(12) STANDARD PATENT (11) Application No. **AU 2011276365 B2**
(19) AUSTRALIAN PATENT OFFICE

(54) Title
Methods and compositions for the specific inhibition of beta-catenin by double-stranded RNA

(51) International Patent Classification(s)
A61K 48/00 (2006.01) ***C12N 15/11*** (2006.01)
C07H 21/04 (2006.01)

(21) Application No: **2011276365** (22) Date of Filing: **2011.07.01**

(87) WIPO No: **WO12/006243**

(30) Priority Data

(31) Number	(32) Date	(33) Country
61/361,776	**2010.07.06**	**US**

(43) Publication Date: **2012.01.12**
(44) Accepted Journal Date: **2017.05.11**

(71) Applicant(s)
Dicerna Pharmaceuticals, Inc.

(72) Inventor(s)
Brown, Bob Dale;Dudek, Henryk T.

(74) Agent / Attorney
Wrays, 56 Ord St, West Perth, WA, 6005, AU

(56) Related Art
WO 2008/109460
US 2008/0113351
Sun, X. et al., Nature Biotechnology, 2008, vol. 26, no. 12, pages 1379-1382.

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
12 January 2012 (12.01.2012)

WIPO | PCT

(10) International Publication Number
WO 2012/006243 A3

(51) International Patent Classification:
C12N 15/11 (2006.01) *C07H 21/04* (2006.01)

(21) International Application Number:
PCT/US2011/042820

(22) International Filing Date:
1 July 2011 (01.07.2011)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/361,776 6 July 2010 (06.07.2010) US

(71) Applicant *(for all designated States except US)*: **DICERNA PHARMACEUTICALS, INC.** [US/US]; 480 Arsenal Street, Watertown, MA 02742 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **BROWN, Bob, Dale** [US/US]; 54 Leprechaun Drive, Millington, NJ 07946 (US). **DUDEK, Henryk, T.** [US/US]; 105 Overbrook Drive, Wellesley, MA 02482 (US).

(74) Agents: **WILLIAMS, Kathleen** et al.; Edwards Angell Palmer & Dodge LLP, P.O. Box 55874, Boston, MA 02205 (US).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report (Art. 21(3))*

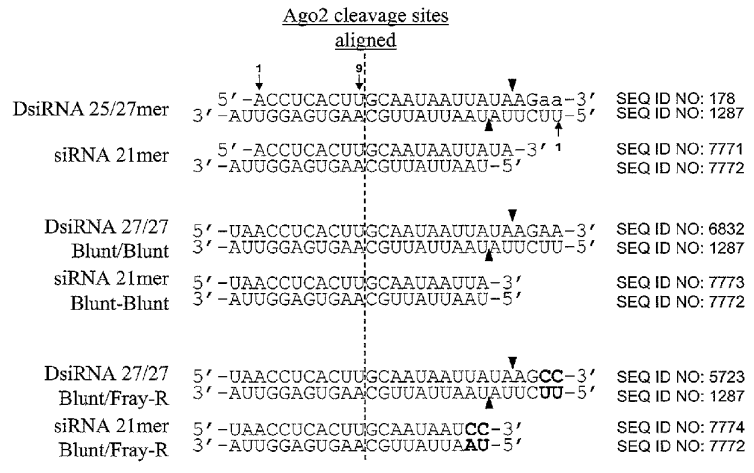
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

— *with sequence listing part of description (Rule 5.2(a))*

(88) Date of publication of the international search report:
14 June 2012

(54) Title: METHODS AND COMPOSITIONS FOR THE SPECIFIC INHIBITION OF BETA-CATENIN BY DOUBLE-STRANDED RNA

Figure 1



(57) Abstract: This invention relates to compounds, compositions, and methods useful for reducing β-catenin target RNA and protein levels via use of dsRNAs, e.g., Dicer substrate siRNA (DsiRNA) agents.

WO 2012/006243 A3

METHODS AND COMPOSITIONS FOR THE SPECIFIC INHIBITION OF BETA-CATENIN BY DOUBLE-STRANDED RNA

CROSS-REFERENCE TO RELATED APPLICATIONS

The present application claims priority to, and the benefit under 35 U.S.C. §119(e) of, U.S. provisional patent application No. 61/361,776, filed July 6, 2010, entitled "Methods and Compositions for the Specific Inhibition of Beta-Catenin by Double-Stranded RNA". The entire teachings of this application are incorporated herein by reference.

