MIR5572	NR_049837	15	Non-coding	chr15:80581102 plus strand	1886111
MIR5701-1	NR_049886	15	Non-coding	chr15:20940251 plus strand	1886112
MIR5701-1	NR_049886	15	Non-coding	chr15:21513958 plus strand	1886113
MIR5701-1	NR_049886	15	Non-coding	chr15:21951241 plus strand	1886114
MIR5701-2	NR_049895	15	Non-coding	chr15:20940251 plus strand	1886115
MIR5701-2	NR_049895	15	Non-coding	chr15:21513958 plus strand	1886116
MIR5701-2	NR_049895	15	Non-coding	chr15:21951241 plus strand	1886117
MIR5701-3	NR_128721	15	Non-coding	chr15:20940251 plus strand	1886118
MIR5701-3	NR_128721	15	Non-coding	chr15:21513958 plus strand	1886119
MIR5701-3	NR_128721	15	Non-coding	chr15:21951241 plus strand	1886120
MIR6085	NR_106733	15	Non-coding	chr15:62343028 plus strand	1886121
MIR626	NR_030356	15	Non-coding	chr15:41691584 plus strand	1886122
MIR627	NR_030357	15	Non-coding	chr15:42199666 minus strand	1886123
MIR628	NR_030358	15	Non-coding	chr15:55373034 minus strand	1886124
MIR629	NR_030714	15	Non-coding	chr15:70079468 minus strand	1886125
MIR630	NR_030359	15	Non-coding	chr15:72587216 plus strand	1886126
MIR631	NR_030360	15	Non-coding	chr15:75353685 minus strand	1886127

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MIR6766	NR_106824	15	Non-coding	chr15:89326810 minus strand	1886128
MIR6859-1	NR_106918	15	Non-coding	chr15:101973523 plus strand	1886129
MIR6859-2	NR_107062	15	Non-coding	chr15:101973523 plus strand	1886130
MIR6859-3	NR_107063	15	Non-coding	chr15:101973523 plus strand	1886131
MIR6859-4	NR_128720	15	Non-coding	chr15:101973523 plus strand	1886132
MIR6881	NR_106941	15	Non-coding	chr15:74411432 minus strand	1886133
MIR6882	NR_106942	15	Non-coding	chr15:74840707 minus strand	1886134
MIR7-2	NR_029606	15	Non-coding	chr15:88611824 plus strand	1886135
MIR7706	NR_106993	15	Non-coding	chr15:85380595 plus strand	1886136
MIR7973-1	NR_107012	15	Non-coding	chr15:51314033 plus strand	1886137
MIR7973-2	NR_107013	15	Non-coding	chr15:51314107 minus strand	1886138
MIR8063	NR_107030	15	Non-coding	chr15:36972901 minus strand	1886139
MIR8067	NR_107034	15	Non-coding	chr15:62304734 minus strand	1886140
MIR9-3	NR_029692	15	Non-coding	chr15:89368016 plus strand	1886141
MRPL42P5	NR_002208	15	Non-coding	chr15:40532550 minus strand	1886142
MTHFS	NR_037654	15	Non-coding	chr15:79896997 minus strand	1886143
MYEF2	NR_125408	15	Non-coding	chr15:48178361 minus strand	1886144
NBEAP1	NR_027992	15	Non-coding	chr15:20756151 minus strand	1886145
NDUFAF1	NR_045620	15	Non-coding	chr15:41402460 minus strand	1886146
NDUFAF4P1	NR_036507	15	Non-coding	chr15:49156297 plus strand	1886147
NEDD4	NR_104302	15	Non-coding	chr15:55917131 minus strand	1886148
NEIL1	NR_046311	15	Non-coding	chr15:75347618 plus strand	1886149
NF1P2	NR_028506	15	Non-coding	chr15:20929296 minus strand	1886150
NF1P2	NR_028506	15	Non-coding	chr15:21502997 minus strand	1886151
NF1P2	NR_028506	15	Non-coding	chr15:21940278 minus strand	1886152
NGRN	NR_028052	15	Non-coding	chr15:90265662 plus strand	1886153
NOX5	NR_033671	15	Non-coding	chr15:68930499 plus strand	1886154

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NOX5	NR_033672	15	Non-coding	chr15:68930499 plus strand	1886154
NPTN-IT1	NR_103844	15	Non-coding	chr15:73569543 minus strand	1886155
NR2F2-AS1	NR_125738	15	Non-coding	chr15:96327118 minus strand	1886156
NR2F2-AS1	NR_102744	15	Non-coding	chr15:96327361 minus strand	1886157
NR2F2-AS1	NR_102743	15	Non-coding	chr15:96327361 minus strand	1886157
NTRK3-AS1	NR_038229	15	Non-coding	chr15:88252729 plus strand	1886158
OIP5-AS1	NR_026757	15	Non-coding	chr15:41284002 plus strand	1886159
ONECUT1	NR_073510	15	Non-coding	chr15:52780884 minus strand	1886160
OR4F13P	NR_046417	15	Non-coding	chr15:101842118 plus strand	1886161
OR4N3P	NR_028067	15	Non-coding	chr15:22125510 plus strand	1886162
PCAT29	NR_126437	15	Non-coding	chr15:69592199 plus strand	1886163
PCAT29	NR_126438	15	Non-coding	chr15:69592199 plus strand	1886163
PDCD6IPP2	NR_037599	15	Non-coding	chr15:28789833 plus strand	1886164
PIN4P1	NR_003571	15	Non-coding	chr15:43878171 minus strand	1886165
PLA2G4E-AS1	NR_120334	15	Non-coding	chr15:41972762 plus strand	1886166
PLA2G4F	NR_033151	15	Non-coding	chr15:42156641 minus strand	1886167
POTEB	NR_102391	15	Non-coding	chr15:20866314 minus strand	1886168
POTEB	NR_102391	15	Non-coding	chr15:21877279 minus strand	1886169
POTEB2	NR_102390	15	Non-coding	chr15:20866314 minus strand	1886170
POTEB2	NR_102390	15	Non-coding	chr15:21877279 minus strand	1886171
POTEB3	NR_110752	15	Non-coding	chr15:21440382 minus strand	1886172
PPCDC	NR_125369	15	Non-coding	chr15:75023554 plus strand	1886173
PRC1-AS1	NR_051984	15	Non-coding	chr15:90966368 plus strand	1886174
PRKXP1	NR_073405	15	Non-coding	chr15:100559283 minus strand	1886175
PWAR1	NR_022009	15	Non-coding	chr15:25135641 plus strand	1886176
PWAR4	NR_022010	15	Non-coding	chr15:25211691 plus strand	1886177
PWAR5	NR_022008	15	Non-coding	chr15:24984859 plus strand	1886178

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PWARSN	NR_022011	15	Non-coding	chr15:24981993 plus strand	1886179
PWRN1	NR_026646	15	Non-coding	chr15:24558156 plus strand	1886180
PWRN2	NR_026647	15	Non-coding	chr15:24169906 minus strand	1886181
PWRN4	NR_126392	15	Non-coding	chr15:23975146 plus strand	1886182
RAD51-AS1	NR_040058	15	Non-coding	chr15:40695105 minus strand	1886183
REREP3	NR_033735	15	Non-coding	chr15:22258613 plus strand	1886184
RHCG	NR_110261	15	Non-coding	chr15:89496613 minus strand	1886185
RNU5A-1	NR_002756	15	Non-coding	chr15:65296050 plus strand	1886186
RNU5B-1	NR_002757	15	Non-coding	chr15:65304676 plus strand	1886187
RNU6-1	NR_004394	15	Non-coding	chr15:67840045 minus strand	1886188
RNU6-19P	NR_046487	15	Non-coding	chr15:65553187 minus strand	1886189
RNU6-2	NR_125730	15	Non-coding	chr15:67840045 minus strand	1886190
RNU6-7	NR_104084	15	Non-coding	chr15:67840045 minus strand	1886191
RNU6-8	NR_104088	15	Non-coding	chr15:67840045 minus strand	1886192
RNU6-9	NR_104080	15	Non-coding	chr15:67840045 minus strand	1886193
RORA-AS1	NR_120342	15	Non-coding	chr15:60479177 plus strand	1886194
RORA-AS1	NR_120341	15	Non-coding	chr15:60479177 plus strand	1886194
RORA-AS1	NR_120339	15	Non-coding	chr15:60479177 plus strand	1886194
RORA-AS1	NR_120340	15	Non-coding	chr15:60479177 plus strand	1886194
RORA-AS2	NR_120319	15	Non-coding	chr15:60681568 plus strand	1886195
RORA-AS2	NR_120318	15	Non-coding	chr15:60681568 plus strand	1886195
RPS17	NR_111943	15	Non-coding	chr15:82540457 minus strand	1886196
RPS17	NR_111944	15	Non-coding	chr15:82540544 minus strand	1886197
SALRNA2	NR_126482	15	Non-coding	chr15:70635248 plus strand	1886198
SALRNA3	NR_126481	15	Non-coding	chr15:70615546 plus strand	1886199
SCAMP5	NR_033660	15	Non-coding	chr15:74995534 plus strand	1886200
SCAND2P	NR_004859	15	Non-coding	chr15:84631459 plus strand	1886201

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SCAND2P	NR_003654	15	Non-coding	chr15:84631459 plus strand	1886201
SCARNA14	NR_004388	15	Non-coding	chr15:66347342 minus strand	1886202
SCARNA15	NR_003011	15	Non-coding	chr15:82755944 plus strand	1886203
SEC11A	NR_073518	15	Non-coding	chr15:84716460 minus strand	1886204
SERF2	NR_037672	15	Non-coding	chr15:43791975 plus strand	1886205
SERF2-C15ORF63	NR_037673	15	Non-coding	chr15:43791975 plus strand	1886206
SH3GL3	NR_125370	15	Non-coding	chr15:83447227 plus strand	1886207
SMAD6	NR_027654	15	Non-coding	chr15:66702335 plus strand	1886208
SNHG21	NR_110099	15	Non-coding	chr15:82750563 plus strand	1886209
SNHG21	NR_110098	15	Non-coding	chr15:82750563 plus strand	1886209
SNHG21	NR_110097	15	Non-coding	chr15:82750563 plus strand	1886209
SNHG21	NR_110096	15	Non-coding	chr15:82750563 plus strand	1886209
SNHG21	NR_110100	15	Non-coding	chr15:82750563 plus strand	1886209
SNORD107	NR_001293	15	Non-coding	chr15:24981993 plus strand	1886210
SNORD108	NR_001292	15	Non-coding	chr15:24986924 plus strand	1886211
SNORD109A	NR_001295	15	Non-coding	chr15:25041973 plus strand	1886212
SNORD109A	NR_001295	15	Non-coding	chr15:25278342 plus strand	1886213
SNORD109B	NR_001289	15	Non-coding	chr15:25041973 plus strand	1886214
SNORD109B	NR_001289	15	Non-coding	chr15:25278342 plus strand	1886215
SNORD115-1	NR_001291	15	Non-coding	chr15:25170722 plus strand	1886216
SNORD115-10	NR_003302	15	Non-coding	chr15:25178740 plus strand	1886217
SNORD115-10	NR_003302	15	Non-coding	chr15:25185630 plus strand	1886218
SNORD115-10	NR_003302	15	Non-coding	chr15:25187535 plus strand	1886219
SNORD115-10	NR_003302	15	Non-coding	chr15:25191415 plus strand	1886220
SNORD115-10	NR_003302	15	Non-coding	chr15:25247344 plus strand	1886221
SNORD115-11	NR_003303	15	Non-coding	chr15:25189413 plus strand	1886222
SNORD115-11	NR_003303	15	Non-coding	chr15:25223245 plus strand	1886223

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SNORD115-11	NR_003303	15	Non-coding	chr15:25236084 plus strand	1886224
SNORD115-11	NR_003303	15	Non-coding	chr15:25249197 plus strand	1886225
SNORD115-12	NR_003304	15	Non-coding	chr15:25178740 plus strand	1886226
SNORD115-12	NR_003304	15	Non-coding	chr15:25185630 plus strand	1886227
SNORD115-12	NR_003304	15	Non-coding	chr15:25191415 plus strand	1886228
SNORD115-13	NR_003305	15	Non-coding	chr15:25193320 plus strand	1886229
SNORD115-14	NR_003306	15	Non-coding	chr15:25194920 plus strand	1886230
SNORD115-15	NR_003307	15	Non-coding	chr15:25197575 plus strand	1886231
SNORD115-15	NR_003307	15	Non-coding	chr15:25247344 plus strand	1886232
SNORD115-16	NR_003308	15	Non-coding	chr15:25199447 plus strand	1886233
SNORD115-17	NR_003309	15	Non-coding	chr15:25201322 plus strand	1886234
SNORD115-17	NR_003309	15	Non-coding	chr15:25203226 plus strand	1886235
SNORD115-17	NR_003309	15	Non-coding	chr15:25204356 plus strand	1886236
SNORD115-18	NR_003310	15	Non-coding	chr15:25201322 plus strand	1886237
SNORD115-18	NR_003310	15	Non-coding	chr15:25203226 plus strand	1886238
SNORD115-18	NR_003310	15	Non-coding	chr15:25204356 plus strand	1886239
SNORD115-19	NR_003311	15	Non-coding	chr15:25201322 plus strand	1886240
SNORD115-19	NR_003311	15	Non-coding	chr15:25203226 plus strand	1886241
SNORD115-19	NR_003311	15	Non-coding	chr15:25204356 plus strand	1886242
SNORD115-2	NR_003294	15	Non-coding	chr15:25172634 plus strand	1886243
SNORD115-20	NR_003312	15	Non-coding	chr15:25206261 plus strand	1886244
SNORD115-21	NR_003313	15	Non-coding	chr15:25206261 plus strand	1886245
SNORD115-21	NR_003313	15	Non-coding	chr15:25243613 plus strand	1886246
SNORD115-21	NR_003313	15	Non-coding	chr15:25247344 plus strand	1886247
SNORD115-22	NR_003314	15	Non-coding	chr15:25209917 plus strand	1886248
SNORD115-23	NR_003315	15	Non-coding	chr15:25211795 plus strand	1886249
SNORD115-24	NR_003495	15	Non-coding	chr15:25213658 plus strand	1886250

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SNORD115-25	NR_003342	15	Non-coding	chr15:25215540 plus strand	1886251
SNORD115-26	NR_003343	15	Non-coding	chr15:25218616 plus strand	1886252
SNORD115-27	NR_003496	15	Non-coding	chr15:25220502 plus strand	1886253
SNORD115-28	NR_003497	15	Non-coding	chr15:25222353 plus strand	1886254
SNORD115-29	NR_003344	15	Non-coding	chr15:25189413 plus strand	1886255
SNORD115-29	NR_003344	15	Non-coding	chr15:25223245 plus strand	1886256
SNORD115-29	NR_003344	15	Non-coding	chr15:25236084 plus strand	1886257
SNORD115-29	NR_003344	15	Non-coding	chr15:25249197 plus strand	1886258
SNORD115-3	NR_003295	15	Non-coding	chr15:25174926 plus strand	1886259
SNORD115-30	NR_003345	15	Non-coding	chr15:25225202 plus strand	1886260
SNORD115-31	NR_003346	15	Non-coding	chr15:25227108 plus strand	1886261
SNORD115-32	NR_003347	15	Non-coding	chr15:25228966 plus strand	1886262
SNORD115-33	NR_003348	15	Non-coding	chr15:25230837 plus strand	1886263
SNORD115-34	NR_003349	15	Non-coding	chr15:25232386 plus strand	1886264
SNORD115-35	NR_003350	15	Non-coding	chr15:25234246 plus strand	1886265
SNORD115-36	NR_003351	15	Non-coding	chr15:25189413 plus strand	1886266
SNORD115-36	NR_003351	15	Non-coding	chr15:25223245 plus strand	1886267
SNORD115-36	NR_003351	15	Non-coding	chr15:25236084 plus strand	1886268
SNORD115-36	NR_003351	15	Non-coding	chr15:25249197 plus strand	1886269
SNORD115-37	NR_003352	15	Non-coding	chr15:25237985 plus strand	1886270
SNORD115-38	NR_003353	15	Non-coding	chr15:25239837 plus strand	1886271
SNORD115-39	NR_003354	15	Non-coding	chr15:25241745 plus strand	1886272
SNORD115-4	NR_003296	15	Non-coding	chr15:25176831 plus strand	1886273
SNORD115-40	NR_003355	15	Non-coding	chr15:25243613 plus strand	1886274
SNORD115-41	NR_003356	15	Non-coding	chr15:25245477 plus strand	1886275
SNORD115-42	NR_003357	15	Non-coding	chr15:25247344 plus strand	1886276
SNORD115-43	NR_003358	15	Non-coding	chr15:25189413 plus strand	1886277

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SNORD115-43	NR_003358	15	Non-coding	chr15:25223245 plus strand	1886278
SNORD115-43	NR_003358	15	Non-coding	chr15:25236084 plus strand	1886279
SNORD115-43	NR_003358	15	Non-coding	chr15:25249197 plus strand	1886280
SNORD115-44	NR_003359	15	Non-coding	chr15:25250858 plus strand	1886281
SNORD115-45	NR_003498	15	Non-coding	chr15:25264526 plus strand	1886282
SNORD115-46	NR_047033	15	Non-coding	chr15:25266590 plus strand	1886283
SNORD115-47	NR_003499	15	Non-coding	chr15:25268516 plus strand	1886284
SNORD115-48	NR_003362	15	Non-coding	chr15:25269782 plus strand	1886285
SNORD115-5	NR_003297	15	Non-coding	chr15:25178737 plus strand	1886286
SNORD115-5	NR_003297	15	Non-coding	chr15:25185633 plus strand	1886287
SNORD115-5	NR_003297	15	Non-coding	chr15:25191418 plus strand	1886288
SNORD115-6	NR_003298	15	Non-coding	chr15:25180496 plus strand	1886289
SNORD115-7	NR_003299	15	Non-coding	chr15:25182384 plus strand	1886290
SNORD115-8	NR_003300	15	Non-coding	chr15:25184305 plus strand	1886291
SNORD115-9	NR_003301	15	Non-coding	chr15:25178740 plus strand	1886292
SNORD115-9	NR_003301	15	Non-coding	chr15:25185630 plus strand	1886293
SNORD115-9	NR_003301	15	Non-coding	chr15:25191415 plus strand	1886294
SNORD116-1	NR_003316	15	Non-coding	chr15:25051475 plus strand	1886295
SNORD116-10	NR_003325	15	Non-coding	chr15:25074112 plus strand	1886296
SNORD116-11	NR_003326	15	Non-coding	chr15:25075927 plus strand	1886297
SNORD116-12	NR_003327	15	Non-coding	chr15:25077049 plus strand	1886298
SNORD116-13	NR_003328	15	Non-coding	chr15:25079056 plus strand	1886299
SNORD116-14	NR_003329	15	Non-coding	chr15:25080140 plus strand	1886300
SNORD116-15	NR_003330	15	Non-coding	chr15:25081285 plus strand	1886301
SNORD116-16	NR_003331	15	Non-coding	chr15:25082766 plus strand	1886302
SNORD116-17	NR_003332	15	Non-coding	chr15:25083586 plus strand	1886303
SNORD116-17	NR_003332	15	Non-coding	chr15:25086525 plus strand	1886304

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SNORD116-18	NR_003333	15	Non-coding	chr15:25085383 plus strand	1886305
SNORD116-19	NR_001290	15	Non-coding	chr15:25083586 plus strand	1886306
SNORD116-19	NR_001290	15	Non-coding	chr15:25086525 plus strand	1886307
SNORD116-2	NR_003317	15	Non-coding	chr15:25054208 plus strand	1886308
SNORD116-2	NR_003317	15	Non-coding	chr15:25065024 plus strand	1886309
SNORD116-20	NR_003334	15	Non-coding	chr15:25087660 plus strand	1886310
SNORD116-21	NR_003335	15	Non-coding	chr15:25088802 plus strand	1886311
SNORD116-22	NR_003336	15	Non-coding	chr15:25089921 plus strand	1886312
SNORD116-23	NR_003337	15	Non-coding	chr15:25091784 plus strand	1886313
SNORD116-24	NR_003338	15	Non-coding	chr15:25094035 plus strand	1886314
SNORD116-25	NR_003339	15	Non-coding	chr15:25097661 plus strand	1886315
SNORD116-26	NR_003340	15	Non-coding	chr15:25099497 plus strand	1886316
SNORD116-27	NR_003341	15	Non-coding	chr15:25101573 plus strand	1886317
SNORD116-28	NR_003361	15	Non-coding	chr15:25104640 plus strand	1886318
SNORD116-29	NR_003360	15	Non-coding	chr15:25106519 plus strand	1886319
SNORD116-3	NR_003318	15	Non-coding	chr15:25056858 plus strand	1886320
SNORD116-3	NR_003318	15	Non-coding	chr15:25073105 plus strand	1886321
SNORD116-30	NR_047032	15	Non-coding	chr15:25108267 plus strand	1886322
SNORD116-4	NR_003319	15	Non-coding	chr15:25059536 plus strand	1886323
SNORD116-5	NR_003320	15	Non-coding	chr15:25062331 plus strand	1886324
SNORD116-5	NR_003320	15	Non-coding	chr15:25067786 plus strand	1886325
SNORD116-6	NR_003321	15	Non-coding	chr15:25065024 plus strand	1886326
SNORD116-7	NR_003322	15	Non-coding	chr15:25062331 plus strand	1886327
SNORD116-7	NR_003322	15	Non-coding	chr15:25067786 plus strand	1886328
SNORD116-8	NR_003323	15	Non-coding	chr15:25070430 plus strand	1886329
SNORD116-9	NR_003324	15	Non-coding	chr15:25056858 plus strand	1886330
SNORD116-9	NR_003324	15	Non-coding	chr15:25073105 plus strand	1886331

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SNORD16	NR_002440	15	Non-coding	chr15:66502910 minus strand	1886332
SNORD18A	NR_002441	15	Non-coding	chr15:66503314 minus strand	1886333
SNORD18B	NR_002442	15	Non-coding	chr15:66502091 minus strand	1886334
SNORD18C	NR_002443	15	Non-coding	chr15:66501318 minus strand	1886335
SNORD64	NR_001294	15	Non-coding	chr15:24985099 plus strand	1886336
SNX22	NR_073534	15	Non-coding	chr15:64151716 plus strand	1886337
SORD	NR_034039	15	Non-coding	chr15:45023103 plus strand	1886338
SPATA41	NR_028140	15	Non-coding	chr15:100350233 minus strand	1886339
SPATA41	NR_028139	15	Non-coding	chr15:100350718 minus strand	1886340
SPATA5L1	NR_027635	15	Non-coding	chr15:45402320 plus strand	1886341
SPATA8-AS1	NR_102754	15	Non-coding	chr15:96781654 minus strand	1886342
SPATA8-AS1	NR_102753	15	Non-coding	chr15:96783337 minus strand	1886343
SRP14	NR_104021	15	Non-coding	chr15:40039188 minus strand	1886344
SRP14-AS1	NR_040062	15	Non-coding	chr15:40039310 plus strand	1886345
SRP14-AS1	NR_040061	15	Non-coding	chr15:40039310 plus strand	1886345
SRP14-AS1	NR_040059	15	Non-coding	chr15:40039310 plus strand	1886345
SRP14-AS1	NR_040060	15	Non-coding	chr15:40039310 plus strand	1886345
ST20	NR_037653	15	Non-coding	chr15:79923754 minus strand	1886346
ST20	NR_037652	15	Non-coding	chr15:79923754 minus strand	1886346
ST20-AS1	NR_028330	15	Non-coding	chr15:79922770 plus strand	1886347
THSD4-AS1	NR_120350	15	Non-coding	chr15:71189059 minus strand	1886348
THSD4-AS1	NR_120348	15	Non-coding	chr15:71189059 minus strand	1886348
THSD4-AS1	NR_120351	15	Non-coding	chr15:71189059 minus strand	1886348
THSD4-AS1	NR_120349	15	Non-coding	chr15:71189059 minus strand	1886348
THSD4-AS2	NR_120346	15	Non-coding	chr15:71691539 minus strand	1886349
TMC3-AS1	NR_120365	15	Non-coding	chr15:81324332 plus strand	1886350
TMCO5B	NR_046005	15	Non-coding	chr15:33247555 minus strand	1886351

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TMED3	NR_125394	15	Non-coding	chr15:79311061 plus strand	1886352
TTC23	NR_109947	15	Non-coding	chr15:99249619 minus strand	1886353
TTLL13	NR_104604	15	Non-coding	chr15:90249531 plus strand	1886354
TYRO3P	NR_028510	15	Non-coding	chr15:76260152 minus strand	1886355
UBE2Q2P1	NR_003661	15	Non-coding	chr15:84570795 minus strand	1886356
UBE2Q2P2	NR_004847	15	Non-coding	chr15:82355135 plus strand	1886357
UBL7-AS1	NR_038449	15	Non-coding	chr15:74461264 plus strand	1886358
UBL7-AS1	NR_038448	15	Non-coding	chr15:74461264 plus strand	1886358
UBL7-AS1	NR_120377	15	Non-coding	chr15:74461264 plus strand	1886358
ULK3	NR_104309	15	Non-coding	chr15:74843211 minus strand	1886359
ULK3	NR_104308	15	Non-coding	chr15:74843211 minus strand	1886359
ULK3	NR_104307	15	Non-coding	chr15:74843211 minus strand	1886359
ULK4P1	NR_026858	15	Non-coding	chr15:30103546 plus strand	1886360
ULK4P1	NR_026858	15	Non-coding	chr15:30572554 plus strand	1886361
ULK4P1	NR_026858	15	Non-coding	chr15:32435049 minus strand	1886362
ULK4P2	NR_027470	15	Non-coding	chr15:30103546 plus strand	1886363
ULK4P2	NR_027470	15	Non-coding	chr15:30572554 plus strand	1886364
ULK4P2	NR_027470	15	Non-coding	chr15:32435049 minus strand	1886365
ULK4P3	NR_026859	15	Non-coding	chr15:30103731 plus strand	1886366
USP3	NR_046342	15	Non-coding	chr15:63504510 plus strand	1886367
USP3	NR_046341	15	Non-coding	chr15:63504510 plus strand	1886367
USP3-AS1	NR_034080	15	Non-coding	chr15:63600827 minus strand	1886368
VWA9	NR_045106	15	Non-coding	chr15:65611148 minus strand	1886369
VWA9	NR_045105	15	Non-coding	chr15:65611148 minus strand	1886369
VWA9	NR_045104	15	Non-coding	chr15:65611289 minus strand	1886370
VWA9	NR_045901	15	Non-coding	chr15:65611289 minus strand	1886370
WASH3P	NR_003659	15	Non-coding	chr15:101960812 plus strand	1886371

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WDR72	NR_102336	15	Non-coding	chr15:53540852 minus strand	1886372
WDR72	NR_102335	15	Non-coding	chr15:53541103 minus strand	1886373
WDR72	NR_102334	15	Non-coding	chr15:53762878 minus strand	1886374
WHAMMP1	NR_036650	15	Non-coding	chr15:32533741 minus strand	1886375
WHAMMP2	NR_026589	15	Non-coding	chr15:28737582 plus strand	1886376
WHAMMP3	NR_003521	15	Non-coding	chr15:22664738 plus strand	1886377
ABCA17P	NR_003574	16	Non-coding	chr16:2340921 plus strand	1886378
ABCC6P1	NR_003569	16	Non-coding	chr16:18571247 plus strand	1886379
ABCC6P2	NR_023387	16	Non-coding	chr16:14824702 minus strand	1886380
ACSF3	NR_104293	16	Non-coding	chr16:89093808 plus strand	1886381
ACSF3	NR_045667	16	Non-coding	chr16:89136547 plus strand	1886382
ADAT1	NR_036460	16	Non-coding	chr16:75623323 minus strand	1886383
AFG3L1P	NR_003228	16	Non-coding	chr16:89972579 plus strand	1886384
AFG3L1P	NR_003227	16	Non-coding	chr16:89972579 plus strand	1886384
AFG3L1P	NR_003226	16	Non-coding	chr16:89972579 plus strand	1886384
ANKRD11	NR_045839	16	Non-coding	chr16:89490561 minus strand	1886385
ANKRD26P1	NR_026556	16	Non-coding	chr16:46569097 minus strand	1886386
ANKS3	NR_040252	16	Non-coding	chr16:4734377 minus strand	1886387
APOOP5	NR_028471	16	Non-coding	chr16:59755191 minus strand	1886388
ATF7IP2	NR_045816	16	Non-coding	chr16:10386054 plus strand	1886389
ATF7IP2	NR_045815	16	Non-coding	chr16:10428867 plus strand	1886390
ATP2A1-AS1	NR_046290	16	Non-coding	chr16:28879921 minus strand	1886391
ATP2A1-AS1	NR_046289	16	Non-coding	chr16:28879921 minus strand	1886391
ATP2A1-AS1	NR_046288	16	Non-coding	chr16:28879921 minus strand	1886391
ATP2A1-AS1	NR_046287	16	Non-coding	chr16:28879921 minus strand	1886391
BCAR4	NR_024049	16	Non-coding	chr16:11828832 minus strand	1886392
BCAR4	NR_024050	16	Non-coding	chr16:11828832 minus strand	1886392

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BEAN1-AS1	NR_109960	16	Non-coding	chr16:66476402 minus strand	1886393
C16orf13	NR_109978	16	Non-coding	chr16:636366 minus strand	1886394
C16orf13	NR_109977	16	Non-coding	chr16:636366 minus strand	1886394
C16orf13	NR_109976	16	Non-coding	chr16:636366 minus strand	1886394
C16orf13	NR_109979	16	Non-coding	chr16:636366 minus strand	1886394
CALB2	NR_027910	16	Non-coding	chr16:71358712 plus strand	1886395
CASC16	NR_033920	16	Non-coding	chr16:52606975 minus strand	1886396
CDIPT-AS1	NR_024370	16	Non-coding	chr16:29863682 plus strand	1886397
CDIPT-AS1	NR_015396	16	Non-coding	chr16:29863833 plus strand	1886398
CDK10	NR_027702	16	Non-coding	chr16:89686667 plus strand	1886399
CDK10	NR_027703	16	Non-coding	chr16:89686667 plus strand	1886399
CES1P1	NR_003276	16	Non-coding	chr16:55760598 plus strand	1886400
CES1P2	NR_033740	16	Non-coding	chr16:55724924 plus strand	1886401
CES2	NR_036684	16	Non-coding	chr16:66934470 plus strand	1886402
CHMP1A	NR_046418	16	Non-coding	chr16:89657785 minus strand	1886403
CHTF8	NR_033227	16	Non-coding	chr16:69132590 minus strand	1886404
CIITA	NR_104444	16	Non-coding	chr16:10877197 plus strand	1886405
CLUHP3	NR_024034	16	Non-coding	chr16:31700612 plus strand	1886406
CMTM3	NR_037613	16	Non-coding	chr16:66604031 plus strand	1886407
CMTM3	NR_037619	16	Non-coding	chr16:66604730 plus strand	1886408
CNEP1R1	NR_104042	16	Non-coding	chr16:50025205 plus strand	1886409
CNEP1R1	NR_104043	16	Non-coding	chr16:50025205 plus strand	1886409
CNOT1	NR_049763	16	Non-coding	chr16:58629886 minus strand	1886410
CRNDE	NR_034106	16	Non-coding	chr16:54928778 minus strand	1886411
CRNDE	NR_110454	16	Non-coding	chr16:54928778 minus strand	1886411
CRNDE	NR_034105	16	Non-coding	chr16:54929189 minus strand	1886412
CRNDE	NR_110453	16	Non-coding	chr16:54929189 minus strand	1886412

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CRYM-AS1	NR_026675	16	Non-coding	chr16:21300848 plus strand	1886413
DCTN5	NR_037573	16	Non-coding	chr16:23641365 plus strand	1886414
DDX11L10	NR_045117	16	Non-coding	chr16:11554 plus strand	1886415
DKFZP434H168	NR_026889	16	Non-coding	chr16:56194525 minus strand	1886416
DOC2A	NR_104090	16	Non-coding	chr16:30011080 minus strand	1886417
DOC2A	NR_104089	16	Non-coding	chr16:30011080 minus strand	1886417
EARS2	NR_003501	16	Non-coding	chr16:23557375 minus strand	1886418
ERVK13-1	NR_040023	16	Non-coding	chr16:2673439 minus strand	1886419
FAM157C	NR_126161	16	Non-coding	chr16:90102263 plus strand	1886420
FAM96B	NR_024525	16	Non-coding	chr16:66934423 minus strand	1886421
FAM96B	NR_046109	16	Non-coding	chr16:66934423 minus strand	1886421
FBXL19-AS1	NR_024348	16	Non-coding	chr16:30923269 minus strand	1886422
FENDRR	NR_033925	16	Non-coding	chr16:86508860 minus strand	1886423
FENDRR	NR_036444	16	Non-coding	chr16:86508860 minus strand	1886423
FLJ21408	NR_037184	16	Non-coding	chr16:27268204 plus strand	1886424
FLJ26245	NR_033985	16	Non-coding	chr16:35746551 plus strand	1886425
FLJ30679	NR_026674	16	Non-coding	chr16:86555319 plus strand	1886426
FLJ42627	NR_024492	16	Non-coding	chr16:2638981 plus strand	1886427
FOXC2-AS1	NR_125795	16	Non-coding	chr16:86567761 minus strand	1886428
FRG2DP	NR_026980	16	Non-coding	chr16:35480596 minus strand	1886429
FTO-IT1	NR_103838	16	Non-coding	chr16:54039392 plus strand	1886430
FUS	NR_028388	16	Non-coding	chr16:31180109 plus strand	1886431
GAS8-AS1	NR_122031	16	Non-coding	chr16:90029901 minus strand	1886432
GCSH	NR_033249	16	Non-coding	chr16:81096375 minus strand	1886433
GFOD2	NR_027398	16	Non-coding	chr16:67719370 minus strand	1886434
GLG1	NR_027264	16	Non-coding	chr16:74607144 minus strand	1886435
GLG1	NR_027265	16	Non-coding	chr16:74607144 minus strand	1886435

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GLIS2-AS1	NR_110901	16	Non-coding	chr16:4328340 minus strand	1886436
HCCAT5	NR_027756	16	Non-coding	chr16:73092348 plus strand	1886437
HERC2P4	NR_109773	16	Non-coding	chr16:32188113 minus strand	1886438
IGFALS	NR_027389	16	Non-coding	chr16:1794908 minus strand	1886439
IL21R-AS1	NR_037158	16	Non-coding	chr16:27453393 minus strand	1886440
ITFG1-AS1	NR_110903	16	Non-coding	chr16:47144067 plus strand	1886441
ITFG1-AS1	NR_110904	16	Non-coding	chr16:47144067 plus strand	1886441
ITFG3	NR_104317	16	Non-coding	chr16:234545 plus strand	1886442
ITPRIPL2	NR_028028	16	Non-coding	chr16:19113931 plus strand	1886443
JPH3	NR_073379	16	Non-coding	chr16:87601834 plus strand	1886444
KCTD13	NR_110933	16	Non-coding	chr16:29926232 minus strand	1886445
LCMT1-AS1	NR_120306	16	Non-coding	chr16:25111555 minus strand	1886446
LCMT1-AS2	NR_039998	16	Non-coding	chr16:25149032 minus strand	1886447
LINC00235	NR_024121	16	Non-coding	chr16:527407 minus strand	1886448
LINC00254	NR_033914	16	Non-coding	chr16:1884231 minus strand	1886449
LINC00273	NR_038368	16	Non-coding	chr16:34160036 minus strand	1886450
LINC00304	NR_024347	16	Non-coding	chr16:89159219 plus strand	1886451
LINC00311	NR_038859	16	Non-coding	chr16:85282957 plus strand	1886452
LINC00514	NR_033861	16	Non-coding	chr16:2989053 plus strand	1886453
LINC00917	NR_024406	16	Non-coding	chr16:86345679 minus strand	1886454
LINC00919	NR_038233	16	Non-coding	chr16:52085109 minus strand	1886455
LINC00920	NR_046242	16	Non-coding	chr16:66408523 plus strand	1886456
LINC00921	NR_033904	16	Non-coding	chr16:3263767 plus strand	1886457
LINC00922	NR_027755	16	Non-coding	chr16:65576300 minus strand	1886458
LINC01081	NR_104139	16	Non-coding	chr16:86286247 minus strand	1886459
LINC01082	NR_103859	16	Non-coding	chr16:86196180 plus strand	1886460
LINC01177	NR_126397	16	Non-coding	chr16:9444985 minus strand	1886461

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LINC01195	NR_126349	16	Non-coding	chr16:9455505 minus strand	1886462
LINC01227	NR_104665	16	Non-coding	chr16:80569610 minus strand	1886463
LINC01227	NR_104666	16	Non-coding	chr16:80572808 minus strand	1886464
LINC01229	NR_104660	16	Non-coding	chr16:79770470 plus strand	1886465
LINC01229	NR_104661	16	Non-coding	chr16:79795248 plus strand	1886466
LINC01566	NR_027080	16	Non-coding	chr16:35363415 plus strand	1886467
LINC01566	NR_027079	16	Non-coding	chr16:35363530 plus strand	1886468
LINC01567	NR_122072	16	Non-coding	chr16:24671062 minus strand	1886469
LINC01568	NR_038234	16	Non-coding	chr16:73386804 plus strand	1886470
LINC01569	NR_039999	16	Non-coding	chr16:4253789 minus strand	1886471
LINC01570	NR_110902	16	Non-coding	chr16:5616250 minus strand	1886472
LINC01571	NR_110916	16	Non-coding	chr16:51762518 plus strand	1886473
LINC01572	NR_126330	16	Non-coding	chr16:72665009 minus strand	1886474
LITAF	NR_024320	16	Non-coding	chr16:11587466 minus strand	1886475
LMF1	NR_033646	16	Non-coding	chr16:970984 minus strand	1886476
LMF1	NR_033645	16	Non-coding	chr16:981318 minus strand	1886477
LMF1	NR_036442	16	Non-coding	chr16:981318 minus strand	1886477
LMF1-AS1	NR_110945	16	Non-coding	chr16:921032 plus strand	1886478
LMF1-AS1	NR_110946	16	Non-coding	chr16:921032 plus strand	1886478
LOC100128770	NR_047572	16	Non-coding	chr16:3032480 plus strand	1886479
LOC100129617	NR_045112	16	Non-coding	chr16:81665353 plus strand	1886480
LOC100130700	NR_034019	16	Non-coding	chr16:35506469 minus strand	1886481
LOC100130700	NR_034018	16	Non-coding	chr16:35506469 minus strand	1886481
LOC100134368	NR_024453	16	Non-coding	chr16:382240 plus strand	1886482
LOC100190986	NR_024456	16	Non-coding	chr16:21434455 minus strand	1886483
LOC100190986	NR_024456	16	Non-coding	chr16:21866735 minus strand	1886484
LOC100190986	NR_024456	16	Non-coding	chr16:22504448 plus strand	1886485

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LOC100288162	NR_103772	16	Non-coding	chr16:14927283 minus strand	1886486
LOC100288162	NR_103772	16	Non-coding	chr16:16325934 minus strand	1886487
LOC100288162	NR_103772	16	Non-coding	chr16:18342732 plus strand	1886488
LOC100289580	NR_103774	16	Non-coding	chr16:88731179 plus strand	1886489
LOC100505915	NR_125434	16	Non-coding	chr16:15094410 plus strand	1886490
LOC100505942	NR_104656	16	Non-coding	chr16:67528745 minus strand	1886491
LOC100506083	NR_039997	16	Non-coding	chr16:70346747 minus strand	1886492
LOC100506281	NR_109777	16	Non-coding	chr16:75226382 plus strand	1886493
LOC100507534	NR_110649	16	Non-coding	chr16:47887130 minus strand	1886494
LOC100507577	NR_040677	16	Non-coding	chr16:48355684 plus strand	1886495
LOC100996338	NR_126340	16	Non-coding	chr16:54270879 minus strand	1886496
LOC101927131	NR_110907	16	Non-coding	chr16:11465259 plus strand	1886497
LOC101927132	NR_110650	16	Non-coding	chr16:47858580 plus strand	1886498
LOC101927272	NR_110908	16	Non-coding	chr16:50668854 plus strand	1886499
LOC101927311	NR_110909	16	Non-coding	chr16:14016018 minus strand	1886500
LOC101927334	NR_110913	16	Non-coding	chr16:51017757 plus strand	1886501
LOC101927348	NR_110915	16	Non-coding	chr16:14021077 minus strand	1886502
LOC101927580	NR_110917	16	Non-coding	chr16:59855352 plus strand	1886503
LOC101927650	NR_110918	16	Non-coding	chr16:65176573 minus strand	1886504
LOC101927814	NR_110930	16	Non-coding	chr16:21599385 minus strand	1886505
LOC101927817	NR_110931	16	Non-coding	chr16:89430917 plus strand	1886506
LOC101927817	NR_110932	16	Non-coding	chr16:89430917 plus strand	1886506
LOC101928035	NR_104657	16	Non-coding	chr16:74215521 minus strand	1886507
LOC101928203	NR_110934	16	Non-coding	chr16:76634997 plus strand	1886508
LOC101928417	NR_110937	16	Non-coding	chr16:82990298 minus strand	1886509
LOC101928446	NR_110938	16	Non-coding	chr16:82773318 plus strand	1886510
LOC101928682	NR_104667	16	Non-coding	chr16:87292452 minus strand	1886511

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LOC101928708	NR_110939	16	Non-coding	chr16:87212114 plus strand	1886512
LOC101928737	NR_110943	16	Non-coding	chr16:87494186 plus strand	1886513
LOC101928880	NR_110944	16	Non-coding	chr16:88194280 plus strand	1886514
LOC101929613	NR_110947	16	Non-coding	chr16:2998954 plus strand	1886515
LOC101929613	NR_110948	16	Non-coding	chr16:2998954 plus strand	1886515
LOC101929613	NR_110949	16	Non-coding	chr16:2998954 plus strand	1886515
LOC102467079	NR_104655	16	Non-coding	chr16:52085280 plus strand	1886516
LOC102467146	NR_104663	16	Non-coding	chr16:79770532 minus strand	1886517
LOC102723373	NR_119378	16	Non-coding	chr16:53373492 plus strand	1886518
LOC102723385	NR_119382	16	Non-coding	chr16:19067483 minus strand	1886519
LOC102723385	NR_119379	16	Non-coding	chr16:19067691 minus strand	1886520
LOC102723385	NR_119381	16	Non-coding	chr16:19067691 minus strand	1886520
LOC102723385	NR_119380	16	Non-coding	chr16:19067691 minus strand	1886520
LOC102724084	NR_120307	16	Non-coding	chr16:80563135 minus strand	1886521
LOC102724163	NR_120308	16	Non-coding	chr16:83803976 minus strand	1886522
LOC102724467	NR_120309	16	Non-coding	chr16:87779148 minus strand	1886523
LOC102724927	NR_120311	16	Non-coding	chr16:3950444 minus strand	1886524
LOC146513	NR_038438	16	Non-coding	chr16:86286430 plus strand	1886525
LOC283856	NR_027078	16	Non-coding	chr16:56191094 minus strand	1886526
LOC283922	NR_026950	16	Non-coding	chr16:74368255 minus strand	1886527
LOC339059	NR_120387	16	Non-coding	chr16:88742766 plus strand	1886528
LOC388242	NR_002556	16	Non-coding	chr16:29467578 minus strand	1886529
LOC388242	NR_002556	16	Non-coding	chr16:30206927 minus strand	1886530
LOC390705	NR_033866	16	Non-coding	chr16:32289981 minus strand	1886531
LOC390705	NR_033866	16	Non-coding	chr16:33496235 minus strand	1886532
LOC399491	NR_123721	16	Non-coding	chr16:15136959 minus strand	1886533
LOC400541	NR_126007	16	Non-coding	chr16:70173448 minus strand	1886534

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LOC400548	NR_033984	16	Non-coding	chr16:85137149 plus strand	1886535
LOC400553	NR_120310	16	Non-coding	chr16:88100985 minus strand	1886536
LOC400558	NR_046200	16	Non-coding	chr16:89166382 plus strand	1886537
LOC440390	NR_126008	16	Non-coding	chr16:87057783 plus strand	1886538
LOC554206	NR_038379	16	Non-coding	chr16:25031740 plus strand	1886539
LOC606724	NR_002454	16	Non-coding	chr16:29449344 plus strand	1886540
LOC606724	NR_002454	16	Non-coding	chr16:30188683 plus strand	1886541
LOC613037	NR_002555	16	Non-coding	chr16:30245611 minus strand	1886542
LOC613038	NR_002557	16	Non-coding	chr16:29467578 minus strand	1886543
LOC613038	NR_002557	16	Non-coding	chr16:30206927 minus strand	1886544
LOC652276	NR_015441	16	Non-coding	chr16:2603383 plus strand	1886545
LOC653786	NR_003676	16	Non-coding	chr16:22545697 plus strand	1886546
LYRM1	NR_126520	16	Non-coding	chr16:20900297 plus strand	1886547
LYRM1	NR_126528	16	Non-coding	chr16:20900297 plus strand	1886547
LYRM1	NR_126516	16	Non-coding	chr16:20900665 plus strand	1886548
LYRM1	NR_126521	16	Non-coding	chr16:20900665 plus strand	1886548
LYRM1	NR_126527	16	Non-coding	chr16:20901072 plus strand	1886549
MAZ	NR_074080	16	Non-coding	chr16:29806536 plus strand	1886550
MGRN1	NR_102267	16	Non-coding	chr16:4624823 plus strand	1886551
MIR1225	NR_030646	16	Non-coding	chr16:2090284 minus strand	1886552
MIR1273H	NR_106996	16	Non-coding	chr16:24203115 plus strand	1886553
MIR138-2	NR_029680	16	Non-coding	chr16:56858517 plus strand	1886554
MIR140	NR_029681	16	Non-coding	chr16:69933080 plus strand	1886555
MIR1538	NR_031719	16	Non-coding	chr16:69565868 minus strand	1886556
MIR1910	NR_031731	16	Non-coding	chr16:85741700 minus strand	1886557
MIR193B	NR_030177	16	Non-coding	chr16:14303966 plus strand	1886558
MIR1972-1	NR_036054	16	Non-coding	chr16:15010397 minus strand	1886559

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MIR1972-1	NR_036054	16	Non-coding	chr16:70030345 plus strand	1886560
MIR1972-2	NR_036265	16	Non-coding	chr16:15010397 minus strand	1886561
MIR1972-2	NR_036265	16	Non-coding	chr16:70030345 plus strand	1886562
MIR3176	NR_036137	16	Non-coding	chr16:543276 plus strand	1886563
MIR3177	NR_036138	16	Non-coding	chr16:1734984 plus strand	1886564
MIR3178	NR_036139	16	Non-coding	chr16:2532005 minus strand	1886565
MIR3179-1	NR_036140	16	Non-coding	chr16:14901507 plus strand	1886566
MIR3179-1	NR_036140	16	Non-coding	chr16:16300158 plus strand	1886567
MIR3179-1	NR_036140	16	Non-coding	chr16:18411977 minus strand	1886568
MIR3179-1	NR_036140	16	Non-coding	chr16:18494576 minus strand	1886569
MIR3179-2	NR_036143	16	Non-coding	chr16:14901507 plus strand	1886570
MIR3179-2	NR_036143	16	Non-coding	chr16:16300158 plus strand	1886571
MIR3179-2	NR_036143	16	Non-coding	chr16:18411977 minus strand	1886572
MIR3179-2	NR_036143	16	Non-coding	chr16:18494576 minus strand	1886573
MIR3179-3	NR_036145	16	Non-coding	chr16:14901507 plus strand	1886574
MIR3179-3	NR_036145	16	Non-coding	chr16:16300158 plus strand	1886575
MIR3179-3	NR_036145	16	Non-coding	chr16:18411977 minus strand	1886576
MIR3179-3	NR_036145	16	Non-coding	chr16:18494576 minus strand	1886577
MIR3179-4	NR_128709	16	Non-coding	chr16:14901507 plus strand	1886578
MIR3179-4	NR_128709	16	Non-coding	chr16:16300158 plus strand	1886579
MIR3179-4	NR_128709	16	Non-coding	chr16:18411977 minus strand	1886580
MIR3179-4	NR_128709	16	Non-coding	chr16:18494576 minus strand	1886581
MIR3180-1	NR_036141	16	Non-coding	chr16:14911219 plus strand	1886582
MIR3180-1	NR_036141	16	Non-coding	chr16:15155028 minus strand	1886583
MIR3180-1	NR_036141	16	Non-coding	chr16:16309874 plus strand	1886584
MIR3180-1	NR_036141	16	Non-coding	chr16:18402271 minus strand	1886585
MIR3180-2	NR_036142	16	Non-coding	chr16:14911223 plus strand	1886586

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MIR3180-2	NR_036142	16	Non-coding	chr16:15155024 minus strand	1886587
MIR3180-2	NR_036142	16	Non-coding	chr16:16309878 plus strand	1886588
MIR3180-2	NR_036142	16	Non-coding	chr16:18402267 minus strand	1886589
MIR3180-3	NR_036144	16	Non-coding	chr16:14911219 plus strand	1886590
MIR3180-3	NR_036144	16	Non-coding	chr16:15155028 minus strand	1886591
MIR3180-3	NR_036144	16	Non-coding	chr16:16309874 plus strand	1886592
MIR3180-3	NR_036144	16	Non-coding	chr16:18402271 minus strand	1886593
MIR3180-4	NR_037466	16	Non-coding	chr16:15155002 minus strand	1886594
MIR3180-5	NR_037467	16	Non-coding	chr16:2136129 minus strand	1886595
MIR3182	NR_036147	16	Non-coding	chr16:83508345 plus strand	1886596
MIR328	NR_029887	16	Non-coding	chr16:67202395 minus strand	1886597
MIR365A	NR_029854	16	Non-coding	chr16:14309284 plus strand	1886598
MIR3670-1	NR_037442	16	Non-coding	chr16:14907716 plus strand	1886599
MIR3670-1	NR_037442	16	Non-coding	chr16:15158521 minus strand	1886600
MIR3670-1	NR_037442	16	Non-coding	chr16:16306369 plus strand	1886601
MIR3670-1	NR_037442	16	Non-coding	chr16:18405762 minus strand	1886602
MIR3670-1	NR_037442	16	Non-coding	chr16:18488365 minus strand	1886603
MIR3670-2	NR_049832	16	Non-coding	chr16:14907716 plus strand	1886604
MIR3670-2	NR_049832	16	Non-coding	chr16:15158521 minus strand	1886605
MIR3670-2	NR_049832	16	Non-coding	chr16:16306369 plus strand	1886606
MIR3670-2	NR_049832	16	Non-coding	chr16:18405762 minus strand	1886607
MIR3670-2	NR_049832	16	Non-coding	chr16:18488365 minus strand	1886608
MIR3670-3	NR_128712	16	Non-coding	chr16:14907716 plus strand	1886609
MIR3670-3	NR_128712	16	Non-coding	chr16:15158521 minus strand	1886610
MIR3670-3	NR_128712	16	Non-coding	chr16:16306369 plus strand	1886611
MIR3670-3	NR_128712	16	Non-coding	chr16:18405762 minus strand	1886612
MIR3670-3	NR_128712	16	Non-coding	chr16:18488365 minus strand	1886613

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MIR3670-4	NR_128713	16	Non-coding	chr16:14907716 plus strand	1886614
MIR3670-4	NR_128713	16	Non-coding	chr16:15158521 minus strand	1886615
MIR3670-4	NR_128713	16	Non-coding	chr16:16306369 plus strand	1886616
MIR3670-4	NR_128713	16	Non-coding	chr16:18405762 minus strand	1886617
MIR3670-4	NR_128713	16	Non-coding	chr16:18488365 minus strand	1886618
MIR3677	NR_037448	16	Non-coding	chr16:2270712 plus strand	1886619
MIR3680-1	NR_037451	16	Non-coding	chr16:21506135 minus strand	1886620
MIR3680-1	NR_037451	16	Non-coding	chr16:29599265 minus strand	1886621
MIR3680-2	NR_049833	16	Non-coding	chr16:21506135 minus strand	1886622
MIR3680-2	NR_049833	16	Non-coding	chr16:29599265 minus strand	1886623
MIR3935	NR_037499	16	Non-coding	chr16:56245519 plus strand	1886624
MIR4426	NR_039624	16	Non-coding	chr16:61055766 minus strand	1886625
MIR4516	NR_039741	16	Non-coding	chr16:2133118 plus strand	1886626
MIR4517	NR_039742	16	Non-coding	chr16:28958582 plus strand	1886627
MIR4518	NR_039743	16	Non-coding	chr16:30503918 plus strand	1886628
MIR4519	NR_039744	16	Non-coding	chr16:30875323 minus strand	1886629
MIR4717	NR_039868	16	Non-coding	chr16:2274619 plus strand	1886630
MIR4718	NR_039869	16	Non-coding	chr16:12720320 plus strand	1886631
MIR4719	NR_039870	16	Non-coding	chr16:76868935 plus strand	1886632
MIR4720	NR_039871	16	Non-coding	chr16:81385017 plus strand	1886633
MIR4721	NR_039872	16	Non-coding	chr16:28844007 minus strand	1886634
MIR4722	NR_039873	16	Non-coding	chr16:88716337 minus strand	1886635
MIR484	NR_030159	16	Non-coding	chr16:15643293 plus strand	1886636
MIR5093	NR_049816	16	Non-coding	chr16:85306325 minus strand	1886637
MIR5189	NR_049821	16	Non-coding	chr16:88468917 plus strand	1886638
MIR548AI	NR_039672	16	Non-coding	chr16:50878772 plus strand	1886639
MIR548H2	NR_031678	16	Non-coding	chr16:11306527 minus strand	1886640

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MIR548W	NR_036146	16	Non-coding	chr16:26025236 plus strand	1886641
MIR5587	NR_049852	16	Non-coding	chr16:535315 plus strand	1886642
MIR6126	NR_106741	16	Non-coding	chr16:3485469 minus strand	1886643
MIR6504	NR_106759	16	Non-coding	chr16:81611347 plus strand	1886644
MIR6506	NR_106761	16	Non-coding	chr16:15611095 minus strand	1886645
MIR6511A1	NR_106766	16	Non-coding	chr16:14925936 plus strand	1886646
MIR6511A1	NR_106766	16	Non-coding	chr16:16324587 plus strand	1886647
MIR6511A1	NR_106766	16	Non-coding	chr16:16368875 plus strand	1886648
MIR6511A1	NR_106766	16	Non-coding	chr16:18344079 minus strand	1886649
MIR6511A2	NR_106969	16	Non-coding	chr16:14925936 plus strand	1886650
MIR6511A2	NR_106969	16	Non-coding	chr16:16324587 plus strand	1886651
MIR6511A2	NR_106969	16	Non-coding	chr16:16368875 plus strand	1886652
MIR6511A2	NR_106969	16	Non-coding	chr16:18344079 minus strand	1886653
MIR6511A3	NR_106970	16	Non-coding	chr16:14925936 plus strand	1886654
MIR6511A3	NR_106970	16	Non-coding	chr16:16324587 plus strand	1886655
MIR6511A3	NR_106970	16	Non-coding	chr16:16368875 plus strand	1886656
MIR6511A3	NR_106970	16	Non-coding	chr16:18344079 minus strand	1886657
MIR6511A4	NR_106971	16	Non-coding	chr16:14925936 plus strand	1886658
MIR6511A4	NR_106971	16	Non-coding	chr16:16324587 plus strand	1886659
MIR6511A4	NR_106971	16	Non-coding	chr16:16368875 plus strand	1886660
MIR6511A4	NR_106971	16	Non-coding	chr16:18344079 minus strand	1886661
MIR6511B1	NR_106775	16	Non-coding	chr16:15134150 minus strand	1886662
MIR6511B1	NR_106775	16	Non-coding	chr16:2106753 minus strand	1886663
MIR6511B2	NR_106965	16	Non-coding	chr16:15134145 minus strand	1886664
MIR6511B2	NR_106965	16	Non-coding	chr16:2106748 minus strand	1886665
MIR662	NR_030384	16	Non-coding	chr16:770182 plus strand	1886666
MIR6767	NR_106825	16	Non-coding	chr16:2445391 plus strand	1886667

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MIR6768	NR_106826	16	Non-coding	chr16:2463966 plus strand	1886668
MIR6769A	NR_106827	16	Non-coding	chr16:4671317 plus strand	1886669
MIR6770-1	NR_106828	16	Non-coding	chr16:14930819 plus strand	1886670
MIR6770-1	NR_106828	16	Non-coding	chr16:16329304 plus strand	1886671
MIR6770-1	NR_106828	16	Non-coding	chr16:18379410 minus strand	1886672
MIR6770-2	NR_107060	16	Non-coding	chr16:14930819 plus strand	1886673
MIR6770-2	NR_107060	16	Non-coding	chr16:16329304 plus strand	1886674
MIR6770-2	NR_107060	16	Non-coding	chr16:18379410 minus strand	1886675
MIR6770-3	NR_107061	16	Non-coding	chr16:14930819 plus strand	1886676
MIR6770-3	NR_107061	16	Non-coding	chr16:16329304 plus strand	1886677
MIR6770-3	NR_107061	16	Non-coding	chr16:18379410 minus strand	1886678
MIR6771	NR_106829	16	Non-coding	chr16:50292615 plus strand	1886679
MIR6772	NR_106830	16	Non-coding	chr16:57772352 minus strand	1886680
MIR6773	NR_106831	16	Non-coding	chr16:68233499 minus strand	1886681
MIR6774	NR_106832	16	Non-coding	chr16:85918346 plus strand	1886682
MIR6775	NR_106833	16	Non-coding	chr16:87834660 minus strand	1886683
MIR6859-1	NR_106918	16	Non-coding	chr16:17119 minus strand	1886684
MIR6859-2	NR_107062	16	Non-coding	chr16:17119 minus strand	1886685
MIR6859-3	NR_107063	16	Non-coding	chr16:17119 minus strand	1886686
MIR6859-4	NR_128720	16	Non-coding	chr16:17119 minus strand	1886687
MIR6862-1	NR_106922	16	Non-coding	chr16:28391051 minus strand	1886688
MIR6862-1	NR_106922	16	Non-coding	chr16:28724251 plus strand	1886689
MIR6862-2	NR_107058	16	Non-coding	chr16:28391051 minus strand	1886690
MIR6862-2	NR_107058	16	Non-coding	chr16:28724251 plus strand	1886691
MIR6863	NR_106923	16	Non-coding	chr16:56904263 plus strand	1886692
MIR762	NR_031576	16	Non-coding	chr16:30893902 plus strand	1886693
MIR762HG	NR_110942	16	Non-coding	chr16:30875459 plus strand	1886694

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MIR762HG	NR_110941	16	Non-coding	chr16:30875459 plus strand	1886694
MIR762HG	NR_110940	16	Non-coding	chr16:30875459 plus strand	1886694
MIR7641-2	NR_106988	16	Non-coding	chr16:68742515 plus strand	1886695
MIR7854	NR_107008	16	Non-coding	chr16:81533901 plus strand	1886696
MIR8058	NR_107025	16	Non-coding	chr16:82688930 plus strand	1886697
MIR8065	NR_107032	16	Non-coding	chr16:5632466 plus strand	1886698
MIR940	NR_030636	16	Non-coding	chr16:2271746 plus strand	1886699
MMP25-AS1	NR_123723	16	Non-coding	chr16:3059370 minus strand	1886700
MT1DP	NR_027781	16	Non-coding	chr16:56643686 plus strand	1886701
MT1DP	NR_003658	16	Non-coding	chr16:56643803 plus strand	1886702
MT1IP	NR_104045	16	Non-coding	chr16:56676115 plus strand	1886703
MT1IP	NR_104046	16	Non-coding	chr16:56676115 plus strand	1886703
MT1IP	NR_003669	16	Non-coding	chr16:56676115 plus strand	1886703
MT1JP	NR_036677	16	Non-coding	chr16:56635738 plus strand	1886704
MT1L	NR_001447	16	Non-coding	chr16:56617460 plus strand	1886705
MTHFSD	NR_027489	16	Non-coding	chr16:86555235 minus strand	1886706
MTHFSD	NR_027490	16	Non-coding	chr16:86555235 minus strand	1886706
NAGPA-AS1	NR_038913	16	Non-coding	chr16:5033701 plus strand	1886707
NDRG4	NR_040072	16	Non-coding	chr16:58500142 plus strand	1886708
NLRC3	NR_075083	16	Non-coding	chr16:3577404 minus strand	1886709
NOB1	NR_074074	16	Non-coding	chr16:69754968 minus strand	1886710
NUBP2	NR_104318	16	Non-coding	chr16:1782922 plus strand	1886711
OR1F2P	NR_002169	16	Non-coding	chr16:3215561 plus strand	1886712
ORC6	NR_037620	16	Non-coding	chr16:46689645 plus strand	1886713
PDXDC2P	NR_003610	16	Non-coding	chr16:70065948 minus strand	1886714
PDZD9	NR_033694	16	Non-coding	chr16:22001110 minus strand	1886715
PKD1L2	NR_126532	16	Non-coding	chr16:81220370 minus strand	1886716

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PKD1P1	NR_036447	16	Non-coding	chr16:16317608 plus strand	1886717
PKD1P6	NR_123722	16	Non-coding	chr16:15131601 minus strand	1886718
POLR3E	NR_047581	16	Non-coding	chr16:22297374 plus strand	1886719
PRM2	NR_104428	16	Non-coding	chr16:11276480 minus strand	1886720
PRSS21	NR_073012	16	Non-coding	chr16:2817162 plus strand	1886721
PRSS30P	NR_026864	16	Non-coding	chr16:2842751 minus strand	1886722
PYCARD-AS1	NR_102400	16	Non-coding	chr16:31201884 plus strand	1886723
RNPS1	NR_104485	16	Non-coding	chr16:2268412 minus strand	1886724
RNU6-21P	NR_028369	16	Non-coding	chr16:62187646 minus strand	1886725
RNU6-23P	NR_046488	16	Non-coding	chr16:70445399 minus strand	1886726
ROGDI	NR_046480	16	Non-coding	chr16:4802950 minus strand	1886727
RRN3P1	NR_003370	16	Non-coding	chr16:21819174 minus strand	1886728
RRN3P2	NR_003369	16	Non-coding	chr16:29074841 plus strand	1886729
RRN3P3	NR_027460	16	Non-coding	chr16:22437715 minus strand	1886730
SLC6A10P	NR_003083	16	Non-coding	chr16:32885142 minus strand	1886731
SLC7A5P1	NR_002593	16	Non-coding	chr16:29613717 minus strand	1886732
SLC7A5P2	NR_002594	16	Non-coding	chr16:21520444 minus strand	1886733
SLX1A-SULT1A3	NR_037608	16	Non-coding	chr16:29455090 plus strand	1886734
SLX1A-SULT1A3	NR_037608	16	Non-coding	chr16:30194432 plus strand	1886735
SLX1B-SULT1A4	NR_037609	16	Non-coding	chr16:29455090 plus strand	1886736
SLX1B-SULT1A4	NR_037609	16	Non-coding	chr16:30194432 plus strand	1886737
SMG1P1	NR_027154	16	Non-coding	chr16:22437007 plus strand	1886738
SMG1P2	NR_002473	16	Non-coding	chr16:29566219 minus strand	1886739
SMG1P2	NR_002473	16	Non-coding	chr16:30305923 minus strand	1886740
SMG1P3	NR_027155	16	Non-coding	chr16:21502281 minus strand	1886741
SMG1P5	NR_002453	16	Non-coding	chr16:30335374 minus strand	1886742
SMG1P7	NR_033959	16	Non-coding	chr16:70226033 minus strand	1886743

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SNAI3-AS1	NR_024402	16	Non-coding	chr16:88663372 plus strand	1886744
SNAI3-AS1	NR_024399	16	Non-coding	chr16:88663372 plus strand	1886744
SNHG9	NR_003142	16	Non-coding	chr16:1964995 plus strand	1886745
SNORA10	NR_002327	16	Non-coding	chr16:1962466 minus strand	1886746
SNORA30	NR_002966	16	Non-coding	chr16:30710536 plus strand	1886747
SNORA46	NR_002978	16	Non-coding	chr16:58548633 minus strand	1886748
SNORA64	NR_002326	16	Non-coding	chr16:1963106 minus strand	1886749
SNORA70D	NR_033337	16	Non-coding	chr16:71698701 minus strand	1886750
SNORA76A	NR_002980	16	Non-coding	chr16:58559931 minus strand	1886751
SNORA78	NR_003020	16	Non-coding	chr16:1965183 plus strand	1886752
SNORD111	NR_003079	16	Non-coding	chr16:70538004 plus strand	1886753
SNORD111B	NR_037420	16	Non-coding	chr16:70529498 plus strand	1886754
SNORD60	NR_002736	16	Non-coding	chr16:2155105 minus strand	1886755
SNORD68	NR_002450	16	Non-coding	chr16:89561429 plus strand	1886756
SNORD71	NR_003059	16	Non-coding	chr16:71758487 minus strand	1886757
SNX29P1	NR_045011	16	Non-coding	chr16:21349362 plus strand	1886758
SNX29P2	NR_002939	16	Non-coding	chr16:29302286 plus strand	1886759
SPATA33	NR_073515	16	Non-coding	chr16:89657803 plus strand	1886760
SPATA33	NR_073516	16	Non-coding	chr16:89658046 plus strand	1886761
SRRM2-AS1	NR_027274	16	Non-coding	chr16:2744797 minus strand	1886762
SRRM2-AS1	NR_027275	16	Non-coding	chr16:2752600 minus strand	1886763
SSTR5-AS1	NR_027242	16	Non-coding	chr16:1078731 minus strand	1886764
TAT-AS1	NR_103852	16	Non-coding	chr16:71565015 plus strand	1886765
TAT-AS1	NR_103851	16	Non-coding	chr16:71565788 plus strand	1886766
TK2	NR_073520	16	Non-coding	chr16:66550412 minus strand	1886767
TMEM114	NR_110736	16	Non-coding	chr16:8589838 minus strand	1886768
TMEM159	NR_125971	16	Non-coding	chr16:21158376 plus strand	1886769

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TMEM231	NR_074083	16	Non-coding	chr16:75556286 minus strand	1886770
TP53TG3	NR_110886	16	Non-coding	chr16:32676129 minus strand	1886771
TP53TG3	NR_110910	16	Non-coding	chr16:32676129 minus strand	1886771
TP53TG3	NR_110886	16	Non-coding	chr16:33194261 plus strand	1886772
TP53TG3	NR_110910	16	Non-coding	chr16:33194261 plus strand	1886772
TP53TG3	NR_110886	16	Non-coding	chr16:33304341 plus strand	1886773
TP53TG3	NR_110910	16	Non-coding	chr16:33304341 plus strand	1886773
TP53TG3	NR_110886	16	Non-coding	chr16:33360876 plus strand	1886774
TP53TG3	NR_110910	16	Non-coding	chr16:33360876 plus strand	1886774
TP53TG3	NR_110886	16	Non-coding	chr16:33459647 plus strand	1886775
TP53TG3	NR_110910	16	Non-coding	chr16:33459647 plus strand	1886775
TP53TG3B	NR_110897	16	Non-coding	chr16:32676129 minus strand	1886776
TP53TG3B	NR_110911	16	Non-coding	chr16:32676129 minus strand	1886776
TP53TG3B	NR_110897	16	Non-coding	chr16:33194261 plus strand	1886777
TP53TG3B	NR_110911	16	Non-coding	chr16:33194261 plus strand	1886777
TP53TG3B	NR_110897	16	Non-coding	chr16:33304341 plus strand	1886778
TP53TG3B	NR_110911	16	Non-coding	chr16:33304341 plus strand	1886778
TP53TG3B	NR_110897	16	Non-coding	chr16:33360876 plus strand	1886779
TP53TG3B	NR_110911	16	Non-coding	chr16:33360876 plus strand	1886779
TP53TG3B	NR_110911	16	Non-coding	chr16:33459647 plus strand	1886780
TP53TG3B	NR_110897	16	Non-coding	chr16:33459647 plus strand	1886780
TP53TG3C	NR_110914	16	Non-coding	chr16:32676127 minus strand	1886781
TP53TG3C	NR_110914	16	Non-coding	chr16:33194263 plus strand	1886782
TP53TG3C	NR_110914	16	Non-coding	chr16:33304343 plus strand	1886783
TP53TG3C	NR_110914	16	Non-coding	chr16:33360878 plus strand	1886784
TP53TG3C	NR_110914	16	Non-coding	chr16:33459649 plus strand	1886785
TP53TG3D	NR_110898	16	Non-coding	chr16:32253323 plus strand	1886786

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UBE2MP1	NR_002837	16	Non-coding	chr16:35170391 minus strand	1886787
URAHP	NR_027335	16	Non-coding	chr16:90047625 minus strand	1886788
URAHP	NR_027336	16	Non-coding	chr16:90047783 minus strand	1886789
USP10	NR_073578	16	Non-coding	chr16:84699948 plus strand	1886790
USP10	NR_073577	16	Non-coding	chr16:84699948 plus strand	1886790
VAC14-AS1	NR_034083	16	Non-coding	chr16:70755059 plus strand	1886791
VPS9D1-AS1	NR_036480	16	Non-coding	chr16:89711855 plus strand	1886792
WWOX	NR_120436	16	Non-coding	chr16:78099412 plus strand	1886793
WWOX	NR_120435	16	Non-coding	chr16:78099412 plus strand	1886793
YBX3P1	NR_027011	16	Non-coding	chr16:31569524 minus strand	1886794
ZNF205-AS1	NR_024166	16	Non-coding	chr16:3115598 minus strand	1886795
ZNF205-AS1	NR_024167	16	Non-coding	chr16:3115598 minus strand	1886795
ZNF213	NR_104432	16	Non-coding	chr16:3135055 plus strand	1886796
ZNF213-AS1	NR_110900	16	Non-coding	chr16:3134882 minus strand	1886797
ZNF267	NR_049749	16	Non-coding	chr16:31873757 plus strand	1886798
ZNF276	NR_110128	16	Non-coding	chr16:89720367 plus strand	1886799
ZNF276	NR_110122	16	Non-coding	chr16:89720984 plus strand	1886800
ZNF276	NR_110126	16	Non-coding	chr16:89720984 plus strand	1886800
ZNF276	NR_110129	16	Non-coding	chr16:89721541 plus strand	1886801
ZNF689	NR_104166	16	Non-coding	chr16:30609828 minus strand	1886802
ZNF689	NR_073480	16	Non-coding	chr16:30610386 minus strand	1886803
ZNF689	NR_073482	16	Non-coding	chr16:30610433 minus strand	1886804
ZNF689	NR_073481	16	Non-coding	chr16:30610775 minus strand	1886805
ZNF75A	NR_126069	16	Non-coding	chr16:3308312 plus strand	1886806
ZNF778	NR_037705	16	Non-coding	chr16:89217702 plus strand	1886807
AA06	NR_037584	17	Non-coding	chr17:33533760 minus strand	1886808
AANAT	NR_110548	17	Non-coding	chr17:76467547 plus strand	1886809

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AATK-AS1	NR_027255	17	Non-coding	chr17:81165506 plus strand	1886810
ABCA9-AS1	NR_126414	17	Non-coding	chr17:69004713 plus strand	1886811
ACSF2	NR_110232	17	Non-coding	chr17:50468328 plus strand	1886812
ACTG1	NR_037688	17	Non-coding	chr17:81512866 minus strand	1886813
AFMID	NR_027083	17	Non-coding	chr17:78187316 plus strand	1886814
ALOX12-AS1	NR_040089	17	Non-coding	chr17:7012334 minus strand	1886815
ALOX12P2	NR_002710	17	Non-coding	chr17:6853575 plus strand	1886816
ALOX12P2	NR_120453	17	Non-coding	chr17:6893776 plus strand	1886817
ALOX15P1	NR_045985	17	Non-coding	chr17:6657718 plus strand	1886818
AMZ2P1	NR_026903	17	Non-coding	chr17:64975585 minus strand	1886819
ANKFY1	NR_047571	17	Non-coding	chr17:4263979 minus strand	1886820
AOC3	NR_102422	17	Non-coding	chr17:42851183 plus strand	1886821
AOC4P	NR_002773	17	Non-coding	chr17:42867144 plus strand	1886822
ARGFXP2	NR_002222	17	Non-coding	chr17:32151571 minus strand	1886823
ARHGDIA	NR_125441	17	Non-coding	chr17:81871406 minus strand	1886824
ARRB2	NR_047516	17	Non-coding	chr17:4710493 plus strand	1886825
ASB16-AS1	NR_049730	17	Non-coding	chr17:44186717 minus strand	1886826
ASB16-AS1	NR_049729	17	Non-coding	chr17:44186717 minus strand	1886826
ASPSCR1	NR_045351	17	Non-coding	chr17:81977549 plus strand	1886827
BAIAP2-AS1	NR_026857	17	Non-coding	chr17:81034719 minus strand	1886828
BRCA1	NR_027676	17	Non-coding	chr17:43125323 minus strand	1886829
BZRAP1-AS1	NR_038410	17	Non-coding	chr17:58325449 plus strand	1886830
BZRAP1-AS1	NR_038411	17	Non-coding	chr17:58328937 plus strand	1886831
BZRAP1-AS1	NR_038412	17	Non-coding	chr17:58328937 plus strand	1886831
BZRAP1-AS1	NR_038413	17	Non-coding	chr17:58329604 plus strand	1886832
BZRAP1-AS1	NR_038417	17	Non-coding	chr17:58337201 plus strand	1886833
BZRAP1-AS1	NR_038418	17	Non-coding	chr17:58337201 plus strand	1886833

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BZRAP1-AS1	NR_038416	17	Non-coding	chr17:58337201 plus strand	1886833
BZRAP1-AS1	NR_038415	17	Non-coding	chr17:58337201 plus strand	1886833
BZRAP1-AS1	NR_038414	17	Non-coding	chr17:58337201 plus strand	1886833
C17orf62	NR_036516	17	Non-coding	chr17:82450831 minus strand	1886834
C17orf62	NR_036514	17	Non-coding	chr17:82450831 minus strand	1886834
C17orf62	NR_036518	17	Non-coding	chr17:82450831 minus strand	1886834
C17orf62	NR_036517	17	Non-coding	chr17:82450831 minus strand	1886834
C17orf62	NR_036519	17	Non-coding	chr17:82450831 minus strand	1886834
C17orf70	NR_033338	17	Non-coding	chr17:81552403 minus strand	1886835
C17orf80	NR_110105	17	Non-coding	chr17:73232621 plus strand	1886836
C1QTNF1	NR_049769	17	Non-coding	chr17:79025662 plus strand	1886837
C1QTNF1-AS1	NR_040019	17	Non-coding	chr17:79027655 minus strand	1886838
C1QTNF1-AS1	NR_040018	17	Non-coding	chr17:79027655 minus strand	1886838
CACNA1G	NR_046058	17	Non-coding	chr17:50561067 plus strand	1886839
CACNA1G	NR_046054	17	Non-coding	chr17:50561067 plus strand	1886839
CACNA1G	NR_046057	17	Non-coding	chr17:50561067 plus strand	1886839
CACNA1G	NR_046056	17	Non-coding	chr17:50561067 plus strand	1886839
CACNA1G	NR_046055	17	Non-coding	chr17:50561067 plus strand	1886839
CACNA1G-AS1	NR_038439	17	Non-coding	chr17:50562108 minus strand	1886840
CARD14	NR_047566	17	Non-coding	chr17:80169991 plus strand	1886841
CASC17	NR_104152	17	Non-coding	chr17:71202179 minus strand	1886842
CCDC144B	NR_036647	17	Non-coding	chr17:18625617 minus strand	1886843
CCDC144CP	NR_023380	17	Non-coding	chr17:20321173 plus strand	1886844
CCDC144NL-AS1	NR_104185	17	Non-coding	chr17:20868432 plus strand	1886845
CCL15-CCL14	NR_027921	17	Non-coding	chr17:36002038 minus strand	1886846
CCL15-CCL14	NR_027922	17	Non-coding	chr17:36002038 minus strand	1886846
CCL3L1	NR_111964	17	Non-coding	chr17:36090143 minus strand	1886847

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CCL4L1	NR_111969	17	Non-coding	chr17:36103672 plus strand	1886848
CCL4L1	NR_111969	17	Non-coding	chr17:36210907 plus strand	1886849
CCL4L2	NR_111970	17	Non-coding	chr17:36103826 plus strand	1886850
CCL4L2	NR_111970	17	Non-coding	chr17:36211062 plus strand	1886851
CD300LF	NR_110298	17	Non-coding	chr17:74713000 minus strand	1886852
CDRT15P1	NR_003261	17	Non-coding	chr17:14024497 plus strand	1886853
CDRT15P2	NR_033865	17	Non-coding	chr17:15764702 plus strand	1886854
CDRT7	NR_033371	17	Non-coding	chr17:15030974 plus strand	1886855
CDRT8	NR_103559	17	Non-coding	chr17:15106187 minus strand	1886856
CEP112	NR_126542	17	Non-coding	chr17:65826543 minus strand	1886857
COX10-AS1	NR_049718	17	Non-coding	chr17:14069458 minus strand	1886858
COX11	NR_027941	17	Non-coding	chr17:54968703 minus strand	1886859
COX11	NR_027942	17	Non-coding	chr17:54968703 minus strand	1886859
CRHR1-IT1	NR_026905	17	Non-coding	chr17:45638974 plus strand	1886860
CRHR1-IT1	NR_026906	17	Non-coding	chr17:45638974 plus strand	1886860
CRLF3	NR_073118	17	Non-coding	chr17:30824760 minus strand	1886861
CSF3	NR_033662	17	Non-coding	chr17:40015360 plus strand	1886862
CSNK1D	NR_110578	17	Non-coding	chr17:82273742 minus strand	1886863
CTC1	NR_046431	17	Non-coding	chr17:8248095 minus strand	1886864
CWC25	NR_073428	17	Non-coding	chr17:38825350 minus strand	1886865
DBF4B	NR_036623	17	Non-coding	chr17:44708607 plus strand	1886866
DBIL5P	NR_024120	17	Non-coding	chr17:752332 plus strand	1886867
DCAF7	NR_073585	17	Non-coding	chr17:63550434 plus strand	1886868
DNAH17-AS1	NR_102401	17	Non-coding	chr17:78484909 plus strand	1886869
DNAJC7	NR_029431	17	Non-coding	chr17:42017697 minus strand	1886870
DPRXP4	NR_002221	17	Non-coding	chr17:30975334 plus strand	1886871
EFCAB5	NR_026738	17	Non-coding	chr17:29941604 plus strand	1886872

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EPN2-AS1	NR_048576	17	Non-coding	chr17:19306261 minus strand	1886873
EPN2-IT1	NR_046824	17	Non-coding	chr17:19271392 plus strand	1886874
ERBB2	NR_110535	17	Non-coding	chr17:39699977 plus strand	1886875
FAM106A	NR_026809	17	Non-coding	chr17:18526846 minus strand	1886876
FAM106B	NR_126160	17	Non-coding	chr17:20417291 plus strand	1886877
FAM106CP	NR_026810	17	Non-coding	chr17:16788742 plus strand	1886878
FAM134C	NR_026697	17	Non-coding	chr17:42609427 minus strand	1886879
FAM20A	NR_027751	17	Non-coding	chr17:68558427 minus strand	1886880
FAM215A	NR_026770	17	Non-coding	chr17:43917207 plus strand	1886881
FAM27L	NR_028336	17	Non-coding	chr17:22298763 plus strand	1886882
FBXW10	NR_051988	17	Non-coding	chr17:18744012 plus strand	1886883
FDXR	NR_047576	17	Non-coding	chr17:74873031 minus strand	1886884
FLJ35934	NR_104343	17	Non-coding	chr17:18411158 plus strand	1886885
FLJ36000	NR_027084	17	Non-coding	chr17:22406018 plus strand	1886886
FLJ40194	NR_034161	17	Non-coding	chr17:49248242 plus strand	1886887
FLJ43681	NR_029406	17	Non-coding	chr17:83226896 plus strand	1886888
FLJ45079	NR_028337	17	Non-coding	chr17:77884087 minus strand	1886889
FN3KRP	NR_046408	17	Non-coding	chr17:82716705 plus strand	1886890
FOXO3B	NR_026718	17	Non-coding	chr17:18673181 minus strand	1886891
G6PC3	NR_028582	17	Non-coding	chr17:44070729 plus strand	1886892
G6PC3	NR_028581	17	Non-coding	chr17:44070729 plus strand	1886892
GPATCH8	NR_036474	17	Non-coding	chr17:44503589 minus strand	1886893
GRIN2C	NR_103735	17	Non-coding	chr17:74859884 minus strand	1886894
HID1-AS1	NR_110878	17	Non-coding	chr17:74970688 plus strand	1886895
HIGD1B	NR_073504	17	Non-coding	chr17:44847901 plus strand	1886896
HILS1	NR_024193	17	Non-coding	chr17:50172476 minus strand	1886897
HILS1	NR_024192	17	Non-coding	chr17:50172476 minus strand	1886897

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HN1	NR_109933	17	Non-coding	chr17:75154683 minus strand	1886898
HOXB-AS1	NR_102279	17	Non-coding	chr17:48544350 plus strand	1886899
HOXB-AS3	NR_033202	17	Non-coding	chr17:48590419 plus strand	1886900
HOXB-AS3	NR_033201	17	Non-coding	chr17:48590419 plus strand	1886900
HOXB-AS3	NR_110331	17	Non-coding	chr17:48590419 plus strand	1886900
HOXB-AS3	NR_033204	17	Non-coding	chr17:48592291 plus strand	1886901
HOXB-AS3	NR_033203	17	Non-coding	chr17:48592291 plus strand	1886901
HOXB-AS3	NR_110329	17	Non-coding	chr17:48592291 plus strand	1886901
HOXB-AS3	NR_033205	17	Non-coding	chr17:48595957 plus strand	1886902
HOXB-AS3	NR_110330	17	Non-coding	chr17:48595957 plus strand	1886902
HP09025	NR_109783	17	Non-coding	chr17:79707265 plus strand	1886903
INTS2	NR_026641	17	Non-coding	chr17:61928016 minus strand	1886904
KANSL1-AS1	NR_034172	17	Non-coding	chr17:46193572 plus strand	1886905
KCNJ2-AS1	NR_036534	17	Non-coding	chr17:70169402 minus strand	1886906
KCTD2	NR_110835	17	Non-coding	chr17:75032566 plus strand	1886907
KCTD2	NR_110834	17	Non-coding	chr17:75047183 plus strand	1886908
KRT16P1	NR_073414	17	Non-coding	chr17:18439907 plus strand	1886909
KRT16P2	NR_029392	17	Non-coding	chr17:16832833 minus strand	1886910
KRT16P3	NR_029393	17	Non-coding	chr17:20504498 minus strand	1886911
KRT17P5	NR_001443	17	Non-coding	chr17:18422180 plus strand	1886912
KRT18P55	NR_028334	17	Non-coding	chr17:28307382 minus strand	1886913
KRT42P	NR_033415	17	Non-coding	chr17:41640199 minus strand	1886914
LASP1	NR_073384	17	Non-coding	chr17:38869858 plus strand	1886915
LGALS9	NR_024043	17	Non-coding	chr17:27631147 plus strand	1886916
LINC00324	NR_026951	17	Non-coding	chr17:8224043 minus strand	1886917
LINC00469	NR_027146	17	Non-coding	chr17:73828537 minus strand	1886918
LINC00482	NR_038080	17	Non-coding	chr17:81309248 minus strand	1886919