FIELD OF THE INVENTION

The present invention relates to compounds, compositions, and methods for the study, diagnosis, and treatment of traits, diseases and conditions that respond to the modulation of *CTNNB1* (β-catenin) gene expression and/or activity.

BACKGROUND OF THE INVENTION

Wnt pathway signaling mediates development, regeneration, cellular proliferation and stem cell formation (Fuerer *et al. EMBO* Rep 9: 134-8). Abnormal Wnt pathway signaling has been associated with a wide range of diseases, including cancer (Moon *et al. Nat Rev Genet.* 5: 691-701). Mutations in β-catenin (encoded by the *CTNNB1* gene in humans) – an oncogene that is the key mediator of Wnt signaling – have been specifically associated with colorectal, desmoid, endometrial, gastric, hepatocellular, hepatoblastoma, kidney (Wilms' tumor), medulloblastoma, melanoma, ovarian (endometrioid), pancreatic, pilomatricoma, prostate, thyroid (anaplastic) and uterine (endometrium) cancers (Polakis P. *Genes Dev.* 14: 1837-51; Samowitz *et al. Cancer Res.* 59: 1442-4; Iwao *et al. Cancer Res.* 58: 1021-6; Mirabelli-Primdahl *et al. Cancer Res.* 59: 3346-51; Shitoh *et al. J Clin Path.* 52: 695-6; Tejpar *et al. Oncogene* 18: 6615-20; Kitaeva *et al. Cancer Res.* 57: 4478-81; Sparks *et al. Cancer Res.* 58: 1130-4; Miyaki *et al. Cancer Res.* 59: 4506-9; Park *et al. Cancer Res.* 59: 4257-60; Huang *et al. Am J Pathol.* 155: 1795-801; Nhieu *et al. Am J Pathol.* 155: 703-10; Legoix *et al. Oncogene* 18: 4044-6; Jeng *et al. Cancer Lett.* 152: 45-51; Koch *et al. Cancer Res.* 59: 269-73; Wei *et al. Oncogene* 19: 498-504; Koesters *et al. Cancer Res.* 59: 3880-2; Maiti *et al. Cancer Res.* 60: 6288-92; Zurawel *et al. Cancer Res.* 58: 896-9; Gamallo *et al. Am J Pathol.* 155: 527-36;

Palacios and Gamallo *Cancer Res.* 58: 1344-7; Wright *et al. Int J Cancer* 82: 625-9; Gerdes *et al. Digestion* 60: 544-8; Chan *et al. Nat Genet.* 21: 410-3; Voeller *et al. Cancer Res.* 58: 2520-3; Garcia-Rostan *et al. Cancer Res.* 59: 1811-5; Fukuchi *et al. Cancer Res.* 58: 3526-8). Many such mutations in β-catenin are believed to impart increased stability to the β-catenin protein, making β-catenin an attractive target for development of therapeutics that inhibit and/or reduce levels of the β-catenin protein. Given the role of β-catenin in the development of cancer and other diseases and/or disorders (*e.g.*, proper β-catenin activity is important for hair follicle/epithelial stem cell function, meaning that certain inhibitors of β-catenin possess depilatory properties), there remains an unmet need for therapeutically effective inhibitors of β-catenin.

Double-stranded RNA (dsRNA) agents possessing strand lengths of 25 to 35 nucleotides have been described as effective inhibitors of target gene expression in mammalian cells (Rossi *et al.*, U.S. Patent Application Nos. 2005/0244858 and US 2005/0277610). dsRNA agents of such length are believed to be processed by the Dicer enzyme of the RNA interference (RNAi) pathway, leading such agents to be termed "Dicer substrate siRNA" ("DsiRNA") agents. Additional modified structures of DsiRNA agents were previously described (Rossi *et al.*, U.S. Patent Application No. 2007/0265220).

BRIEF SUMMARY OF THE INVENTION

The present invention is directed to compositions that contain double stranded RNA ("dsRNA"), and methods for preparing them. The dsRNAs of the invention are capable of reducing the expression of a target *CTNNB1* gene (encoding β-catenin) in a cell, either *in vitro* or in a mammalian subject. More particularly, the invention is directed to Dicer substrate siRNAs ("DsiRNAs") with structures and modification patterns which act as effective and highly potent β-catenin inhibitory agents, and also may possess extended duration of inhibitory effect. A number of such DsiRNAs possess target-specific inhibitory potencies and efficacies that are significantly enhanced relative to 21 nucleotide siRNAs directed against the same target RNA.