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LINC00483	NR_073199	17	Non-coding	chr17:50767515 minus strand	1886920
LINC00511	NR_033876	17	Non-coding	chr17:72640472 minus strand	1886921
LINC00670	NR_034145	17	Non-coding	chr17:12549967 plus strand	1886922
LINC00670	NR_034144	17	Non-coding	chr17:12549967 plus strand	1886922
LINC00671	NR_027254	17	Non-coding	chr17:42898734 minus strand	1886923
LINC00672	NR_038847	17	Non-coding	chr17:38925167 plus strand	1886924
LINC00673	NR_036488	17	Non-coding	chr17:72592804 minus strand	1886925
LINC00674	NR_027418	17	Non-coding	chr17:68101554 plus strand	1886926
LINC00675	NR_036581	17	Non-coding	chr17:10804099 minus strand	1886927
LINC00854	NR_047479	17	Non-coding	chr17:43229011 minus strand	1886928
LINC00910	NR_027412	17	Non-coding	chr17:43388898 minus strand	1886929
LINC00910	NR_027413	17	Non-coding	chr17:43388898 minus strand	1886929
LINC00974	NR_038442	17	Non-coding	chr17:41554495 minus strand	1886930
LINC01028	NR_104130	17	Non-coding	chr17:70051270 plus strand	1886931
LINC01028	NR_104129	17	Non-coding	chr17:70051270 plus strand	1886931
LINC01152	NR_110124	17	Non-coding	chr17:72030653 plus strand	1886932
LINC01152	NR_110132	17	Non-coding	chr17:72030653 plus strand	1886932
LINC01180	NR_110661	17	Non-coding	chr17:44650349 minus strand	1886933
LINC01476	NR_110813	17	Non-coding	chr17:59526857 minus strand	1886934
LINC01482	NR_110825	17	Non-coding	chr17:68628153 plus strand	1886935
LINC01483	NR_109971	17	Non-coding	chr17:69593986 plus strand	1886936
LINC01483	NR_109972	17	Non-coding	chr17:69593986 plus strand	1886936
LINC01497	NR_110875	17	Non-coding	chr17:69961706 plus strand	1886937
LINC01497	NR_110874	17	Non-coding	chr17:69961706 plus strand	1886937
LINC01563	NR_110896	17	Non-coding	chr17:21075555 plus strand	1886938
LINC01563	NR_110895	17	Non-coding	chr17:21075555 plus strand	1886938
LOC100128006	NR_104607	17	Non-coding	chr17:12790284 minus strand	1886939

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LOC100128288	NR_024447	17	Non-coding	chr17:8360541 minus strand	1886940
LOC100130950	NR_034082	17	Non-coding	chr17:5192083 plus strand	1886941
LOC100131347	NR_036551	17	Non-coding	chr17:39057018 plus strand	1886942
LOC100132174	NR_104134	17	Non-coding	chr17:77728559 minus strand	1886943
LOC100287042	NR_036520	17	Non-coding	chr17:75271298 plus strand	1886944
LOC100287072	NR_073509	17	Non-coding	chr17:20712445 plus strand	1886945
LOC100288866	NR_103773	17	Non-coding	chr17:49574064 minus strand	1886946
LOC100294362	NR_029376	17	Non-coding	chr17:80415168 minus strand	1886947
LOC100505782	NR_040111	17	Non-coding	chr17:41402415 plus strand	1886948
LOC100506371	NR_104420	17	Non-coding	chr17:187251 minus strand	1886949
LOC100506388	NR_040011	17	Non-coding	chr17:331204 plus strand	1886950
LOC100507002	NR_110801	17	Non-coding	chr17:65100811 plus strand	1886951
LOC100507351	NR_040050	17	Non-coding	chr17:77546940 plus strand	1886952
LOC100996291	NR_073178	17	Non-coding	chr17:78278492 minus strand	1886953
LOC101559451	NR_103482	17	Non-coding	chr17:4704229 plus strand	1886954
LOC101927018	NR_110803	17	Non-coding	chr17:28926274 plus strand	1886955
LOC101927166	NR_110804	17	Non-coding	chr17:48444832 plus strand	1886956
LOC101927207	NR_110805	17	Non-coding	chr17:49461749 minus strand	1886957
LOC101927230	NR_110806	17	Non-coding	chr17:50214693 plus strand	1886958
LOC101927239	NR_110748	17	Non-coding	chr17:34183632 minus strand	1886959
LOC101927274	NR_110751	17	Non-coding	chr17:51335162 minus strand	1886960
LOC101927539	NR_110807	17	Non-coding	chr17:57608412 minus strand	1886961
LOC101927557	NR_110808	17	Non-coding	chr17:57523597 minus strand	1886962
LOC101927666	NR_110809	17	Non-coding	chr17:58083204 minus strand	1886963
LOC101927755	NR_110816	17	Non-coding	chr17:59965095 plus strand	1886964
LOC101927755	NR_110815	17	Non-coding	chr17:59965095 plus strand	1886964
LOC101927839	NR_110888	17	Non-coding	chr17:2232677 plus strand	1886965

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LOC101927911	NR_110818	17	Non-coding	chr17:2965895 minus strand	1886966
LOC101928205	NR_110827	17	Non-coding	chr17:72072332 plus strand	1886967
LOC101928266	NR_110828	17	Non-coding	chr17:9179118 minus strand	1886968
LOC101928418	NR_104605	17	Non-coding	chr17:12706135 minus strand	1886969
LOC101928514	NR_110837	17	Non-coding	chr17:76799043 plus strand	1886970
LOC101928567	NR_110839	17	Non-coding	chr17:15817742 minus strand	1886971
LOC101928674	NR_110847	17	Non-coding	chr17:78360447 plus strand	1886972
LOC101928674	NR_110845	17	Non-coding	chr17:78360447 plus strand	1886972
LOC101928674	NR_110846	17	Non-coding	chr17:78361001 plus strand	1886973
LOC101928710	NR_110848	17	Non-coding	chr17:78632057 minus strand	1886974
LOC101928710	NR_110849	17	Non-coding	chr17:78632057 minus strand	1886974
LOC101928738	NR_110851	17	Non-coding	chr17:79919356 plus strand	1886975
LOC101928766	NR_110850	17	Non-coding	chr17:79926725 minus strand	1886976
LOC101928855	NR_110852	17	Non-coding	chr17:80805632 minus strand	1886977
LOC101929767	NR_110868	17	Non-coding	chr17:43170403 minus strand	1886978
LOC102723505	NR_110876	17	Non-coding	chr17:72025979 minus strand	1886979
LOC102723517	NR_110877	17	Non-coding	chr17:72057734 minus strand	1886980
LOC102724009	NR_120665	17	Non-coding	chr17:5020093 minus strand	1886981
LOC102724508	NR_110881	17	Non-coding	chr17:47323613 minus strand	1886982
LOC102724508	NR_110880	17	Non-coding	chr17:47323901 minus strand	1886983
LOC102724596	NR_110884	17	Non-coding	chr17:49361164 plus strand	1886984
LOC102724596	NR_110883	17	Non-coding	chr17:49361369 plus strand	1886985
LOC102724596	NR_110882	17	Non-coding	chr17:49362381 plus strand	1886986
LOC103021295	NR_110982	17	Non-coding	chr17:4271894 minus strand	1886987
LOC146880	NR_027487	17	Non-coding	chr17:64781504 minus strand	1886988
LOC146880	NR_026899	17	Non-coding	chr17:64781999 minus strand	1886989
LOC284009	NR_028335	17	Non-coding	chr17:2415436 minus strand	1886990

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LOC284023	NR_024349	17	Non-coding	chr17:7915947 minus strand	1886991
LOC284080	NR_038230	17	Non-coding	chr17:50055739 minus strand	1886992
LOC339166	NR_040000	17	Non-coding	chr17:5772233 plus strand	1886993
LOC339260	NR_123730	17	Non-coding	chr17:20938519 plus strand	1886994
LOC388406	NR_126009	17	Non-coding	chr17:60564545 plus strand	1886995
LOC400612	NR_126169	17	Non-coding	chr17:63999899 minus strand	1886996
LOC400620	NR_040020	17	Non-coding	chr17:73786821 plus strand	1886997
LOC440434	NR_036750	17	Non-coding	chr17:36274196 plus strand	1886998
LOC440434	NR_036750	17	Non-coding	chr17:38257249 minus strand	1886999
LOC440446	NR_122104	17	Non-coding	chr17:51336714 plus strand	1887000
LOC440461	NR_027283	17	Non-coding	chr17:68198659 plus strand	1887001
LOC644172	NR_026901	17	Non-coding	chr17:45602382 minus strand	1887002
LOC644172	NR_026901	17	Non-coding	chr17:46243563 plus strand	1887003
LOC653653	NR_027408	17	Non-coding	chr17:60102919 minus strand	1887004
LOC729683	NR_046273	17	Non-coding	chr17:63700337 plus strand	1887005
LPO	NR_027647	17	Non-coding	chr17:58238425 plus strand	1887006
LRRC37A11P	NR_033753	17	Non-coding	chr17:39029905 plus strand	1887007
LRRC37A4P	NR_002940	17	Non-coding	chr17:45520523 minus strand	1887008
LRRC37A8P	NR_126038	17	Non-coding	chr17:35911023 minus strand	1887009
LRRC37BP1	NR_015341	17	Non-coding	chr17:30576464 plus strand	1887010
LRRC75A-AS1	NR_045029	17	Non-coding	chr17:16438986 plus strand	1887011
LRRC75A-AS1	NR_045028	17	Non-coding	chr17:16438986 plus strand	1887011
LRRC75A-AS1	NR_045027	17	Non-coding	chr17:16438986 plus strand	1887011
LRRC75A-AS1	NR_045026	17	Non-coding	chr17:16438986 plus strand	1887011
LRRC75A-AS1	NR_045025	17	Non-coding	chr17:16438986 plus strand	1887011
LRRC75A-AS1	NR_045024	17	Non-coding	chr17:16438986 plus strand	1887011
LRRC75A-AS1	NR_045023	17	Non-coding	chr17:16438986 plus strand	1887011

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LRRC75A-AS1	NR_045022	17	Non-coding	chr17:16438986 plus strand	1887011
LRRC75A-AS1	NR_045021	17	Non-coding	chr17:16438986 plus strand	1887011
LRRC75A-AS1	NR_027667	17	Non-coding	chr17:16438986 plus strand	1887011
LRRC75A-AS1	NR_027179	17	Non-coding	chr17:16438986 plus strand	1887011
LRRC75A-AS1	NR_027178	17	Non-coding	chr17:16438986 plus strand	1887011
LRRC75A-AS1	NR_027177	17	Non-coding	chr17:16438986 plus strand	1887011
LRRC75A-AS1	NR_027176	17	Non-coding	chr17:16438986 plus strand	1887011
LRRC75A-AS1	NR_027175	17	Non-coding	chr17:16438986 plus strand	1887011
LRRC75A-AS1	NR_027174	17	Non-coding	chr17:16438986 plus strand	1887011
LRRC75A-AS1	NR_027173	17	Non-coding	chr17:16438986 plus strand	1887011
LRRC75A-AS1	NR_027172	17	Non-coding	chr17:16438986 plus strand	1887011
LRRC75A-AS1	NR_027171	17	Non-coding	chr17:16438986 plus strand	1887011
LRRC75A-AS1	NR_027169	17	Non-coding	chr17:16438986 plus strand	1887011
LRRC75A-AS1	NR_027170	17	Non-coding	chr17:16438986 plus strand	1887011
LRRC75A-AS1	NR_027168	17	Non-coding	chr17:16438986 plus strand	1887011
LRRC75A-AS1	NR_027167	17	Non-coding	chr17:16438986 plus strand	1887011
LRRC75A-AS1	NR_027166	17	Non-coding	chr17:16438986 plus strand	1887011
LRRC75A-AS1	NR_027165	17	Non-coding	chr17:16438986 plus strand	1887011
LRRC75A-AS1	NR_027164	17	Non-coding	chr17:16438986 plus strand	1887011
LRRC75A-AS1	NR_027163	17	Non-coding	chr17:16438986 plus strand	1887011
LRRC75A-AS1	NR_027162	17	Non-coding	chr17:16438986 plus strand	1887011
LRRC75A-AS1	NR_027161	17	Non-coding	chr17:16438986 plus strand	1887011
LRRC75A-AS1	NR_027160	17	Non-coding	chr17:16438986 plus strand	1887011
LRRC75A-AS1	NR_027159	17	Non-coding	chr17:16438986 plus strand	1887011
LRRC75A-AS1	NR_027158	17	Non-coding	chr17:16438986 plus strand	1887011
MAFG-AS1	NR_015454	17	Non-coding	chr17:81927828 plus strand	1887012
MAGOH2	NR_049723	17	Non-coding	chr17:10716582 minus strand	1887013

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MAP3K14-AS1	NR_110326	17	Non-coding	chr17:45247924 plus strand	1887014
MAP3K14-AS1	NR_024434	17	Non-coding	chr17:45247924 plus strand	1887014
MAP3K14-AS1	NR_110325	17	Non-coding	chr17:45247924 plus strand	1887014
MAP3K14-AS1	NR_110324	17	Non-coding	chr17:45262079 plus strand	1887015
MAP3K14-AS1	NR_024435	17	Non-coding	chr17:45262079 plus strand	1887015
MAPT-AS1	NR_024559	17	Non-coding	chr17:45895513 minus strand	1887016
MAPT-IT1	NR_024560	17	Non-coding	chr17:45895782 plus strand	1887017
MED24	NR_052017	17	Non-coding	chr17:40054636 minus strand	1887018
MEIS3P1	NR_002211	17	Non-coding	chr17:15786849 plus strand	1887019
METTL23	NR_038193	17	Non-coding	chr17:76726829 plus strand	1887020
MGC12916	NR_026880	17	Non-coding	chr17:14303739 plus strand	1887021
MGC16275	NR_026914	17	Non-coding	chr17:74213321 minus strand	1887022
MGC57346	NR_026680	17	Non-coding	chr17:45620328 plus strand	1887023
MGC57346	NR_027295	17	Non-coding	chr17:45620614 plus strand	1887024
MIR10A	NR_029608	17	Non-coding	chr17:48579947 minus strand	1887025
MIR1180	NR_031591	17	Non-coding	chr17:19344574 minus strand	1887026
MIR1203	NR_031607	17	Non-coding	chr17:48156511 minus strand	1887027
MIR1250	NR_031652	17	Non-coding	chr17:81133308 minus strand	1887028
MIR1253	NR_031654	17	Non-coding	chr17:2748182 minus strand	1887029
MIR1268B	NR_039607	17	Non-coding	chr17:80098827 plus strand	1887030
MIR1269B	NR_039747	17	Non-coding	chr17:12917342 minus strand	1887031
MIR1273E	NR_128706	17	Non-coding	chr17:64425170 minus strand	1887032
MIR1288	NR_031698	17	Non-coding	chr17:16282013 plus strand	1887033
MIR132	NR_029674	17	Non-coding	chr17:2050008 minus strand	1887034
MIR142	NR_029683	17	Non-coding	chr17:58331318 minus strand	1887035
MIR144	NR_029685	17	Non-coding	chr17:28861618 minus strand	1887036
MIR152	NR_029687	17	Non-coding	chr17:48037247 minus strand	1887037

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MIR193A	NR_029710	17	Non-coding	chr17:31559995 plus strand	1887038
MIR195	NR_029712	17	Non-coding	chr17:7017701 minus strand	1887039
MIR196A1	NR_029582	17	Non-coding	chr17:48632559 minus strand	1887040
MIR21	NR_029493	17	Non-coding	chr17:59841265 plus strand	1887041
MIR2117	NR_031751	17	Non-coding	chr17:43444805 plus strand	1887042
MIR212	NR_029625	17	Non-coding	chr17:2050380 minus strand	1887043
MIR22	NR_029494	17	Non-coding	chr17:1713987 minus strand	1887044
MIR22HG	NR_028505	17	Non-coding	chr17:1716272 minus strand	1887045
MIR22HG	NR_028504	17	Non-coding	chr17:1716272 minus strand	1887045
MIR22HG	NR_028503	17	Non-coding	chr17:1716272 minus strand	1887045
MIR22HG	NR_028502	17	Non-coding	chr17:1716272 minus strand	1887045
MIR2909	NR_036056	17	Non-coding	chr17:37033744 plus strand	1887046
MIR301A	NR_029842	17	Non-coding	chr17:59151221 minus strand	1887047
MIR3064	NR_039891	17	Non-coding	chr17:64500839 minus strand	1887048
MIR3065	NR_036151	17	Non-coding	chr17:81125876 plus strand	1887049
MIR3183	NR_036148	17	Non-coding	chr17:1022559 minus strand	1887050
MIR3184	NR_036149	17	Non-coding	chr17:30117160 minus strand	1887051
MIR3185	NR_036150	17	Non-coding	chr17:48724475 minus strand	1887052
MIR3186	NR_036152	17	Non-coding	chr17:81451188 minus strand	1887053
MIR324	NR_029896	17	Non-coding	chr17:7223379 minus strand	1887054
MIR338	NR_029897	17	Non-coding	chr17:81125949 minus strand	1887055
MIR33B	NR_030361	17	Non-coding	chr17:17813931 minus strand	1887056
MIR3614	NR_037408	17	Non-coding	chr17:56891355 minus strand	1887057
MIR3615	NR_037409	17	Non-coding	chr17:74748612 plus strand	1887058
MIR365B	NR_029856	17	Non-coding	chr17:31575410 plus strand	1887059
MIR3678	NR_037449	17	Non-coding	chr17:75406068 plus strand	1887060
MIR378J	NR_106744	17	Non-coding	chr17:37615039 minus strand	1887061

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MIR423	NR_029945	17	Non-coding	chr17:30117078 plus strand	1887062
MIR4314	NR_036201	17	Non-coding	chr17:8088055 plus strand	1887063
MIR4315-1	NR_036199	17	Non-coding	chr17:45475435 minus strand	1887064
MIR4315-1	NR_036199	17	Non-coding	chr17:64822102 minus strand	1887065
MIR4315-2	NR_036271	17	Non-coding	chr17:45475435 minus strand	1887066
MIR4315-2	NR_036271	17	Non-coding	chr17:64822102 minus strand	1887067
MIR4316	NR_036200	17	Non-coding	chr17:77397054 minus strand	1887068
MIR451A	NR_029970	17	Non-coding	chr17:28861440 minus strand	1887069
MIR451B	NR_039876	17	Non-coding	chr17:28861370 plus strand	1887070
MIR4520-1	NR_039745	17	Non-coding	chr17:6655509 minus strand	1887071
MIR4520-2	NR_039874	17	Non-coding	chr17:6655448 plus strand	1887072
MIR4521	NR_039746	17	Non-coding	chr17:8186944 plus strand	1887073
MIR4522	NR_039748	17	Non-coding	chr17:27293996 minus strand	1887074
MIR4523	NR_039749	17	Non-coding	chr17:29390661 plus strand	1887075
MIR4524A	NR_039750	17	Non-coding	chr17:69099632 minus strand	1887076
MIR4524B	NR_049834	17	Non-coding	chr17:69099541 plus strand	1887077
MIR4525	NR_039751	17	Non-coding	chr17:82668307 minus strand	1887078
MIR454	NR_030411	17	Non-coding	chr17:59137872 minus strand	1887079
MIR4723	NR_039875	17	Non-coding	chr17:28360653 plus strand	1887080
MIR4724	NR_039877	17	Non-coding	chr17:31534882 plus strand	1887081
MIR4725	NR_039878	17	Non-coding	chr17:31575268 plus strand	1887082
MIR4726	NR_039879	17	Non-coding	chr17:38719690 plus strand	1887083
MIR4727	NR_039880	17	Non-coding	chr17:38825837 plus strand	1887084
MIR4728	NR_039881	17	Non-coding	chr17:39726494 plus strand	1887085
MIR4729	NR_039882	17	Non-coding	chr17:59366082 plus strand	1887086
MIR4730	NR_039883	17	Non-coding	chr17:80419417 plus strand	1887087
MIR4731	NR_039884	17	Non-coding	chr17:15251696 minus strand	1887088

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MIR4732	NR_039885	17	Non-coding	chr17:28861730 minus strand	1887089
MIR4733	NR_039886	17	Non-coding	chr17:31094425 minus strand	1887090
MIR4734	NR_039887	17	Non-coding	chr17:38702331 minus strand	1887091
MIR4736	NR_039889	17	Non-coding	chr17:58336022 minus strand	1887092
MIR4737	NR_039890	17	Non-coding	chr17:60043105 minus strand	1887093
MIR4738	NR_039892	17	Non-coding	chr17:75784607 minus strand	1887094
MIR4739	NR_039893	17	Non-coding	chr17:79707249 minus strand	1887095
MIR4740	NR_039894	17	Non-coding	chr17:81400778 minus strand	1887096
MIR497	NR_030178	17	Non-coding	chr17:7018022 minus strand	1887097
MIR497HG	NR_038310	17	Non-coding	chr17:7019654 minus strand	1887098
MIR5010	NR_049808	17	Non-coding	chr17:42514187 plus strand	1887099
MIR5047	NR_039969	17	Non-coding	chr17:64501313 minus strand	1887100
MIR5089	NR_049812	17	Non-coding	chr17:46973016 plus strand	1887101
MIR5096	NR_039973	17	Non-coding	chr17:4141088 plus strand	1887102
MIR548AA2	NR_037517	17	Non-coding	chr17:67471488 plus strand	1887103
MIR548AT	NR_049845	17	Non-coding	chr17:42494772 plus strand	1887104
MIR548D2	NR_030385	17	Non-coding	chr17:67471585 minus strand	1887105
MIR548H3	NR_031679	17	Non-coding	chr17:13543646 minus strand	1887106
MIR6080	NR_106728	17	Non-coding	chr17:64780758 plus strand	1887107
MIR6129	NR_106745	17	Non-coding	chr17:49288454 minus strand	1887108
MIR6165	NR_106751	17	Non-coding	chr17:49510816 plus strand	1887109
MIR632	NR_030362	17	Non-coding	chr17:32350108 plus strand	1887110
MIR633	NR_030363	17	Non-coding	chr17:62944214 plus strand	1887111
MIR634	NR_030364	17	Non-coding	chr17:66787071 plus strand	1887112
MIR635	NR_030365	17	Non-coding	chr17:68424548 minus strand	1887113
MIR636	NR_030366	17	Non-coding	chr17:76736548 minus strand	1887114
MIR6510	NR_106765	17	Non-coding	chr17:41517217 minus strand	1887115

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MIR6516	NR_106997	17	Non-coding	chr17:77089416 plus strand	1887116
MIR657	NR_030394	17	Non-coding	chr17:81125373 minus strand	1887117
MIR6776	NR_106834	17	Non-coding	chr17:2692919 minus strand	1887118
MIR6777	NR_106835	17	Non-coding	chr17:17813545 minus strand	1887119
MIR6778	NR_106836	17	Non-coding	chr17:18340886 minus strand	1887120
MIR6779	NR_106837	17	Non-coding	chr17:38914978 plus strand	1887121
MIR6780A	NR_106838	17	Non-coding	chr17:42708151 minus strand	1887122
MIR6781	NR_106839	17	Non-coding	chr17:42823943 minus strand	1887123
MIR6782	NR_106840	17	Non-coding	chr17:44207839 minus strand	1887124
MIR6783	NR_106841	17	Non-coding	chr17:44934681 minus strand	1887125
MIR6784	NR_106842	17	Non-coding	chr17:45114433 minus strand	1887126
MIR6785	NR_106843	17	Non-coding	chr17:75498547 plus strand	1887127
MIR6786	NR_106844	17	Non-coding	chr17:81693756 plus strand	1887128
MIR6787	NR_106845	17	Non-coding	chr17:82236667 plus strand	1887129
MIR6864	NR_106924	17	Non-coding	chr17:4969771 minus strand	1887130
MIR6865	NR_106925	17	Non-coding	chr17:4970150 minus strand	1887131
MIR6866	NR_106926	17	Non-coding	chr17:40161932 plus strand	1887132
MIR6867	NR_106927	17	Non-coding	chr17:40193596 plus strand	1887133
MIR6868	NR_106928	17	Non-coding	chr17:76098076 minus strand	1887134
MIR6883	NR_106943	17	Non-coding	chr17:8145071 minus strand	1887135
MIR6884	NR_106944	17	Non-coding	chr17:40026409 minus strand	1887136
MIR744	NR_030613	17	Non-coding	chr17:12081898 plus strand	1887137
MIR8059	NR_107026	17	Non-coding	chr17:50768649 plus strand	1887138
MMP28	NR_111988	17	Non-coding	chr17:35795707 minus strand	1887139
MPDU1	NR_024603	17	Non-coding	chr17:7583646 plus strand	1887140
MPP3	NR_003562	17	Non-coding	chr17:43833179 minus strand	1887141
MRPL10	NR_037575	17	Non-coding	chr17:47831541 minus strand	1887142

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MRPL45P2	NR_033934	17	Non-coding	chr17:47492620 minus strand	1887143
MSX2P1	NR_002307	17	Non-coding	chr17:58156958 plus strand	1887144
MTVR2	NR_027025	17	Non-coding	chr17:56884913 minus strand	1887145
MYHAS	NR_125367	17	Non-coding	chr17:10383131 plus strand	1887146
MYO15B	NR_003587	17	Non-coding	chr17:75588057 plus strand	1887147
NBR2	NR_003108	17	Non-coding	chr17:43125582 plus strand	1887148
NME1-NME2	NR_037149	17	Non-coding	chr17:51153535 plus strand	1887149
NSF	NR_040116	17	Non-coding	chr17:46590668 plus strand	1887150
NSFP1	NR_033799	17	Non-coding	chr17:46372812 plus strand	1887151
NSFP1	NR_033799	17	Non-coding	chr17:46590733 plus strand	1887152
NT5C	NR_045513	17	Non-coding	chr17:75131795 minus strand	1887153
NT5C3B	NR_033464	17	Non-coding	chr17:41836236 minus strand	1887154
NT5C3B	NR_033465	17	Non-coding	chr17:41836271 minus strand	1887155
OGFOD3	NR_033265	17	Non-coding	chr17:82418637 minus strand	1887156
OR1D4	NR_033795	17	Non-coding	chr17:3240675 plus strand	1887157
OR3A4P	NR_024128	17	Non-coding	chr17:3310244 plus strand	1887158
P2RX5-TAX1BP3	NR_037928	17	Non-coding	chr17:3696404 minus strand	1887159
PDE6G	NR_026872	17	Non-coding	chr17:81656577 minus strand	1887160
PGS1	NR_110601	17	Non-coding	chr17:78378617 plus strand	1887161
PGS1	NR_110602	17	Non-coding	chr17:78378617 plus strand	1887161
PGS1	NR_111989	17	Non-coding	chr17:78378617 plus strand	1887161
PIK3R6	NR_110865	17	Non-coding	chr17:8867677 minus strand	1887162
PITPNA-AS1	NR_028514	17	Non-coding	chr17:1516918 plus strand	1887163
PLEKHH3	NR_073574	17	Non-coding	chr17:42676090 minus strand	1887164
PLEKHH3	NR_073573	17	Non-coding	chr17:42677030 minus strand	1887165
PLEKHM1	NR_027774	17	Non-coding	chr17:45490780 minus strand	1887166
PLEKHM1	NR_027782	17	Non-coding	chr17:45490780 minus strand	1887166

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PLEKHM1P	NR_024386	17	Non-coding	chr17:64837184 minus strand	1887167
PMP22	NR_104018	17	Non-coding	chr17:15265357 minus strand	1887168
PMP22	NR_104017	17	Non-coding	chr17:15265357 minus strand	1887168
PNMT	NR_073461	17	Non-coding	chr17:39667980 plus strand	1887169
PPM1E	NR_048561	17	Non-coding	chr17:58755868 plus strand	1887170
PPY2	NR_002181	17	Non-coding	chr17:28247443 plus strand	1887171
PRCD	NR_033357	17	Non-coding	chr17:76527585 plus strand	1887172
PRKCA-AS1	NR_110822	17	Non-coding	chr17:66416854 minus strand	1887173
PSMB3	NR_104195	17	Non-coding	chr17:38752712 plus strand	1887174
PSMB3	NR_104194	17	Non-coding	chr17:38752712 plus strand	1887174
PSMC3IP	NR_045671	17	Non-coding	chr17:42577716 minus strand	1887175
PSMC3IP	NR_045670	17	Non-coding	chr17:42577831 minus strand	1887176
PSMC3IP	NR_045669	17	Non-coding	chr17:42577831 minus strand	1887176
PSME3	NR_049772	17	Non-coding	chr17:42833141 plus strand	1887177
PYY2	NR_003064	17	Non-coding	chr17:28226562 plus strand	1887178
RAD51C	NR_103872	17	Non-coding	chr17:58692572 plus strand	1887179
RAD51C	NR_103873	17	Non-coding	chr17:58692572 plus strand	1887179
RAD51D	NR_037712	17	Non-coding	chr17:35119869 minus strand	1887180
RAD51D	NR_037711	17	Non-coding	chr17:35119869 minus strand	1887180
RAD51L3-RFFL	NR_037714	17	Non-coding	chr17:35121522 minus strand	1887181
RAMP2-AS1	NR_024461	17	Non-coding	chr17:42761257 minus strand	1887182
RAMP2-AS1	NR_024462	17	Non-coding	chr17:42761257 minus strand	1887182
RARA-AS1	NR_110861	17	Non-coding	chr17:40343136 minus strand	1887183
RDM1	NR_028000	17	Non-coding	chr17:35930299 minus strand	1887184
RDM1	NR_027999	17	Non-coding	chr17:35930299 minus strand	1887184
RDM1	NR_027998	17	Non-coding	chr17:35930776 minus strand	1887185
RDM1	NR_027997	17	Non-coding	chr17:35930776 minus strand	1887185

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RDM1	NR_027996	17	Non-coding	chr17:35930776 minus strand	1887185
RFFL	NR_037713	17	Non-coding	chr17:35089329 minus strand	1887186
RHOT1	NR_110083	17	Non-coding	chr17:32142453 plus strand	1887187
RNASEK	NR_037716	17	Non-coding	chr17:7012416 plus strand	1887188
RNASEK	NR_037715	17	Non-coding	chr17:7012416 plus strand	1887188
RNASEK-C17orf49	NR_037717	17	Non-coding	chr17:7012416 plus strand	1887189
RNF126P1	NR_002818	17	Non-coding	chr17:57045477 plus strand	1887190
RNF157-AS1	NR_040017	17	Non-coding	chr17:76140555 plus strand	1887191
RNU2-1	NR_002716	17	Non-coding	chr17:43233977 minus strand	1887192
RNU2-1	NR_002716	17	Non-coding	chr17:43240111 minus strand	1887193
RNU2-1	NR_002716	17	Non-coding	chr17:43241370 minus strand	1887194
RNU2-1	NR_002716	17	Non-coding	chr17:43245864 minus strand	1887195
RNU2-1	NR_002716	17	Non-coding	chr17:43252019 minus strand	1887196
RNU2-1	NR_002716	17	Non-coding	chr17:43266823 minus strand	1887197
RNU2-1	NR_002716	17	Non-coding	chr17:43278168 minus strand	1887198
RNU2-1	NR_002716	17	Non-coding	chr17:43284329 minus strand	1887199
RNU2-1	NR_002716	17	Non-coding	chr17:43296615 minus strand	1887200
RNU2-1	NR_002716	17	Non-coding	chr17:43300231 minus strand	1887201
RPAIN	NR_027685	17	Non-coding	chr17:5419640 plus strand	1887202
RPAIN	NR_027684	17	Non-coding	chr17:5419640 plus strand	1887202
RPAIN	NR_027683	17	Non-coding	chr17:5419640 plus strand	1887202
RPAIN	NR_027682	17	Non-coding	chr17:5419640 plus strand	1887202
RPAIN	NR_027679	17	Non-coding	chr17:5419640 plus strand	1887202
RPL29P2	NR_002778	17	Non-coding	chr17:7754319 plus strand	1887203
RUNDC3A-AS1	NR_110802	17	Non-coding	chr17:44308431 minus strand	1887204
SAP30BP	NR_126036	17	Non-coding	chr17:75667115 plus strand	1887205
SAP30BP	NR_126037	17	Non-coding	chr17:75667115 plus strand	1887205

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SCARF1	NR_028075	17	Non-coding	chr17:1645789 minus strand	1887206
SCARF1	NR_102409	17	Non-coding	chr17:1645789 minus strand	1887206
SCARNA16	NR_003013	17	Non-coding	chr17:77089306 plus strand	1887207
SCARNA20	NR_002999	17	Non-coding	chr17:60231645 minus strand	1887208
SCARNA21	NR_003000	17	Non-coding	chr17:7906122 plus strand	1887209
SDF2	NR_045585	17	Non-coding	chr17:28662189 minus strand	1887210
SENP3-EIF4A1	NR_037926	17	Non-coding	chr17:7561991 plus strand	1887211
SEPT4	NR_104196	17	Non-coding	chr17:58529467 minus strand	1887212
SEPT4	NR_037155	17	Non-coding	chr17:58529467 minus strand	1887212
SEPT4	NR_104197	17	Non-coding	chr17:58532084 minus strand	1887213
SEPT4-AS1	NR_110810	17	Non-coding	chr17:58519836 plus strand	1887214
SH3GL1P1	NR_033412	17	Non-coding	chr17:32040335 plus strand	1887215
SH3GL1P2	NR_033420	17	Non-coding	chr17:30624317 plus strand	1887216
SLC13A2	NR_027384	17	Non-coding	chr17:28473645 plus strand	1887217
SMCR5	NR_024007	17	Non-coding	chr17:17779529 minus strand	1887218
SMIM5	NR_028439	17	Non-coding	chr17:75636594 plus strand	1887219
SNHG16	NR_038111	17	Non-coding	chr17:76557763 plus strand	1887220
SNHG16	NR_038109	17	Non-coding	chr17:76557763 plus strand	1887220
SNHG16	NR_038110	17	Non-coding	chr17:76557763 plus strand	1887220
SNHG16	NR_038108	17	Non-coding	chr17:76557763 plus strand	1887220
SNHG20	NR_027058	17	Non-coding	chr17:77088642 plus strand	1887221
SNORA21	NR_002576	17	Non-coding	chr17:38852995 minus strand	1887222
SNORA38B	NR_003706	17	Non-coding	chr17:67740669 plus strand	1887223
SNORA48	NR_002918	17	Non-coding	chr17:7574712 plus strand	1887224
SNORA59A	NR_003025	17	Non-coding	chr17:19557559 plus strand	1887225
SNORA59B	NR_003022	17	Non-coding	chr17:19557559 plus strand	1887226
SNORA67	NR_002912	17	Non-coding	chr17:7577954 plus strand	1887227

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SNORA76C	NR_002995	17	Non-coding	chr17:64146338 plus strand	1887228
SNORD10	NR_002604	17	Non-coding	chr17:7576810 plus strand	1887229
SNORD104	NR_004380	17	Non-coding	chr17:64146077 plus strand	1887230
SNORD118	NR_033294	17	Non-coding	chr17:8173588 minus strand	1887231
SNORD124	NR_102369	17	Non-coding	chr17:40027645 minus strand	1887232
SNORD1A	NR_004395	17	Non-coding	chr17:76561632 plus strand	1887233
SNORD1B	NR_004396	17	Non-coding	chr17:76561107 plus strand	1887234
SNORD1C	NR_004397	17	Non-coding	chr17:76558791 plus strand	1887235
SNORD3A	NR_006880	17	Non-coding	chr17:19188015 plus strand	1887236
SNORD3B-1	NR_003271	17	Non-coding	chr17:19061911 plus strand	1887237
SNORD3B-1	NR_003271	17	Non-coding	chr17:19064136 minus strand	1887238
SNORD3B-2	NR_003924	17	Non-coding	chr17:19061911 plus strand	1887239
SNORD3B-2	NR_003924	17	Non-coding	chr17:19064136 minus strand	1887240
SNORD3C	NR_006881	17	Non-coding	chr17:19190245 minus strand	1887241
SNORD3D	NR_006882	17	Non-coding	chr17:19112636 minus strand	1887242
SNORD42A	NR_000014	17	Non-coding	chr17:28723428 plus strand	1887243
SNORD42B	NR_000013	17	Non-coding	chr17:28720549 plus strand	1887244
SNORD49A	NR_002744	17	Non-coding	chr17:16440035 plus strand	1887245
SNORD49B	NR_003043	17	Non-coding	chr17:16439508 plus strand	1887246
SNORD4A	NR_000010	17	Non-coding	chr17:28722581 plus strand	1887247
SNORD4B	NR_000009	17	Non-coding	chr17:28723680 plus strand	1887248
SNORD65	NR_003054	17	Non-coding	chr17:16441225 plus strand	1887249
SNORD7	NR_003037	17	Non-coding	chr17:35573656 plus strand	1887250
SNORD91A	NR_003072	17	Non-coding	chr17:2330370 minus strand	1887251
SNORD91B	NR_003073	17	Non-coding	chr17:2329210 minus strand	1887252
SOX9-AS1	NR_103738	17	Non-coding	chr17:72116016 minus strand	1887253
SOX9-AS1	NR_103737	17	Non-coding	chr17:72120793 minus strand	1887254

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SP2-AS1	NR_103857	17	Non-coding	chr17:47941404 minus strand	1887255
SP2-AS1	NR_103856	17	Non-coding	chr17:47941404 minus strand	1887255
SPAG5-AS1	NR_040012	17	Non-coding	chr17:28599132 plus strand	1887256
SRP68	NR_048541	17	Non-coding	chr17:76072526 minus strand	1887257
SRSF1	NR_034041	17	Non-coding	chr17:58007346 minus strand	1887258
SRSF2	NR_036608	17	Non-coding	chr17:76737411 minus strand	1887259
ST6GALNAC1	NR_110309	17	Non-coding	chr17:76643838 minus strand	1887260
STX8	NR_033656	17	Non-coding	chr17:9575958 minus strand	1887261
SUPT4H1	NR_073470	17	Non-coding	chr17:58352238 minus strand	1887262
SUZ12P1	NR_024187	17	Non-coding	chr17:30709607 plus strand	1887263
TBC1D3P1-DHX40P1	NR_002924	17	Non-coding	chr17:60018975 minus strand	1887264
TBC1D3P2	NR_027486	17	Non-coding	chr17:62275655 minus strand	1887265
TBC1D3P5	NR_033892	17	Non-coding	chr17:27418004 plus strand	1887266
TBX2-AS1	NR_125749	17	Non-coding	chr17:61399606 minus strand	1887267
TBX2-AS1	NR_125750	17	Non-coding	chr17:61399606 minus strand	1887267
TBX2-AS1	NR_125751	17	Non-coding	chr17:61399606 minus strand	1887267
TCAM1P	NR_002947	17	Non-coding	chr17:63857015 plus strand	1887268
TEN1-CDK3	NR_037709	17	Non-coding	chr17:75979216 plus strand	1887269
TMEM11	NR_024547	17	Non-coding	chr17:21214595 minus strand	1887270
TMEM220-AS1	NR_073457	17	Non-coding	chr17:10729776 plus strand	1887271
TMEM220-AS1	NR_073458	17	Non-coding	chr17:10729776 plus strand	1887271
TMEM220-AS1	NR_073456	17	Non-coding	chr17:10729776 plus strand	1887271
TMEM220-AS1	NR_073455	17	Non-coding	chr17:10729776 plus strand	1887271
TMEM256-PLSCR3	NR_037719	17	Non-coding	chr17:7404131 minus strand	1887272
TMEM92-AS1	NR_125805	17	Non-coding	chr17:50287855 minus strand	1887273
TNFSF12	NR_037146	17	Non-coding	chr17:7549057 plus strand	1887274
TNFSF13	NR_073490	17	Non-coding	chr17:7558291 plus strand	1887275

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TNRC6C-AS1	NR_040071	17	Non-coding	chr17:78111799 minus strand	1887276
TOB1-AS1	NR_038458	17	Non-coding	chr17:50866678 plus strand	1887277
TRAPPC1	NR_030684	17	Non-coding	chr17:7931949 minus strand	1887278
TRAPPC1	NR_030697	17	Non-coding	chr17:7931999 minus strand	1887279
TSPAN10	NR_110866	17	Non-coding	chr17:81642304 plus strand	1887280
TTC25	NR_110662	17	Non-coding	chr17:41930622 plus strand	1887281
TVP23C-CDRT4	NR_037924	17	Non-coding	chr17:15563631 minus strand	1887282
UBTF	NR_045058	17	Non-coding	chr17:44221626 minus strand	1887283
UNK	NR_038131	17	Non-coding	chr17:75784838 plus strand	1887284
USP32P1	NR_003190	17	Non-coding	chr17:16786891 plus strand	1887285
USP32P2	NR_003554	17	Non-coding	chr17:18521252 minus strand	1887286
WFDC21P	NR_030732	17	Non-coding	chr17:60088467 minus strand	1887287
XAF1	NR_046397	17	Non-coding	chr17:6755836 plus strand	1887288
XAF1	NR_046396	17	Non-coding	chr17:6755836 plus strand	1887288
XAF1	NR_046398	17	Non-coding	chr17:6755836 plus strand	1887288
XYLT2	NR_110010	17	Non-coding	chr17:50346031 plus strand	1887289
YWHAE	NR_024058	17	Non-coding	chr17:1400262 minus strand	1887290
YWHAEP7	NR_024178	17	Non-coding	chr17:37884743 minus strand	1887291
ZNHIT3	NR_104010	17	Non-coding	chr17:36486626 plus strand	1887292
ZNHIT3	NR_104011	17	Non-coding	chr17:36486626 plus strand	1887292
ZNHIT3	NR_104009	17	Non-coding	chr17:36486626 plus strand	1887292
ANKRD20A5P	NR_040113	18	Non-coding	chr18:14179096 plus strand	1887293
AQP4-AS1	NR_026908	18	Non-coding	chr18:26865307 plus strand	1887294
C18orf54	NR_110234	18	Non-coding	chr18:54357916 plus strand	1887295
C18orf61	NR_049896	18	Non-coding	chr18:12200778 plus strand	1887296
C18orf8	NR_075075	18	Non-coding	chr18:23503469 plus strand	1887297
C18orf8	NR_075076	18	Non-coding	chr18:23503469 plus strand	1887297

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CABLES1	NR_023359	18	Non-coding	chr18:23134563 plus strand	1887298
CBX3P2	NR_033754	18	Non-coding	chr18:2655395 minus strand	1887299
CDH19	NR_073130	18	Non-coding	chr18:66604138 minus strand	1887300
CEP76	NR_073537	18	Non-coding	chr18:12702777 minus strand	1887301
CIDEA	NR_036468	18	Non-coding	chr18:12254360 plus strand	1887302
CXADRP3	NR_024076	18	Non-coding	chr18:14498706 minus strand	1887303
CYP4F35P	NR_026756	18	Non-coding	chr18:14337422 plus strand	1887304
DLGAP1-AS1	NR_024101	18	Non-coding	chr18:3594113 plus strand	1887305
DLGAP1-AS2	NR_119377	18	Non-coding	chr18:3603736 plus strand	1887306
DLGAP1-AS3	NR_038895	18	Non-coding	chr18:3878179 plus strand	1887307
DLGAP1-AS4	NR_102696	18	Non-coding	chr18:3962352 plus strand	1887308
DLGAP1-AS5	NR_036489	18	Non-coding	chr18:4264601 plus strand	1887309
DSCAS	NR_110785	18	Non-coding	chr18:31101587 plus strand	1887310
DSG1-AS1	NR_110789	18	Non-coding	chr18:31353936 minus strand	1887311
DSG1-AS1	NR_110788	18	Non-coding	chr18:31426988 minus strand	1887312
DSG2-AS1	NR_045216	18	Non-coding	chr18:31556911 minus strand	1887313
ELP2	NR_040110	18	Non-coding	chr18:36129873 plus strand	1887314
GACAT2	NR_120598	18	Non-coding	chr18:8707621 minus strand	1887315
GATA6-AS1	NR_102763	18	Non-coding	chr18:22168968 minus strand	1887316
HAUS1	NR_026978	18	Non-coding	chr18:46104331 plus strand	1887317
KC6	NR_002838	18	Non-coding	chr18:41520597 minus strand	1887318
L3MBTL4-AS1	NR_110765	18	Non-coding	chr18:6256743 plus strand	1887319
LAMA3	NR_130106	18	Non-coding	chr18:23689442 plus strand	1887320
LDLRAD4-AS1	NR_040031	18	Non-coding	chr18:13427534 minus strand	1887321
LINC00305	NR_027245	18	Non-coding	chr18:64149026 minus strand	1887322
LINC00470	NR_023926	18	Non-coding	chr18:1359629 minus strand	1887323
LINC00470	NR_023925	18	Non-coding	chr18:1359629 minus strand	1887323

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LINC00470	NR_023927	18	Non-coding	chr18:1359629 minus strand	1887323
LINC00470	NR_110327	18	Non-coding	chr18:1359629 minus strand	1887323
LINC00526	NR_026849	18	Non-coding	chr18:5238029 minus strand	1887324
LINC00667	NR_015389	18	Non-coding	chr18:5238099 plus strand	1887325
LINC00668	NR_034100	18	Non-coding	chr18:6929869 minus strand	1887326
LINC00669	NR_024391	18	Non-coding	chr18:39751995 minus strand	1887327
LINC00683	NR_120419	18	Non-coding	chr18:76619776 plus strand	1887328
LINC00907	NR_046455	18	Non-coding	chr18:42186667 plus strand	1887329
LINC00907	NR_046454	18	Non-coding	chr18:42186667 plus strand	1887329
LINC00907	NR_046458	18	Non-coding	chr18:42186667 plus strand	1887329
LINC00907	NR_046457	18	Non-coding	chr18:42186667 plus strand	1887329
LINC00907	NR_046456	18	Non-coding	chr18:42186667 plus strand	1887329
LINC00907	NR_046174	18	Non-coding	chr18:42186667 plus strand	1887329
LINC00908	NR_015417	18	Non-coding	chr18:76528654 plus strand	1887330
LINC00909	NR_024484	18	Non-coding	chr18:74597835 minus strand	1887331
LINC01029	NR_104127	18	Non-coding	chr18:77993727 minus strand	1887332
LINC01254	NR_110775	18	Non-coding	chr18:10414370 minus strand	1887333
LINC01255	NR_110779	18	Non-coding	chr18:11488569 plus strand	1887334
LINC01255	NR_110778	18	Non-coding	chr18:11490047 plus strand	1887335
LINC01387	NR_120518	18	Non-coding	chr18:6511415 plus strand	1887336
LINC01443	NR_104164	18	Non-coding	chr18:14946266 plus strand	1887337
LINC01444	NR_110783	18	Non-coding	chr18:14970468 minus strand	1887338
LINC01477	NR_110791	18	Non-coding	chr18:40066285 plus strand	1887339
LINC01478	NR_110792	18	Non-coding	chr18:44531697 minus strand	1887340
LINC01538	NR_033983	18	Non-coding	chr18:64260055 minus strand	1887341
LINC01539	NR_040026	18	Non-coding	chr18:56137536 minus strand	1887342
LINC01539	NR_040025	18	Non-coding	chr18:56137536 minus strand	1887342

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LINC01540	NR_110428	18	Non-coding	chr18:3466249 plus strand	1887343
LINC01540	NR_110429	18	Non-coding	chr18:3466249 plus strand	1887343
LINC01541	NR_038326	18	Non-coding	chr18:71578956 minus strand	1887344
LINC01541	NR_038325	18	Non-coding	chr18:71578956 minus strand	1887344
LINC01543	NR_110762	18	Non-coding	chr18:26422994 plus strand	1887345
LINC01544	NR_103449	18	Non-coding	chr18:61748175 plus strand	1887346
LINC-ROR	NR_048536	18	Non-coding	chr18:57072119 minus strand	1887347
LOC100131655	NR_040024	18	Non-coding	chr18:76822295 minus strand	1887348
LOC100192426	NR_024419	18	Non-coding	chr18:8367034 minus strand	1887349
LOC100287225	NR_040074	18	Non-coding	chr18:51392041 plus strand	1887350
LOC100287225	NR_040075	18	Non-coding	chr18:51392041 plus strand	1887350
LOC100505817	NR_038340	18	Non-coding	chr18:73324940 plus strand	1887351
LOC100996324	NR_110763	18	Non-coding	chr18:12749422 minus strand	1887352
LOC101060542	NR_110764	18	Non-coding	chr18:70384591 minus strand	1887353
LOC101927188	NR_126040	18	Non-coding	chr18:6954676 plus strand	1887354
LOC101927229	NR_110743	18	Non-coding	chr18:55124306 minus strand	1887355
LOC101927273	NR_110755	18	Non-coding	chr18:55920199 minus strand	1887356
LOC101927410	NR_110777	18	Non-coding	chr18:10661932 plus strand	1887357
LOC101927481	NR_126336	18	Non-coding	chr18:70335438 plus strand	1887358
LOC101927571	NR_110782	18	Non-coding	chr18:22786837 minus strand	1887359
LOC101927651	NR_110784	18	Non-coding	chr18:76639011 minus strand	1887360
LOC101928167	NR_110800	18	Non-coding	chr18:53581059 minus strand	1887361
LOC102723376	NR_110795	18	Non-coding	chr18:12074 plus strand	1887362
LOC102724651	NR_110798	18	Non-coding	chr18:53568446 plus strand	1887363
LOC102724913	NR_126324	18	Non-coding	chr18:71782226 minus strand	1887364
LOC284294	NR_033881	18	Non-coding	chr18:64104090 plus strand	1887365
LOC339298	NR_040034	18	Non-coding	chr18:76122997 plus strand	1887366

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LOC400655	NR_034133	18	Non-coding	chr18:73264498 minus strand	1887367
LOC400661	NR_122073	18	Non-coding	chr18:76690028 plus strand	1887368
LOC643542	NR_033921	18	Non-coding	chr18:67516545 plus strand	1887369
LOC644669	NR_027417	18	Non-coding	chr18:15325919 minus strand	1887370
LOC727896	NR_026659	18	Non-coding	chr18:2946623 minus strand	1887371
LOC729950	NR_040033	18	Non-coding	chr18:24628181 plus strand	1887372
MAPRE2	NR_046177	18	Non-coding	chr18:35041649 plus strand	1887373
MIR1-2	NR_029662	18	Non-coding	chr18:21829088 minus strand	1887374
MIR122	NR_029667	18	Non-coding	chr18:58451073 plus strand	1887375
MIR133A1	NR_029675	18	Non-coding	chr18:21825785 minus strand	1887376
MIR133A1HG	NR_110369	18	Non-coding	chr18:21831406 minus strand	1887377
MIR1539	NR_031720	18	Non-coding	chr18:49487372 plus strand	1887378
MIR187	NR_029616	18	Non-coding	chr18:35904926 minus strand	1887379
MIR302F	NR_031684	18	Non-coding	chr18:30298909 plus strand	1887380
MIR3156-2	NR_036153	18	Non-coding	chr18:14830165 plus strand	1887381
MIR320C1	NR_031565	18	Non-coding	chr18:21683509 plus strand	1887382
MIR320C2	NR_031724	18	Non-coding	chr18:24321685 plus strand	1887383
MIR3591	NR_039899	18	Non-coding	chr18:58451152 minus strand	1887384
MIR3929	NR_037497	18	Non-coding	chr18:35934142 minus strand	1887385
MIR3975	NR_039771	18	Non-coding	chr18:35591736 plus strand	1887386
MIR3976	NR_039772	18	Non-coding	chr18:5840694 plus strand	1887387
MIR3976HG	NR_038839	18	Non-coding	chr18:5748818 plus strand	1887388
MIR4317	NR_036205	18	Non-coding	chr18:6374425 minus strand	1887389
MIR4318	NR_036202	18	Non-coding	chr18:37657134 plus strand	1887390
MIR4319	NR_036203	18	Non-coding	chr18:44970166 minus strand	1887391
MIR4320	NR_036204	18	Non-coding	chr18:50126563 minus strand	1887392
MIR4526	NR_039752	18	Non-coding	chr18:13611113 plus strand	1887393

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MIR4527	NR_039753	18	Non-coding	chr18:47380495 plus strand	1887394
MIR4529	NR_039754	18	Non-coding	chr18:55479220 plus strand	1887395
MIR4741	NR_039895	18	Non-coding	chr18:22933348 plus strand	1887396
MIR4743	NR_039897	18	Non-coding	chr18:48670599 plus strand	1887397
MIR4744	NR_039898	18	Non-coding	chr18:49049768 minus strand	1887398
MIR5011	NR_049809	18	Non-coding	chr18:67081583 plus strand	1887399
MIR5190	NR_049822	18	Non-coding	chr18:13459946 plus strand	1887400
MIR548AV	NR_049858	18	Non-coding	chr18:72853382 minus strand	1887401
MIR5583-1	NR_049847	18	Non-coding	chr18:39676720 plus strand	1887402
MIR5583-2	NR_049848	18	Non-coding	chr18:39676777 minus strand	1887403
MIR6718	NR_106776	18	Non-coding	chr18:3885352 plus strand	1887404
MIR6788	NR_106846	18	Non-coding	chr18:10759649 minus strand	1887405
MIR7153	NR_106975	18	Non-coding	chr18:11654941 minus strand	1887406
MIR8057	NR_107024	18	Non-coding	chr18:26591535 minus strand	1887407
MIR8078	NR_107045	18	Non-coding	chr18:112339 minus strand	1887408
MIR924	NR_030628	18	Non-coding	chr18:39622175 minus strand	1887409
MPPE1	NR_040242	18	Non-coding	chr18:11908797 minus strand	1887410
MPPE1	NR_040243	18	Non-coding	chr18:11908797 minus strand	1887410
MPPE1	NR_040241	18	Non-coding	chr18:11908797 minus strand	1887410
NDUFV2-AS1	NR_110771	18	Non-coding	chr18:9136720 minus strand	1887411
NDUFV2-AS1	NR_110772	18	Non-coding	chr18:9136720 minus strand	1887411
OACYLP	NR_024021	18	Non-coding	chr18:59035738 plus strand	1887412
PARD6G-AS1	NR_028339	18	Non-coding	chr18:80147923 plus strand	1887413
PARD6G-AS1	NR_028340	18	Non-coding	chr18:80147923 plus strand	1887413
PCAT18	NR_024259	18	Non-coding	chr18:26703638 minus strand	1887414
PPP4R1	NR_052003	18	Non-coding	chr18:9614607 minus strand	1887415
PPP4R1-AS1	NR_110773	18	Non-coding	chr18:9614806 plus strand	1887416

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PPP4R1-AS1	NR_110774	18	Non-coding	chr18:9615263 plus strand	1887417
RBFADN	NR_103445	18	Non-coding	chr18:80067255 plus strand	1887418
RNF165	NR_046357	18	Non-coding	chr18:46334223 plus strand	1887419
RNU6-39P	NR_046495	18	Non-coding	chr18:68858933 plus strand	1887420
ROCK1P1	NR_033770	18	Non-coding	chr18:109064 plus strand	1887421
SCARNA17	NR_003003	18	Non-coding	chr18:49814022 plus strand	1887422
SLC14A2-AS1	NR_110899	18	Non-coding	chr18:45507036 minus strand	1887423
SNHG22	NR_117096	18	Non-coding	chr18:49814022 plus strand	1887424
SNORA37	NR_002970	18	Non-coding	chr18:54222412 minus strand	1887425
SNORD58A	NR_002571	18	Non-coding	chr18:49491347 minus strand	1887426
SNORD58B	NR_002572	18	Non-coding	chr18:49491729 minus strand	1887427
SNORD58C	NR_003701	18	Non-coding	chr18:49489324 minus strand	1887428
TAF4B	NR_121653	18	Non-coding	chr18:26226882 plus strand	1887429
TTC39C-AS1	NR_110796	18	Non-coding	chr18:24015460 minus strand	1887430
TXNL1	NR_024546	18	Non-coding	chr18:56638689 minus strand	1887431
WBP11P1	NR_003558	18	Non-coding	chr18:32511662 plus strand	1887432
ZCCHC2	NR_126534	18	Non-coding	chr18:62523424 plus strand	1887433
ZNF271P	NR_024565	18	Non-coding	chr18:35290271 plus strand	1887434
ZNF271P	NR_024566	18	Non-coding	chr18:35290271 plus strand	1887434
ZNF519	NR_033354	18	Non-coding	chr18:14132490 minus strand	1887435
A1BG-AS1	NR_015380	19	Non-coding	chr19:58351969 plus strand	1887436
AKAP8L	NR_111971	19	Non-coding	chr19:15419121 minus strand	1887437
ANGPTL4	NR_104213	19	Non-coding	chr19:8364126 plus strand	1887438
ANKLE1	NR_103530	19	Non-coding	chr19:17281644 plus strand	1887439
APOC1P1	NR_028414	19	Non-coding	chr19:44926802 plus strand	1887440
APOC1P1	NR_028412	19	Non-coding	chr19:44926802 plus strand	1887440
APOC1P1	NR_028413	19	Non-coding	chr19:44926802 plus strand	1887440

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APOC4-APOC2	NR_037932	19	Non-coding	chr19:44942237 plus strand	1887441
ATG4D	NR_104024	19	Non-coding	chr19:10543893 plus strand	1887442
ATG4D	NR_104025	19	Non-coding	chr19:10543893 plus strand	1887442
ATP5SL	NR_030765	19	Non-coding	chr19:41439938 minus strand	1887443
ATP8B3	NR_047593	19	Non-coding	chr19:1812276 minus strand	1887444
BAX	NR_027882	19	Non-coding	chr19:48954859 plus strand	1887445
BCL2L12	NR_104205	19	Non-coding	chr19:49665141 plus strand	1887446
BCL2L12	NR_104204	19	Non-coding	chr19:49665141 plus strand	1887446
BCL2L12	NR_104203	19	Non-coding	chr19:49665141 plus strand	1887446
BCL2L12	NR_104200	19	Non-coding	chr19:49665141 plus strand	1887446
BCL2L12	NR_104201	19	Non-coding	chr19:49665141 plus strand	1887446
BCL2L12	NR_104202	19	Non-coding	chr19:49665141 plus strand	1887446
C19orf47	NR_046202	19	Non-coding	chr19:40348409 minus strand	1887447
C19orf84	NR_126530	19	Non-coding	chr19:51390574 minus strand	1887448
C3P1	NR_027300	19	Non-coding	chr19:10041355 plus strand	1887449
CACNG6	NR_102308	19	Non-coding	chr19:53991148 plus strand	1887450
CACTIN-AS1	NR_038865	19	Non-coding	chr19:3607246 plus strand	1887451
CARD8	NR_033679	19	Non-coding	chr19:48241063 minus strand	1887452
CARD8	NR_033680	19	Non-coding	chr19:48249633 minus strand	1887453
CARD8	NR_033678	19	Non-coding	chr19:48249633 minus strand	1887453
CARD8-AS1	NR_040599	19	Non-coding	chr19:48255674 plus strand	1887454
CD209	NR_026692	19	Non-coding	chr19:7747578 minus strand	1887455
CEACAM22P	NR_027754	19	Non-coding	chr19:44556917 minus strand	1887456
CEACAM3	NR_102333	19	Non-coding	chr19:41796589 plus strand	1887457
CEBPA-AS1	NR_026887	19	Non-coding	chr19:33302856 plus strand	1887458
CELF5	NR_033342	19	Non-coding	chr19:3225484 plus strand	1887459
CENPBD1P1	NR_026052	19	Non-coding	chr19:58575398 plus strand	1887460

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CIRBP	NR_023312	19	Non-coding	chr19:1269267 plus strand	1887461
CIRBP	NR_023313	19	Non-coding	chr19:1269267 plus strand	1887461
CIRBP-AS1	NR_027271	19	Non-coding	chr19:1270260 minus strand	1887462
CLASRP	NR_103529	19	Non-coding	chr19:45039039 plus strand	1887463
CLEC17A	NR_109785	19	Non-coding	chr19:14583083 plus strand	1887464
CLEC17A	NR_109784	19	Non-coding	chr19:14583083 plus strand	1887464
CLEC4GP1	NR_002931	19	Non-coding	chr19:7787483 plus strand	1887465
CLEC4M	NR_026708	19	Non-coding	chr19:7763148 plus strand	1887466
CLEC4M	NR_026709	19	Non-coding	chr19:7763148 plus strand	1887466
CLEC4M	NR_026707	19	Non-coding	chr19:7763148 plus strand	1887466
CPT1C	NR_108072	19	Non-coding	chr19:49691107 plus strand	1887467
CSNK1G2-AS1	NR_033400	19	Non-coding	chr19:1954549 minus strand	1887468
CYP2B7P	NR_001278	19	Non-coding	chr19:40924264 plus strand	1887469
CYP2G1P	NR_040249	19	Non-coding	chr19:40890825 plus strand	1887470
CYP4F12	NR_117085	19	Non-coding	chr19:15673017 plus strand	1887471
CYP4F24P	NR_033864	19	Non-coding	chr19:15779988 minus strand	1887472
DACT3-AS1	NR_040042	19	Non-coding	chr19:46660363 plus strand	1887473
DACT3-AS1	NR_040041	19	Non-coding	chr19:46661477 plus strand	1887474
DDX39A	NR_046366	19	Non-coding	chr19:14419383 minus strand	1887475
DDX49	NR_033677	19	Non-coding	chr19:18919674 plus strand	1887476
DEDD2	NR_073052	19	Non-coding	chr19:42217792 minus strand	1887477
DEDD2	NR_073051	19	Non-coding	chr19:42217792 minus strand	1887477
DEDD2	NR_073050	19	Non-coding	chr19:42217792 minus strand	1887477
DEDD2	NR_073046	19	Non-coding	chr19:42217792 minus strand	1887477
DEDD2	NR_073049	19	Non-coding	chr19:42217792 minus strand	1887477
DEDD2	NR_073048	19	Non-coding	chr19:42217792 minus strand	1887477
DEDD2	NR_073047	19	Non-coding	chr19:42220152 minus strand	1887478

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DHPS	NR_038192	19	Non-coding	chr19:12681887 minus strand	1887479
DKFZp434J0226	NR_027003	19	Non-coding	chr19:46210241 plus strand	1887480
DMKN	NR_033746	19	Non-coding	chr19:35510510 minus strand	1887481
EML2	NR_034098	19	Non-coding	chr19:45639417 minus strand	1887482
EMR4P	NR_024075	19	Non-coding	chr19:6990846 minus strand	1887483
EPOR	NR_033663	19	Non-coding	chr19:11384342 minus strand	1887484
EPS15L1	NR_047666	19	Non-coding	chr19:16472012 minus strand	1887485
EPS15L1	NR_047665	19	Non-coding	chr19:16472012 minus strand	1887485
FAM138A	NR_026818	19	Non-coding	chr19:77690 minus strand	1887486
FAM138C	NR_026822	19	Non-coding	chr19:77690 minus strand	1887487
FAM138F	NR_026820	19	Non-coding	chr19:77690 minus strand	1887488
FAM90A27P	NR_046365	19	Non-coding	chr19:53282289 plus strand	1887489
FBXO17	NR_104026	19	Non-coding	chr19:38975813 minus strand	1887490
FKBP1AP1	NR_024162	19	Non-coding	chr19:57827462 minus strand	1887491
FLJ25758	NR_024372	19	Non-coding	chr19:7006415 minus strand	1887492
FLJ26850	NR_027257	19	Non-coding	chr19:50050679 plus strand	1887493
FUZ	NR_033269	19	Non-coding	chr19:49813310 minus strand	1887494
FXYD5	NR_028406	19	Non-coding	chr19:35154768 plus strand	1887495
GCDH	NR_102317	19	Non-coding	chr19:12891128 plus strand	1887496
GCDH	NR_102316	19	Non-coding	chr19:12891128 plus strand	1887496
GOLGA2P9	NR_033899	19	Non-coding	chr19:22596256 plus strand	1887497
GYS1	NR_027763	19	Non-coding	chr19:48993353 minus strand	1887498
HAVCR1P1	NR_003603	19	Non-coding	chr19:24163447 minus strand	1887499
HNRNPA1P10	NR_002944	19	Non-coding	chr19:11667089 minus strand	1887500
HOMER3	NR_027297	19	Non-coding	chr19:18939635 minus strand	1887501
HPN-AS1	NR_024561	19	Non-coding	chr19:35106271 minus strand	1887502
HPN-AS1	NR_024562	19	Non-coding	chr19:35106304 minus strand	1887503

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HSH2D	NR_111904	19	Non-coding	chr19:16134027 plus strand	1887504
HSH2D	NR_111903	19	Non-coding	chr19:16134027 plus strand	1887504
IFNL4	NR_074079	19	Non-coding	chr19:39248856 minus strand	1887505
IL4I1	NR_047577	19	Non-coding	chr19:49929539 minus strand	1887506
ILF3-AS1	NR_024333	19	Non-coding	chr19:10653872 minus strand	1887507
INAFM1	NR_037675	19	Non-coding	chr19:47274401 plus strand	1887508
IPO5P1	NR_103742	19	Non-coding	chr19:23274251 minus strand	1887509
IPO5P1	NR_103741	19	Non-coding	chr19:23274251 minus strand	1887509
IRF3	NR_045568	19	Non-coding	chr19:49665875 minus strand	1887510
ISYNA1	NR_045574	19	Non-coding	chr19:18438162 minus strand	1887511
ISYNA1	NR_045573	19	Non-coding	chr19:18438301 minus strand	1887512
KCNC3	NR_110912	19	Non-coding	chr19:50333515 minus strand	1887513
KIR3DX1	NR_026716	19	Non-coding	chr19:54532691 plus strand	1887514
KIR3DX1	NR_104097	19	Non-coding	chr19:54532691 plus strand	1887514
KIR3DX1	NR_104096	19	Non-coding	chr19:54532691 plus strand	1887514
KIR3DX1	NR_104095	19	Non-coding	chr19:54532691 plus strand	1887514
KLK15	NR_102274	19	Non-coding	chr19:50831523 minus strand	1887515
KLK2	NR_045762	19	Non-coding	chr19:50873432 plus strand	1887516
KLK2	NR_045763	19	Non-coding	chr19:50873432 plus strand	1887516
KLK4	NR_126566	19	Non-coding	chr19:50910738 minus strand	1887517
KLK8	NR_104008	19	Non-coding	chr19:51001702 minus strand	1887518
KLKP1	NR_002948	19	Non-coding	chr19:50896398 minus strand	1887519
KPTN	NR_111923	19	Non-coding	chr19:47484264 minus strand	1887520
LAIR1	NR_110280	19	Non-coding	chr19:54365114 minus strand	1887521
LAIR1	NR_110279	19	Non-coding	chr19:54365114 minus strand	1887521
LENG8-AS1	NR_126418	19	Non-coding	chr19:54449038 minus strand	1887522
LGALS17A	NR_034156	19	Non-coding	chr19:39679373 plus strand	1887523

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LIG1	NR_110296	19	Non-coding	chr19:48170603 minus strand	1887524
LILRA1	NR_103503	19	Non-coding	chr19:54593575 plus strand	1887525
LILRA1	NR_103502	19	Non-coding	chr19:54593575 plus strand	1887525
LILRA1	NR_103501	19	Non-coding	chr19:54593575 plus strand	1887525
LILRA6	NR_104098	19	Non-coding	chr19:54242768 minus strand	1887526
LILRB1	NR_103518	19	Non-coding	chr19:54630516 plus strand	1887527
LILRB2	NR_103521	19	Non-coding	chr19:54280628 minus strand	1887528
LILRP2	NR_003061	19	Non-coding	chr19:54707915 plus strand	1887529
LINC00661	NR_026828	19	Non-coding	chr19:16015633 plus strand	1887530
LINC00662	NR_027301	19	Non-coding	chr19:27793940 minus strand	1887531
LINC00663	NR_026956	19	Non-coding	chr19:19776413 minus strand	1887532
LINC00664	NR_037194	19	Non-coding	chr19:21483714 plus strand	1887533
LINC00665	NR_038279	19	Non-coding	chr19:36331718 minus strand	1887534
LINC00665	NR_038278	19	Non-coding	chr19:36331718 minus strand	1887534
LINC00904	NR_046222	19	Non-coding	chr19:34898943 minus strand	1887535
LINC00905	NR_024335	19	Non-coding	chr19:16033712 plus strand	1887536
LINC00905	NR_110321	19	Non-coding	chr19:16034119 plus strand	1887537
LINC00906	NR_027318	19	Non-coding	chr19:28965130 plus strand	1887538
LINC01002	NR_028324	19	Non-coding	chr19:202209 minus strand	1887539
LINC01224	NR_126448	19	Non-coding	chr19:23416074 minus strand	1887540
LINC01224	NR_126449	19	Non-coding	chr19:23416074 minus strand	1887540
LINC01233	NR_110663	19	Non-coding	chr19:22532625 plus strand	1887541
LINC01233	NR_110664	19	Non-coding	chr19:22532625 plus strand	1887541
LINC01480	NR_110724	19	Non-coding	chr19:41535497 plus strand	1887542
LINC01529	NR_104176	19	Non-coding	chr19:35797909 minus strand	1887543
LINC01530	NR_034159	19	Non-coding	chr19:51594380 minus strand	1887544
LINC01531	NR_040046	19	Non-coding	chr19:35405606 plus strand	1887545

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LINC01532	NR_040036	19	Non-coding	chr19:29002554 plus strand	1887546
LINC01533	NR_110673	19	Non-coding	chr19:32025861 plus strand	1887547
LINC01533	NR_110674	19	Non-coding	chr19:32025861 plus strand	1887547
LINC01533	NR_110675	19	Non-coding	chr19:32025861 plus strand	1887547
LINC01534	NR_110707	19	Non-coding	chr19:36687449 minus strand	1887548
LINC01534	NR_110708	19	Non-coding	chr19:36687449 minus strand	1887548
LINC01535	NR_110718	19	Non-coding	chr19:37251884 plus strand	1887549
LINC01535	NR_110719	19	Non-coding	chr19:37251884 plus strand	1887549
LINC01535	NR_110720	19	Non-coding	chr19:37251884 plus strand	1887549
LIPE-AS1	NR_073180	19	Non-coding	chr19:42397147 plus strand	1887550
LIPE-AS1	NR_073179	19	Non-coding	chr19:42423754 plus strand	1887551
LOC100128398	NR_036508	19	Non-coding	chr19:58002893 plus strand	1887552
LOC100128568	NR_046376	19	Non-coding	chr19:5978402 plus strand	1887553
LOC100128573	NR_024491	19	Non-coding	chr19:7473361 minus strand	1887554
LOC100129935	NR_026870	19	Non-coding	chr19:39638684 plus strand	1887555
LOC100134317	NR_029389	19	Non-coding	chr19:36311342 plus strand	1887556
LOC100288123	NR_034114	19	Non-coding	chr19:1822088 plus strand	1887557
LOC100289333	NR_104179	19	Non-coding	chr19:12195014 plus strand	1887558
LOC100289650	NR_036584	19	Non-coding	chr19:42821862 plus strand	1887559
LOC100379224	NR_033341	19	Non-coding	chr19:44113183 minus strand	1887560
LOC100420587	NR_110759	19	Non-coding	chr19:28727694 minus strand	1887561
LOC100505622	NR_038332	19	Non-coding	chr19:42132628 plus strand	1887562
LOC100505715	NR_038334	19	Non-coding	chr19:43901803 minus strand	1887563
LOC100507373	NR_045214	19	Non-coding	chr19:14137151 plus strand	1887564
LOC100631378	NR_040015	19	Non-coding	chr19:37855196 minus strand	1887565
LOC100996349	NR_103470	19	Non-coding	chr19:22608015 plus strand	1887566
LOC100996351	NR_110670	19	Non-coding	chr19:3155175 minus strand	1887567

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LOC101059948	NR_073552	19	Non-coding	chr19:49019484 minus strand	1887568
LOC101927151	NR_110688	19	Non-coding	chr19:27793466 plus strand	1887569
LOC101927151	NR_110689	19	Non-coding	chr19:27793466 plus strand	1887569
LOC101927151	NR_110691	19	Non-coding	chr19:27793466 plus strand	1887569
LOC101927151	NR_110687	19	Non-coding	chr19:27793894 plus strand	1887570
LOC101927151	NR_110690	19	Non-coding	chr19:27793894 plus strand	1887570
LOC101927411	NR_110694	19	Non-coding	chr19:32105916 minus strand	1887571
LOC101928063	NR_110727	19	Non-coding	chr19:44002870 minus strand	1887572
LOC101928295	NR_110729	19	Non-coding	chr19:49388081 minus strand	1887573
LOC101928517	NR_110732	19	Non-coding	chr19:51181966 minus strand	1887574
LOC101928804	NR_110738	19	Non-coding	chr19:54756329 minus strand	1887575
LOC101928804	NR_110738	19	Non-coding	chr19:54771064 minus strand	1887576
LOC101928804	NR_110737	19	Non-coding	chr19:54771064 minus strand	1887576
LOC101928804	NR_110738	19	Non-coding	chr19:54835292 minus strand	1887577
LOC101928804	NR_110737	19	Non-coding	chr19:54835292 minus strand	1887577
LOC101928844	NR_110740	19	Non-coding	chr19:5847466 plus strand	1887578
LOC101928886	NR_110741	19	Non-coding	chr19:56066683 plus strand	1887579
LOC101929124	NR_110427	19	Non-coding	chr19:22527949 minus strand	1887580
LOC101929144	NR_110745	19	Non-coding	chr19:23061265 minus strand	1887581
LOC101929164	NR_110746	19	Non-coding	chr19:23023697 minus strand	1887582
LOC101930071	NR_126041	19	Non-coding	chr19:42397127 plus strand	1887583
LOC102723617	NR_110750	19	Non-coding	chr19:35597894 plus strand	1887584
LOC102724958	NR_110760	19	Non-coding	chr19:28968467 plus strand	1887585
LOC113230	NR_111941	19	Non-coding	chr19:14073008 plus strand	1887586
LOC284344	NR_033888	19	Non-coding	chr19:43248646 minus strand	1887587
LOC284379	NR_002938	19	Non-coding	chr19:53603497 minus strand	1887588
LOC284395	NR_040029	19	Non-coding	chr19:29525752 minus strand	1887589

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LOC284412	NR_029390	19	Non-coding	chr19:37269010 minus strand	1887590
LOC284454	NR_036515	19	Non-coding	chr19:13836289 minus strand	1887591
LOC400684	NR_046201	19	Non-coding	chr19:32405539 minus strand	1887592
LOC400685	NR_033982	19	Non-coding	chr19:34832869 minus strand	1887593
LOC400706	NR_125344	19	Non-coding	chr19:46077629 minus strand	1887594
LOC641367	NR_024523	19	Non-coding	chr19:21750744 plus strand	1887595
LOC644189	NR_033748	19	Non-coding	chr19:36421173 plus strand	1887596
LOC644554	NR_040013	19	Non-coding	chr19:37817410 plus strand	1887597
LOC728752	NR_036504	19	Non-coding	chr19:36489626 plus strand	1887598
LOC729966	NR_036575	19	Non-coding	chr19:18255419 minus strand	1887599
LONP1	NR_076392	19	Non-coding	chr19:5720165 minus strand	1887600
LYPLA2P2	NR_033250	19	Non-coding	chr19:7880232 minus strand	1887601
MEF2BNB-MEF2B	NR_027307	19	Non-coding	chr19:19192591 minus strand	1887602
MEF2BNB-MEF2B	NR_027308	19	Non-coding	chr19:19192591 minus strand	1887602
MGC45922	NR_038359	19	Non-coding	chr19:50817680 plus strand	1887603
MIA-RAB4B	NR_037775	19	Non-coding	chr19:40775536 plus strand	1887604
MIMT1	NR_024059	19	Non-coding	chr19:56840901 plus strand	1887605
MIR1181	NR_031592	19	Non-coding	chr19:10403538 minus strand	1887606
MIR1199	NR_106715	19	Non-coding	chr19:14073360 plus strand	1887607
MIR1227	NR_031596	19	Non-coding	chr19:2234149 minus strand	1887608
MIR1238	NR_031603	19	Non-coding	chr19:10552121 plus strand	1887609
MIR125A	NR_029693	19	Non-coding	chr19:51693253 plus strand	1887610
MIR1268A	NR_031672	19	Non-coding	chr19:3064714 minus strand	1887611
MIR1270	NR_036053	19	Non-coding	chr19:20399354 minus strand	1887612
MIR1283-1	NR_031573	19	Non-coding	chr19:53688480 plus strand	1887613
MIR1283-2	NR_031696	19	Non-coding	chr19:53758231 plus strand	1887614
MIR1302-10	NR_036267	19	Non-coding	chr19:71972 plus strand	1887615

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MIR1302-11	NR_036268	19	Non-coding	chr19:71972 plus strand	1887616
MIR1302-2	NR_036051	19	Non-coding	chr19:71972 plus strand	1887617
MIR1302-9	NR_036266	19	Non-coding	chr19:71972 plus strand	1887618
MIR1323	NR_031568	19	Non-coding	chr19:53671967 plus strand	1887619
MIR1470	NR_031716	19	Non-coding	chr19:15449547 plus strand	1887620
MIR150	NR_029703	19	Non-coding	chr19:49500868 minus strand	1887621
MIR181C	NR_029613	19	Non-coding	chr19:13874698 plus strand	1887622
MIR181D	NR_030179	19	Non-coding	chr19:13874874 plus strand	1887623
MIR1909	NR_031730	19	Non-coding	chr19:1816238 minus strand	1887624
MIR199A1	NR_029586	19	Non-coding	chr19:10817496 minus strand	1887625
MIR23A	NR_029495	19	Non-coding	chr19:13836659 minus strand	1887626
MIR24-2	NR_029497	19	Non-coding	chr19:13836359 minus strand	1887627
MIR27A	NR_029501	19	Non-coding	chr19:13836517 minus strand	1887628
MIR3187	NR_036154	19	Non-coding	chr19:813583 plus strand	1887629
MIR3188	NR_036155	19	Non-coding	chr19:18282076 plus strand	1887630
MIR3189	NR_036156	19	Non-coding	chr19:18386561 plus strand	1887631
MIR3190	NR_036158	19	Non-coding	chr19:47226941 plus strand	1887632
MIR3191	NR_036159	19	Non-coding	chr19:47227019 minus strand	1887633
MIR320E	NR_036157	19	Non-coding	chr19:46709345 minus strand	1887634
MIR330	NR_029886	19	Non-coding	chr19:45639087 minus strand	1887635
MIR371A	NR_029864	19	Non-coding	chr19:53787674 plus strand	1887636
MIR371B	NR_039909	19	Non-coding	chr19:53787742 minus strand	1887637
MIR372	NR_029865	19	Non-coding	chr19:53787889 plus strand	1887638
MIR373	NR_029866	19	Non-coding	chr19:53788704 plus strand	1887639
MIR3940	NR_037505	19	Non-coding	chr19:6416511 minus strand	1887640
MIR4321	NR_036207	19	Non-coding	chr19:2250638 plus strand	1887641
MIR4322	NR_036206	19	Non-coding	chr19:10230412 plus strand	1887642

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MIR4323	NR_036208	19	Non-coding	chr19:42133513 minus strand	1887643
MIR4324	NR_036209	19	Non-coding	chr19:49308868 minus strand	1887644
MIR4530	NR_039755	19	Non-coding	chr19:39409678 minus strand	1887645
MIR4531	NR_039756	19	Non-coding	chr19:44653732 minus strand	1887646
MIR4745	NR_039900	19	Non-coding	chr19:804939 plus strand	1887647
MIR4746	NR_039901	19	Non-coding	chr19:4445977 plus strand	1887648
MIR4747	NR_039902	19	Non-coding	chr19:4932686 plus strand	1887649
MIR4748	NR_039903	19	Non-coding	chr19:10780253 plus strand	1887650
MIR4749	NR_039904	19	Non-coding	chr19:49854590 plus strand	1887651
MIR4750	NR_039905	19	Non-coding	chr19:49888174 plus strand	1887652
MIR4751	NR_039906	19	Non-coding	chr19:49933063 plus strand	1887653
MIR4752	NR_039907	19	Non-coding	chr19:54282108 plus strand	1887654
MIR4754	NR_039910	19	Non-coding	chr19:58386858 minus strand	1887655
MIR498	NR_030182	19	Non-coding	chr19:53674196 plus strand	1887656
MIR4999	NR_049795	19	Non-coding	chr19:8389380 minus strand	1887657
MIR5088	NR_049811	19	Non-coding	chr19:49682116 plus strand	1887658
MIR512-1	NR_030180	19	Non-coding	chr19:53666678 plus strand	1887659
MIR512-1	NR_030180	19	Non-coding	chr19:53669162 plus strand	1887660
MIR512-2	NR_030181	19	Non-coding	chr19:53666672 plus strand	1887661
MIR512-2	NR_030181	19	Non-coding	chr19:53669156 plus strand	1887662
MIR515-1	NR_030184	19	Non-coding	chr19:53679002 plus strand	1887663
MIR515-1	NR_030184	19	Non-coding	chr19:53685008 plus strand	1887664
MIR515-2	NR_030187	19	Non-coding	chr19:53679002 plus strand	1887665
MIR515-2	NR_030187	19	Non-coding	chr19:53685008 plus strand	1887666
MIR516A1	NR_030220	19	Non-coding	chr19:53756740 plus strand	1887667
MIR516A2	NR_030221	19	Non-coding	chr19:53761132 plus strand	1887668
MIR516B1	NR_030212	19	Non-coding	chr19:53736844 plus strand	1887669