In one aspect, the invention provides an isolated double stranded ribonucleic acid (dsRNA) comprising first and second nucleic acid strands and a duplex region of at least 25 base pairs, wherein the first strand is 25-34 nucleotides in length and the

second strand is 26-35 nucleotides in length and comprises 1-5 single-stranded nucleotides at its 3' terminus, where the second oligonucleotide strand is sufficiently complementary to a target β-catenin cDNA sequence of SEQ ID NOs: 2226-3334 along at least 15 nucleotides of the second oligonucleotide strand length to reduce β-catenin target gene expression when the double stranded nucleic acid is introduced into a mammalian cell. Optionally, the second oligonucleotide strand is complementary to a target β-catenin cDNA sequence of SEQ ID NOs: 1-3 and 5-6 along at most 27 nucleotides of its length.

In one aspect of the present invention there is provided a non-naturally occurring double stranded ribonucleic acid (dsRNA) comprising first and second nucleic acid strands, wherein said second nucleic acid strand is complementary to SEQ ID NO: 4566 or SEQ ID NO: 4833 and reduces β-catenin target gene expression when said double stranded nucleic acid is introduced into a mammalian cell.

In a further aspect of the present invention there is provided a non-naturally occurring double stranded ribonucleic acid (dsRNA) comprising first and second nucleic acid strands, wherein said second nucleic acid strand is comprises SEQ ID NO: 1239 and wherein said dsRNA reduces β-catenin target gene expression when said double stranded nucleic acid is introduced into a mammalian cell.

In yet a further aspect of the present invention there is provided a non-naturally occurring double-stranded RNA (dsRNA) comprising first and second nucleic acid strand and a duplex region of at least 25 base pairs, wherein said first strand is 25-35 nucleotides in length and said second strand of said dsRNA comprises SEQ ID NO: 1239, wherein said dsRNA reduces β-catenin target gene expression when said double stranded nucleic acid is introduced into a mammalian cell.

In a further aspect of the present invention there is provided a non-naturally occurring double stranded ribonucleic acid (dsRNA) comprising first and second nucleic acid strands and a duplex region of at least 25 base pairs, wherein said dsRNA comprises blunt ends, wherein each of said first and second nucleic acid strands consists of the same number of nucleotide residues and is at most 35 nucleotides in length, wherein said second nucleic acid strand is complementary to SEQ ID NO: 4566 or SEQ ID NO: 4833 and reduces β-catenin target gene expression when said double stranded nucleic acid is introduced into a mammalian cell.

In yet a further aspect of the present invention there is provided a A non-naturally occurring dsRNA molecule, consisting of: (a) a sense region and an

antisense region, wherein said sense region and said antisense region together form a duplex region consisting of 19-35 base pairs and said antisense region comprises a sequence that is the complement of SEQ ID NO: 4566 or SEQ ID NO: 4833; and (b) from zero to two 3' overhang regions, wherein each overhang region is six or fewer nucleotides in length.

In a further aspect, the present invention provides a non-naturally occurring siRNA molecule, consisting of: (a) a sense region and an antisense region, wherein said sense region and said antisense region together form a duplex region consisting of 19-23 base pairs and said antisense region comprises a sequence that is the complement of SEQ ID NO: 4566 or SEQ ID NO: 4833; and (b) from zero to four overhang regions, wherein each overhang region is six or fewer nucleotides in length.

In a further aspect, there is provided a non-naturally occurring double stranded ribonucleic acid (dsRNA) comprising first and second nucleic acid strands, wherein said first strand is 15-35 nucleotides in length and said second strand of said dsRNA is 19-35 nucleotides in length, wherein said second nucleic acid strand is complementary to SEQ ID NO: 4566 or SEQ ID NO: 4833.

In yet a further aspect, there is provided a non-naturally occurring double stranded ribonucleic acid (dsRNA) comprising first and second nucleic acid strands, wherein said dsRNA comprises blunt ends, wherein each of said first and second nucleic acid strands consists of the same number of nucleotide residues and is at most 35 nucleotides in length, wherein said second nucleic acid strand is complementary to SEQ ID NO: 4566 or SEQ ID NO: 4833 and reduces β-catenin target gene expression when said double stranded nucleic acid is introduced into a mammalian cell.