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MIR516B2	NR_030207	19	Non-coding	chr19:53725441 plus strand	1887670
MIR517A	NR_030201	19	Non-coding	chr19:53712267 plus strand	1887671
MIR517B	NR_030205	19	Non-coding	chr19:53721075 plus strand	1887672
MIR517C	NR_030214	19	Non-coding	chr19:53741312 plus strand	1887673
MIR518A1	NR_030210	19	Non-coding	chr19:53731005 plus strand	1887674
MIR518A2	NR_030213	19	Non-coding	chr19:53739332 plus strand	1887675
MIR518B	NR_030196	19	Non-coding	chr19:53702736 plus strand	1887676
MIR518C	NR_030199	19	Non-coding	chr19:53708734 plus strand	1887677
MIR518D	NR_030211	19	Non-coding	chr19:53734876 plus strand	1887678
MIR518E	NR_030209	19	Non-coding	chr19:53729837 plus strand	1887679
MIR518F	NR_030194	19	Non-coding	chr19:53700014 plus strand	1887680
MIR5196	NR_049828	19	Non-coding	chr19:35345512 plus strand	1887681
MIR519A1	NR_030218	19	Non-coding	chr19:53752396 plus strand	1887682
MIR519A2	NR_030222	19	Non-coding	chr19:53762343 plus strand	1887683
MIR519B	NR_030191	19	Non-coding	chr19:53695212 plus strand	1887684
MIR519C	NR_030188	19	Non-coding	chr19:53686468 plus strand	1887685
MIR519D	NR_030202	19	Non-coding	chr19:53713346 plus strand	1887686
MIR519E	NR_030185	19	Non-coding	chr19:53679939 plus strand	1887687
MIR520A	NR_030189	19	Non-coding	chr19:53690880 plus strand	1887688
MIR520B	NR_030195	19	Non-coding	chr19:53701226 plus strand	1887689
MIR520C	NR_030198	19	Non-coding	chr19:53707452 plus strand	1887690
MIR520D	NR_030204	19	Non-coding	chr19:53720095 plus strand	1887691
MIR520E	NR_030183	19	Non-coding	chr19:53675710 plus strand	1887692
MIR520F	NR_030186	19	Non-coding	chr19:53682158 plus strand	1887693
MIR520G	NR_030206	19	Non-coding	chr19:53722165 plus strand	1887694
MIR520H	NR_030215	19	Non-coding	chr19:53742511 plus strand	1887695
MIR521-1	NR_030216	19	Non-coding	chr19:53748635 plus strand	1887696

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MIR521-2	NR_030203	19	Non-coding	chr19:53716593 plus strand	1887697
MIR522	NR_030217	19	Non-coding	chr19:53751210 plus strand	1887698
MIR523	NR_030193	19	Non-coding	chr19:53698384 plus strand	1887699
MIR524	NR_030200	19	Non-coding	chr19:53711001 plus strand	1887700
MIR525	NR_030192	19	Non-coding	chr19:53697532 plus strand	1887701
MIR526A1	NR_030197	19	Non-coding	chr19:53706251 plus strand	1887702
MIR526A2	NR_030208	19	Non-coding	chr19:53726921 plus strand	1887703
MIR526B	NR_030190	19	Non-coding	chr19:53694392 plus strand	1887704
MIR527	NR_030219	19	Non-coding	chr19:53754017 plus strand	1887705
MIR5589	NR_049855	19	Non-coding	chr19:10038353 plus strand	1887706
MIR5684	NR_049864	19	Non-coding	chr19:12787127 plus strand	1887707
MIR5695	NR_049880	19	Non-coding	chr19:12920319 plus strand	1887708
MIR6088	NR_106736	19	Non-coding	chr19:45436653 plus strand	1887709
MIR637	NR_030367	19	Non-coding	chr19:3961512 minus strand	1887710
MIR638	NR_030368	19	Non-coding	chr19:10718403 plus strand	1887711
MIR639	NR_030369	19	Non-coding	chr19:14529542 plus strand	1887712
MIR640	NR_030370	19	Non-coding	chr19:19435062 plus strand	1887713
MIR641	NR_030371	19	Non-coding	chr19:40282641 minus strand	1887714
MIR642A	NR_030372	19	Non-coding	chr19:45674927 plus strand	1887715
MIR642B	NR_037512	19	Non-coding	chr19:45675008 minus strand	1887716
MIR643	NR_030373	19	Non-coding	chr19:52281796 plus strand	1887717
MIR6515	NR_106770	19	Non-coding	chr19:12940483 plus strand	1887718
MIR6719	NR_106777	19	Non-coding	chr19:39829802 minus strand	1887719
MIR6789	NR_106847	19	Non-coding	chr19:2235926 minus strand	1887720
MIR6790	NR_106848	19	Non-coding	chr19:6392983 minus strand	1887721
MIR6791	NR_106849	19	Non-coding	chr19:6736778 minus strand	1887722
MIR6792	NR_106850	19	Non-coding	chr19:7617438 plus strand	1887723

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MIR6793	NR_106851	19	Non-coding	chr19:10828972 plus strand	1887724
MIR6794	NR_106852	19	Non-coding	chr19:12852259 plus strand	1887725
MIR6795	NR_106853	19	Non-coding	chr19:15179350 minus strand	1887726
MIR6796	NR_106854	19	Non-coding	chr19:40369845 plus strand	1887727
MIR6797	NR_106855	19	Non-coding	chr19:41869626 plus strand	1887728
MIR6798	NR_106856	19	Non-coding	chr19:49009905 plus strand	1887729
MIR6799	NR_106857	19	Non-coding	chr19:49791865 plus strand	1887730
MIR6800	NR_106858	19	Non-coding	chr19:49832017 plus strand	1887731
MIR6801	NR_106859	19	Non-coding	chr19:52222019 plus strand	1887732
MIR6802	NR_106860	19	Non-coding	chr19:55239976 minus strand	1887733
MIR6803	NR_106861	19	Non-coding	chr19:55245250 minus strand	1887734
MIR6804	NR_106862	19	Non-coding	chr19:55230952 minus strand	1887735
MIR6805	NR_106863	19	Non-coding	chr19:55388180 plus strand	1887736
MIR6806	NR_106864	19	Non-coding	chr19:58334687 plus strand	1887737
MIR6807	NR_106865	19	Non-coding	chr19:58550284 plus strand	1887738
MIR6885	NR_106945	19	Non-coding	chr19:6389703 minus strand	1887739
MIR6886	NR_106946	19	Non-coding	chr19:11113473 plus strand	1887740
MIR6887	NR_106947	19	Non-coding	chr19:35122699 plus strand	1887741
MIR7108	NR_106958	19	Non-coding	chr19:2435000 minus strand	1887742
MIR7-3	NR_029607	19	Non-coding	chr19:4770669 plus strand	1887743
MIR7-3HG	NR_027148	19	Non-coding	chr19:4769104 plus strand	1887744
MIR769	NR_030412	19	Non-coding	chr19:46018931 plus strand	1887745
MIR7850	NR_107004	19	Non-coding	chr19:2630714 plus strand	1887746
MIR7974	NR_107014	19	Non-coding	chr19:11495622 minus strand	1887747
MIR7975	NR_107015	19	Non-coding	chr19:55123292 minus strand	1887748
MIR8061	NR_107028	19	Non-coding	chr19:54645308 plus strand	1887749
MIR8074	NR_107041	19	Non-coding	chr19:51207009 minus strand	1887750

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MIR8077	NR_107044	19	Non-coding	chr19:42351130 plus strand	1887751
MIR8085	NR_107052	19	Non-coding	chr19:44758656 plus strand	1887752
MIR935	NR_030632	19	Non-coding	chr19:53982306 plus strand	1887753
MIR99B	NR_029843	19	Non-coding	chr19:51692611 plus strand	1887754
MIRLET7E	NR_029482	19	Non-coding	chr19:51692785 plus strand	1887755
MUM1	NR_024247	19	Non-coding	chr19:1356323 plus strand	1887756
MZF1-AS1	NR_027334	19	Non-coding	chr19:58559185 plus strand	1887757
NAPA	NR_038457	19	Non-coding	chr19:47515258 minus strand	1887758
NAPA	NR_038456	19	Non-coding	chr19:47515258 minus strand	1887758
NAPA-AS1	NR_038452	19	Non-coding	chr19:47484281 plus strand	1887759
NAPSB	NR_002798	19	Non-coding	chr19:50344748 minus strand	1887760
NDUFA11	NR_034166	19	Non-coding	chr19:5904013 minus strand	1887761
NFKBIB	NR_040515	19	Non-coding	chr19:38899929 plus strand	1887762
NMRK2	NR_110316	19	Non-coding	chr19:3933102 plus strand	1887763
NUCB1-AS1	NR_046633	19	Non-coding	chr19:48918891 minus strand	1887764
PAF1	NR_046384	19	Non-coding	chr19:39391195 minus strand	1887765
PBX4	NR_038198	19	Non-coding	chr19:19618916 minus strand	1887766
PCAT19	NR_040109	19	Non-coding	chr19:41500644 minus strand	1887767
PDE4C	NR_040546	19	Non-coding	chr19:18226475 minus strand	1887768
PEG3-AS1	NR_023847	19	Non-coding	chr19:56812479 plus strand	1887769
PET100	NR_033242	19	Non-coding	chr19:7629784 plus strand	1887770
PIK3R2	NR_073517	19	Non-coding	chr19:18153177 plus strand	1887771
PIN1	NR_038830	19	Non-coding	chr19:9835206 plus strand	1887772
PIN1	NR_038422	19	Non-coding	chr19:9835206 plus strand	1887772
POLD1	NR_046402	19	Non-coding	chr19:50384322 plus strand	1887773
POP4	NR_027368	19	Non-coding	chr19:29606262 plus strand	1887774
PPFIA3	NR_103842	19	Non-coding	chr19:49119388 plus strand	1887775

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PPP2R1A	NR_033500	19	Non-coding	chr19:52189801 plus strand	1887776
PRG1	NR_026881	19	Non-coding	chr19:43349055 plus strand	1887777
PRMT1	NR_033397	19	Non-coding	chr19:49677151 plus strand	1887778
PRR36	NR_104345	19	Non-coding	chr19:7874441 minus strand	1887779
PSG10P	NR_026824	19	Non-coding	chr19:42855718 minus strand	1887780
PTOV1-AS1	NR_040037	19	Non-coding	chr19:49851676 minus strand	1887781
PTOV1-AS2	NR_110730	19	Non-coding	chr19:49859289 minus strand	1887782
RAB11B-AS1	NR_038237	19	Non-coding	chr19:8390691 minus strand	1887783
RAB4B-EGLN2	NR_037791	19	Non-coding	chr19:40778218 plus strand	1887784
RAD23A	NR_072976	19	Non-coding	chr19:12945813 plus strand	1887785
RDH13	NR_027381	19	Non-coding	chr19:55063217 minus strand	1887786
RDH13	NR_027382	19	Non-coding	chr19:55063217 minus strand	1887786
RNU6-1	NR_004394	19	Non-coding	chr19:1021521 plus strand	1887787
RNU6-1	NR_004394	19	Non-coding	chr19:893483 plus strand	1887788
RNU6-2	NR_125730	19	Non-coding	chr19:1021521 plus strand	1887789
RNU6-2	NR_125730	19	Non-coding	chr19:893483 plus strand	1887790
RNU6-7	NR_104084	19	Non-coding	chr19:1021521 plus strand	1887791
RNU6-7	NR_104084	19	Non-coding	chr19:893483 plus strand	1887792
RNU6-8	NR_104088	19	Non-coding	chr19:1021521 plus strand	1887793
RNU6-8	NR_104088	19	Non-coding	chr19:893483 plus strand	1887794
RNU6-9	NR_104080	19	Non-coding	chr19:1021521 plus strand	1887795
RNU6-9	NR_104080	19	Non-coding	chr19:893483 plus strand	1887796
RPL13A	NR_073024	19	Non-coding	chr19:49487553 plus strand	1887797
RPL18	NR_073022	19	Non-coding	chr19:48619418 minus strand	1887798
RPSAP58	NR_003662	19	Non-coding	chr19:23763013 plus strand	1887799
SAE1	NR_027280	19	Non-coding	chr19:47130857 plus strand	1887800
SAFB	NR_037699	19	Non-coding	chr19:5623034 plus strand	1887801

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SCGB1B2P	NR_027620	19	Non-coding	chr19:34577691 minus strand	1887802
SCGB2B3P	NR_045208	19	Non-coding	chr19:34645872 plus strand	1887803
SEC1P	NR_004401	19	Non-coding	chr19:48638038 plus strand	1887804
SIGLEC16	NR_002825	19	Non-coding	chr19:49969654 plus strand	1887805
SIGLEC17P	NR_047531	19	Non-coding	chr19:51167327 plus strand	1887806
SIGLEC17P	NR_047529	19	Non-coding	chr19:51167327 plus strand	1887806
SIGLEC17P	NR_047530	19	Non-coding	chr19:51167327 plus strand	1887806
SIGLEC7	NR_102350	19	Non-coding	chr19:51142300 plus strand	1887807
SIGLECL1	NR_102324	19	Non-coding	chr19:51251077 plus strand	1887808
SIRT2	NR_034146	19	Non-coding	chr19:38894155 minus strand	1887809
SLC1A6	NR_073589	19	Non-coding	chr19:15010643 minus strand	1887810
SNAPC2	NR_030717	19	Non-coding	chr19:7920981 plus strand	1887811
SNAR-A1	NR_004435	19	Non-coding	chr19:47918428 plus strand	1887812
SNAR-A1	NR_004435	19	Non-coding	chr19:47934180 plus strand	1887813
SNAR-A10	NR_024229	19	Non-coding	chr19:47923778 plus strand	1887814
SNAR-A10	NR_024229	19	Non-coding	chr19:50092609 minus strand	1887815
SNAR-A10	NR_024229	19	Non-coding	chr19:50097946 minus strand	1887816
SNAR-A10	NR_024229	19	Non-coding	chr19:50101011 minus strand	1887817
SNAR-A10	NR_024229	19	Non-coding	chr19:50104075 minus strand	1887818
SNAR-A10	NR_024229	19	Non-coding	chr19:50107134 minus strand	1887819
SNAR-A10	NR_024229	19	Non-coding	chr19:50112488 minus strand	1887820
SNAR-A10	NR_024229	19	Non-coding	chr19:50117840 minus strand	1887821
SNAR-A10	NR_024229	19	Non-coding	chr19:50123194 minus strand	1887822
SNAR-A10	NR_024229	19	Non-coding	chr19:50128522 minus strand	1887823
SNAR-A11	NR_024225	19	Non-coding	chr19:47923778 plus strand	1887824
SNAR-A11	NR_024225	19	Non-coding	chr19:50092609 minus strand	1887825
SNAR-A11	NR_024225	19	Non-coding	chr19:50097946 minus strand	1887826

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SNAR-A11	NR_024225	19	Non-coding	chr19:50101011 minus strand	1887827
SNAR-A11	NR_024225	19	Non-coding	chr19:50104075 minus strand	1887828
SNAR-A11	NR_024225	19	Non-coding	chr19:50107134 minus strand	1887829
SNAR-A11	NR_024225	19	Non-coding	chr19:50112488 minus strand	1887830
SNAR-A11	NR_024225	19	Non-coding	chr19:50117840 minus strand	1887831
SNAR-A11	NR_024225	19	Non-coding	chr19:50123194 minus strand	1887832
SNAR-A11	NR_024225	19	Non-coding	chr19:50128522 minus strand	1887833
SNAR-A12	NR_004437	19	Non-coding	chr19:47907677 plus strand	1887834
SNAR-A12	NR_004437	19	Non-coding	chr19:47944921 plus strand	1887835
SNAR-A13	NR_024216	19	Non-coding	chr19:47907677 plus strand	1887836
SNAR-A13	NR_024216	19	Non-coding	chr19:47944921 plus strand	1887837
SNAR-A14	NR_024242	19	Non-coding	chr19:47923778 plus strand	1887838
SNAR-A14	NR_024242	19	Non-coding	chr19:50092609 minus strand	1887839
SNAR-A14	NR_024242	19	Non-coding	chr19:50097946 minus strand	1887840
SNAR-A14	NR_024242	19	Non-coding	chr19:50101011 minus strand	1887841
SNAR-A14	NR_024242	19	Non-coding	chr19:50104075 minus strand	1887842
SNAR-A14	NR_024242	19	Non-coding	chr19:50107134 minus strand	1887843
SNAR-A14	NR_024242	19	Non-coding	chr19:50112488 minus strand	1887844
SNAR-A14	NR_024242	19	Non-coding	chr19:50117840 minus strand	1887845
SNAR-A14	NR_024242	19	Non-coding	chr19:50123194 minus strand	1887846
SNAR-A14	NR_024242	19	Non-coding	chr19:50128522 minus strand	1887847
SNAR-A2	NR_004436	19	Non-coding	chr19:47918428 plus strand	1887848
SNAR-A2	NR_004436	19	Non-coding	chr19:47934180 plus strand	1887849
SNAR-A3	NR_024214	19	Non-coding	chr19:47923778 plus strand	1887850
SNAR-A3	NR_024214	19	Non-coding	chr19:50092609 minus strand	1887851
SNAR-A3	NR_024214	19	Non-coding	chr19:50097946 minus strand	1887852
SNAR-A3	NR_024214	19	Non-coding	chr19:50101011 minus strand	1887853

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SNAR-A3	NR_024214	19	Non-coding	chr19:50104075 minus strand	1887854
SNAR-A3	NR_024214	19	Non-coding	chr19:50107134 minus strand	1887855
SNAR-A3	NR_024214	19	Non-coding	chr19:50112488 minus strand	1887856
SNAR-A3	NR_024214	19	Non-coding	chr19:50117840 minus strand	1887857
SNAR-A3	NR_024214	19	Non-coding	chr19:50123194 minus strand	1887858
SNAR-A3	NR_024214	19	Non-coding	chr19:50128522 minus strand	1887859
SNAR-A4	NR_024215	19	Non-coding	chr19:47923778 plus strand	1887860
SNAR-A4	NR_024215	19	Non-coding	chr19:50092609 minus strand	1887861
SNAR-A4	NR_024215	19	Non-coding	chr19:50097946 minus strand	1887862
SNAR-A4	NR_024215	19	Non-coding	chr19:50101011 minus strand	1887863
SNAR-A4	NR_024215	19	Non-coding	chr19:50104075 minus strand	1887864
SNAR-A4	NR_024215	19	Non-coding	chr19:50107134 minus strand	1887865
SNAR-A4	NR_024215	19	Non-coding	chr19:50112488 minus strand	1887866
SNAR-A4	NR_024215	19	Non-coding	chr19:50117840 minus strand	1887867
SNAR-A4	NR_024215	19	Non-coding	chr19:50123194 minus strand	1887868
SNAR-A4	NR_024215	19	Non-coding	chr19:50128522 minus strand	1887869
SNAR-A5	NR_024223	19	Non-coding	chr19:47923778 plus strand	1887870
SNAR-A5	NR_024223	19	Non-coding	chr19:50092609 minus strand	1887871
SNAR-A5	NR_024223	19	Non-coding	chr19:50097946 minus strand	1887872
SNAR-A5	NR_024223	19	Non-coding	chr19:50101011 minus strand	1887873
SNAR-A5	NR_024223	19	Non-coding	chr19:50104075 minus strand	1887874
SNAR-A5	NR_024223	19	Non-coding	chr19:50107134 minus strand	1887875
SNAR-A5	NR_024223	19	Non-coding	chr19:50112488 minus strand	1887876
SNAR-A5	NR_024223	19	Non-coding	chr19:50117840 minus strand	1887877
SNAR-A5	NR_024223	19	Non-coding	chr19:50123194 minus strand	1887878
SNAR-A5	NR_024223	19	Non-coding	chr19:50128522 minus strand	1887879
SNAR-A6	NR_024227	19	Non-coding	chr19:47923778 plus strand	1887880

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SNAR-A6	NR_024227	19	Non-coding	chr19:50092609 minus strand	1887881
SNAR-A6	NR_024227	19	Non-coding	chr19:50097946 minus strand	1887882
SNAR-A6	NR_024227	19	Non-coding	chr19:50101011 minus strand	1887883
SNAR-A6	NR_024227	19	Non-coding	chr19:50104075 minus strand	1887884
SNAR-A6	NR_024227	19	Non-coding	chr19:50107134 minus strand	1887885
SNAR-A6	NR_024227	19	Non-coding	chr19:50112488 minus strand	1887886
SNAR-A6	NR_024227	19	Non-coding	chr19:50117840 minus strand	1887887
SNAR-A6	NR_024227	19	Non-coding	chr19:50123194 minus strand	1887888
SNAR-A6	NR_024227	19	Non-coding	chr19:50128522 minus strand	1887889
SNAR-A7	NR_024224	19	Non-coding	chr19:47923778 plus strand	1887890
SNAR-A7	NR_024224	19	Non-coding	chr19:50092609 minus strand	1887891
SNAR-A7	NR_024224	19	Non-coding	chr19:50097946 minus strand	1887892
SNAR-A7	NR_024224	19	Non-coding	chr19:50101011 minus strand	1887893
SNAR-A7	NR_024224	19	Non-coding	chr19:50104075 minus strand	1887894
SNAR-A7	NR_024224	19	Non-coding	chr19:50107134 minus strand	1887895
SNAR-A7	NR_024224	19	Non-coding	chr19:50112488 minus strand	1887896
SNAR-A7	NR_024224	19	Non-coding	chr19:50117840 minus strand	1887897
SNAR-A7	NR_024224	19	Non-coding	chr19:50123194 minus strand	1887898
SNAR-A7	NR_024224	19	Non-coding	chr19:50128522 minus strand	1887899
SNAR-A8	NR_024228	19	Non-coding	chr19:47923778 plus strand	1887900
SNAR-A8	NR_024228	19	Non-coding	chr19:50092609 minus strand	1887901
SNAR-A8	NR_024228	19	Non-coding	chr19:50097946 minus strand	1887902
SNAR-A8	NR_024228	19	Non-coding	chr19:50101011 minus strand	1887903
SNAR-A8	NR_024228	19	Non-coding	chr19:50104075 minus strand	1887904
SNAR-A8	NR_024228	19	Non-coding	chr19:50107134 minus strand	1887905
SNAR-A8	NR_024228	19	Non-coding	chr19:50112488 minus strand	1887906
SNAR-A8	NR_024228	19	Non-coding	chr19:50117840 minus strand	1887907

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SNAR-A8	NR_024228	19	Non-coding	chr19:50123194 minus strand	1887908
SNAR-A8	NR_024228	19	Non-coding	chr19:50128522 minus strand	1887909
SNAR-A9	NR_024226	19	Non-coding	chr19:47923778 plus strand	1887910
SNAR-A9	NR_024226	19	Non-coding	chr19:50092609 minus strand	1887911
SNAR-A9	NR_024226	19	Non-coding	chr19:50097946 minus strand	1887912
SNAR-A9	NR_024226	19	Non-coding	chr19:50101011 minus strand	1887913
SNAR-A9	NR_024226	19	Non-coding	chr19:50104075 minus strand	1887914
SNAR-A9	NR_024226	19	Non-coding	chr19:50107134 minus strand	1887915
SNAR-A9	NR_024226	19	Non-coding	chr19:50112488 minus strand	1887916
SNAR-A9	NR_024226	19	Non-coding	chr19:50117840 minus strand	1887917
SNAR-A9	NR_024226	19	Non-coding	chr19:50123194 minus strand	1887918
SNAR-A9	NR_024226	19	Non-coding	chr19:50128522 minus strand	1887919
SNAR-B1	NR_024231	19	Non-coding	chr19:50133864 minus strand	1887920
SNAR-B1	NR_024231	19	Non-coding	chr19:50139237 minus strand	1887921
SNAR-B2	NR_024230	19	Non-coding	chr19:50133864 minus strand	1887922
SNAR-B2	NR_024230	19	Non-coding	chr19:50139237 minus strand	1887923
SNAR-C1	NR_024220	19	Non-coding	chr19:47913050 plus strand	1887924
SNAR-C1	NR_024220	19	Non-coding	chr19:47928817 plus strand	1887925
SNAR-C1	NR_024220	19	Non-coding	chr19:47955681 plus strand	1887926
SNAR-C2	NR_024217	19	Non-coding	chr19:47913050 plus strand	1887927
SNAR-C2	NR_024217	19	Non-coding	chr19:47928817 plus strand	1887928
SNAR-C2	NR_024217	19	Non-coding	chr19:47955681 plus strand	1887929
SNAR-C3	NR_024221	19	Non-coding	chr19:47950295 plus strand	1887930
SNAR-C4	NR_024218	19	Non-coding	chr19:47939540 plus strand	1887931
SNAR-C5	NR_024219	19	Non-coding	chr19:47913050 plus strand	1887932
SNAR-C5	NR_024219	19	Non-coding	chr19:47928817 plus strand	1887933
SNAR-C5	NR_024219	19	Non-coding	chr19:47955681 plus strand	1887934

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SNAR-D	NR_024243	19	Non-coding	chr19:50140320 minus strand	1887935
SNAR-E	NR_024258	19	Non-coding	chr19:46830704 minus strand	1887936
SNAR-F	NR_004384	19	Non-coding	chr19:50604962 plus strand	1887937
SNAR-G1	NR_004383	19	Non-coding	chr19:49037019 plus strand	1887938
SNAR-G2	NR_024244	19	Non-coding	chr19:49031787 minus strand	1887939
SNORA68	NR_000012	19	Non-coding	chr19:17862587 plus strand	1887940
SNORD105	NR_004381	19	Non-coding	chr19:10107650 plus strand	1887941
SNORD105B	NR_003688	19	Non-coding	chr19:10109748 plus strand	1887942
SNORD23	NR_003048	19	Non-coding	chr19:47755852 plus strand	1887943
SNORD32A	NR_000021	19	Non-coding	chr19:49489965 plus strand	1887944
SNORD33	NR_000020	19	Non-coding	chr19:49490616 plus strand	1887945
SNORD34	NR_000019	19	Non-coding	chr19:49490906 plus strand	1887946
SNORD35A	NR_000018	19	Non-coding	chr19:49491174 plus strand	1887947
SNORD35B	NR_001285	19	Non-coding	chr19:49497718 plus strand	1887948
SNORD37	NR_002602	19	Non-coding	chr19:3982572 minus strand	1887949
SNORD41	NR_002751	19	Non-coding	chr19:12706518 minus strand	1887950
SNORD88A	NR_003067	19	Non-coding	chr19:50799535 minus strand	1887951
SNORD88B	NR_003068	19	Non-coding	chr19:50799125 minus strand	1887952
SNORD88C	NR_003069	19	Non-coding	chr19:50802421 minus strand	1887953
SPACA6P	NR_024330	19	Non-coding	chr19:51693339 plus strand	1887954
SPACA6P-AS	NR_108100	19	Non-coding	chr19:51693456 minus strand	1887955
SPRED3	NR_073032	19	Non-coding	chr19:38390291 plus strand	1887956
STXBP2	NR_073560	19	Non-coding	chr19:7637100 plus strand	1887957
TECR	NR_038104	19	Non-coding	chr19:14529566 plus strand	1887958
TECR	NR_038103	19	Non-coding	chr19:14529566 plus strand	1887958
TINCR	NR_027064	19	Non-coding	chr19:5567994 minus strand	1887959
TMED1	NR_104015	19	Non-coding	chr19:10835740 minus strand	1887960

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TMEM147-AS1	NR_038396	19	Non-coding	chr19:35546029 minus strand	1887961
TMEM150B	NR_104071	19	Non-coding	chr19:55325340 minus strand	1887962
TMEM150B	NR_104066	19	Non-coding	chr19:55325340 minus strand	1887962
TPM3P9	NR_003148	19	Non-coding	chr19:53431973 plus strand	1887963
TRAPPC2B	NR_002166	19	Non-coding	chr19:57363510 plus strand	1887964
TRIP10	NR_110231	19	Non-coding	chr19:6739681 plus strand	1887965
TSPAN16	NR_104199	19	Non-coding	chr19:11296138 plus strand	1887966
TYROBP	NR_033390	19	Non-coding	chr19:35908309 minus strand	1887967
U2AF1L4	NR_110173	19	Non-coding	chr19:35745442 minus strand	1887968
U2AF1L4	NR_110172	19	Non-coding	chr19:35745442 minus strand	1887968
U2AF1L4	NR_110171	19	Non-coding	chr19:35745442 minus strand	1887968
UCA1	NR_015379	19	Non-coding	chr19:15828946 plus strand	1887969
UPK1A-AS1	NR_046420	19	Non-coding	chr19:35673291 minus strand	1887970
URI1	NR_045557	19	Non-coding	chr19:29942238 plus strand	1887971
VSTM1	NR_110142	19	Non-coding	chr19:54063953 minus strand	1887972
WASH5P	NR_033266	19	Non-coding	chr19:70966 minus strand	1887973
WDR83	NR_029375	19	Non-coding	chr19:12666803 plus strand	1887974
ZFR2	NR_027149	19	Non-coding	chr19:3869029 minus strand	1887975
ZIM2-AS1	NR_110744	19	Non-coding	chr19:56765321 plus strand	1887976
ZNF137P	NR_023311	19	Non-coding	chr19:52596683 plus strand	1887977
ZNF154	NR_110974	19	Non-coding	chr19:57709211 minus strand	1887978
ZNF154	NR_110975	19	Non-coding	chr19:57709211 minus strand	1887978
ZNF211	NR_049754	19	Non-coding	chr19:57633166 plus strand	1887979
ZNF211	NR_049753	19	Non-coding	chr19:57633166 plus strand	1887979
ZNF211	NR_049752	19	Non-coding	chr19:57633166 plus strand	1887979
ZNF229	NR_103551	19	Non-coding	chr19:44448477 minus strand	1887980
ZNF28	NR_036600	19	Non-coding	chr19:52821669 minus strand	1887981

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ZNF28	NR_036599	19	Non-coding	chr19:52821669 minus strand	1887981
ZNF30	NR_024018	19	Non-coding	chr19:34926902 plus strand	1887982
ZNF302	NR_110322	19	Non-coding	chr19:34677638 plus strand	1887983
ZNF30-AS1	NR_110749	19	Non-coding	chr19:34926826 minus strand	1887984
ZNF317	NR_102435	19	Non-coding	chr19:9140379 plus strand	1887985
ZNF321P	NR_037805	19	Non-coding	chr19:52942594 minus strand	1887986
ZNF345	NR_038362	19	Non-coding	chr19:36850885 plus strand	1887987
ZNF350-AS1	NR_103847	19	Non-coding	chr19:51949133 plus strand	1887988
ZNF415	NR_028343	19	Non-coding	chr19:53132920 minus strand	1887989
ZNF468	NR_102301	19	Non-coding	chr19:52857649 minus strand	1887990
ZNF468	NR_102300	19	Non-coding	chr19:52857649 minus strand	1887990
ZNF468	NR_102299	19	Non-coding	chr19:52857649 minus strand	1887990
ZNF525	NR_003699	19	Non-coding	chr19:53365714 plus strand	1887991
ZNF528-AS1	NR_125345	19	Non-coding	chr19:52397757 minus strand	1887992
ZNF529	NR_027239	19	Non-coding	chr19:36605276 minus strand	1887993
ZNF529-AS1	NR_110703	19	Non-coding	chr19:36573069 plus strand	1887994
ZNF529-AS1	NR_110705	19	Non-coding	chr19:36573069 plus strand	1887994
ZNF529-AS1	NR_110706	19	Non-coding	chr19:36573069 plus strand	1887994
ZNF529-AS1	NR_110704	19	Non-coding	chr19:36573069 plus strand	1887994
ZNF542P	NR_003127	19	Non-coding	chr19:56368098 plus strand	1887995
ZNF542P	NR_024057	19	Non-coding	chr19:56368120 plus strand	1887996
ZNF542P	NR_024056	19	Non-coding	chr19:56368120 plus strand	1887996
ZNF542P	NR_024055	19	Non-coding	chr19:56368120 plus strand	1887996
ZNF542P	NR_033418	19	Non-coding	chr19:56368120 plus strand	1887996
ZNF551	NR_073102	19	Non-coding	chr19:57681968 plus strand	1887997
ZNF561-AS1	NR_122038	19	Non-coding	chr19:9621481 plus strand	1887998
ZNF571-AS1	NR_038247	19	Non-coding	chr19:37548948 plus strand	1887999

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ZNF571-AS1	NR_038248	19	Non-coding	chr19:37548948 plus strand	1887999
ZNF571-AS1	NR_038250	19	Non-coding	chr19:37551370 plus strand	1888000
ZNF571-AS1	NR_038249	19	Non-coding	chr19:37551370 plus strand	1888000
ZNF577	NR_024181	19	Non-coding	chr19:51887936 minus strand	1888001
ZNF582-AS1	NR_037160	19	Non-coding	chr19:56393675 plus strand	1888002
ZNF582-AS1	NR_037159	19	Non-coding	chr19:56393675 plus strand	1888002
ZNF582-AS1	NR_037161	19	Non-coding	chr19:56393675 plus strand	1888002
ZNF585A	NR_110152	19	Non-coding	chr19:37172741 minus strand	1888003
ZNF625	NR_037801	19	Non-coding	chr19:12156731 minus strand	1888004
ZNF625-ZNF20	NR_037802	19	Non-coding	chr19:12156731 minus strand	1888005
ZNF649-AS1	NR_110733	19	Non-coding	chr19:51888024 plus strand	1888006
ZNF667	NR_030740	19	Non-coding	chr19:56477401 minus strand	1888007
ZNF667-AS1	NR_036521	19	Non-coding	chr19:56477873 plus strand	1888008
ZNF667-AS1	NR_036522	19	Non-coding	chr19:56478123 plus strand	1888009
ZNF702P	NR_003578	19	Non-coding	chr19:52993531 minus strand	1888010
ZNF714	NR_117088	19	Non-coding	chr19:21082146 plus strand	1888011
ZNF714	NR_117086	19	Non-coding	chr19:21082146 plus strand	1888011
ZNF714	NR_117087	19	Non-coding	chr19:21082146 plus strand	1888011
ZNF724P	NR_045525	19	Non-coding	chr19:23250370 minus strand	1888012
ZNF738	NR_027130	19	Non-coding	chr19:21358932 plus strand	1888013
ZNF761	NR_110551	19	Non-coding	chr19:53431973 plus strand	1888014
ZNF788	NR_027049	19	Non-coding	chr19:12092262 plus strand	1888015
ZNF790-AS1	NR_040027	19	Non-coding	chr19:36797549 plus strand	1888016
ZNF790-AS1	NR_040028	19	Non-coding	chr19:36797562 plus strand	1888017
ZNF793-AS1	NR_110723	19	Non-coding	chr19:37507087 minus strand	1888018
ZNF818P	NR_073396	19	Non-coding	chr19:53212947 plus strand	1888019
ZNF826P	NR_036455	19	Non-coding	chr19:20424965 minus strand	1888020

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ZNF833P	NR_028594	19	Non-coding	chr19:11673997 plus strand	1888021
ZNF837	NR_049780	19	Non-coding	chr19:58381022 minus strand	1888022
ZNF85	NR_045830	19	Non-coding	chr19:20923252 plus strand	1888023
ZSCAN18	NR_027135	19	Non-coding	chr19:58118426 minus strand	1888024
ADNP-AS1	NR_110008	20	Non-coding	chr20:50930983 plus strand	1888025
ADNP-AS1	NR_110007	20	Non-coding	chr20:50930983 plus strand	1888025
ADNP-AS1	NR_110009	20	Non-coding	chr20:50930983 plus strand	1888025
APCDD1L-AS1	NR_034147	20	Non-coding	chr20:58515378 plus strand	1888026
ARFGAP1	NR_104022	20	Non-coding	chr20:63284114 plus strand	1888027
ARFGAP1	NR_104023	20	Non-coding	chr20:63284114 plus strand	1888027
ARFRP1	NR_051958	20	Non-coding	chr20:63708013 minus strand	1888028
ARFRP1	NR_051957	20	Non-coding	chr20:63708013 minus strand	1888028
ARFRP1	NR_051956	20	Non-coding	chr20:63708013 minus strand	1888028
ARFRP1	NR_051955	20	Non-coding	chr20:63708013 minus strand	1888028
ARFRP1	NR_051954	20	Non-coding	chr20:63708013 minus strand	1888028
BMP7-AS1	NR_110631	20	Non-coding	chr20:57213695 plus strand	1888029
BPIFA4P	NR_026760	20	Non-coding	chr20:33193604 plus strand	1888030
C20orf166-AS1	NR_033263	20	Non-coding	chr20:62551561 minus strand	1888031
C20orf173	NR_026933	20	Non-coding	chr20:35529652 minus strand	1888032
C20orf197	NR_126504	20	Non-coding	chr20:60055924 plus strand	1888033
C20orf24	NR_026562	20	Non-coding	chr20:36605733 plus strand	1888034
C20orf27	NR_047675	20	Non-coding	chr20:3768388 minus strand	1888035
CASC20	NR_109953	20	Non-coding	chr20:6426731 plus strand	1888036
CD40	NR_126502	20	Non-coding	chr20:46118253 plus strand	1888037
CEBPB-AS1	NR_125739	20	Non-coding	chr20:50192069 minus strand	1888038
CHRNA4	NR_046317	20	Non-coding	chr20:63361396 minus strand	1888039
CPNE1	NR_037188	20	Non-coding	chr20:35664937 minus strand	1888040

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CSE1L	NR_045796	20	Non-coding	chr20:49046245 plus strand	1888041
CSE1L-AS1	NR_110624	20	Non-coding	chr20:49046056 minus strand	1888042
CSE1L-AS1	NR_110625	20	Non-coding	chr20:49046056 minus strand	1888042
CSRP2BP	NR_028402	20	Non-coding	chr20:18145098 plus strand	1888043
CST13P	NR_001279	20	Non-coding	chr20:23519145 plus strand	1888044
CTCFL	NR_072975	20	Non-coding	chr20:57524867 minus strand	1888045
DEFB119	NR_073153	20	Non-coding	chr20:31390649 minus strand	1888046
DEFB119	NR_073151	20	Non-coding	chr20:31390649 minus strand	1888046
DEFB119	NR_073152	20	Non-coding	chr20:31390649 minus strand	1888046
DEFB119	NR_126440	20	Non-coding	chr20:31390649 minus strand	1888046
DEFB122	NR_045677	20	Non-coding	chr20:31429180 minus strand	1888047
DEFB123	NR_126450	20	Non-coding	chr20:31440518 plus strand	1888048
DHX35	NR_033905	20	Non-coding	chr20:38962337 plus strand	1888049
DLGAP4-AS1	NR_109939	20	Non-coding	chr20:36573275 minus strand	1888050
DYNLRB1	NR_104032	20	Non-coding	chr20:34516383 plus strand	1888051
EDEM2	NR_026728	20	Non-coding	chr20:35147358 minus strand	1888052
EIF6	NR_052024	20	Non-coding	chr20:35284717 minus strand	1888053
EIF6	NR_052023	20	Non-coding	chr20:35284816 minus strand	1888054
EIF6	NR_052022	20	Non-coding	chr20:35284816 minus strand	1888054
FAM182A	NR_026713	20	Non-coding	chr20:26054613 plus strand	1888055
FAM182B	NR_027061	20	Non-coding	chr20:25796242 minus strand	1888056
FAM182B	NR_026714	20	Non-coding	chr20:25801291 minus strand	1888057
FAM65C	NR_110890	20	Non-coding	chr20:50691530 minus strand	1888058
FAM83C-AS1	NR_109815	20	Non-coding	chr20:35285250 plus strand	1888059
FER1L4	NR_119376	20	Non-coding	chr20:35607562 minus strand	1888060
FKBP1A-SDCBP2	NR_037661	20	Non-coding	chr20:1393172 minus strand	1888061
FLJ16779	NR_024389	20	Non-coding	chr20:63253977 plus strand	1888062

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FLJ33581	NR_040102	20	Non-coding	chr20:24199766 plus strand	1888063
FRG1B	NR_003579	20	Non-coding	chr20:30377202 plus strand	1888064
FRG2EP	NR_037925	20	Non-coding	chr20:29416961 minus strand	1888065
GDAP1L1	NR_046353	20	Non-coding	chr20:44247257 plus strand	1888066
GNAS	NR_003259	20	Non-coding	chr20:58889124 plus strand	1888067
GNAS-AS1	NR_002785	20	Non-coding	chr20:58850903 minus strand	1888068
HAR1A	NR_003244	20	Non-coding	chr20:63101291 plus strand	1888069
HAR1B	NR_003245	20	Non-coding	chr20:63102319 minus strand	1888070
HM13-AS1	NR_046853	20	Non-coding	chr20:31573263 minus strand	1888071
HMGB3P1	NR_002165	20	Non-coding	chr20:34834462 minus strand	1888072
HNF4A-AS1	NR_109949	20	Non-coding	chr20:44395706 minus strand	1888073
ISM1-AS1	NR_040043	20	Non-coding	chr20:13239687 minus strand	1888074
ITPA	NR_052000	20	Non-coding	chr20:3208867 plus strand	1888075
ITPA	NR_052002	20	Non-coding	chr20:3209359 plus strand	1888076
ITPA	NR_052001	20	Non-coding	chr20:3209487 plus strand	1888077
KIZ-AS1	NR_109956	20	Non-coding	chr20:21218289 minus strand	1888078
LAMA5-AS1	NR_109924	20	Non-coding	chr20:62353009 plus strand	1888079
LAMA5-AS1	NR_109923	20	Non-coding	chr20:62353009 plus strand	1888079
LAMA5-AS1	NR_109922	20	Non-coding	chr20:62353009 plus strand	1888079
LAMP5-AS1	NR_109957	20	Non-coding	chr20:9514998 minus strand	1888080
LINC00028	NR_024358	20	Non-coding	chr20:31485777 plus strand	1888081
LINC00029	NR_028295	20	Non-coding	chr20:63037028 minus strand	1888082
LINC00176	NR_027686	20	Non-coding	chr20:64034343 plus strand	1888083
LINC00176	NR_027687	20	Non-coding	chr20:64034343 plus strand	1888083
LINC00261	NR_001558	20	Non-coding	chr20:22578642 minus strand	1888084
LINC00266-1	NR_040415	20	Non-coding	chr20:64290384 plus strand	1888085
LINC00489	NR_047461	20	Non-coding	chr20:37623119 minus strand	1888086

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LINC00493	NR_015432	20	Non-coding	chr20:18567428 plus strand	1888087
LINC00494	NR_026958	20	Non-coding	chr20:48359910 plus strand	1888088
LINC00652	NR_026884	20	Non-coding	chr20:18793982 minus strand	1888089
LINC00652	NR_026883	20	Non-coding	chr20:18794584 minus strand	1888090
LINC00654	NR_015406	20	Non-coding	chr20:5504596 minus strand	1888091
LINC00656	NR_034149	20	Non-coding	chr20:23132636 minus strand	1888092
LINC00657	NR_027451	20	Non-coding	chr20:36050960 minus strand	1888093
LINC00658	NR_038240	20	Non-coding	chr20:5445748 minus strand	1888094
LINC00658	NR_038239	20	Non-coding	chr20:5445748 minus strand	1888094
LINC00659	NR_046225	20	Non-coding	chr20:62776856 minus strand	1888095
LINC00659	NR_046224	20	Non-coding	chr20:62776856 minus strand	1888095
LINC00687	NR_110635	20	Non-coding	chr20:11870715 minus strand	1888096
LINC00851	NR_034167	20	Non-coding	chr20:18379048 plus strand	1888097
LINC01056	NR_033369	20	Non-coding	chr20:63038010 plus strand	1888098
LINC01260	NR_034104	20	Non-coding	chr20:44671739 minus strand	1888099
LINC01270	NR_034124	20	Non-coding	chr20:50292719 plus strand	1888100
LINC01271	NR_109950	20	Non-coding	chr20:50321342 minus strand	1888101
LINC01273	NR_109943	20	Non-coding	chr20:50172569 plus strand	1888102
LINC01370	NR_109937	20	Non-coding	chr20:40004460 plus strand	1888103
LINC01370	NR_109936	20	Non-coding	chr20:40004460 plus strand	1888103
LINC01384	NR_109883	20	Non-coding	chr20:22607517 minus strand	1888104
LINC01427	NR_110615	20	Non-coding	chr20:22282801 minus strand	1888105
LINC01428	NR_110609	20	Non-coding	chr20:7254202 minus strand	1888106
LINC01429	NR_110016	20	Non-coding	chr20:51862913 minus strand	1888107
LINC01430	NR_109893	20	Non-coding	chr20:44450557 minus strand	1888108
LINC01431	NR_109884	20	Non-coding	chr20:23358127 minus strand	1888109
LINC01432	NR_038394	20	Non-coding	chr20:22054089 plus strand	1888110

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LINC01433	NR_033917	20	Non-coding	chr20:4193089 plus strand	1888111
LINC01440	NR_110629	20	Non-coding	chr20:55423042 plus strand	1888112
LINC01441	NR_110064	20	Non-coding	chr20:55427197 minus strand	1888113
LINC01522	NR_110027	20	Non-coding	chr20:47990117 minus strand	1888114
LINC01523	NR_109942	20	Non-coding	chr20:47983225 plus strand	1888115
LINC01524	NR_110038	20	Non-coding	chr20:52620837 plus strand	1888116
LOC100130264	NR_024564	20	Non-coding	chr20:19284596 minus strand	1888117
LOC100130587	NR_110634	20	Non-coding	chr20:63359987 plus strand	1888118
LOC100131496	NR_024594	20	Non-coding	chr20:47318501 plus strand	1888119
LOC100134868	NR_004846	20	Non-coding	chr20:26009798 plus strand	1888120
LOC100270804	NR_026885	20	Non-coding	chr20:18794048 plus strand	1888121
LOC100287792	NR_040021	20	Non-coding	chr20:37676909 plus strand	1888122
LOC100289473	NR_037142	20	Non-coding	chr20:1779746 minus strand	1888123
LOC100505515	NR_109870	20	Non-coding	chr20:12950339 plus strand	1888124
LOC100506175	NR_111906	20	Non-coding	chr20:50645470 plus strand	1888125
LOC100506384	NR_040513	20	Non-coding	chr20:59628289 minus strand	1888126
LOC100506470	NR_109919	20	Non-coding	chr20:61079063 plus strand	1888127
LOC101926889	NR_109994	20	Non-coding	chr20:25196892 minus strand	1888128
LOC101926935	NR_110001	20	Non-coding	chr20:25854021 minus strand	1888129
LOC101926955	NR_110003	20	Non-coding	chr20:25955811 plus strand	1888130
LOC101927159	NR_110004	20	Non-coding	chr20:42685482 plus strand	1888131
LOC101927770	NR_110051	20	Non-coding	chr20:53552769 plus strand	1888132
LOC101927932	NR_126334	20	Non-coding	chr20:58888810 minus strand	1888133
LOC101928048	NR_109903	20	Non-coding	chr20:60472976 minus strand	1888134
LOC101929125	NR_109859	20	Non-coding	chr20:3808493 plus strand	1888135
LOC101929207	NR_109860	20	Non-coding	chr20:5510002 minus strand	1888136
LOC101929312	NR_110610	20	Non-coding	chr20:7347432 plus strand	1888137

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LOC101929371	NR_109861	20	Non-coding	chr20:9986332 plus strand	1888138
LOC101929395	NR_110611	20	Non-coding	chr20:10753089 plus strand	1888139
LOC101929413	NR_109866	20	Non-coding	chr20:10909272 minus strand	1888140
LOC101929486	NR_109868	20	Non-coding	chr20:12952519 minus strand	1888141
LOC101929526	NR_109955	20	Non-coding	chr20:18698708 minus strand	1888142
LOC101929608	NR_109878	20	Non-coding	chr20:21703585 minus strand	1888143
LOC101929625	NR_109880	20	Non-coding	chr20:21570023 plus strand	1888144
LOC101929698	NR_110619	20	Non-coding	chr20:32509958 plus strand	1888145
LOC102606466	NR_109872	20	Non-coding	chr20:12936963 minus strand	1888146
LOC149684	NR_104170	20	Non-coding	chr20:38260174 plus strand	1888147
LOC149950	NR_034152	20	Non-coding	chr20:32587478 plus strand	1888148
LOC284788	NR_027089	20	Non-coding	chr20:22420643 minus strand	1888149
LOC284788	NR_027090	20	Non-coding	chr20:22420643 minus strand	1888149
LOC284798	NR_027093	20	Non-coding	chr20:25147993 minus strand	1888150
LOC284798	NR_027092	20	Non-coding	chr20:25148725 minus strand	1888151
LOC284798	NR_027091	20	Non-coding	chr20:25148790 minus strand	1888152
LOC339568	NR_027124	20	Non-coding	chr20:39224748 minus strand	1888153
LOC339593	NR_038972	20	Non-coding	chr20:11273383 minus strand	1888154
LOC63930	NR_033370	20	Non-coding	chr20:63009382 plus strand	1888155
LOC643406	NR_029405	20	Non-coding	chr20:5471195 plus strand	1888156
LOC729296	NR_109918	20	Non-coding	chr20:60087685 plus strand	1888157
LOC729296	NR_109917	20	Non-coding	chr20:60087685 plus strand	1888157
LOC729296	NR_109916	20	Non-coding	chr20:60087685 plus strand	1888157
LOC79160	NR_125359	20	Non-coding	chr20:58634771 plus strand	1888158
LPIN3	NR_126051	20	Non-coding	chr20:41340852 plus strand	1888159
MACROD2-AS1	NR_037841	20	Non-coding	chr20:14929518 minus strand	1888160
MACROD2-AS1	NR_110318	20	Non-coding	chr20:14929518 minus strand	1888160

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MACROD2-AS1	NR_072988	20	Non-coding	chr20:14929518 minus strand	1888160
MACROD2-IT1	NR_104193	20	Non-coding	chr20:14554383 plus strand	1888161
MAVS	NR_037921	20	Non-coding	chr20:3846798 plus strand	1888162
MCM8-AS1	NR_110101	20	Non-coding	chr20:6005821 minus strand	1888163
MCTS2P	NR_003677	20	Non-coding	chr20:31547381 plus strand	1888164
MIR103A2	NR_029519	20	Non-coding	chr20:3917493 plus strand	1888165
MIR103B2	NR_031722	20	Non-coding	chr20:3917563 minus strand	1888166
MIR1-1	NR_029780	20	Non-coding	chr20:62554305 plus strand	1888167
MIR124-3	NR_029670	20	Non-coding	chr20:63178499 plus strand	1888168
MIR1257	NR_031658	20	Non-coding	chr20:61953662 minus strand	1888169
MIR1289-1	NR_031620	20	Non-coding	chr20:35454097 minus strand	1888170
MIR1292	NR_031699	20	Non-coding	chr20:2652776 plus strand	1888171
MIR1302-5	NR_031634	20	Non-coding	chr20:50614785 minus strand	1888172
MIR133A2	NR_029676	20	Non-coding	chr20:62564911 plus strand	1888173
MIR1825	NR_031726	20	Non-coding	chr20:32237794 plus strand	1888174
MIR1914	NR_031735	20	Non-coding	chr20:63941544 minus strand	1888175
MIR296	NR_029844	20	Non-coding	chr20:58817694 minus strand	1888176
MIR298	NR_030580	20	Non-coding	chr20:58818313 minus strand	1888177
MIR3192	NR_036160	20	Non-coding	chr20:18470614 plus strand	1888178
MIR3193	NR_036161	20	Non-coding	chr20:31607185 plus strand	1888179
MIR3194	NR_036162	20	Non-coding	chr20:51452977 minus strand	1888180
MIR3196	NR_036163	20	Non-coding	chr20:63238778 plus strand	1888181
MIR3616	NR_037410	20	Non-coding	chr20:47166966 plus strand	1888182
MIR3617	NR_037411	20	Non-coding	chr20:45705180 minus strand	1888183
MIR3646	NR_037419	20	Non-coding	chr20:44408119 plus strand	1888184
MIR4325	NR_036219	20	Non-coding	chr20:57321591 minus strand	1888185
MIR4326	NR_036220	20	Non-coding	chr20:63286807 plus strand	1888186

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MIR4477A	NR_039688	20	Non-coding	chr20:29880463 minus strand	1888187
MIR4477B	NR_039689	20	Non-coding	chr20:29880383 plus strand	1888188
MIR4532	NR_039757	20	Non-coding	chr20:57895393 plus strand	1888189
MIR4533	NR_039758	20	Non-coding	chr20:60478110 plus strand	1888190
MIR4755	NR_039911	20	Non-coding	chr20:34049118 plus strand	1888191
MIR4756	NR_039913	20	Non-coding	chr20:54068485 minus strand	1888192
MIR4758	NR_039915	20	Non-coding	chr20:62332557 minus strand	1888193
MIR499A	NR_030223	20	Non-coding	chr20:34990375 plus strand	1888194
MIR499B	NR_039912	20	Non-coding	chr20:34990472 minus strand	1888195
MIR548AG2	NR_039653	20	Non-coding	chr20:60564561 plus strand	1888196
MIR548O2	NR_039605	20	Non-coding	chr20:38516562 plus strand	1888197
MIR644A	NR_030374	20	Non-coding	chr20:34466324 plus strand	1888198
MIR645	NR_030375	20	Non-coding	chr20:50585785 plus strand	1888199
MIR646	NR_030376	20	Non-coding	chr20:60308473 plus strand	1888200
MIR646HG	NR_046099	20	Non-coding	chr20:60138491 plus strand	1888201
MIR647	NR_030377	20	Non-coding	chr20:63942726 minus strand	1888202
MIR663A	NR_030386	20	Non-coding	chr20:26208278 minus strand	1888203
MIR663AHG	NR_040095	20	Non-coding	chr20:26209233 minus strand	1888204
MIR6812	NR_106870	20	Non-coding	chr20:45425509 plus strand	1888205
MIR6813	NR_106871	20	Non-coding	chr20:64077010 minus strand	1888206
MIR6869	NR_106929	20	Non-coding	chr20:1392961 minus strand	1888207
MIR6870	NR_106930	20	Non-coding	chr20:10649695 minus strand	1888208
MIR6871	NR_106931	20	Non-coding	chr20:41169022 plus strand	1888209
MIR7641-2	NR_106988	20	Non-coding	chr20:32008386 plus strand	1888210
MIR8062	NR_107029	20	Non-coding	chr20:7371607 plus strand	1888211
MIR941-1	NR_030637	20	Non-coding	chr20:63919424 plus strand	1888212
MIR941-2	NR_030638	20	Non-coding	chr20:63919536 plus strand	1888213

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MIR941-3	NR_030639	20	Non-coding	chr20:63919536 plus strand	1888214
MIR941-3	NR_030639	20	Non-coding	chr20:63919731 plus strand	1888215
MIR941-4	NR_040032	20	Non-coding	chr20:63919539 plus strand	1888216
MIR941-4	NR_040032	20	Non-coding	chr20:63919843 plus strand	1888217
MIR941-5	NR_128719	20	Non-coding	chr20:63919560 plus strand	1888218
MIR941-5	NR_128719	20	Non-coding	chr20:63919755 plus strand	1888219
MIR941-5	NR_128719	20	Non-coding	chr20:63919867 plus strand	1888220
MKKS	NR_072977	20	Non-coding	chr20:10434239 minus strand	1888221
MKRN7P	NR_026640	20	Non-coding	chr20:46465292 minus strand	1888222
MLLT10P1	NR_045115	20	Non-coding	chr20:30403462 minus strand	1888223
MMP24-AS1	NR_102705	20	Non-coding	chr20:35278157 minus strand	1888224
MMP24-AS1	NR_102706	20	Non-coding	chr20:35278157 minus strand	1888224
NAPB	NR_104266	20	Non-coding	chr20:23421519 minus strand	1888225
NCOR1P1	NR_003678	20	Non-coding	chr20:26114041 minus strand	1888226
NDRG3	NR_038370	20	Non-coding	chr20:36746138 minus strand	1888227
NDUFAF5	NR_029377	20	Non-coding	chr20:13785025 plus strand	1888228
NFS1	NR_037570	20	Non-coding	chr20:35699365 minus strand	1888229
NOP56	NR_027700	20	Non-coding	chr20:2652531 plus strand	1888230
NRSN2-AS1	NR_109990	20	Non-coding	chr20:325252 minus strand	1888231
NSFL1C	NR_038164	20	Non-coding	chr20:1467692 minus strand	1888232
OGFR-AS1	NR_102430	20	Non-coding	chr20:62805587 minus strand	1888233
OSER1-AS1	NR_038339	20	Non-coding	chr20:44210959 plus strand	1888234
OSER1-AS1	NR_038338	20	Non-coding	chr20:44211081 plus strand	1888235
OSER1-AS1	NR_038337	20	Non-coding	chr20:44211085 plus strand	1888236
PCNA-AS1	NR_028370	20	Non-coding	chr20:5119585 plus strand	1888237
PIGT	NR_047691	20	Non-coding	chr20:45416066 plus strand	1888238
PIGT	NR_047695	20	Non-coding	chr20:45416066 plus strand	1888238

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PIGT	NR_047694	20	Non-coding	chr20:45416066 plus strand	1888238
PIGT	NR_047693	20	Non-coding	chr20:45416066 plus strand	1888238
PIGT	NR_047692	20	Non-coding	chr20:45416066 plus strand	1888238
PLCG1-AS1	NR_109889	20	Non-coding	chr20:41138000 minus strand	1888239
POLR3F	NR_104209	20	Non-coding	chr20:18467388 plus strand	1888240
PPP4R1L	NR_003505	20	Non-coding	chr20:58309439 minus strand	1888241
PRNT	NR_024267	20	Non-coding	chr20:4740668 minus strand	1888242
PRNT	NR_024268	20	Non-coding	chr20:4740668 minus strand	1888242
PRNT	NR_024269	20	Non-coding	chr20:4740668 minus strand	1888242
RALY-AS1	NR_109886	20	Non-coding	chr20:33994367 minus strand	1888243
RALY-AS1	NR_109885	20	Non-coding	chr20:33994367 minus strand	1888243
RBM39	NR_040724	20	Non-coding	chr20:35742336 minus strand	1888244
RBM39	NR_040723	20	Non-coding	chr20:35742336 minus strand	1888244
RBM39	NR_040722	20	Non-coding	chr20:35742336 minus strand	1888244
RNU105B	NR_004386	20	Non-coding	chr20:8831184 plus strand	1888245
RTEL1-TNFRSF6B	NR_037882	20	Non-coding	chr20:63657809 plus strand	1888246
SDCBP2-AS1	NR_040047	20	Non-coding	chr20:1325342 plus strand	1888247
SDCBP2-AS1	NR_040049	20	Non-coding	chr20:1325342 plus strand	1888247
SDCBP2-AS1	NR_040048	20	Non-coding	chr20:1325342 plus strand	1888247
SEL1L2	NR_073206	20	Non-coding	chr20:13990619 minus strand	1888248
SEL1L2	NR_073207	20	Non-coding	chr20:13995333 minus strand	1888249
SIRPG-AS1	NR_110090	20	Non-coding	chr20:1633507 plus strand	1888250
SLC9A8	NR_048540	20	Non-coding	chr20:49812712 plus strand	1888251
SLC9A8	NR_048539	20	Non-coding	chr20:49812712 plus strand	1888251
SLC9A8	NR_048537	20	Non-coding	chr20:49812712 plus strand	1888251
SLC9A8	NR_048538	20	Non-coding	chr20:49812712 plus strand	1888251
SLCO4A1-AS1	NR_024470	20	Non-coding	chr20:62666621 minus strand	1888252

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SLMO2-ATP5E	NR_037930	20	Non-coding	chr20:59042846 minus strand	1888253
SLMO2-ATP5E	NR_037929	20	Non-coding	chr20:59042846 minus strand	1888253
SNAP25-AS1	NR_040710	20	Non-coding	chr20:10219506 minus strand	1888254
SNHG11	NR_003239	20	Non-coding	chr20:38446653 plus strand	1888255
SNHG17	NR_015366	20	Non-coding	chr20:38435319 minus strand	1888256
SNHG17	NR_027241	20	Non-coding	chr20:38435375 minus strand	1888257
SNORA51	NR_002981	20	Non-coding	chr20:2655066 plus strand	1888258
SNORA60	NR_002986	20	Non-coding	chr20:38449368 plus strand	1888259
SNORA71A	NR_002911	20	Non-coding	chr20:38427443 minus strand	1888260
SNORA71B	NR_002910	20	Non-coding	chr20:38425330 minus strand	1888261
SNORA71C	NR_003017	20	Non-coding	chr20:38429804 minus strand	1888262
SNORA71D	NR_003018	20	Non-coding	chr20:38433999 minus strand	1888263
SNORA71E	NR_002972	20	Non-coding	chr20:38448082 plus strand	1888264
SNORD110	NR_003078	20	Non-coding	chr20:2654211 plus strand	1888265
SNORD119	NR_003684	20	Non-coding	chr20:2463047 minus strand	1888266
SNORD12	NR_003030	20	Non-coding	chr20:49280682 plus strand	1888267
SNORD12B	NR_003695	20	Non-coding	chr20:49280312 plus strand	1888268
SNORD12C	NR_002433	20	Non-coding	chr20:49278944 plus strand	1888269
SNORD17	NR_003045	20	Non-coding	chr20:17962946 minus strand	1888270
SNORD56	NR_002739	20	Non-coding	chr20:2656623 plus strand	1888271
SNORD57	NR_002738	20	Non-coding	chr20:2656938 plus strand	1888272
SNORD86	NR_004399	20	Non-coding	chr20:2656096 plus strand	1888273
SRSF6	NR_034009	20	Non-coding	chr20:43457863 plus strand	1888274
SS18L1	NR_125980	20	Non-coding	chr20:62143719 plus strand	1888275
SS18L1	NR_125981	20	Non-coding	chr20:62143719 plus strand	1888275
STK4-AS1	NR_038341	20	Non-coding	chr20:44966458 minus strand	1888276
STMN3	NR_075070	20	Non-coding	chr20:63653610 minus strand	1888277

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STX16	NR_037943	20	Non-coding	chr20:58651252 plus strand	1888278
STX16	NR_037941	20	Non-coding	chr20:58651252 plus strand	1888278
STX16	NR_037942	20	Non-coding	chr20:58651252 plus strand	1888278
STX16-NPEPL1	NR_037945	20	Non-coding	chr20:58651252 plus strand	1888279
SUMO1P1	NR_002189	20	Non-coding	chr20:53875709 minus strand	1888280
SYS1-DBNDD2	NR_003189	20	Non-coding	chr20:45363168 plus strand	1888281
TBC1D20	NR_111901	20	Non-coding	chr20:462553 minus strand	1888282
TMEM189	NR_027889	20	Non-coding	chr20:50153798 minus strand	1888283
TPD52L2	NR_045090	20	Non-coding	chr20:63865227 plus strand	1888284
TRERNA1	NR_051976	20	Non-coding	chr20:50041629 minus strand	1888285
TSPY26P	NR_002781	20	Non-coding	chr20:32190360 minus strand	1888286
UBE2C	NR_104037	20	Non-coding	chr20:45812575 plus strand	1888287
UBE2C	NR_104036	20	Non-coding	chr20:45812575 plus strand	1888287
UBE2V1	NR_047554	20	Non-coding	chr20:50113198 minus strand	1888288
UBE2V1	NR_104218	20	Non-coding	chr20:50113198 minus strand	1888288
UBOX5-AS1	NR_038395	20	Non-coding	chr20:3106910 plus strand	1888289
UCKL1	NR_126526	20	Non-coding	chr20:63956447 minus strand	1888290
UCKL1-AS1	NR_027287	20	Non-coding	chr20:63953383 plus strand	1888291
VAPB	NR_036633	20	Non-coding	chr20:58389118 plus strand	1888292
VSX1	NR_045951	20	Non-coding	chr20:25082379 minus strand	1888293
VSX1	NR_045948	20	Non-coding	chr20:25082379 minus strand	1888293
ZBTB46-AS1	NR_110081	20	Non-coding	chr20:63808075 plus strand	1888294
ZFAS1	NR_003604	20	Non-coding	chr20:49278177 plus strand	1888295
ZFAS1	NR_003606	20	Non-coding	chr20:49278177 plus strand	1888295
ZFAS1	NR_036658	20	Non-coding	chr20:49278177 plus strand	1888295
ZFAS1	NR_003605	20	Non-coding	chr20:49278177 plus strand	1888295
ZFAS1	NR_036659	20	Non-coding	chr20:49278641 plus strand	1888296

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ZNF334	NR_073026	20	Non-coding	chr20:46513559 minus strand	1888297
ZNF337-AS1	NR_126465	20	Non-coding	chr20:25624044 plus strand	1888298
ZNF337-AS1	NR_126466	20	Non-coding	chr20:25624044 plus strand	1888298
ZNF337-AS1	NR_126467	20	Non-coding	chr20:25624224 plus strand	1888299
ZNF341	NR_104259	20	Non-coding	chr20:33731759 plus strand	1888300
ZNF341-AS1	NR_110623	20	Non-coding	chr20:33811099 minus strand	1888301
ZNF663P	NR_045983	20	Non-coding	chr20:46457643 minus strand	1888302
ZSWIM3	NR_037628	20	Non-coding	chr20:45857580 plus strand	1888303
ABCC13	NR_003088	21	Non-coding	chr21:14273798 plus strand	1888304
ABCC13	NR_003087	21	Non-coding	chr21:14273798 plus strand	1888304
ADARB1	NR_073200	21	Non-coding	chr21:45074577 plus strand	1888305
ADARB1	NR_027674	21	Non-coding	chr21:45074577 plus strand	1888305
ADARB1	NR_027673	21	Non-coding	chr21:45074577 plus strand	1888305
ADARB1	NR_027672	21	Non-coding	chr21:45074577 plus strand	1888305
ANKRD20A11P	NR_027270	21	Non-coding	chr21:13980444 minus strand	1888306
ANKRD30BP2	NR_026916	21	Non-coding	chr21:13038165 plus strand	1888307
B3GALT5-AS1	NR_026543	21	Non-coding	chr21:39612822 minus strand	1888308
B3GALT5-AS1	NR_026542	21	Non-coding	chr21:39612822 minus strand	1888308
BACH1	NR_027655	21	Non-coding	chr21:29305203 plus strand	1888309
BACH1-IT2	NR_046564	21	Non-coding	chr21:29372500 plus strand	1888310
BRWD1-AS1	NR_046655	21	Non-coding	chr21:39315706 plus strand	1888311
BRWD1-IT2	NR_111942	21	Non-coding	chr21:39313906 plus strand	1888312
C21orf59	NR_036552	21	Non-coding	chr21:32612603 minus strand	1888313
C21orf62-AS1	NR_024622	21	Non-coding	chr21:32772099 plus strand	1888314
C21orf62-AS1	NR_024623	21	Non-coding	chr21:32772099 plus strand	1888314
C21orf91-OT1	NR_038871	21	Non-coding	chr21:17792509 minus strand	1888315
C21orf91-OT1	NR_038870	21	Non-coding	chr21:17792509 minus strand	1888315

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CBR3-AS1	NR_038894	21	Non-coding	chr21:36156308 minus strand	1888316
CBR3-AS1	NR_038893	21	Non-coding	chr21:36156308 minus strand	1888316
CBR3-AS1	NR_038892	21	Non-coding	chr21:36156308 minus strand	1888316
CHODL-AS1	NR_024354	21	Non-coding	chr21:17885608 minus strand	1888317
COL18A1-AS1	NR_028082	21	Non-coding	chr21:45425040 minus strand	1888318
COL18A1-AS1	NR_027498	21	Non-coding	chr21:45425070 minus strand	1888319
COL18A1-AS2	NR_052004	21	Non-coding	chr21:45410065 minus strand	1888320
CYP4F29P	NR_026755	21	Non-coding	chr21:13848364 minus strand	1888321
D21S2088E	NR_040254	21	Non-coding	chr21:23384835 minus strand	1888322
DIP2A-IT1	NR_046400	21	Non-coding	chr21:46462470 plus strand	1888323
DSCAM	NR_073202	21	Non-coding	chr21:40847113 minus strand	1888324
DSCAM-AS1	NR_038896	21	Non-coding	chr21:40383082 plus strand	1888325
DSCAM-AS1	NR_038898	21	Non-coding	chr21:40383082 plus strand	1888325
DSCAM-AS1	NR_038900	21	Non-coding	chr21:40383082 plus strand	1888325
DSCAM-AS1	NR_038899	21	Non-coding	chr21:40383083 plus strand	1888326
DSCAM-IT1	NR_046774	21	Non-coding	chr21:40630767 minus strand	1888327
DSCR10	NR_027695	21	Non-coding	chr21:38206155 plus strand	1888328
DSCR8	NR_026842	21	Non-coding	chr21:38121450 plus strand	1888329
DSCR8	NR_026841	21	Non-coding	chr21:38121450 plus strand	1888329
DSCR8	NR_026839	21	Non-coding	chr21:38121450 plus strand	1888329
DSCR8	NR_026840	21	Non-coding	chr21:38121450 plus strand	1888329
DSCR8	NR_026838	21	Non-coding	chr21:38121450 plus strand	1888329
DSCR9	NR_026719	21	Non-coding	chr21:37208502 plus strand	1888330
ERG	NR_111949	21	Non-coding	chr21:38661780 minus strand	1888331
EVA1C	NR_104472	21	Non-coding	chr21:32412436 plus strand	1888332
GRIK1-AS1	NR_027021	21	Non-coding	chr21:29748174 plus strand	1888333
GRIK1-AS2	NR_033368	21	Non-coding	chr21:29596039 plus strand	1888334

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IL10RB-AS1	NR_038974	21	Non-coding	chr21:33266260 minus strand	1888335
ITGB2-AS1	NR_038312	21	Non-coding	chr21:44921034 plus strand	1888336
ITGB2-AS1	NR_038311	21	Non-coding	chr21:44921034 plus strand	1888336
ITGB2-AS1	NR_038316	21	Non-coding	chr21:44921034 plus strand	1888336
ITGB2-AS1	NR_038315	21	Non-coding	chr21:44921034 plus strand	1888336
ITGB2-AS1	NR_038314	21	Non-coding	chr21:44921034 plus strand	1888336
ITGB2-AS1	NR_038313	21	Non-coding	chr21:44921034 plus strand	1888336
JAM2	NR_072999	21	Non-coding	chr21:25639281 plus strand	1888337
KRTAP20-4	NR_023342	21	Non-coding	chr21:30620626 plus strand	1888338
LINC00111	NR_024367	21	Non-coding	chr21:41679301 plus strand	1888339
LINC00112	NR_024028	21	Non-coding	chr21:41716435 plus strand	1888340
LINC00113	NR_024357	21	Non-coding	chr21:27722378 plus strand	1888341
LINC00114	NR_027067	21	Non-coding	chr21:38752257 minus strand	1888342
LINC00114	NR_027066	21	Non-coding	chr21:38768974 minus strand	1888343
LINC00114	NR_027065	21	Non-coding	chr21:38773477 minus strand	1888344
LINC00158	NR_024027	21	Non-coding	chr21:25431701 minus strand	1888345
LINC00159	NR_038033	21	Non-coding	chr21:32086295 minus strand	1888346
LINC00160	NR_024351	21	Non-coding	chr21:34737182 minus strand	1888347
LINC00161	NR_026552	21	Non-coding	chr21:28539317 plus strand	1888348
LINC00161	NR_026553	21	Non-coding	chr21:28539317 plus strand	1888348
LINC00162	NR_024089	21	Non-coding	chr21:45004727 minus strand	1888349
LINC00163	NR_033840	21	Non-coding	chr21:44994086 minus strand	1888350
LINC00189	NR_027072	21	Non-coding	chr21:29193493 plus strand	1888351
LINC00307	NR_038855	21	Non-coding	chr21:30211783 minus strand	1888352
LINC00308	NR_038400	21	Non-coding	chr21:22098616 plus strand	1888353
LINC00310	NR_027267	21	Non-coding	chr21:34180676 plus strand	1888354
LINC00310	NR_027266	21	Non-coding	chr21:34180676 plus strand	1888354

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LINC00313	NR_026863	21	Non-coding	chr21:43478223 minus strand	1888355
LINC00313	NR_026863	21	Non-coding	chr21:6060339 plus strand	1888356
LINC00314	NR_027246	21	Non-coding	chr21:28013362 plus strand	1888357
LINC00316	NR_103811	21	Non-coding	chr21:45341990 minus strand	1888358
LINC00317	NR_038872	21	Non-coding	chr21:21737319 minus strand	1888359
LINC00319	NR_026960	21	Non-coding	chr21:43450023 plus strand	1888360
LINC00319	NR_026960	21	Non-coding	chr21:6088242 minus strand	1888361
LINC00320	NR_109786	21	Non-coding	chr21:20803108 minus strand	1888362
LINC00320	NR_024090	21	Non-coding	chr21:20803108 minus strand	1888362
LINC00320	NR_109788	21	Non-coding	chr21:20803108 minus strand	1888362
LINC00320	NR_109787	21	Non-coding	chr21:20803108 minus strand	1888362
LINC00322	NR_103713	21	Non-coding	chr21:43332039 minus strand	1888363
LINC00323	NR_024100	21	Non-coding	chr21:41148064 minus strand	1888364
LINC00479	NR_027272	21	Non-coding	chr21:41715775 minus strand	1888365
LINC00515	NR_024092	21	Non-coding	chr21:25583224 minus strand	1888366
LINC00649	NR_038883	21	Non-coding	chr21:33931211 plus strand	1888367
LINC00945	NR_104056	21	Non-coding	chr21:33057828 plus strand	1888368
LINC01423	NR_110545	21	Non-coding	chr21:38346076 minus strand	1888369
LINC01424	NR_109928	21	Non-coding	chr21:44802240 plus strand	1888370
LINC01425	NR_109958	21	Non-coding	chr21:21746984 plus strand	1888371
LINC01426	NR_038885	21	Non-coding	chr21:34745824 plus strand	1888372
LINC01426	NR_038886	21	Non-coding	chr21:34745824 plus strand	1888372
LINC01436	NR_110419	21	Non-coding	chr21:36005319 plus strand	1888373
LINC01547	NR_027129	21	Non-coding	chr21:44939913 minus strand	1888374
LINC01547	NR_027128	21	Non-coding	chr21:44939913 minus strand	1888374
LINC01548	NR_024102	21	Non-coding	chr21:33170236 minus strand	1888375
LINC01549	NR_037586	21	Non-coding	chr21:17438889 plus strand	1888376

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LINC01549	NR_037585	21	Non-coding	chr21:17438889 plus strand	1888376
LOC100129027	NR_038876	21	Non-coding	chr21:45836419 minus strand	1888377
LOC100133286	NR_040084	21	Non-coding	chr21:36126640 minus strand	1888378
LOC100506403	NR_073512	21	Non-coding	chr21:35580764 minus strand	1888379
LOC100507412	NR_038958	21	Non-coding	chr21:8197619 plus strand	1888380
LOC100507412	NR_038958	21	Non-coding	chr21:8380664 plus strand	1888381
LOC101927797	NR_109925	21	Non-coding	chr21:18759812 minus strand	1888382
LOC101927843	NR_109959	21	Non-coding	chr21:22098459 minus strand	1888383
LOC101927869	NR_109963	21	Non-coding	chr21:24321377 minus strand	1888384
LOC101927973	NR_126012	21	Non-coding	chr21:28228667 minus strand	1888385
LOC101928107	NR_109961	21	Non-coding	chr21:33123700 minus strand	1888386
LOC101928269	NR_110418	21	Non-coding	chr21:36004667 minus strand	1888387
LOC101928398	NR_109926	21	Non-coding	chr21:38857538 plus strand	1888388
LOC101928435	NR_109962	21	Non-coding	chr21:38977774 minus strand	1888389
LOC101928796	NR_109931	21	Non-coding	chr21:45972969 plus strand	1888390
LOC102724188	NR_110544	21	Non-coding	chr21:13546032 plus strand	1888391
LOC284825	NR_126010	21	Non-coding	chr21:28048413 plus strand	1888392
LOC284825	NR_126011	21	Non-coding	chr21:28090402 plus strand	1888393
LOC284837	NR_026961	21	Non-coding	chr21:43812567 minus strand	1888394
LOC339622	NR_046198	21	Non-coding	chr21:24840549 plus strand	1888395
LOC400867	NR_120405	21	Non-coding	chr21:38938429 minus strand	1888396
LOC642852	NR_026943	21	Non-coding	chr21:45288051 plus strand	1888397
LRRC3-AS1	NR_047476	21	Non-coding	chr21:44455284 minus strand	1888398
MCM3AP-AS1	NR_002776	21	Non-coding	chr21:46229230 plus strand	1888399
MCM3AP-AS1	NR_110565	21	Non-coding	chr21:46229230 plus strand	1888399
MCM3AP-AS1	NR_110566	21	Non-coding	chr21:46229230 plus strand	1888399
MCM3AP-AS1	NR_110567	21	Non-coding	chr21:46229230 plus strand	1888399

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MGC39584	NR_038377	21	Non-coding	chr21:9821061 minus strand	1888400
MIR125B2	NR_029694	21	Non-coding	chr21:16590236 plus strand	1888401
MIR155	NR_030784	21	Non-coding	chr21:25573979 plus strand	1888402
MIR155HG	NR_001458	21	Non-coding	chr21:25562144 plus strand	1888403
MIR3118-1	NR_036061	21	Non-coding	chr21:13644850 minus strand	1888404
MIR3156-3	NR_036164	21	Non-coding	chr21:13406460 minus strand	1888405
MIR3197	NR_036167	21	Non-coding	chr21:41167556 plus strand	1888406
MIR3648-1	NR_037421	21	Non-coding	chr21:8208472 plus strand	1888407
MIR3648-1	NR_037421	21	Non-coding	chr21:8986998 plus strand	1888408
MIR3648-2	NR_128711	21	Non-coding	chr21:8208472 plus strand	1888409
MIR3648-2	NR_128711	21	Non-coding	chr21:8986998 plus strand	1888410
MIR3687-1	NR_037458	21	Non-coding	chr21:8208843 plus strand	1888411
MIR3687-1	NR_037458	21	Non-coding	chr21:8987369 plus strand	1888412
MIR3687-2	NR_128714	21	Non-coding	chr21:8208843 plus strand	1888413
MIR3687-2	NR_128714	21	Non-coding	chr21:8987369 plus strand	1888414
MIR4327	NR_036221	21	Non-coding	chr21:30375378 minus strand	1888415
MIR4759	NR_039916	21	Non-coding	chr21:26953960 plus strand	1888416
MIR4760	NR_039917	21	Non-coding	chr21:40212431 minus strand	1888417
MIR548X	NR_036166	21	Non-coding	chr21:18686164 minus strand	1888418
MIR5692B	NR_049889	21	Non-coding	chr21:42951014 minus strand	1888419
MIR6070	NR_106718	21	Non-coding	chr21:43609989 minus strand	1888420
MIR6130	NR_106746	21	Non-coding	chr21:23079283 plus strand	1888421
MIR6501	NR_106756	21	Non-coding	chr21:33550661 plus strand	1888422
MIR6508	NR_106763	21	Non-coding	chr21:39447009 plus strand	1888423
MIR663A	NR_030386	21	Non-coding	chr21:8252231 plus strand	1888424
MIR6724-1	NR_106782	21	Non-coding	chr21:8205314 plus strand	1888425
MIR6724-1	NR_106782	21	Non-coding	chr21:8249504 plus strand	1888426

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MIR6724-1	NR_106782	21	Non-coding	chr21:8388361 plus strand	1888427
MIR6724-1	NR_106782	21	Non-coding	chr21:8432529 plus strand	1888428
MIR6724-2	NR_128715	21	Non-coding	chr21:8205314 plus strand	1888429
MIR6724-2	NR_128715	21	Non-coding	chr21:8249504 plus strand	1888430
MIR6724-2	NR_128715	21	Non-coding	chr21:8388361 plus strand	1888431
MIR6724-2	NR_128715	21	Non-coding	chr21:8432529 plus strand	1888432
MIR6724-3	NR_128716	21	Non-coding	chr21:8205314 plus strand	1888433
MIR6724-3	NR_128716	21	Non-coding	chr21:8249504 plus strand	1888434
MIR6724-3	NR_128716	21	Non-coding	chr21:8388361 plus strand	1888435
MIR6724-3	NR_128716	21	Non-coding	chr21:8432529 plus strand	1888436
MIR6724-4	NR_128717	21	Non-coding	chr21:8205314 plus strand	1888437
MIR6724-4	NR_128717	21	Non-coding	chr21:8249504 plus strand	1888438
MIR6724-4	NR_128717	21	Non-coding	chr21:8388361 plus strand	1888439
MIR6724-4	NR_128717	21	Non-coding	chr21:8432529 plus strand	1888440
MIR6814	NR_106872	21	Non-coding	chr21:41746841 minus strand	1888441
MIR6815	NR_106873	21	Non-coding	chr21:45478265 plus strand	1888442
MIR802	NR_030414	21	Non-coding	chr21:35720714 plus strand	1888443
MIR8069-1	NR_107036	21	Non-coding	chr21:13724188 plus strand	1888444
MIR8069-1	NR_107036	21	Non-coding	chr21:6859170 plus strand	1888445
MIR8069-2	NR_128718	21	Non-coding	chr21:13724188 plus strand	1888446
MIR8069-2	NR_128718	21	Non-coding	chr21:6859170 plus strand	1888447
MIR99A	NR_029514	21	Non-coding	chr21:16539088 plus strand	1888448
MIR99AHG	NR_027790	21	Non-coding	chr21:16070521 plus strand	1888449
MIR99AHG	NR_111004	21	Non-coding	chr21:16071113 plus strand	1888450
MIR99AHG	NR_111005	21	Non-coding	chr21:16071113 plus strand	1888450
MIR99AHG	NR_027791	21	Non-coding	chr21:16194378 plus strand	1888451
MIRLET7C	NR_029480	21	Non-coding	chr21:16539827 plus strand	1888452