In a further aspect of the present invention, there is provided a non-naturally occurring dsRNA molecule, consisting of: (a) a sense region and an antisense region, wherein said sense region and said antisense region together form a duplex region consisting of 15-35 base pairs and said antisense region comprises a sequence that is the complement of SEQ ID NO: 4566 or SEQ ID NO: 4833; and (b) from zero to two 3' overhang regions, wherein each overhang region is six or fewer nucleotides in length.

In yet a further aspect of the present invention there is provided a non-naturally occurring siRNA molecule, consisting of: (a) a sense region and an antisense region, wherein said sense region and said antisense region together form a duplex region consisting of 19-23 base pairs and said antisense region comprises a sequence

that is the complement of SEQ ID NO: 4566 or SEQ ID NO: 4833; and (b) from zero to four overhang regions, wherein each overhang region is six or fewer nucleotides in length.

In another aspect of the present invention, there is provided a non-naturally occurring modified double stranded ribonucleic acid (dsRNA) comprising first and second nucleic acid strands, wherein said second nucleic acid strand is complementary to SEQ ID NO: 4566 or SEQ ID NO: 4833 and reduces ß-catenin target gene expression when said double stranded nucleic acid is introduced into a mammalian cell.

In one embodiment, starting from the first nucleotide (position 1) at the 3' terminus of the first oligonucleotide strand, position 1, 2 and/or 3 is substituted with a modified nucleotide. In certain embodiments, the modified nucleotide residue of the 3' terminus of the first strand is a deoxyribonucleotide, an acyclonucleotide or a fluorescent molecule. In a related embodiment, position 1 of the 3' terminus of the first oligonucleotide strand is a deoxyribonucleotide.

In an additional embodiment, the 3' terminus of the first strand and the 5' terminus of the second strand form a blunt end.

In another embodiment, the first strand is 25 nucleotides in length and the second strand is 27 nucleotides in length.

In one embodiment, the second strand includes a sequence of SEQ ID NOs: 1117-2225.

In another embodiment, the first strand includes a sequence of SEQ ID NOs: 8-1116, 3335-3822 and 3823-4443.

In an additional embodiment, the dsRNA includes a pair of first strand/second strand sequences as shown for a DsiRNA agent of Tables 2-4, 6, 9 or 11.

In one embodiment, each of the first and the second strands has a length which is at least 26 nucleotides.

In another embodiment, the nucleotides of the 3' overhang include a modified nucleotide. Optionally, the modified nucleotide of the 3' overhang is a 2'-O-methyl ribonucleotide. In a related embodiment, all nucleotides of the 3' overhang are modified nucleotides.

In an additional embodiment, one or both of the first and second oligonucleotide strands includes a 5' phosphate.

In another embodiment, the modified nucleotide residues of the dsRNA are 2'-O-methyl, 2'-methoxyethoxy, 2'-fluoro, 2'-allyl, 2'-O-[2-(methylamino)-2-oxoethyl],

second strand is 26-35 nucleotides in length and comprises 1-5 single-stranded nucleotides at its 3' terminus, where the second oligonucleotide strand is sufficiently complementary to a target β-catenin cDNA sequence of SEQ ID NOs: 2226-3334 along at least 15 nucleotides of the second oligonucleotide strand length to reduce β-catenin target gene expression when the double stranded nucleic acid is introduced into a mammalian cell. Optionally, the second oligonucleotide strand is complementary to a target β-catenin cDNA sequence of SEQ ID NOs: 1-3 and 5-6 along at most 27 nucleotides of its length.

In one aspect of the present invention there is provided a non-naturally occurring double stranded ribonucleic acid (dsRNA) comprising first and second nucleic acid strands, wherein said second nucleic acid strand is complementary to SEQ ID NO: 4566 or SEQ ID NO: 4833 and reduces β-catenin target gene expression when said double stranded nucleic acid is introduced into a mammalian cell.

In a further aspect of the present invention there is provided a non-naturally occurring double stranded ribonucleic acid (dsRNA) comprising first and second nucleic acid strands, wherein said first strand is 25-35 nucleotides in length, wherein said second nucleic acid strand comprises SEQ ID NO: 1239 and is 25-50 nucleotides in length, and wherein said dsRNA reduces β-catenin target gene expression when said double stranded nucleic acid is introduced into a mammalian cell.