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N6AMT1	NR_047510	21	Non-coding	chr21:28885373 minus strand	1888453
PAXBP1	NR_027873	21	Non-coding	chr21:32771858 minus strand	1888454
PAXBP1-AS1	NR_038880	21	Non-coding	chr21:32728113 plus strand	1888455
PAXBP1-AS1	NR_038879	21	Non-coding	chr21:32728113 plus strand	1888455
PIGP	NR_028352	21	Non-coding	chr21:37073158 minus strand	1888456
POFUT2	NR_004858	21	Non-coding	chr21:45287896 minus strand	1888457
PRDM15	NR_104260	21	Non-coding	chr21:41863302 minus strand	1888458
PRDM15	NR_104258	21	Non-coding	chr21:41879482 minus strand	1888459
PRDM15	NR_104257	21	Non-coding	chr21:41879482 minus strand	1888459
PSMG1	NR_049728	21	Non-coding	chr21:39183514 minus strand	1888460
PTTG1IP	NR_104597	21	Non-coding	chr21:44873903 minus strand	1888461
RNA18S5	NR_003286	21	Non-coding	chr21:8209630 plus strand	1888462
RNA18S5	NR_003286	21	Non-coding	chr21:8392665 plus strand	1888463
RNA18S5	NR_003286	21	Non-coding	chr21:8436875 plus strand	1888464
RNA28S5	NR_003287	21	Non-coding	chr21:8213887 plus strand	1888465
RNA28S5	NR_003287	21	Non-coding	chr21:8441145 plus strand	1888466
RNA45S5	NR_046235	21	Non-coding	chr21:8433221 plus strand	1888467
RNA5-8S5	NR_003285	21	Non-coding	chr21:8212571 plus strand	1888468
RNA5-8S5	NR_003285	21	Non-coding	chr21:8256780 plus strand	1888469
RNA5-8S5	NR_003285	21	Non-coding	chr21:8395606 plus strand	1888470
RNA5-8S5	NR_003285	21	Non-coding	chr21:8439822 plus strand	1888471
RUNX1-IT1	NR_026812	21	Non-coding	chr21:35039426 minus strand	1888472
SAMSN1-AS1	NR_046512	21	Non-coding	chr21:14582201 plus strand	1888473
SETD4	NR_040087	21	Non-coding	chr21:36060818 minus strand	1888474
SNORA80A	NR_002996	21	Non-coding	chr21:32377322 minus strand	1888475
SON	NR_103797	21	Non-coding	chr21:33543037 plus strand	1888476
SSR4P1	NR_027292	21	Non-coding	chr21:45073211 minus strand	1888477

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TEKT4P2	NR_038327	21	Non-coding	chr21:9129761 minus strand	1888478
TEKT4P2	NR_038328	21	Non-coding	chr21:9129761 minus strand	1888478
TEKT4P2	NR_038329	21	Non-coding	chr21:9129761 minus strand	1888478
TMEM50B	NR_040016	21	Non-coding	chr21:33480009 minus strand	1888479
TMPRSS3	NR_046020	21	Non-coding	chr21:42396846 minus strand	1888480
TRPM2	NR_038257	21	Non-coding	chr21:44353600 plus strand	1888481
TRPM2-AS	NR_109964	21	Non-coding	chr21:44425563 minus strand	1888482
TSPEAR-AS1	NR_103707	21	Non-coding	chr21:44506043 plus strand	1888483
TSPEAR-AS2	NR_026547	21	Non-coding	chr21:44517214 plus strand	1888484
TSPEAR-AS2	NR_026548	21	Non-coding	chr21:44517214 plus strand	1888484
UMODL1-AS1	NR_027243	21	Non-coding	chr21:42108534 minus strand	1888485
URB1-AS1	NR_026845	21	Non-coding	chr21:32393132 plus strand	1888486
WDR4	NR_048535	21	Non-coding	chr21:42879589 minus strand	1888487
ZNF295-AS1	NR_119384	21	Non-coding	chr21:42009193 plus strand	1888488
ZNF295-AS1	NR_119385	21	Non-coding	chr21:42022003 plus strand	1888489
ZNF295-AS1	NR_027273	21	Non-coding	chr21:42022268 plus strand	1888490
ADORA2A	NR_103544	22	Non-coding	chr22:24427561 plus strand	1888491
ADORA2A	NR_103543	22	Non-coding	chr22:24427561 plus strand	1888491
ADORA2A-AS1	NR_028483	22	Non-coding	chr22:24494815 minus strand	1888492
ADORA2A-AS1	NR_028484	22	Non-coding	chr22:24494815 minus strand	1888492
AIFM3	NR_027464	22	Non-coding	chr22:20967158 plus strand	1888493
ANKRD54	NR_036556	22	Non-coding	chr22:37844346 minus strand	1888494
ANKRD62P1-PARP4P3	NR_040115	22	Non-coding	chr22:16675540 minus strand	1888495
AP1B1P1	NR_040114	22	Non-coding	chr22:32121976 plus strand	1888496
APOBEC3B-AS1	NR_104187	22	Non-coding	chr22:38963410 minus strand	1888497
APOBEC3B-AS1	NR_104187	22	Non-coding	chr22:38998220 minus strand	1888498
APOL3	NR_027835	22	Non-coding	chr22:36160929 minus strand	1888499

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APOL3	NR_027834	22	Non-coding	chr22:36160929 minus strand	1888499
APOL3	NR_027833	22	Non-coding	chr22:36160929 minus strand	1888499
BCL2L13	NR_073068	22	Non-coding	chr22:17655661 plus strand	1888500
BCL2L13	NR_073069	22	Non-coding	chr22:17655661 plus strand	1888500
BCRP2	NR_037566	22	Non-coding	chr22:21103015 plus strand	1888501
BCRP3	NR_024494	22	Non-coding	chr22:24632914 plus strand	1888502
BMS1P17	NR_073460	22	Non-coding	chr22:15815897 minus strand	1888503
BMS1P18	NR_073459	22	Non-coding	chr22:15815897 minus strand	1888504
BMS1P20	NR_027293	22	Non-coding	chr22:22298097 plus strand	1888505
C22orf24	NR_126507	22	Non-coding	chr22:31945362 minus strand	1888506
C22orf34	NR_110522	22	Non-coding	chr22:49657542 minus strand	1888507
C22orf34	NR_110523	22	Non-coding	chr22:49657542 minus strand	1888507
CECR3	NR_038398	22	Non-coding	chr22:17266733 minus strand	1888508
CECR5-AS1	NR_024483	22	Non-coding	chr22:17159388 plus strand	1888509
CECR5-AS1	NR_024482	22	Non-coding	chr22:17159388 plus strand	1888509
CECR7	NR_015352	22	Non-coding	chr22:17036569 plus strand	1888510
CES5AP1	NR_037839	22	Non-coding	chr22:23382126 minus strand	1888511
CHCHD10	NR_125755	22	Non-coding	chr22:23767972 minus strand	1888512
CHCHD10	NR_125756	22	Non-coding	chr22:23767972 minus strand	1888512
CHKB-AS1	NR_110536	22	Non-coding	chr22:50583025 plus strand	1888513
CHKB-AS1	NR_021492	22	Non-coding	chr22:50583025 plus strand	1888513
CHKB-CPT1B	NR_027928	22	Non-coding	chr22:50582999 minus strand	1888514
CRELD2	NR_104295	22	Non-coding	chr22:49918629 plus strand	1888515
CRYBB2P1	NR_033734	22	Non-coding	chr22:25448086 plus strand	1888516
CRYBB2P1	NR_033733	22	Non-coding	chr22:25448086 plus strand	1888516
CYP2D7	NR_002570	22	Non-coding	chr22:42144574 minus strand	1888517
DEPDC5	NR_110988	22	Non-coding	chr22:31754022 plus strand	1888518

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DGCR10	NR_026651	22	Non-coding	chr22:19022623 plus strand	1888519
DGCR11	NR_024157	22	Non-coding	chr22:19048375 minus strand	1888520
DGCR2	NR_033674	22	Non-coding	chr22:19122454 minus strand	1888521
DGCR5	NR_110533	22	Non-coding	chr22:18970497 plus strand	1888522
DGCR5	NR_002733	22	Non-coding	chr22:18970497 plus strand	1888522
DGCR5	NR_045121	22	Non-coding	chr22:18970497 plus strand	1888522
DGCR9	NR_024159	22	Non-coding	chr22:19017833 plus strand	1888523
DMC1	NR_103474	22	Non-coding	chr22:38570196 minus strand	1888524
DUXAP8	NR_122113	22	Non-coding	chr22:15784953 plus strand	1888525
EFCAB6-AS1	NR_046563	22	Non-coding	chr22:43516253 plus strand	1888526
ELFN2	NR_110512	22	Non-coding	chr22:37427470 minus strand	1888527
EP300-AS1	NR_110514	22	Non-coding	chr22:41197501 minus strand	1888528
FAM230B	NR_108107	22	Non-coding	chr22:21166902 plus strand	1888529
FBXW4P1	NR_033408	22	Non-coding	chr22:23262766 plus strand	1888530
FLJ41941	NR_024417	22	Non-coding	chr22:18029384 plus strand	1888531
GGT3P	NR_003267	22	Non-coding	chr22:18791961 minus strand	1888532
GSTT2	NR_126445	22	Non-coding	chr22:23961301 minus strand	1888533
GSTT2	NR_126445	22	Non-coding	chr22:23980027 plus strand	1888534
GSTT2	NR_126442	22	Non-coding	chr22:23980027 plus strand	1888534
GSTT2	NR_126446	22	Non-coding	chr22:23980027 plus strand	1888534
GSTTP1	NR_003081	22	Non-coding	chr22:24005361 minus strand	1888535
GSTTP2	NR_003082	22	Non-coding	chr22:24005453 minus strand	1888536
GTSE1-AS1	NR_024009	22	Non-coding	chr22:46296660 minus strand	1888537
GUCD1	NR_104286	22	Non-coding	chr22:24555935 minus strand	1888538
GUSBP11	NR_024448	22	Non-coding	chr22:23717423 minus strand	1888539
HMGXB4	NR_027780	22	Non-coding	chr22:35257451 plus strand	1888540
HORMAD2-AS1	NR_110541	22	Non-coding	chr22:30080480 minus strand	1888541

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HPS4	NR_073136	22	Non-coding	chr22:26479681 minus strand	1888542
HPS4	NR_073135	22	Non-coding	chr22:26483863 minus strand	1888543
HSFY1P1	NR_003607	22	Non-coding	chr22:16827473 plus strand	1888544
IFT27	NR_033531	22	Non-coding	chr22:36776133 minus strand	1888545
IGLL3P	NR_029395	22	Non-coding	chr22:25318256 plus strand	1888546
KIAA1656	NR_046312	22	Non-coding	chr22:30377905 minus strand	1888547
KLHL22	NR_033825	22	Non-coding	chr22:20495883 minus strand	1888548
LARGE-AS1	NR_038949	22	Non-coding	chr22:33724985 plus strand	1888549
LARGE-AS1	NR_038950	22	Non-coding	chr22:33724985 plus strand	1888549
LINC00207	NR_028410	22	Non-coding	chr22:44569339 plus strand	1888550
LINC00207	NR_028409	22	Non-coding	chr22:44569339 plus strand	1888550
LINC00207	NR_028411	22	Non-coding	chr22:44569339 plus strand	1888550
LINC00229	NR_044991	22	Non-coding	chr22:44625419 minus strand	1888551
LINC00528	NR_103718	22	Non-coding	chr22:17777289 plus strand	1888552
LINC00634	NR_024355	22	Non-coding	chr22:41952186 plus strand	1888553
LINC00895	NR_024381	22	Non-coding	chr22:19566839 minus strand	1888554
LINC00896	NR_026919	22	Non-coding	chr22:20206331 plus strand	1888555
LINC00898	NR_033377	22	Non-coding	chr22:47631569 minus strand	1888556
LINC00899	NR_027036	22	Non-coding	chr22:46044868 minus strand	1888557
LINC01310	NR_038944	22	Non-coding	chr22:48866769 plus strand	1888558
LINC01311	NR_103767	22	Non-coding	chr22:19171705 plus strand	1888559
LINC01315	NR_120595	22	Non-coding	chr22:42369208 minus strand	1888560
LINC01315	NR_120596	22	Non-coding	chr22:42369208 minus strand	1888560
LINC01315	NR_120597	22	Non-coding	chr22:42369208 minus strand	1888560
LINC01399	NR_126356	22	Non-coding	chr22:35231056 minus strand	1888561
LINC01422	NR_110540	22	Non-coding	chr22:26903291 plus strand	1888562
LINC01521	NR_120386	22	Non-coding	chr22:31346758 plus strand	1888563

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LL22NC01-81G9.3	NR_038954	22	Non-coding	chr22:36965247 plus strand	1888564
LL22NC03-63E9.3	NR_027426	22	Non-coding	chr22:22559342 plus strand	1888565
LL22NC03-75H12.2	NR_109967	22	Non-coding	chr22:47487111 minus strand	1888566
LOC100128531	NR_038941	22	Non-coding	chr22:25112692 minus strand	1888567
LOC100130899	NR_039988	22	Non-coding	chr22:40032331 plus strand	1888568
LOC100506271	NR_110515	22	Non-coding	chr22:37354839 minus strand	1888569
LOC100506472	NR_040535	22	Non-coding	chr22:39432159 plus strand	1888570
LOC100506679	NR_125362	22	Non-coding	chr22:43038584 plus strand	1888571
LOC100996342	NR_103793	22	Non-coding	chr22:17121594 plus strand	1888572
LOC101927051	NR_109952	22	Non-coding	chr22:37658377 minus strand	1888573
LOC101927257	NR_109965	22	Non-coding	chr22:40521799 plus strand	1888574
LOC101927526	NR_109966	22	Non-coding	chr22:44443326 plus strand	1888575
LOC101928891	NR_110537	22	Non-coding	chr22:20957091 plus strand	1888576
LOC101929374	NR_110538	22	Non-coding	chr22:23433563 plus strand	1888577
LOC101929829	NR_111920	22	Non-coding	chr22:42130881 minus strand	1888578
LOC101929829	NR_111920	22	Non-coding	chr22:42144554 minus strand	1888579
LOC102723769	NR_110761	22	Non-coding	chr22:11897405 plus strand	1888580
LOC284865	NR_038460	22	Non-coding	chr22:20204918 minus strand	1888581
LOC284930	NR_122046	22	Non-coding	chr22:47631673 plus strand	1888582
LOC284933	NR_038917	22	Non-coding	chr22:48547387 minus strand	1888583
LOC339666	NR_038918	22	Non-coding	chr22:32376663 plus strand	1888584
LOC388882	NR_110539	22	Non-coding	chr22:23486980 minus strand	1888585
LOC400927	NR_002821	22	Non-coding	chr22:38398926 minus strand	1888586
LOC730668	NR_027240	22	Non-coding	chr22:46006615 plus strand	1888587
LOC90834	NR_026993	22	Non-coding	chr22:49780310 minus strand	1888588
LRRC74B	NR_027006	22	Non-coding	chr22:21045959 plus strand	1888589
LRRC74B	NR_110991	22	Non-coding	chr22:21045959 plus strand	1888589

【１８３０】

MAPK11	NR_110887	22	Non-coding	chr22:50270393 minus strand	1888590
MCAT	NR_046423	22	Non-coding	chr22:43143397 minus strand	1888591
MFNG	NR_029413	22	Non-coding	chr22:37486440 minus strand	1888592
MGAT3-AS1	NR_126469	22	Non-coding	chr22:39476822 minus strand	1888593
MIAT	NR_003491	22	Non-coding	chr22:26657481 plus strand	1888594
MIAT	NR_033319	22	Non-coding	chr22:26657481 plus strand	1888594
MIAT	NR_033320	22	Non-coding	chr22:26657481 plus strand	1888594
MIAT	NR_033321	22	Non-coding	chr22:26657481 plus strand	1888594
MIATNB	NR_110543	22	Non-coding	chr22:26672842 plus strand	1888595
MIF-AS1	NR_038911	22	Non-coding	chr22:23898930 minus strand	1888596
MIR1249	NR_031651	22	Non-coding	chr22:45201019 minus strand	1888597
MIR1281	NR_031694	22	Non-coding	chr22:41092512 plus strand	1888598
MIR1286	NR_031618	22	Non-coding	chr22:20249211 minus strand	1888599
MIR1306	NR_031706	22	Non-coding	chr22:20086057 plus strand	1888600
MIR130B	NR_029845	22	Non-coding	chr22:21653303 plus strand	1888601
MIR185	NR_029706	22	Non-coding	chr22:20033138 plus strand	1888602
MIR301B	NR_030622	22	Non-coding	chr22:21652980 plus strand	1888603
MIR3198-1	NR_036168	22	Non-coding	chr22:17764259 minus strand	1888604
MIR3199-1	NR_036169	22	Non-coding	chr22:27920612 minus strand	1888605
MIR3199-2	NR_036170	22	Non-coding	chr22:27920525 plus strand	1888606
MIR3200	NR_036171	22	Non-coding	chr22:30731556 plus strand	1888607
MIR3201	NR_036172	22	Non-coding	chr22:48274363 plus strand	1888608
MIR33A	NR_029507	22	Non-coding	chr22:41900943 plus strand	1888609
MIR3618	NR_037412	22	Non-coding	chr22:20085745 plus strand	1888610
MIR3619	NR_037413	22	Non-coding	chr22:46091043 plus strand	1888611
MIR3653	NR_037426	22	Non-coding	chr22:29333267 minus strand	1888612
MIR3667	NR_037440	22	Non-coding	chr22:49543466 minus strand	1888613

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MIR3781	NR_039760	22	Non-coding	chr22:41923297 minus strand	1888614
MIR3909	NR_037471	22	Non-coding	chr22:35335639 plus strand	1888615
MIR3928	NR_037496	22	Non-coding	chr22:31160119 minus strand	1888616
MIR4534	NR_039759	22	Non-coding	chr22:37988793 plus strand	1888617
MIR4535	NR_039761	22	Non-coding	chr22:48780294 plus strand	1888618
MIR4761	NR_039918	22	Non-coding	chr22:19963752 plus strand	1888619
MIR4762	NR_039919	22	Non-coding	chr22:45760523 plus strand	1888620
MIR4763	NR_039920	22	Non-coding	chr22:46113565 plus strand	1888621
MIR4764	NR_039921	22	Non-coding	chr22:33436669 minus strand	1888622
MIR4766	NR_039923	22	Non-coding	chr22:40813958 minus strand	1888623
MIR5096	NR_039973	22	Non-coding	chr22:37668025 plus strand	1888624
MIR548J	NR_031615	22	Non-coding	chr22:26555323 minus strand	1888625
MIR5571	NR_049835	22	Non-coding	chr22:22886266 plus strand	1888626
MIR5739	NR_106713	22	Non-coding	chr22:28459868 plus strand	1888627
MIR6069	NR_106717	22	Non-coding	chr22:35336799 minus strand	1888628
MIR648	NR_030378	22	Non-coding	chr22:17980961 minus strand	1888629
MIR649	NR_030379	22	Non-coding	chr22:21034272 minus strand	1888630
MIR650	NR_030755	22	Non-coding	chr22:22822775 plus strand	1888631
MIR658	NR_030395	22	Non-coding	chr22:37844371 minus strand	1888632
MIR659	NR_030396	22	Non-coding	chr22:37847774 minus strand	1888633
MIR6816	NR_106874	22	Non-coding	chr22:20114751 minus strand	1888634
MIR6817	NR_106875	22	Non-coding	chr22:25455645 plus strand	1888635
MIR6818	NR_106876	22	Non-coding	chr22:30007048 plus strand	1888636
MIR6819	NR_106877	22	Non-coding	chr22:36286907 minus strand	1888637
MIR6820	NR_106878	22	Non-coding	chr22:37967562 plus strand	1888638
MIR6821	NR_106879	22	Non-coding	chr22:49962865 plus strand	1888639
MIR6889	NR_106949	22	Non-coding	chr22:41253050 minus strand	1888640

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MIR7109	NR_106959	22	Non-coding	chr22:31621531 minus strand	1888641
MIRLET7A3	NR_029478	22	Non-coding	chr22:46112748 plus strand	1888642
MIRLET7B	NR_029479	22	Non-coding	chr22:46113685 plus strand	1888643
MIRLET7BHG	NR_027033	22	Non-coding	chr22:46085996 plus strand	1888644
MIRLET7BHG	NR_110479	22	Non-coding	chr22:46085996 plus strand	1888644
MORC2-AS1	NR_026920	22	Non-coding	chr22:30922307 plus strand	1888645
NDUFA6-AS1	NR_034118	22	Non-coding	chr22:42090932 plus strand	1888646
NDUFA6-AS1	NR_034118	22	Non-coding	chr22:42136195 plus strand	1888647
NUP50-AS1	NR_038957	22	Non-coding	chr22:45152584 minus strand	1888648
NUP50-AS1	NR_038956	22	Non-coding	chr22:45163781 minus strand	1888649
OGFRP1	NR_036498	22	Non-coding	chr22:42269752 plus strand	1888650
P2RX6P	NR_002829	22	Non-coding	chr22:21044249 minus strand	1888651
PANX2	NR_027691	22	Non-coding	chr22:50170730 plus strand	1888652
PCAT14	NR_109832	22	Non-coding	chr22:23538101 plus strand	1888653
PI4KAP1	NR_003563	22	Non-coding	chr22:18548828 minus strand	1888654
PI4KAP2	NR_003700	22	Non-coding	chr22:21517491 minus strand	1888655
PIK3IP1-AS1	NR_110542	22	Non-coding	chr22:31335348 plus strand	1888656
PIWIL3	NR_045649	22	Non-coding	chr22:24774720 minus strand	1888657
PIWIL3	NR_045648	22	Non-coding	chr22:24774720 minus strand	1888657
POLDIP3	NR_103820	22	Non-coding	chr22:42614962 minus strand	1888658
POLR2F	NR_125371	22	Non-coding	chr22:37953662 plus strand	1888659
POM121L10P	NR_024593	22	Non-coding	chr22:24659147 minus strand	1888660
POM121L1P	NR_024591	22	Non-coding	chr22:22644541 minus strand	1888661
POM121L4P	NR_024592	22	Non-coding	chr22:20689554 plus strand	1888662
POM121L8P	NR_024583	22	Non-coding	chr22:21282424 plus strand	1888663
POM121L9P	NR_003714	22	Non-coding	chr22:24251620 plus strand	1888664
POTEH-AS1	NR_046571	22	Non-coding	chr22:15703354 minus strand	1888665

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PRR34-AS1	NR_027034	22	Non-coding	chr22:46053845 plus strand	1888666
RFPL1S	NR_002727	22	Non-coding	chr22:29442129 minus strand	1888667
RFPL3S	NR_001450	22	Non-coding	chr22:32371076 minus strand	1888668
RFPL3S	NR_002596	22	Non-coding	chr22:32371076 minus strand	1888668
RFPL3S	NR_104232	22	Non-coding	chr22:32371264 minus strand	1888669
RNF185	NR_024209	22	Non-coding	chr22:31160151 plus strand	1888670
RNF185	NR_024211	22	Non-coding	chr22:31160151 plus strand	1888670
RNF185	NR_024210	22	Non-coding	chr22:31160151 plus strand	1888670
RNF185	NR_024212	22	Non-coding	chr22:31160151 plus strand	1888670
RNU12	NR_029422	22	Non-coding	chr22:42615244 plus strand	1888671
RNU6-28P	NR_046489	22	Non-coding	chr22:31479488 minus strand	1888672
RNU86	NR_000026	22	Non-coding	chr22:39316896 minus strand	1888673
RPL23AP82	NR_026981	22	Non-coding	chr22:50757085 plus strand	1888674
RPL23AP82	NR_026982	22	Non-coding	chr22:50783728 plus strand	1888675
RRP7B	NR_002184	22	Non-coding	chr22:42582011 minus strand	1888676
SDC4P	NR_001580	22	Non-coding	chr22:30481756 minus strand	1888677
SEPT5-GP1BB	NR_037611	22	Non-coding	chr22:19717219 plus strand	1888678
SEPT5-GP1BB	NR_037612	22	Non-coding	chr22:19718468 plus strand	1888679
SERHL	NR_027786	22	Non-coding	chr22:42500578 plus strand	1888680
SERHL2	NR_104300	22	Non-coding	chr22:42553861 plus strand	1888681
SERHL2	NR_104301	22	Non-coding	chr22:42553861 plus strand	1888681
SLC25A1	NR_046298	22	Non-coding	chr22:19178863 minus strand	1888682
SLC25A17	NR_104238	22	Non-coding	chr22:40819399 minus strand	1888683
SLC25A17	NR_104237	22	Non-coding	chr22:40819399 minus strand	1888683
SLC25A17	NR_104236	22	Non-coding	chr22:40819399 minus strand	1888683
SLC25A17	NR_104235	22	Non-coding	chr22:40819399 minus strand	1888683
SLC2A11	NR_104247	22	Non-coding	chr22:23856702 plus strand	1888684

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SLC2A11	NR_104248	22	Non-coding	chr22:23856702 plus strand	1888684
SNORD125	NR_003686	22	Non-coding	chr22:29333258 minus strand	1888685
SNORD43	NR_002439	22	Non-coding	chr22:39319113 minus strand	1888686
SNORD83A	NR_000027	22	Non-coding	chr22:39315307 minus strand	1888687
SNORD83B	NR_000028	22	Non-coding	chr22:39313911 minus strand	1888688
SNRPD3	NR_103819	22	Non-coding	chr22:24555649 plus strand	1888689
SPECC1L-ADORA2A	NR_103546	22	Non-coding	chr22:24270816 plus strand	1888690
SREBF2	NR_103834	22	Non-coding	chr22:41833078 plus strand	1888691
TANGO2	NR_104274	22	Non-coding	chr22:20021068 plus strand	1888692
TANGO2	NR_104275	22	Non-coding	chr22:20036759 plus strand	1888693
TBC1D22A	NR_104292	22	Non-coding	chr22:46763741 plus strand	1888694
TBC1D22A-AS1	NR_122047	22	Non-coding	chr22:46916042 minus strand	1888695
THAP7-AS1	NR_027052	22	Non-coding	chr22:21001921 plus strand	1888696
THAP7-AS1	NR_027051	22	Non-coding	chr22:21001921 plus strand	1888696
TMEM191A	NR_026815	22	Non-coding	chr22:20701113 plus strand	1888697
TOM1	NR_024194	22	Non-coding	chr22:35299803 plus strand	1888698
TOM1	NR_024195	22	Non-coding	chr22:35299803 plus strand	1888698
TOP1P2	NR_001283	22	Non-coding	chr22:24764500 plus strand	1888699
TPTEP1	NR_001591	22	Non-coding	chr22:16601910 plus strand	1888700
TRMU	NR_104240	22	Non-coding	chr22:46335400 plus strand	1888701
TRMU	NR_104241	22	Non-coding	chr22:46335400 plus strand	1888701
TSPO	NR_046308	22	Non-coding	chr22:43151513 plus strand	1888702
TTC28-AS1	NR_026963	22	Non-coding	chr22:27919375 plus strand	1888703
TTC28-AS1	NR_026962	22	Non-coding	chr22:27919375 plus strand	1888703
TTLL1	NR_027779	22	Non-coding	chr22:43089428 minus strand	1888704
TUBA3FP	NR_003608	22	Non-coding	chr22:21014287 minus strand	1888705
TUG1	NR_002323	22	Non-coding	chr22:30969210 plus strand	1888706

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TUG1	NR_110492	22	Non-coding	chr22:30969210 plus strand	1888706
TUG1	NR_110493	22	Non-coding	chr22:30969210 plus strand	1888706
UBE2L3	NR_028436	22	Non-coding	chr22:21567546 plus strand	1888707
UBE2L3	NR_046082	22	Non-coding	chr22:21567729 plus strand	1888708
ZDHHC8P1	NR_003950	22	Non-coding	chr22:23402612 minus strand	1888709
ZNF74	NR_046282	22	Non-coding	chr22:20394114 plus strand	1888710
ZNRF3-AS1	NR_046851	22	Non-coding	chr22:29031476 minus strand	1888711
AKAP17A	NR_027383	X	Non-coding	chrX:1591592 plus strand	1888712
ALG13	NR_033125	X	Non-coding	chrX:111681117 plus strand	1888713
APOO	NR_026545	X	Non-coding	chrX:23907940 minus strand	1888714
ARHGAP6	NR_109776	X	Non-coding	chrX:11665701 minus strand	1888715
ARHGEF9-IT1	NR_046803	X	Non-coding	chrX:63671502 minus strand	1888716
ARL13A	NR_103708	X	Non-coding	chrX:100969707 plus strand	1888717
ARL13A	NR_103709	X	Non-coding	chrX:100969707 plus strand	1888717
ARMCX4	NR_028407	X	Non-coding	chrX:101418262 plus strand	1888718
ARMCX4	NR_045861	X	Non-coding	chrX:101485253 plus strand	1888719
ARMCX4	NR_045862	X	Non-coding	chrX:101485253 plus strand	1888719
ARMCX4	NR_045863	X	Non-coding	chrX:101485253 plus strand	1888719
ARMCX4	NR_045864	X	Non-coding	chrX:101485253 plus strand	1888719
ARMCX6	NR_033669	X	Non-coding	chrX:101618001 minus strand	1888720
ARMCX6	NR_033670	X	Non-coding	chrX:101618001 minus strand	1888720
ASMTL-AS1	NR_026710	X	Non-coding	chrX:1400530 plus strand	1888721
ASMTL-AS1	NR_026711	X	Non-coding	chrX:1400530 plus strand	1888721
ATP7A	NR_104109	X	Non-coding	chrX:77910655 plus strand	1888722
AVPR2	NR_027419	X	Non-coding	chrX:153902530 plus strand	1888723
BRDTP1	NR_003539	X	Non-coding	chrX:96337902 minus strand	1888724
CA5BP1	NR_026551	X	Non-coding	chrX:15674915 plus strand	1888725

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CD99P1	NR_033380	X	Non-coding	chrX:2609264 plus strand	1888726
CD99P1	NR_033381	X	Non-coding	chrX:2609264 plus strand	1888726
CENPVP1	NR_033772	X	Non-coding	chrX:51682514 minus strand	1888727
CENPVP1	NR_033772	X	Non-coding	chrX:51710828 plus strand	1888728
CENPVP2	NR_033773	X	Non-coding	chrX:51682514 minus strand	1888729
CENPVP2	NR_033773	X	Non-coding	chrX:51710828 plus strand	1888730
CHMP1B2P	NR_110646	X	Non-coding	chrX:80335318 minus strand	1888731
CRLF2	NR_110830	X	Non-coding	chrX:1212723 minus strand	1888732
CSAG4	NR_073432	X	Non-coding	chrX:152733826 plus strand	1888733
CSF2RA	NR_027760	X	Non-coding	chrX:1268799 plus strand	1888734
CXorf65	NR_033212	X	Non-coding	chrX:71106788 minus strand	1888735
CXXC1P1	NR_033924	X	Non-coding	chrX:47707190 plus strand	1888736
DDX11L16	NR_110561	X	Non-coding	chrX:156028183 minus strand	1888737
DDX26B-AS1	NR_046740	X	Non-coding	chrX:135520674 minus strand	1888738
DDX3X	NR_126093	X	Non-coding	chrX:41333307 plus strand	1888739
DDX3X	NR_126094	X	Non-coding	chrX:41334161 plus strand	1888740
DIAPH2-AS1	NR_125391	X	Non-coding	chrX:97564535 minus strand	1888741
DKC1	NR_110021	X	Non-coding	chrX:154762741 plus strand	1888742
DKC1	NR_110022	X	Non-coding	chrX:154762741 plus strand	1888742
DKC1	NR_110023	X	Non-coding	chrX:154762741 plus strand	1888742
DLG3-AS1	NR_046586	X	Non-coding	chrX:70455826 minus strand	1888743
DLG3-AS1	NR_109801	X	Non-coding	chrX:70455994 minus strand	1888744
EIF1AX-AS1	NR_046592	X	Non-coding	chrX:20139967 plus strand	1888745
FAM104B	NR_030722	X	Non-coding	chrX:55161195 minus strand	1888746
FAM223A	NR_027401	X	Non-coding	chrX:154571247 plus strand	1888747
FAM223A	NR_027401	X	Non-coding	chrX:154633182 minus strand	1888748
FAM223B	NR_027402	X	Non-coding	chrX:154571247 plus strand	1888749

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FAM223B	NR_027402	X	Non-coding	chrX:154633182 minus strand	1888750
FAM226A	NR_026595	X	Non-coding	chrX:72777072 plus strand	1888751
FAM226A	NR_026595	X	Non-coding	chrX:72943750 minus strand	1888752
FAM226B	NR_026594	X	Non-coding	chrX:72777072 plus strand	1888753
FAM226B	NR_026594	X	Non-coding	chrX:72943750 minus strand	1888754
FAM45B	NR_027141	X	Non-coding	chrX:130494940 plus strand	1888755
FGF13-AS1	NR_038405	X	Non-coding	chrX:138712106 plus strand	1888756
FHL1	NR_027621	X	Non-coding	chrX:136146701 plus strand	1888757
FIRRE	NR_026975	X	Non-coding	chrX:131830643 minus strand	1888758
FMR1	NR_033699	X	Non-coding	chrX:147911950 plus strand	1888759
FMR1	NR_033700	X	Non-coding	chrX:147911950 plus strand	1888759
FMR1-AS1	NR_024499	X	Non-coding	chrX:147922158 minus strand	1888760
FMR1-AS1	NR_024500	X	Non-coding	chrX:147922158 minus strand	1888760
FMR1-AS1	NR_024501	X	Non-coding	chrX:147922158 minus strand	1888760
FMR1-AS1	NR_024502	X	Non-coding	chrX:147922158 minus strand	1888760
FMR1-AS1	NR_024503	X	Non-coding	chrX:147922158 minus strand	1888760
FRMD8P1	NR_033742	X	Non-coding	chrX:65552421 minus strand	1888761
FRMPD3-AS1	NR_046750	X	Non-coding	chrX:107545821 minus strand	1888762
FTX	NR_028379	X	Non-coding	chrX:74293574 minus strand	1888763
GAB3	NR_104114	X	Non-coding	chrX:154751583 minus strand	1888764
GAGE1	NR_102272	X	Non-coding	chrX:49599012 plus strand	1888765
GS1-600G8.3	NR_046087	X	Non-coding	chrX:13310651 plus strand	1888766
H2BFXP	NR_003238	X	Non-coding	chrX:103975923 plus strand	1888767
H2BFXP	NR_003238	X	Non-coding	chrX:104062938 minus strand	1888768
HAUS7	NR_073156	X	Non-coding	chrX:153495525 minus strand	1888769
HCFC1-AS1	NR_046608	X	Non-coding	chrX:153968764 plus strand	1888770
HDAC8	NR_051952	X	Non-coding	chrX:72573103 minus strand	1888771

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HS6ST2-AS1	NR_046691	X	Non-coding	chrX:132667641 plus strand	1888772
IDS	NR_104128	X	Non-coding	chrX:149505354 minus strand	1888773
INE1	NR_024616	X	Non-coding	chrX:47204847 plus strand	1888774
INE2	NR_002725	X	Non-coding	chrX:15787589 minus strand	1888775
INGX	NR_002226	X	Non-coding	chrX:71492449 minus strand	1888776
JPX	NR_024582	X	Non-coding	chrX:73944323 plus strand	1888777
KANTR	NR_110456	X	Non-coding	chrX:53094156 plus strand	1888778
KDM6A	NR_111960	X	Non-coding	chrX:44873174 plus strand	1888779
LINC00086	NR_024359	X	Non-coding	chrX:135421942 plus strand	1888780
LINC00087	NR_024493	X	Non-coding	chrX:135098703 minus strand	1888781
LINC00102	NR_037842	X	Non-coding	chrX:2615347 minus strand	1888782
LINC00269	NR_103715	X	Non-coding	chrX:69179556 plus strand	1888783
LINC00629	NR_038998	X	Non-coding	chrX:134550023 plus strand	1888784
LINC00630	NR_038988	X	Non-coding	chrX:102769166 plus strand	1888785
LINC00632	NR_028344	X	Non-coding	chrX:140709758 plus strand	1888786
LINC00632	NR_028345	X	Non-coding	chrX:140709758 plus strand	1888786
LINC00632	NR_104228	X	Non-coding	chrX:140709758 plus strand	1888786
LINC00633	NR_033941	X	Non-coding	chrX:135120477 minus strand	1888787
LINC00684	NR_034116	X	Non-coding	chrX:72782660 minus strand	1888788
LINC00684	NR_120499	X	Non-coding	chrX:72782660 minus strand	1888788
LINC00684	NR_034116	X	Non-coding	chrX:72938162 plus strand	1888789
LINC00684	NR_120499	X	Non-coding	chrX:72938162 plus strand	1888789
LINC00685	NR_027231	X	Non-coding	chrX:319144 plus strand	1888790
LINC00685	NR_027232	X	Non-coding	chrX:319144 plus strand	1888790
LINC00850	NR_109813	X	Non-coding	chrX:149825707 plus strand	1888791
LINC00889	NR_026935	X	Non-coding	chrX:138617638 minus strand	1888792
LINC00890	NR_033974	X	Non-coding	chrX:111511661 plus strand	1888793

【１８３９】

LINC00891	NR_034005	X	Non-coding	chrX:71697195 plus strand	1888794
LINC00891	NR_034005	X	Non-coding	chrX:71784378 minus strand	1888795
LINC00892	NR_038461	X	Non-coding	chrX:136639542 plus strand	1888796
LINC00892	NR_038462	X	Non-coding	chrX:136639542 plus strand	1888796
LINC00893	NR_027455	X	Non-coding	chrX:149539752 minus strand	1888797
LINC00894	NR_027456	X	Non-coding	chrX:149938547 plus strand	1888798
LINC01186	NR_110388	X	Non-coding	chrX:46327674 minus strand	1888799
LINC01201	NR_126350	X	Non-coding	chrX:131058146 minus strand	1888800
LINC01203	NR_045260	X	Non-coding	chrX:13335240 plus strand	1888801
LINC01204	NR_104644	X	Non-coding	chrX:45505387 plus strand	1888802
LINC01204	NR_104645	X	Non-coding	chrX:45505387 plus strand	1888802
LINC01278	NR_015353	X	Non-coding	chrX:63560993 minus strand	1888803
LINC01281	NR_038968	X	Non-coding	chrX:39327362 minus strand	1888804
LINC01282	NR_110385	X	Non-coding	chrX:39391774 minus strand	1888805
LINC01284	NR_110382	X	Non-coding	chrX:51171400 minus strand	1888806
LINC01285	NR_110393	X	Non-coding	chrX:118839555 plus strand	1888807
LINC01402	NR_126557	X	Non-coding	chrX:120119700 minus strand	1888808
LINC01420	NR_015367	X	Non-coding	chrX:56729284 plus strand	1888809
LINC01496	NR_110654	X	Non-coding	chrX:51507441 minus strand	1888810
LINC01545	NR_046101	X	Non-coding	chrX:46899704 minus strand	1888811
LINC01546	NR_038428	X	Non-coding	chrX:3271819 plus strand	1888812
LINC01560	NR_126059	X	Non-coding	chrX:47482715 plus strand	1888813
LOC100132304	NR_120493	X	Non-coding	chrX:72782660 minus strand	1888814
LOC100132304	NR_120494	X	Non-coding	chrX:72782660 minus strand	1888814
LOC100132304	NR_120493	X	Non-coding	chrX:72938162 plus strand	1888815
LOC100132304	NR_120494	X	Non-coding	chrX:72938162 plus strand	1888815
LOC100132741	NR_034004	X	Non-coding	chrX:71697195 plus strand	1888816

【１８４０】

LOC100132741	NR_034004	X	Non-coding	chrX:71784378 minus strand	1888817
LOC100132831	NR_027761	X	Non-coding	chrX:40833196 minus strand	1888818
LOC100287728	NR_103770	X	Non-coding	chrX:135120620 plus strand	1888819
LOC100506790	NR_104652	X	Non-coding	chrX:135396428 plus strand	1888820
LOC101927476	NR_110386	X	Non-coding	chrX:40262916 plus strand	1888821
LOC101927501	NR_110387	X	Non-coding	chrX:43176993 plus strand	1888822
LOC101927830	NR_109985	X	Non-coding	chrX:155374174 minus strand	1888823
LOC101927830	NR_109985	X	Non-coding	chrX:155466539 plus strand	1888824
LOC101928128	NR_110651	X	Non-coding	chrX:85210705 plus strand	1888825
LOC101928201	NR_110390	X	Non-coding	chrX:4633572 minus strand	1888826
LOC101928259	NR_110391	X	Non-coding	chrX:72688948 plus strand	1888827
LOC101928335	NR_110395	X	Non-coding	chrX:107935980 minus strand	1888828
LOC101928336	NR_110396	X	Non-coding	chrX:119291528 plus strand	1888829
LOC101928358	NR_110652	X	Non-coding	chrX:108736539 plus strand	1888830
LOC101928437	NR_110399	X	Non-coding	chrX:113042726 plus strand	1888831
LOC101928495	NR_110409	X	Non-coding	chrX:126109761 plus strand	1888832
LOC101928564	NR_104642	X	Non-coding	chrX:35993280 plus strand	1888833
LOC104798195	NR_126564	X	Non-coding	chrX:15602880 plus strand	1888834
LOC158960	NR_103768	X	Non-coding	chrX:154428479 minus strand	1888835
LOC286437	NR_039980	X	Non-coding	chrX:104124632 minus strand	1888836
LOC389906	NR_034031	X	Non-coding	chrX:3843894 minus strand	1888837
LOC392452	NR_102268	X	Non-coding	chrX:45731087 plus strand	1888838
LOC401585	NR_125365	X	Non-coding	chrX:45851490 minus strand	1888839
LOC729609	NR_024440	X	Non-coding	chrX:19989779 minus strand	1888840
LONRF3	NR_110311	X	Non-coding	chrX:118974613 plus strand	1888841
MAGEA8-AS1	NR_102703	X	Non-coding	chrX:149897006 minus strand	1888842
MAP2K4P1	NR_029423	X	Non-coding	chrX:73563085 minus strand	1888843

【１８４１】

MID1IP1-AS1	NR_046706	X	Non-coding	chrX:38803883 minus strand	1888844
MIR105-1	NR_029521	X	Non-coding	chrX:152392299 minus strand	1888845
MIR105-2	NR_029522	X	Non-coding	chrX:152394492 minus strand	1888846
MIR106A	NR_029523	X	Non-coding	chrX:134170278 minus strand	1888847
MIR1184-1	NR_036049	X	Non-coding	chrX:154887458 minus strand	1888848
MIR1184-1	NR_036049	X	Non-coding	chrX:155383198 minus strand	1888849
MIR1184-1	NR_036049	X	Non-coding	chrX:155457516 plus strand	1888850
MIR1184-2	NR_036259	X	Non-coding	chrX:154887458 minus strand	1888851
MIR1184-2	NR_036259	X	Non-coding	chrX:155383198 minus strand	1888852
MIR1184-2	NR_036259	X	Non-coding	chrX:155457516 plus strand	1888853
MIR1184-3	NR_036260	X	Non-coding	chrX:154887458 minus strand	1888854
MIR1184-3	NR_036260	X	Non-coding	chrX:155383198 minus strand	1888855
MIR1184-3	NR_036260	X	Non-coding	chrX:155457516 plus strand	1888856
MIR1264	NR_031563	X	Non-coding	chrX:114652654 plus strand	1888857
MIR1277	NR_031685	X	Non-coding	chrX:118386393 plus strand	1888858
MIR1298	NR_031578	X	Non-coding	chrX:114715232 plus strand	1888859
MIR1321	NR_031710	X	Non-coding	chrX:85835779 plus strand	1888860
MIR1468	NR_031567	X	Non-coding	chrX:63786087 minus strand	1888861
MIR1587	NR_039763	X	Non-coding	chrX:39837560 plus strand	1888862
MIR188	NR_029708	X	Non-coding	chrX:50003502 plus strand	1888863
MIR18B	NR_029949	X	Non-coding	chrX:134170111 minus strand	1888864
MIR1911	NR_031732	X	Non-coding	chrX:114763183 plus strand	1888865
MIR1912	NR_031733	X	Non-coding	chrX:114651543 plus strand	1888866
MIR19B2	NR_029491	X	Non-coding	chrX:134169766 minus strand	1888867
MIR20B	NR_029950	X	Non-coding	chrX:134169877 minus strand	1888868
MIR2114	NR_031748	X	Non-coding	chrX:150228003 plus strand	1888869
MIR221	NR_029635	X	Non-coding	chrX:45746266 minus strand	1888870

【１８４２】

MIR222	NR_029636	X	Non-coding	chrX:45747124 minus strand	1888871
MIR223	NR_029637	X	Non-coding	chrX:66018869 plus strand	1888872
MIR224	NR_029638	X	Non-coding	chrX:151958658 minus strand	1888873
MIR23C	NR_037414	X	Non-coding	chrX:20017187 minus strand	1888874
MIR3202-1	NR_036174	X	Non-coding	chrX:153981096 plus strand	1888875
MIR3202-2	NR_036175	X	Non-coding	chrX:153981176 minus strand	1888876
MIR320D2	NR_031725	X	Non-coding	chrX:140926219 minus strand	1888877
MIR325	NR_029905	X	Non-coding	chrX:77005501 minus strand	1888878
MIR325HG	NR_110400	X	Non-coding	chrX:77014532 minus strand	1888879
MIR325HG	NR_110401	X	Non-coding	chrX:77014532 minus strand	1888879
MIR325HG	NR_110402	X	Non-coding	chrX:77014532 minus strand	1888879
MIR325HG	NR_110403	X	Non-coding	chrX:77014532 minus strand	1888879
MIR325HG	NR_110404	X	Non-coding	chrX:77014532 minus strand	1888879
MIR325HG	NR_110405	X	Non-coding	chrX:77014532 minus strand	1888879
MIR325HG	NR_110406	X	Non-coding	chrX:77014532 minus strand	1888879
MIR361	NR_029848	X	Non-coding	chrX:85903707 minus strand	1888880
MIR362	NR_029850	X	Non-coding	chrX:50008963 plus strand	1888881
MIR363	NR_029852	X	Non-coding	chrX:134169452 minus strand	1888882
MIR3672	NR_037444	X	Non-coding	chrX:121370971 plus strand	1888883
MIR3690	NR_037461	X	Non-coding	chrX:1293917 plus strand	1888884
MIR374A	NR_030785	X	Non-coding	chrX:74287357 minus strand	1888885
MIR374B	NR_030620	X	Non-coding	chrX:74218618 minus strand	1888886
MIR374C	NR_037511	X	Non-coding	chrX:74218548 plus strand	1888887
MIR384	NR_029909	X	Non-coding	chrX:76919360 minus strand	1888888
MIR3915	NR_037478	X	Non-coding	chrX:32583752 minus strand	1888889
MIR3937	NR_037501	X	Non-coding	chrX:39661215 plus strand	1888890
MIR3978	NR_039774	X	Non-coding	chrX:110082117 plus strand	1888891

【１８４３】

MIR421	NR_030398	X	Non-coding	chrX:74218461 minus strand	1888892
MIR424	NR_029946	X	Non-coding	chrX:134546711 minus strand	1888893
MIR4328	NR_036258	X	Non-coding	chrX:78901249 minus strand	1888894
MIR4329	NR_036255	X	Non-coding	chrX:112780788 minus strand	1888895
MIR4330	NR_036256	X	Non-coding	chrX:151168221 plus strand	1888896
MIR4454	NR_039659	X	Non-coding	chrX:109870400 plus strand	1888897
MIR4454	NR_039659	X	Non-coding	chrX:92824903 minus strand	1888898
MIR448	NR_029955	X	Non-coding	chrX:114823453 plus strand	1888899
MIR450A1	NR_029962	X	Non-coding	chrX:134540431 minus strand	1888900
MIR450A2	NR_030227	X	Non-coding	chrX:134540607 minus strand	1888901
MIR450B	NR_030587	X	Non-coding	chrX:134540262 minus strand	1888902
MIR452	NR_029973	X	Non-coding	chrX:151959712 minus strand	1888903
MIR4536-1	NR_039764	X	Non-coding	chrX:55451459 plus strand	1888904
MIR4666B	NR_049877	X	Non-coding	chrX:29574277 plus strand	1888905
MIR4767	NR_039924	X	Non-coding	chrX:7147859 plus strand	1888906
MIR4768	NR_039925	X	Non-coding	chrX:17425880 plus strand	1888907
MIR4769	NR_039926	X	Non-coding	chrX:47587428 plus strand	1888908
MIR4770	NR_039927	X	Non-coding	chrX:6383963 minus strand	1888909
MIR500A	NR_030224	X	Non-coding	chrX:50008430 plus strand	1888910
MIR500B	NR_036257	X	Non-coding	chrX:50010671 plus strand	1888911
MIR501	NR_030225	X	Non-coding	chrX:50009721 plus strand	1888912
MIR502	NR_030226	X	Non-coding	chrX:50014597 plus strand	1888913
MIR503	NR_030228	X	Non-coding	chrX:134546398 minus strand	1888914
MIR503HG	NR_024607	X	Non-coding	chrX:134546630 minus strand	1888915
MIR504	NR_030229	X	Non-coding	chrX:138667793 minus strand	1888916
MIR505	NR_030230	X	Non-coding	chrX:139924231 minus strand	1888917
MIR506	NR_030233	X	Non-coding	chrX:147230843 minus strand	1888918

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MIR507	NR_030234	X	Non-coding	chrX:147231077 minus strand	1888919
MIR508	NR_030235	X	Non-coding	chrX:147237027 minus strand	1888920
MIR509-1	NR_030236	X	Non-coding	chrX:147258850 minus strand	1888921
MIR509-1	NR_030236	X	Non-coding	chrX:147260625 minus strand	1888922
MIR509-2	NR_030586	X	Non-coding	chrX:147258850 minus strand	1888923
MIR509-2	NR_030586	X	Non-coding	chrX:147260625 minus strand	1888924
MIR509-3	NR_030629	X	Non-coding	chrX:147258840 minus strand	1888925
MIR509-3	NR_030629	X	Non-coding	chrX:147259726 minus strand	1888926
MIR509-3	NR_030629	X	Non-coding	chrX:147260615 minus strand	1888927
MIR510	NR_030237	X	Non-coding	chrX:147272408 minus strand	1888928
MIR513A1	NR_030231	X	Non-coding	chrX:147213591 minus strand	1888929
MIR513A2	NR_030232	X	Non-coding	chrX:147225952 minus strand	1888930
MIR513B	NR_031708	X	Non-coding	chrX:147199127 minus strand	1888931
MIR513C	NR_031709	X	Non-coding	chrX:147189787 minus strand	1888932
MIR514A1	NR_030238	X	Non-coding	chrX:147279344 minus strand	1888933
MIR514A2	NR_030239	X	Non-coding	chrX:147282030 minus strand	1888934
MIR514A2	NR_030239	X	Non-coding	chrX:147284728 minus strand	1888935
MIR514A3	NR_030240	X	Non-coding	chrX:147282030 minus strand	1888936
MIR514A3	NR_030240	X	Non-coding	chrX:147284728 minus strand	1888937
MIR514B	NR_036173	X	Non-coding	chrX:147250230 minus strand	1888938
MIR532	NR_030241	X	Non-coding	chrX:50003147 plus strand	1888939
MIR542	NR_030399	X	Non-coding	chrX:134541437 minus strand	1888940
MIR545	NR_030258	X	Non-coding	chrX:74287209 minus strand	1888941
MIR548AJ2	NR_039674	X	Non-coding	chrX:38023986 minus strand	1888942
MIR548AM	NR_039762	X	Non-coding	chrX:16627085 minus strand	1888943
MIR548AN	NR_039765	X	Non-coding	chrX:106639813 plus strand	1888944
MIR548AX	NR_049865	X	Non-coding	chrX:11318686 minus strand	1888945

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MIR548F5	NR_031646	X	Non-coding	chrX:32641559 minus strand	1888946
MIR548I4	NR_031690	X	Non-coding	chrX:84225828 minus strand	1888947
MIR548M	NR_031667	X	Non-coding	chrX:95063226 minus strand	1888948
MIR6086	NR_106734	X	Non-coding	chrX:13590291 plus strand	1888949
MIR6087	NR_106735	X	Non-coding	chrX:109054541 plus strand	1888950
MIR6089	NR_106737	X	Non-coding	chrX:2609190 plus strand	1888951
MIR6134	NR_106750	X	Non-coding	chrX:28495663 minus strand	1888952
MIR651	NR_030380	X	Non-coding	chrX:8126964 plus strand	1888953
MIR652	NR_030381	X	Non-coding	chrX:110055328 plus strand	1888954
MIR660	NR_030397	X	Non-coding	chrX:50013240 plus strand	1888955
MIR664B	NR_049842	X	Non-coding	chrX:154768595 plus strand	1888956
MIR676	NR_037494	X	Non-coding	chrX:70022856 plus strand	1888957
MIR6857	NR_106916	X	Non-coding	chrX:53405765 minus strand	1888958
MIR6858	NR_106917	X	Non-coding	chrX:154450319 plus strand	1888959
MIR6894	NR_106954	X	Non-coding	chrX:53198945 minus strand	1888960
MIR6895	NR_106955	X	Non-coding	chrX:53195488 minus strand	1888961
MIR718	NR_031757	X	Non-coding	chrX:154019989 minus strand	1888962
MIR764	NR_031581	X	Non-coding	chrX:114639434 plus strand	1888963
MIR7641-2	NR_106988	X	Non-coding	chrX:41292836 plus strand	1888964
MIR766	NR_030413	X	Non-coding	chrX:119646848 minus strand	1888965
MIR767	NR_030409	X	Non-coding	chrX:152393529 minus strand	1888966
MIR8088	NR_107055	X	Non-coding	chrX:52336642 minus strand	1888967
MIR888	NR_030592	X	Non-coding	chrX:145994860 minus strand	1888968
MIR890	NR_030589	X	Non-coding	chrX:145994351 minus strand	1888969
MIR891A	NR_030581	X	Non-coding	chrX:146027872 minus strand	1888970
MIR891B	NR_030590	X	Non-coding	chrX:146001131 minus strand	1888971
MIR892A	NR_030584	X	Non-coding	chrX:145996743 minus strand	1888972

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MIR892B	NR_030593	X	Non-coding	chrX:145997274 minus strand	1888973
MIR892C	NR_106783	X	Non-coding	chrX:145992826 minus strand	1888974
MIR92A2	NR_029509	X	Non-coding	chrX:134169612 minus strand	1888975
MIR934	NR_030631	X	Non-coding	chrX:136550877 plus strand	1888976
MIR98	NR_029513	X	Non-coding	chrX:53556341 minus strand	1888977
MIRLET7F2	NR_029484	X	Non-coding	chrX:53557274 minus strand	1888978
MORF4L2-AS1	NR_038978	X	Non-coding	chrX:103687283 plus strand	1888979
NAP1L6	NR_027291	X	Non-coding	chrX:73128080 minus strand	1888980
NHS-AS1	NR_046632	X	Non-coding	chrX:17559127 minus strand	1888981
NKAPP1	NR_027131	X	Non-coding	chrX:120245267 minus strand	1888982
NUP62CL	NR_033676	X	Non-coding	chrX:107206440 minus strand	1888983
NXF4	NR_002216	X	Non-coding	chrX:102549964 plus strand	1888984
NXF5	NR_028089	X	Non-coding	chrX:101857577 minus strand	1888985
PABPC1L2B-AS1	NR_110398	X	Non-coding	chrX:73002856 minus strand	1888986
PABPC1L2B-AS1	NR_110398	X	Non-coding	chrX:73080166 plus strand	1888987
PABPC5-AS1	NR_110659	X	Non-coding	chrX:91434999 minus strand	1888988
PAGE3	NR_033460	X	Non-coding	chrX:55264732 minus strand	1888989
PCYT1B-AS1	NR_046638	X	Non-coding	chrX:24650072 plus strand	1888990
PFKFB1	NR_073450	X	Non-coding	chrX:54994078 minus strand	1888991
PHEX-AS1	NR_046639	X	Non-coding	chrX:22172983 minus strand	1888992
PHKA2-AS1	NR_029379	X	Non-coding	chrX:18890295 plus strand	1888993
PIGA	NR_033835	X	Non-coding	chrX:15335554 minus strand	1888994
PIGA	NR_033836	X	Non-coding	chrX:15335554 minus strand	1888994
PIN4	NR_033187	X	Non-coding	chrX:72181675 plus strand	1888995
PIR-FIGF	NR_037859	X	Non-coding	chrX:15491309 minus strand	1888996
PLCXD1	NR_028057	X	Non-coding	chrX:276323 plus strand	1888997
PLS3-AS1	NR_110383	X	Non-coding	chrX:115562731 minus strand	1888998

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PLS3-AS1	NR_110384	X	Non-coding	chrX:115562731 minus strand	1888998
PPEF1-AS1	NR_046642	X	Non-coding	chrX:18692687 minus strand	1888999
PPP1R2P9	NR_002191	X	Non-coding	chrX:42778235 minus strand	1889000
PRKX-AS1	NR_046643	X	Non-coding	chrX:3659486 plus strand	1889001
PRRG3	NR_033262	X	Non-coding	chrX:151698306 plus strand	1889002
PTCHD1-AS	NR_073010	X	Non-coding	chrX:23293146 minus strand	1889003
RAI2	NR_033348	X	Non-coding	chrX:17860827 minus strand	1889004
RAI2	NR_033349	X	Non-coding	chrX:17860827 minus strand	1889004
RAP2C	NR_073150	X	Non-coding	chrX:132219480 minus strand	1889005
RAP2C-AS1	NR_110410	X	Non-coding	chrX:132218506 plus strand	1889006
RBMX	NR_028476	X	Non-coding	chrX:136880780 minus strand	1889007
RBMX	NR_028477	X	Non-coding	chrX:136880780 minus strand	1889007
RNU6-1	NR_004394	X	Non-coding	chrX:141118136 minus strand	1889008
RNU6-2	NR_125730	X	Non-coding	chrX:141118136 minus strand	1889009
RNU6-30P	NR_046490	X	Non-coding	chrX:101634112 minus strand	1889010
RNU6-7	NR_104084	X	Non-coding	chrX:141118136 minus strand	1889011
RNU6-8	NR_104088	X	Non-coding	chrX:141118136 minus strand	1889012
RNU6-9	NR_104080	X	Non-coding	chrX:141118136 minus strand	1889013
RP11-87M18.2	NR_110412	X	Non-coding	chrX:36440292 minus strand	1889014
RPS26P11	NR_002309	X	Non-coding	chrX:72044408 plus strand	1889015
SAT1	NR_027783	X	Non-coding	chrX:23783157 plus strand	1889016
SCARNA23	NR_003007	X	Non-coding	chrX:24744440 plus strand	1889017
SCARNA9L	NR_023358	X	Non-coding	chrX:20136413 minus strand	1889018
SCML2	NR_033717	X	Non-coding	chrX:18354724 minus strand	1889019
SHROOM4	NR_027121	X	Non-coding	chrX:50814044 minus strand	1889020
SLC25A14	NR_104107	X	Non-coding	chrX:130339887 plus strand	1889021
SLC25A5-AS1	NR_028443	X	Non-coding	chrX:119469120 minus strand	1889022

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SMEK3P	NR_002784	X	Non-coding	chrX:27463341 minus strand	1889023
SMPX	NR_045617	X	Non-coding	chrX:21758160 minus strand	1889024
SNORA11	NR_002953	X	Non-coding	chrX:54814369 plus strand	1889025
SNORA11C	NR_003710	X	Non-coding	chrX:47388649 plus strand	1889026
SNORA11D	NR_003711	X	Non-coding	chrX:52063473 minus strand	1889027
SNORA11D	NR_003711	X	Non-coding	chrX:52190621 plus strand	1889028
SNORA11E	NR_102368	X	Non-coding	chrX:52063473 minus strand	1889029
SNORA11E	NR_102368	X	Non-coding	chrX:52190621 plus strand	1889030
SNORA35	NR_002993	X	Non-coding	chrX:114630796 plus strand	1889031
SNORA36A	NR_002969	X	Non-coding	chrX:154768527 plus strand	1889032
SNORA56	NR_002984	X	Non-coding	chrX:154774997 plus strand	1889033
SNORA69	NR_002584	X	Non-coding	chrX:119787484 minus strand	1889034
SNORA70	NR_000011	X	Non-coding	chrX:154400280 plus strand	1889035
SNORD61	NR_002735	X	Non-coding	chrX:136879271 minus strand	1889036
SNORD96B	NR_004379	X	Non-coding	chrX:110225060 minus strand	1889037
SPANXA2-OT1	NR_037183	X	Non-coding	chrX:141502848 plus strand	1889038
SPIN3	NR_027139	X	Non-coding	chrX:56995555 minus strand	1889039
SRD5A1P1	NR_028597	X	Non-coding	chrX:139446818 plus strand	1889040
SSR4	NR_037927	X	Non-coding	chrX:153794448 plus strand	1889041
SSX6	NR_028366	X	Non-coding	chrX:48107981 plus strand	1889042
SSX8	NR_027250	X	Non-coding	chrX:52622934 plus strand	1889043
SSX9	NR_073393	X	Non-coding	chrX:48306179 minus strand	1889044
SYAP1	NR_033181	X	Non-coding	chrX:16719583 plus strand	1889045
SYP-AS1	NR_046649	X	Non-coding	chrX:49198838 plus strand	1889046
TAF1	NR_104387	X	Non-coding	chrX:71366238 plus strand	1889047
TAF1	NR_104388	X	Non-coding	chrX:71366238 plus strand	1889047
TAF1	NR_104389	X	Non-coding	chrX:71366238 plus strand	1889047

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TAF1	NR_104390	X	Non-coding	chrX:71366238 plus strand	1889047
TAF1	NR_104391	X	Non-coding	chrX:71366238 plus strand	1889047
TAF1	NR_104392	X	Non-coding	chrX:71366238 plus strand	1889047
TAF1	NR_104393	X	Non-coding	chrX:71366238 plus strand	1889047
TAF1	NR_104394	X	Non-coding	chrX:71366238 plus strand	1889047
TAF1	NR_104395	X	Non-coding	chrX:71366238 plus strand	1889047
TAF1	NR_104396	X	Non-coding	chrX:71491995 plus strand	1889048
TAZ	NR_024048	X	Non-coding	chrX:154411540 plus strand	1889049
TDGF1P3	NR_002718	X	Non-coding	chrX:110520311 plus strand	1889050
TLR8-AS1	NR_030727	X	Non-coding	chrX:12943300 minus strand	1889051
TMEM185A	NR_104121	X	Non-coding	chrX:149631912 minus strand	1889052
TMLHE-AS1	NR_039991	X	Non-coding	chrX:155374174 minus strand	1889053
TMLHE-AS1	NR_039991	X	Non-coding	chrX:155466539 plus strand	1889054
TRO	NR_073148	X	Non-coding	chrX:54920562 plus strand	1889055
TRO	NR_073149	X	Non-coding	chrX:54920562 plus strand	1889055
TSIX	NR_003255	X	Non-coding	chrX:73792204 plus strand	1889056
TTC3P1	NR_030737	X	Non-coding	chrX:75743079 minus strand	1889057
UBE2DNL	NR_024062	X	Non-coding	chrX:84934150 plus strand	1889058
UBE2E4P	NR_110506	X	Non-coding	chrX:14244264 plus strand	1889059
UBE2NL	NR_121210	X	Non-coding	chrX:143884070 plus strand	1889060
UPRT	NR_030774	X	Non-coding	chrX:75274058 plus strand	1889061
UQCRBP1	NR_002308	X	Non-coding	chrX:56737584 minus strand	1889062
USP27X-AS1	NR_026742	X	Non-coding	chrX:49879356 minus strand	1889063
UXT	NR_045559	X	Non-coding	chrX:47659180 minus strand	1889064
UXT	NR_045560	X	Non-coding	chrX:47659180 minus strand	1889064
UXT-AS1	NR_028119	X	Non-coding	chrX:47658832 plus strand	1889065
VAMP7	NR_033714	X	Non-coding	chrX:155881279 plus strand	1889066

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VAMP7	NR_033715	X	Non-coding	chrX:155881279 plus strand	1889066
VENTXP1	NR_001559	X	Non-coding	chrX:26558336 plus strand	1889067
WDR13	NR_029427	X	Non-coding	chrX:48597491 plus strand	1889068
XAGE1B	NR_033254	X	Non-coding	chrX:52495876 plus strand	1889069
XAGE1B	NR_033254	X	Non-coding	chrX:52517012 minus strand	1889070
XAGE1E	NR_033257	X	Non-coding	chrX:52495876 plus strand	1889071
XAGE1E	NR_033257	X	Non-coding	chrX:52517012 minus strand	1889072
XGY2	NR_003254	X	Non-coding	chrX:2752295 plus strand	1889073
XIAP	NR_037916	X	Non-coding	chrX:123860166 plus strand	1889074
XIST	NR_001564	X	Non-coding	chrX:73852753 minus strand	1889075
XRCC6P5	NR_024608	X	Non-coding	chrX:99939843 minus strand	1889076
ZC4H2	NR_045044	X	Non-coding	chrX:64976533 minus strand	1889077
ZCCHC18	NR_026694	X	Non-coding	chrX:104112525 plus strand	1889078
ZFX-AS1	NR_046657	X	Non-coding	chrX:24149654 minus strand	1889079
ZNF630-AS1	NR_046742	X	Non-coding	chrX:48056309 plus strand	1889080
ZNF674-AS1	NR_015378	X	Non-coding	chrX:46545489 plus strand	1889081
ZNF75D	NR_110381	X	Non-coding	chrX:135344087 minus strand	1889082
AKAP17A	NR_027383	Y	Non-coding	chrY:1591592 plus strand	1889083
ASMTL-AS1	NR_026711	Y	Non-coding	chrY:1400530 plus strand	1889084
ASMTL-AS1	NR_026710	Y	Non-coding	chrY:1400530 plus strand	1889084
BCORP1	NR_033732	Y	Non-coding	chrY:19503153 minus strand	1889085
BCORP1	NR_002923	Y	Non-coding	chrY:19503153 minus strand	1889085
CD99P1	NR_033381	Y	Non-coding	chrY:2609264 plus strand	1889086
CD99P1	NR_033380	Y	Non-coding	chrY:2609264 plus strand	1889086
CRLF2	NR_110830	Y	Non-coding	chrY:1212723 minus strand	1889087
CSF2RA	NR_027760	Y	Non-coding	chrY:1268799 plus strand	1889088
CSPG4P1Y	NR_001554	Y	Non-coding	chrY:24187231 minus strand	1889089

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CSPG4P1Y	NR_001554	Y	Non-coding	chrY:25482907 plus strand	1889090
DDX11L16	NR_110561	Y	Non-coding	chrY:57214703 minus strand	1889091
FAM197Y2	NR_001553	Y	Non-coding	chrY:9355182 minus strand	1889092
FAM197Y2	NR_001553	Y	Non-coding	chrY:9375462 minus strand	1889093
FAM197Y2	NR_001553	Y	Non-coding	chrY:9464345 minus strand	1889094
FAM197Y2	NR_001553	Y	Non-coding	chrY:9484654 minus strand	1889095
FAM197Y2	NR_001553	Y	Non-coding	chrY:9525268 minus strand	1889096
FAM197Y5	NR_046300	Y	Non-coding	chrY:9355182 minus strand	1889097
FAM197Y5	NR_046300	Y	Non-coding	chrY:9375462 minus strand	1889098
FAM197Y5	NR_046300	Y	Non-coding	chrY:9464345 minus strand	1889099
FAM197Y5	NR_046300	Y	Non-coding	chrY:9484654 minus strand	1889100
FAM197Y5	NR_046300	Y	Non-coding	chrY:9525268 minus strand	1889101
FAM224A	NR_002161	Y	Non-coding	chrY:17579473 minus strand	1889102
FAM224A	NR_002161	Y	Non-coding	chrY:18326532 plus strand	1889103
FAM224B	NR_002160	Y	Non-coding	chrY:17579452 minus strand	1889104
FAM224B	NR_002160	Y	Non-coding	chrY:18326553 plus strand	1889105
FAM41AY1	NR_028083	Y	Non-coding	chrY:17500957 plus strand	1889106
FAM41AY1	NR_028083	Y	Non-coding	chrY:18405046 minus strand	1889107
FAM41AY2	NR_028084	Y	Non-coding	chrY:17500957 plus strand	1889108
FAM41AY2	NR_028084	Y	Non-coding	chrY:18405046 minus strand	1889109
GOLGA2P2Y	NR_001555	Y	Non-coding	chrY:24214831 minus strand	1889110
GOLGA2P2Y	NR_001555	Y	Non-coding	chrY:25455310 plus strand	1889111
GOLGA2P3Y	NR_002195	Y	Non-coding	chrY:24214831 minus strand	1889112
GOLGA2P3Y	NR_002195	Y	Non-coding	chrY:25455310 plus strand	1889113
GYG2P1	NR_033667	Y	Non-coding	chrY:12421590 minus strand	1889114
HSFY1	NR_003510	Y	Non-coding	chrY:18546690 plus strand	1889115
HSFY1	NR_003510	Y	Non-coding	chrY:18773715 minus strand	1889116

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HSFY2	NR_003509	Y	Non-coding	chrY:18546670 plus strand	1889117
HSFY2	NR_003509	Y	Non-coding	chrY:18773735 minus strand	1889118
LINC00102	NR_037842	Y	Non-coding	chrY:2615347 minus strand	1889119
LINC00278	NR_046502	Y	Non-coding	chrY:3002995 plus strand	1889120
LINC00280	NR_046505	Y	Non-coding	chrY:6361413 minus strand	1889121
LINC00685	NR_027231	Y	Non-coding	chrY:319144 plus strand	1889122
LINC00685	NR_027232	Y	Non-coding	chrY:319144 plus strand	1889122
LOC100652931	NR_104151	Y	Non-coding	chrY:22316677 plus strand	1889123
LOC101929148	NR_110413	Y	Non-coding	chrY:22147484 minus strand	1889124
LOC101929148	NR_110413	Y	Non-coding	chrY:22438939 plus strand	1889125
MIR3690	NR_037461	Y	Non-coding	chrY:1293917 plus strand	1889126
MIR6089	NR_106737	Y	Non-coding	chrY:2609190 plus strand	1889127
NLGN4Y	NR_046355	Y	Non-coding	chrY:14523504 plus strand	1889128
NLGN4Y	NR_028319	Y	Non-coding	chrY:14524573 plus strand	1889129
NLGN4Y-AS1	NR_046504	Y	Non-coding	chrY:14804033 minus strand	1889130
PLCXD1	NR_028057	Y	Non-coding	chrY:276323 plus strand	1889131
PRKY	NR_028062	Y	Non-coding	chrY:7273971 plus strand	1889132
RBMY1A3P	NR_001547	Y	Non-coding	chrY:9322874 minus strand	1889133
RBMY2EP	NR_001574	Y	Non-coding	chrY:21401562 minus strand	1889134
RBMY2FP	NR_002193	Y	Non-coding	chrY:22308858 plus strand	1889135
RBMY3AP	NR_001573	Y	Non-coding	chrY:9615153 minus strand	1889136
TTTY1	NR_001538	Y	Non-coding	chrY:6390430 plus strand	1889137
TTTY1	NR_001538	Y	Non-coding	chrY:9774289 minus strand	1889138
TTTY10	NR_001542	Y	Non-coding	chrY:20519228 minus strand	1889139
TTTY11	NR_001548	Y	Non-coding	chrY:8817382 minus strand	1889140
TTTY12	NR_001551	Y	Non-coding	chrY:7804923 plus strand	1889141
TTTY13	NR_001537	Y	Non-coding	chrY:21594666 minus strand	1889142

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TTTY14	NR_125736	Y	Non-coding	chrY:19076003 minus strand	1889143
TTTY14	NR_125737	Y	Non-coding	chrY:19076003 minus strand	1889143
TTTY14	NR_125733	Y	Non-coding	chrY:19077547 minus strand	1889144
TTTY14	NR_125734	Y	Non-coding	chrY:19077547 minus strand	1889144
TTTY14	NR_125735	Y	Non-coding	chrY:19077547 minus strand	1889144
TTTY14	NR_001543	Y	Non-coding	chrY:19077547 minus strand	1889144
TTTY15	NR_001545	Y	Non-coding	chrY:12662366 plus strand	1889145
TTTY16	NR_001552	Y	Non-coding	chrY:7701247 minus strand	1889146
TTTY17A	NR_001526	Y	Non-coding	chrY:22851583 plus strand	1889147
TTTY17A	NR_001526	Y	Non-coding	chrY:24485331 plus strand	1889148
TTTY17A	NR_001526	Y	Non-coding	chrY:25184773 minus strand	1889149
TTTY17B	NR_002180	Y	Non-coding	chrY:22851583 plus strand	1889150
TTTY17B	NR_002180	Y	Non-coding	chrY:24485331 plus strand	1889151
TTTY17B	NR_002180	Y	Non-coding	chrY:25184773 minus strand	1889152
TTTY17C	NR_002179	Y	Non-coding	chrY:22851583 plus strand	1889153
TTTY17C	NR_002179	Y	Non-coding	chrY:24485331 plus strand	1889154
TTTY17C	NR_002179	Y	Non-coding	chrY:25184773 minus strand	1889155
TTTY18	NR_001550	Y	Non-coding	chrY:8683878 minus strand	1889156
TTTY19	NR_001549	Y	Non-coding	chrY:8704471 plus strand	1889157
TTTY1B	NR_003589	Y	Non-coding	chrY:6390400 plus strand	1889158
TTTY1B	NR_003589	Y	Non-coding	chrY:9774319 minus strand	1889159
TTTY2	NR_001536	Y	Non-coding	chrY:6428444 minus strand	1889160
TTTY2	NR_001536	Y	Non-coding	chrY:9736285 plus strand	1889161
TTTY20	NR_001546	Y	Non-coding	chrY:9334832 minus strand	1889162
TTTY21	NR_001535	Y	Non-coding	chrY:6443433 plus strand	1889163
TTTY21	NR_001535	Y	Non-coding	chrY:9721296 minus strand	1889164
TTTY21B	NR_003588	Y	Non-coding	chrY:6443433 plus strand	1889165

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TTTY21B	NR_003588	Y	Non-coding	chrY:9721296 minus strand	1889166
TTTY22	NR_001539	Y	Non-coding	chrY:9801152 plus strand	1889167
TTTY23	NR_001540	Y	Non-coding	chrY:6243610 minus strand	1889168
TTTY23	NR_001540	Y	Non-coding	chrY:9910797 plus strand	1889169
TTTY23B	NR_003593	Y	Non-coding	chrY:6243610 minus strand	1889170
TTTY23B	NR_003593	Y	Non-coding	chrY:9910797 plus strand	1889171
TTTY2B	NR_003590	Y	Non-coding	chrY:6428444 minus strand	1889172
TTTY2B	NR_003590	Y	Non-coding	chrY:9736285 plus strand	1889173
TTTY3	NR_001524	Y	Non-coding	chrY:23941622 minus strand	1889174
TTTY3	NR_001524	Y	Non-coding	chrY:25728489 plus strand	1889175
TTTY3B	NR_002176	Y	Non-coding	chrY:23941622 minus strand	1889176
TTTY3B	NR_002176	Y	Non-coding	chrY:25728489 plus strand	1889177
TTTY4	NR_001525	Y	Non-coding	chrY:22936454 plus strand	1889178
TTTY4	NR_001525	Y	Non-coding	chrY:24570201 plus strand	1889179
TTTY4	NR_001525	Y	Non-coding	chrY:25099892 minus strand	1889180
TTTY4B	NR_002178	Y	Non-coding	chrY:22936454 plus strand	1889181
TTTY4B	NR_002178	Y	Non-coding	chrY:24570201 plus strand	1889182
TTTY4B	NR_002178	Y	Non-coding	chrY:25099892 minus strand	1889183
TTTY4C	NR_002177	Y	Non-coding	chrY:22936454 plus strand	1889184
TTTY4C	NR_002177	Y	Non-coding	chrY:24570201 plus strand	1889185
TTTY4C	NR_002177	Y	Non-coding	chrY:25099892 minus strand	1889186
TTTY5	NR_001541	Y	Non-coding	chrY:22298876 minus strand	1889187
TTTY6	NR_001527	Y	Non-coding	chrY:22144964 plus strand	1889188
TTTY6	NR_001527	Y	Non-coding	chrY:22441459 minus strand	1889189
TTTY6B	NR_002175	Y	Non-coding	chrY:22144986 plus strand	1889190
TTTY6B	NR_002175	Y	Non-coding	chrY:22441437 minus strand	1889191
TTTY7	NR_001534	Y	Non-coding	chrY:6449467 plus strand	1889192

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TTTY7	NR_001534	Y	Non-coding	chrY:9715262 minus strand	1889193
TTTY7B	NR_003592	Y	Non-coding	chrY:6449467 plus strand	1889194
TTTY7B	NR_003592	Y	Non-coding	chrY:9715262 minus strand	1889195
TTTY8	NR_001533	Y	Non-coding	chrY:6473630 minus strand	1889196
TTTY8	NR_001533	Y	Non-coding	chrY:9691099 plus strand	1889197
TTTY8B	NR_003591	Y	Non-coding	chrY:6473630 minus strand	1889198
TTTY8B	NR_003591	Y	Non-coding	chrY:9691099 plus strand	1889199
TTTY9A	NR_001530	Y	Non-coding	chrY:18590521 minus strand	1889200
TTTY9A	NR_001530	Y	Non-coding	chrY:18729881 plus strand	1889201
TTTY9B	NR_002159	Y	Non-coding	chrY:18590521 minus strand	1889202
TTTY9B	NR_002159	Y	Non-coding	chrY:18729881 plus strand	1889203
TXLNGY	NR_045128	Y	Non-coding	chrY:19567357 plus strand	1889204
TXLNGY	NR_045129	Y	Non-coding	chrY:19567357 plus strand	1889204
UTY	NR_047627	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047626	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047628	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047625	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047629	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047643	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047642	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047630	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047640	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047647	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047646	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047645	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047634	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047619	Y	Non-coding	chrY:13480670 minus strand	1889205

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UTY	NR_047618	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047600	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047641	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047631	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047636	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047635	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047633	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047632	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047624	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047623	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047639	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047638	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047644	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047637	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047606	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047596	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047604	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047603	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047602	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047601	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047605	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047597	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047607	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047608	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047598	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047613	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047611	Y	Non-coding	chrY:13480670 minus strand	1889205

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UTY	NR_047599	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047617	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047616	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047615	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047614	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047612	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047609	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047610	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047620	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047621	Y	Non-coding	chrY:13480670 minus strand	1889205
UTY	NR_047622	Y	Non-coding	chrY:13480670 minus strand	1889205
VAMP7	NR_033715	Y	Non-coding	chrY:57067799 plus strand	1889206
VAMP7	NR_033714	Y	Non-coding	chrY:57067799 plus strand	1889206
XGY2	NR_003254	Y	Non-coding	chrY:2752295 plus strand	1889207

【１８５８】
本発明のｓａＲＮＡは一本鎖でありうると共に、１４～３０ヌクレオチドを含みうる。一本鎖ｓａＲＮＡの配列は、限定されるものではないが、配列番号４０４８～３１５２３５、３１８７２７～５８４７８４、５８９０６２～９１３３０９、９１７５３２～１２４１０７９、１２４５４０２～１５５９９３１、１５６４３７３～１８７９１８８、１８８９２０８～２５８５２５９などの配列に対して少なくとも６０％、７０％、８０％、または９０％の同一性を有しうる。
【１８５９】
一実施形態では、一本鎖ｓａＲＮＡは、限定されるものではないが、配列番号４０４８

～３１５２３５、３１８７２７～５８４７８４、５８９０６２～９１３３０９、９１７５３２～１２４１０７９、１２４５４０２～１５５９９３１、１５６４３７３～１８７９１８８、１８８９２０８～２５８５２５９などの配列を含む。

【１８６０】

一実施形態では、ｓａＲＮＡは、アンチセンス配列、たとえば、限定されるものではないが、本出願の冒頭で参照された配列表に記載のアンチセンス配列のいずれかを含む一本鎖ｓａＲＮＡである。

【１８６１】

一実施形態では、ｓａＲＮＡは、アンチセンス配列、たとえば、限定されるものではないが、本出願の冒頭で参照された配列表に記載のセンス配列のいずれかを含む一本鎖ｓａＲＮＡである。

【１８６２】

本発明の一本鎖ｓａＲＮＡは修飾型または非修飾型でありうる。

一実施形態では、一本鎖ｓａＲＮＡは３’テールを有しうる。

一実施形態では、ｓａＲＮＡは二本鎖でありうる。２つの鎖は、ｓａＲＮＡ二本鎖としても知られる二本鎖を形成しうる。また、各鎖は１４～３０ヌクレオチドを含む。二本鎖ｓａＲＮＡの第１の鎖は、限定されるものではないが、配列番号４０４８～３１５２３５、３１８７２７～５８４７８４、５８９０６２～９１３３０９、９１７５３２～１２４１０７９、１２４５４０２～１５５９９３１、１５６４３７３～１８７９１８８、１８８９２０８～２５８５２５９などの配列に対して少なくとも６０％、７０％、８０％、または９０％の同一性を有しうる。一実施形態では、二本鎖ｓａＲＮＡの第１の鎖は、限定されるものではないが、配列番号４０４８～３１５２３５、３１８７２７～５８４７８４、５８９０６２～９１３３０９、９１７５３２～１２４１０７９、１２４５４０２～１５５９９３１、１５６４３７３～１８７９１８８、１８８９２０８～２５８５２５９などの配列を含む。二本鎖ｓａＲＮＡの第２の鎖は、限定されるものではないが、配列番号４０４８～３１５２３５、３１８７２７～５８４７８４、５８９０６２～９１３３０９、９１７５３２～１２４１０７９、１２４５４０２～１５５９９３１、１５６４３７３～１８７９１８８、１８８９２０８～２５８５２５９などの配列に対して少なくとも６０％、７０％、８０％、または９０％の同一性を有しうる。一実施形態では、二本鎖ｓａＲＮＡの第２の鎖は、限定されるものではないが、配列番号４０４８～３１５２３５、３１８７２７～５８４７８４、５８９０６２～９１３３０９、９１７５３２～１２４１０７９、１２４５４０２～１５５９９３１、１５６４３７３～１８７９１８８、１８８９２０８～２５８５２５９などの配列を含む。一実施形態では、二本鎖ｓａＲＮＡは各鎖に３’オーバーハングを有しうる。

【１８６３】

一実施形態では、本発明のｓａＲＮＡはｓａＲＮＡ二本鎖である。ｓａＲＮＡ二本鎖は、センス配列とアンチセンス配列との対、たとえば、限定されるものではないが、本出願の冒頭で参照された配列表に記載のセンス配列および対応するアンチセンス配列のいずれかの対でありうる。本発明のｓａＲＮＡは、本出願の冒頭で参照された配列表に記載のセンス配列とアンチセンス配列との対でありうる。

【１８６４】

本発明の二本鎖ｓａＲＮＡは修飾型または非修飾型でありうる。

二機能オリゴヌクレオチド

二機能または二元機能オリゴヌクレオチド、たとえばｓａＲＮＡは、第１の遺伝子の発現をアップレギュレートするように、かつ少なくとも１種の第２の遺伝子の発現をダウンレギュレートするように設計しうる。二元機能オリゴヌクレオチドの１つの鎖は第１の遺伝子の発現を活性化し、かつ他の鎖は第２の遺伝子の発現を阻害する。各鎖はダイサーの基質配列をさらに含みうる。

【１８６５】

ｓａＲＮＡの化学修飾

本明細書では、ｓａＲＮＡにおいて「修飾」または必要に応じて「修飾された」という用語は、Ａ、Ｇ、Ｕ、またはＣリボヌクレオチドに対する構造修飾および／または化学修飾を意味する。本発明のｓａＲＮＡのヌクレオチドは、非標準的ヌクレオチド、たとえば、天然に存在しないヌクレオチドまたは化学合成されたヌクレオチドもしくはデオキシヌクレオチドを含みうる。本発明のｓａＲＮＡは、任意の有用な修飾、たとえば、糖、核酸塩基、またはヌクレオシド間結合（たとえば、結合ホスフェート／ホスホジエステル結合／ホスホジエステル骨格）に対する修飾を含みうる。ピリミジン核酸塩基の１個以上の原子は、任意選択的に置換されたアミノ、任意選択的に置換されたチオール、任意選択的に置換されたアルキル（たとえば、メチルもしくはエチル）、またはハロ（たとえば、クロロもしくはフルオロ）により置き換えうるかまたは置換しうる。特定の実施形態では、修飾（たとえば、１つ以上の修飾）は糖およびヌクレオシド間結合のそれぞれに存在する。本発明に係る修飾は、デオキシリボ核酸（ＤＮＡ）、トレオース核酸（ＴＮＡ）、グリコール核酸（ＧＮＡ）、ペプチド核酸（ＰＮＡ）、ロックド核酸（ＬＮＡ）、またはそれらのハイブリッドをもたらすリボ核酸（ＲＮＡ）の修飾でありうる。限定されるものではないが、例として、Ｕの２’－ＯＨは２’－ＯＭｅで置換される。

【１８６６】

一実施形態では、本発明のｓａＲＮＡは本明細書に記載の少なくとも１つの修飾を含みうる。

他の実施形態では、ｓａＲＮＡはｓａＲＮＡ二本鎖であり、センス鎖およびアンチセンス配列は独立して少なくとも１つの修飾を含みうる。限定されるものではないが、例として、センス配列は修飾を含みうると共にアンチセンス鎖は非修飾でありうる。限定されるものではないが、他の例として、アンチセンス配列は修飾を含みうると共にセンス鎖は非修飾でありうる。限定されるものではないが、さらに他の例として、センス配列は２つ以上の修飾を含みうると共にアンチセンス鎖は１つの修飾を含みうる。限定されるものではないが、例として、アンチセンス配列は２つ以上の修飾を含みうると共にセンス鎖は１つの修飾を含みうる。

【１８６７】

本発明のｓａＲＮＡは、糖、核酸塩基、および／またはヌクレオシド間結合への修飾の組合せを含みうる。これらの組合せは、本明細書または２０１２年１０月３日出願の国際公開第２０１３／０５２５２３号パンフレットに記載のいずれか１つ以上の修飾、特に式（Ｉａ）～（Ｉａ－５）、（Ｉｂ）～（Ｉｆ）、（ＩＩａ）～（ＩＩｐ）、（ＩＩｂ－１）、（ＩＩｂ－２）、（ＩＩｃ－１）～（ＩＩｃ－２）、（ＩＩｎ－１）、（ＩＩｎ－２）、（ＩＶａ）～（ＩＶｌ）、および（ＩＸａ）～（ＩＸｒ））（その内容はその全体が参照により本明細書に組み込まれる）を含みうる。

【１８６８】

本発明のｓａＲＮＡは、分子の全長に沿って均一に修飾しうるかまたは修飾しえない。たとえば、本発明のｓａＲＮＡでは１つ以上またはすべてのタイプのヌクレオチド（たとえば、プリンもしくはピリミジン、またはＡ、Ｇ、Ｕ、Ｃのいずれか１つ以上もしくはすべて）を均一に修飾しうるかまたは修飾しえない。いくつかの実施形態では、本発明のｓａＲＮＡのすべてのヌクレオチドＸが修飾される。ただし、Ｘは、ヌクレオチドＡ、Ｇ、Ｕ、Ｃのいずれか１つ、または組合せＡ＋Ｇ、Ａ＋Ｕ、Ａ＋Ｃ、Ｇ＋Ｕ、Ｇ＋Ｃ、Ｕ＋Ｃ、Ａ＋Ｇ＋Ｕ、Ａ＋Ｇ＋Ｃ、Ｇ＋Ｕ＋Ｃ、またはＡ＋Ｇ＋Ｃのいずれか１つでありうる。

【１８６９】

さまざまな糖修飾、ヌクレオチド修飾、および／またはヌクレオシド間結合（たとえば、骨格構造）は、ｓａＲＮＡの種々の位置に存在しうる。ｓａＲＮＡの機能が実質的に低減されないようにｓａＲＮＡの任意の位置にヌクレオチドアナログまたは他の修飾を配置しうることは、当業者であれば分かるであろう。本発明のｓａＲＮＡは、修飾ヌクレオチドを約１％～約１００％（全ヌクレオチド分を基準にして、または１つ以上のタイプのヌクレオチド、すなわち、Ａ、Ｇ、Ｕ、もしくはＣのいずれか１つ以上を基準にして）または任意の介在パーセント（たとえば、１％～２０％、１％～２５％、１％～５０％、１％

～６０％、１％～７０％、１％～８０％、１％～９０％、１％～９５％、１０％～２０％、１０％～２５％、１０％～５０％、１０％～６０％、１０％～７０％、１０％～８０％、１０％～９０％、１０％～９５％、１０％～１００％、２０％～２５％、２０％～５０％、２０％～６０％、２０％～７０％、２０％～８０％、２０％～９０％、２０％～９５％、２０％～１００％、５０％～６０％、５０％～７０％、５０％～８０％、５０％～９０％、５０％～９５％、５０％～１００％、７０％～８０％、７０％～９０％、７０％～９５％の、７０％～１００％、８０％～９０％、８０％～９５％、８０％～１００％、９０％～９５％、９０％～１００％、および９５％～１００％）で含有しうる。

【１８７０】

いくつかの実施形態では、本発明のｓａＲＮＡは、球状核酸（ＳＮＡ）または環状核酸になるように修飾しうる。化学試薬または酵素により本発明のｓａＲＮＡの末端を結合して、遊離末端を有していない球状ｓａＲＮＡを生成しうる。球状ｓａＲＮＡは、その線状カウンターパートよりも安定であり、かつＲＮアーゼＲエキソヌクレアーゼによる消化に耐性であることが予想される。球状ｓａＲＮＡは、Ａ、Ｇ、Ｕ、またはＣリボヌクレオチドに対する他の構造修飾および／または化学修飾をさらに含みうる。

【１８７１】

いくつかの実施形態では、本発明のｓａＲＮＡは、パッセンジャー鎖に反転デオキシ脱塩基修飾を含みうる。少なくとも１つの反転デオキシ脱塩基修飾は、パッセンジャー鎖の５’末端もしくは３’末端またはその両方の末端にありうる。反転デオキシ塩基修飾は、ガイド鎖の優先的ローディングを促進しうる。

【１８７２】

本発明のｓａＲＮＡは、２０１３年１０月１０日に公開されたＰＣＴ公開国際公開第２０１３／１５１６６６号パンフレット（その内容はその全体が参照により本明細書に組み込まれる）のページ１３６～２４７に開示されるオリゴヌクレオチドまたはポリヌクレオチドの任意の修飾により修飾しうる。

【１８７３】

ｓａＲＮＡコンジュゲートおよび組合せ

コンジュゲーションは、安定性および／または半減期の増加をもたらしうると共に、細胞、組織、または生物において本発明のｓａＲＮＡを特定の部位に標的化するのに特に有用でありうる。本発明のｓａＲＮＡは、他のポリヌクレオチド、色素、インターカレート剤（たとえば、アクリジン）、架橋剤（たとえば、プソラレン、マイトマイシンＣ）、ポルフィリン（ＴＰＰＣ４、テキサフィリン、サフィリン）、多環式芳香族炭化水素（たとえば、フェナジン、ジヒドロフェナジン）、人工エンドヌクレアーゼ（たとえば、ＥＤＴＡ）、アルキル化剤、ホスフェート、アミノ、メルカプト、ＰＥＧ（たとえば、ＰＥＧ－４０Ｋ）、ＭＰＥＧ、［ＭＰＥＧ］$_2$、ポリアミノ、アルキル、置換アルキル、放射性標識マーカ、酵素、ハプテン（たとえば、ビオチン）、輸送／吸収促進剤（たとえば、アスピリン、ビタミンＥ、葉酸）、合成リボヌクレアーゼ、タンパク質、たとえば、糖タンパク質、またはペプチド、たとえば、共リガンドへの特異的親和性を有する分子、または抗体、たとえば、癌細胞、内皮細胞、骨細胞などの特定の細胞型に結合する抗体、ホルモンおよびホルモンレセプター、非ペプチド種、たとえば、脂質、レクチン、炭水化物、ビタミン、補因子、または薬剤にコンジュゲートされるように設計可能である。核酸分子に好適なコンジュゲートは、２０１２年１２月１４日出願の国際公開第２０１３／０９０６４８号パンフレット（その内容はその全体が参照により本明細書に組み込まれる）に開示されている。

【１８７４】

本発明によれば、本発明のｓａＲＮＡは、さまざまな機能を達成するために、ＲＮＡｉ剤、低分子干渉ＲＮＡ（ｓｉＲＮＡ）、低分子ヘアピンＲＮＡ（ｓｈＲＮＡ）、長鎖非コードＲＮＡ（ｌｎｃＲＮＡ）、エンハンサーＲＮＡ、エンハンサー由来ＲＮＡまたはエンハンサー駆動ＲＮＡ（ｅＲＮＡ）、マイクロＲＮＡ（ｍｉＲＮＡ）、ｍｉＲＮＡ結合部位、アンチセンスＲＮＡ、リボザイム、触媒ＤＮＡ、ｔＲＮＡ、三重螺旋形成を誘導するＲ

ＮＡ、アプタマー、ベクターなどの１つ以上と共に投与しうるかまたはそれらをさらに含みうる。１つ以上のＲＮＡｉ剤、低分子干渉ＲＮＡ（ｓｉＲＮＡ）、低分子ヘアピンＲＮＡ（ｓｈＲＮＡ）、長鎖非コードＲＮＡ（ｌｎｃＲＮＡ）、マイクロＲＮＡ（ｍｉＲＮＡ）、ｍｉＲＮＡ結合部位、アンチセンスＲＮＡ、リボザイム、触媒ＤＮＡ、ｔＲＮＡ、三重螺旋形成を誘導するＲＮＡ、アプタマー、またはベクターは、少なくとも１つの修飾または置換を含みうる。

【１８７５】

いくつかの実施形態では、修飾は、糖位置での核酸の化学置換、ホスフェート位置での化学置換、および塩基位置での化学置換から選択される。他の実施形態では、化学修飾は、修飾ヌクレオチドの取込み、３’キャッピング、高分子量非免疫原性化合物へのコンジュゲーション、親油性化合物へのコンジュゲーション、およびホスフェート骨格へのホスホロチオエートの取込みから選択される。一実施形態では、高分子量非免疫原性化合物はポリアルキレングリコールであるか、またはポリエチレングリコール（ＰＥＧ）である。

【１８７６】

一実施形態では、少なくとも１つの修飾を含むｓａＲＮＡは増殖細胞で効力を示しうる。

一実施形態では、本発明のｓａＲＮＡは、ＲＮＡポリメラーゼＩＩプロモータから共発現できるようにトランスジーンに結合しうる。限定されるものではないが、一例では、本発明のｓａＲＮＡは緑色蛍光タンパク質（ＧＦＰ）に結合される。

【１８７７】

一実施形態では、本発明のｓａＲＮＡは、ＤＮＡまたはＲＮＡアプタマーに結合することによりｓａＲＮＡ－アプタマーコンジュゲートを生成しうる。アプタマーは、高い選択性、親和性、および安定性を有するオリゴヌクレオチドまたはペプチドである。それは特異的かつ安定な三次元形状をとることにより標的分子へのきわめて特異的な緊密結合を提供する。アプタマーは、低分子、タンパク質、核酸などの種々の分子標的、さらには細胞、組織、および生物に結合するように、インビトロ選択の繰返しラウンドまたは均等にＳＥＬＥＸ（指数関数的富化によるリガンドの系統的進化）により工学操作された核酸種でありうる。核酸アプタマーは、典型的なワトソン・クリック塩基対合以外の相互作用により分子への特異的結合親和性を有する。核酸アプタマーは、ファージディスプレイまたはモノクローナル抗体（ｍＡｂ）により生成されたペプチドのように、選択された標的に特異的に結合可能であり、かつ結合を介してその標的の機能能力をブロックする。いくつかの場合、アプタマーはまたペプチドアプタマーでありうる。いずれかの特異的分子標的では、核酸アプタマーは、たとえばＳＥＬＥＸにより核酸のコンビナトリアルライブラリーから同定可能である。ペプチドアプタマーは酵母ツーハイブリッド系を用いて同定しうる。したがって、当業者であれば、肝細胞などの標的細胞に本発明のｓａＲＮＡまたは細胞を送達するのに好適なアプタマーを設計可能である。ＤＮＡアプタマー、ＲＮＡアプタマー、およびペプチドアプタマーが企図される。肝臓特異的アプタマーを用いて本発明のｓａＲＮＡを肝臓に投与することが好ましい。

【１８７８】

本明細書で用いられる場合、典型的な核酸アプタマーは、約１０～１５ｋＤａのサイズ（２０～４５ヌクレオチド）であり、その標的に少なくともナノモル親和性で結合し、かつ関連性の高い標的を識別する。核酸アプタマーは、リボ核酸、デオキシリボ核酸、またはリボ核酸とデオキシリボ核酸との混合でありうる。アプタマーは、一本鎖のリボ核酸、デオキシリボ核酸、またはリボ核酸とデオキシリボ核酸との混合でありうる。アプタマーは、少なくとも１つの化学修飾を含みうる。

【１８７９】

アプタマーに好適なヌクレオチド長は約１５～約１００ヌクレオチド（ｎｔ：ｎｕｃｌｅｏｔｉｄｅ）の範囲内であり、種々の他の実施形態では、１５～３０ｎｔ、２０～２５ｎｔ、３０～１００ｎｔ、３０～６０ｎｔ、２５～７０ｎｔ、２５～６０ｎｔ、４０～６０ｎｔ、２５～４０ｎｔ、３０～４０ｎｔ、次の値、すなわち、２２、２３、２４、２５

、２６、２７、２８、２９、３０、３１、３２、３３、３４、３５、３６、３７、３８、３９、もしくは４０ｎｔのいずれか、または４０～７０ｎｔの長さである。しかしながら、配列は、本明細書に記載の距離でアプタマーと２つの標的との相互作用に適合できるように十分な柔軟性を有して設計可能である。アプタマーは、ヌクレアーゼ活性および他の酵素活性からの保護を提供するようにさらに修飾しうる。アプタマー配列は、当技術分野で公知の任意の好適な方法により修飾可能である。

【１８８０】

ｓａＲＮＡ－アプタマーコンジュゲートは、２つの部分を結合するための任意の公知の方法、たとえば、直接化学結合形成、ストレプトアビジンなどのリンカーを介する結合などを用いて形成しうる。

【１８８１】

一実施形態では、本発明のｓａＲＮＡは抗体に結合しうる。標的細胞表面レセプターに対する抗体を生成する方法は周知である。本発明のｓａＲＮＡは、公知の方法を用いて、たとえば、ＲＮＡ担体タンパク質を用いて、かかる抗体に結合しうる。次いで、得られた複合体は、対象に投与してレセプター媒介エンドサイトーシスにより標的細胞に取り込みうる。

【１８８２】

一実施形態では、本発明のｓａＲＮＡは、脂質部分、たとえばコレステロール部分（レットシンガー（Ｌｅｔｓｉｎｇｅｒ）ら著、米国科学アカデミー紀要（Ｐｒｏｃ．Ｎａｔｌ．Ａｃｉｄ．Ｓｃｉ．ＵＳＡ）、１９８９年、第８６巻、ｐ．６５５３～６５５６）、コール酸（マノハラン（Ｍａｎｏｈａｒａｎ）ら著、バイオオーガニック・アンド・メディシナル・ケミストリー・レターズ（Ｂｉｏｒｇ．Ｍｅｄ．Ｃｈｅｍ．Ｌｅｔ．）、１９９４年、第４巻、ｐ．１０５３～１０６０）、チオエーテル、たとえばベリル－５－トリチルチオール（マノハラン（Ｍａｎｏｈａｒａｎ）ら著、アナルズ・オブ・ザ・ニューヨーク・アカデミー・オブ・サイエンシズ（Ａｎｎ．Ｎ．Ｙ．Ａｃａｄ．Ｓｃｉ．）、１９９２年、第６６０巻、ｐ．３０６～３０９、マノハラン（Ｍａｎｏｈａｒａｎ）ら著、バイオオーガニック・アンド・メディシナル・ケミストリー・レターズ（Ｂｉｏｒｇ．Ｍｅｄ．Ｃｈｅｍ．Ｌｅｔ．）、１９９３年、第３巻、ｐ．２７６５～２７７０）、チオコレステロール（オーバーハウザ（Ｏｂｅｒｈａｕｓｅｒ）ら著、ヌクレイック・アシッズ・リサーチ（Ｎｕｃｌ．Ａｃｉｄｓ Ｒｅｓ．）、１９９２年、第２０巻、ｐ．５３３～５３８）、脂肪族鎖、たとえば、ドデカンジオールまたはウンデシル残基（サイソン－ベーモアラス（Ｓａｉｓｏｎ－Ｂｅｈｍｏａｒａｓ）ら著、ＥＭＢＯジャーナル（ＥＭＢＯＪ）、１９９１年、第１０巻、ｐ．１１１１～１１１８、カバノフ（Ｋａｂａｎｏｖ）ら著、ＦＥＢＳレターズ（ＦＥＢＳ Ｌｅｔｔ．）、１９９０年、第２５９巻、ｐ．３２７～３３０、シバノルチュク（Ｓｖｉｎａｒｃｈｕｋ）ら著、バイオシミー（Ｂｉｏｃｈｉｍｉｅ）、１９９３年、第７５巻、ｐ．４９～５４）、リン脂質、たとえば、ジ－ヘキサデシル－ｒａｃ－グリセロールまたはトリエチル－アンモニウム１，２－ジ－Ｏ－ヘキサデシル－ｒａｃ－グリセロ－３－Ｈホスホネート（マノハラン（Ｍａｎｏｈａｒａｎ）ら著、テトラヘドロン・レターズ（Ｔｅｔｒａｈｅｄｒｏｎ Ｌｅｔｔ．）、１９９５年、第３６巻、ｐ．３６５１－３６５４、シーア（Ｓｈｅａ）ら著、ヌクレイック・アシッズ・リサーチ（Ｎｕｃｌ．Ａｃｉｄｓ Ｒｅｓ．）、１９９０年、第１８巻、ｐ．３７７７～３７８３）、ポリアミンもしくはポリエチレングリコール鎖（マノハラン（Ｍａｎｏｈａｒａｎ）ら著、ヌクレオシズ・アンド・ヌクレオチズ（Ｎｕｃｌｅｏｓｉｄｅｓ＆Ｎｕｃｌｅｏｔｉｄｅｓ）、１９９５年、第１４巻、ｐ．９６９～９７３）、またはアダマンタン酢酸（マノハラン（Ｍａｎｏｈａｒａｎ）ら著、テトラヘドロン・レターズ（Ｔｅｔｒａｈｅｄｒｏｎ Ｌｅｔｔ．）、１９９５年、第３６巻、ｐ．３６５１～３６５４、）、パルミチル部分（（Ｍｉｓｈｒａ）ら著、バイオシミカ・エ・バイオフィジカ・アクタ（Ｂｉｏｃｈｉｍ．Ｂｉｏｐｈｙｓ．Ａｃｔａ）、１９９５年、第１２６４巻、ｐ．２２９～２３７）、またはオクタデシルアミンもしくはヘキシルアミノカルボニルオキシコレステロール部分（クルッケ（Ｃｒｏｏｋｅ）ら著、ジャーナル・オブ・ファーマコロジ・

アンド・エクスペリメンタル・セラピューティクス（Ｊ．Ｐｈａｒｍａｃｏｌ．Ｅｘｐ．Ｔｈｅｒ．）、１９９６年、第２７７巻、ｐ．９２３～９３７）（それらの各内容はその全体が参照により本明細書に組み込まれる）にコンジュゲートしうる。

【１８８３】

一実施形態では、本発明のｓａＲＮＡはリガンドにコンジュゲートされる。限定されるものではないが、一例では、リガンドは、マノハラン（Ｍａｎｏｈａｒａｎ）らに付与された米国特許出願公開第２０１３／０１８４３２８号明細書（その内容はその全体が参照により本明細書に組み込まれる）に開示される任意のリガンドでありうる。コンジュゲートは、リガンド－［リンカー］任意選択的－［テザー］任意選択的－オリゴヌクレオチド剤の式を有する。オリゴヌクレオチド剤は、マノハラン（Ｍａｎｏｈａｒａｎ）らに付与された米国特許出願公開第２０１３／０１８４３２８号明細書（その内容はその全体が参照により本明細書に組み込まれる）に開示される式（Ｉ）を有するサブユニットを含みうる。限定されるものではないが、他の例では、リガンドは、アキンク（Ａｋｉｎｃ）らに付与された米国特許出願公開第２０１３／０３１７０８１号明細書（その内容はその全体が参照により本明細書に組み込まれる）に開示される任意のリガンド、たとえば、式ＩＩ～ＸＸＶＩの脂質、タンパク質、ホルモン、または炭水化物のリガンドでありうる。リガンドは、アキンク（Ａｋｉｎｃ）に開示される式ＸＸＩ～ＸＸＸＶの２価または３価の分岐状リンカーによりｓａＲＮＡと組み合わせうる。

【１８８４】

かかる核酸／脂質コンジュゲートの調製を教示する代表的な米国特許としては、米国特許第４，８２８，９７９号明細書、同第４，９４８，８８２号明細書、同第５，２１８，１０５号明細書、同第５，５２５，４６５号明細書、同第５，５４１，３１３号明細書、同第５，５４５，７３０号明細書、同第５，５５２，５３８号明細書、同第５，５７８，７１７号明細書、同第５，５８０，７３１号明細書、同第５，５９１，５８４号明細書、同第５，１０９，１２４号明細書、同第５，１１８，８０２号明細書、同第５，１３８，０４５号明細書、同第５，４１４，０７７号明細書、同第５，４８６，６０３号明細書、同第５，５１２，４３９号明細書、同第５，５７８，７１８号明細書、同第５，６０８，０４６号明細書、同第４，５８７，０４４号明細書、同第４，６０５，７３５号明細書、同第４，６６７，０２５号明細書、同第４，７６２，７７９号明細書、同第４，７８９，７３７号明細書、同第４，８２４，９４１号明細書、同第４，８３５，２６３号明細書、同第４，８７６，３３５号明細書、同第４，９０４，５８２号明細書、同第４，９５８，０１３号明細書、同第５，０８２，８３０号明細書、同第５，１１２，９６３号明細書、同第５，２１４，１３６号明細書、同第５，０８２，８３０号明細書、同第５，１１２，９６３号明細書、同第５，２１４，１３６号明細書、同第５，２４５，０２２号明細書、同第５，２５４，４６９号明細書、同第５，２５８，５０６号明細書、同第５，２６２，５３６号明細書、同第５，２７２，２５０号明細書、同第５，２９２，８７３号明細書、同第５，３１７，０９８号明細書、同第５，３７１，２４１号明細書、同第５，３９１，７２３号明細書、同第５，４１６，２０３号明細書、同第５，４５１，４６３号明細書、同第５，５１０，４７５号明細書、同第５，５１２，６６７号明細書、同第５，５１４，７８５号明細書、同第５，５６５，５５２号明細書、同第５，５６７，８１０号明細書、同第５，５７４，１４２号明細書、同第５，５８５，４８１号明細書、同第５，５８７，３７１号明細書、同第５，５９５，７２６号明細書、同第５，５９７，６９６号明細書、同第５，５９９，９２３号明細書、同第５，５９９，９２８号明細書、および同第５，６８８，９４１号明細書（それらの各内容はその全体が参照により本明細書に組み込まれる）が挙げられるが、これらに限定されるものではない。

【１８８５】

本発明のｓａＲＮＡは、考慮対象となる特定の方法で作用を有することが知られる他の活性成分と組み合わせて提供しうる。他の活性成分は、本発明のｓａＲＮＡと同時に、個別に、または逐次的に投与しうる。一実施形態では、本発明のｓａＲＮＡは、異なる標的遺伝子をモジュレートするｓａＲＮＡと共に投与される。例としては、アルブミン、イン

スリン、またはＨＮＦ４Ａ遺伝子をモジュレートするｓａＲＮＡが挙げられるが、これらに限定されるものではない。単一のｓａＲＮＡまたは２つ以上の異なるｓａＲＮＡの組合せを用いて、任意の遺伝子のモジュレーションを達成しうる。限定されるものではないが、本発明のｓａＲＮＡと共に投与可能なｓａＲＮＡの例としては、２０１２年６月２０日出願の国際公開第２０１２／１７５９５８号パンフレットに開示されるアルブミンまたはＨＮＦ４ＡをモジュレートするｓａＲＮＡ、両方とも２０１１年１０月１０日出願の国際公開第２０１２／０４６０８４号パンフレットおよび国際公開第２０１２／０４６０８５号パンフレットに開示されるインスリンをモジュレートするｓａＲＮＡ、２００６年１１月１３日出願の米国特許第７，７０９，４５６号明細書および２０１０年４月２３日出願の米国特許出願公開第２０１０／０２７３８６３号明細書に開示されるヒトプロゲステロンレセプター、ヒト主要ボールトタンパク質（ｈＭＶＰ）、Ｅ－カドヘリン遺伝子、ｐ５３遺伝子、またはＰＴＥＮ遺伝子をモジュレートするｓａＲＮＡ、２００６年４月１１日出願の国際公開第２００６／１１３２４６号パンフレットに開示されるｐ２１遺伝子を標的とするｓａＲＮＡ、国際公開第２０１２／０６５１４３号パンフレットの表８の遺伝子の発現をアップレギュレートするまたは腫瘍サプレッサーの発現を増加させる２０１１年１１月１２日出願の国際公開第２０１２／０６５１４３号パンフレットに開示される任意の核酸、２０１３年５月１６日出願の国際公開第２０１３／１７３６３５号パンフレットの表４の標的遺伝子を活性化する任意のオリゴヌクレオチド、２０１３年５月１６日出願の国際公開第２０１３／１７３６３７号パンフレットの表４の標的遺伝子を活性化する任意のオリゴヌクレオチド、２０１３年５月１６日出願の国際公開第２０１３／１７３６５２号パンフレットの配列番号１～１２１２の配列から選択される配列に相補的な任意のオリゴヌクレオチド、２０１３年５月１６日出願の国際公開第２０１３／１７３６４７号パンフレットに開示されるＡＰＯＡ１およびＡＢＣＡ１遺伝子の発現をモジュレートする任意のオリゴヌクレオチド、２０１３年５月１６日出願の国際公開第２０１３／１７３６３８号パンフレットに開示されるＳＭＮファミリー遺伝子の発現をモジュレートする任意のオリゴヌクレオチド、２０１３年５月１６日出願の国際公開第２０１３／１７３６０５号パンフレットに開示されるＰＴＥＮ遺伝子の発現をモジュレートする任意のオリゴヌクレオチド、２０１３年５月１６日出願の国際公開第２０１３／１７３６０８号パンフレットに開示されるＭＥＣＰ２遺伝子の発現をモジュレートする任意のオリゴヌクレオチド、２０１３年５月１６日出願の国際公開第２０１３／１７３５９８号パンフレットに開示されるＡＴＰ２Ａ２遺伝子の発現をモジュレートする任意のオリゴヌクレオチド、２０１３年５月１６日出願の国際公開第２０１３／１７３６４５号パンフレットに開示されるＵＴＲＮ遺伝子の発現をモジュレートする任意のオリゴヌクレオチド、２００６年１２月２８日出願の米国特許第８，２８８，３５４号明細書に開示されるＣＤ９７、ＴＳ－α、Ｃ／ＥＢＰデルタ、ＣＤＣ２３、ＰＩＮＫ１、ＨＩＦ１α、Ｇｎｂｐ３ｇ、アドレノメデュリンＡＭ１レセプター、３－オキソ酸ＣｏＡトランスフェラーゼ、カテプシンＷ、またはＢＡＣＥ１の発現をモジュレートする任意の核酸分子、２０１１年１１月１７日出願の米国特許出願公開第２０１３／０２４５０９９号明細書に開示される式（Ｉ）を有するアンタゴＮＡＴ、２０１０年４月３０日出願の米国特許第８，３１８，６９０号明細書に開示されるヘモグロビン（ＨＢＦ／ＨＢＧ）ポリヌクレオチドの発現をアップレギュレートする任意のアンタゴＮＡＴ、２００９年１０月２日出願の米国特許第８，１５３，６９６号明細書（ＣＵＲＮＡ）に開示されるアポリポタンパク質（ＡｐｏＡ１）ポリヌクレオチドの発現を増加させる任意のアンチセンスオリゴヌクレオチド（それぞれの内容はその全体が参照により本明細書に組み込まれる）が挙げられる。

【１８８６】

一実施形態では、ｓａＲＮＡは、マノハラン（Ｍａｎｏｈａｒａｎ）ら（アルナイラム・ファーマシューティカルズ（Ａｌｎｙｌａｍ　Ｐｈａｒｍａｃｅｕｔｉｃａｌｓ））に付与された米国特許第８１０６０２２号明細書および同第８８２８９５６号明細書（それらの内容はその全体が参照により本明細書に組み込まれる）に開示される任意の炭水化物リガンドなどの炭水化物リガンドにコンジュゲートされる。たとえば、炭水化物リガンド

は、単糖、二糖、三糖、四糖、オリゴ糖、または多糖でありうる。これらの炭水化物コンジュゲートＲＮＡ剤は、肝臓の実質細胞を標的としうる。一実施形態では、ｓａＲＮＡは、２つ以上、好ましくは２または３つの炭水化物リガンドにコンジュゲートされる。一実施形態では、ｓａＲＮＡは、１つ以上のガラクトース部分にコンジュゲートされる。他の実施形態では、ｓａＲＮＡは、少なくとも１つ（たとえば、２もしくは３つまたはそれを超える）のラクトース分子にコンジュゲートされる（ラクトースはガラクトースに結合されたグルコースである）。他の実施形態では、ｓａＲＮＡは、少なくとも１つ（たとえば、２もしくは３つまたはそれを超える）のＮ－アセチル－ガラクトサミン（ＧａｌＮＡｃ）、Ｎ－Ａｃ－グルコサミン（ＧｌｕＮＡｃ）、またはマンノース（たとえば、マンノース－６－ホスフェート）にコンジュゲートされる。一実施形態では、ｓａＲＮＡは、少なくとも１つのマンノースリガンドにコンジュゲートされ、コンジュゲートｓａＲＮＡはマクロファージを標的とする。

【１８８７】

一実施形態では、本発明のｓａＲＮＡは、遺伝子の発現を阻害する低分子干渉ＲＮＡまたはｓｉＲＮＡと共に投与される。

一実施形態では、本発明のｓａＲＮＡは治療目的で１種以上の薬剤と共に投与される。

【１８８８】

ＩＩ．本発明の組成物

本発明の一態様は、標的遺伝子をアップレギュレートする低分子活性化ＲＮＡ（ｓａＲＮＡ）と、少なくとも１種の薬学的に許容可能な担体とを含む医薬組成物を提供する。

【１８８９】

製剤、送達、投与、および用量

医薬製剤は、薬学的に許容可能な賦形剤を追加的に含みうる。この賦形剤は、本明細書で用いられる場合、所望の特定の剤形に適したあらゆる溶媒、分散媒、希釈剤、または他の液体媒体、分散助剤または懸濁助剤、界面活性剤、等張化剤、増粘剤または乳化剤、保存剤、固形結合剤、滑沢剤などを含むが、これらに限定されるものではない。医薬組成物を製剤化するための種々の賦形剤および組成物を調製するための技術は当技術分野で公知である（「レミングトン：薬学の科学と実践（Ｒｅｍｉｎｇｔｏｎ：Ｔｈｅ Ｓｃｉｅｎｃｅ ａｎｄ Ｐｒａｃｔｉｃｅ ｏｆ Ｐｈａｒｍａｃｙ）」、第２１版、Ａ．Ｒ．（Ａ．Ｒ．Ｇｅｎｎａｒｏ）編、リッピンコット・ウィリアムズ・アンド・ウィルキンス（Ｌｉｐｐｉｎｃｏｔｔ，Ｗｉｌｌｉａｍｓ＆Ｗｉｌｋｉｎｓ）、メリーランド州ボルチモア、２００６年（その全体が参照により本明細書に組み込まれる）を参照されたい）。何らかの望ましくない生物学的作用、さもなければ医薬組成物のいずれか他の成分との有害な相互作用を生じることなどにより、任意の従来の賦形媒体が物質またはその誘導体に不適合性でありうる場合を除いて、従来の賦形媒体の使用は本開示の範囲内で企図しうる。

【１８９０】

いくつかの実施形態では、組成物は、ヒト、ヒト患者、または対象に投与される。本開示の目的では、「活性成分」という語句は、本明細書に記載されるように送達されるｓａＲＮＡを一般に意味する。

【１８９１】

本明細書に提供される医薬組成物の説明はヒトへの投与に好適な医薬組成物を主に対象としているが、かかる組成物が任意の他の動物、たとえば非ヒト動物、たとえば非ヒト哺乳動物への投与に一般に好適であることは、当業者であれば理解されよう。種々の動物への投与に好適な組成物にするためのヒトへの投与に好適な医薬組成物の改変はよく理解されており、通常の技能を有する獣医薬理学者であれば、かりに実験を行うとしても通常の実験を行うだけで、かかる改変の設計および／または実施が可能である。医薬組成物の投与が企図される対象としては、限定されるものではないが、ヒトおよび／もしくは他の霊長動物、哺乳動物（ウシ、ブタ、ウマ、ヒツジ、ネコ、イヌ、マウス、および／もしくはラットなどの商業関連の哺乳動物を含む）、ならびに／またはトリ（家禽、ニワトリ、アヒル、ガチョウ、および／もしくはシチメンチョウなどの商業関連のトリを含む）が挙げ

られる。
【１８９２】
一実施形態では、本明細書に記載の製剤化ｓａＲＮＡの効力は増殖細胞において決定しうる。
本明細書に記載の医薬組成物の製剤は、薬理学技術分野で公知であるまたは今後開発される任意の方法により調製しうる。一般に、かかる調製方法は、活性成分を賦形剤および／または１種以上の他の副成分と一体化させる工程と、次いで、必要に応じておよび／または望ましい場合には分割、造形、および／または包装を行って所望の単回または複数回用量ユニットにする工程とを含む。
【１８９３】
本発明に係る医薬組成物は、単回ユニット用量としておよび／または複数の単回ユニット用量として大量に調製、包装、および／または販売を行いうる。本明細書で用いられる場合、「ユニット用量」とは、所定量の活性成分を含む医薬組成物の個別量のことである。活性成分の量は、一般に、対象に投与される活性成分の投与量および／またはかかる投与量の便利な部分量、たとえばかかる投与量の１／２もしくは１／３に等しい。
【１８９４】
本発明に係る医薬組成物中の活性成分、薬学的に許容可能な賦形剤、および／または任意の追加の成分の相対量は、治療される対象のアイデンティティー、サイズ、および／または病態に依存して、さらには組成物の投与経路に依存して変化するであろう。例として、組成物は、０．１％～１００％、たとえば、０．５～５０％、１～３０％、５～８０％、少なくとも８０％（ｗ／ｗ）の活性成分を含みうる。
【１８９５】
いくつかの実施形態では、本明細書に記載の製剤は少なくとも１種のｓａＲＮＡを含有しうる。限定されるものではないが、例として、製剤は、異なる配列を有する１、２、３、４、または５種のｓａＲＮＡを含有しうる。一実施形態では、製剤は、異なる配列を有する少なくとも３種のｓａＲＮＡを含有する。一実施形態では、製剤は、異なる配列を有する少なくとも５種のｓａＲＮＡを含有する。
【１８９６】
本発明のｓａＲＮＡは、（１）安定性を向上させるために、（２）細胞トランスフェクションを向上させるために、（３）持続放出または遅延放出（たとえば、ｓａＲＮＡのデポ製剤から）を可能にするために、（４）生体内分布を変化させるために（たとえば、ｓａＲＮＡを特定の組織または細胞型に標的化するために）、（５）インビボでコードタンパク質の翻訳を増加させるために、および／または（６）インビボでコードタンパク質の放出プロファイルを変化させるために、１種以上の賦形剤を用いて製剤化可能である。
【１８９７】
従来の賦形剤、たとえば、あらゆる溶媒、分散媒、希釈剤または他の液体媒体、分散助剤または懸濁助剤、界面活性剤、等張化剤、増粘剤または乳化剤、保存剤に加えて、本発明の賦形剤は、限定されるものではないが、リピドイド、リポソーム、脂質ナノ粒子、ポリマー、リポプレックス、コア－シェルナノ粒子、ペプチド、タンパク質、ｓａＲＮＡでトランスフェクトされた細胞（たとえば、対象への移植のために）、ヒアルロニダーゼ、ナノ粒子ミミック、およびそれらの組合せを含みうる。したがって、本発明の製剤は、それぞれ一緒になってｓａＲＮＡの安定性の向上および／またはｓａＲＮＡによる細胞トランスフェクションの向上を行う量で１種以上の賦形剤を含みうる。さらに、本発明のｓａＲＮＡは、自己集合核酸ナノ粒子を用いて製剤化しうる。薬学的に許容可能な担体、賦形剤、および本発明のｓａＲＮＡを含む製剤で使用しうる核酸用の送達剤は、２０１２年１２月１４日出願の国際公開第２０１３／０９０６４８号パンフレット（その内容はその全体が参照により本明細書に組み込まれる）に開示されている。
【１８９８】
一実施形態では、本発明のｓａＲＮＡは、アニーリングにより活性成分として二本鎖ｓａＲＮＡを形成するそれぞれ２１ヌクレオチド長の２つの単一ＲＮＡ鎖を含む。組成物は

、５０ｍＭトリス－ＨＣｌ、ｐＨ８．０、１００ｍＭ　ＮａＣｌ、および５ｍＭ　ＥＤＴＡからなる塩緩衝液をさらに含む。

【１８９９】

他の実施形態では、本発明のｓａＲＮＡはデンドリマーと共に送達しうる。デンドリマーは高分岐状マクロ分子である。一実施形態では、本発明のｓａＲＮＡは、標的化インビボ送達のために可撓性構造のポリ（アミドアミン）（ＰＡＭＡＭ）デンドリマーと複合体化される。この複合体はｓａＲＮＡデンドリマーと呼ばれる。デンドリマーは、高度の分子均一性、狭い分子量分布、特定のサイズおよび形状特性、ならびに高官能基化末端表面を有する。製造プロセスは、中心開始剤コアから開始される一連の繰返し工程である。各後続の成長工程は、より大きい分子直径および分子量ならびに前の世代よりも高反応性の表面部位を有する新しい世代のポリマーを与える。

【１９００】

ＰＡＭＡＭデンドリマーは、表面上の第１級アミン基と構造内の第３級アミン基とを有する効率的なヌクレオチド送達系である。第１級アミン基は、ヌクレオチド結合に関与すると共に細胞内取込みを促進し、一方、埋め込まれた第３級アミノ基は、エンドソーム内でプロトンスポンジとして作用すると共に細胞質中への核酸の放出を増強する。このデンドリマーは、それにより運ばれるｓａＲＮＡをリボヌクレアーゼ分解から保護し、効率的な遺伝子標的化のためにエンドサイトーシスにより長期にわたりｓａＲＮＡの実質的放出を達成する。こうしたナノ粒子のインビボ効力はこれまでに評価されてきており、デンドリマーは末梢血単核細胞に優先的に蓄積すると共に識別可能な毒性を伴うことなく存続することが生体内分布研究から示される（シュウ（Ｚｈｏｕ）ら著、モレキュラー・セラピー（Ｍｏｌｅｃｕｌａｒ　Ｔｈｅｒ．）、２０１１年、第１９巻、ｐ．２２２８～２２３８（その内容はその全体が参照により本明細書に組み込まれる）を参照されたい）。ＰＡＭＡＭデンドリマーは、トリエタノールアミン（ＴＥＡ）コア、ジアミノブタン（ＤＡＢ）コア、シスタミンコア（ジアミノヘキサン（ヘキサ）コア）、ジアモノドデカン（ＤＯＤＥ）コア、またはエチレンジアミン（ＥＤＡ）コアを含みうる。一実施形態では、ＰＡＭＡＭデンドリマーはＴＥＡコアまたはＤＡＢコアを含む。

【１９０１】

リピドイド

リピドイドの合成は広範に記載されており、これらの化合物を含有する製剤は、オリゴヌクレオチドまたは核酸の送達に特に適している（マーン（Ｍａｈｏｎ）ら著、バイオコンジュゲート・ケミストリー（Ｂｉｏｃｏｎｊｕｇ　Ｃｈｅｍ．）、２０１０年 第２１巻、ｐ．１４４８～１４５４、シュレーダ（Ｓｃｈｒｏｅｄｅｒ）ら著、ジャーナル・オブ・インターナル・メディスン（Ｊ　Ｉｎｔｅｒｎ　Ｍｅｄ．）、２０１０年、第２６７巻、ｐ．９～２１、アキンク（Ａｋｉｎｃ）ら著、ネイチャー・バイオテクノロジー（Ｎａｔ　Ｂｉｏｔｅｃｈｎｏｌ．）、２００８年、第２６巻、ｐ．５６１～５６９、ラブ（Ｌｏｖｅ）ら著、米国科学アカデミー紀要（Ｐｒｏｃ　Ｎａｔｌ　Ａｃａｄ　Ｓｃｉ　ＵＳＡ）、２０１０年、第１０７巻、ｐ．１８６４～１８６９、ジークバルト（Ｓｉｅｇｗａｒｔ）ら著、米国科学アカデミー紀要（Ｐｒｏｃ　Ｎａｔｌ　Ａｃａｄ　Ｓｃｉ　ＵＳＡ）、２０１１年、第１０８巻、ｐ．１２９９６～３００１（それらはすべて、その全体が本明細書に組み込まれる）を参照されたい）。

【１９０２】

これらのリピドイドは、齧歯動物および非ヒト霊長動物において二本鎖低分子干渉ＲＮＡ分子を効果的に送達するために使用されてきたが（アキンク（Ａｋｉｎｃ）ら著、ネイチャー・バイオテクノロジー（Ｎａｔ　Ｂｉｏｔｅｃｈｎｏｌ．）、２００８年、第２６巻、ｐ．５６１～５６９、フランク－カメネツキー（Ｆｒａｎｋ－Ｋａｍｅｎｅｔｓｋｙ）ら著、米国科学アカデミー紀要（Ｐｒｏｃ　Ｎａｔｌ　Ａｃａｄ　Ｓｃｉ　ＵＳＡ．）、２００８年、第１０５巻、ｐ．１１９１５～１１９２０、アキンク（Ａｋｉｎｃ）ら著、モレキュラー・セラピー（Ｍｏｌ　Ｔｈｅｒ．）、２００９年、第１７巻、ｐ．８７２～８７９、ラブ（Ｌｏｖｅ）ら著、米国科学アカデミー紀要（Ｐｒｏｃ　Ｎａｔｌ　Ａｃ

ａｄ　Ｓｃｉ　ＵＳＡ）、２０１０年、第１０７巻、ｐ．１８６４～１８６９、ロイシュナー（Ｌｅｕｓｃｈｎｅｒ）ら著、ネイチャー・バイオテクノロジー（Ｎａｔ　Ｂｉｏｔｅｃｈｎｏｌ．）、２０１１年、第２９巻、ｐ．１００５～１０１０（それらはすべて、その全体が本明細書に組み込まれる）を参照されたい）、本開示は、ｓａＲＮＡの送達におけるそれらの製剤および使用を想定する。複合体、ミセル、リポソーム、または粒子は、これらのリピドイドを含有した状態で調製可能であるため、局所および／または全身投与経路によりリピドイド製剤を注射した後、ｓａＲＮＡの有効な送達をもたらしうる。ｓａＲＮＡのリピドイド複合体は、限定されるものではないが、静脈内経路、筋肉内経路、または皮下経路を含めて種々の手段により投与可能である。

【１９０３】

核酸のインビボ送達は、限定されるものではないが、製剤組成、粒子ＰＥＧ化性、充填度、オリゴヌクレオチド対脂質比、および生物物理学的パラメータ、たとえば、限定されるものではないが、粒子サイズをはじめとする多くのパラメータにより影響されうる（アキンク（Ａｋｉｎｃ）ら著、モレキュラー・セラピー（Ｍｏｌ　Ｔｈｅｒ．）、２００９年、第１７巻、ｐ．８７２～８７９（その内容はその全体が参照により本明細書に組み込まれる））。一例として、ポリ（エチレングリコール）（ＰＥＧ）脂質のアンカー鎖長がわずかに変化すると、インビボ効力が有意な影響を受ける可能性がある。限定されるものではないが、ペンタ［３－（１－ラウリルアミノプロピオニル）］－トリエチレンテトラミンヒドロクロリド（９８Ｎ１２－５としても知られるＴＥＴＡ－５ＬＡＰ、ムルガイア（Ｍｕｒｕｇａｉａｈ）ら著、アナリティカル・ケミストリー（Ａｎａｌｙｔｉｃａｌ　Ｂｉｏｃｈｅｍｉｓｔｒｙ）、２０１０年、第４０１巻、ｐ．６１（その内容はその全体が参照により本明細書に組み込まれる）を参照されたい）、Ｃ１２－２００（誘導体およびバリアントを含む）、およびＭＤ１をはじめとするさまざまなリピドイドを含む製剤は、インビボ活性に関して試験可能である。

【１９０４】

本明細書で「９８Ｎ１２－５」と呼ばれるリピドイドは、アキンク（Ａｋｉｎｃ）ら著、モレキュラー・セラピー（Ｍｏｌ　Ｔｈｅｒ．）、２００９年、第１７巻、ｐ．８７２～８７９に開示されており、その内容はその全体が参照により組み込まれる。

【１９０５】

本明細書で「Ｃ１２－２００」と呼ばれるリピドイドは、ラブ（Ｌｏｖｅ）ら著、米国科学アカデミー紀要（Ｐｒｏｃ　Ｎａｔｌ　Ａｃａｄ　Ｓｃｉ　ＵＳＡ）、２０１０年、第１０７巻、ｐ．１８６４～１８６９ならびにリウ（Ｌｉｕ）およびホワン（Ｈｕａｎｇ）著、モレキュラー・セラピー（Ｍｏｌｅｃｕｌａｒ　Ｔｈｅｒａｐｙ）、２０１０年、ｐ．６６９～６７０に開示されており、その両方の内容は、その全体が参照により本明細書に組み込まれる。リピドイド製剤は、ｓａＲＮＡに加えて３もしくは４つまたはそれを超える成分を含む粒子を含みうる。一例として、特定のリピドイドを含む製剤は、限定されるものではないが、９８Ｎ１２－５を含み、４２％リピドイド、４８％コレステロール、および１０％ＰＥＧ（Ｃ１４アルキル鎖長）を含有しうる。他の例として、特定のリピドイドを含む製剤は、限定されるものではないが、Ｃ１２－２００を含み、５０％リピドイド、１０％ジステロイルホスファチジルコリン、３８．５％コレステロール、および１．５％ＰＥＧ－ＤＭＧを含有しうる。

【１９０６】

一実施形態では、全身静脈内投与のためにリピドイドを用いて製剤化されたｓａＲＮＡは肝臓を標的としうる。たとえば、ｓａＲＮＡを使用し、４２％９８Ｎ１２－５、４８％コレステロール、および１０％ＰＥＧ－脂質の脂質モル組成を含み、約７．５対１の全脂質対ｓａＲＮＡの最終重量比を有し、ＰＥＧ脂質上にＣ１４アルキル鎖長を有し、かつ約５０～６０ｎｍの平均粒子サイズを有する最終最適化静脈内投与製剤は、肝臓への製剤の分布が９０％超になりうる（アキンク（Ａｋｉｎｃ）ら著、モレキュラー・セラピー（Ｍｏｌ　Ｔｈｅｒ．）、２００９年、第１７巻、ｐ．８７２～８７９（その内容はその全体が参照により本明細書に組み込まれる）を参照されたい）。他の例では、Ｃ１２－２００

（国際公開第２０１０／１２９７０９号パンフレット（その内容はその全体が参照により本明細書に組み込まれる）を参照されたい）リピドイドを用いた静脈内投与製剤は、７対１の全脂質対核酸の重量比と、５０／１０／３８．５／１．５のＣ１２－２００／ジステロイルホスファチジルコリン／コレステロール／ＰＥＧ－ＤＭＧのモル比率と、８０ｎｍの平均粒子サイズとを有しうると共に、ｓａＲＮＡの送達に有効でありうる（ラブ（Ｌｏｖｅ）ら著、米国科学アカデミー紀要（Ｐｒｏｃ Ｎａｔｌ Ａｃａｄ Ｓｃｉ ＵＳＡ）、２０１０年、第１０７巻、ｐ．１８６４～１８６９（その内容はその全体が参照により本明細書に組み込まれる））。

【１９０７】

他の実施形態では、ＭＤ１リピドイド含有製剤は、インビボでｓａＲＮＡを肝細胞に効果的に送達するために使用しうる。筋肉内経路または皮下経路に対して最適化されたリピドイド製剤の特徴は、標的細胞型および細胞外マトリックスを介する血流中への製剤の拡散能に有意に依存して異なりうる。効果的肝細胞送達を行うには内皮小孔サイズに基づいて１５０ｎｍ未満の粒子サイズが望まれるが（アキンク（Ａｋｉｎｃ）ら著、モレキュラー・セラピー（Ｍｏｌ Ｔｈｅｒ．）、２００９年、第１７巻、ｐ．８７２～８７９（その内容はその全体が参照により本明細書に組み込まれる）を参照されたい）、内皮細胞、骨髄細胞、および筋細胞（これらに限定されるものではない）をはじめとする他の細胞型に製剤を送達するためのリピドイド製剤化ｓａＲＮＡの使用は、同様なサイズ制限を受けない可能性がある。

【１９０８】

骨髄細胞および内皮などの他の非肝細胞にインビボでｓｉＲＮＡを送達するためのリピドイド製剤の使用は報告されている（アキンク（Ａｋｉｎｃ）ら著、ネイチャー・バイオテクノロジー（Ｎａｔ Ｂｉｏｔｅｃｈｎｏｌ．）、２００８年、第２６巻、ｐ．５６１～５６９、ロイシュナー（Ｌｅｕｓｃｈｎｅｒ）ら著、ネイチャー・バイオテクノロジー（Ｎａｔ Ｂｉｏｔｅｃｈｎｏｌ．）、２０１１年、第２９巻、ｐ．１００５～１０１０、チョー（Ｃｈｏ）ら著、アドバンスト・ファンクショナル・マテリアルズ（Ａｄｖ．Ｆｕｎｃｔ．Ｍａｔｅｒ．）、２００９年、第１９巻、ｐ．３１１２～３１１８、第８回ジュダ・フォークマン国際会議（８ｔｈ Ｉｎｔｅｒｎａｔｉｏｎａｌ Ｊｕｄａｈ Ｆｏｌｋｍａｎ Ｃｏｎｆｅｒｅｎｃｅ）、マサチューセッツ州ケンブリッジ、２０１０年１０月８～９日（それらの各内容はその全体が参照により本明細書に組み込まれる）を参照されたい）。単球などの骨髄細胞への効果的送達では、リピドイド製剤は類似の成分モル比率を有しうる。リピドイドと、ジステロイルホスファチジルコリン、コレステロール、およびＰＥＧ－ＤＭＧ（これらに限定されるものではない）をはじめとする他の成分とのさまざまな比を用いて、肝細胞、骨髄細胞、筋細胞など（これらに限定されるものではない）をはじめとするさまざまな細胞型への送達のために、ｓａＲＮＡの製剤を最適化しうる。たとえば、成分モル比率としては、限定されるものではないが、５０％Ｃ１２－２００、１０％ジステロイルホスファチジルコリン、３８．５％コレステロール、および％１．５ＰＥＧ－ＤＭＧが挙げられうる（ロイシュナー（Ｌｅｕｓｃｈｎｅｒ）ら著、ネイチャー・バイオテクノロジー（Ｎａｔ Ｂｉｏｔｅｃｈｎｏｌ）、２０１１年、第２９巻、ｐ．１００５～１０１０（その内容はその全体が参照により本明細書に組み込まれる）を参照されたい）。皮下送達または筋肉内送達のいずれかを介する細胞（たとえば、限定されるものではないが、脂肪細胞および筋細胞）への核酸の局所送達のためのリピドイド製剤の使用はまた、全身送達に望まれる製剤成分の必ずしもすべてを必要としないこともあり、したがって、リピドイドとｓａＲＮＡとのみを含みうる。

【１９０９】

リポソーム、リポプレックス、および脂質ナノ粒子

本発明のｓａＲＮＡは、１種以上のリポソーム、リポプレックス、または脂質ナノ粒子を用いて製剤化可能である。一実施形態では、ｓａＲＮＡの医薬組成物はリポソームを含む。リポソームは、主に脂質二重層で構成しうる人工調製ベシクルであり、栄養素および医薬製剤を投与するための送達媒体として使用しうる。リポソームはさまざまなサイズで

ありうる。たとえば、限定されるものではないが、何百ナノメートルもの直径でありうると共に狭い水性区画により分離された一連の同心二重層を含有しうるマルチラメラベシクル（ＭＬＶ：ｍｕｌｔｉｌａｍｅｌｌａｒ ｖｅｓｉｃｌｅ）、５０ｎｍよりも小さい直径でありうるスモールユニセルベシクル（ＳＵＶ：ｓｍａｌｌ ｕｎｉｃｅｌｌｕｌａｒ ｖｅｓｉｃｌｅ）、および５０～５００ｎｍの直径でありうるラージユニラメラベシクル（ＬＵＶ：ｌａｒｇｅ ｕｎｉｃｅｌｌｕｌａｒ ｖｅｓｉｃｌｅ）でありうる。リポソーム設計は、非健常組織へのリポソームの結合を改善するためにまたは限定されるものではないがエンドサイトーシスなどのイベントを活性化するために、限定されるものではないが、オプソニンまたはリガンドを含みうる。リポソームは、医薬製剤の送達を改善するために低ｐＨまたは高ｐＨを含みうる。

【１９１０】

リポソームの形成は、物理化学的特性、たとえば、限定されるものではないが、閉じ込められる医薬製剤およびリポソーム成分、脂質ベシクルが分散される媒体の性質、閉じ込められる物質の有効濃度およびその潜在的毒性、ベシクルの適用時および／または送達時に含まれる任意の追加のプロセス、最適化サイズ、意図される用途でのベシクルの多分散性および貯蔵寿命、ならびに安全かつ効率的なリポソーム製品のバッチ間の再現性および大量生産の可能性に依存しうる。

【１９１１】

一実施形態では、本明細書に記載の医薬組成物は、限定されるものではないが、１，２－ジオレイルオキシ－Ｎ，Ｎ－ジメチルアミノプロパン（ＤＯＤＭＡ）リポソーム、マリーナ・バイオテック（Ｍａｒｉｎａ Ｂｉｏｔｅｃｈ）（ワシントン州ボセル）製のＤｉＬａ２リポソーム、１，２－ジリノレイルオキシ－３－ジメチルアミノプロパン（ＤＬｉｎ－ＤＭＡ）、２，２－ジリノレイル－４－（２－ジメチルアミノエチル）－［１，３］－ジオキソラン（ＤＬｉｎ－ＫＣ２－ＤＭＡ）、およびＭＣ３（米国特許出願公開第２０１０／０３２４１２０号明細書（その内容はその全体が参照により本明細書に組み込まれる））から形成されるようなリポソーム、ならびに低分子薬剤を送達しうるリポソーム、たとえば、限定されるものではないが、ヤンセン・バイオテック（Ｊａｎｓｓｅｎ Ｂｉｏｔｅｃｈ，Ｉｎｃ．）（ペンシルバニア州ホーシャム）製のドキシル（ＤＯＸＩＬ）（登録商標）を含みうる。

【１９１２】

一実施形態では、本明細書に記載の医薬組成物は、限定されるものではないが、インビトロおよびインビボでオリゴヌクレオチドの送達に好適であることがこれまでに記載および証明されてきた安定化プラスミド－脂質粒子（ＳＰＬＰ：ｓｔａｂｉｌｉｚｅｄ ｐｌａｓｍｉｄ－ｌｉｐｉｄ ｐａｒｔｉｃｌｅ）または安定化核酸脂質粒子（ＳＮＡＬＰ：ｓｔａｂｉｌｉｚｅｄ ｎｕｃｌｅｉｃ ａｃｉｄ ｌｉｐｉｄ ｐａｒｔｉｃｌｅ）の合成から形成されるようなリポソームを含みうる（ホイーラ（Ｗｈｅｅｌｅｒ）ら著、ジーン・セラピー（Ｇｅｎｅ Ｔｈｅｒａｐｙ）、１９９９年、第６巻、ｐ．２７１～２８１、チャン（Ｚｈａｎｇ）ら著、ジーン・セラピー（Ｇｅｎｅ Ｔｈｅｒａｐｙ）、１９９９年、第６巻、ｐ．１４３８～１４４７ジェフズ（Ｊｅｆｆｓ）ら著、ファーマシューティカル・リサーチ（Ｐｈａｒｍ Ｒｅｓ．）、２００５年、第２２巻、ｐ．３６２～３７２、モリッシー（Ｍｏｒｒｉｓｓｅｙ）ら著、ネイチャー・バイオテクノロジー（Ｎａｔ Ｂｉｏｔｅｃｈｎｏｌ．）、２００５年、第２巻、ｐ．１００２～１００７、ジマーマン（Ｚｉｍｍｅｒｍａｎｎ）ら著、ネイチャー（Ｎａｔｕｒｅ）、２００６年、第４４１巻、ｐ．１１１～１１４、ヘイズ（Ｈｅｙｅｓ）ら著、ジャーナル・オブ・コントロールド・リリース（Ｊ Ｃｏｎｔｒ Ｒｅｌ．）、２００５年、第１０７巻、ｐ．２７６～２８７、センプル（Ｓｅｍｐｌｅ）ら著、ネイチャー・バイオテクノロジー（Ｎａｔｕｒｅ Ｂｉｏｔｅｃｈ．）、２０１０年、第２８巻、ｐ．１７２～１７６、ジャッジ（Ｊｕｄｇｅ）ら著、ジャーナル・オブ・クリニカル・インベスティケーション（Ｊ Ｃｌｉｎ Ｉｎｖｅｓｔ．）、２００９年、第１１９巻、ｐ．６６１～６７３、ド・フジュロル（ｄｅＦｏｕｇｅｒｏｌｌｅｓ）著、ヒューマン・ジーン・セラピー（Ｈｕｍ Ｇｅｎｅ

Ｔｈｅｒ．）、２００８年、第１９巻、ｐ．１２５～１３２（それらの各内容はその全体が本明細書に組み込まれる）を参照されたい）。ホイーラ（Ｗｈｅｅｌｅｒ）らによる独自の製造方法は界面活性剤透析法であった。これは後でジェフズ（Ｊｅｆｆｓ）らにより改良されて自発的ベシクル形成法と呼ばれる。リポソーム製剤は、ｓａＲＮＡに加えて３～４つの脂質成分で構成しうる。例として、リポソームは、限定されるものではないが、ジェフズ（Ｊｅｆｆｓ）らにより記載されるように、５５％コレステロール、２０％ジステロイルホスファチジルコリン（ＤＳＰＣ）、１０％ＰＥＧ－Ｓ－ＤＳＧ、および１５％１，２－ジオレイルオキシ－Ｎ，Ｎ－ジメチルアミノプロパン（ＤＯＤＭＡ）を含有しうる。他の例では、特定のリポソーム製剤は、限定されるものではないが、４８％コレステロール、２０％ＤＳＰＣ、２％ＰＥＧ－ｃ－ＤＭＡ、および３０％カチオン性脂質を含有しうる。この場合、ヘイズ（Ｈｅｙｅｓ）らにより記載されるように、カチオン性脂質は、１，２－ジステアルルオキシ－Ｎ，Ｎ－ジメチルアミノプロパン（ＤＳＤＭＡ）、ＤＯＤＭＡ、ＤＬｉｎ－ＤＭＡ、または１，２－ジリノレニルオキシ－３－ジメチルアミノプロパン（ＤＬｅｎＤＭＡ）を含みうる。他の例では、核酸－脂質粒子は、マクラクラン（Ｍａｃｌａｃｈｌａｎ）らに付与された国際公開第２００９／１２７０６０号パンフレット（その内容はその全体が参照により本明細書に組み込まれる）に記載されるように、粒子中に存在する全脂質の約５０ｍｏｌ％～約８５ｍｏｌ％を占めるカチオン性脂質と、粒子中に存在する全脂質の約１３ｍｏｌ％～約４９．５ｍｏｌ％を占める非カチオン性脂質と、粒子中に存在する全脂質の約０．５ｍｏｌ％～約２ｍｏｌ％を占める粒子の凝集を阻害するコンジュゲート脂質とを含みうる。他の例では、核酸－脂質粒子は、マクラクラン（Ｍａｃｌａｃｈｌａｎ）らに付与された米国特許出願公開第２００６／００８９１０号明細書（その内容はその全体が参照により本明細書に組み込まれる）に開示される任意の核酸－脂質粒子でありうる。限定されるものではないが、例として、核酸－脂質粒子は、式Ｉのカチオン性脂質と、非カチオン性脂質と、粒子の凝集を阻害するコンジュゲート脂質とを含みうる。

【１９１３】

一実施形態では、本発明のｓａＲＮＡは、官能基化脂質二重層間に架橋を有しうる脂質ベシクル中に製剤化しうる。

一実施形態では、リポソームは、バリー（Ｂａｌｌｙ）らに付与された米国特許第５５９５７５６号明細書（その内容はその全体が参照により本明細書に組み込まれる）に開示される糖修飾脂質を含有しうる。脂質は、約１０ｍｏｌパーセントの量のガングリオシドおよびセレブロシドでありうる。

【１９１４】

一実施形態では、本発明のｓａＲＮＡは、カチオン性脂質を含むリポソーム中に製剤化しうる。リポソームは、国際公開第２０１３／００６８２５号パンフレット（その内容はその全体が参照により本明細書に組み込まれる）に記載されるように、カチオン性脂質中の窒素原子とｓａＲＮＡ中のホスフェートとのモル比（Ｎ：Ｐ比）が１：１～２０：１でありうる。他の実施形態では、リポソームは、２０：１超または１：１未満のＮ：Ｐ比を有しうる。

【１９１５】

一実施形態では、本発明のｓａＲＮＡは、脂質－ポリカチオン複合体中に製剤化しうる。脂質－ポリカチオン複合体の形成は、当技術分野で公知の方法によりおよび／または米国特許出願公開第２０１２／０１７８７０２号明細書（その内容はその全体が参照により本明細書に組み込まれる）に記載されるように達成しうる。限定されるものではないが、例として、ポリカチオンは、カチオン性ペプチドまたはポリペプチド、たとえば、限定されるものではないが、ポリリシン、ポリオルニチン、および／またはポリアルギニン、ならびに国際公開第２０１２／０１３３２６号パンフレット（その全体が参照により本明細書に組み込まれる）に記載のカチオン性ペプチドを含みうる。他の実施形態では、ｓａＲＮＡは、脂質－ポリカチオン複合体中に製剤化しうると共に、これは、中性脂質、たとえば、限定されるものではないが、コレステロールまたはジオレオイルホスファチジルエタ

ノールアミン（ＤＯＰＥ）をさらに含みうる。
【１９１６】
リポソーム製剤は、限定されるものではないが、カチオン性脂質成分の選択、カチオン性脂質の飽和度、ＰＥＧ化性、全成分の比、および生物物理学的パラメータ、たとえばサイズの影響を受けうる。センプル（Ｓｅｍｐｌｅ）ら（センプル（Ｓｅｍｐｌｅ）ら著、ネイチャー・バイオテクノロジー（Ｎａｔｕｒｅ　Ｂｉｏｔｅｃｈ．）、２０１０年、第２８巻、ｐ．１７２～１７６（その内容はその全体が参照により本明細書に組み込まれる））の一例では、リポソーム製剤は、５７．１％カチオン性脂質、７．１％ジパルミトイルホスファチジルコリン、３４．３％コレステロール、および１．４％ＰＥＧｃ－ＤＭＡで構成された。
【１９１７】
いくつかの実施形態では、ＬＮＰ製剤の薬動学的挙動および／または生体内分布を変化させるために、脂質ナノ粒子（ＬＮＰ：ｌｉｐｉｄ　ｎａｎｏｐａｒｔｉｃｌｅ）製剤中のＰＥＧの比を増加もしくは減少させることができ、および／またはＰＥＧ脂質の炭素鎖長をＣ１４からＣ１８に改変することができる。限定されるものではないが、例として、ＬＮＰ製剤は、カチオン性脂質、ＤＳＰＣ、およびコレステロールと比較して、１～５％のモル比率のＰＥＧ－ｃ－ＤＯＭＧの脂質を含有しうる。他の実施形態では、ＰＥＧ－ｃ－ＤＯＭＧは、たとえば、限定されるものではないが、ＰＥＧ－ＤＳＧ（１，２－ジステアロイル－ｓｎ－グリセロール、メトキシポリエチレングリコール）またはＰＥＧ－ＤＰＧ（１，２－ジパルミトイル－ｓｎ－グリセロール、メトキシポリエチレングリコール）などのＰＥＧ脂質で置き換えうる。カチオン性脂質は、当技術分野で公知の任意の脂質、たとえば、限定されるものではないが、ＤＬｉｎ－ＭＣ３－ＤＭＡ、ＤＬｉｎ－ＤＭＡ、Ｃ１２－２００、およびＤＬｉｎ－ＫＣ２－ＤＭＡから選択しうる。
【１９１８】
一実施形態では、本発明のｓａＲＮＡは、国際公開第２０１２／１７０９３０号パンフレット（その内容はその全体が参照により本明細書に組み込まれる）に記載の脂質ナノ粒子などの脂質ナノ粒子中に製剤化しうる。
【１９１９】
一実施形態では、本発明の製剤で使用しうるカチオン性脂質は、限定されるものではないが、国際公開第２０１２／０４０１８４号パンフレット、国際公開第２０１１／１５３１２０号パンフレット、国際公開第２０１１／１４９７３３号パンフレット、国際公開第２０１１／０９０９６５号パンフレット、国際公開第２０１１／０４３９１３号パンフレット、国際公開第２０１１／０２２４６０号パンフレット、国際公開第２０１２／０６１２５９号パンフレット、国際公開第２０１２／０５４３６５号パンフレット、国際公開第２０１２／０４４６３８号パンフレット、国際公開第２０１０／０８０７２４号パンフレット、国際公開第２０１０／０２１８６５号パンフレット、および国際公開第２００８／１０３２７６号パンフレット、米国特許第７，８９３，３０２号明細書、同第７，４０４，９６９号明細書、および同第８，２８３，３３３号明細書、ならびに米国特許出願公開第２０１０／００３６１１５号明細書および米国特許出願公開第２０１２／０２０２８７１号明細書（それらの各内容はその全体が参照により本明細書に組み込まれる）に記載のカチオン性脂質から選択される。他の実施形態では、カチオン性脂質は、限定されるものではないが、国際公開第２０１２／０４０１８４号パンフレット、国際公開第２０１１／１５３１２０号パンフレット、国際公開第２０１１／１４９７３３号パンフレット、国際公開第２０１１／０９０９６５号パンフレット、国際公開第２０１１／０４３９１３号パンフレット、国際公開第２０１１／０２２４６０号パンフレット、国際公開第２０１２／０６１２５９号パンフレット、国際公開第２０１２／０５４３６５号パンフレット、および国際公開第２０１２／０４４６３８号パンフレット（それらの各内容はその全体が参照により本明細書に組み込まれる）に記載の式Ａから選択される。さらに他の実施形態では、カチオン性脂質は、限定されるものではないが、国際公開第２００８／１０３２７６号パンフレットの式ＣＬＩ－ＣＬＸＸＩＸ、米国特許第７，８９３，３０２号明細書の式Ｃ

ＬＩ－ＣＬＸＸＩＸ、米国特許第７，４０４，９６９号明細書の式ＣＬＩ－ＣＬＸＸＸＸＩＩ、および米国特許出願公開第２０１０／００３６１１５／号明細書の式Ｉ－ＶＩ（それらの各内容はその全体が参照により本明細書に組み込まれる）から選択される。さらに他の実施形態では、カチオン性脂質は、ゴーシュロン（Ｇａｕｃｈｅｒｏｎ）らに付与された米国特許第７２２３８８７号明細書（その内容はその全体が参照により本明細書に組み込まれる）に開示されるカチオン性脂質などの多価カチオン性脂質でありうる。カチオン性脂質は、ゴーシュロン（Ｇａｕｃｈｅｒｏｎ）らに付与された米国特許第７２２３８８７号明細書（その内容はその全体が参照により本明細書に組み込まれる）に記載されるように、２つの第４級アミン基を含む正荷電ヘッド基と、４つの炭化水素鎖を含む疎水性部分とを有しうる。さらに他の実施形態では、カチオン性脂質は、マイヤー（Ｍａｉｅｒ）らに付与された米国特許出願公開第２０１３／０１９５９２０号明細書（その内容はその全体が参照により本明細書に組み込まれる）に開示される生分解性脂質のように生分解性でありうる。カチオン性脂質は、マイヤー（Ｍａｉｅｒ）らに付与された米国特許出願公開第２０１３／０１９５９２０号明細書（その内容はその全体が参照により本明細書に組み込まれる）の式Ｉ～ＩＶに記載されるようにカチオン性脂質の脂質部分に位置する１つ以上の生分解性基を有しうる。

【１９２０】

限定されるものではないが、例として、カチオン性脂質は、（２０Ｚ，２３Ｚ）－Ｎ，Ｎ－ジメチルノナコサ－２０，２３－ジエン－１０－アミン、（１７Ｚ，２０Ｚ）－Ｎ，Ｎ－ジメミルヘキサコサ－１７，２０－ジエン－９－アミン、（１Ｚ，１９Ｚ）－Ｎ５Ｎ－ジメチルペンタコサ－１６，１９－ジエン－８－アミン、（１３Ｚ，１６Ｚ）－Ｎ，Ｎ－ジメチルドコサ－１３，１６－ジエン－５－アミン、（１２Ｚ，１５Ｚ）－Ｎ，Ｎ－ジメチルヘンイコサ－１２，１５－ジエン－４－アミン、（１４Ｚ，１７Ｚ）－Ｎ，Ｎ－ジメチルトリコサ－１４，１７－ジエン－６－アミン、（１５Ｚ，１８Ｚ）－Ｎ，Ｎ－ジメチルテトラコサ－１５，１８－ジエン－７－アミン、（１８Ｚ，２１Ｚ）－Ｎ，Ｎ－ジメチルヘプタコサ１８，２１ジエン－１０－アミン、（１５Ｚ，１８Ｚ）－Ｎ，Ｎ－ジメチルテトラコサ－１５，１８－ジエン－５－アミン、（１４Ｚ，１７Ｚ）－Ｎ，Ｎ－ジメチルトリコサ－１４，１７－ジエン－４－アミン、（１９Ｚ，２２Ｚ）－Ｎ，Ｎ－ジメイヒルオクタコサ－１９，２２－ジエン－９－アミン、（１８Ｚ，２１Ｚ）－Ｎ，Ｎ－ジメチルヘプタコサ－１８，２１－ジエン－８－アミン、（１７Ｚ，２０Ｚ）－Ｎ，Ｎ－ジメチルヘキサコサ－１７，２０－ジエン－７－アミン、（１６Ｚ，１９Ｚ）－Ｎ，Ｎ－ジメチルペンタコサ－１６，１９－ジエン－６－アミン、（２２Ｚ，２５Ｚ）－Ｎ，Ｎ－ジメチルヘントリアコンタ－２２，２５－ジエン－１０－アミン、（２１Ｚ，２４Ｚ）－Ｎ，Ｎ－ジメチルトリアコンタ－２１，２４－ジエン－９－アミン、（１８Ｚ）－Ｎ，Ｎ－ジメチルヘプタコス－１８－エン－１０－アミン、（１７Ｚ）－Ｎ，Ｎ－ジメチルヘキサコス－１７－エン－９－アミン、（１９Ｚ，２２Ｚ）－Ｎ，Ｎ－ジメチルオクタコサ－１９，２２－ジエン－７－アミン、Ｎ，Ｎ－ジメチルヘプタコサン－１０－アミン、（２０Ｚ，２３Ｚ）－Ｎ－エチル－Ｎ－メチルノナコサ－２０，２３－ジエン－１０－アミン、１－［（１１Ｚ，１４Ｚ）－１－ノニルイコサ－１１，１４－ジエン－１－イル］ピロリジン、（２０Ｚ）－Ｎ，Ｎ－ジメチルヘプタコサ－２０－エン－１０－アミン、（１５Ｚ）－Ｎ，Ｎ－ジメチルエプタコサ－１５－エン－１０－アミン、（１４Ｚ）－Ｎ，Ｎ－ジメチルノナコサ－１４－エン－１０－アミン、（１７Ｚ）－Ｎ，Ｎ－ジメチルノナコサ－１７－エン－１０－アミン、（２４Ｚ）－Ｎ，、Ｎ－ジメチルトリトリアコンタ－２４－エン－１０－アミン、（２０Ｚ）－Ｎ，Ｎ－ジメチルノナコサ－２０－エン－１０－アミン、（２２Ｚ）－Ｎ，Ｎ－ジメチルヘントリアコンタ－２２－エン－１０－アミン、（１６Ｚ）－Ｎ，Ｎ－ジメチルペンタコサ－１６－エン－８－アミン、（１２Ｚ，１５Ｚ）－Ｎ，Ｎ－ジメチル－２－ノニルヘンイコサ－１２，１５－ジエン－１－アミン、（１３Ｚ，１６Ｚ）－Ｎ，Ｎ－ジメチル－３－ノニルドコサ－ｌ３，１６－ジエン－１－アミン、Ｎ，Ｎ－ジメチル１－［（１Ｓ，２Ｒ）－２－オクチルシクロプロピル］エプタデカン－８－アミン、１－［（１Ｓ，２Ｒ）－２－ヘキシルシクロプロピル］－Ｎ，Ｎ－ジメチルノナ

デカン－１０－アミン、Ｎ，Ｎ－ジメチル１－［（１Ｓ，２Ｒ）－２－オクチルシクロプロピル］ノナデカン－１０－アミン、Ｎ，Ｎ－ジメチル－２１－［（１Ｓ，２Ｒ）－２－オクチルシクロプロピル］ヘンイコサン－１０－アミン、Ｎ，Ｎ－ジメチル－１－［（１Ｓ，２Ｓ）－２－｛［（１Ｒ，２Ｒ）－２－ペンチルシクロプロピル］メチル｝シクロプロピル］ノナデカン－１０－アミン、Ｎ，Ｎ－ジメチル－１－［（１Ｓ，２Ｒ）－２－オクチルシクロプロピル］ヘキサデカン－８－アミン、Ｎ，Ｎ－ジメチル－［（１Ｒ，２Ｓ）－２－ウンデシルシクロプロピル］テトラデカン－５－アミン、Ｎ，Ｎ－ジメチル３－｛７－［（１Ｓ，２Ｒ）－２－オクチルシクロプロピル］ヘプチル｝ドデカン－１－アミン、１－［（１Ｒ，２Ｓ）－２－ヘプチルシクロプロピル］－Ｎ，Ｎ－ジメチルオクタデカン－９－アミン、１－［（１Ｓ，２Ｒ）－２－デシルシクロプロピル］－Ｎ，Ｎ－ジメチルペンタデカン－６－アミン、Ｎ，Ｎ－ジメチル－１－［（１Ｓ，２Ｒ）－２－オクチルシクロプロピル］ペンタデカン－８－アミン、Ｒ－Ｎ，Ｎ－ジメチル１－［（９Ｚ，１２Ｚ）－オクタデカ－９，１２－ジエン－１－イルオキシ］－３－（オクチルオキシ）プロパン－２－アミン、Ｓ－Ｎ，Ｎ－ジメチル１－［（９Ｚ，１２Ｚ）－オクタデカ－９，１２－ジエン－１－イルオキシ］－３－（オクチルオキシ）プロパン－２－アミン、１－｛２－［（９Ｚ，１２Ｚ）－オクタデカ－９，１２－ジエン－１－イルオキシ］－１－［（オクチルオキシ）メチル］エチル｝ピロリジン、（２Ｓ）－Ｎ，Ｎ－ジメチル１－［（９Ｚ，１２Ｚ）－オクタデカ－９，１２－ジエン－１－イルオキシ］－３－［（５Ｚ）－オクト－５－エン－１－イルオキシ］プロパン－２－アミン、１－｛２－［（９Ｚ，１２Ｚ）－オクタデカ－９，１２－ジエン－１－イルオキシ］－１－［（オクチルオキシ）メチル］エチル｝アゼチジン、（２Ｓ）－１－（ヘキシルオキシ）－Ｎ，Ｎ－ジメチル３－［（９Ｚ，１２Ｚ）－オクタデカ－９，１２－ジエン－１－イルオキシ］プロパン－２アミン、（２Ｓ）－１－（ヘプチルオキシ）－Ｎ，Ｎ－ジメチル－３－［（９Ｚ，１２Ｚ）－オクタデカ９，１２ジエン－１－イルオキシ］プロパン－２－アミン、Ｎ，Ｎ－ジメチル１－（ノニルオキシ）－３－［（９Ｚ，１２Ｚ）－オクタデカ－９，１２－ジエン－１－イルオキシ］プロパン－２－アミン、Ｎ，Ｎ－ジメチル－１－［（９Ｚ）－オクタデク－９－エン－１－イルオキシ］－３－（オクチルオキシ）プロパン－２－アミン、（２Ｓ）－Ｎ，Ｎ－ジメチル－１－［（６Ｚ，９Ｚ，１２Ｚ）－オクタデカ－６，９，１２－トリエン－１－イルオキシ］－３－（オクチルオキシ）プロパン－２－アミン、（２Ｓ）－１－［（１１Ｚ，１４Ｚ）－イコサ－１１，１４－ジエン－１－イルオキシ］－Ｎ，Ｎ－ジメチル－３－（ペンチルオキシ）プロパン－２－アミン、（２Ｓ）－１－（ヘキシルオキシ）－３－［（１１Ｚ，１４Ｚ）－イコサ－１１，１４－ジエン－１－イルオキシ］－Ｎ，Ｎ－ジメチルプロパン－２－アミン、１－［（１１Ｚ，１４Ｚ）－イコサ－１１，１４－ジエン－１－イルオキシ］－Ｎ，Ｎ－ジメチル－３－（オクチルオキシ）プロパン－２－アミン、１－［（１３Ｚ，１６Ｚ）－ドコサ－１３，１６－ジエン－１－イルオキシ］－Ｎ，Ｎ－ジメチル３－（オクチルオキシ）プロパン－２－アミン、（２Ｓ）－１－［（１３Ｚ，１６Ｚ）－ドコサ－１３，１６－ジエン－１－イルオキシ］－３－（ヘキシルオキシ）－Ｎ，Ｎ－ジメチルプロパン－２－アミン、（２Ｓ）－１－［（１３Ｚ）－ドコス－１３－エン－１－イルオキシ］－３－（ヘキシルオキシ）－Ｎ，Ｎ－ジメチルプロパン－２－アミン、１－［（１３Ｚ）－ドコス－１３－エン－１－イルオキシ］－Ｎ，Ｎ－ジメチル－３－（オクチルオキシ）プロパン－２－アミン、１－［（９Ｚ）－ヘキサデク－９－エン－１－イルオキシ］－Ｎ，Ｎ－ジメチル－３－（オクチルオキシ）プロパン－２－アミン、（２Ｒ）－Ｎ，Ｎ－ジメチルＨ（１－メトイルオクチル）オキシ］－３－［（９Ｚ，１２Ｚ）－オクタデカ－９，１２－ジエン－１－イルオキシ］プロパン－２－アミン、（２Ｒ）－１－［（３，７－ジメチルオクチル）オキシ］－Ｎ，Ｎ－ジメチル－３－［（９Ｚ，１２Ｚ）－オクタデカ－９，１２－ジエン－１－イルオキシ］プロパン－２－アミン、Ｎ，Ｎ－ジメチル－１－（オクチルオキシ）－３－（｛８－［（１Ｓ，２Ｓ）－２－｛［（１Ｒ，２Ｒ）－２－ペンチルシクロプロピル］メチル｝シクロプロピル］オクチル｝オキシ）プロパン－２－アミン、Ｎ，Ｎ－ジメチル－１－｛［８－（２－オクチルシクロプロピル）オクチル］オキシ｝－３－（オクチルオキシ）プロパン－２－アミン

、および（１１Ｅ，２０Ｚ，２３Ｚ）－Ｎ，Ｎ－ジメチルノナコサ－１１，２０，２－トリエン－１０－アミン、またはそれらの薬学的に許容可能な塩もしくは立体異性体から選択しうる。

【１９２１】

一実施形態では、脂質は、国際公開第２０１２／１７０８８９号パンフレット（その内容はその全体が参照により本明細書に組み込まれる）に記載されるような切断性脂質でありうる。