In yet a further aspect of the present invention there is provided a non-naturally occurring double-stranded RNA (dsRNA) comprising first and second nucleic acid strand and a duplex region of at least 25 base pairs, wherein said first strand is 25-35 nucleotides in length and said second strand of said dsRNA comprises SEQ ID NO: 1239 and is 25-50 nucleotides in length, wherein said dsRNA reduces β-catenin target gene expression when said double stranded nucleic acid is introduced into a mammalian cell.

In a further aspect of the present invention there is provided a non-naturally occurring double stranded ribonucleic acid (dsRNA) comprising first and second nucleic acid strands and a duplex region of at least 25 base pairs, wherein said dsRNA comprises blunt ends, wherein each of said first and second nucleic acid strands consists of the same number of nucleotide residues and is at most 35 nucleotides in length, wherein said second nucleic acid strand is complementary to SEQ ID NO: 4566 or SEQ ID NO: 4833 and reduces β-catenin target gene expression when said double stranded nucleic acid is introduced into a mammalian cell.

In yet a further aspect of the present invention there is provided a A non-naturally occurring dsRNA molecule, consisting of: (a) a sense region and an antisense region, wherein said sense region and said antisense region together form a duplex region consisting of 19-35 base pairs and said antisense region comprises a sequence that is the complement of SEQ ID NO: 4566 or SEQ ID NO: 4833; and (b) from zero to two 3' overhang regions, wherein each overhang region is six or fewer nucleotides in length.

In a further aspect, the present invention provides a non-naturally occurring siRNA molecule, consisting of: (a) a sense region and an antisense region, wherein said sense region and said antisense region together form a duplex region consisting of 19-23 base pairs and said antisense region comprises a sequence that is the complement of SEQ ID NO: 4566 or SEQ ID NO: 4833; and (b) from zero to four overhang regions, wherein each overhang region is six or fewer nucleotides in length.

In a further aspect, there is provided a non-naturally occurring double stranded ribonucleic acid (dsRNA) comprising first and second nucleic acid strands, wherein said first strand is 15-35 nucleotides in length and said second strand of said dsRNA is 19-35 nucleotides in length, wherein said second nucleic acid strand is complementary to SEQ ID NO: 4566 or SEQ ID NO: 4833.

In yet a further aspect, there is provided a non-naturally occurring double stranded ribonucleic acid (dsRNA) comprising first and second nucleic acid strands, wherein said dsRNA comprises blunt ends, wherein each of said first and second nucleic acid strands consists of the same number of nucleotide residues and is at most 35 nucleotides in length, wherein said second nucleic acid strand is complementary to SEQ ID NO: 4566 or SEQ ID NO: 4833 and reduces β-catenin target gene expression when said double stranded nucleic acid is introduced into a mammalian cell.

In a further aspect of the present invention, there is provided a non-naturally occurring dsRNA molecule, consisting of: (a) a sense region and an antisense region, wherein said sense region and said antisense region together form a duplex region consisting of 15-35 base pairs and said antisense region comprises a sequence that is the complement of SEQ ID NO: 4566 or SEQ ID NO: 4833; and (b) from zero to two 3' overhang regions, wherein each overhang region is six or fewer nucleotides in length.

In yet a further aspect of the present invention there is provided a non-naturally occurring siRNA molecule, consisting of: (a) a sense region and an antisense

region, wherein said sense region and said antisense region together form a duplex region consisting of 19-23 base pairs and said antisense region comprises a sequence that is the complement of SEQ ID NO: 4566 or SEQ ID NO: 4833; and (b) from zero to four overhang regions, wherein each overhang region is six or fewer nucleotides in length.

In another aspect of the present invention, there is provided a non-naturally occurring modified double stranded ribonucleic acid (dsRNA) comprising first and second nucleic acid strands, wherein said second nucleic acid strand is complementary to SEQ ID NO: 4566 or SEQ ID NO: 4833 and reduces ß-catenin target gene expression when said double stranded nucleic acid is introduced into a mammalian cell.