【１９２２】

一実施形態では、本明細書に記載のナノ粒子は、本明細書に記載のおよび／または当技術分野で公知の少なくとも１種のカチオン性ポリマーを含みうる。

一実施形態では、カチオン性脂質は、当技術分野で公知の方法により、ならびに／または国際公開第２０１２／０４０１８４号パンフレット、国際公開第２０１１／１５３１２０号パンフレット、国際公開第２０１１／１４９７３３号パンフレット、国際公開第２０１１／０９０９６５号パンフレット、国際公開第２０１１／０４３９１３号パンフレット、国際公開第２０１１／０２２４６０号パンフレット、国際公開第２０１２／０６１２５９号パンフレット、国際公開第２０１２／０５４３６５号パンフレット、国際公開第２０１２／０４４６３８号パンフレット、国際公開第２０１０／０８０７２４号パンフレット、および国際公開第２０１０／２１８６５号パンフレット（それらの各内容はその全体が参照により本明細書に組み込まれる）に記載されるように合成しうる。

【１９２３】

一実施形態では、ｓａＲＮＡのＬＮＰ製剤は、３％脂質モル比率でＰＥＧ－ｃ－ＤＯＭＧを含有しうる。他の実施形態では、ｓａＲＮＡのＬＮＰ製剤は、１．５％脂質モル比率でＰＥＧ－ｃ－ＤＯＭＧを含有しうる。

【１９２４】

一実施形態では、ｓａＲＮＡの医薬組成物は、国際公開第２０１２／０９９７５５号パンフレット（その内容はその全体が参照により本明細書に組み込まれる）に記載のＰＥＧ化脂質の少なくとも１つを含みうる。

【１９２５】

一実施形態では、ＬＮＰ製剤は、ＰＥＧ－ＤＭＧ２０００（１，２－ジミリストイル－ｓｎ－グルセロ－３－ホホエタノールアミン－Ｎ－［メトキシ（ポリエチレングリコール）－２０００）を含有しうる。一実施形態では、ＬＮＰ製剤は、ＰＥＧ－ＤＭＧ２０００と、当技術分野で公知のカチオン性脂質と、少なくとも１つの他の成分とを含有しうる。他の実施形態では、ＬＮＰ製剤は、ＰＥＧ－ＤＭＧ２０００と、当技術分野で公知のカチオン性脂質と、ＤＳＰＣと、コレステロールとを含有しうる。限定されるものではないが、例として、ＬＮＰ製剤は、ＰＥＧ－ＤＭＧ２０００と、ＤＬｉｎ－ＤＭＡと、ＤＳＰＣと、コレステロールとを含有しうる。限定されるものではないが、他の例として、ＬＮＰ製剤は、２：４０：１０：４８のモル比でＰＥＧ－ＤＭＧ２０００と、ＤＬｉｎ－ＤＭＡと、ＤＳＰＣと、コレステロールとを含有しうる（たとえば、ゲアール（Ｇｅａｌｌ）ら著、「自己増幅ＲＮＡワクチンの非ウイルス送達（Ｎｏｎｖｉｒａｌ ｄｅｌｉｖｅｒｙ ｏｆ ｓｅｌｆ－ａｍｐｌｉｆｙｉｎｇ ＲＮＡ ｖａｃｃｉｎｅｓ）」、米国科学アカデミー紀要（ＰＮＡＳ）、２０１２年、ＰＭＩＤ：２２９０８２９４（その全体が参照により本明細書に組み込まれる）を参照されたい）。限定されるものではないが、他の例として、本明細書に記載のｓａＲＮＡは、米国特許出願公開第２０１２／０２０７８４５号明細書（その内容はその全体が参照により本明細書に組み込まれる）に記載されるように、非経口経路により送達されるナノ粒子中に製剤化しうる。カチオン性脂質はまた、マノハラン（Ｍａｎｏｈａｒａｎ）らに付与された米国特許出願公開第２０１３／０１５６８４５号明細書、マノハラン（Ｍａｎｏｈａｒａｎ）らに付与された米国特許出願公開第２０１３／０１２９７８５号明細書、Ｗａｓａｎらに付与された国際公開第２０１２／０４７６５６号パンフレット、チェン（Ｃｈｅｎ）らに付与された国際公開第２０１０／１４４７４０号パンフレット、アンセル（Ａｎｓｅｌｌの）らに付与された国際公開第２０

１３／０８６３２２号パンフレット、またはマノハラン（Ｍａｎｏｈａｒａｎ）らに付与された国際公開第２０１２／０１６１８４号パンフレット（それぞれの内容はその全体が参照により本明細書に組み込まれる）に開示されるカチオン性脂質でありうる。

【１９２６】

一実施形態では、本発明のｓａＲＮＡは、ホープ（Ｈｏｐｅ）らに付与された米国特許出願公開第２０１３／００１７２２３号明細書（その内容はその全体が参照により本明細書に組み込まれる）に記載されるように、第１および第２のカチオン性脂質などの複数のカチオン性脂質を用いて製剤化しうる。第１のカチオン性脂質は第１の性質に基づいて選択可能であり、かつ第２のカチオン性脂質は第２の性質に基づいて選択可能である。この場合、これらの性質は、米国特許出願公開第２０１３／００１７２２３号明細書（その内容はその全体が参照により本明細書に組み込まれる）に概説されるように決定しうる。一実施形態では、第１および第２の性質は相補的である。

【１９２７】

他の実施形態では、ｓａＲＮＡは、カリス（Ｃｕｌｌｉｓ）らに付与された米国特許出願公開第２０１２／０２７６２０９号明細書（その内容はその全体が参照により本明細書に組み込まれる）に記載されるように、脂質粒子が固体コアを含む条件で１種以上のカチオン性脂質と１種以上の第２の脂質と１種以上の核酸とを含む脂質粒子を用いて製剤化しうる。

【１９２８】

一実施形態では、本発明のｓａＲＮＡは、サティッシュチャンドラン（Ｓａｔｉｓｈｃｈａｎｄｒａｎ）らに付与された欧州特許第２２９８３５８号明細書（その内容はその全体が参照により本明細書に組み込まれる）に記載されるように、水中油型（ｏ／ｗ）エマルジョン中でカチオン性両親媒性物質と複合体化しうる。カチオン性両親媒性物質は、カチオン性脂質、修飾もしくは非修飾スペルミン、ブピバカイン、またはベンザルコニウムクロリドでありうると共に、油は、野菜油または動物油でありうる。限定されるものではないが、例として、核酸－カチオン性両親媒性物質複合体の少なくとも１０％は、水中油型エマルジョンの油相中にある（たとえば、サティッシュチャンドラン（Ｓａｔｉｓｈｃｈａｎｄｒａｎ）らに付与された欧州特許第２２９８３５８号明細書（その内容はその全体が参照により本明細書に組み込まれる）に記載の複合体を参照されたい）。

【１９２９】

一実施形態では、本発明のｓａＲＮＡは、カチオン性化合物と中性脂質との混合物を含む組成物を用いて製剤化しうる。限定されるものではないが、例として、カチオン性化合物は、アンセル（Ａｎｓｅｌｌ）らに付与された国際公開第１９９９／０１０３９０号パンフレット（その内容はその全体が参照により本明細書に開示される）に開示される式（Ｉ）でありうると共に、中性脂質は、ジアシルホスファチジルコリン、ジアシルホスファチジルエタノールアミン、セラミド、およびスフィンゴミエリンからなる群から選択しうる。限定されるものではないが、他の例では、脂質製剤は、アキンク（Ａｋｉｎｃ）らに付与された米国特許出願公開第２０１２／０１０１１４８号明細書（その内容はその全体が参照により本明細書に組み込まれる）に開示される式Ａの陽イオン性脂質と、中性脂質と、ステロールと、ＰＥＧまたはＰＥＧ修飾脂質とを含みうる。

【１９３０】

一実施形態では、ＬＮＰ製剤は、国際公開第２０１１／１２７２５５号パンフレットまたは国際公開第２００８／１０３２７６号パンフレット（それぞれその全体が参照により本明細書に組み込まれる）に記載の方法により製剤化しうる。限定されるものではないが、例として、本発明のｓａＲＮＡは、国際公開第２０１１／１２７２５５号パンフレットおよび／または国際公開第２００８／１０３２７６号パンフレット（その各内容はその全体が参照により本明細書に組み込まれる）に記載の脂質ナノ粒子（ＬＮＰ）製剤のいずれかでカプセル化しうる。

【１９３１】

一実施形態では、本明細書に記載のＬＮＰ製剤はポリカチオン性組成物を含みうる。限

定されるものではないが、例として、ポリカチオン性組成物は、米国特許出願公開第２００５／０２２２０６４号明細書（その内容はその全体が参照により本明細書に組み込まれる）の式１～６０から選択しうる。他の実施形態では、ポリカチオン性組成物を含むＬＮＰ製剤は、本明細書に記載のｓａＲＮＡをインビボおよび／またはインビトロで送達するために使用しうる。

【１９３２】

一実施形態では、本明細書に記載のＬＮＰ製剤は浸透エンハンサー分子を追加的に含みうる。限定されるものではないが、浸透エンハンサー分子は米国特許出願公開第２００５／０２２２０６４／号明細書（その内容はその全体が参照により本明細書に組み込まれる）に記載されている。

【１９３３】

一実施形態では、医薬組成物は、限定されるものではないが、ＤｉＬａ２リポソーム（マリーナ・バイオテック（Ｍａｒｉｎａ　Ｂｉｏｔｅｃｈ）、ワシントン州ボセル）、スマーティクルズ（ＳＭＡＲＴＩＣＬＥＳ）（登録商標）／ＮＯＶ３４０（マリーナ・バイオテック（Ｍａｒｉｎａ　Ｂｉｏｔｅｃｈ）、ワシントン州ボセル）、中性ＤＯＰＣ（１，２－ジオレオイル－ｓｎ－グルセロ－３－ホスホコリン）ベースのリポソーム（たとえば、卵巣癌のためのｓｉＲＮＡ送達（ランデン（Ｌａｎｄｅｎ）ら著、キャンサー・バイオロジー・アンド・セラピー（Ｃａｎｃｅｒ　Ｂｉｏｌｏｇｙ＆Ｔｈｅｒａｐｙ）、２００６年、第５巻、第１２号、ｐ．１７０８～１７１３）（その内容はその全体が参照により本明細書に組み込まれる））、およびヒアルロナン被覆リポソーム（クワイエット・セラピューティクス（Ｑｕｉｅｔ　Ｔｈｅｒａｐｅｕｔｉｃｓ）、イスラエル国）などのリポソーム中に製剤化しうる。

【１９３４】

いくつかの実施形態では、医薬組成物は、パンズナー（Ｐａｎｚｎｅｒ）に付与された国際公開第２００８／０４３５７５号パンフレットおよびエスラー（Ｅｓｓｌｅｒ）ら（マリーナ・バイオテック（Ｍａｒｉｎａ　Ｂｉｏｔｅｃｈ））に付与された米国特許第８５８０２９７号明細書（それらの内容はその全体が参照により本明細書に組み込まれる）に開示される任意の両性リポソームを用いて製剤化しうる。両性リポソームは、カチオン性両親媒性物質と、アニオン性両親媒性物質と、任意選択的な１種以上の中性両親媒性物質とを含む脂質の混合物を含みうる。両性リポソームは、ヘッド基が１つ以上の両性基で置換された両親媒性分子をベースとする両性化合物を含みうる。いくつかの実施形態では、医薬組成物は、エスラー（Ｅｓｓｌｅｒ）ら（マリーナ・バイオテック（Ｍａｒｉｎａ　Ｂｉｏｔｅｃｈ））に付与された米国特許出願公開第２０１４／０２２７３４５号明細書（その内容はその全体が参照により本明細書に組み込まれる）に開示されるように、４～９の等電点を有する１つ以上の両性基を含む両性脂質を用いて製剤化しうる。

【１９３５】

いくつかの実施形態では、医薬組成物は、パンズナー（Ｐａｎｚｎｅｒ）ら（ノボソム（Ｎｏｖｏｓｏｍ））に付与された米国特許第７３１２２０６号明細書（その内容はその全体が参照により本明細書に組み込まれる）に開示されるステロール誘導体を含むリポソームを用いて製剤化しうる。いくつかの実施形態では、医薬組成物は、パンズナー（Ｐａｎｚｎｅｒ）ら（ノボソム（Ｎｏｖｏｓｏｍ））に付与された米国特許第７７８０９８３号明細書（その内容はその全体が参照により本明細書に組み込まれる）に開示されるように、リポソームがｐＨ４．２～ｐＨ７．５で安定である、少なくとも１種の両親媒性陽イオン性脂質と、少なくとも１種の両親媒性陰イオン性脂質と、少なくとも１種の中性脂質とを含む両性リポソームを用いて、または正電荷と負電荷との両方を有する少なくとも１種の両親媒性脂質と、少なくとも１種の中性脂質とを含むリポソームを用いて製剤化しうる。いくつかの実施形態では、医薬組成物は、パンズナー（Ｐａｎｚｎｅｒ）らに付与された米国特許出願公開第２０１１／００７６３２２号明細書（その内容はその全体が参照により本明細書に組み込まれる）に教示される、本発明のｓａＲＮＡをカプセル化可能な脂質の血清安定性混合物を含むリポソームを用いて製剤化しうる。脂質混合物は、約０．

５～約８の範囲内の比率でホスファチジルコリンとホスファチジルエタノールアミンとを含む。脂質混合物はまた、混合物が両性であり、およびｐＨ７．４で負荷電または中性かつｐＨ４で正荷電となるようにｐＨ感受性の陰イオン性かつ陽イオン性の両親媒性物質を含みうる。薬剤／脂質比は、体内の特定の器官または他の位置にリポソームを標的化するように調整しうる。いくつかの実施形態では、本発明のｓａＲＮＡがカーゴとしてロードされたリポソームは、パンズナー（Ｐａｎｚｎｅｒ）らに付与された米国特許出願公開第２０１２／００２１０４２号明細書（その内容はその全体が参照により本明細書に組み込まれる）に開示される方法により調製される。この方法は、ポリ陰イオン性活性剤の水性溶液と１種以上の両親媒性物質のアルコール溶液とを混合する工程と、前記混合物を酸性ｐＨに緩衝化する工程とを含み、１種以上の両親媒性物質は、酸性ｐＨで両性リポソームを形成しやすいことから、活性剤をカプセル化したサスペンジョン状態の両性リポソームを形成する。

【１９３６】

ナノ粒子配合物は、炭水化物担体と核酸分子（たとえば、ｓａＲＮＡ）とを含む炭水化物ナノ粒子でありうる。非限定的な例として、炭水化物担体は、限定されるものではないが、アンヒドリド修飾フィトグリコーゲン型またはグリコーゲン型材料、フトグリコーゲンオクテニルスクシネート、フィトグリコーゲンベーターデキストリン、アンヒドリド修飾フィトグリコーゲンベーターデキストリンを含みうる。（たとえば、国際公開第２０１２／１０９１２１号パンフレット（その内容はその全体が参照により本明細書に組み込まれる）を参照されたい）。

【１９３７】

脂質ナノ粒子製剤は、カチオン性脂質を急速排出脂質ナノ粒子（ｒｅＬＮＰ：ｒａｐｉｄｌｙ　ｅｌｉｍｉｎａｔｅｄ　ｌｉｐｉｄ　ｎａｎｏｐａｒｔｉｃｌｅ）として知られる生分解性カチオン性脂質に置き換えることにより改善しうる。限定されるものではないが、ＤＬｉｎＤＭＡ、ＤＬｉｎ－ＫＣ２－ＤＭＡ、ＤＬｉｎ－ＭＣ３－ＤＭＡなどのイオン化性カチオン性脂質は、経時的に血漿および組織に蓄積することが示されており、潜在的な毒性源でありうる。急速排出脂質の急速代謝は、ラットにおいて脂質ナノ粒子の耐容性および治療指数を１ｍｇ／ｋｇ用量～１０ｍｇ／ｋｇ用量程度改善可能である。酵素分解エステル結合の組込みは、カチオン性成分の分解および代謝プロファイルを向上可能であるが、依然としてｒｅＬＮＰ製剤の活性が維持される。エステル結合は、脂質鎖内に内在しうるかまたは脂質鎖末端に端在しうる。内部エステル結合は、脂質鎖中の任意の炭素を置き換えうる。

【１９３８】

一実施形態では、ｓａＲＮＡは、限定されるものではないが、サイレンス・セラピューティクス（Ｓｉｌｅｎｃｅ　Ｔｈｅｒａｐｅｕｔｉｃｓ）（英国ロンドン）製のアツプレックス（ＡＴＵＰＬＥＸ）（商標）系、ＤＡＣＣ系、ＤＢＴＣ系、および他のｓｉＲＮＡ－リポプレックス技術、ステムジェント（ＳＴＥＭＧＥＮＴ）（登録商標）（マサチューセッツ州ケンブリッジ）製のステムフェクト（ＳＴＥＭＦＥＣＴ）（商標）、ならびにポリエチレンイミン（ＰＥＩ）またはプロタミンをベースとする核酸の標的化および非標的化送達（アレク（Ａｌｅｋｕ）ら著、キャンサー・リサーチ（Ｃａｎｃｅｒ　Ｒｅｓ．）、２００８年、第６８巻、ｐ．９７８８～９７９８、ストラムバーグ（Ｓｔｒｕｍｂｅｒｇ）ら著、インターナショナル・ジャーナル・オブ・クリニカル・ファーマコロジー・アンド・セラピューティクス（Ｉｎｔ　Ｊ　Ｃｌｉｎ　Ｐｈａｒｍａｃｏｌ　Ｔｈｅｒ）、２０１２年、第５０巻、ｐ．７６～７８、サンテル（Ｓａｎｔｅｌ）ら著、ジーン・セラピー（Ｇｅｎｅ　Ｔｈｅｒ）、２００６年、第１３巻、ｐ．１２２２～１２３４、サンテル（Ｓａｎｔｅｌ）ら著、ジーン・セラピー（Ｇｅｎｅ　Ｔｈｅｒ）、２００６年、第１３巻、ｐ．１３６０～１３７０、グートビール（Ｇｕｔｂｉｅｒ）ら著、プルモナリー・ファーマコロジー・アンド・セラピューティクス（Ｐｕｌｍ　Ｐｈａｒｍａｃｏｌ．Ｔｈｅｒ．）、２０１０年、第２３巻、ｐ．３３４～３４４、カウフマン（Ｋａｕｆｍａｎｎ）ら著、マイクロバスキュラー・リサーチ（Ｍｉｃｒｏｖａｓｃ　Ｒｅｓ）、２０１０年

、第８０巻、ｐ．２８６～２９３、ウェイド（Ｗｅｉｄｅ）ら著、ジャーナル・オブ・イムノセラピー（Ｊ　Ｉｍｍｕｎｏｔｈｅｒ．）、２００９年、第３２巻、ｐ．４９８～５０７、ウェイド（Ｗｅｉｄｅ）ら著、ジャーナル・オブ・イムノセラピー（Ｊ　Ｉｍｍｕｎｏｔｈｅｒ．）、２００８年、第３１巻、ｐ．１８０～１８８、パスコロ（Ｐａｓｃｏｌｏ）著、エクスパート・オピニオン・オン・バイオロジカル・セラピー（Ｅｘｐｅｒｔ　Ｏｐｉｎ．Ｂｉｏｌ．Ｔｈｅｒ．）、第４巻、ｐ．１２８５～１２９４、フォティン－ムレクゼック（Ｆｏｔｉｎ－Ｍｌｅｃｚｅｋ）ら著、ジャーナル・オブ・イムノセラピー（Ｊ．Ｉｍｍｕｎｏｔｈｅｒ．）、２０１１年、第３４巻、ｐ．１～１５、ソング（Ｓｏｎｇ）ら著、ネイチャー・バイオテクノロジー（Ｎａｔｕｒｅ　Ｂｉｏｔｅｃｈｎｏｌ．）、２００５年、第２３巻、ｐ．７０９～７１７、ペール（Ｐｅｅｒ）ら著、米国科学アカデミー紀要（Ｐｒｏｃ　Ｎａｔｌ　Ａｃａｄ　Ｓｃｉ　ＵＳＡ）、２００７年、第６巻、第１０４号、ｐ．４０９５～４１００、ド・フジュロル（ｄｅＦｏｕｇｅｒｏｌｌｅｓ）著、ヒューマン・ジーン・セラピー（Ｈｕｍ　Ｇｅｎｅ　Ｔｈｅｒ．）、２００８年、第１９巻、ｐ．１２５～１３２（それぞれの内容はその全体が参照により本明細書に組み込まれる））など、リポプレックスとして製剤化しうる。

【１９３９】

一実施形態では、かかる製剤はまた、限定されるものではないが、肝細胞、免疫細胞、腫瘍細胞、内皮細胞、抗原提示細胞、白血球などのさまざまな細胞型をインビボで受動的または能動的に指向するように、構築または組成変更しうる（アキンク（Ａｋｉｎｃ）ら著、モレキュラー・セラピー（Ｍｏｌ　Ｔｈｅｒ．）、２０１０年、第１８巻、ｐ．１３５７～１３６４、ソング（Ｓｏｎｇ）ら著、ネイチャー・バイオテクノロジー（ＮａｔＢｉｏｔｅｃｈｎｏｌ．）、２００５年、第２３巻、ｐ．７０９～７１７、ジャッジ（Ｊｕｄｇｅ）ら著、ジャーナル・オブ・クリニカル・インベスティゲーション（Ｊ　Ｃｌｉｎ　Ｉｎｖｅｓｔ）、２００９年、第１１９巻、ｐ．６６１～６７３、カウフマン（Ｋａｕｆｍａｎｎ）ら著、マイクロバスキュラー・リサーチ（Ｍｉｃｒｏｖａｓｃ　Ｒｅｓ）、２０１０年、第８０巻、ｐ．２８６～２９３、サンテル（Ｓａｎｔｅｌ）ら著、ジーン・セラピー（Ｇｅｎｅ　Ｔｈｅｒ）、２００６年、第１３巻、ｐ．１２２２～１２３４、サンテル（Ｓａｎｔｅｌ）ら著、ジーン・セラピー（Ｇｅｎｅ　Ｔｈｅｒ）、２００６年、第１３巻、ｐ．１３６０～１３７０、グートビール（Ｇｕｔｂｉｅｒ）ら著、プルモナリー・ファーマコロジー・アンド・セラピューティクス（Ｐｕｌｍ　Ｐｈａｒｍａｃｏｌ．Ｔｈｅｒ．）、２０１０年、第２３巻、ｐ．３３４～３４４、バシャ（Ｂａｓｈａ）ら著、モレキュラー・セラピー（Ｍｏｌ．Ｔｈｅｒ．）、２０１１年、第１９巻、ｐ．２１８６～２２００、フェンケ（Ｆｅｎｓｋｅ）およびカリス（Ｃｕｌｌｉｓ）著、エクスパート・オピニオン・オン・ドラッグ・デリバリー（Ｅｘｐｅｒｔ　Ｏｐｉｎ　Ｄｒｕｇ　Ｄｅｌｉｖ．）、２００８年、第５巻、ｐ．２５～４４、ペール（Ｐｅｅｒ）ら著、サイエンス（Ｓｃｉｅｎｃｅ）、２００８年、第３１９巻、ｐ．６２７～６３０、ペール（Ｐｅｅｒ）およびリーバーマン（Ｌｉｅｂｅｒｍａｎ）著、ジーン・セラピー（Ｇｅｎｅ　Ｔｈｅｒ．）、２０１１年、第１８巻、ｐ．１１２７～１１３３（それらの各内容はその全体が参照により本明細書に組み込まれる））。肝細胞への製剤の受動標的化の一例は、インビボアポリポタンパク質Ｅに結合して肝細胞へのこれらの製剤の結合および取込みを促進することが示されているＤＬｉｎ－ＤＭＡ、ＤＬｉｎ－ＫＣ２－ＤＭＡおよびＤＬｉｎ－ＭＣ３－ＤＭＡをベースとする脂質ナノ粒子製剤を含む（アキンク（Ａｋｉｎｃ）ら著、モレキュラー・セラピー（Ｍｏｌ　Ｔｈｅｒ．）、２０１０年、第１８巻、ｐ．１３５７～１３６４（その内容はその全体が参照により本明細書に組み込まれる））。製剤はまた、限定されるものではないが、ホレート、トランスフェリン、Ｎ－アセチルガラクトサミン（ＧａｌＮＡｃ）、および抗体による標的化的法により例証されるように、その表面上のさまざまなリガンドの発現を介して選択的に標的化可能である（コルハトカー（Ｋｏｌｈａｔｋａｒ）ら著、カレント・ドラッグ・デリバリー・テクノロジー（Ｃｕｒｒ　Ｄｒｕｇ　Ｄｉｓｃｏｖ　Ｔｅｃｈｎｏｌ．）、２０１１年、第８巻、ｐ．１９７～２０６、ムサッチオ（Ｍｕｓａｃｃｈｉｏ）およびトーチリン（Ｔｏｒｃｈｉｌｉｎ）著、フ

ロンティアズ・イン・バイオサイエンス（Ｆｒｏｎｔ　Ｂｉｏｓｃｉ．）、２０１１年、第１６巻、ｐ．１３８８～１４１２、ユー（Ｙｕ）ら著、モレキュラー・メンブレン・バイオロジー（Ｍｏｌ　Ｍｅｍｂｒ　Ｂｉｏｌ．）、２０１０年、第２７巻、ｐ．２８６～２９８、パティル（Ｐａｔｉｌ）ら著、クリニカル・レビューズ・イン・セラピューティック・ドラッグ・キャリヤー・システムズ（Ｃｒｉｔ　Ｒｅｖ　Ｔｈｅｒ　Ｄｒｕｇ　Ｃａｒｒｉｅｒ　Ｓｙｓｔ．）、２００８年、第２５巻、ｐ．１～６１、ブノワ（Ｂｅｎｏｉｔ）ら著、バイオモレキュールズ（Ｂｉｏｍａｃｒｏｍｏｌｅｃｕｌｅｓ）、２０１１年、第１２巻、ｐ．２７０８～２７１４、ザオ（Ｚｈａｏ）ら著、エクスパート・オピニオン・オン・ドラッグ・デリバリー（Ｅｘｐｅｒｔ　Ｏｐｉｎ　Ｄｒｕｇ　Ｄｅｌｉｖ．）、２００８年、第５巻、ｐ．３０９～３１９、アキンク（Ａｋｉｎｃ）ら著、モレキュラー・セラピー（Ｍｏｌ　Ｔｈｅｒ．）、２０１０年、第１８巻、ｐ．１３５７～１３６４、スリニバサン（Ｓｒｉｎｉｖａｓａｎ）ら著、メソッズ・イン・モレキュラー・バイオロジー（Ｍｅｔｈｏｄｓ　Ｍｏｌ　Ｂｉｏｌ．）、２０１２年、第８２０巻、ｐ．１０５～１１６、ベン－アリエ（Ｂｅｎ－Ａｒｉｅ）ら著、メソッズ・イン・モレキュラー・バイオロジー（Ｍｅｔｈｏｄｓ　Ｍｏｌ　Ｂｉｏｌ．）、２０１２年、第７５７巻、ｐ．４９７～５０７、ペール（Ｐｅｅｒ）ら著、ジャーナル・オブ・コントロールド・リリース（Ｊ　Ｃｏｎｔｒｏｌ　Ｒｅｌｅａｓｅ）、２０１０年、第２０巻、ｐ．６３～６８、ペール（Ｐｅｅｒ）ら著、米国科学アカデミー紀要（Ｐｒｏｃ　Ｎａｔｌ　Ａｃａｄ　Ｓｃｉ　ＵＳＡ）、２００７年、第１０４巻、ｐ．４０９５～４１００、キム（Ｋｉｍ）ら著、メソッズ・イン・モレキュラー・バイオロジー（Ｍｅｔｈｏｄｓ　Ｍｏｌ　Ｂｉｏｌ．）、２０１１年、第７２１巻、ｐ．３３９～３５３、スブラマニア（Ｓｕｂｒａｍａｎｙａ）ら著、モレキュラー・セラピー（Ｍｏｌ　Ｔｈｅｒ．）、２０１０年、第１８巻、ｐ．２０２８～２０３７、ソング（Ｓｏｎｇ）ら著、ネイチャー・バイオテクノロジー（Ｎａｔ　Ｂｉｏｔｅｃｈｎｏｌ．）、２００５年、第２３巻、ｐ．７０９～７１７、ペール（Ｐｅｅｒ）ら著、サイエンス（Ｓｃｉｅｎｃｅ）、２００８年、第３１９巻、第号、ｐ．６２７～６３０、ペール（Ｐｅｅｒ）およびリーバーマン（Ｌｉｅｂｅｒｍａｎ）著、ジーン・セラピー（Ｇｅｎｅ　Ｔｈｅｒ．）、２０１１年、第１８巻、ｐ．１１２７～１１３３（それらの各内容はその全体が参照により本明細書に組み込まれる））。

【１９４０】

一実施形態では、ｓａＲＮＡは固体脂質ナノ粒子として製剤化される。固体脂質ナノ粒子（ＳＬＮ：ｓｏｌｉｄ　ｌｉｐｉｄ　ｎａｎｏｐａｒｔｉｃｌｅ）は１０～１０００ｎｍの平均直径を有して球状でありうる。ＳＬＮは、親油性分子を可溶化することができ、かつ界面活性剤および／または乳化剤を用いて安定化することができる固体脂質コアマトリックスを有する。さらなる実施形態では、脂質ナノ粒子はセルフアセンブリー脂質－ポリマーナノ粒子でありうる（ザング（Ｚｈａｎｇ）ら著、ＡＣＳナノ（ＡＣＳ　Ｎａｎｏ）、２００８年、第２巻、第８号、ｐ．１６９６～１７０２を参照されたい（その内容はその全体が参照により本明細書に組み込まれる））。

【１９４１】

一実施形態では、本発明のｓａＲＮＡは、制御放出および／または標的化送達のために製剤化可能である。本明細書で用いられる場合、「制御放出」とは、治療アウトカムを達成する特定の放出パターンに適合する医薬組成物または化合物の放出プロファイルを意味する。一実施形態では、ｓａＲＮＡは、制御放出および／または標的化送達のために本明細書に記載のおよび／または当技術分野で公知の送達剤中にカプセル化しうる。本明細書で用いられる場合、「カプセル化」という用語は、密封、包囲、または収容を意味する。本発明の化合物の製剤に関して、カプセル化は、実質的、完全、または部分的でありうる。「実質的カプセル化」という用語は、本発明の医薬組成物または化合物の少なくとも５０、６０、７０、８０、８５、９０、９５、９６、９７、９８、９９、９９．９、９９．９超または９９．９９９％超を送達剤内に密封、包囲、または収容しうることを意味する。「部分的カプセル化」とは、本発明の医薬組成物または化合物の１０未満、１０、２０、３０、４０、５０以下を送達剤内に密封、包囲、または収容しうることを意味する。有

利には、カプセル化は、蛍光および／または電子顕微鏡写真を用いて本発明の医薬組成物または化合物の逃散または活性を測定することにより決定しうる。たとえば、本発明の医薬組成物または化合物の少なくとも１、５、１０、２０、３０、４０、５０、６０、７０、８０、８５、９０、９５、９６、９７、９８、９９、９９．９、９９．９９％、または９９．９９％超が送達剤内にカプセル化される。

【１９４２】

他の実施形態では、ｓａＲＮＡは、脂質ナノ粒子または急速排出脂質ナノ粒子中にカプセル化しうると共に、次いで、脂質ナノ粒子または急速排出脂質ナノ粒子は、本明細書に記載のおよび／または当技術分野で公知のポリマー、ヒドロゲル、および／または外科シーラント中にカプセル化しうる。限定されるものではないが、例として、ポリマー、ヒドロゲル、または外科シーラントは、ＰＬＧＡ、エチレンビニルアセテート（ＥＶＡｃ）、ポロキサマー、ゲルサイト（ＧＥＬＳＩＴＥ）（登録商標）（ナノセラピューティクス・インコーポレイテッド（Ｎａｎｏｔｈｅｒａｐｅｕｔｉｃｓ，Ｉｎｃ．）、フロリダ州アラチュア）、ハイレネッミス（ＨＹＬＥＮＥＸ）（登録商標）（ハロザイム・セラピューティクス（Ｈａｌｏｚｙｍｅ　Ｔｈｅｒａｐｅｕｔｉｃｓ）、カリフォルニア州サンディエゴ）、外科シーラント、たとえば、フィブリノーゲンポリマー（エチコン・インコーポレーテッド（Ｅｔｈｉｃｏｎ　Ｉｎｃ．）、ジョージア州コーネリア）、ティセル（ＴＩＳＳＥＬＬ）（登録商標）（バクスター・インターナル・インコーポレイテッド（Ｂａｘｔｅｒ　Ｉｎｔｅｒｎａｔｉｏｎａｌ．，Ｉｎｃ）、イリノイ州ディアフィールド）、ＰＥＧ系シーラント、およびコシール（ＣＯＳＥＡＬ）（登録商標）（バクスター・インターナル・インコーポレイテッド（Ｂａｘｔｅｒ　Ｉｎｔｅｒｎａｔｉｏｎａｌ．，Ｉｎｃ）、イリノイ州ディアフィールド）でありうる。

【１９４３】

他の実施形態では、対象に注射する場合、脂質ナノ粒子は、ゲルを形成しうる当技術分野で公知の任意のポリマー中にカプセル化しうる。限定されるものではないが、他の例として、脂質ナノ粒子は、生分解性でありうるポリマーマトリックス中にカプセル化しうる。

【１９４４】

一実施形態では、制御放出および／または標的化送達に供されるｓａＲＮＡ製剤はまた、少なくとも１種の制御放出コーティングを含みうる。制御放出コーティングとしては、限定されるものではないが、オパドライ（ＯＰＡＤＲＹ）（登録商標）、ポリビニルピロリドン／ビニルアセテートコポリマー、ポリビニルピロリドン、ヒドロキシプロピルメチルセルロース、ヒドロキシプロピルセルロース、ヒドロキシエチルセルロース、ユードラギットＲＬ（ＥＵＤＲＡＧＩＴ　ＲＬ）（登録商標）、ユードラギットＲＳ（ＥＵＤＲＡＧＩＴ　ＲＳ）（登録商標）、およびセルロース誘導体、たとえば、エチルセルロース水性ディスパージョン（アクアコート（ＡＱＵＡＣＯＡＴ）（登録商標）およびスリリース（ＳＵＲＥＬＥＡＳＥ）（登録商標））が挙げられる。

【１９４５】

一実施形態では、制御放出および／または標的化送達製剤は、ポリカチオン性側鎖を含有しうる少なくとも１種の分解性ポリエステルを含みうる。分解性ポリエステルとしては、ポリ（セリンエステル）、ポリ（Ｌ－ラクチド－ｃｏ－Ｌ－リシン）、ポリ（４－ヒドロキシ－Ｌ－プロリンエステル）、およびそれらの組合せが挙げられるが、これらに限定されるものではない。他の実施形態では、分解性ポリエステルは、ＰＥＧ化ポリマーを形成するようにＰＥＧコンジュゲーションを含みうる。

【１９４６】

一実施形態では、本発明のｓａＲＮＡは、マノハラン（Ｍａｎｏｈａｒａｎ）らに付与された米国特許出願公開第２０１３／０２０２６５２号明細書（その内容はその全体が参照により本明細書に組み込まれる）に開示される標的化部分などの標的化部分を有する標的化脂質を用いて製剤化しうる。限定されるものではないが、例として、マノハラン（Ｍａｎｏｈａｒａｎ）らに付与された米国特許出願公開第２０１３／０２０２６５２号明細

書の式Ｉの標的化部分は、所望の器官、組織、細胞、細胞型もしくは亜型、またはオルガネラに脂質が有利に局在化するように選択しうる。限定されるものではないが、本発明で企図される標的化部分は、トランスフェリン、アニスアミド、ＲＧＤペプチド、前立腺特異的膜抗原（ＰＳＭＡ：ｐｒｏｓｔａｔｅ ｓｐｅｃｉｆｉｃ ｍｅｍｂｒａｎｅ ａｎｔｉｇｅｎ）、フコース、抗体、またはアプタマーを含む。

【１９４７】

一実施形態では、本発明のｓａＲＮＡは治療用ナノ粒子中にカプセル化しうる。治療用ナノ粒子は、本明細書に記載のおよび当技術分野で公知の方法により、たとえば、限定されるものではないが、国際公開第２０１０／００５７４０号パンフレット、国際公開第２０１０／０３０７６３号パンフレット、国際公開第２０１０／００５７２１号パンフレット、国際公開第２０１０／００５７２３号パンフレット、国際公開第２０１２／０５４９２３号パンフレット、米国特許出願公開第２０１１／０２６２４９１号明細書、米国特許出願公開第２０１０／０１０４６４５号明細書、米国特許出願公開第２０１０／００８７３３７号明細書、米国特許出願公開第２０１０／００６８２８５号明細書、米国特許出願公開第２０１１／０２７４７５９号明細書、米国特許出願公開第２０１０／００６８２８６号明細書、および米国特許出願公開第２０１２／０２８８５４１号明細書、ならびに米国特許第８，２０６，７４７号明細書、同第８，２９３，２７６号明細書、同第８，３１８，２０８号明細書、および同第８，３１８，２１１号明細書（それらの各内容はその全体が参照により本明細書に組み込まれる）の方法により製剤化しうる。他の実施形態では、治療用ポリマーナノ粒子は、米国特許出願公開第２０１２／０１４０７９０号明細書（その内容はその全体が参照により本明細書に組み込まれる）に記載の方法により同定しうる。

【１９４８】

一実施形態では、治療用ナノ粒子、持続放出のために製剤化しうる。本明細書で用いられる場合、「持続放出」とは、特定の期間にわたり放出速度に適合する医薬組成物または化合物を意味する。期間は、限定されるものではないが、何時間、何日間、何週間、何ヶ月間、および何年間かを含みうる。限定されるものではないが、例として、持続放出ナノ粒子は、ポリマーおよび治療剤、たとえば、限定されるものではないが本発明のｓａＲＮＡを含みうる（国際公開第２０１０／０７５０７２号パンフレット、ならびに米国特許出願公開第２０１０／０２１６８０４号明細書、米国特許出願公開第２０１１／０２１７３７７号明細書、および米国特許出願公開第２０１２／０２０１８５９号明細書、（それらの各内容はその全体が参照により本明細書に組み込まれる）を参照されたい）。

【１９４９】

一実施形態では、治療用ナノ粒子は標的特異的になるように製剤化しうる。限定されるものではないが、例として、治療用ナノ粒子はコルチコステロイドを含みうる（国際公開第２０１１／０８４５１８／号パンフレット（その内容はその全体が参照により本明細書に組み込まれる）を参照されたい）。一実施形態では、治療用ナノ粒子は癌特異的になるように製剤化しうる。限定されるものではないが、例として、治療用ナノ粒子は、国際公開第２００８／１２１９４９号パンフレット、国際公開第２０１０／００５７２６号パンフレット、国際公開第２０１０／００５７２５号パンフレット、国際公開第２０１１／０８４５２１号パンフレット、ならびに米国特許出願公開第２０１０／００６９４２６号明細書、米国特許出願公開第２０１２／０００４２９３号明細書、および米国特許出願公開第２０１０／０１０４６５５号明細書、（それらの各内容はその全体が参照により本明細書に組み込まれる）に記載のナノ粒子中で製剤化しうる。

【１９５０】

一実施形態では、本発明のナノ粒子はポリマーマトリックスを含みうる。限定されるものではないが、例として、ナノ粒子は、２種以上のポリマー、たとえば、限定されるものではないが、ポリエチレン、ポリカーボネート、ポリアンヒドリド、ポリヒドロキシ酸、ポリプロピルフメレート、ポリカプロラクトン、ポリアミド、ポリアセタール、ポリエーテル、ポリエステル、ポリ（オルトエステル）、ポリシアノアクリレート、ポリビニルア

ルコール、ポリウレタン、ポリホスファゼン、ポリアクリレート、ポリメタクリレート、ポリシアノアクリレート、ポリウレア、ポリスチレン、ポリアミン、ポリリシン、ポリ（エチレンイミン）、ポリ（セリンエステル）、ポリ（Ｌ－ラクチド－ｃｏ－Ｌ－リシン）、ポリ（４－ヒドロキシ－Ｌ－プロリンエステル）、またはそれらの組合せを含みうる。

【１９５１】

一実施形態では、治療用ナノ粒子はジブロックコポリマーを含む。一実施形態では、ジブロックコポリマーは、限定されるものではないが、ポリエチレン、ポリカーボネート、ポリアンヒドリド、ポリヒドロキシ酸、ポリプロピルフメレート、ポリカプロラクトン、ポリアミド、ポリアセタール、ポリエーテル、ポリエステル、ポリ（オルトエステル）、ポリシアノアクリレート、ポリビニルアルコール、ポリウレタン、ポリホスファゼン、ポリアクリレート、ポリメタクリレート、ポリシアノアクリレート、ポリウレア、ポリスチレン、ポリアミン、ポリリシン、ポリ（エチレンイミン）、ポリ（セリンエステル）、ポリ（Ｌ－ラクチド－ｃｏ－Ｌ－リシン）、ポリ（４－ヒドロキシ－Ｌ－プロリンエステル）、またはそれらの組合せなどのポリマーと組み合わせてＰＥＧを含みうる。

【１９５２】

限定されるものではないが、例として、治療用ナノ粒子はＰＬＧＡ－ＰＥＧブロックコポリマーを含む（米国特許出願公開第２０１２／０００４２９３号明細書および米国特許第８，２３６，３３０号明細書（それらのそれぞれはその全体が参照により本明細書に組み込まれる）を参照されたい）。限定されるものではないが、他の例として、治療用ナノ粒子は、ＰＥＧとＰＬＡまたはＰＥＧとＰＬＧＡのジブロックコポリマーを含むステルスナノ粒子である（米国特許第８，２４６，９６８号明細書および国際公開第２０１２／１６６９２３号パンフレット（それらの各内容はその全体が参照により本明細書に組み込まれる）を参照されたい）。

【１９５３】

一実施形態では、治療用ナノ粒子は、限定されるものではないが、米国特許第８，２６３，６６５号明細書および同第８，２８７，９１０号明細書（それらの各内容はその全体が参照により本明細書に組み込まれる）に記載のマルチブロックコポリマーなどのマルチブロックコポリマーを含みうる。

【１９５４】

一実施形態では、本明細書に記載のブロックコポリマーは、非ポリマーミセルとブロックコポリマーとを含むポリイオン複合体に含まれうる。（たとえば、米国特許出願公開第２０１２／００７６８３６号明細書（その内容はその全体が参照により本明細書に組み込まれる）を参照されたい）。

【１９５５】

一実施形態では、治療用ナノ粒子は、少なくとも１種のアクリル系ポリマーを含みうる。アクリル系ポリマーとしては、限定されるものではないが、アクリル酸、メタクリル酸、アクリル酸、メチルメタクリレートコポリマー、エトキシエチルメタクリレート、シアノエチルメタクリレートおよびメタクリル酸コポリマー、アミノ、アルキルメタクリレートコポリマー、ポリ（アクリル酸）、ポリ（メタクリル酸）、ポリシアノアクリレート、およびそれらの組合せが挙げられる。

【１９５６】

一実施形態では、治療用ナノ粒子は、少なくとも１種のアミン含有ポリマー、たとえば、限定されるものではないが、ポリリシン、ポリエチレンイミン、ポリ（アミドアミン）デンドリマー、ポリ（β－アミノエステル）、およびそれらの組合せを含みうる（たとえば、米国特許第８，２８７，８４９号明細書（その内容はその全体が参照により本明細書に組み込まれる）を参照されたい）。

【１９５７】

一実施形態では、治療用ナノ粒子は、ポリカチオン性側鎖を含有しうる少なくとも１種の分解性ポリエステルを含みうる。分解性ポリエステルとしては、ポリ（セリンエステル）、ポリ（Ｌ－ラクチド－ｃｏ－Ｌ－リシン）、ポリ（４－ヒドロキシ－Ｌ－プロリンエ

ステル）、およびそれらの組合せが挙げられるが、これらに限定されるものではない。他の実施形態では、分解性ポリエステルは、ＰＥＧ化ポリマーを形成するようにＰＥＧコンジュゲーションを含みうる。

【１９５８】

他の実施形態では、治療用ナノ粒子、少なくとも１種の標的化リガンドのコンジュゲーションを含みうる。標的化リガンドは、当技術分野で公知の任意のリガンド、たとえば、限定されるものではないがモノクローナル抗体でありうる。（キルポーチン（Ｋｉｒｐｏｔｉｎ）ら著、キャンサー・リサーチ（Ｃａｎｃｅｒ　Ｒｅｓ．）、２００６年、第６６巻、ｐ．６７３２～６７４０（その内容はその全体が参照により本明細書に組み込まれる））。

【１９５９】

一実施形態では、治療用ナノ粒子は、癌を標的とするように使用しうる水性溶液中に製剤化しうる（国際公開第２０１１／０８４５１３号パンフレットおよび米国特許出願公開第２０１１／０２９４７１７号明細書（それらの各内容はその全体が参照により本明細書に組み込まれる）を参照されたい）。

【１９６０】

一実施形態では、ｓａＲＮＡは、合成ナノ担体にカプセル化、結合、および／または会合しうる。合成ナノ担体は、限定されるものではないが、国際公開第２０１０／００５７４０号パンフレット、国際公開第２０１０／０３０７６３号パンフレット、国際公開第２０１２／１３５０１号パンフレット、国際公開第２０１２／１４９２５２号パンフレット、国際公開第２０１２／１４９２５５号パンフレット、国際公開第２０１２／１４９２５９号パンフレット、国際公開第２０１２／１４９２６５号パンフレット、国際公開第２０１２／１４９２６８号パンフレット、国際公開第２０１２／１４９２８２号パンフレット、国際公開第２０１２／１４９３０１号パンフレット、国際公開第２０１２／１４９３９３号パンフレット、国際公開第２０１２／１４９４０５号パンフレット、国際公開第２０１２／１４９４１１号パンフレット、国際公開第２０１２／１４９４５４号パンフレットおよび国際公開第２０１３／０１９６６９号パンフレット、ならびに米国特許出願公開第２０１１／０２６２４９１号明細書、米国特許出願公開第２０１０／０１０４６４５号明細書、米国特許出願公開第２０１０／００８７３３７号明細書および米国特許出願公開第２０１２／０２４４２２２号明細書（それらの各内容はその全体が参照により本明細書に組み込まれる）のに記載のものを含む。合成ナノ担体は、本明細書に記載のおよび／または当技術分野で公知の方法を用いて製剤化しうる。限定されるものではないが、例として、合成ナノ担体は、国際公開第２０１０／００５７４０号パンフレット、国際公開第２０１０／０３０７６３号パンフレット、および国際公開第２０１２／１３５０１号パンフレット、ならびに米国特許出願公開第２０１１／０２６２４９１号明細書、米国特許出願公開第２０１０／０１０４６４５号明細書、米国特許出願公開第２０１０／００８７３３７号明細書、および米国特許出願公開第２０１２／０２４４２２号明細書（それらの各内容はその全体が参照により本明細書に組み込まれる）に記載の方法により製剤化しうる。他の実施形態では、合成ナノ担体製剤は、国際公開第２０１１／０７２２１８号パンフレットおよび米国特許第８，２１１，４７３号明細書（それらの各内容はその全体が参照により本明細書に組み込まれる）に記載の方法により凍結乾燥しうる。

【１９６１】

一実施形態では、合成ナノ担体は、本明細書に記載のｓａＲＮＡを放出するために反応性基を含有しうる（国際公開第２０１２／０９５２５５２号パンフレットおよび米国特許出願公開第２０１２／０１７１２２９号明細書（それらの各内容はその全体が参照により本明細書に組み込まれる）を参照されたい）。

【１９６２】

一実施形態では、合成ナノ担体は標的化放出のために製剤化しうる。一実施形態では、合成ナノ担体は、特定のｐＨでおよび／または所望の時間後にｓａＲＮＡを放出するように製剤化しうる。限定されるものではないが、例として、合成ナノ粒子は、２４時間後に

および／または４．５のｐＨでｓａＲＮＡを放出するように製剤化しうる（国際公開第２０１０／１３８１９３号パンフレットおよび国際公開第２０１０／１３８１９４号パンフレットならびに米国特許出願公開第２０１１／００２０３８８号明細書および米国特許出願公開第２０１１／００２７２１７号明細書（それらの各内容はその全体が参照により本明細書に組み込まれる）を参照されたい）。

【１９６３】

一実施形態では、合成ナノ担体は、本明細書に記載のｓａＲＮＡの制御放出および／または持続放出のために製剤化しうる。限定されるものではないが、例として、持続放出に供される合成ナノ担体は、当技術分野で公知の、本明細書に記載の、ならびに／または国際公開第２０１０／１３８１９２号パンフレットおよび米国特許出願公開第２０１０／０３０３８５０号明細書（それらの各内容はその全体が参照により本明細書に組み込まれる）に記載の方法により製剤化しうる。

【１９６４】

一実施形態では、ナノ粒子は経口投与のために最適化しうる。ナノ粒子は、少なくとも１種のカチオン性バイオポリマー、たとえば、限定されるものではないがキトサンまたはその誘導体を含みうる。限定されるものではないが、例として、ナノ粒子は、米国特許出願公開第２０１２／０２８２３４３号明細書（その内容はその全体が参照により本明細書に組み込まれる）に記載の方法により製剤化しうる。

【１９６５】

一実施形態では、本発明のｓａＲＮＡは、マノハラン（Ｍａｎｏｈａｒａｎ）らに付与された米国特許第８５７５１２３号明細書（その内容はその全体が参照により本明細書に組み込まれる）に記載されるようなモジュール組成物中に製剤化しうる。限定されるものではないが、例として、モジュール組成物は、核酸、たとえば本発明のｓａＲＮＡと、少なくとも１種のエンドソーム分解成分と、少なくとも１種の標的化リガンドとを含みうる。モジュール組成物は、マノハラン（Ｍａｎｏｈａｒａｎ）らに付与された米国特許第８５７５１２３号明細書（その内容はその全体が参照により本明細書に組み込まれる）に記載のいずれかの式などの式を有しうる。

【１９６６】

一実施形態では、本発明のｓａＲＮＡは、ド・フジュロル（ｄｅ　Ｆｏｕｇｅｒｏｌｌｅｓ）らに付与された米国特許第８５４６５５４号明細書（その内容はその全体が参照により組み込まれる）に記載されるような安定な核酸－脂質粒子（ＳＮＡＬＰ）を形成するように脂質配合物中にカプセル化しうる。脂質はカチオン性または非カチオン性でありうる。限定されるものではないが、一例では、脂質対核酸比（質量／質量比）（たとえば、脂質対ｓａＲＮＡ比）は、約１：１～約５０：１、約１：１～約２５：１、約３：１～約１５：１、約４：１～約１０：１、約５：１～約９：１、もしくは約６：１～約９：１の範囲内、または５：１、６：１、７：１、８：１、９：１、１０：１、もしくは１１：１であろう。他の例では、ＳＮＡＬＰは、６３．０±２０ｎｍの粒子サイズおよび０．０２７の核酸／脂質比率を有して、４０％２，２－ジリノレイル－４－ジメチルアミノエチル－［１，３］－ジオキソラン（リピドＡ）、１０％ジオレオイルホスファチジルコリン（ＤＳＰＣ）、４０％コレステロール、１０％ポリエチレングリコール（ＰＥＧ）－Ｃ－ＤＯＭＧ（モルパーセント）を含む。他の実施形態では、本発明のｓａＲＮＡは、ラム（Ｌａｍ）らに付与された米国特許第７１８９７０５号明細書（その内容はその全体が参照により本明細書に組み込まれる）に開示されるエンドソーム膜不安定化剤を含む核酸－脂質粒子を用いて製剤化しうる。限定されるものではないが、例として、エンドソーム膜不安定化剤はCa^{2+}イオンでありうる。

【１９６７】

一実施形態では、本発明のｓａＲＮＡは、アキンク（Ａｋｉｎｃ）らに付与された米国特許第８１４８３４４号明細書（その内容はその全体が参照により本明細書に組み込まれる）に開示される製剤化脂質粒子（ＦＬｉＰ：ｆｏｒｍｕｌａｔｅｄ　ｌｉｐｉｄ　ｐａｒｔｉｃｌｅ）を用いて製剤化しうる。アキンク（Ａｋｉｎｃ）らは、ＦＬｉＰが一本鎖

または二本鎖のオリゴヌクレオチドの少なくとも１つを含みうると教示している。この場合、オリゴヌクレオチドは、親油性物質と、コンジュゲートオリゴヌクレオチドが凝集、混合、または会合されたエマルジョンまたはリポソームの少なくとも１つとにコンジュゲートされている。こうした粒子は、驚くべきことに、アキンク（Ａｋｉｎｃ）らに付与された米国特許第８１４８３４４号明細書（その内容はその全体が参照により本明細書に組み込まれる）に開示されるように、心臓、肺、および筋肉にオリゴヌクレオチドを効果的に送達することが示されている。

【１９６８】

一実施形態では、本発明のｓａＲＮＡは、タム（Ｔａｍ）らに付与された米国特許第６０８６９１３号明細書（その内容はその全体が参照により本明細書に組み込まれる）に記載されるように、脂質製剤中に発現ベクターを含む組成物を用いて細胞に送達しうる。タム（Ｔａｍ）により開示された組成物は血清安定性であり、アデノ随伴ウイルス（ＡＡＶ：ａｄｅｎｏ ａｓｓｏｃｉａｔｅｄ ｖｉｒｕｓ）の第１のおよび第２の反転反復配列とＡＡＶのｒｅｐ遺伝子と核酸断片とを含む発現ベクターを含む。タム（Ｔａｍ）の発現ベクターは脂質と複合体化される。

【１９６９】

一実施形態では、本発明のｓａＲＮＡは、ド・フジュロル（ｄｅ Ｆｏｕｇｅｒｏｌｌｅｓ）らに付与された米国特許出願公開第２０１２／０２７０９２１号明細書（その内容はその全体が参照により本明細書に組み込まれる）に開示される脂質製剤を用いて製剤化しうる。限定されるものではないが、一例では、脂質製剤は、米国特許出願公開第２０１２／０２７０９２１号明細書（その内容はその全体が参照により本明細書に組み込まれる）に記載の式Ａを有するカチオン性脂質を含みうる。限定されるものではないが、他の例として、米国特許出願公開第２０１２／０２７０９２１号明細書（その内容はその全体が参照により本明細書に組み込まれる）の表Ａに開示される例示的な核酸－脂質粒子の組成物は、本発明のｓａＲＮＡと共に使用しうる。

【１９７０】

一実施形態では、本発明のｓａＲＮＡは、マウラー（Ｍａｕｒｅｒ）らに付与された米国特許出願公開第２０１２／０２７６２０７号明細書（その内容はその全体が参照により本明細書に組み込まれる）に開示される脂質粒子中に完全にカプセル化しうる。粒子は、あらかじめ形成されたベシクルと治療剤との混合物を不安定化溶媒中に形成するように、あらかじめ形成された脂質ベシクルと荷電治療剤と不安定化剤とを含む脂質組成物を含む。この場合、不安定化溶媒は、ベシクルを破壊することなくあらかじめ形成された脂質ベシクルの膜を不安定化するのに有効である。

【１９７１】

一実施形態では、本発明のｓａＲＮＡはコンジュゲート脂質を用いて製剤化しうる。限定されるものではないが、一例では、コンジュゲート脂質は、リン（Ｌｉｎ）らに付与された米国特許出願公開第２０１２／０２６４８１０号明細書（その内容はその全体が参照により本明細書に組み込まれる）に記載されるような式を有しうる。コンジュゲート脂質は、カチオン性脂質と中性脂質と凝集を低減可能な脂質とをさらに含む脂質粒子を形成しうる。

【１９７２】

一実施形態では、本発明のｓａＲＮＡ、フィッツジェラルド（Ｆｉｔｚｇｅｒａｌｄ）らに付与された米国特許出願公開第２０１２／０２４４２０７号明細書（その内容はその全体が参照により本明細書に組み込まれる）に開示されるような中性リポソーム製剤中に製剤化しうる。「中性リポソーム製剤」という語句は、生理ｐＨでほぼ中性または中性の表面電荷を有するリポソーム製剤を意味する。生理ｐＨは、たとえば約７．０～約７．５、またはたとえば約７．５、またはたとえば７．０、７．１、７．２、７．３、７．４、もしくは７．５、またはたとえば７．３、またはたとえば７．４でありうる。中性リポソーム製剤の例は、イオン化性脂質ナノ粒子（ｉＬＮＰ：ｉｏｎｉｚａｂｌｅ ｌｉｐｉｄ ｎａｎｏｐａｒｔｉｃｌｅ）である。中性リポソーム製剤は、イオン化性カチオン性脂

質、たとえばＤＬｉｎ－ＫＣ２－ＤＭＡを含みうる。

【１９７３】

一実施形態では、本発明のｓａＲＮＡは、荷電脂質またはアミノ脂質を用いて製剤化しうる。本明細書で用いられる場合、「荷電脂質」という用語は、１または２つの脂肪アシル鎖または脂肪アルキル鎖と第４級アミノヘッド基とを有する脂質を含むことを意味する。第４級アミンは永久正電荷を有する。ヘッド基は、生理ｐＨでプロトン化しうる第１級、第２級、第３級アミンなどのイオン化性基を任意選択的に含みうる。第４級アミンの存在は、第４級アミンの欠如した構造類似化合物（たとえば、第４級アミンが第３級アミンで置き換えられる）中のイオン化性基のｐＫａと比較してイオン化性基のｐＫａを変化させうる。いくつかの実施形態では、荷電脂質は「アミノ脂質」と呼ばれる。限定されるものではないが、一例では、アミノ脂質は、ホープ（Ｈｏｐｅ）らに付与された米国特許出願公開第２０１１／０２５６１７５号明細書（その内容はその全体が参照により本明細書に組み込まれる）に記載の任意のアミノ脂質でありうる。たとえば、アミノ脂質は、ホープ（Ｈｏｐｅ）の表３～７に開示される構造、たとえば、構造（ＩＩ）、ＤＬｉｎ－Ｋ－Ｃ２－ＤＭＡ、ＤＬｉｎ－Ｋ２－ＤＭＡ、ＤＬｉｎ－Ｋ６－ＤＭＡなどを有しうる。得られた医薬製剤はホープ（Ｈｏｐｅ）に従って凍結乾燥状態しうる。限定されるものではないが、他の例では、アミノ脂質は、ホープ（Ｈｏｐｅ）らに付与された米国特許出願公開第２０１１／０１１７１２５号明細書（その内容はその全体が参照により本明細書に組み込まれる）に記載の任意のアミノ脂質、たとえば、構造（Ｉ）の脂質、ＤＬｉｎ－Ｋ－ＤＭＡ、ＤＬｉｎ－Ｃ－ＤＡＰ、ＤＬｉｎ－ＤＡＣ、ＤＬｉｎ－ＭＡ、ＤＬｉｎ－Ｓ－ＤＭＡなどでありうる。限定されるものではないが、他の例では、アミノ脂質は、マノハラン（Ｍａｎｏｈａｒａｎ）らに付与された国際公開第２００９／１３２１３１号パンフレット（その内容はその全体が参照により本明細書に組み込まれる）に記載の構造（Ｉ）、（ＩＩ）、（ＩＩＩ）、もしくは（ＩＶ）、または４－（Ｒ）－ＤＵｎ－Ｋ－ＤＭＡ（ＶＩ）、４－（Ｓ）－ＤＵｎ－Ｋ－ＤＭＡ（Ｖ）を有しうる。限定されるものではないが、他の例では、本明細書に記載の製剤のいずれかで使用される荷電脂質は、マノハラン（Ｍａｎｏｈａｒａｎ）らに付与された欧州特許第２５０９６３６号明細書（その内容はその全体が参照により本明細書に組み込まれる）に記載の任意の荷電脂質でありうる。

【１９７４】

一実施形態では、本発明のｓａＲＮＡは、脂質とリポソームとリポプレックスとを含有する会合複合体を用いて製剤化しうる。限定されるものではないが、一例では、会合複合体は、マノハラン（Ｍａｎｏｈａｒａｎ）らに付与された米国特許第８０３４３７６号明細書（その内容はその全体が参照により本明細書に組み込まれる）に開示される式（Ｉ）により定義される構造、式（ＸＶ）による定義される構造を有するＰＥＧ－脂質、ステロイド、および核酸をそれぞれ有する１種以上の化合物を含む。ｓａＲＮＡは、米国特許第８０３４３７６号明細書（その内容はその全体が参照により本明細書に組み込まれる）に記載のいずれかの会合複合体を用いて製剤化しうる。

【１９７５】

一実施形態では、本発明のｓａＲＮＡは、リバースヘッド基脂質を用いて製剤化しうる。限定されるものではないが、例として、ｓａＲＮＡは、ヘッド基を含む双性イオン性脂質を用いて製剤化しうる。この場合、レオン（Ｌｅｕｎｇ）らに付与された国際公開第２０１１／０５６６８２号パンフレット（その内容はその全体が参照により本明細書に組み込まれる）に記載の構造（Ａ）または構造（Ｉ）を有する脂質のように、正電荷はアシル鎖領域の近傍に位置し、負電荷はヘッド基の先端部に位置する。

【１９７６】

一実施形態では、本発明のｓａＲＮＡは脂質二重層担体中に製剤化しうる。限定されるものではないが、例として、ｓａＲＮＡは、核酸－脂質－界面活性剤混合物を提供するために、約５ｍｏｌ％～約２０ｍｏｌ％の量の凝集防止剤と、約０．５ｍｏｌ％～約５０ｍｏｌ％の量のカチオン性脂質と、膜融合脂質と、界面活性剤との脂質混合物を含む脂質－界面活性剤混合物と組み合わせうると共に、次いで、緩衝塩溶液に対して核酸－脂質－界

面活性剤混合物を透析して界面活性剤を除去し、かつ核酸を脂質二重層担体中にカプセル化し、かつ脂質二重層－核酸組成物を提供しうる。この場合、緩衝塩溶液は、核酸の約４０％～約８０％をカプセル化するのに十分なイオン強度を有する。これについては、カリス（Ｃｕｌｌｉｓ）らに付与された国際公開第１９９９／０１８９３３号パンフレット（その内容はその全体が参照により本明細書に組み込まれる）に記載されている。

【１９７７】

一実施形態では、本発明のｓａＲＮＡは、心臓、肝臓、または腫瘍組織部位にｓａＲＮＡを選択的に標的化可能な核酸－脂質粒子中に製剤化しうる。たとえば、核酸－脂質粒子は、カリス（Ｃｕｌｌｉｓ）らに付与された欧州特許第１３２８２５４号明細書（その内容はその全体が参照により本明細書に組み込まれる）に記載されるように、（ａ）核酸、（ｂ）１．０モル％～４５モル％のカチオン性脂質、（ｃ）０，０モル％～９０モル％の他の脂質、（ｄ）１，０モル％～１０モル％の二重層安定化成分、（ｅ）０，０モル％～６０モル％のコレステロール、および（ｆ）０，０モル％～１０モル％のカチオン性ポリマー脂質を含みうる。カリス（Ｃｕｌｌｉｓ）は、カチオン性脂質、二重層安定化成分、他の脂質、コレステロール、およびカチオン性ポリマー脂質の各量を変化させることにより、心臓、肝臓、または腫瘍組織部位に対する組織選択率を付与可能であることから、心臓、肝臓、または腫瘍組織部位に核酸を選択的に標的化可能な核酸－脂質粒子が同定されると教示している。

【１９７８】

ポリマー、生分解性ナノ粒、およびコア－シェルナノ粒子

本発明のｓａＲＮＡは、天然および／または合成のポリマーを用いて製剤化しうる。限定されるものではないが、送達に使用しうるポリマーの例としては、ミラス（登録商標）バイオ（ＭＩＲＵＳ　Ｂｉｏ）（ウィスコンシン州マディソン）およびロシュ・マディソン（Ｒｏｃｈｅ　Ｍａｄｉｓｏｎ）（ウィスコンシン州マディソン）製のダイナミック・ポリコンジュゲート（登録商標）（ＤＹＮＡＭＩＣ　ＰＯＬＹＣＯＮＪＵＧＡＴＥ）（アローヘッド・リサーチ・コーポレーション（Ａｒｒｏｗｈｅａｄ　Ｒｅｓｅａｒｃｈ　Ｃｏｒｐ．）、カリフォルニア州パサデナ）配合物、フェイサーＸ（商標）（ＰＨＡＳＥＲＸ）ポリマー配合物、たとえば、限定されるものではないが、スマートＴポリマー・テクノロジー（商標）（ＳＭＡＲＴＴ　ＰＯＬＹＭＥＲ　ＴＥＣＨＮＯＬＯＧＹ）（フェイサーＸ（登録商標）（ＰＨＡＳＥＲＸ）、ワシントン州シアトル）、ＤＭＲＩ／ＤＯＰＥ、ポロキサマー、ビスカル（Ｖｉｃａｌ）（カリフォルニア州サンディエゴ）製のバクスフェクチン（登録商標）（ＶＡＸＦＥＣＴＩＮ）補助剤、キトサン、コロラド・ファーマシューティカルズ（Ｃａｌａｎｄｏ　Ｐｈａｒｍａｃｅｕｔｉｃａｌｓ）（カリフォルニア州パサデナ）製のシクロデキストリン、デンドリマーおよびポリ（乳酸－ｃｏ－グリコール酸）（ＰＬＧＡ）ポリマー、ロンデル（商標）（ＲＯＮＤＥＬ）（ＲＮＡｉ／オリゴヌクレオチドナノ粒子送達）ポリマー（アローヘッド・リサーチ・コーポレーション（Ａｒｒｏｗｈｅａｄ　Ｒｅｓｅａｒｃｈ　Ｃｏｒｐｏｒａｔｉｏｎ）、カリフォルニア州パサデナ）およびｐＨ反応性コブロックポリマー、たとえば、限定されるものではないが、フェイサーＸ（登録商標）（ＰＨＡＳＥＲＸ）（ワシントン州シアトル）が挙げられるが、これらに限定されるものではない。

【１９７９】

限定されるものではないが、キトサン配合物の例は、正荷電キトサンのコアと負荷電基材の外側部分とを含む（米国特許出願公開第２０１２／０２５８１７６号明細書（その全体が参照により本明細書に組み込まれる））。キトサンは、限定されるものではないが、Ｎ－トリメチルキトサン、モノ－Ｎ－カルボキシメチルキトサン（ＭＣＣ）、Ｎ－パルミトイルキトサン（ＮＰＣＳ）、ＥＤＴＡ－キトサン、低分子量キトサン、キトサン誘導体、またはそれらの組合せを含む。

【１９８０】

一実施形態では、本発明で使用されるポリマーは、限定されるものではないが、細菌などの望ましくない物質がポリマーの表面に結合するのを低減および／または阻害するため

の処理を受けたものである。ポリマーは、当技術分野で公知のおよび／もしくは記載のならびに／または国際公開第２０１２／１５０４６７号パンフレット（その全体が参照により本明細書に組み込まれる）に記載の方法により処理しうる。

【１９８１】

限定されるものではないが、ＰＬＧＡ配合物の例は、ＰＬＧＡ注射用デポ剤（たとえば、６６％のＮ－メチル－２－ピロリドン（ＮＭＰ）ならびに残分の水性溶媒およびロイプロリドにＰＬＧＡを溶解させることにより形成されるエリガード（登録商標）（ＥＬＩＧＡＲＤ））を含むが、これに限定されるものではない。注射するとＰＬＧＡおよびロイプロリドペプチドは皮下空隙に沈殿する。

【１９８２】

こうしたポリマー手段の多くは、インビボでオリゴヌクレオチドを細胞の細胞質に送達する際に効力を示してきた（ド・フジュロル（ｄｅ　Ｆｏｕｇｅｒｏｌｌｅｓ）著、ヒューマン・ジーン・セラピー（Ｈｕｍ　Ｇｅｎｅ　Ｔｈｅｒ．）、２００８年、第１９巻、ｐ．１２５～１３２（その全体が参照により本明細書に組み込まれる）にレビューされている）。核酸のロバストなインビボ送達をもたらしてきた２つのポリマー手段（この場合には低分子干渉ＲＮＡ（ｓｉＲＮＡ）が使用された）は、動的ポリコンジュゲートおよびシクロデキストリン系ナノ粒子である。これらの送達手段の第１のものは、動的ポリコンジュゲートを使用し、マウスにおいてインビボでｓｉＲＮＡを効果的に送達して肝細胞の内因性標的ｍＲＮＡをサイレンシングすることが示されている（ロゼマ（Ｒｏｚｅｍａ）ら著、米国科学アカデミー紀要（Ｐｒｏｃ　Ｎａｔｌ　Ａｃａｄ　Ｓｃｉ　ＵＳＡ）、２００７年、第１０４巻、ｐ．１２９８２～１２８８７（その全体が参照により本明細書に組み込まれる））。この特定の手段は多成分ポリマー系であり、その重要な特徴として、核酸（この場合にはｓｉＲＮＡ）がジスルフィド結合により共有結合され、かつＰＥＧ（電荷を遮蔽するため）およびＮ－アセチルガラクトサミン（肝細胞を標的とするため）基の両方がｐＨ感受性結合により結合された膜活性ポリマーが含まれる（ロゼマ（Ｒｏｚｅｍａ）ら著、米国科学アカデミー紀要（Ｐｒｏｃ　Ｎａｔｌ　Ａｃａｄ　Ｓｃｉ　ＵＳＡ）、２００７年、第１０４巻、ｐ．１２９８２～１２８８７（その全体が参照により本明細書に組み込まれる））。肝細胞に結合してエンドソームに進入すると、ポリマー複合体は低ｐＨ環境でポリマーがその正電荷を露出するように脱集合し、エンドソームエスケープを起こしてポリマーから細胞質にｓｉＲＮＡを放出する。Ｎ－アセチルガラクトサミン基をマンノース基で置き換えることにより、アシアロ糖タンパク質レセプター発現肝細胞から類洞内皮細胞およびクッパー細胞に標的を変更可能であることが示された。他のポリマー手段は、トランスフェリン標的化シクロデキストリン含有ポリ陽イオンナノ粒子の使用を含む。これらのナノ粒子では、トランスフェリンレセプター発現ユーイング肉腫腫瘍細胞においてＥＷＳ－ＦＬＩ１遺伝子産物の標的化サイレンシングが行われること（フー－リースコバン（Ｈｕ－Ｌｉｅｓｋｏｖａｎ）ら著、キャンサー・リサーチ（Ｃａｎｃｅｒ　Ｒｅｓ．）、２００５年、第６５巻、ｐ．８９８４～８９８２（その全体が参照により本明細書に組み込まれる））および非ヒト霊長動物においてこれらのナノ粒子中に製剤化されたｓｉＲＮＡが良好な耐容性であること（ヘイデル（Ｈｅｉｄｅｌ）ら著、米国科学アカデミー紀要（Ｐｒｏｃ　Ｎａｔｌ　Ａｃａｄ　Ｓｃｉ　ＵＳＡ）、２００７年、第１０４巻、ｐ．５７１５～２１（その全体が参照により本明細書に組み込まれる））が実証された。これらの送達ストラテジーでは両方とも、標的化送達およびエンドソームエスケープ機序の両方を用いる合理的手段がとられる。

【１９８３】

ポリマー製剤はｓａＲＮＡの持続放出または遅延放出を可能にしうる（たとえば、筋肉内注射または皮下注射後）。ｓａＲＮＡの放出プロファイルを変化させることにより、たとえば、長期にわたるコードタンパク質の翻訳が可能になる。生分解性ポリマーはこれまで核酸を分解から保護するために使用され、その結果、インビボでペイロードを持続放出することが示された（ロゼマ（Ｒｏｚｅｍａ）ら著、米国科学アカデミー紀要（Ｐｒｏｃ　Ｎａｔｌ　Ａｃａｄ　Ｓｃｉ　ＵＳＡ）、２００７年、第１０４巻、ｐ．１２９８２～

１２８８７、スリバン（Ｓｕｌｌｉｖａｎ）ら著、エクスパート・オピニオン・オン・ドラッグ・デリバリー（Ｅｘｐｅｒｔ　Ｏｐｉｎ　Ｄｒｕｇ　Ｄｅｌｉｖ．）、２０１０年、第７巻、ｐ．１４３３～１４４６、コンバータイン（Ｃｏｎｖｅｒｔｉｎｅ）ら著、バイオモレキュールズ（Ｂｉｏｍａｃｒｏｍｏｌｅｃｕｌｅｓ）、２０１０年１０月１日、チュー（Ｃｈｕ）ら著、アカウンツ・オブ・ケミカル・リサーチ（Ａｃｃ　Ｃｈｅｍ　Ｒｅｓ．）、２０１２年１月１３日、マンガニエロ（Ｍａｎｇａｎｉｅｌｌｏ）ら著、バイオマテリアル（Ｂｉｏｍａｔｅｒｉａｌｓ）、２０１２年、第３３巻、ｐ．２３０１～２３０９、ベノイト（Ｂｅｎｏｉｔ）ら著、バイオモレキュールズ（Ｂｉｏｍａｃｒｏｍｏｌｅｃｕｌｅｓ）、２０１１年、第１２巻、ｐ．２７０８～２７１４、シンガ（Ｓｉｎｇｈａ）ら著、ニュクレイック・アシッド・セラピューティクス（Ｎｕｃｌｅｉｃ　Ａｃｉｄ　Ｔｈｅｒ．）、２０１１年、第２巻、ｐ．１３３～１４７、ド・フジュロル（ｄｅ　Ｆｏｕｇｅｒｏｌｌｅｓ）著、ヒューマン・ジーン・セラピー（Ｈｕｍ　Ｇｅｎｅ　Ｔｈｅｒ．）、２００８年、第１９巻、ｐ．１２５～１３２、シャファート（Ｓｃｈａｆｆｅｒｔ）およびワグナー（Ｗａｇｎｅｒ）著、ジーン・セラピー（Ｇｅｎｅ　Ｔｈｅｒ．）、２００８年、第１６巻、ｐ．１１３１～１１３８、チャチューベディ（Ｃｈａｔｕｒｖｅｄｉ）ら著、エクスパート・オピニオン・オン・ドラッグ・デリバリー（Ｅｘｐｅｒｔ　Ｏｐｉｎ　Ｄｒｕｇ　Ｄｅｌｉｖ．）、２０１１年、第８巻、ｐ．１４５５～１４６８、デイビス（Ｄａｖｉｓ）著、モレキュラー・ファーマシューティクス（Ｍｏｌ　Ｐｈａｒｍ．）、２００９年、第６巻、ｐ．６５９～６６８、デイビス（Ｄａｖｉｓ）著、ネイチャー（Ｎａｔｕｒｅ）、２０１０年、第４６４巻、ｐ．１０６７～１０７０（それぞれその全体が参照により本明細書に組み込まれる））。

【１９８４】

一実施形態では、医薬組成物は持続放出製剤でありうる。さらなる実施形態では、持続放出製剤は皮下送達用でありうる。持続放出製剤は、限定されるものではないが、ＰＬＧＡマイクロスフェア、エチレンビニルアセテート（ＥＶＡｃ）、ポロキサマー、ゲルサイト（ＧＥＬＳＩＴＥ）（登録商標）（ナノセラピューティクス・インコーポレーテッド（Ｎａｎｏｔｈｅｒａｐｅｕｔｉｃｓ，Ｉｎｃ．）、フロリダ州アラチュア）、ハイレネクス（ＨＹＬＥＮＥＸ）（登録商標）（ハロザイム・セラピューティクス（Ｈａｌｏｚｙｍｅ　Ｔｈｅｒａｐｅｕｔｉｃｓ）、カリフォルニア州サンディエゴ）、外科用シーラント、たとえば、フィブリノーゲンポリマー（エチコン・インコーポレーテッド（Ｅｔｈｉｃｏｎ　Ｉｎｃ．）、ジョージア州コーネリア）、ティッセル（ＴＩＳＳＥＬＬ）（登録商標）（バクスター・インターナショナル・インコーポレイテッド（Ｂａｘｔｅｒ　Ｉｎｔｅｒｎａｔｉｏｎａｌ，Ｉｎｃ）、イリノイ州ディアフィールド）、ＰＥＧ系シーラント、およびコシール（ＣＯＳＥＡＬ）（登録商標）（バクスター・インターナショナル・インコーポレイテッド（Ｂａｘｔｅｒ　Ｉｎｔｅｒｎａｔｉｏｎａｌ，Ｉｎｃ）、イリノイ州ディアフィールド）を含みうる。

【１９８５】

限定されるものではないが、例として、調整可能な放出速度（たとえば、何日間および何週間）のＰＬＧＡマイクロスフェアを調製してカプセル化プロセス時にｓａＲＮＡの完全性を維持しつつＰＬＧＡマイクロスフェア中にｓａＲＮＡをカプセル化することにより、ｓａＲＮＡをＰＬＧＡマイクロスフェア中に製剤化しうる。ＥＶＡｃは、前臨床持続放出インプラント用途で広範に使用される非生分解性生体適合性ポリマーである（たとえば、緑内障用ピロカルピン眼科インサートの長期放出製剤オキュサート（Ｏｃｕｓｅｒｔ）または持続放出プロゲステロン子宮内デバイスのプロゲスタサート（ｐｒｏｇｅｓｔａｓｅｒｔ）、経真皮送達系のテストダーム（Ｔｅｓｔｏｄｅｒｍ）、デュラゲシック（Ｄｕｒａｇｅｓｉｃ）、およびセレギリン（Ｓｅｌｅｇｉｌｉｎｅ）、カテーテル）。ポロキサマーＦ４０７ＮＦは、５℃未満の温度で低粘度を有するポリオキシエチレン－ポリオキシプロピレン－ポリオキシエチレンの親水性非イオン性界面活性トリブロックコポリマーであり、１５℃超の温度で固体ゲルを形成する。ＰＥＧ系外科シーラントは、送達デバイス中に混合導入された２つの合成ＰＥＧ成分を含む。これは１分間で作製可能であり、３

分間でシールし、かつ３０日以内に再吸収される。ゲルサイト（ＧＥＬＳＩＴＥ）（登録商標）および天然ポリマーは、投与部位でインサイチューゲル化が可能である。それらはイオン性相互作用によりタンパク質およびペプチドの治療候補物質と相互作用して安定化効果を提供することが示されている。

【１９８６】

ポリマー製剤はまた、限定されるものではないが、ホレート、トランスフェリン、およびＮ－アセチルガラクトサミン（ＧａｌＮＡｃ）により例証されるように、さまざまなリガンドの発現により選択的標的化が可能である（ベノイト（Ｂｅｎｏｉｔ）ら著、バイオモレキュールズ（Ｂｉｏｍａｃｒｏｍｏｌｅｃｕｌｅｓ）、２０１１年、第１２巻、ｐ．２７０８～２７１４、ロゼマ（Ｒｏｚｅｍａ）ら著、米国科学アカデミー紀要（Ｐｒｏｃ Ｎａｔｌ Ａｃａｄ Ｓｃｉ ＵＳＡ）、２００７年、第１０４巻、ｐ．１２９８２～１２８８７、デイビス（Ｄａｖｉｓ）著、モレキュラー・ファーマシューティクス（Ｍｏｌ Ｐｈａｒｍ．）、２００９年、第６巻、ｐ．６５９～６６８、デイビス（Ｄａｖｉｓ）著、ネイチャー（Ｎａｔｕｒｅ）、２０１０年、第４６４巻、ｐ．１０６７～１０７０（それぞれその全体が参照により本明細書に組み込まれる））。

【１９８７】

本発明のｓａＲＮＡは、高分子化合物と共にまたはその中に製剤化しうる。ポリマーは、限定されるものではないが、ポリエテン、ポリエチレングリコール（ＰＥＧ）、ポリ（ｌ－リシン）（ＰＬＬ）、ＰＬＬにグラフトされたＰＥＧ、陽イオン性リポポリマー、生分解性陽イオン性リポポリマー、ポリエチレンイミン（ＰＥＩ）、架橋分岐状ポリ（アルキレンイミン）、ポリアミン誘導体、修飾ポロキサマー、生分解性ポリマー、弾性生分解性ポリマー、生分解性ブロックコポリマー、生分解性ランダムコポリマー、生分解性ポリエステルコポリマー、生分解性ポリエステルブロックコポリマー、生分解性ポリエステルブロックランダムコポリマー、マルチブロックコポリマー、線状生分解性コポリマー、ポリ［α－（４－アミノブチル）－Ｌ－グリコール酸（ＰＡＧＡ）、生分解性架橋陽イオン性マルチブロックコポリマー、ポリカーボネート、ポリアンヒドリド、ポリヒドロキシ酸、ポリプロピルフメレート、ポリカプロラクトン、ポリアミド、ポリアセタール、ポリエーテル、ポリエステル、ポリ（オルトエステル）、ポリシアノアクリレート、ポリビニルアルコール、ポリウレタン、ポリホスファゼン、ポリアクリレート、ポリメタクリレート、ポリシアノアクリレート、ポリウレア、ポリスチレン、ポリアミン、ポリリシン、ポリ（エチレンイミン）、ポリ（セリンエステル）、ポリ（Ｌ－ラクチド－ｃｏ－Ｌ－リシン）、ポリ（４－ヒドロキシ－Ｌ－プロリンエステル）、アクリル系ポリマー、アミン含有ポリマー、デキストランポリマー、デキストランポリマー誘導体、それらの組合せなどの少なくとも１種のポリマーを含みうる。

【１９８８】

限定されるものではないが、例として、本発明のｓａＲＮＡは、米国特許第６，１７７，２７４号明細書（その全体が参照により本明細書に組み込まれる）に記載されるようにＰＬＬでグラフトされたＰＥＧの高分子化合物を用いて製剤化しうる。製剤は、インビトロで細胞をトランスフェクトのためにまたはｓａＲＮＡをインビボ送達するために使用しうる。他の例として、ｓａＲＮＡは、陽イオン性ポリマーを含む溶液中もしくは媒体中に、乾燥医薬組成物中に、または米国特許出願公開第２００９／００４２８２９号明細書および同第２００９／００４２８２５号明細書（それぞれその全体が参照により本明細書に組み込まれる）に記載の乾燥可能な溶液中に懸濁可能である。

【１９８９】

限定されるものではないが、他の例として、本発明のｓａＲＮＡは、ＰＬＧＡ－ＰＥＧブロックコポリマーを用いて（米国特許出願公開第２０１２／０００４２９３号明細書および米国特許第８，２３６，３３０号明細書（それらの全体が参照により本明細書に組み込まれる）を参照されたい）またはＰＬＧＡ－ＰＥＧ－ＰＬＧＡブロックコポリマーを用いて（米国特許第６，００４，５７３号明細書（その全体が参照により本明細書に組み込まれる）を参照されたい）製剤化しうる。限定されるものではないが、例として、本発明

のｓａＲＮＡは、ＰＥＧおよびＰＬＡまたはＰＥＧおよびＰＬＧＡのジブロックコポリマーを用いて製剤化しうる（米国特許第８，２４６，９６８号明細書（その全体が参照により本明細書に組み込まれる）を参照されたい）。

【１９９０】

ポリアミン誘導体は、核酸を送達するために、または疾患を治療および／もしくは予防するために、または植込み型注入可能デバイスに組み込むために使用しうる（米国特許出願公開第２０１０／０２６０８１７号明細書（その全体が参照により本明細書に組み込まれる））。限定されるものではないが、例として、医薬組成物は、ｓａＲＮＡと、米国特許出願公開第２０１０／０２６０８１７号明細書（その内容はその全体が参照により本明細書に組み込まれる）に記載のポリアミン誘導体とを含みうる。限定されるものではないが、例として、本発明のｓａＲＮＡは、ポリアミンドポリマーを用いて、たとえば、限定されるものではないが、炭水化物ジアジドモノマーとオリゴアミンを含むジルキンユニットとを組み合わせることにより調製される１，３－双極付加ポリマーを含むポリマーを用いて送達しうる（米国特許第８，２３６，２８０号明細書（その全体が参照により本明細書に組み込まれる））。

【１９９１】

一実施形態では、本発明のｓａＲＮＡは、国際公開第２０１１／１１５８６２号パンフレット、国際公開第２０１２／０８２５７４号パンフレット、および国際公開第２０１２／０６８１８７号パンフレットならびに米国特許出願公開第２０１２／０２８３４２７号明細書（それぞれの内容はその全体が参照により本明細書に組み込まれる）に記載の少なくとも１種のポリマーおよび／またはそれらの誘導体を用いて製剤化しうる。他の実施形態では、本発明のｓａＲＮＡは、国際公開第２０１１／１１５８６２号パンフレット（その全体が参照により本明細書に組み込まれる）に記載の式Ｚのポリマーを用いて製剤化しうる。さらに他の実施形態では、ｓａＲＮＡは、国際公開第２０１２／０８２５７４号パンフレットまたは国際公開第２０１２／０６８１８７号パンフレットおよび米国特許出願公開第２０１２／０２８３４２号明細書（それぞれの内容はその全体が参照により本明細書に組み込まれる）に記載の式Ｚ、Ｚ’、またはＺ’’のポリマーを用いて製剤化しうる。本発明のｓａＲＮＡを用いて製剤化されるポリマーは、国際公開第２０１２／０８２５７４号パンフレットまたは国際公開第２０１２／０６８１８７号パンフレット（それぞれの内容はその全体が参照により本明細書に組み込まれる）に記載の方法により合成しうる。

【１９９２】

本発明のｓａＲＮＡは少なくとも１種のアクリル系ポリマーを用いて製剤化しうる。アクリル系ポリマーとしては、限定されるものではないが、アクリル酸、メタクリル酸、アクリル酸、メチルメタクリレートコポリマー、エトキシエチルメタクリレート、シアノエチルメタクリレートおよびメタクリル酸コポリマー、アミノ、アルキルメタクリレートコポリマー、ポリ（アクリル酸）、ポリ（メタクリル酸）、ポリシアノアクリレートおよびそれらの組合せが挙げられる。

【１９９３】

本発明のｓａＲＮＡの製剤は、少なくとも１種のアミン含有ポリマー、たとえば、限定されるものではないが、ポリリシン、ポリエチレンイミン、ポリ（アミドアミン）デンドリマー、またはそれらの組合せを含みうる。

【１９９４】

たとえば、本発明のｓａＲＮＡは、ポリ（アルキレンイミン）、生分解性陽イオン性リポポリマー、生分解性ブロックコポリマー、生分解性ポリマー、または生分解性ランダムコポリマー、生分解性ポリエステルブロックコポリマー、生分解性ポリエステルポリマー、生分解性ポリエステルランダムコポリマー、線状生分解性コポリマー、ＰＡＧＡ、生分解性架橋陽イオン性マルチブロックコポリマー、またはそれらの組合せをはじめとする医薬化合物中に製剤化しうる。生分解性陽イオン性リポポリマーは、当技術分野で公知のならびに／または米国特許第６，６９６，０３８号明細書、米国特許出願公開第２００３／００７３６１９号明細書および同第２００４／０１４２４７４号（それぞれその全体が参

照により本明細書に組み込まれる）に記載の方法により製造しうる。ポリ（アルキレンイミン）は、当技術分野で公知のおよび／または米国特許出願公開第２０１０／０００４３１５号明細書（その全体が参照により本明細書に組み込まれる）に記載の方法を用いて製造しうる。生分解性ポリマー、生分解性ブロックコポリマー、生分解性ランダムコポリマー、生分解性ポリエステルブロックコポリマー、生分解性ポリエステルポリマー、または生分解性ポリエステルランダムコポリマーは、当技術分野で公知のならびに／または米国特許第６，５１７，８６９号明細書および同第６，２６７，９８７号明細書（それらの内容はそれぞれその全体が参照により本明細書に組み込まれる）に記載の方法を用いて製造しうる。線状生分解性コポリマーは、当技術分野で公知のおよび／または米国特許第６，６５２，８８６号明細書に記載の方法を用いて製造しうる。ＰＡＧＡポリマーは、当技術分野で公知のおよび／または米国特許第６，２１７，９１２号明細書（その全体が参照により本明細書に組み込まれる）に記載の方法を用いて製造しうる。ＰＡＧＡポリマーは、限定されるものではないが、ポリ－Ｌ－リシン、ポリアルギン、ポリオルニチン、ヒストン、アビジン、プロタミン、ポリラクチド、ポリ（ラクチド－ｃｏ－グリコリド）などのポリマーとのコポリマーまたはブロックコポリマーを形成するように共重合しうる。生分解性架橋陽イオン性マルチブロックコポリマーは、当技術分野で公知のおよび／または米国特許第８，０５７，８２１号明細書もしくは米国特許出願公開第２０１２／００９１４５号明細書（それぞれその全体が参照により本明細書に組み込まれる）に記載の方法により製造しうる。たとえば、マルチブロックコポリマーは、分岐状ポリエチレンイミンと比較して識別可能なパターンを有する線状ポリエチレンイミン（ＬＰＥＩ）ブロックを用いて合成しうる。さらに、組成物または医薬組成物は、当技術分野で公知の、本明細書に記載の、または米国特許出願公開第２０１０／０００４３１５号明細書もしくは米国特許第６，２６７，９８７号明細書および同第６，２１７，９１２号明細書（それぞれその全体が参照により本明細書に組み込まれる）に記載の方法により製造しうる。

【１９９５】

本発明のｓａＲＮＡは、ポリ陽イオン性側鎖を含有しうる少なくとも１種の分解性ポリエステルを用いて製剤化しうる。分解性ポリエステルとしては、ポリ（セリンエステル）、ポリ（Ｌ－ラクチド－ｃｏ－Ｌ－リシン）、ポリ（４－ヒドロキシ－Ｌ－プロリンエステル）、およびそれらの組合せが挙げられるが、これらに限定されるものではない。他の実施形態では、分解性ポリエステルは、ＰＥＧ化ポリマーを形成するようにＰＥＧコンジュゲーションを含みうる。

【１９９６】

本発明のｓａＲＮＡは、少なくとも１種の架橋性ポリエステルを用いて製剤化しうる。架橋性ポリエステルは、当技術分野で公知のおよび米国特許出願公開第２０１２／０２６９７６１号明細書（その全体が参照により本明細書に組み込まれる）に記載のものを含む。

【１９９７】

一実施形態では、本明細書に記載のポリマーは脂質末端ＰＥＧにコンジュゲートしうる。限定されるものではないが、例として、ＰＬＧＡを脂質末端ＰＥＧにコンジュゲートすることによりＰＬＧＡ－ＤＳＰＥ－ＰＥＧを形成しうる。限定されるものではないが、他の例として、本発明に使用されるＰＥＧコンジュゲートは、国際公開第２００８／１０３２７６号パンフレット（その全体が参照により本明細書に組み込まれる）に記載されている。ポリマーは、リガンドコンジュゲートを用いて、たとえば、限定されるものではないが、米国特許第８，２７３，３６３号明細書（その全体が参照により本明細書に組み込まれる）に記載のコンジュゲートを用いてコンジュゲートしうる。

【１９９８】

一実施形態では、本明細書に記載のｓａＲＮＡは他の化合物にコンジュゲートしうる。限定されるものではないが、コンジュゲートの例は、米国特許第７，９６４，５７８号明細書および同第７，８３３，９９２号明細書（それぞれその全体が参照により本明細書に組み込まれる）に記載されている。他の実施形態では、本発明のｓａＲＮＡは、米国特許

第７，９６４，５７８号明細書および同第７，８３３，９９２号明細書（それぞれその全体が参照により本明細書に組み込まれる）に記載の式１～１２２のコンジュゲートにコンジュゲートしうる。本明細書に記載のｓａＲＮＡは、限定されるものではないが、金などの金属にコンジュゲートしうる。（たとえば、ギルジョハン（Ｇｉｌｊｏｈａｎｎ）ら著、ジャーナル・オブ・アメリカン・ケミカル・ソサエティ（Ｊｏｕｒｎ．Ａｍｅｒ．Ｃｈｅｍ．Ｓｏｃ．）、２００９年、第１３１巻、第６号、ｐ．２０７２～２０７３（その全体が参照により本明細書に組み込まれる）を参照されたい）。他の実施形態では、本明細書に記載のｓａＲＮＡは、金ナノ粒子にコンジュゲートおよび／またはカプセル化しうる。（国際公開第２０１２／１６２６９号パンフレットおよび米国特許出願公開第２０１２／０３０２９４０号明細書（それぞれその全体が参照により本明細書に組み込まれる））。

【１９９９】

米国特許出願公開第２０１０／０００４３１３号明細書（その全体が参照により本明細書に組み込まれる）に記載されるように、遺伝子送達組成物はヌクレオチド配列とポロキサマーとを含みうる。たとえば、本発明のｓａＲＮＡは、米国特許出願公開第２０１０／０００４３１３号明細書に記載のポロキサマーを用いた遺伝子送達組成物に使用しうる。

【２０００】

一実施形態では、本発明のポリマー製剤は、陽イオン性担体を含みうるポリマー製剤と、コレステロール基およびポリエチレングリコール基に共有結合しうる陽イオン性リポポリマーとを接触させることにより安定化しうる。ポリマー製剤は、米国特許出願公開第２００９／００４２８２９号明細書（その全体が参照により本明細書に組み込まれる）に記載の方法を用いて陽イオン性リポポリマーと接触させうる。

【２００１】

陽イオン性担体は、限定されるものではないが、ポリエチレンイミン、ポリ（トリメチレンイミン）、ポリ（テトラメチレンイミン）、ポリプロピレンイミン、アミノグリコシドポリアミン、ジデオキシジアミノ－ｂ－シクロデキストリン、スペルミン、スペルミジン、ポリ（２－ジメチルアミノ）エチルメタクリレート、ポリ（リシン）、ポリ（ヒスチジン）、ポリ（アルギニン）、陽イオン化ゼラチン、デンドリマー、キトサン、１，２－ジオレオイル－３－トリメチルアンモニウムプロパン（ＤＯＴＡＰ）、Ｎ－［１－（２，３－ジオレオイルオキシ）プロピル］－Ｎ，Ｎ，Ｎ－トリメチルアンモニウムクロリド（ＤＯＴＭＡ）、１－［２－（オレオイルオキシ）エチル］－２－オレイル－３－（２－ヒドロキシエチル）イミダゾリニウムクロリド（ＤＯＴＩＭ）、２，３－ジオレイルオキシ－Ｎ－［２（スペルミンカルボキサミド）エチル］－Ｎ，Ｎ－ジメチル－１－プロパンアミニウムトリフルオロアセテート（ＤＯＳＰＡ）、３Ｂ－［Ｎ－（Ｎ’，Ｎ’－ジメチルアミノエタン）－カルバモイル］コレステロールヒドロクロリド（ＤＣ－コレステロールＨＣｌ）ジヘプタデシルアミドグリシルスペルミジン（ＤＯＧＳ）、Ｎ，Ｎ－ジステアリル－Ｎ，Ｎ－ジメチルアンモニウムブロミド（ＤＤＡＢ）、Ｎ－（１，２－ジミリスチルオキシプロプ－３－イル）－Ｎ，Ｎ－ジメチル－Ｎ－ヒドロキシエチルアンモニウムブロミド（ＤＭＲＩＥ）、Ｎ，Ｎ－ジオレイル－Ｎ，Ｎ－ジメチルアンモニウムクロリドＤＯＤＡＣ、ならびにそれらの組合せを含みうる。

【２００２】

本発明のｓａＲＮＡは、１種以上のポリマーのポリプレックス中に製剤化しうる（米国特許出願公開第２０１２／０２３７５６５号明細書および同第２０１２／０２７０９２７号明細書（それぞれその全体が参照により本明細書に組み込まれる））。一実施形態では、ポリプレックスは２種以上の陽イオン性ポリマーを含む。陽イオン性ポリマーは、線状ＰＥＩなどのポリ（エチレンイミン）（ＰＥＩ）を含みうる。

【２００３】

本発明のｓａＲＮＡは、ポリマー、脂質、および／または限定されるものではないが、リン酸カルシウムなどの他の生分解性作用剤の組合せを用いてナノ粒子として製剤化することも可能である。成分は、コア－シェル、ハイブリッド、および／または交互積層のア

ーキテクチャーで組み合わせうる（ワング（Ｗａｎｇ）ら著、ネイチャー・マテリアルズ（Ｎａｔ　Ｍａｔｅｒ．）、２００６年、第５巻、ｐ．７９１～７９６、フラー（Ｆｕｌｌｅｒ）ら著、バイオマテリアルズ（Ｂｉｏｍａｔｅｒｉａｌｓ）、２００８年、第２９巻、ｐ．１５２６～１５３２、デコカー（ＤｅＫｏｋｅｒ）ら著、アドバンスト・ドラッグ・デリバリー・レビューズ（Ａｄｖ　Ｄｒｕｇ　Ｄｅｌｉｖ　Ｒｅｖ．）、２０１１年、第６３巻、ｐ．７４８～７６１、エンドレス（Ｅｎｄｒｅｓ）ら著、バイオマテリアルズ（Ｂｉｏｍａｔｅｒｉａｌｓ）、２０１１年、第３２巻、ｐ．７７２１～７７３１、スー（Ｓｕ）ら著、モレキュラー・ファーマシューティクス（Ｍｏｌ　Ｐｈａｒｍ．）、２０１１年６月６日、第８巻、第３号、ｐ．７７４～８７（その全体が参照により本明細書に組み込まれる））。限定されるものではないが、例として、ナノ粒子は、複数のポリマー、たとえば、限定されるものではないが、親水性－疎水性ポリマー（たとえば、ＰＥＧ－ＰＬＧＡ）、疎水性ポリマー（たとえば、ＰＥＧ）、および／または親水性ポリマーを含みうる（国際公開第２０１２／０２２５１２９号パンフレット（その全体が参照により本明細書に組み込まれる））。

【２００４】

脂質および／またはポリマーと組み合わされた生分解性リン酸カルシウムナノ粒子は、インビボでｓａＲＮＡを送達するために使用しうる。一実施形態では、本発明のｓａＲＮＡを送達するために、アニスアミドなどの標的化リガンドも含有していてもよい脂質被覆リン酸カルシウムナノ粒子を使用しうる。たとえば、マウス転移肺モデルでｓｉＲＮＡを効果的に送達するために脂質被覆リン酸カルシウムナノ粒子を使用しうる（リー（Ｌｉ）ら著、ジャーナル・オブ・コントロールド・リリース（Ｊ　Ｃｏｎｔｒ　Ｒｅｌ．）、２０１０年、第１４２巻、ｐ．４１６～４２１、リー（Ｌｉ）ら著、ジャーナル・オブ・コントロールド・リリース（Ｊ　Ｃｏｎｔｒ　Ｒｅｌ．）、２０１２年、第１５８巻、ｐ．１０８～１１４、ヤング（Ｙａｎｇ）ら著、モレキュラー・セラピー（Ｍｏｌ　Ｔｈｅｒ．）、２０１２年、第２０巻、ｐ．６０９～６１５（その全体が参照により本明細書に組み込まれる））。この送達系は、ｓｉＲＮＡの送達を改善するために、標的化ナノ粒子およびエンドソームエスケープを促進するための成分の両方とリン酸カルシウムとを組み合わせる。

【２００５】

一実施形態では、ＰＥＧ－ポリ陰イオンブロックコポリマーを有するリン酸カルシウムをｓａＲＮＡの送達に使用しうる（カジワラ（Ｋａｚｉｋａｗａ）ら著、ジャーナル・オブ・コントロールド・リリース（Ｊ　Ｃｏｎｔｒ　Ｒｅｌ．）、２００４年、第９７巻、ｐ．３４５～３５６、カジワラ（Ｋａｚｉｋａｗａ）ら著、ジャーナル・オブ・コントロールド・リリース（Ｊ　Ｃｏｎｔｒ　Ｒｅｌ．）、２００６年、第１１１巻、ｐ．３６８～３７０（その全体が参照により本明細書に組み込まれる））。

【２００６】

一実施形態では、本発明のｓａＲＮＡを送達するためにＰＥＧ－電荷反転ポリマー（ピテラ（Ｐｉｔｅｌｌａ）ら著、バイオマテリアルズ（Ｂｉｏｍａｔｅｒｉａｌｓ）、２０１１年、第３２巻、ｐ．３１０６～３１１４）を用いてナノ粒子を形成しうる。ＰＥＧ－電荷反転ポリマーは、酸性ｐＨでポリ陽イオン状態に切断されてエンドソームエスケープを促進することによりＰＥＧ－ポリ陰イオンブロックコポリマーを改良しうる。

【２００７】

コア－シェルナノ粒子の使用では、陽イオン性架橋ナノゲルコアと種々のシェルとを合成するための高スループット手段にも重点が置かれてきた（シーグワルト（Ｓｉｅｇｗａｒｔ）ら著、米国科学アカデミー紀要（Ｐｒｏｃ　Ｎａｔｌ　Ａｃａｄ　Ｓｃｉ　ＵＳＡ）、２０１１年、第１０８巻、ｐ．１２９９６～１３００１）。ポリマーナノ粒子の複合体化、送達、および内在化は、ナノ粒子のコア成分およびシェル成分の両方の化学組成を変化させることにより正確に制御可能である。たとえば、コア－シェルナノ粒子は、ナノ粒子にコレステロールを共有結合した後、マウス肝細胞にｓａＲＮＡを効率的に送達しうる。

【２００８】
一実施形態では、中間ＰＬＧＡ層とＰＥＧを含有する外側中性脂質層とを含む中空脂質コアは、本発明のｓａＲＮＡの送達に使用しうる。限定されるものではないが、例として、ルシフェラーゼ発現腫瘍を有するマウスにおいて脂質－ポリマー－脂質ハイブリッドナノ粒子が従来のリポプレックスと比較してルシフェラーゼ発現を有意に抑制することが確認された（シー（Ｓｈｉ）ら著、アンゲバンテ・ヘミー（Ａｎｇｅｗ　Ｃｈｅｍ）、国際版、２０１１年、第５０巻、ｐ．７０２７～７０３１（その全体が参照により本明細書に組み込まれる））。
【２００９】
一実施形態では、脂質ナノ粒子は、本明細書に開示されるｓａＲＮＡのコアとポリマーシェルとを含みうる。ポリマーシェルは、本明細書に記載のポリマーのいずれかでありうると共に当技術分野で公知のものである。さらなる実施形態では、ポリマーシェルは、コア中の修飾核酸を保護するために使用しうる。
【２０１０】
本発明のｓａＲＮＡと共に使用されるコア－シェルナノ粒子は、米国特許第８，３１３，７７７号明細書（その全体が参照により本明細書に組み込まれる）に記載の方法により形成しうる。
【２０１１】
一実施形態では、コア－シェルナノ粒子は、本明細書に開示されるｓａＲＮＡのコアとポリマーシェルとを含みうる。ポリマーシェルは、本明細書に記載のポリマーのいずれかでありうると共に当技術分野で公知のものである。さらなる実施形態では、ポリマーシェルはコア中のｓａＲＮＡを保護するために使用しうる。限定されるものではないが、例として、コア－シェルナノ粒子は、眼の疾患または障害を治療するために使用しうる（たとえば、米国特許出願公開第２０１２／０３２１７１９号明細書（その全体が参照により本明細書に組み込まれる）を参照されたい）。
【２０１２】
一実施形態では、本明細書に記載の製剤で使用されるポリマーは、国際公開第２０１１／１２００５３号パンフレット（その全体が参照により本明細書に組み込まれる）に記載の修飾ポリマー（たとえば、限定されるものではないが、修飾ポリアセタール）でありうる。
【２０１３】
送達
本開示は、薬剤送達の科学の進歩の可能性を考慮して任意の適切な経路により治療、予防、医薬、診断、またはイメージングのいずれかのためにｓａＲＮＡを送達することを包含する。送達はネイキッド状態または製剤化状態でありうる。
【２０１４】
本発明のｓａＲＮＡは、ネイキッド状態で細胞に送達しうる。本明細書で用いられる場合、「ネイキッド」とは、トランスフェクションを促進する作用剤を用いずにｓａＲＮＡを送達することを意味する。たとえば、細胞に送達されるｓａＲＮＡは修飾を含まないものでありうる。ネイキッドｓａＲＮＡは、当技術分野で公知のおよび本明細書に記載の投与経路を用いて細胞に送達しうる。
【２０１５】
本発明のｓａＲＮＡは、本明細書に記載の方法を用いて製剤化しうる。製剤は、修飾型および／または非修飾型でありうるｓａＲＮＡを含有しうる。製剤は、限定されるものではないが、細胞透過剤、薬学的に許容可能な担体、送達剤、生侵食性または生体適合性ポリマー、溶媒、および持続放出送達デポをさらに含みうる。製剤化ｓａＲＮＡは、当技術分野で公知のおよび本明細書に記載の投与経路を用いて細胞に送達しうる。
【２０１６】
組成物はまた、直接浸漬または沐浴する方法、カテーテルを介した方法、ゲル剤、粉末剤、軟膏剤、クリーム剤、ゲル剤、ローション剤、および／または滴剤による方法、組成

物で被覆または含浸された布または生分解性材料などの基材を用いた方法など（これらに限定されるものではない）をはじめとする当技術分野のいくつかの方法のいずれかで、器官または組織に直接送達するために製剤化しうる。本発明のｓａＲＮＡはまた、レトロウイルス複製ベクター（ＲＲＶ：ｒｅｔｒｏｖｉｒｌ　ｒｅｐｌｉｃａｔｉｎｇ　ｖｅｃｔｏｒ）中にクローニングして細胞にトランスデュースしうる。

【２０１７】

投与

本発明のｓａＲＮＡは、治療上有効なアウトカムをもたらす任意の経路により投与しうる。こうした経路としては、経腸、経胃腸、硬膜外、経口、経真皮、硬膜外（硬膜上）、大脳内（大脳中へ）、脳室内（脳室中へ）、皮膚上（皮膚上への適用）、真皮内（皮膚自体中へ）、皮下（皮膚下へ）、経鼻投与（鼻を介して）、静脈内（静脈中へ）、動脈内（動脈中へ）、筋肉内（筋肉中へ）、心臓内（心臓中へ）、骨内注入（骨髄中へ）、髄腔内（脊柱管中へ）、腹腔内、（腹膜中への注入または注射）、膀胱内注入、硝子体内、（眼を介して）、空洞内注射、（陰茎基部中へ）、膣内投与、子宮内、羊膜外投与、経真皮（全身分布のためのインタクト皮膚を介する拡散）、経粘膜（粘膜を介する拡散）、吹送（経鼻吸入）、舌下、唇下、浣腸、点眼（結膜上へ）、または点耳が挙げられるが、これらに限定されるものではない。特定の実施形態では、組成物は、血液脳関門、血管関門、または他の上皮性関門を通過できるようにする方法で投与しうる。２０１２年１２月１４日出願の国際公開第２０１３／０９０６４８号パンフレット（その内容はその全体が参照により本明細書に組み込まれる）に開示される投与経路は、本発明のｓａＲＮＡを投与するために使用しうる。

【２０１８】

剤形

本明細書に記載の医薬組成物は、局所、鼻腔内、気管内、または注射用（たとえば、静脈内、眼内、硝子体内、筋肉内、心臓内、腹腔内、皮下）などの本明細書に記載の剤形で製剤化しうる。２０１２年１２月１４日出願の国際公開第２０１３／０９０６４８号パンフレット（その内容はその全体が参照により本明細書に組み込まれる）に記載の液体剤形、注射用製剤、経肺剤形、および固体剤形は、本発明のｓａＲＮＡ用の剤形として使用しうる。

【２０１９】

ＩＩＩ．使用方法

本発明の一態様は、本発明のｓａＲＮＡを使用する方法と、ｓａＲＮＡと少なくとも１種の薬学的に許容可能な担体とを含む医薬組成物とを提供する。本発明のｓａＲＮＡはその標的遺伝子の発現をモジュレートする。一実施形態では、本発明のｓａＲＮＡを投与する工程を含む、インビトロおよび／またはインビボで標的遺伝子の発現をレギュレートする方法が提供される。一実施形態では、標的遺伝子の発現は、本発明のｓａＲＮＡの存在下で、本発明のｓａＲＮＡの不在下での標的遺伝子の発現と比較して少なくとも５、１０、２０、３０、４０％、または少なくとも４５、５０、５５、６０、６５、７０、７５％、または少なくとも８０％だけ増加される。さらなる実施形態では、標的遺伝子の発現は、本発明のｓａＲＮＡの存在下で、本発明のｓａＲＮＡの不在下での標的遺伝子の発現と比較して少なくとも２、３、４、５、６、７、８、９、１０倍、または少なくとも１５、２０、２５、３０、３５、４０、４５、５０倍、または少なくとも６０、７０、８０、９０、１００倍だけ増加される。

【２０２０】

一実施形態では、本明細書に記載のｓａＲＮＡの遺伝子発現の増加は増殖細胞で示される。

標的遺伝子はヒトゲノムの任意の遺伝子でありうる。限定されるものではないが、例として、標的遺伝子は、表１に列挙されたコード標的遺伝子のいずれかまたは表２に列挙された非コード遺伝子のいずれかでありうる。

【２０２１】

一実施形態では、本明細書に記載のｓａＲＮＡは、ＣＲＩＰＲ／Ｃａｓ９系などのＣＲＩＳＰＲ（クラスター化規則的間隔回文リピート）系でスペーサとして使用しうる。本明細書に記載のｓａＲＮＡを含むＣＲＩＳＰＲ系は、標的遺伝子を切断して編集するために使用しうる。

【２０２２】

一実施形態では、本明細書に記載のｓａＲＮＡは、血液障害、たとえば、赤血球を侵す障害（たとえば、貧血、サラセミア、鎌状赤血球貧血、および真性赤血球増加症）、白血球を侵す障害（たとえば、リンパ腫、白血病、多発性骨髄腫、および脊髄異形成症候群）、血小板を侵す障害（たとえば、血小板減少症、特発性血小板減少性紫斑病、ヘパリン誘発性血小板減少症、血栓性血小板減少性紫斑病、および本態性血小板増加症）、血漿を侵す障害（たとえば、敗血症、血友病、フォンウィルブランド病、凝固亢進状態、深部静脈血栓症、および播種性血管内凝固（ＤＩＣ：ｄｉｓｓｅｍｉｎａｔｅｄ　ｉｎｔｒａｖａｓｃｕｌａｒ　ｃｏａｇｕｌａｔｉｏｎ））を治療するために使用しうる。

【２０２３】

一実施形態では、本明細書に記載のｓａＲＮＡは、アルブミン障害、たとえば、無アルブミン血症、ビスアルブミン血症、家族性異常アルブミン血性高サイロキシン血症、および低アルブミン血症を治療するために使用しうる。

【２０２４】

一実施形態では、本明細書に記載のｓａＲＮＡは、凝固症、たとえば、血友病、活性化プロテインＣ抵抗性、アミロイド紫斑病、抗リン脂質抗体症候群、アンチトロンビンＩＩＩ欠乏症、ベルナール・スーリエ症候群、出血性素質、海綿静脈洞血栓症、凝固症、先天性無フィブリノーゲン血症、先天性無巨核球性血小板減少症、深部静脈血栓症、播種性血管内凝固、異常フィブリノーゲン血症、本態性血小板血症、エバンス症候群、第Ｉ因子欠損症、第Ｖ因子ライデン、第ＸＩＩＩ因子欠損症、フェクトナー症候群、巨大血小板障害、グランツマン血小板無力症、灰色血小板症候群、ハリス血小板症候群、ヘパライン誘発性血小板減少症、ヘルマンスキー・プドラック症候群、高プロトロンビン血症、低プロトロンビン血症、特発性血小板減少性紫斑病、カサバッハ・メリット症候群、メイ・ヘグリン異常、新生児同種免疫性血小板減少症、オニアライ、静脈血栓症、血小板貯蔵プール欠損症、血小板輸血不応、プレットテスト、一次フィブリノーゲン溶解、プロテインＣ欠損症、プロテインＳ欠損症、プロトロンビンＧ２０２１０Ａ、偽性灰色血小板症候群、電撃性紫斑病、ケベック血小板障害、スコット症候群、粘着性血小板症候群、表在静脈血栓症、血小板減少症、血小板減少性紫斑病、血小板増加症、栓友病、血栓性微小血管症、血栓性血小板減少性紫斑病、アップショー・シュールマン症候群、およびフォンウィルブランド病を治療するために使用しうる。

【２０２５】

一実施形態では、本明細書に記載のｓａＲＮＡは、血液の疾患および障害、たとえば、貧血、白血病、リンパ腫、多発性骨髄腫、敗血症および鎌状細胞疾患、非定型溶血性尿毒症症候群、コメイア、血球減少症、楕円赤血球、フィブリノーゲン溶解、血液疾患、溶血性尿毒症症候群、肝静脈閉塞性疾患、過粘稠度症候群、類白血病反応、白血球増加症、白血球減少症、軽鎖沈着疾患、マクログロブリン血症、オルニチン血症、汎血球減少症、汎骨髄症、偽性血小板減少症、シュワックマン・ダイアモンド症候群、および腫瘍崩壊症候群を治療するために使用しうる。

【２０２６】

一実施形態では、本明細書に記載のｓａＲＮＡは、胎児および新生児の出血性障害および血液障害、たとえば、ＡＢＯ、抗Ｋｅｌｌ、抗Ｒｈｃ、抗ＲｈＥ、核黄疸、新生児黄疸、胎盤機能不全、多血症、およびＲｈ疾患を治療するために使用しうる。

【２０２７】

一実施形態では、本明細書に記載のｓａＲＮＡは、血液新生物、たとえば、血液悪性新生物（たとえば、白血病、リンパ腫、多発性骨髄腫）および骨髄新形成（たとえば、骨髄性白血病）を治療するために使用しうる。

【２０２８】
一実施形態では、本明細書に記載のｓａＲＮＡは、組織球症関連病態、たとえば、エルドハイム・チェスター病、血球貪食性リンパ組織球症、ランゲルハンス細胞組織球症、悪性組織球症、非ランゲルハンス細胞組織球症、非Ｘ組織球症、およびＸ型組織球症を治療するために使用しうる。
【２０２９】
一実施形態では、本明細書に記載のｓａＲＮＡは、リンパ球性障害、たとえば、リンパ球性免疫系障害（たとえば、自己免疫性リンパ増殖症候群、高ガンマグロブリン血症、低ガンマグロブリン血症、リンパ球増殖性障害、パラプロテイン血症、持続性ポリクローナルＢ細胞リンパ球症、およびＲＡＳ病）、リンパ球性白血病（たとえば、急性リンパ球性白血病および慢性リンパ球性白血病）、およびリンパ腫を治療するために使用しうる。
【２０３０】
一実施形態では、本明細書に記載のｓａＲＮＡは、単球および顆粒球の障害、たとえば、顆粒球減少症、自己免疫性好中球減少症、帯状核球増加症（Ｂａｎｄｅｍｉａ）、好塩基球減少症、好塩基球増加症、好酸球減少症、好酸球増加症、発熱性好中球減少症、顆粒球増加症、過好酸球増加症、好酸球増加症候群、過分葉好中球、単球減少症、単球増加症、午前偽好中球減少症、好中球減少症、および好中球増加症を治療するために使用しうる。
【２０３１】
一実施形態では、本明細書に記載のｓａＲＮＡは、赤血球障害、たとえば、貧血、アフリカ鉄過剰症、アルドラーゼＡ欠損症、無トランスフェリン血症、バヒマ病、先天性赤血球生成不全性貧血、赤血球異形成、３型ヘモクロマトーシス、ヘモグロビンレポアー症候群、ヘモグロビン変異体、ヘモグロビン血症、ヘモジデリン尿症、遺伝性耐熱奇形赤血球症、ＨＦＥ遺伝性ヘモクロマトーシス、鉄欠乏症、潜在性鉄欠乏症、マクラウド症候群、メトヘモグロビン血症、小赤血球症、筋腫赤血球増加症候群、変形赤血球症、多染症、多血症、ポルフィリン症、網赤血球減少症、Ｒｈ欠損症候群、病的細胞症候群、球状赤血球症、スルホヘモグロビン血症、および小児期一過性赤芽球減少症を治療するために使用しうる。
【２０３２】
一実施形態では、本明細書に記載のｓａＲＮＡは、乳房障害、たとえば、乳房新生物（たとえば、乳癌）、乳房嚢胞、乳房疾患、乳房鬱滞、乳房血腫、乳房腫瘤、乳管拡張症、乳房肥大、陥没乳頭、乳頭亀裂、乳房筋線維芽腫、乳腺炎、乳房痛、モンドール病、非産褥性乳腺炎、偽血管腫間質性過形成、下垂症（乳房）、乳輪下膿瘍、結節性乳房、およびズスカ病を治療するために使用しうる。
【２０３３】
一実施形態では、本明細書に記載のｓａＲＮＡは、心血管疾患、たとえば、心原性障害、循環系先天性障害（たとえば、先天性心疾患、先天性血管欠損症）、心膜疾患（たとえば、中皮過形成）、心疾患、および血管疾患を治療するために使用しうる。
【２０３４】
一実施形態では、本明細書に記載のｓａＲＮＡは、心原性障害、たとえば、アラジール症候群、ブルガダ症候群、拡張型心筋症、家族性心房細動、肥大型心筋症、ＱＴ延長症候群、マクラウド症候群、サカチ・ナイハン・ティスデール症候群、ＱＴ短縮症候群、スミス・マーチン・ドッド症候群、およびチモシー症候群を治療するために使用しうる。
【２０３５】
一実施形態では、本明細書に記載のｓａＲＮＡは、心疾患、たとえば、不整脈、心肥大、心筋症、心肺蘇生、慢性リウマチ性心疾患、先天性心疾患、心臓新形成、虚血性心疾患、心膜障害、弁膜性心疾患、急性非代償性心不全、心臓瘤、動脈硬化性心疾患、スポーツ心臓症候群、房室瘻、自己免疫性心疾患、心褐色萎縮、心アミロイドーシス、心臓喘息、心収縮調節、心Ｘ症候群、心臓性ショック、心臓病恐怖症、心腎症候群、心毒性、心炎、冠状動脈瘤、冠動脈異常、冠動脈疾患、冠動脈拡張症、冠状動脈閉塞症、冠状動脈血栓症

、冠血管攣縮、木靴心、コクサッキーウイルス誘発心筋症、拡張期心不全、ドレスラー症候群、デュロジェ病、アイゼンメンガー症候群、胎児心音、心内膜線維弾性症、心不全、高拍出性心不全、前胸部抬起、特発性巨細胞性心筋炎、心室間同期不全、心室内同期不全、孤立性心房アミロイドーシス、克山病、コーニス症候群、マイディカー（Ｍｙｄｉｃａｒ）、心筋橋、心筋錯綜配列、心筋破裂、心筋瘢痕化、心筋スタニング、心筋炎、非細菌性血栓性心内膜炎、心門疾患、リン性および非アテローム硬化性心疾患、心膜切開後症候群、右軸偏位、ロエムヘルド症候群、ショーン症候群、外傷性心停止、心室瘤、ウイルス性心筋症、および和温療法を治療するために使用しうる。

【２０３６】

一実施形態では、本明細書に記載のｓａＲＮＡは、血管疾患、たとえば、脳血管疾患、先天性血管欠損症、動脈、細動脈、および毛細血管の疾患、大動脈の疾患、静脈、リンパ管、およびリンパ節の疾患、高血圧、虚血、血管新形成、侵攻性血管粘液腫、貧血性梗塞、動脈瘤、血管異形成、血管症、大動脈弁輪拡張、大動脈炎、大動脈腸骨動脈閉塞性疾患、動脈硬化度、細動脈硬化症、動脈硬化症、アテローム、アテローム硬化症、脳虚血、閉塞性血栓性血管炎、毛細血管炎、頸動脈狭窄、頸動脈雑音、脳アミロイド血管症、コレステロール塞栓症、慢性脳脊髄静脈不全、慢性静脈機能不全、循環内皮細胞、ＣＬＯＶＥＳ症候群、圧潰静脈、冠状静脈拡張（ｃｏｒｏｎａ　ｐｈｌｅｂｅｃｔａｔｉｃａ）、デゴス病、糖尿病性血管症、糖尿病性腎症、硬膜動静脈瘻、内皮細胞機能不全、内皮炎、家族性大動脈解離、脂肪線条、線維脂肪血管異常、線維筋性異形成、フラマー症候群、出血性梗塞、遺伝性シスタチンＣアミロイド血管症、ホレンホースト斑、熱疼痛、ヒアリン細動脈硬化症、過形成細動脈硬化症、低血圧、下大静脈症候群、間欠性跛行、硬膜内偽動脈瘤、頸静脈拡張症、川崎病、ロイス・ディーツ症候群、ループス血管炎、大血管疾患、仙骨部の後腎異形成血腫、メンケベルク動脈硬化症、閉塞性動脈内膜炎、起立性高血圧、起立性低血圧、起立不耐性、パジェット・シュレッター病、寄異性寒栓症、末梢血管症、静脈炎、有痛性白股腫、有痛青股腫、門脈大静脈吻合、門脈血栓症、体位性起立性頻拍症候群、偽血栓性静脈炎、肺動脈弁閉鎖不全、門脈炎、ラスムッセン動脈瘤、サック・バラバス症候群、スチュワート・トリーブス症候群、上腸間膜動脈症候群、スザック症候群、高安動脈炎、胸部大動脈瘤、血栓性静脈炎、精索静脈瘤、血管異常、血管疾患、血管奇形、血流閉塞発作、自律神経血管筋緊張症、静脈性潰瘍、椎骨動脈解離、ならびに椎骨脳底動脈不全を治療するために使用しうる。

【２０３７】

一実施形態では、本明細書に記載のｓａＲＮＡは、皮膚病態、たとえば、座瘡様発疹、自己炎症性症候群、慢性疱疹発生皮膚病態、粘膜病態、皮膚付属器病態、皮下脂肪病態、結合組織疾患（たとえば、皮膚エリテマトーデスおよび全身性結合組織障害）、皮膚先天性異常（たとえば、遺伝性皮膚症）、真皮・皮下成長、皮膚炎（たとえば、アトピー性皮膚炎、接触性皮膚炎、湿疹、膿疱性皮膚炎、脂漏性皮膚炎）、ヒト色素沈着障害、薬疹、エンドクリン関連皮膚病態、好酸球性皮膚病態、表皮母斑、表皮新生物、表皮嚢胞、紅斑、外皮新形成、リンパ関連皮膚病態、メラノサイト性母斑および新生物（たとえば、黒色腫）、単球およびマクロファージ関連皮膚病態、ムチン沈着症、神経皮膚病態、非感染性免疫不全関連皮膚病態、丘疹鱗屑性障害（たとえば、苔癬様発疹および乾癬）、丘疹鱗屑性角質増殖皮膚病態（たとえば、掌蹠角皮症）、妊娠関連皮膚病態、掻痒性皮膚病態、反応性好中性皮膚病態、不応性手掌足底発疹、代謝異常由来皮膚病態、物理的因子由来皮膚病態（たとえば、熱傷、浸水足症候群、イオン化放射線誘発皮膚病態）、蕁麻疹および血管性浮腫、血管関連皮膚病態、斑状痘瘡様皮膚萎縮症、ならびに皮膚病性リンパ節症を治療するために使用しうる。

【２０３８】

一実施形態では、本明細書に記載のｓａＲＮＡは、消化疾患、たとえば、付属消化腺障害（たとえば、肝臓、胆嚢、胆道、および膵臓の疾患、アラジール症候群、胆汁熱、デュービン・ジョンソン症候群、およびジルベール症候群）、胃腸癌、舌障害、中皮過形成、結腸炎、虫垂疾患、腸疾患、食道、胃、および十二指腸の疾患、脂肪便関連疾患、腹膜障

害、、アルバレス症候群、ハイド症候群、レイノルズ症候群、ロエムヘルド症候群、腹部癲癇、空気嚥下症、アメーバ性肉芽腫、肛門直腸膿瘍、アニスムス、肛門直腸障害、胃石、胆汁酸吸収不良、盲嚢症候群、腸梗塞、腸閉塞、胼胝性潰瘍、カメレオン病変、カンピロバクター症、コレラ、セリアック病、クロンカイト・カナダ症候群、陰窩炎、二核アメーバ症、末端腸閉塞症候群、十二指腸閉鎖、嚥下障害、腸神経障害、腸結石、腸症、好酸球性胃腸炎、腹膜垂炎、線維化性結腸疾患、機能性便秘、機能性胃腸障害、胃底腺ポリープ症、胆石性イレウス、胃腸出血、胃空腸結腸性フィステル、咽頭異常感症、血便排泄、高所性腸内ガス排出、ヒルシュスプルング病、胃酸過多、回腸Ｓ状結腸結節、炎症性腸疾患、腸上皮化生、腸ニューロン異形成、腸スピロヘータ症、腸静脈瘤、油脂瀉下、下部胃腸出血、吸収不良、巨大結腸、巨大直腸、結腸メラノーシス、微胞子虫病、微絨毛封入体病、粘膜炎、壊死性小腸大腸炎、汎大腸炎、肛門周囲血腫、ポイツ・ジェガース症候群、咽頭炎、腸壁気腫、嚢炎、直腸結腸炎、タンパク質喪失性腸症、偽下痢、放射線療法腸症、放射線直腸炎、直腸出血、直腸出血、サンディファー症候群、脾結腸曲症候群、脂肪便、宿便性穿孔、宿便性潰瘍、ストレス潰瘍、上腸間膜動脈症候群、熱帯性スプルー、ならびにホウィップル病を治療するために使用しうる。

【２０３９】

一実施形態では、本明細書に記載のｓａＲＮＡは、耳および乳様突起の疾患、たとえば、自己免疫性内耳疾患、平衡障害、両側前庭障害、カリフラワー耳、隠耳症、耳疾患、耳痛、拡大前庭水管、鼓室内出血、聴覚過敏、巨耳症、乳突起削開術、乳様突起炎、小耳症、ミソフォニア、モンディーニ異形成、耳痛、耳真菌症、ソパイト症候群、上半規管裂隙、サーファーズイア、耳鳴、アッシャー症候群、および前庭聴覚過敏を治療するために使用しうる。

【２０４０】

一実施形態では、本明細書に記載のｓａＲＮＡは、内分泌疾患、たとえば、副腎障害、先天性内分泌系障害、内分泌膵障害（たとえば、糖尿病）、エンドクリン生殖腺障害、エンドクリン新形成（たとえば、甲状腺癌）、エンドクリン関連皮膚病態、視床下部障害、副甲状腺障害、脳下垂体障害、甲状腺疾患（たとえば、甲状腺癌および甲状腺腫瘍）、急性感染性甲状腺炎、自己免疫性甲状腺炎、コロイド小結節、先天性甲状腺機能低下症、クレチン病、ドケルバン甲状腺炎、甲状腺機能正常、甲状腺機能正常病的症候群、家族性異常アルブミン血性高サイロキシン血症、甲状腺腫、甲状腺腫誘発物質、グレーブス病、グレーブス眼症、橋本甲状腺炎、ハシトキシコーシス、甲状腺機能亢進、高チロキシン血症、甲状腺機能低下症、母体甲状腺機能低下症、粘液水腫性昏睡、粘液水腫精神病、オード甲状腺炎、触診甲状腺炎、極地Ｔ３症候群、分娩後甲状腺炎、放射線誘発甲状腺炎、放射性ヨード取込み試験、リーデル甲状腺炎、亜急性リンパ球性甲状腺炎、亜急性甲状腺炎、甲状腺疾患、甲状腺内分泌障害、甲状腺ホルモン耐性、甲状腺新生物、甲状腺結節、甲状腺ストーム、甲状腺切除、甲状腺炎、甲状腺学者、甲状腺中毒性周期性四肢麻痺、甲状腺薬中毒症、中毒性多結節性甲状腺腫、中毒性結節性甲状腺腫、バンワイク・グラムバッハ症候群、越冬症候群、先天性高インスリン症、高血糖、高インスリン血症、高インスリン低血糖、高インスリン症、高プロインスリン血症、低血糖、特発性低血糖、空腹時グルコース障害、グルコース耐性障害、膵島炎、ケトン性低血糖症、膵島芽腫、オキシ高血糖、反応性低血糖、自発性低血糖、ストレス高血糖、ゾリンジャー・エリソン症候群、アシャール・ティエール症候群、腺疾患、無飲症、自己免疫性多内分泌腺症候群、１型自己免疫性多内分泌腺症候群、２型自己免疫性多内分泌腺症候群、３型自己免疫性多内分泌腺症候群、常染色体優性低リン血症性くる病、中枢性塩類喪失症候群、軟骨異形成症ブロムストランド、尿崩症、地方病性甲状腺腫、エンドクリン骨疾患、乳漏高プロラクチン血症、甲状腺腫、女性化乳房、特発性低身長、偶発腫、メタボリック症候群、前頭骨内板過骨症、骨粗鬆症、ピッカルト症候群、下垂体中間部機能不全、ＰＯＥＭＳ症候群、体位性起立性頻拍症候群、および偽クッシング症候群を治療するために使用しうる。

【２０４１】

一実施形態では、本明細書に記載のｓａＲＮＡは、代謝性疾患、たとえば、酸－塩基障

害、白皮症、アミロイドーシス、電解質障害、痛風、先天性代謝異常症（たとえば、アミノ酸代謝障害、コレステロール・ステロイド代謝障害、エイコサノイド代謝障害、脂肪酸代謝障害、糖タンパク質代謝障害、糖タンパク質代謝障害、ヘム代謝障害、脂質代謝障害、リソソーム貯蔵疾患、リン脂質代謝障害、プロテオグリカン代謝障害、ＴＣＡ・ＥＴＣ代謝障害）、白質ジストロフィー、脂質障害（たとえば、脂質代謝障害および脂質貯蔵障害）、肥満、老化、異常基礎代謝率、ダノン病、運動関連低ナトリウム血症、アニオンギャップ増加性代謝性アシドーシス、ＭＤＰ症候群、代謝性ミオパチー、汎脂肪織炎、リフィーディング症候群、ウィンチェスター症候群、Ｘ連鎖低リン酸血症、複合型高脂血症、異脂肪血症、高脂血症、低コレステロール血症、低リポタンパク血症、酸リパーゼ疾患、バッテン病、カナバン病、脳腱黄色腫症、コレステリルエステル貯蔵疾患、ファブリ病、ファーバ病、ガングリオシド症、ゴーシェ病、ＧＭ１ガングリオシド症、ＧＭ２ガングリオシド症、乳児性ニューロンセロイド脂褐素症、ヤンスキー－ビールショースキー病、クラッベ病、リゾリーマル酸リパーゼ欠損症、異染性白質萎縮症、多発性スルファターゼ欠損症、ニューロンセロイド脂褐素症、ニーマン・ピック病（たとえば、ニーマン・ピック病、ＳＭＰＤ１関連ニーマン・ピック病、またはＣ型ニーマン・ピック病）、ペリツェウス・メルツバッヘル病、サンドホフ病、シンドラー病、スフィンゴリピド、スルファチド症、テイ・ザックス病、およびウォルマン病を治療するために使用しうる。

【２０４２】

一実施形態では、本明細書に記載のｓａＲＮＡは、リソソーム貯蔵疾患、たとえば、アクチベータ欠損症／ＧＭ２ガングリオシド症、アルファマンノシダーゼ欠損症、アスパルチルグルコサミン尿症、コレステリルエステル貯蔵疾患、慢性ヘキソサミニダーゼＡ欠損症、シスチン症、ダノン病、ファブリ病、ファーバ病、フコース症、ガラクトシアリドーシス、ゴーシェ病（たとえば、Ｉ型ゴーシェ病、ＩＩ型ゴーシェ病、ＩＩＩ型ゴーシェ病）、ＧＭ１ガングリオシド症（たとえば、乳児性、後期乳児性／若年性、成人性／慢性）、Ｉ－セル病／ムコリピドーシスＩＩ、乳児性遊離シアル酸貯蔵疾患／ＩＳＳＤ、若年性ヘキソサミニダーゼＡ欠損症、クラッベ病（たとえば、乳児発症、遅発）、リゾリーマル酸リパーゼ欠損症（たとえば、早期発症、遅発）、異染性白質萎縮症、ムコ多糖沈着障害（たとえば、偽ハーラ多発性ジストロフィー／シアリダーゼ欠損症ＩＩＩＡ、ＭＰＳＩハーラ症候群、ＭＰＳＩシャイエ症候群、ＭＰＳＩハーラ・シャイエ症候群、ＭＰＳＩＩハンター症候群、Ａ／ＭＰＳＩＩＩＡ型サンフィリッポ症候群、Ｂ／ＭＰＳＩＩＩＢ型サンフィリッポ症候群、Ｃ／ＭＰＳＩＩＩＣ型サンフィリッポ症候群、Ｄ／ＭＰＳＩＩＩＤ型サンフィリッポ症候群、Ａ／ＭＰＳＩＶＡ型モルキオ、Ｂ／ＭＰＳＩＶＢ型モルキオ、ＭＰＳＩＸヒアルロニダーゼ欠損症、ＭＰＳＶＩマロトー・ラミー症候群、ＭＰＳＶＩＩスライ症候群、ムコリピドーシスＩ／シアリドーシス、シアリダーゼ欠損症ＩＩＩＣ、ＩＶ型シアリダーゼ欠損症、多発性スルファターゼ欠損症、ニーマン・ピック病（たとえば、Ａ型、Ｂ型、Ｃ型）、神経セロイドリポフスチン沈着症（たとえば、ＣＬＮ６疾患－非定型後期乳児性、遅発異型、初期若年性、バッテン・シュピールマイアー・フォークト／若年性ＮＣＬ／ＣＬＮ３疾患、フィンランド異型後期乳児性ＣＬＮ５、ヤンスキー・ビールショースキ病／後期乳児性ＣＬＮ２／ＴＰＰ１疾患、クーフス／成人発症ＮＣＬ／ＣＬＮ４疾患、ノーザン癲癇／異型後期乳児性ＣＬＮ８、サンタブオリ・ハルチア／乳児性ＣＬＮ１／ＰＰＴ疾患、ベータマンノシダーゼ欠損症）、ポンペ病／ＩＩ型糖原貯蔵障害、濃化異骨症、サンドホフ病／成人発症／ＧＭ２ガングリオシド症、サンドホフ病／ＧＭ２ガングリオシド症－乳児性、サンドホフ病／ＧＭ２ガングリオシド症－若年性、シンドラー病、サラ病／シアル酸貯蔵疾患、テイ・サックス病／ＧＭ２ガングリオシド症、およびウォルマン病を治療するために使用しうる。

【２０４３】

一実施形態では、本明細書に記載のｓａＲＮＡは、栄養性疾患、たとえば、栄養欠乏症、高栄養症、および栄養失調症を治療するために使用しうる。

一実施形態では、本明細書に記載のｓａＲＮＡは、眼および付属器の疾患、たとえば、脈絡膜および網膜の障害、眼の先天性障害、結膜の障害、眼瞼、涙器系、および眼窩の障

害、緑内障、虹彩および毛様体の障害、水晶体の障害、眼筋、両眼運動、遠近調節、および屈折の障害、眼新形成、視神経および視覚伝導路の障害、眼窩骨膜病態、強膜および角膜の障害、硝子体および眼球の障害、照射性結膜炎、急性出血性結膜炎、急性後極部多発性板状色素上皮症、急性帯状潜在性網膜外層症、黒内障、一過性黒内障、色素線条、瞳孔不同症、前眼部間葉異発生、アーガイル・ロバートソン瞳孔、アルルト線、動脈炎性前部虚血性視神経症、星芒状硝子体症、自己免疫性視神経症、バリント症候群、バルデー・ビードル症候群、ビトー斑点、芽細胞関連眼外傷、ベーム症候群、ボストン徴候、ブラッシュフィールド斑、水疱性角膜症、牛眼、皮質性色盲、結膜水腫、キアスマ症候群、閉眼幻覚、コーガン症候群、眼欠損症、視神経欠損症、コンピュータ視覚症候群、錐体ジストロフィー、共同注視麻痺、瞳孔偏位、扁平角膜１、扁平角膜２、渦巻き状角膜、角膜擦過傷、角膜拡張性障害、角膜水症、角膜穿孔、涙嚢ヘルニア、皮膚弛緩症、類皮嚢胞、拡散性ラメラ角膜炎、解離性垂直偏位、乱視、ドルーゼン、イールズ病、眼内炎、眼球陥入、副眼瞼、眼の周りの隈、眼疾患、全身麻酔時眼傷害、眼傷害、固視ずれ、フラマー症候群、フライシャー輪、フレクスナー・ビンテルシュタイナーロゼット、フォスター・ケネディ症候群、フックス虹彩毛様体炎、フックス斑、巨細胞性動脈炎、グレーブス眼症、虹彩異色症、ホルナー症候群、前房蓄膿、両眼近接、特発性頭蓋内圧亢進、特発性眼窩炎症性疾患、乳児性内斜視、浸潤性眼障害、角膜実質炎、眼内出血、眼内神経鞘腫、網膜内細小血管異常、虹彩角膜内皮症候群、虹彩麻痺、アーヴァイン・ガス症候群、円錐角膜、角膜軟化症、コダドウスト線、クルーケンベルク紡錘、後期先天性梅毒性眼病、格子状変性、レシチンコレステロールアシルトランスフェラーゼ欠損症、白色瞳孔、角膜縁小結節、ロア糸状虫フィラリア症、大視症、黄斑円孔、黄斑低形成症、黄斑部毛細血管拡張症、黄斑症、マーカス・ガン瞳孔、マーシャル症候群、機械的瞳孔不同症、小瞳孔、小視症、縮瞳、ミルホセイニ・ホームズ・ウォルトン症候群、ミトコンドリア視神経症、単眼固視症候群、ムーア稲妻線条、マンソン徴候、散瞳、新生児結膜炎、核性硬化、眼振、１型眼白子症、眼幼虫移行症、眼黒色症、眼筋無力症、眼神経症、眼酒さ、眼球運動失行症、視神経円板小窩、視神経低形成、視神経症、視神経乳頭炎、全眼球炎、パリノー症候群、近視症、第１次硝子体過形成遺残、水晶体血管膜遺残、幻眼症候群、小水疱、光視症、生理学的瞳孔不同症、色素散乱症候群、拡張性気副鼻腔、多瞳孔症、ポストレシック拡張症、後部虚血性視神経症、後部硝子体剥離、推定眼ヒストプラスマ症候群、進行性網膜外層壊死、増殖性硝子体網膜症、偽落屑症候群、偽性近視、偽水晶体光現象、偽斜視、点状上皮侵食、再発性角膜糜爛、網膜変性（ロドプシン突然変異）、網膜形成異常、ロート斑、強膜角膜、透明中隔視神経異形成、シーグリスト線条、中枢性上下斜視、太陽性網膜症、ブドウ腫、シュタルガルト病、スティックラー症候群、突発性後天性網膜変性、上輪部角結膜炎、上斜筋ミオキミア、交感性眼炎、閃輝性融解、遠視症、腱炎、テリエン辺縁変性、テルソン症候群、中毒性前眼部症候群、トラコーマ、眼窩滑車部炎、ブドウ膜耳下腺炎、春季角結膜炎、視力喪失、視覚障害、視覚ルーミング症候群、硝子体網膜症、ガラス質触感症候群、ホッシウス輪、ワグナー病、バイル・マルケサーニ症候群、白斑症候群、白内障、胎生血管系遺残、およびＸ連鎖先天性停止性夜盲症を治療するために使用しうる。

【２０４４】

一実施形態では、本明細書に記載のｓａＲＮＡは、足疾患、たとえば、浸水足症候群、塹壕足炎、アキレス腱滑液包炎、アインフム、足白癬、青趾症候群、中足骨短縮、バニオン、灼熱足症候群、踵骨棘、胼胝、凍瘡、外転尖足、ハグルンド奇形、ハグルンド症候群、母趾内反症、ジェーンウェー病変、中足関節捻挫、モートン神経腫、モルトン趾、掌蹠角皮症、足底踵骨滑液包炎、足底筋膜炎、足底疣贅、シップフット、靭帯結合手順、テーラ腱膜瘤、足根骨癒合、足根管症候群、および爪先歩行を治療するために使用しうる。

【２０４５】

一実施形態では、本明細書に記載のｓａＲＮＡは、泌尿生殖系疾患、たとえば、婦人科障害、男性生殖器性障害、泌尿器科病態、延髄尿道壊死、フレイジャー症候群、および生殖器系疾患を治療するために使用しうる。

【２０４６】

一実施形態では、本明細書に記載のｓａＲＮＡは、婦人科障害、たとえば、先天性女性生殖器障害、婦人科新形成（たとえば、婦人科癌）、不妊症、炎症性女性骨盤臓器疾患、非炎症性女性生殖管障害（たとえば、月経障害）および性感染性疾患および性感染症、アッシャーマン症候群、破綻出血、頸運動圧痛、偽性無月経、類皮嚢胞、卵管内膜症、エストオメーヌ、女性生殖器疾患、フィッツ・ヒュー・カーティス症候群、婦人科出血、腟留血症、高エストロゲン症、性腺機能亢進、性腺機能低下症、陰唇癒合、リプシュッツ潰瘍、メイグス症候群、子宮静脈炎、混合型性腺異発生、卵巣卒中、卵巣静脈症候群、乳頭状汗腺腫、持続性性的興奮障害、多嚢胞性卵巣症候群、骨盤底機能不全、早期卵巣機能不全、月経前不快気分障害、ロキタンスキー結節、円靱帯疼痛、ＸＹ性腺形成不全、処女膜輪強靱、膣痙、外陰前庭炎、外陰部痛、およびＸＸ性腺形成不全を治療するために使用しうる。

【２０４７】

一実施形態では、本明細書に記載のｓａＲＮＡは、婦人科癌、たとえば、腺筋腫、絨毛膜癌、絨毛状皮腫、未分化胚細胞腫、胚性癌腫、子宮内膜上皮内新形成、妊娠性絨毛癌、性腺芽細胞腫、遺伝性平滑筋腫症・腎細胞癌症候群、ミュラー管混合腫瘍、粘液腫瘍、卵巣線維腫、卵巣漿液性嚢胞腺腫、ポイツ・ジェガース症候群、多胚腫、卵胞膜細胞腫、栄養膜新生物、子宮類線維症、腟上皮内腫瘍、および外陰上皮内新形成を治療するために使用しうる。

【２０４８】

一実施形態では、本明細書に記載のｓａＲＮＡは、非炎症性女性生殖管障害、たとえば、月経障害、腺筋症、アッシャーマン症候群、萎縮性腟炎、非定型ポリポイド腺筋腫、頸管無力症、頸部上皮内新形成、頸管ポリープ、黄体嚢胞、膀胱瘤、不正子宮出血、性交疼痛、異形成、子宮内膜増殖症、子宮内膜ポリープ、子宮内膜症、卵巣子宮内膜症、腸ヘルニア、卵管閉塞、女性性器脱、女性不妊、卵巣濾胞性嚢胞、生殖腺捩れ、再発性流産、子宮留血腫、卵管留血症、外陰萎縮症、帯下、中間痛、産科瘻、卵巣卒中、卵巣嚢胞、卵巣疾患、卵巣過剰刺激症候群、卵巣捻転、傍卵巣嚢胞、骨盤鬱血症候群、持続性性的興奮障害、直腸瘤、直腸膣瘻、後傾子宮、結節性峡部卵管炎、Ｓ状結腸ヘルニア、子宮頸部狭窄、黄体莢膜嚢胞、尿道瘤、子宮脱、性器出血、膣痙、バンワイク・グラムバッハ症候群、および膀胱膣瘻を治療するために使用しうる。

【２０４９】

一実施形態では、本明細書に記載のｓａＲＮＡは、男性生殖器障害、たとえば、先天性男性生殖器障害、精巣上体障害、男性生殖器新形成（たとえば、前立腺癌）、陰茎障害、前立腺障害、性感染性疾患および性感染症、ならびに精巣障害を治療するために使用しうる。

【２０５０】

一実施形態では、本明細書に記載のｓａＲＮＡは、男性生殖器新形成、たとえば、ボーエン病、陰茎癌、絨毛癌、胚芽腫、胚性癌腫、内胚葉洞腫瘍、乳腺外ページェット病、生殖細胞腫瘍、胚細胞腫、性腺芽細胞腫、顆粒膜細胞腫瘍、男女性胚細胞腫、高悪性度前立腺上皮内新生物、管内生殖細胞新形成、ライディッヒ細胞腫瘍、ミュール紡績工癌、前立腺癌、ラインケ結晶、セミノーマ、セルトリ細胞腫瘍、セルトリ・ライディッヒ細胞腫瘍、性索性腺間質腫瘍、精母細胞セミノーマ、および奇形腫を治療するために使用しうる。

【２０５１】

一実施形態では、本明細書に記載のｓａＲＮＡは、泌尿器科病態、たとえば、膀胱結石、気腫性膀胱炎、遺尿、好酸球性膀胱炎、フルニエ壊疽、陰嚢水瘤、腎結石、腰腹痛血尿症候群、下部尿路症状、マラコプラキー、排尿性失神、腎性腺腫、閉塞性尿路疾患、卵巣静脈症候群、排尿恐怖症、骨盤筋神経障害、ポイツ・ジェガース症候群、気尿症、偽共同運動障害、プロヒット・ブレイバス病期分類系、腎仙痛、宇宙腎結石形成、後腹膜線維症、鎮静鎮痛、前立腺症候群の経尿道的切除、尿路感染、尿路閉塞、尿貯留腫、尿路結石、尿路障害、膀胱尿管逆流、およびツェルベーガ症候群を治療するために使用しうる。

【２０５２】

一実施形態では、本明細書に記載のｓａＲＮＡは、毛髪疾患、たとえば、円形脱毛症、全脱毛症、全身性脱毛症、アンドロゲン性脱毛症、黒色砂毛症、バブル毛変形、毛髪疾患、毛嚢母斑、脱毛、多毛症、貧毛症、縺れ毛、疎成長期症候群、連珠毛、白輪毛、捻転毛、神経病性皺襞、休止期脱毛、頭部白癬、および抜毛癖を治療するために使用しうる。

【２０５３】

一実施形態では、本明細書に記載のｓａＲＮＡは、免疫系障害、たとえば、喘息、自己免疫性疾患、慢性疲労症候群、ヒトＭＨＣ媒介疾患、過敏性、免疫不全リンパ球性免疫系障害、アーゲナエス症候群、動物性アレルギー、アルツス反応、無脾、自己免疫性心疾患、脾自己消失、カスパーゼ８欠乏状態、キャッスルマン病、慢性疲労症候群、クリオフィブリノゲン血症、皮膚小血管性血管炎、サイトカイン放出症候群、サイトカインストーム、デニー・モルガン皺襞、異所性胸腺、皮膚外肥満細胞腫、家族性地中海熱、グライヒ症候群、移植片対宿主病、湾岸戦争症候群、重鎖病、慢性疲労症候群病歴、ＨＬＡ－Ｂ２７、１型高ＩｇＭ症候群、５型高ＩｇＭ症候群、後天性魚鱗癬、特発性ＣＤ４＋リンパ球減少症、免疫障害、免疫調節不全、免疫再構築炎症反応症候群、免疫媒介性炎症性疾患、免疫増殖性障害、木村病、リンパ球減少症、肥満細胞症、モーティマ病、口腔アレルギー症候群、腫瘍随伴症候群、ＲＡＳ関連自己免疫性白血球増殖性障害、海水浴者発疹、全身性炎症反応症候群、Ｔ細胞欠損症、胸腺過形成、移植拒絶、およびＸＭＥＮ病を治療するために使用しうる。

【２０５４】

一実施形態では、本明細書に記載のｓａＲＮＡは、喘息、たとえば、急性重症喘息、アスピリン喘息、アストマゲン、小麦粉喘息、ブリットル喘息、気管支サーモプラスティ、気管支痙攣、咳喘息、動的過膨張、運動起因性気管支収縮、職業性喘息、および反応性気道疾患を治療するために使用しうる。

【２０５５】

一実施形態では、本明細書に記載のｓａＲＮＡは、口腔疾患、たとえば、慢性硬化性唾液腺炎および唾液腺炎を治療するために使用しうる。

一実施形態では、本明細書に記載のｓａＲＮＡは、筋骨格障害、たとえば、軟骨異常、先天性筋骨格系障害（たとえば、関節拘縮症およびアザラシ肢症）、結晶沈着疾患、関節障害（たとえば、痛風）、筋障害、神経筋接合部・神経筋疾患（たとえば、運動ニューロン疾患および筋ジストロフィー）、オステオパシー（たとえば、骨炎および骨壊死）、骨格障害（たとえば、骨性および軟骨腫様新形成）、軟部組織障害、全身性結合組織障害、アシャール症候群、肢端肥大、強直性過骨症、動脈屈曲度症候群、減少膝蓋高位、ベーカ嚢胞、ブラックベリー指、骨嚢胞、骨疾患、頚部脊柱管狭窄症、頸椎障害、軟骨石灰化症、関節丘吸収、コペンハーゲン病、肋軟骨炎、デッドアーム症候群、下顎歯感覚運動機能不全、瀰漫性特発性過骨症、関節離断術、クモ肢、デュボワ徴候、腱靭帯付着部症、腱靭帯付着部骨棘、ＦＡＣＥＳ症候群、ファセット症候群、下垂足、反張膝、腱鞘の巨細胞腫瘍、グリセル症候群、ハンハート症候群、重い足、ヒル・サックス病変、注射線維症、交差症候群、椎間板障害、関節滲出液、カーン運動治療、膝関節滲出液、膝痛、腰部椎間板疾患、短肢症、顕微外傷、脊髄壊死、特発性側彎ニューロメカニクス、骨溶解、ペレグリニ・スチーダ症候群、色素性絨毛結節性滑膜炎、梨状筋症候群、カリウム惹起性ミオトニー、脊椎初期診療医、偽関節症、橈骨神経管症候群、神経根痛、反復性挫傷ソフトウェアのリスト、反復性挫傷、剣状脛、仙腸関節機能不全、シール指、シーバ病、ばね股症候群、脊髄減圧術、脊椎腱付着部症、脊椎関節症、胸骨クレフト、爪下外骨腫、滑膜肉腫、テーラ腱膜瘤、顎関節機能不全、張力筋炎症候群、ティーツェ症候群、外傷性脊椎障害、尺骨神経絞扼、尺骨神経管症候群、単房性骨嚢腫、翼状肩甲症、ヨガ下垂足、およびツェンカー麻痺を治療するために使用しうる。

【２０５６】

一実施形態では、本明細書に記載のｓａＲＮＡは、神経障害、たとえば、癲癇、頭痛、睡眠障害、脳卒中、中枢神経系障害、末梢神経系障害、テイ・ザックス病、読字障害、トゥレット症候群、急性弛緩性脊髄炎、副腎脳白質ジストロフィー、アイカルディー症候群

、アレキサンダー病、アンブリオーディア、アスペルガー症候群、ユーザ：パラノイドレミングス／サンドボックス（Ｕｓｅｒ：ＰａｒａｎｏｉｄＬｅｍｍｉｎｇｓ／ｓａｎｄｂｏｘ）、自閉症、バッテン病、カナバン病、脳性小児麻痺、小児期崩壊性障害、癲癇、ガストウ特発性小児期後頭葉癲癇、クラッベ病、リー病、リソソーム貯蔵疾患、異染性白質萎縮症、ミオクローヌス失立癲癇、パナイオトポロス症候群、発作性強直性眼球上転、広汎性発達障害、多形黄色星細胞腫、進行性風疹性全脳炎、レット症候群、感覚性機能不全障害、乳児期重症ミオクローヌス性癲癇、常同性運動障害、テイ・ザックス病、および新生児一過性高アンモニア血症を治療するために使用しうる。

【２０５７】

一実施形態では、本明細書に記載のｓａＲＮＡは、中枢神経系障害、たとえば、脳障害、ＣＮＳ脱髄疾患・脊髄障害、前角疾患、海綿静脈洞血栓症、中枢神経系抑制、中枢神経系疾患、中枢神経系疲労、脈絡叢嚢胞、脳脊髄炎、海馬硬化症、髄膜脳炎、ミソフォニア、Ｇ．Ｈ．モンラド・クローン、音楽幻聴、脳室周囲白質軟化症、松果体嚢胞、および視床皮質の律動不整を治療するために使用しうる。

【２０５８】

一実施形態では、本明細書に記載のｓａＲＮＡは、脳障害、たとえば、認知不能症、失語症、脳腫瘍、視床下部障害、白質ジストロフィー、神経学的脳障害、脳下垂体障害、後天性脳傷害、小児期急性小脳失調症、中脳水道狭窄、基底核疾患、脳膿瘍、小脳橋角症候群、脳アミロイド血管症、脳低酸素、脳軟化、脳血管痙攣、脳炎、脳脊髄液漏出、小児期後天性脳傷害、皮質盲、皮質視覚障害、脳症、エチルマロン酸脳症、１７番染色体に連鎖する前頭側頭型認知症およびパーキンソニズム、神経膠瘢痕、神経膠症、橋本脳症、肝性脳障害、ホームズ反跳現象、高血圧白質脳症、ラクロス脳炎、白質脳症、神経軸索スフェロイドを伴う白質脳症、内側髄質症候群、髄膜血管腫症、小多脳回、正常圧水頭症、オリーブ橋小脳萎縮、小児後天性脳傷害、多形黄色星細胞腫、一次性・二次性脳傷害、進行性多病巣性白質脳症、右半球脳損傷、サルナート病期分類、スポーツ関連外傷性脳傷害、側頭葉壊死、および脳室炎を治療するために使用しうる。

【２０５９】

一実施形態では、本明細書に記載のｓａＲＮＡは、ＣＮＳ脱髄疾患、たとえば、多発性硬化症、ＣＮＳ脱髄性自己免疫性疾患、副腎脳白質ジストロフィー、アレキサンダー病、アルパース病、バロー同心円性硬化症、ＣＡＭＦＡＫ症候群、カナバン病、橋中央ミエリン溶解、実験的自己免疫性脳脊髄炎、遺伝性ＣＮＳ脱髄疾患、クラッベ病、白質消失を伴う白質脳症、マルキアファーバ・ビニャーミ病、皮質下嚢胞を伴う大頭型白質脳症、異染性白質萎縮症、視神経脊髄炎、ペリツェウス・メルツバッヘル病、および瀰漫性ミエリン破壊性硬化症を治療するために使用しうる。

【２０６０】

一実施形態では、本明細書に記載のｓａＲＮＡは、末梢神経系障害、たとえば、脳神経障害、神経障害、神経根障害、血管叢障害、ＰＮＳ新形成、副神経障害、有痛知覚麻痺、抗ＭＡＧ末梢性ニューロパチー、自律神経異常反射、腋窩神経機能不全、腋窩神経麻痺、シャルコー・マリー・ツース病、化学療法誘発性末梢性ニューロパチー、慢性溶媒誘発性脳症、ＣＭＶ多発性神経根脊髄症、無汗症を伴う先天性無痛症、除神経、糖尿病性神経障害、自律神経失調症、顔面神経麻痺、家族性自律神経失調症、遺伝性感覚性自律性ニューロパチー、Ｉ型遺伝性感覚性自律性ニューロパチー、ホルナー症候群、多系統萎縮症、神経圧迫症候群、神経傷害、起立性低血圧、起立不耐性、発作性交感神経機能亢進、末梢性ニューロパチー、梨状筋症候群、神経叢症、多発性ニューロパチー、体位性起立性頻拍症候群、原発性自律神経不全、円回内筋症候群、近位糖尿病性神経障害、陰部神経絞扼、純粋自律神経不全、橈骨ニューロパチー、神経根症、坐骨神経痛、胸郭出口症候群、尺骨ニューロパチー、自律神経血管筋緊張症、ビラレー症候群、およびワルテンベルク症候群を治療するために使用しうる。

【２０６１】

一実施形態では、本明細書に記載のｓａＲＮＡは、整形外科問題、たとえば、関節軟骨

損傷、バンカート傷害、ブラウント病、石灰化腱炎、指炎、分裂脊髄、術後疼痛症候群、扁平足、ヒル・サックス病変、膝痛、ラーセン症候群、脊髄症、ペルテス病変、内股、肩の問題、および脊椎炎を治療するために使用しうる。

【２０６２】

一実施形態では、本明細書に記載のｓａＲＮＡは、呼吸器疾患、たとえば、先天性呼吸器系障害、胸膜疾患（たとえば、中皮腫、胸膜新形成）、下気道疾患（たとえば、喘息、急性下気道疾患、気管支障害、慢性下気道疾患、肺障害）、肺性心疾患・肺循環疾患、経肺病変、肺腫瘍、周産期特異的な呼吸・心臓血管障害、呼吸器系新形成、および上気道疾患を治療するために使用しうる。

【２０６３】

一実施形態では、本明細書に記載のｓａＲＮＡは、肺障害、たとえば、結核、アルコール肺疾患、アルファ１－アンチトリプシン欠損症、肺胞毛細管血異形成、肺胞肺疾患、抗合成酵素症候群、石綿肺、アスペルギルス腫、非定型肺カルチノイド腫瘍、バリウム症、褐色硬化、空洞形成（生物学）、石粉症、チャーグ・ストラウス症候群、合併肺線維症・肺気腫、嚢胞性線維症、フラッシュ肺水腫、フロック労働者の肺、ゴーンコンプレックス、多発血管炎性肉芽腫症、肺の肝変、高所性肺浮腫、内部乾裂、特発性肺血鉄症、インジウム肺、間質性肺疾患、肺膿瘍、肺疾患、ホコリタケ症、リンパ管平滑筋腫症、閉塞性肺疾患、職業性肺疾患、白色肺炎、進行性塊状線維症、肺胞タンパク症、経肺吸引、肺毛細血管腫症、肺挫傷、肺嚢胞、肺線維症、肺血腫、肺出血、経肺過形成、肺破裂、肺毒性、肺腎症候群、呼吸細気管支炎間質性肺疾患、拘束性肺疾患、リウマチ性肺疾患、サルコイドーシス、サーファクタント代謝機能不全、水泳誘発性肺浮腫、スワイヤー・ジェームス症候群、輸血関連急性肺障害、肺胸膜の腫瘍様障害、換気血流不適合、および人工呼吸器関連肺傷害を治療するために使用しうる。

【２０６４】

一実施形態では、本明細書に記載のｓａＲＮＡは、性障害、たとえば、勃起不全、持続性性的興奮障害、性的マゾヒズム障害、性的サディズム障害、および精液漏を治療するために使用しうる。

【２０６５】

一実施形態では、本明細書に記載のｓａＲＮＡは、発声障害、たとえば、ボガート・バコール症候群、声帯炎、喉頭炎、唖、ラインケ浮腫、痙攣性発声障害、声帯不全麻痺、声帯皺襞嚢胞、および声帯皺襞小結節を治療するために使用しうる。

【２０６６】

一実施形態では、本明細書に記載のｓａＲＮＡは、免疫系障害、たとえば、喘息、自己免疫性疾患、慢性疲労症候群、ヒトＭＨＣ媒介疾患、過敏症、免疫不全、およびリンパ球性免疫系障害を治療するために使用しうる。

【２０６７】

一実施形態では、本明細書に記載のｓａＲＮＡは、自己免疫性疾患、たとえば、急性播種性脳脊髄炎、円形脱毛症、全身性脱毛症、強直性脊椎炎、抗リン脂質抗体症候群、抗合成酵素症候群、再生不良性貧血、アポリポタンパク質Ｈ、破壊性関節炎、萎縮性胃炎、自己免疫性腸症、自己免疫性胃腸運動異常、自己免疫性溶血性貧血、自己免疫性下垂体炎、自己免疫性内耳疾患、自己免疫性卵巣炎、自己免疫性膵炎、自己免疫性多内分泌腺症候群、１型自己免疫性多内分泌腺症候群、２型自己免疫性多内分泌腺症候群、３型自己免疫性多内分泌腺症候群、アジュバント誘発性自己免疫性／炎症性症候群、バロー同心円性硬化症、ベーチェット病、ＢＥＮＴＡ疾患、ビッカースタッフ脳炎、水疱性類天疱瘡、慢性炎症性脱髄性多発性神経症、チャーグ・ストラウス症候群、瘢痕性類天疱瘡、ＣＮＳ脱髄性自己免疫性疾患、セリアック病、コーガン症候群、寒冷凝集素症、クレスト症候群、クローン病、サルコイドーシス皮膚病変、皮膚炎、皮膚筋炎、糖尿病健康、１型糖尿病、薬剤誘導紅斑性狼瘡、好酸球性筋膜炎、結節性紅斑、在胎類天疱瘡、グッドパスチャー症候群、多発血管炎性肉芽腫症、グレーブス病、グレーブス眼症、ギラン・バレー症候群、橋本脳症、橋本甲状腺炎、ヘールフォルト症候群、ヘノッホ・シェーンライン紫斑病、ヒュー

ズ・ストービン症候群、特発性肉芽腫性肝炎、特発性炎症性中枢神経系脱髄疾患、ＩｇＡ腎症、炎症性腸疾患、ＩＰＥＸ症候群、ランバート・イートン筋無力症候群、成人潜在性自己免疫性糖尿病、多発性硬化症の病態生理学、扁平苔癬、リニアＩｇＡ水疱性皮膚症、ロフグレン症候群、紅斑性狼瘡、凍傷状狼瘡、マールブルグ型多発性硬化症、マリー・アントワネット症候群、マクドナルド基準、混合性結合組織病、限局性強皮症、多発性硬化症、重症筋無力症、神経ベーチェット病、神経学的疲労、視神経脊髄炎、神経サルコイドーシス、眼筋無力症、眼球クローヌスミオクローヌス症候群、視神経炎オード甲状腺炎、オーバーラップ症候群、回帰性リウマチ、腫瘍随伴性天疱瘡、類天疱瘡、天疱瘡、ポーサ基準、原発性胆汁性肝硬変、原発性硬化性胆管炎、直腸炎、進行性炎症性ニューロパチー、乾癬性関節炎、ＲＡＳ関連自己免疫性白血球増殖性障害、レイノー現象、反応性関節炎、再発性多発性軟骨炎、レイノルズ症候群、関節リウマチ、リーデル甲状腺炎、サモイェード遺伝性糸球体症、サルコイドーシス、里吉症候群、瀰漫性ミエリン破壊性硬化症、強皮症、硬化性筋炎、皮脂線リンパ節炎、シェーグレン症候群、スザック症候群、交感性眼炎、グレーブス病、全身性紅斑性狼瘡、全身性強皮症、血栓性血小板減少性紫斑病、横断性脊髄炎、ウートホフ現象、潰瘍性結腸炎、未分化結合組織疾患、白斑症、および温式自己免疫性溶血性貧血を治療するために使用しうる。

【２０６８】

一実施形態では、本明細書に記載のｓａＲＮＡは、リンパ腫、たとえば、成人Ｔ細胞白血病／リンパ腫、侵攻性リンパ腫、ＡＩＤＳ関連リンパ腫、ＡＬＫ＋大型Ｂ細胞リンパ腫、未分化大細胞リンパ腫、血管免疫芽Ｔ細胞性リンパ腫、Ｂ細胞ＣＬＬ／リンパ腫、Ｂ細胞性リンパ腫、芽細胞ＮＫ細胞性リンパ腫、バーキットリンパ腫、ＣＤ３０＋皮膚Ｔ細胞性リンパ腫、皮膚Ｂ細胞性リンパ腫、皮膚リンパ腫、皮膚Ｔ細胞性リンパ腫、瀰漫性大型Ｂ細胞リンパ腫、腸症関連Ｔ細胞性リンパ腫、節外性ＮＫ／Ｔ細胞性リンパ腫、濾胞状大細胞リンパ腫、濾胞性リンパ腫、胃リンパ腫、胚中心Ｂ細胞様瀰漫性大型Ｂ細胞リンパ腫、グレイゾーンリンパ腫、肝脾Ｔ細胞性リンパ腫、眼内リンパ腫、血管内大型Ｂ細胞リンパ腫、ＨＨＶ８関連多中心性キャッスルマン病で生じる大型Ｂ細胞リンパ腫、大細胞型リンパ腫、レンネルトリンパ腫、リンパ芽球性リンパ腫、皮膚型リンパ腫、ＭＡＬＴリンパ腫、マントル細胞性リンパ腫、辺縁帯Ｂ細胞性リンパ腫、混合細胞性リンパ腫、節性辺縁帯Ｂ細胞リンパ腫、非ホジキンリンパ腫、非菌状息肉腫ＣＤ３０＋皮膚大型Ｔ細胞性リンパ腫、眼窩リンパ腫、末梢Ｔ細胞性リンパ腫、形質芽球性リンパ腫、移植後リンパ球増殖性障害、前駆体Ｔリンパ芽球性リンパ腫、原発性中枢神経系リンパ腫、原発性皮膚濾胞中心リンパ腫、原発性皮膚免疫細胞腫、原発性皮膚辺縁帯リンパ腫、原発性滲出液リンパ腫、原発性縦隔（胸腺）大型Ｂ細胞リンパ腫、原発性縦隔Ｂ細胞性リンパ腫、管内外二次皮膚ＣＤ３０＋大細胞型リンパ腫、セザリー病、有毛リンパ球を伴う脾リンパ腫、脾辺縁帯リンパ腫、脾腫、Ｔ細胞性リンパ腫、Ｔリンパ芽球性白血病／リンパ腫、甲状腺リンパ腫、およびワルデンシュトレームマクログロブリン血症を治療するために使用しうる。