In one embodiment, starting from the first nucleotide (position 1) at the 3' terminus of the first oligonucleotide strand, position 1, 2 and/or 3 is substituted with a modified nucleotide. In certain embodiments, the modified nucleotide residue of the 3' terminus of the first strand is a deoxyribonucleotide, an acyclonucleotide or a fluorescent molecule. In a related embodiment, position 1 of the 3' terminus of the first oligonucleotide strand is a deoxyribonucleotide.

In an additional embodiment, the 3' terminus of the first strand and the 5' terminus of the second strand form a blunt end.

In another embodiment, the first strand is 25 nucleotides in length and the second strand is 27 nucleotides in length.

In one embodiment, the second strand includes a sequence of SEQ ID NOs: 1117-2225.

In another embodiment, the first strand includes a sequence of SEQ ID NOs: 8-1116, 3335-3822 and 3823-4443.

In an additional embodiment, the dsRNA includes a pair of first strand/second strand sequences as shown for a DsiRNA agent of Tables 2-4, 6, 9 or 11.

In one embodiment, each of the first and the second strands has a length which is at least 26 nucleotides.

In another embodiment, the nucleotides of the 3' overhang include a modified nucleotide. Optionally, the modified nucleotide of the 3' overhang is a 2'-O-methyl ribonucleotide. In a related embodiment, all nucleotides of the 3' overhang are modified nucleotides.

In an additional embodiment, one or both of the first and second oligonucleotide strands includes a 5' phosphate.

In another embodiment, the modified nucleotide residues of the dsRNA are 2'-O-methyl, 2'-methoxyethoxy, 2'-fluoro, 2'-allyl, 2'-O-[2-(methylamino)-2-oxoethyl],

[Text continued on page 4]

catenin RNA levels when assayed *in vitro* in a mammalian cell at an effective concentration in the environment of a cell of 1 nanomolar or less.

In one embodiment, the effective amount is a dosage of 1 microgram to 5 milligrams per kilogram of the subject per day, 100 micrograms to 0.5 milligrams per kilogram, 0.001 to 0.25 milligrams per kilogram, 0.01 to 20 micrograms per kilogram, 0.01 to 10 micrograms per kilogram, 0.10 to 5 micrograms per kilogram, or 0.1 to 2.5 micrograms per kilogram.

In an additional embodiment, the invention provides a mammalian cell containing an isolated dsRNA as described.

Another embodiment of the invention provides a pharmaceutical composition which includes an isolated dsRNA as described and a pharmaceutically acceptable carrier. A further embodiment of the invention provides a kit having an isolated dsRNA as described and instructions for its use.

In an additional aspect, the invention provides a composition possessing β-catenin inhibitory activity consisiting essentially of an isolated double stranded ribonucleic acid (dsRNA) comprising first and second nucleic acid strands and a duplex region of at least 25 base pairs, where the first strand is 25-34 nucleotides in length and the second strand is 26-35 nucleotides in length and comprises 1-5 single-stranded nucleotides at its 3' terminus, where the second oligonucleotide strand is sufficiently complementary to a target β-catenin cDNA sequence of SEQ ID NOs: 2226-3334 along at least 15 nucleotides of the second oligonucleotide strand length to reduce β-catenin target gene expression when the double stranded nucleic acid is introduced into a mammalian cell.

In another embodiment, the invention provides a method for treating or preventing a β-catenin-associated disease or disorder in a subject by administering a dsRNA and/or dsRNA-containing composition of the invention and a pharmaceutically acceptable carrier to a subject in an amount sufficient to treat or prevent a β-catenin-associated disease or disorder in the subject. In a related embodiment, the β-catenin-associated disease or disorder is colorectal or hepatocellular cancer. Optionally, the β-catenin-associated disease or disorder is melanoma.

In another aspect, the invention provides an isolated double stranded ribonucleic acid (dsRNA) comprising first and second nucleic acid strands and a duplex region of at least 25 base pairs, wherein the dsRNA comprises blunt ends,

where each of the first and second oligonucleotide strands consists of the same number of nucleotide residues and is at most 35 nucleotides in length, wherein the second oligonucleotide strand is sufficiently complementary to a target β-catenin cDNA sequence of SEQ ID NOs: 2226-3334 along at least 15 nucleotides of the second oligonucleotide strand length to reduce β-catenin target gene expression when the double stranded nucleic acid is introduced into a mammalian cell.