【２０６９】

一実施形態では、本明細書に記載のｓａＲＮＡは、癌、たとえば、急性リンパ芽球性白血病（ＡＬＬ：Ａｃｕｔｅ　Ｌｙｍｐｈｏｂｌａｓｔｉｃ　Ｌｅｕｋｅｍｉａ）、急性骨髄性白血病（ＡＭＬ：Ａｃｕｔｅ　Ｍｙｅｌｏｉｄ　Ｌｅｕｋｅｍｉａ）、副腎皮質癌、ＡＩＤＳ関連癌（たとえば、カポジ肉腫およびエイズ関連リンパ腫）、肛門癌、虫垂癌、星状細胞腫、小児期非定型奇形様／ラブドイド腫瘍、小児期中枢神経系基底細胞癌、肝臓外胆管癌、膀胱癌、骨癌（たとえば、ユーイング肉腫ファミリー腫瘍、骨肉腫、および悪性線維性組織球腫）、脳幹神経膠腫、小児期脳腫瘍（たとえば、星状細胞腫、脳幹神経膠腫、中枢神経系、非定型奇形様／ラブドイド腫瘍、中枢神経系胚芽腫、中枢神経系生殖細胞腫瘍、頭蓋咽頭腫、上衣腫）、乳癌、気管支腫瘍、バーキットリンパ腫、カルチノイド腫瘍（たとえば、小児期胃腸）、原発巣不明癌、心臓（Ｃａｒｄｉａｃ）（心臓（Ｈｅａｒｔ））腫瘍、小児期中枢神経系（たとえば、非定型奇形様／ラブドイド腫瘍、胚芽腫、生殖細胞腫瘍、およびリンパ腫）、頸癌、脊索腫、小児期慢性リンパ球性白血病（ＣＬＬ：Ｃｈｒｏｎｉｃ　Ｌｙｍｐｈｏｃｙｔｉｃ　Ｌｅｕｋｅｍｉａ）、慢性骨髄性白血病（

ＣＭＬ：Ｃｈｒｏｎｉｃ Ｍｙｅｌｏｇｅｎｏｕｓ Ｌｅｕｋｅｍｉａ）、慢性骨髄増殖性新生物、結腸癌、結腸直腸癌、頭蓋咽頭腫、皮膚Ｔ細胞性リンパ腫、肝外胆管癌、腺管上皮内癌（ＤＣＩＳ：Ｄｕｃｔａｌ Ｃａｒｃｉｎｏｍａ Ｉｎ Ｓｉｔｕ）、胚芽腫、中枢神経系癌、子宮内膜癌、上衣腫、食道癌、感覚神経芽腫、小児期ユーイング肉腫、頭蓋外生殖細胞腫瘍、小児期性腺外生殖細胞腫瘍、肝臓外胆管癌、眼癌（たとえば、眼球内黒色腫およびレチノブラストーマ）、ファロピウス管癌、骨悪性線維性組織球腫、および骨肉腫、胆嚢癌、胃（Ｇａｓｔｒｉｃ）（胃（Ｓｔｏｍａｃｈ））癌、胃腸管カルチノイド腫瘍、胃腸間質腫瘍（ＧＩＳＴ：Ｇａｓｔｒｏｉｎｔｅｓｔｉｎａｌ Ｓｔｒｏｍａｌ Ｔｕｍｏｒ）、生殖細胞腫瘍（たとえば、中枢神経系、小児期頭蓋外、小児期性腺外、卵巣、精巣）、妊娠性絨毛性疾患、神経膠腫、有毛細胞白血病、頭頸部癌、心臓癌、肝細胞（肝）癌、組織球腫、ランゲルハンス細胞腫、ホジキンリンパ腫、下咽頭癌、眼球内黒色腫、膵神経内分泌腫瘍、島細胞腫瘍、カポジ肉腫、腎腫瘍（たとえば、腎細胞腫瘍およびウィルムス腫瘍および他の小児期腎腫瘍）、ランゲルハンス細胞組織球症、喉頭癌、白血病（急性リンパ芽球性（ＡＬＬ）、急性骨髄性（ＡＭＬ）、慢性リンパ球性（ＣＬＬ）、慢性骨髄性（ＣＭＬ）、および有毛細胞性）、口唇・口腔癌、肝癌、肺癌（たとえば、小児期、非小細胞、小細胞）、リンパ腫（たとえば、ＡＩＤＳ関連、バーキット、皮膚Ｔ細胞、ホジキン、非ホジキン、および原発性中枢神経系（ＣＮＳ：Ｃｅｎｔｒａｌ Ｎｅｒｖｏｕｓ Ｓｙｓｔｅｍ））、マクログロブリン血症、ワルデンシュトレーム、男性乳癌、骨悪性線維性組織球腫および骨肉腫、黒色腫、眼内（眼）黒色腫、メルケル細胞癌、悪性中皮腫、原発不明転移性扁平上皮頸部癌、ＮＵＴ遺伝子が関与する正中線管癌、口腔癌、多発性内分泌腫瘍症候群、小児期多発性骨髄腫／形質細胞新生物、菌状息肉腫、骨髄異形成症候群、骨髄異形成／骨髄増殖性新生物、慢性骨髄性白血病（ＣＭＬ）、急性骨髄性白血病（ＡＭＬ）、多発性骨髄腫、慢性骨髄増殖性新生物、鼻腔・副鼻腔癌、鼻咽腔癌、神経芽腫、非ホジキンリンパ腫、非小細胞肺癌、口腔癌、口唇・口腔癌、中咽頭癌、骨肉腫および骨悪性線維性組織球腫、卵巣癌（たとえば、小児期上皮生殖細胞腫瘍、低悪性度腫瘍）、膵癌、膵神経内分泌腫瘍（島細胞腫瘍）、パピローマ症、小児期傍神経節腫、副鼻腔・鼻腔癌、副甲状腺癌、陰茎癌、咽頭癌、褐色細胞腫、下垂体腫瘍、形質細胞新生物／多発性骨髄腫、小児期胸膜肺芽腫、原発性中枢神経系（ＣＮＳ）リンパ腫、原発性腹膜癌、前立腺癌、直腸癌、腎細胞（腎）癌、レチノブラストーマ、小児期横紋筋肉腫、唾液腺癌、小児期肉腫（たとえば、ユーイング肉腫、カポジ肉腫、骨肉腫（骨癌）、横紋筋肉腫、軟組織肉腫、および子宮肉腫）、セザリー症候群、皮膚癌（たとえば、小児期黒色腫、メルケル細胞癌、および非黒色腫）、小細胞肺癌、小腸癌、軟組織肉腫、扁平上皮細胞癌、原発不明転移性扁平上皮頸部癌、胃癌、皮膚Ｔ細胞性リンパ腫、精巣癌、咽喉癌、胸腺腫および胸腺癌、甲状腺癌、腎盂・尿管移行細胞癌、尿管・腎盂移行細胞癌、尿道癌、子宮内膜子宮癌、子宮肉腫、膣癌、外陰癌、ワルデンシュトレームマクログロブリン血症、およびウィルムス腫瘍を治療するために使用しうる。

【２０７０】

本発明のｓａＲＮＡを用いて治療しうる追加の疾患および障害としては、限定されるものではないが、ペル・エブスタイン熱、形質細胞疾患、形質細胞腫、燻り型骨髄腫、ワルデンシュトレームマクログロブリン血症、染色体５ｑ欠損症候群、骨髄線維症、不応性貧血、不応性血球減少症、鉄利用不能性貧血、ビング・ニール症候群、日光肉芽腫、環状エラスチン分解性巨大細胞肉芽腫、良性頭部組織球症、バーベック顆粒、先天性自己回復性網内系組織球症、ダリエー・ルーシ病、ダリエー・ルーシサロイド、発疹性組織球腫、全身性発疹性組織球腫、全身性環状フラヌローマ、巨細胞弾性線維食作用、巨細胞レチクロヒスチオサイトーマ、ヌラーレ肉芽腫、多形肉芽腫、ハンド・シュラー・クリスチャン病、橋本・プリツカー病、ヘールフォルト症候群、遺伝性進行性粘液性組織球症、未定細胞組織球増殖症、レッテラー・シーブ病、局所環状肉芽腫、ロフグレン症候群、黄斑環状肉芽腫、マイシャー肉芽腫、モントゴメリー症候群、多中心性網組織球症、類壊死黄色肉芽腫、オブライエン肉芽腫、丘疹性黄色腫、パッチ型環状肉芽腫、穿孔性環状肉芽腫、進行性結節性組織球症、偽リウマトイド小結節、細網組織球腫、網内系組織球症、海青組織球

症、孤立性細網組織球腫、孤立性網内系組織球症、皮下環状肉芽腫、全身性サルコイドーシス、細胞線維腺腫、モントゴメリー嚢胞、線維腺腫、乳房線維嚢胞性変化、乳房線維性硬化症、乳瘤、および乳漏、肉芽腫性乳腺炎が挙げられる。

【２０７１】

ＩＶ．キットおよびデバイス

本発明は、本発明に係る方法を便宜的および／または効果的に行うためのさまざまなキットを提供する。典型的には、キットは、使用者が対象の複数の治療を行えるようにおよび／または複数の実験を行えるように、十分な量および／または数の成分を含むであろう。

【２０７２】

一実施形態では、本発明は、本発明のｓａＲＮＡ、または本発明のｓａＲＮＡ、他の遺伝子をモジュレートするｓａＲＮＡ、ｓｉＲＮＡ、ｍｉＲＮＡ、もしくは他のオリゴヌクレオチド分子の組合せを含む、インビトロまたはインビボで遺伝子の発現をレギュレートするためのキットを提供する。

【２０７３】

キットは、パッケージおよび説明書ならびに／または製剤組成物を形成するための送達剤をさらに含みうる。送達剤は、生理食塩水、緩衝溶液、リピドイド、デンドリマー、または本明細書に開示される任意の送達剤を含みうる。

【２０７４】

限定されるものではないが、遺伝子の例は、本明細書の表１に記載されている。

一実施形態では、本明細書に記載のｓａＲＮＡを含むキットは、増殖細胞と共に使用して効力を示しうる。

【２０７５】

限定されるものではないが、一例では、緩衝溶液は、塩化ナトリウム、塩化カルシウム、リン酸塩、および／またはＥＤＴＡを含みうる。限定されるものではないが、他の例では、緩衝溶液は、限定されるものではないが、生理食塩水、２ｍＭカルシウムを含む生理食塩水、５％スクロース、２ｍＭカルシウムを含む５％スクロース、５％マンニトール、２ｍＭカルシウムを含む５％マンニトール、乳酸リンゲル液、塩化ナトリウム、２ｍＭカルシウムとマンノースとを含む塩化ナトリウム（米国特許出願公開第２０１２／０２５８０４６号明細書（その全体が参照により本明細書に組み込まれる）を参照されたい）を含みうる。限定されるものではないが、さらに他の例では、緩衝溶液は沈殿させうるかまたは凍結乾燥させうる。各成分の量は、一貫して再現性のあるより高濃度の生理食塩水または単純な緩衝配合物が得られるように変化させうる。成分はまた、ある期間にわたりおよび／またはさまざまな条件下で緩衝溶液中のｓａＲＮＡの安定性を増加させるために変化させうる。

【２０７６】

デバイス

本発明は、本発明のｓａＲＮＡを組み込みうるデバイスを提供する。このデバイスは、必要とする対象、たとえばヒト患者に即時送達するために利用可能な安定な製剤を含有する。

【２０７７】

限定されるものではないが、デバイスの例としては、ポンプ、カテーテル、針、経真皮パッチ、加圧経鼻送達デバイス、イオン泳動デバイス、多層マイクロ流体デバイスが挙げられる。デバイスは、単回投与、多数回投与、または分割投与のレジメントに従って本発明のｓａＲＮＡを送達するために利用しうる。デバイスは、生体組織を横切って、真皮内に、皮下に、または筋肉内に本発明のｓａＲＮＡを送達するために利用しうる。オリゴヌクレオチドの送達に好適なデバイスのより多くの例は、２０１２年１２月１４日出願の国際公開第２０１３／０９０６４８号パンフレット（その内容はその全体が参照により本明細書に組み込まれる）に開示されている。

【２０７８】

定義
便宜上、本明細書、実施例、および添付の特許請求の範囲で用いられる特定の用語および語句の意味を以下に提供する。本明細書の他の部分の用語の使用と本節に提供されるその定義との間に明らかな矛盾がある場合、この節の定義を優先するものとする。
【２０７９】
約：本明細書で用いられる場合、「約」という用語は、挙げられた値の＋／－１０％を意味する。
組み合わせて投与される：本明細書で用いられる場合、「組み合わせて投与される」または「組合せ投与」という用語は、２種以上の作用剤を対象に同時にまたは患者に対する各作用剤の作用がオーバーラップしうるインターバル内で投与することを意味する。いくつかの実施形態では、それらは互いに約６０、３０、１５、１０、５、または１分以内に投与される。いくつかの実施形態では、作用剤の投与は、組合せ（たとえば、相乗）効果が達成されるように互いに十分接近した時間で行われる。
【２０８０】
アミノ酸：本明細書で用いられる場合、１つまたは複数の「アミノ酸」という用語は、すべての天然に存在するＬ－アルファ－アミノ酸を意味する。アミノ酸は、次のように一文字または三文字の表記により同定される。アスパラギン酸（Ａｓｐ：Ｄ）、イソロイシン（Ｉｌｅ：Ｉ）、トレオニン（Ｔｈｒ：Ｔ）、ロイシン（Ｌｅｕ：Ｌ）、セリン（Ｓｅｒ：Ｓ）、チロシン（Ｔｙｒ：Ｙ）、グルタミン酸（Ｇｌｕ：Ｅ）、フェニルアラニン（Ｐｈｅ：Ｆ）、プロリン（Ｐｒｏ：Ｐ）、ヒスチジン（Ｈｉｓ：Ｈ）、グリシン（Ｇｌｙ：Ｇ）、リシン（Ｌｙｓ：Ｋ）、アラニン（Ａｌａ：Ａ）、アルギニン（Ａｒｇ：Ｒ）、システイン（Ｃｙｓ：Ｃ）、トリプトファン（Ｔｒｐ：Ｗ）、バリン（Ｖａｌ：Ｖ）、グルタミン（Ｇｌｎ：Ｑ）メチオニン（Ｍｅｔ：Ｍ）、アスパラギン（Ａｓｎ：Ｎ）。ただし、最初にアミノ酸、続いてカッコ内にそれぞれ三文字コードおよび一文字コードが列挙される。
【２０８１】
動物：本明細書で用いられる場合、「動物」という用語は、動物界の任意のメンバーを意味する。いくつかの実施形態では、「動物」は、任意の発生段階のヒトを意味する。いくつかの実施形態では、「動物」は、任意の発生段階の非ヒト動物を意味する。特定の実施形態では、非ヒト動物は、哺乳動物（たとえば、齧歯動物、マウス、ラット、ウサギ、サル、イヌ、ネコ、ヒツジ、ウシ、霊長動物、またはブタ）である。いくつかの実施形態では、動物は、哺乳動物、トリ、爬虫動物、両生動物、サカナ、および虫を含むが、これらに限定されるものではない。いくつかの実施形態では、動物は、トランスジェニック動物、遺伝子工学操作動物、またはクローンである。
【２０８２】
およそ：本明細書で用いられる場合、「およそ」または「約」という用語は、対象の１つ以上の値に適用される場合、明記された参照値に類似した値を意味する。特定の実施形態では、「およそ」または「約」という用語は、特に明記されていない限りまたは特に文脈から自明でない限り、明記された参照値のいずれの方向にも（それよりも大きい方向にも小さい方向にも）、２５％、２０％、１９％、１８％、１７％、１６％、１５％、１４％、１３％、１２％、１１％、１０％、９％、８％、７％、６％、５％、４％、３％、２％、１％、またはそれよりも少ない範囲内に入る値の範囲を意味する（かかる数が可能な値の１００％を超える場合を除く）。
【２０８３】
会合：本明細書で用いられる場合、「会合」、「コンジュゲート」、「結合」、「装着」、および「テザー連結」という用語は、２つ以上の部分に対して用いられる場合、直接にまたはリンク剤として機能する１つ以上の追加の部分を介して、互いに物理的に会合または接続されて、構造が用いられる条件下で、たとえば、生理学的条件下で、これらの部分が、物理的に会合された状態を維持するように、十分に安定な構造を形成することを意味する。「会合」は、厳密に直接の共有化学結合を介する必要はない。また、それは、イ

オン結合、水素結合、または「会合」要素が物理的会合を維持するように十分に安定なハイブリダイゼーションに基づく結合をも示唆しうる。

【２０８４】

二機能または二機能性：

本明細書で用いられる場合、「二機能」および「二機能性」という用語は、少なくとも２つの機能が可能であるかまたはそれを維持する任意の物質、分子、または部分を意味する。機能は、同一のアウトカムまたは異なるアウトカムに影響しうる。機能を発揮する構造は、同一であっても異なっていてもよい。たとえば、本発明の二機能性ｓａＲＮＡは、細胞傷害性ペプチドを含みうる（第１の機能）。一方、そのｓａＲＮＡを含むヌクレオシドは、本質的にそれ自体で細胞傷害性である（第２の機能）。

【２０８５】

生体適合性：本明細書で用いられる場合、「生体適合性」という用語は、生細胞、組織、傷害のリスクをほとんどまたはまったく示さない器官もしくは系、毒性、または免疫系による拒絶に適合しうることを意味する。

【２０８６】

生分解性：本明細書で用いられる場合、「生分解性」という用語は、生物の作用により無害な産物に分解可能であることを意味する。

生物学的活性：本明細書で用いられる場合、「生物学的活性」という表現は、生体系および／または生物で活性を有する任意の物質の特性を意味する。たとえば、生物に投与されたとき、その生物に対して生物学的作用を有する物質は、生物学的に活性であると考えられる。特定の実施形態では、ｓａＲＮＡの一部であっても、生物学的に活性であれば、または生物学的に関連があると見なされる活性を模倣するのであれば、本発明のｓａＲＮＡは、生物学的に活性であると考えうる。

【２０８７】

癌：本明細書で用いられる場合、個体における「癌」という用語は、癌を引き起こす細胞に典型的な特性、たとえば、無制御な増殖、不死、転移能、速い成長および増殖の速度、ならびに特徴的なモルフォロジー特性を有する細胞の存在を意味する。多くの場合、癌細胞は、腫瘍の形態であろうが、かかる細胞は、個体内に単独で存在しうるか、または白血病細胞などの独立細胞として血流中を循環しうる。

【２０８８】

細胞成長：本明細書で用いられる場合、「細胞成長」という用語は、細胞複製（すなわち増殖）により生じる細胞数の増大に主に関連付けられ、その速度は細胞死（たとえば、アポトーシスまたは壊死による）の速度よりも大きく、細胞集団のサイズの増加をもたらすが、特定の状況下では、その成長のごく一部は、個別細胞の細胞サイズまたは細胞質体積の増加にも起因する。したがって、細胞成長を阻害する作用剤は、増殖の阻害もしくは細胞死の促進のいずれかまたはその両方によりこれらの２つの対立するプロセスの平衡を変化させるように阻害を行いうる。

【２０８９】

細胞型：本明細書で用いられる場合、「細胞型」という用語は、所与の起源（たとえば、組織、器官）の細胞、または所与の分化状態の細胞、または所与の病理もしくは遺伝子構成に関連付けられる細胞を意味する。

【２０９０】

染色体：本明細書で用いられる場合、「染色体」という用語は、細胞に見いだされるＤＮＡおよびタンパク質の組織化構造を意味する。

相補的：本明細書で用いられる場合、核酸に関する「相補的」という用語は、ヌクレオチド間または核酸間のハイブリダイゼーションまたは塩基対合を意味する。たとえば、二本鎖ＤＮＡ分子の２つの鎖間またはオリゴヌクレオチドプローブと標的との間などは相補的である。

【２０９１】

病態：本明細書で用いられる場合、「病態」という用語は、任意の細胞、器官、器官系

、または生物の状態を意味する。病態は、疾患状態または単にエンティティーの生理学的提示もしくは状況を反映しうる。病態は、疾患の巨視的提示などの表現型病態または病態に関連付けられる根底にある遺伝子もしくはタンパク質の発現プロファイルなどの遺伝子型病態として特徴付けうる。病態は良性または悪性でありうる。

【２０９２】

制御放出：本明細書で用いられる場合、「制御放出」という用語は、治療アウトカムをもたらす特定の放出パターンに適合する医薬組成物または化合物の放出プロファイルを意味する。

【２０９３】

細胞静止：本明細書で用いられる場合、「細胞静止」とは、細胞（たとえば、哺乳動物細胞（たとえば、ヒト細胞））、細菌、ウイルス、菌類、原生動物、寄生生物、プリオン、またはそれらの組合せの成長、分裂、または増殖の阻害、低減、抑制を意味する。

【２０９４】

細胞傷害性：本明細書で用いられる場合、「細胞傷害性」とは、細胞（たとえば、哺乳動物細胞（たとえば、ヒト細胞））、細菌、ウイルス、菌類、原生動物、寄生生物、プリオン、またはそれらの組合せを死滅させることまたはそれらに有害作用、毒性作用、もしくは致命的作用を引き起こすことを意味する。

【２０９５】

送達：本明細書で用いられる場合、「送達」とは、化合物、物質、要素、部分、カーゴ、またはペイロードを送達する行為または方式を意味する。

送達剤：本明細書で用いられる場合、「送達剤」とは、標的細胞への本発明のｓａＲＮＡのインビボ送達を少なくとも部分的に促進する任意の物質を意味する。

【２０９６】

不安定化：本明細書で用いられる場合、「不安定」、「不安定化する」、または「不安定化領域」という用語は、同一の領域または分子の初期型、野生型、または天然型よりも安定でない領域または分子を意味する。

【２０９７】

検出可能な標識：本明細書で用いられる場合、「検出可能な標識」とは、ラジオグラフィー、蛍光、化学発光、酵素活性、吸光度などをはじめとする当技術分野で公知の方法により容易に検出される、他のエンティティーへの装着、組込み、または会合が行われる１つ以上のマーカ、シグナル、または部分を意味する。検出可能な標識としては、放射性同位体、発蛍光団、発色団、酵素、染料、金属イオン、リガンド（たとえば、ビオチン、アビジン、ストレプトアビジン、およびハプテン）、量子ドットなどが挙げられる。検出可能な標識は、本明細書に開示されるオリゴヌクレオチドの任意の位置に位置しうる。それらは、ヌクレオチド内にあるか、または５’末端もしくは３’末端に位置しうる。

【２０９８】

カプセル化：本明細書で用いられる場合、「カプセル化」というという用語は、密封、包囲、または収容を意味する。

工学操作：本明細書で用いられる場合、本発明の実施形態は、構造的か化学的かにかかわらず、出発点、野生型、または天然型の分子と異なる特徴または性質を有するように設計される場合、「工学操作」される。

【２０９９】

均等な対象：本明細書で用いられる場合、「均等な対象」は、たとえば、類似の年齢、性別、および健康、たとえば、肝臓の健康もしくは癌の病期の対象、または本発明に係る治療を行う前の同一の対象でありうる。均等な対象は、本発明に係るｓａＲＮＡの治療を受けない点で「未治療」である。しかしながら、本発明のｓａＲＮＡで治療される対象が同一のまたは均等な従来の抗癌治療を受けるのであれば、従来の抗癌治療を受けてもよい。

【２１００】

エキソソーム：本明細書で用いられる場合、「エキソソーム」とは哺乳動物細胞により

分泌されるベシクルである。
発現：本明細書で用いられる場合、核酸配列の「発現」とは、次のイベント、すなわち、（１）ＤＮＡ配列からのＲＮＡ鋳型の産生（たとえば、転写による）、（２）ＲＮＡ転写物のプロセシング（たとえば、スプライシング、エディティング、５’キャップ形成、および／または３’末端プロセシングによる）、（３）ポリペプチドまたはタンパク質へのＲＮＡの翻訳、ならびに（４）ポリペプチドまたはタンパク質の翻訳後修飾の１つ以上を意味する。
【２１０１】
特徴：本明細書で用いられる場合、「特徴」とは、特性、性質、または識別エレメントを意味する。
製剤：本明細書で用いられる場合、「製剤」は、本発明の少なくとも１つのｓａＲＮＡと送達剤とを含む。
【２１０２】
断片：
「断片」とは、本明細書で用いられる場合、一部分を意味する。たとえば、タンパク質の断片は、培養細胞から単離された全長タンパク質を消化することにより得られるポリペプチドを含みうる。オリゴヌクレオチドの断片は、ヌクレオチドまたはヌクレオチドの領域を含みうる。
【２１０３】
機能性：本明細書で用いられる場合、「機能性」生物学的分子とは、特徴付けられる性質および／または活性を呈する形態の生物学的分子のことである。
遺伝子：本明細書で用いられる場合、「遺伝子」という用語は、ポリペプチドまたは前駆体の産生に必要な制御配列とほとんどの場合にコード配列とを含む核酸配列を意味する。しかしながら、遺伝子は翻訳されなくてもよく、その代わりに調節または構造ＲＮＡ分子をコードしうる。
【２１０４】
遺伝子は、植物、菌類、動物、細菌ゲノムもしくはエピソーム、真核、核、もしくはプラスミドのＤＮＡ、ｃＤＮＡ、ウイルスＤＮＡ、または化学合成ＤＮＡを含めて、全体または一部が当技術分野で公知の任意の起源に由来しうる。遺伝子は、発現産物の生物学的活性もしくは化学構造、発現の速度、または発現制御の方式に影響を及ぼしうる１つ以上の修飾をコード領域または非翻訳領域のいずれかに含有しうる。かかる修飾としては、１つ以上のヌクレオチドの突然変異、挿入、欠失、および置換が挙げられるが、これらに限定されるものではない。遺伝子は非中断コード配列を構成しうるか、または適切なスプライス部位により結合された１つ以上のイントロンを含みうる。
【２１０５】
遺伝子発現：本明細書で用いられる場合、「遺伝子発現」という用語は、核酸配列がうまく転写されて、ほとんどの場合、翻訳されてタンパク質またはペプチドを産生するプロセスを意味する。明確さを期して、「遺伝子発現」の測定が参照される場合、測定は転写の核酸産物、たとえばＲＮＡもしくはｍＲＮＡまたは翻訳のアミノ酸産物、たとえばポリペプチドもしくはペプチドの測定でありうることを意味すると理解すべきである。ＲＮＡ、ｍＲＮＡ、ポリペプチド、およびペプチドの量またはレベルを測定する方法は、当技術分野で周知である。
【２１０６】
ゲノム：「ゲノム」という用語は、核ＤＮＡ成分、染色体または染色体外のＤＮＡ、さらには細胞質内ドメイン（たとえば、ミトコンドリアＤＮＡ）を含めて、生物の全ＤＮＡ相補体を含むことが意図される。
【２１０７】
相同性：本明細書で用いられる場合、「相同性」という用語は、高分子間、たとえば、核酸分子（たとえば、ＤＮＡ分子および／またはＲＮＡ分子）間および／またはポリペプチド分子間の全体的な関連性を意味する。いくつかの実施形態では、高分子は、配列が少

なくとも２５％、３０％、３５％、４０％、４５％、５０％、５５％、６０％、６５％、７０％、７５％、８０％、８５％、９０％、９５％、または９９％同一または類似である場合、互いに「相同」であると見なされる。「相同」という用語は、必然的に、少なくとも２つの配列（ポリヌクレオチド配列またはポリペプチド配列）間の比較を意味する。本発明によれば、２つのポリヌクレオチド配列は、それらがコードするポリペプチドが少なくとも約２０アミノ酸の少なくとも１つのストレッチに関して少なくとも約５０％、６０％、７０％、８０％、９０％、９５％、さらには９９％であれば、相同であると見なされる。いくつかの実施形態では、相同ポリヌクレオチド配列は、ユニークに特定された少なくとも４～５アミノ酸のストレッチをコードする能力により特徴付けられる。６０ヌクレオチド長未満のポリヌクレオチド配列では、相同性は、ユニークに特定された少なくとも４～５アミノ酸のストレッチをコードする能力により決定される。本発明によれば、２つのタンパク質配列は、タンパク質が少なくとも約２０アミノ酸の少なくとも１つのストレッチに関して少なくとも約５０％、６０％、７０％、８０％、または９０％同一であれば、相同であると見なされる。

【２１０８】

「過増殖細胞」という用語は、均等な健常細胞（「対照」と呼びうる）の増殖速度と比較して異常に高い速度で増殖する任意の細胞を意味しうる。「均等な健常」細胞とは、細胞の正常な健常カウンターパートである。したがって、それは、同一のタイプの細胞、たとえば、コンパレータ細胞と同一の機能を行う、同一の器官の細胞である。たとえば、過増殖肝細胞の増殖は健常肝細胞を基準にして評価すべきであり、一方、過増殖前立腺細胞の増殖は健常前立腺細胞を基準にして評価すべきである。

【２１０９】

増殖の「異常に高い」速度とは、過増殖細胞の増殖速度が均等な健常（非過増殖）細胞の増殖速度と比較して少なくとも２０、３０、４０％、または少なくとも４５、５０、５５、６０、６５、７０、７５％、または少なくとも８０％だけ増加することを意味する。増殖の「異常に高い」速度とはまた、均等な健常細胞の増殖速度と比較して少なくとも２、３、４、５、６、７、８、９、１０倍、または少なくとも１５、２０、２５、３０、３５、４０、４５、５０倍、または少なくとも６０、７０、８０、９０、１００倍だけ増加する速度を意味する。

【２１１０】

過増殖障害：本明細書で用いられる場合、「過増殖障害」とは、以上に定義される過増殖細胞を含む任意の障害でありうる。過増殖障害の例としては、新生物障害、たとえば癌、乾癬性関節炎、関節リウマチ、胃過増殖障害、たとえば炎症性腸疾患、皮膚障害、たとえば乾癬、ライター症候群、毛孔性紅色粃糠疹、および角化障害の過増殖異型障害が挙げられる。

【２１１１】

過増殖細胞をいかに同定するかは当業者の熟知するところである。動物内の過増殖細胞の存在は、Ｘ線、ＭＲＩ、ＣＴスキャンなどのスキャンを用いて同定可能でありうる。ＭＴＴ、ＸＴＴ、ＭＴＳ、ＷＳＴ－１アッセイなどの細胞増殖アッセイを用いてインビトロでサンプルを培養することによっても過増殖細胞を同定しうるか、または細胞増殖をアッセイしうる。インビトロ細胞増殖はまた、フローサイトメトリーを用いて決定可能である。

【２１１２】

同一性：本明細書で用いられる場合、「同一性」という用語は、高分子間、たとえば、オリゴヌクレオチド分子（たとえば、ＤＮＡ分子および／またはＲＮＡ分子）間および／またはポリペプチド分子間の全体的な関連性を意味する。たとえば、２つのポリヌクレオチド配列の同一性パーセントの計算は、最適比較目的で２つの配列をアライメントすることにより、行うことが可能である（たとえば、最適アライメントになるように第１および第２の核酸配列の一方または両方にギャップを導入することが可能であり、比較目的では異なる配列を無視することが可能である）。特定の実施形態では、比較目的でアライメン

トされる配列の長さは、参照配列の長さの少なくとも３０％、少なくとも４０％、少なくとも５０％、少なくとも６０％、少なくとも７０％、少なくとも８０％、少なくとも９０％、少なくとも９５％、または１００％である。次いで、対応するヌクレオチド位置のヌクレオチドを比較する。第１の配列の位置が第２の配列の対応する位置と同一のヌクレオチドにより占有される場合、分子はその位置で同一である。２つの配列間の同一性パーセントは、２つの配列が最適アライメントになるように導入する必要のあるギャップの数および各ギャップの長さを考慮して、配列により共有される同一位置の数の関数である。配列の比較および２つの配列間の同一性パーセントの決定は、数学的アルゴリズムを用いて達成可能である。たとえば、２つのヌクレオチド配列間の同一性パーセントは、レスク，Ａ．Ｍ．（Ｌｅｓｋ，Ａ．Ｍ．）編、計算分子生物学（Ｃｏｍｐｕｔａｔｉｏｎａｌ Ｍｏｌｅｃｕｌａｒ Ｂｉｏｌｏｇｙ）、オックスフォード大学出版局（Ｏｘｆｏｒｄ Ｕｎｉｖｅｒｓｉｔｙ Ｐｒｅｓｓ）、ニューヨーク、１９８８年、スミス，Ｄ．Ｗ．（Ｓｍｉｔｈ，Ｄ．Ｗ．）編、バイオコンピューティング：インフォマティクスとゲノムプロジェクト（Ｂｉｏｃｏｍｐｕｔｉｎｇ：Ｉｎｆｏｒｍａｔｉｃｓ ａｎｄ Ｇｅｎｏｍｅ Ｐｒｏｊｅｃｔｓ）、アカデミック・プレス（Ａｃａｄｅｍｉｃ Ｐｒｅｓｓ）、ニューヨーク、１９９３年、フォン・ヘインジ，Ｇ（ｖｏｎ Ｈｅｉｎｊｅ，Ｇ）著、分子生物学における配列解析（Ｓｅｑｕｅｎｃｅ Ａｎａｌｙｓｉｓ ｉｎ Ｍｏｌｅｃｕｌａｒ Ｂｉｏｌｏｇｙ）、アカデミック・プレス（Ａｃａｄｅｍｉｃ Ｐｒｅｓｓ）、１９８７年、グリフィン，Ａ．Ｍ．（Ｇｒｉｆｆｉｎ，Ａ．Ｍ．）およびグリフィン，Ｈ．Ｇ．（Ｇｒｉｆｆｉｎ，Ｈ．Ｇ．）編、配列データのコンピュータ解析（Ｃｏｍｐｕｔｅｒ Ａｎａｌｙｓｉｓ ｏｆ Ｓｅｑｕｅｎｃｅ Ｄａｔａ）、第Ｉ部、フマナ・プレス（Ｈｕｍａｎａ Ｐｒｅｓｓ）、ニュージャージ、１９９４年、ならびにグリプスコウ，Ｍ．（Ｇｒｉｂｓｋｏｖ，Ｍ．）およびデベロー，Ｊ．（Ｄｅｖｅｒｅｕｘ，Ｊ．）編、配列解析プライマー（Ｓｅｑｕｅｎｃｅ Ａｎａｌｙｓｉｓ Ｐｒｉｍｅｒ）、Ｍストックトン・プレス（Ｍ Ｓｔｏｃｋｔｏｎ Ｐｒｅｓｓ）、ニューヨーク、１９９１年（それらはそれぞれ参照により本明細書に組み込まれる）に記載されるような方法を用いて決定可能である。たとえば、２つのヌクレオチド配列間の同一性パーセントは、ＰＡＭ１２０重み残基表、１２のギャップ長ペナルティー、および４のギャップペナルティーを用いて、ＡＬＩＧＮプログラム（バージョン２．０）に組み込まれているマイヤー（Ｍｅｙｅｒｓ）およびミラー（Ｍｉｌｌｅｒ）のアルゴリズム（生物科学におけるコンピュータ利用（ＣＡＢＩＯＳ）、１９８９年、第４巻、ｐ．１１～１７）により、決定可能である。２つのヌクレオチド配列間の同一性パーセントは、他の選択肢として、ＮＷＳｇａｐｄｎａ．ＣＭＰマトリックスを用いて、ＧＣＧソフトウェアパッケージ中のＧＡＰプログラムにより、決定可能である。配列間の同一性パーセントを決定するのに一般に利用される方法は、カリロ，Ｈ．（Ｃａｒｉｌｌｏ，Ｈ．）およびリップマン，Ｄ．（Ｌｉｐｍａｎ，Ｄ．）著、ＳＩＡＭジャーナル・オブ・アプライアンス・マセマティクス（ＳＩＡＭ Ｊ．Ａｐｐｌｉｅｄ Ｍａｔｈ．）、１９８８年、第４８巻、ｐ．１０７３（参照により本明細書に組み込まれる）に開示されるものを含むが、これに限定されるものではない。同一性を決定するための技術は、公的に入手可能なコンピュータプログラムの形態で体系化されている。２つの配列間の相同性を決定する例示的コンピュータソフトウェアは、デベロー，Ｊ．（Ｄｅｖｅｒｅｕｘ，Ｊ．）ら著、「ＧＣＧプログラムパッケージ（ＧＣＧ ｐｒｏｇｒａｍ ｐａｃｋａｇｅ）」、ニュクレイック・アシッズ・リサーチ（Ｎｕｃｌｅｉｃ Ａｃｉｄｓ Ｒｅｓｅａｒｃｈ）、１９８４年、第１２巻、第１号、ｐ．３８７、アルツシュール，Ｓ．Ｆ．（Ａｌｔｓｃｈｕｌ，Ｓ．Ｆ．）ら著、「ＢＬＡＳＴＰ、ＢＬＡＳＴＮ、およびＦＡＳＴＡ」、ジャーナル・オブ・モレキュラー・バイオロジー（Ｊ．Ｍｏｌｅｃ．Ｂｉｏｌ．）、１９９０年、第２１５巻、ｐ．４０３を含むが、これらに限定されるものではない。

【２１１３】

遺伝子発現の阻害：本明細書で用いられる場合、「遺伝子発現の阻害」という表現は、遺伝子の発現産物の量の低減を引き起こすことを意味する。発現産物は、遺伝子から転写

されるＲＮＡ（たとえば、ｍＲＮＡ）または遺伝子から転写されるｍＲＮＡから翻訳されるポリペプチドでありうる。典型的には、ｍＲＮＡのレベルの低減は、それから翻訳されるポリペプチドのレベルの低減をもたらす。発現のレベルは、ｍＲＮＡまたはタンパク質を測定するための標準的技術を用いて決定可能である。

【２１１４】

インビトロ：本明細書で用いられる場合、「インビトロ」という用語は、生物（たとえば、動物、植物、または微生物）内ではなく、人工環境下、たとえば、試験管または反応容器、細胞培養物、ペトリ皿などで起こるイベントを意味する。

【２１１５】

インビボ：本明細書で用いられる場合、「インビボ」という用語は、生物（たとえば、動物、植物、もしくは微生物、またはそれらの細胞）内に起こるイベントを意味する。

単離された：本明細書で用いられる場合、「単離された」という用語は、一体化された成分（自然環境または実験現場のいずれであるかにかかわらず）の少なくとも一部から分離された物質または要素を意味する。単離された物質は、一体化されていた物質に対してさまざまなレベルの純度を有しうる。単離された物質および／または要素は、それが最初に会合していた他の成分の少なくとも約１０％、約２０％、約３０％、約４０％、約５０％、約６０％、約７０％、約８０％、約９０％、またはより多くから分離されうる。いくつかの実施形態では、単離された作用剤は、約８０％超、約８５％、約９０％、約９１％、約９２％、約９３％、約９４％、約９５％、約９６％、約９７％、約９８％、約９９％、または約９９％超の純度である。本明細書で用いられる場合、物質は、それが他の成分を実質的に含まないのであれば、「純粋」である。実質的に単離された：「実質的に単離された」とは、生成または検出された環境から化合物が実質的に分離されていることを意味する。部分的な分離は、たとえば、本開示に係る化合物が富化された組成物を含みうる。実質的な分離は、重量基準で、本開示に係る化合物またはその塩の少なくとも約５０％、少なくとも約６０％、少なくとも約７０％、少なくとも約８０％、少なくとも約９０％、少なくとも約９５％、少なくとも約９７％、または少なくとも約９９％を含有する組成物を含みうる。化合物およびその塩を単離する方法は、当技術分野で慣用されているものである。

【２１１６】

標識：「標識」という用語は、物質、化合物、または対象物を検出できるように対象物に組み込まれる物質または化合物を意味する。

リンカー：本明細書で用いられる場合、リンカーとは原子団（たとえば、１０～１，０００原子）を意味し、限定されるものではないが、炭素、アミノ、アルキルアミノ、酸素、硫黄、スルホキシド、スルホニル、カルボニル、イミンなどの原子または基で構成可能である。リンカーは、第１の末端を修飾ヌクレオシドまたは修飾ヌクレオチドの核酸塩基または糖部分に、かつ第２の末端を検出可能剤または治療剤などのペイロードに装着可能である。リンカーは、核酸配列中への組込みを妨害しない十分な長さでありうる。リンカーは、本明細書に記載されるように、ｓａＲＮＡコンジュゲートを形成したりさらにはペイロードを投与したりするなど、任意の有用な目的に使用可能である。

【２１１７】

リンカーに組込み可能な化学基の例としては、限定されるものではないが、アルキル、アルケニル、アルキニル、アミド、アミノ、エーテル、チオエーテル、エステル、アルキレン、ヘテロアルキレン、アリール、またはヘテロシクリルが挙げられ、それらは、それぞれ本明細書に記載されるように任意選択的に置換可能である。リンカーの例としては、限定されるものではないが、不飽和アルカン、ポリエチレングリコール（たとえば、エチレンまたはプロピレングリコールモノマー単位、たとえば、ジエチレングリコール、ジプロピレングリコール、トリエチレングリコール、トリプロピレングリコール、テトラエチレングリコール、またはテトラエチレングリコール）、およびデキストランポリマー、ならびにそれらの誘導体が挙げられる。他の例は、たとえばジスルフィド結合（－Ｓ－Ｓ－）またはアゾ結合（－Ｎ＝Ｎ－）などの切断可能な部分をリンカー中に含んで還元剤また

は光分解を用いて切断可能であるが、これらに限定されるものではない。限定されるものではないが、選択的に切断可能な結合の例としては、たとえばトリス（２－カルボキシエチル）ホスフィン（ＴＣＥＰ）、もしくは他の還元剤および／または光分解を用いて切断可能なアミド結合、さらにはたとえば酸加水分解もしくは塩基加水分解により切断可能なエステル結合が挙げられる。

【２１１８】

転移：本明細書で用いられる場合、「転移」という用語は、原発腫瘍として最初に生じた場所から体内の離れた位置に癌が広がるプロセスを意味する。転移はまた、原発腫瘍の広がりから得られる癌も意味する。たとえば、ある乳癌罹患者は、自身のリンパ系、肝臓、骨、または肺に転移を発症しうる。

【２１１９】

修飾：本明細書で用いられる場合、「修飾」とは、本発明に係る分子の変化した状態または構造を意味する。分子は、化学的、構造的、および機能的なものを含めて、多くの方法で修飾されうる。一実施形態では、本発明のｓａＲＮＡは、非天然のヌクレオシドおよび／またはヌクレオチドの導入により修飾される。

【２１２０】

天然に存在する：本明細書で用いられる場合、「天然に存在する」とは、人為的な支援を受けることなく天然に存在することを意味する。

核酸：本明細書で用いられる「核酸」という用語は、１つ以上のヌクレオチド、すなわち、リボヌクレオチド、デオキシリボヌクレオチド、またはその両方で構成された分子を意味する。この用語は、リボヌクレオチドおよびデオキシリボヌクレオチドのモノマーおよびポリマーを含み、ポリマーの場合、リボヌクレオチドおよび／またはデオキシリボヌクレオチドは、５’→３’結合を介して結合一体化される。リボヌクレオチドおよびデオキシリボヌクレオチドのポリマーは一本鎖または二本鎖でありうる。しかしながら、結合は当技術分野で公知の結合のいずれかを含みうる。たとえば、核酸は５’→３’結合を含む。ヌクレオチドは天然に存在しうるか、または天然に存在する塩基対との塩基対関係を形成可能な合成により生成されたアナログでありうる。塩基対合関係を形成可能な天然に存在しない塩基の例は、限定されるものではないが、アザおよびデアザピリミジンアナログ、アザおよびデアザプリンアナログ、ならびにピリミジン環の炭素原子および窒素原子の１つ以上がヘテロ原子、たとえば、酸素、硫黄、セレン、リンなどにより置換された他のヘテロ環塩基アナログを含みうる。

【２１２１】

患者：本明細書で用いられる場合、「患者」とは、治療を求めているもしくはそれが必要な状態にあると思われる、治療を必要とする、治療を受けている、または治療を受けるであろう対象、あるいは特定の疾患もしくは病態に対して訓練された専門家によるケアを受けている対象を意味する。

【２１２２】

ペプチド：本明細書で用いられる場合、「ペプチド」は、５０アミノ酸長以下、たとえば、約５、１０、１５、２０、２５、３０、３５、４０、４５、または５０アミノ酸長である。

【２１２３】

薬学的に許容可能：「薬学的に許容可能」という表現は、本明細書では、妥当な便益／リスク比に見合って、過度の毒性、刺激、アレルギー反応、もしくは他の問題、または合併症を伴うことなく、健全な医学的判断の範囲内で、ヒトおよび動物の組織に接触させて使用するのに好適な化合物、材料、組成物、および／または製剤を意味する。

【２１２４】

薬学的に許容可能な賦形剤：本明細書で用いられる場合、「薬学的に許容可能な賦形剤」という語句は、本明細書に記載の化合物以外で患者において実質的に非毒性かつ非炎症性の性質を有する任意の成分を意味する（たとえば、活性化合物の懸濁または溶解が可能な媒体）。賦形剤としては、たとえば、抗接着剤、抗酸化剤、結合剤、コーティング剤、

圧縮助剤、崩壊剤、色素（着色剤）、皮膚軟化剤、乳化剤、充填剤（希釈剤）、膜形成剤またはコーティング剤、風味剤、香気剤、滑剤（流動促進剤）、滑沢剤、保存剤、プリントインク、収着剤、懸濁化剤または分散剤、甘味剤、および水和水が挙げられうる。例示的な賦形剤としては、ブチル化ヒドロキシトルエン（ＢＨＴ）、炭酸カルシウム、リン酸カルシウム（第２）、カルシウムステアレート、クロスカルメロース、架橋ポリビニルピロリドン、クエン酸、クロスポビドン、システイン、エチルセルロース、ゼラチン、ヒドロキシプロピルセルロース、ヒドロキシプロピルメチルセルロース、ラクトース、マグネシウムステアレート、マルチトール、マンニトール、メチオニン、メチルセルロース、メチルパラベン、微結晶セルロース、ポリエチレングリコール、ポリビニルピロリドン、ポビドン、α化デンプン、プロピルパラベン、パルミチン酸レチニル、シェラック、二酸化ケイ素、ナトリウムカルボキシメチルセルロース、クエン酸ナトリウム、ナトリウムデンプングリコレート、ソルビトール、デンプン（トウモロコシ）、ステアリン酸、スクロース、タルク、二酸化チタン、ビタミンＡ、ビタミンＥ、ビタミンＣ、およびキシリトールが挙げられるが、これらに限定されるものではない。

【２１２５】

薬学的に許容可能な塩：本開示はまた、本明細書に記載の化合物の薬学的に許容可能な塩を包含する。本明細書で用いられる場合、「薬学的に許容可能な塩」とは、既存の酸部分または塩基部分をその塩形に変換することにより（たとえば、遊離塩基基と好適な有機酸とを反応させることにより）親化合物が修飾された開示化合物の誘導体を意味する。薬学的に許容可能な塩の例としては、アミンなどの塩基残基の鉱酸塩または有機酸塩、カルボン酸などの酸残基のアルカリ塩または有機塩などが挙げられるが、これらに限定されるものではない。代表的な酸付加塩としては、酢酸塩、アジピン酸塩、アルギン酸塩、アスコルビン酸塩、アスパラギン酸塩、ベンゼンスルホン酸塩、安息香酸塩、重硫酸塩、ホウ酸塩、酪酸塩、カンファー酸塩、カンファースルホン酸塩、クエン酸塩、シクロペンタンプロピオン酸塩、ジグルコン酸塩、ドデシル硫酸塩、エタンスルホン酸塩、フマル酸塩、グルコヘプトン酸塩、グリセロリン酸塩、ヘミ硫酸塩、ヘプトン酸塩、ヘキサン酸塩、臭化水素酸塩、塩酸塩、ヨウ化水素酸塩、２－ヒドロキシエタンスルホン酸塩、ラクトビオン酸塩、乳酸塩、ラウリン酸塩、ラウリル硫酸、リンゴ酸塩、マレイン酸塩、マロン酸塩、メタンスルホン酸塩、２－ナフタレンスルホン酸塩、ニコチン酸塩、硝酸塩、オレイン酸塩、シュウ酸塩、パルミチン酸塩、パモ酸塩、ペクチン酸塩、過硫酸塩、３－フェニルプロピオン酸塩、リン酸塩、ピクリン酸塩、ピバル酸塩、プロピオン酸塩、ステアリン酸塩、コハク酸塩、硫酸塩、酒石酸塩、チオシアン酸塩、トルエンスルホン酸塩、ウンデカン酸塩、吉草酸塩などが挙げられる。代表的なアルカリ金属塩またはアルカリ土類金属塩は、ナトリウム、リチウム、カリウム、カルシウム、マグネシウムなど、さらには非毒性のアンモニウム、第４級アンモニウム、およびアミンカチオン、たとえば、限定されるものではないが、アンモニウム、テトラメチルアンモニウム、テトラエチルアンモニウム、メチルアミン、ジメチルアミン、トリメチルアミン、トリエチルアミン、エチルアミンなどを含む。本開示に係る薬学的に許容可能な塩は、親化合物の従来型の非毒性塩、たとえば、非毒性の無機酸または有機酸から生成されたものを含む。本開示に係る薬学的に許容可能な塩は、塩基部分または酸部分を含有する親化合物から従来の化学的方法により合成可能である。一般的には、そのような塩は、水中もしくは有機溶媒中または両者の混合物中で、これらの化合物の遊離の酸形または塩基形と化学量論量の適切な塩基または酸とを反応させることにより、調製可能である。一般的には、エーテル、エチルアセテート、エタノール、イソプロパノール、またはアセトニトリルのような非水性媒体が好ましい。好適な塩のリストは、「レミングトンの薬科学（Ｒｅｍｉｎｇｔｏｎ’ｓ　Ｐｈａｒｍａｃｅｕｔｉｃａｌ　Ｓｃｉｅｎｃｅｓ）」、第１７版、マック・パブリッシング・カンパニー（Ｍａｃｋ　Ｐｕｂｌｉｓｈｉｎｇ　Ｃｏｍｐａｎｙ）、ペンシルバニア州イーストン、１９８５年、ｐ．１４１８、Ｐ．Ｈ．スタール（Ｐ．Ｈ．Ｓｔａｈｌ）およびＣ．Ｇ．ワーマス（Ｃ．Ｇ．Ｗｅｒｍｕｔｈ）編、「医薬塩：性質、選択、および使用（Ｐｈａｒｍａｃｅｕｔｉｃａｌ　Ｓａｌｔｓ：Ｐｒｏｐｅｒｔｉｅｓ，Ｓｅｌｅｃｔｉｏｎ，ａｎ

ｄ　Ｕｓｅ）」、ワイリー－ＶＣＨ（Ｗｉｌｅｙ－ＶＣＨ）、２００８年、ならびにベルジェ（Ｂｅｒｇｅ）ら著、ジャーナル・オブ・ファーマシューティカル・サイエンス（Ｊｏｕｒｎａｌ　ｏｆ　Ｐｈａｒｍａｃｅｕｔｉｃａｌ　Ｓｃｉｅｎｃｅ）、１９７７年、第６６巻、ｐ．１～１９（それぞれその全体が参照により本明細書に組み込まれる）に見いだされる。

【２１２６】

薬学的に許容可能な溶媒和物：「薬学的に許容可能な溶媒和物」という用語は、本明細書で用いられる場合、好適な溶媒の分子が結晶格子に組み込まれた本発明の化合物を意味する。好適な溶媒は、投与される投与量で生理学的に耐容性である。たとえば、溶媒和物は、有機溶媒、水、またはそれらの混合物を含む溶液から結晶化、再結晶化、または沈殿により調製しうる。好適な溶媒の例は、エタノール、水（たとえば、一、二、および三水和物）、Ｎ－メチルピロリジノン（ＮＭＰ）、ジメチルスルホキシド（ＤＭＳＯ）、Ｎ，Ｎ’ジメチルホルムアミド（ＤＭＦ）、Ｎ，Ｎ’ジメチルアセトアミド（ＤＭＡＣ）、１，３－ジメチル－２－イミダゾリジノン（ＤＭＥＵ）、１，３－ジメチル－３，４，５，６－テトラヒドロ－２－（１Ｈ）－ピリミジノン（ＤＭＰＵ）、アセトニトリル（ＡＣＮ）、プロピレングリコール、エチルアセテート、ベンジルアルコール、２－ピロリドン、ベンジルベンゾエートなどである。水が溶媒である場合、溶媒和物は「水和物」と呼ばれる。

【２１２７】

薬理学的効果：本明細書で用いられる場合、「薬理学的効果」とは、生物または系が外因性作用剤と接触した後またはそれに暴露された後に起こる生物または系において測定可能な生物学的現象のことである。薬理学的効果は、治療上有効なアウトカム、たとえば、１つ以上の症状の治療や改善、疾患、障害、病態、または感染の診断、予防、およびそれらの発症の遅延をもたらしうる。かかる生物学的現象の測定は、定量的、定性的、または他の生物学的現象に対して相対的でありうる。定量測定は統計的に有意でありうる。定性的測定は、程度または種類でありうると共に、少なくとも１０％、２０％、３０％、４０％、５０％、６０％、７０％、８０％、９０％、またはそれを超えて異なりうる。それらは、存在するまたは不在である、より良好であるまたはより悪い、より多いまたはより少ないとして観測可能である。外因性作用剤とは、薬理学的効果を参照する場合、全体または一部が生物または系に対して外来性である作用剤のことである。たとえば、野生型バイオ分子への修飾は、構造的か化学的かにかかわらず、外因性作用剤を生じるであろう。同様に、生物または系では天然に見いだされない化合物、分子、または物質への野生型分子の組込みまたはそれらと野生型分子との組合せも外因性作用剤を生じるであろう。

【２１２８】

本発明のｓａＲＮＡは外因性作用剤を含む。薬理学的効果の例としては、限定されるものではないが、細胞数の変化、たとえば、好中球、網状赤血球、顆粒球、赤血球（赤血球）、巨核球、血小板、単球、結合組織マクロファージ、表皮ランゲルハンス細胞、破骨細胞、樹状細胞、ミクログリア細胞、好中球、好酸球、好塩基球、マスト細胞、ヘルパーＴ細胞、サプレッサーＴ細胞、細胞傷害性Ｔ細胞、ナチュラルキラーＴ細胞、Ｂ細胞、ナチュラルキラー細胞、または網状赤血球の増加または減少が挙げられる。薬理学的効果はまた、血液化学、ｐＨ、ヘモグロビン、ヘマトクリットの変化、酵素、たとえば、限定されるものではないが、肝酵素ＡＳＴおよびＡＬＴのレベルの変化、脂質プロファイル、電解質、代謝マーカ、ホルモン、または当業者に公知の他のマーカもしくはプロファイルの変化を含む。

【２１２９】

物理化学的：本明細書で用いられる場合、「物理化学的」とは、物理的および／もしくは化学的な性質またはそれに関することを意味する。

予防：本明細書で用いられる場合、「予防」という用語は、感染、疾患、障害、および／もしくは病態の発生を部分的にもしくは完全に遅延すること、特定の感染、疾患、障害、および／もしくは病態の１つ以上の症状、特徴、もしくは臨床病変の発生を部分的にも

しくは完全に遅延すること、特定の感染、疾患、障害、および／もしくは病態の１つ以上の症状、特徴、もしくは病変の発生を部分的にもしくは完全に遅延すること、感染、特定の疾患、障害、および／もしくは病態からの進行を部分的にもしくは完全に遅延すること、ならびに／または感染、疾患、障害、および／もしくは病態に関連付けられる病理発生のリスクを減少させることを意味する。

【２１３０】

プロドラッグ：本開示はまた、本明細書に記載の化合物のプロドラッグを包含する。本明細書で用いられる場合、「プロドラッグ」とは、物質、分子、または要素が化学的または物理的な変化を受けたときに治療剤として作用すると見なされる形態をとる任意の物質、分子、または要素を意味する。プロドラッグは、共有結合されていても、何らかの方法で捕獲されていてもよく、哺乳動物対象への投与前、投与時、または投与後、活性薬剤部分を放出するかまたはそれに変換される。プロドラッグは、慣例的な操作によりまたはインビボで修飾が切断されて親化合物になるような方法で、化合物中に存在する官能基を修飾することにより、調製可能である。プロドラッグは、ヒドロキシル基、アミノ基、スルフヒドリル基、またはカルボキシル基が、哺乳動物対象に投与されたときにそれぞれ遊離のヒドロキシル基、アミノ基、スルフヒドリル基、またはカルボキシル基を生成するように切断される任意の基に結合されている化合物を含む。プロドラッグの調製および使用は、Ｔ．ヒグチ（Ｔ．Ｈｉｇｕｃｈｉ）およびＶ．ステラ（Ｖ．Ｓｔｅｌｌａ）著、「新規な送達系としてのプロドラッグ（Ｐｒｏ－ｄｒｕｇｓ ａｓ Ｎｏｖｅｌ Ｄｅｌｉｖｅｒｙ Ｓｙｓｔｅｍｓ）」、Ａ．Ｃ．Ｓ．シンポジウムシリーズ（Ａ．Ｃ．Ｓ．Ｓｙｍｐｏｓｉｕｍ Ｓｅｒｉｅｓ）の第１４巻、ならびにエドワードＢ．ロッシュ（Ｅｄｗａｒｄ Ｂ．Ｒｏｃｈｅ）編、「薬剤設計における生体可逆性担体（Ｂｉｏｒｅｖｅｒｓｉｂｌｅ Ｃａｒｒｉｅｒｓ ｉｎ Ｄｒｕｇ Ｄｅｓｉｇｎ）」、米国薬剤師協会（Ａｍｅｒｉｃａｎ Ｐｈａｒｍａｃｅｕｔｉｃａｌ Ａｓｓｏｃｉａｔｉｏｎ）およびパーガモンプレス（Ｐｅｒｇａｍｏｎ Ｐｒｅｓｓ）、１９８７年（両方ともその全体が参照により本明細書に組み込まれる）で考察されている。

【２１３１】

予後予測：本明細書で用いられる場合、「予後予測」という用語は、特定の生物学的イベントが将来起こるであろうことまたは起こる可能性が非常に高いことの陳述または主張を意味する。

【２１３２】

進行：本明細書で用いられる場合、「進行」または「癌の進行」という用語は、疾患もしくは病態のまたはそれらに向かう促進もしくは悪化を意味する。

増殖：本明細書で用いられる場合、「増殖」という用語は、成長、拡張、もしくは増大すること、または迅速に成長、拡張、もしくは増大を引き起こすことを意味する。「増殖」は、増殖する能力を有することを意味する。「抗増殖」とは、増殖性に対抗するまたは不適である性質を有することを意味する。

【２１３３】

タンパク質：「タンパク質」とは、ペプチド結合により結合一体化されたアミノ酸残基のポリマーを意味する。この用語は、本明細書で用いられる場合、任意のサイズ、構造、または機能のタンパク質、ポリペプチド、およびペプチドを意味する。しかしながら、典型的には、タンパク質は少なくとも５０アミノ酸長であろう。いくつかの場合、コードされたタンパク質は約５０アミノ酸未満である。この場合、ポリペプチドはペプチドと称される。タンパク質が短いペプチドである場合、それは少なくとも約１０アミノ酸残基長であろう。タンパク質は、天然に存在するもの、組み換えられたもの、もしくは合成されたもの、またはこれらの任意の組合せでありうる。タンパク質はまた、天然に存在するタンパク質またはペプチドの断片を含みうる。タンパク質は、単分子でありうるかまたは多分子複合体でありうる。タンパク質という用語はまた、１つ以上のアミノ酸残基が対応する天然に存在するアミノ酸の人工化学アナログであるアミノ酸ポリマーにもあてはまりうる。

【２１３４】
タンパク質発現：「タンパク質発現」という用語は、アミノ酸配列またはタンパク質の検出可能なレベルが発現されるように核酸配列が翻訳を受けるプロセスを意味する。
精製された：本明細書で用いられる場合、「精製する」、「精製された」、「精製」とは、望ましくない成分、材料汚染、混合、または不完全から実質的に純粋または清澄にすることを意味する。
【２１３５】
退縮：本明細書で用いられる場合、「退縮」または「退縮度」という用語は、表現型または遺伝子型のいずれかにおける癌の進行の逆転を意味する。癌の進行の遅延または停止は退縮であると見なしうる。
【２１３６】
サンプル：本明細書で用いられる場合、「サンプル」または「生物学的サンプル」という用語は、その組織、細胞、または構成部分（たとえば、限定されるものではないが、血液、粘液、リンパ液、滑液、脳脊髄液、唾液、羊水、羊膜帯血、尿、膣液、および精液をはじめとする体液）の一部を意味する。サンプルは、たとえば、限定されるものではないが、血漿、血清、脊髄液、リンパ液、外側皮膚切片、呼吸管、腸管、および泌尿生殖管、涙液、唾液、乳、血液細胞、腫瘍、器官を含めて、全生物体、またはその組織、細胞、もしくは構成部分のサブセット、またはそれらの画分もしくは一部分から調製されるホモジネート、ライセート、または抽出物をさらに含みうる。サンプルは、タンパク質分子または核酸分子などの細胞成分を含有している可能性がある媒体、たとえば、栄養ブロスまたはゲルをさらに意味する。
【２１３７】
シグナル配列：本明細書で用いられる場合、「シグナル配列」という語句は、タンパク質の輸送または局在化を指示可能な配列を意味する。
単回ユニット用量：本明細書で用いられる場合、「単回ユニット用量」とは、１回で／一時点／一経路／一接触点で、すなわち単回投与イベントで投与される任意の治療剤の用量のことである。
【２１３８】
類似性：本明細書で用いられる場合、「類似性」という用語は、高分子間、たとえば、ポリヌクレオチド分子（たとえば、ＤＮＡ分子および／またはＲＮＡ分子）間および／またはポリペプチド分子間の全体的な関連性を意味する。互いの高分子の類似性パーセントの計算は、当技術分野で理解されている保存的置換を考慮して類似性パーセントを計算すること以外、同一性パーセントの計算と同一の方式で実施可能である。
【２１３９】
分割用量：本明細書で用いられる場合、「分割用量」とは、単回ユニット用量または全一日用量を２つ以上に分割した用量のことである。
安定：本明細書で用いられる場合、「安定」とは、反応混合物から有用な純度への単離に耐えるのに十分なロバスト性のある、一実施形態では有効な治療剤への製剤化が可能である化合物を意味する。
【２１４０】
安定化された：本明細書で用いられる場合、「安定化する」「安定化された」、「安定化領域」という用語は、安定にすることまたは安定になることを意味する。
対象：本明細書で用いられる場合、「対象」または「患者」という用語は、たとえば、実験、診断、予防、および／または治療の目的で、本発明に係る組成物が投与されうる任意の生物を意味する。典型的な対象としては、動物（たとえば、マウス、ラット、ウサギ、非ヒト霊長動物、ヒトなど哺乳動物）および／または植物が挙げられる。
【２１４１】
実質的に：本明細書で用いられる場合、「実質的に」という用語は、対象の特徴または性質の全体またはほぼ全体の範囲または度合いを呈する定性的条件を意味する。生物学技術分野の当業者であれば、生物学的および化学的な現象が、最終状態に達することおよび

／または完全に進行することまたは絶対的結果を達成もしくは回避することは、あっても稀であるものと理解されよう。したがって、「実質的に」という用語は、多くの生物学的および化学的な現象に固有の完全性の欠如の可能性を取り込むように本明細書で用いられる。

【２１４２】

実質的に等しい：用量間の時間差に関して本明細書で用いられる場合、この用語は、±２％を意味する。

実質的に同時に：複数の用量に関して本明細書で用いられる場合、この用語は、２秒間以内を意味する。

【２１４３】

に罹患している：疾患、障害、および／または病態「に罹患している」個体は、疾患、障害、および／または病態と診断されているまたはそれらの１つ以上の症状を呈する。

に罹患しやすい：疾患、障害、および／または病態「に罹患しやすい」個体は、疾患、障害、および／または病態の症状で診断されていないか、かつ／またはその症状を呈していなくてもよいが、疾患またはその症状を発症する傾向を有する。いくつかの実施形態では、疾患、障害、および／または病態（たとえば、癌）に罹患しやすい個体は、次のもの、すなわち、（１）疾患、障害、および／または病態の発生に関連付けられる遺伝子突然変異、（２）疾患、障害、および／または病態の発生に関連付けられる遺伝子多型、（３）疾患、障害、および／または病態に関連付けられるタンパク質および／または核酸の発現および／または活性の増大および／または低減、（４）疾患、障害、および／または病態の発生に関連付けられる習性および／または生活習慣、（５）疾患、障害、および／または病態の家族歴、ならびに（６）疾患、障害、および／または病態の発生に関連付けられる微生物への暴露および／またはその感染の１つ以上により特徴付け可能である。いくつかの実施形態では、疾患、障害、および／または病態に罹患しやすい個体は、疾患、障害、および／または病態を発生するであろう。いくつかの実施形態では、疾患、障害、および／または病態に罹患しやすい個体は、疾患、障害、および／または病態を発生しないであろう。

【２１４４】

持続放出：本明細書で用いられる場合、「持続放出」という用語は、特定の期間にわたり放出速度に適合する医薬組成物または化合物の放出プロファイルを意味する。

合成：「合成」という用語は、ヒトの手により産生、調製、および／または製造されることを意味する。本発明に係るポリヌクレオチドもしくはポリペプチドまたは他の分子の合成は、化学的もしくは酵素的でありうる。

【２１４５】

標的細胞：本明細書で用いられる場合、「標的細胞」とは、任意の１つ以上の対象の細胞を意味する。細胞は、インビトロ、インビボ、インサイチュー、または生物の組織もしくは器官で見いだされうる。生物は、一実施形態では動物、哺乳動物、またはヒト、および一実施形態では患者でありうる。

【２１４６】

治療剤：「治療剤」という用語は、対象に投与したとき、治療効果、診断効果、および／もしくは予防効果を有する、ならびに／または所望の生物学的効果および／もしくは薬理学的効果を誘発する任意の作用剤を意味する。

【２１４７】

治療上有効量：本明細書で用いられる場合、「治療上有効量」という用語は、感染、疾患、障害、および／または病態に罹患しているまたは罹患しやすい対象に投与したとき、感染、疾患、障害、および／または病態を治療、その症状を改善、その発生を診断、予防、および／または遅延するのに十分な送達作用剤（たとえば、核酸、薬剤、治療剤、診断剤、予防剤など）の量を意味する。

【２１４８】

治療上有効なアウトカム：本明細書で用いられる場合、「治療上有効なアウトカム」と

いう用語は、感染、疾患、障害、および／または病態に罹患しているまたは罹患しやすい対象において、感染、疾患、障害、および／または病態を治療、その症状を改善、その発症を診断、予防、および／または遅延するのに十分なアウトカムを意味する。

【２１４９】

全一日用量：本明細書で用いられる場合、「全一日用量」とは、２４時間以内で投与または処方される量のことである。それは、単回ユニット用量として投与されうる。

転写因子：本明細書で用いられる場合、「転写因子」という用語は、たとえば、転写の活性化または抑圧により、ＤＮＡからＲＮＡへの転写を調節するＤＮＡ結合タンパク質を意味する。いくつかの転写因子は、転写のみの調節を行うが、他のものは、他のタンパク質と協奏的に作用する。いくつかの転写因子は、特定の条件下で転写の活性化および抑制の両方を行うことが可能である。一般的には、転写因子は、標的遺伝子の調節領域の特定のコンセンサス配列にきわめて類似した１つもしくは複数の特異的標的配列に結合する。転写因子は、標的遺伝子の転写を単独でまたは他の分子との複合体で調節しうる。

【２１５０】

治療：本明細書で用いられる場合、「治療」という用語、特定の感染、疾患、障害、および／または病態を部分的にまたは完全に緩和、寛解、改善、軽減したり、その発症を遅延したり、その進行を阻害したり、その重症度を低減したり、かつ／またはその１つ以上の症状もしくは特徴の出現を低減したりすることを意味する。たとえば、癌を「治療」することは、腫瘍の生存、増殖、および／または拡がりを阻害することを意味しうる。治療は、疾患、障害、および／もしくは病態の徴候を呈しない対象に、ならびに／または疾患、障害、および／もしくは病態に関連付けられる病変を発生するリスクを低減する目的で、疾患、障害、および／もしくは病態の早期徴候を呈する対象に施すことが可能である。

【２１５１】

「治療方法」という語句またはその均等語は、たとえば癌に適用する場合、個体において癌細胞の数を低減、排除、もしくは予防するようにまたは癌の症状を軽減するように設計された手順または行動方針を意味する。癌または他の増殖性障害の「治療方法」は、癌細胞もしくは他の障害が実際上完全に排除されること、細胞数もしくは障害が実際上低減されること、または癌もしくは他の障害の症状が実際上軽減されることを必ずしも意味するとは限らない。多くの場合、癌の治療方法は、成功する可能性が低い場合でさえも行われるであろう。ただし、それにもかかわらず、個体の病歴および推定余命を考慮して全体的に有益な行動方針と見なされる。

【２１５２】

腫瘍成長：本明細書で用いられる場合、「腫瘍成長」または「腫瘍転移成長」という用語は、特に指定がない限り、腫瘍学で通常使用されるように用いられる。ただし、この用語は、主に腫瘍細胞成長の結果としての腫瘍または腫瘍転移の増加量または増加体積に主に関連付けられる。

【２１５３】

腫瘍負荷：本明細書で用いられる場合、「腫瘍負荷」という用語は、対象が有する直径３ｍｍ超の全腫瘍小結節の全腫瘍体積を意味する。

腫瘍体積：本明細書で用いられる場合、「腫瘍体積」という用語は、腫瘍のサイズを意味する。mm^3単位の腫瘍体積は、式：体積＝（幅）^{2}×長さ／２により計算される。

【２１５４】

非修飾：本明細書で用いられる場合、「非修飾」とは、何らかの方法で変化させる前の任意の物質、化合物、または分子を意味する。非修飾とは、生体分子の野生型または未改変型を意味するが、常にそうであるとは限らない。分子は、一連の修飾を受けうるが、それにより、各修飾分子は、それに続く修飾のための「非修飾」出発分子として役立ちうる。

【２１５５】

均等物および範囲

当業者であれば、通常の実験の域を出ることなく、本明細書に記載の本発明に係る特定

の実施形態に対する多くの均等な形態が分かるであろう。またはそれらを確認できるであろう。本発明の範囲は、以上の説明に限定されるものではなく、添付の特許請求の範囲に明記される通りである。

【２１５６】

特許請求の範囲では、「１つの（ａ）」、「１つの（ａｎ）」、「その（ｔｈｅ）」などの冠詞は、相反する指示がない限りまたは特に文脈から自明でない限り、１つ以上を意味しうる。グループの１つ以上のメンバー間に「または」を含む特許請求の範囲または説明は、相反する指示がない限りまたは特に文脈から自明でない限り、グループメンバーの１つ、１つ超、またはすべてが所与の製品またはプロセスに存在するか、そこで利用されるか、または他の方法でそれに適合する場合、満たされると考えられる。本発明は、厳密にグループの１つのメンバーが所与の製品またはプロセスに存在するか、そこで利用されるか、または他の方法でそれに適合する、実施形態を含む。本発明は、グループメンバーの１つ超またはすべてが所与の製品またはプロセスに存在するか、そこで利用されるか、または他の方法でそれに適合する、実施形態を含む。

【２１５７】

また、「含む」という用語は、オープンであることが意図され、追加の要素または工程の組込みを許容することにも留意されたい。

範囲が与えられた場合、端点が含まれる。さらに、特に指定がない限りまたは特に文脈および当業者の理解から自明でない限り、範囲として表現された値は、文脈上明らかに異なる場合を除いて、範囲の下限の１／１０単位まで、本発明のさまざまな実施形態で指定の範囲内の任意の特定の値または部分範囲を仮定しうると理解されるべきである。

【２１５８】

それに加えて、先行技術に包含される本発明の特定の実施形態はいずれも請求項の任意の１項以上から明示的に除外されうると理解されるべきである。そのような実施形態は、当業者に公知であると見なされるため、たとえ本明細書で明示的に除外が明記されていないとしても、それらは除外されうる。本発明に係る組成物の特定の実施形態（たとえば、任意の核酸、それによりコードされたタンパク質、任意の製造方法、任意の使用方法など）はいずれも、先行技術の存在の有無にかかわらず、任意の理由でいずれか１項以上の請求項から除外しうる。

【２１５９】

引用された出典、たとえば、本明細書に引用された参考文献、刊行物、データベース、データベース項目、および技術はすべて、たとえ引用に明確に記載されていないとしても、参照により本出願に組み込まれる。引用された出典の記載内容と本出願の記載内容とが矛盾する場合、本出願の記載内容が優先するものとする。

【２１６０】

限定されるものではないが、以下の実施例により本発明をさらに説明する。

（実施例）

実施例１．インビトロでｓａＲＮＡをトランスフェクトすることによる標的遺伝子発現のアップレギュレーション

製造業者の説明書に従ってリポフェクタミン２０００（Ｌｉｐｏｆｅｃｔａｍｉｎｅ ２０００）（ライフ・テクノロジーズ（Ｌｉｆｅ Ｔｅｃｈｎｏｌｏｇｉｅｓ）、米国）を用いて、標的遺伝子に対するｓａＲＮＡを用いて２０ｎＭ、５０ｎＭ、または１００ｎＭのｓａＲＮＡを細胞の単層上にトランスフェクトする。標的遺伝子は、本明細書に記載のもの、たとえば、表１に列挙された標的遺伝子のいずれかでありうる。ｓａＲＮＡは一本鎖または二本鎖でありうる。細胞はＨｅｐＧ２細胞でありうる。このプロセスを３回繰り返した後、ｍＲＮＡ分析のために全ＲＮＡが単離されるように細胞を採取する。

【２１６１】

トランスフェクション後、製造業者の説明書に従ってＲＮアクエアス（ＲＮＡｑｕｅｏｕｓ）マイクロキット（アムビオン（Ａｍｂｉｏｎ）、英国）を用いて、全ＲＮＡの単離を行う。簡潔に述べると、溶解緩衝液（アムビオン（ＡＭＢＩＯＮ）、英国）を用いてア

ウトプット３のパルスで超音波処理を３回行った後、細胞を穏やかに遠心分離する。次いで、細胞ライセートをＲＮＡ結合カラムに通して処理し、続いて複数回の洗浄および溶出を行う。単離された全ＲＮＡは、ナノドロップ２０００（ＮＡＮＯＤＲＯＰ　２０００）分光光度計により定量する。ゲノムＤＮＡの除去のために５００ｎｇの全抽出ＲＮＡを処理し、続いてキアゲン（ＱＩＡＧＥＮ）製のクオンティテクト（ＱＵＡＮＴＩＴＥＣＴ）（登録商標）逆転写キットを用いて逆転写を行う。

【２１６２】

単離されたＲＮＡ抽出物を定量逆転写酵素（ｑＲＴ－ＰＣＲ）により分析する。簡潔に述べると、ファースト・ストランドｃＤＮＡ（Ｆｉｒｓｔ　Ｓｔｒａｎｄ　ｃＤＮＡ）合成キット（キアゲン（Ｑｉａｇｅｎ））を用いて抽出物を逆転写する。次いで、キアゲン（Ｑｉａｇｅｎ）製のクオンティファスト（ＱｕａｎｔｉＦａｓｔ）（登録商標）ＳＹＢＲ（登録商標）グリーンＰＣＴキットを用いて定量分析するためにｃＤＮＡを増幅する。増幅は、アプライド・バイオシステムズ（Ａｐｐｌｉｅｄ　Ｂｉｏｓｙｓｔｅｍｓ）７９００ＨＴファースト－リアル－タイムシステムを用いて行う。次いで、アプライド・バイオシステムズ（Ａｐｐｌｉｅｄ　Ｂｉｏｓｙｓｔｅｍｓ）ＲＱマネージャ１．２．１を用いて増幅産物を分析する。定量分析のために５つの独立した実験を用いてトリプリケートで増幅する。９９％信頼区間でスチューデントのｔ検定スコアリングを行う。

【２１６３】

標的遺伝子のｍＲＮＡ産生はＥＬＩＳＡを用いて細胞内で決定される。簡潔に述べると、木炭処理ＦＣＳの存在下でフェノールレッドフリーのＲＰＭＩ培地で細胞を成長させる。８時間、１６時間、および２４時間で３セットのｓａＲＮＡトランスフェクションを行った後、培養培地を収集して全ＥＬＩＳＡに供する。

【２１６４】

ｍＲＮＡレベルの増加はｓａＲＮＡでトランスフェクトされた細胞でのみ起こり、スクランブルｓａＲＮＡでトランスフェクトされた対照細胞では起こらない。

実施例２．マウスにおいてインビボでｓａＲＮＡをトランスフェクトすることによる標的遺伝子発現のアップレギュレーション

十匹の８週齢の雄Ｃ５７ＢＩ６／Ｊマウスを実験に使用する（対照群Ｎ＝５）。標的遺伝子は、本明細書に記載のもの、たとえば、表１に列挙された標的遺伝子のいずれかでありうる。

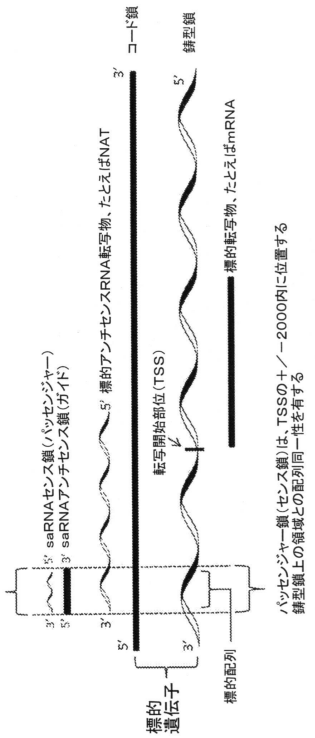
【２１６５】

１００μＬのＲＮアーゼ／ＤｎアーゼフリーのＨ２０で標的遺伝子のｓａＲＮＡを再構成し、５０μＬの複合体Ａおよび５０μＬの複合体Ｂ（インビボフェタミン（ＩｎｖｉｖｏＦｅｃｔａｍｉｎｅ）、インビトロジェン（Ｉｎｖｉｔｒｏｇｅｎ）、米国カリフォルニア州）を混合し、５０℃で３０分間インキュベートし、尾静脈注射に使用する。対照動物には等体積のＰＢＳを注射し、一方、陽性対照動物は標的遺伝子に対するｓｉＲＮＡを摂取し、合計で５匹の対照動物および５匹の実験動物に注射する。

【２１６６】

投与後、全ＲＮＡを単離する。トリゾール（Ｔｒｉｚｏｌ）を含有するシンチレーションバイアルにマウスの凍結組織切片を配置し、３０秒間ホモジナイズする。組織はマウスの肝臓に由来しうる。次いで、ホモジネートをファルコンチューブに移してさらに２分間ホモジナイズする。次いで、これにクロロホルムを添加し、撹拌により混合し、続いて１２，０００ｒｐｍの遠心分離工程を４℃で１５分間行う。次いで、水性上側相を新鮮なマイクロ遠心分離機チューブに移して、５ｍｇ／ｍｌの線状アクリルアミド（アンビコン（Ａｍｂｉｏｎ））およびイソプロパノールを用いてＲＮＡを－２０℃で一晩沈殿させる。４℃で１５分間にわたり１２，０００ｒｐｍの遠心分離によりＲＮＡをペレット化し、氷冷７０％エタノールで洗浄する。４℃で５分間にわたり７，５００ｒｐｍで再びＲＮＡをペレット化する。ただちに上清を除去し、ＲＮＡペレットを空気乾燥させる。ＲＮＡをヌクレアーゼフリーの水に溶解させ、ＲＮＡの完全性が得られるようにバイオアナライザー（Ｂｉｏｎａｎａｌｙｓｅｒ）を用いてただちに分析する。

【２１６７】
単離されたＲＮＡを実施例１に記載のｑＲＴ－ＰＣＲにより分析する。標的遺伝子のｍＲＮＡ産生は、実施例１に記載のＥＬＩＳＡを用いて決定される。デンドリマー送達媒体を用いてｓａＲＮＡをマウスに投与すると、標的遺伝子によりコードされる血液循環内のｍＲＮＡの有意な増加がもたらされる。
【２１６８】
全体的マウス器官機能に及ぼすｓａＲＮＡの投与の影響を研究しうる。限定されるものではないが、例として、全体的肝機能に及ぼすｓａＲＮＡの投与の影響は、肝機能マーカのガンマグルタミルトランスペプチダーゼ、アラニンアミノトランスフェラーゼ、およびアスパラギン酸アミノトランスフェラーゼまたはビリルビンに基づいて決定される。
【２１６９】
ｓａＲＮＡは、また、これらの遺伝子のｍＲＮＡレベルに基づいて他の遺伝子の発現にも影響を及ぼす。種々の遺伝子の発現レベルを測定するために、治療マウスの組織サンプルが使用される。これらの遺伝子のｍＲＮＡ転写レベルは、ＲＴ－ＰＣＴ　ｍＲＮＡ発現レベルにより測定される。
【２１７０】
他の実施形態
本開示をその詳細な説明と組み合わせて説明してきたが、以上の説明は例示することを意図したものであり、添付の特許請求の範囲により規定される本開示の範囲を限定することを意図したものではないことを理解すべきである。他の態様、利点、および変更形態は以下の特許請求の範囲内にある。
【図面】
【図１】



【配列表】
<u>2023040138000001.app</u>

【手続補正書】
【提出日】令和５年１月１６日(２０２３.１.１６)
【手続補正１】
【補正対象書類名】特許請求の範囲
【補正対象項目名】全文
【補正方法】変更
【補正の内容】
【特許請求の範囲】
【請求項１】
本明細書に記載の発明。

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