In one embodiment, the dsRNA is capable of reducing target gene expression at a concentration of less than 1 nanomolar in the environment of a cell. In another embodiment, each of the first and the second strands has a length which is at least 26 nucleotides. In a related embodiment, each of the first and the second strands has a length which is 26-30 nucleotides. Optionally, each of the first and the second strands has a length which is 27 nucleotides.

In certain embodiments, the second strand of the dsRNA includes a sequence selected from SEQ ID NOs: 1117-2225. (Optionally, the second strand is a sequence selected from SEQ ID NOs: 1117-2225.) In related embodiments, the first strand of the dsRNA includes a sequence selected from SEQ ID NOs: 5553-7770. (Optionally, the first strand is a sequence selected from SEQ ID NOs: 5553-7770.) In a further embodiment, the dsRNA includes a pair of first strand and corresponding second strand sequences selected from Tables 7-8 or 12-13.

Another aspect of the invention provides an isolated double stranded ribonucleic acid (dsRNA) comprising first and second nucleic acid strands and a duplex region of at least 25 base pairs, where the dsRNA comprises a blunt end, where each of the first and second oligonucleotide strands consists of the same number of nucleotide residues and is at most 35 nucleotides in length, where the ultimate and penultimate residues of the 3' terminus of the first strand and the ultimate and penultimate residues of said 5' terminus of the second strand form one or two mismatched based pairs. where the second oligonucleotide strand is sufficiently complementary to a target β-catenin cDNA sequence of SEQ ID NOs: 2226-3334 along at least 15 nucleotides of the second oligonucleotide strand length to reduce β-catenin target gene expression when the double stranded nucleic acid is introduced into a mammalian cell.

In one embodiment, the first strand includes a sequence of SEQ ID NOs: 5553-6661.

In an additional aspect, the invention provides a composition possessing β-catenin inhibitory activity consisting essentially of an isolated double stranded ribonucleic acid (dsRNA) comprising first and second nucleic acid strands and a duplex region of at least 25 base pairs, where the dsRNA comprises blunt ends, where each of the first and second oligonucleotide strands consists of the same number of nucleotide residues and is at most 35 nucleotides in length, where the second oligonucleotide strand is sufficiently complementary to a target β-catenin cDNA sequence of SEQ ID NOs: 2226-3334 along at least 15 nucleotides of the second oligonucleotide strand length to reduce β-catenin target gene expression when the double stranded nucleic acid is introduced into a mammalian cell and the second oligonucleotide strand is complementary to a target β-catenin cDNA sequence of SEQ ID NOs: 1-3 and 5-6 along at most 35 nucleotides of its length.

In another aspect, the invention provides an isolated dsRNA molecule consisting of a sense region and an antisense region, where the sense region and the antisense region together form a duplex region consisting of 19-35 base pairs and the antisense region includes a sequence that is the complement of a sequence of SEQ ID NOs 4444-5552, and the isolated dsRNA further includes from zero to two 3' overhang regions where each overhang region is six or fewer nucleotides in length. Optionally, the duplex region consists of 25-35 base pairs.

In a further aspect, the invention provides a siRNA molecule consisting of a sense region and an antisense region, where the sense region and the antisense region together form a duplex region consisting of 19-23 base pairs and the antisense region includes a sequence that is the complement of a sequence of SEQ ID NOs 4444-5552, and the isolated dsRNA further includes from zero to four overhang regions, where each overhang region is six or fewer nucleotides in length.

In a further aspect, the invention provides an isolated double stranded ribonucleic acid (dsRNA) comprising first and second nucleic acid strands, wherein the first strand is 15-35 nucleotides in length and the second strand is 19-35 nucleotides in length, wherein the second oligonucleotide strand is sufficiently complementary to a target β-catenin cDNA sequence of Table 18 along at least 19 nucleotides of the second oligonucleotide strand length to reduce β-catenin target gene expression when the double stranded nucleic acid is introduced into a mammalian cell. In certain embodiments, the isolated dsRNA possesses a duplex

region of at least 25 base pairs. In one embodiment, the second strand of the isolated dsRNA includes a one to five nucleotide single stranded overhang of the first strand at the 3' terminus of the second strand. In another embodiment, the first strand is 25-35 nucleotides in length. In an additional embodiment, the second strand is 25-35 nucleotides in length. Optionally, the second oligonucleotide strand is complementary to a target β-catenin cDNA sequence of GenBank Accession Nos. NM_001904.3, NM_001098209.1 or NM_001098210.1 along at most 27 nucleotides of the second oligonucleotide strand length.

In one embodiment, starting from the first nucleotide (position 1) at the 3' terminus of the first oligonucleotide strand, position 1, 2 and/or 3 is substituted with a modified nucleotide. In certain embodiments, the modified nucleotide residue of the 3' terminus of the first strand is a deoxyribonucleotide, an acyclonucleotide or a fluorescent molecule. In a related embodiment, position 1 of the 3' terminus of the first oligonucleotide strand is a deoxyribonucleotide.

In an additional embodiment, the 3' terminus of the first strand and the 5' terminus of the second strand form a blunt end.

In another embodiment, the first strand is 25 nucleotides in length and the second strand is 27 nucleotides in length.

In one embodiment, the second strand includes a sequence of SEQ ID NOs: 1122, 1126, 1216, 1239, 1282, 1368, 1165, 1509, 1536 and 1552.

In another embodiment, the first strand includes a sequence of SEQ ID NOs: 13, 17, 107, 130, 173, 259, 56, 400, 427 and 443.

In an additional embodiment, the dsRNA includes a pair of first strand/second strand sequences as shown for a DsiRNA agent of Tables 2-3, 6-9 and 11-13.

In one embodiment, each of the first and the second strands has a length which is at least 26 nucleotides.

In another embodiment, the nucleotides of the 3' overhang include a modified nucleotide. Optionally, the modified nucleotide of the 3' overhang is a 2'-O-methyl ribonucleotide. In a related embodiment, all nucleotides of the 3' overhang are modified nucleotides.

In an additional embodiment, one or both of the first and second oligonucleotide strands includes a 5' phosphate.

In another embodiment, the modified nucleotide residues of the dsRNA are 2'-O-methyl, 2'-methoxyethoxy, 2'-fluoro, 2'-allyl, 2'-O-[2-(methylamino)-2-oxoethyl],

4'-thio, 4'-CH2-O-2'-bridge, 4'-(CH2)2-O-2'-bridge, 2'-LNA, 2'-amino or 2'-O-(N-methlycarbamate).

In one embodiment, the 3' overhang of the dsRNA is 1-3 nucleotides in length. Optionally, the 3' overhang is 1-2 nucleotides in length. In a related embodiment, the 3' overhang is two nucleotides in length and the modified nucleotide of the 3' overhang is a 2'-O-methyl modified ribonucleotide.

In a further embodiment, the second oligonucleotide strand, starting from the nucleotide residue of the second strand that is complementary to the 5' terminal nucleotide residue of the first oligonucleotide strand, includes alternating modified and unmodified nucleotide residues. In another embodiment, the second oligonucleotide strand, starting from the nucleotide residue of the second strand that is complementary to the 5' terminal nucleotide residue of the first oligonucleotide strand, includes unmodified nucleotide residues at all positions from position 18 to the 5' terminus of the second oligonucleotide strand.

In another embodiment, each of the first and the second strands has a length which is at least 26 and at most 30 nucleotides.

In one embodiment, the dsRNA is cleaved endogenously in the cell by Dicer.

In an additional embodiment, the amount of the isolated double stranded nucleic acid sufficient to reduce expression of the target gene is 1 nanomolar or less, 200 picomolar or less, 100 picomolar or less, 50 picomolar or less, 20 picomolar or less, 10 picomolar or less, 5 picomolar or less, 2 picomolar or less or 1 picomolar or less in the environment of the cell.

In a further embodiment, the isolated dsRNA possesses greater potency than isolated 21mer siRNAs directed to the identical at least 19 nucleotides of the target β-catenin cDNA in reducing target β-catenin gene expression when assayed *in vitro* in a mammalian cell at an effective concentration in the environment of a cell of 1 nanomolar or less, 200 picomolar or less, 100 picomolar or less, 50 picomolar or less, 20 picomolar or less, 10 picomolar or less, 5 picomolar or less, 2 picomolar or less or 1 picomolar or less.

In another embodiment, the isolated dsRNA is sufficiently complementary to the target β-catenin cDNA sequence to reduce β-catenin target gene expression by at least 10%, at least 50%, at least 80-90%, at least 95%, at least 98%, or at least 99% when the double stranded nucleic acid is introduced into a mammalian cell.

In a further embodiment, the first and second strands are joined by a chemical linker. In a related embodiment, the 3' terminus of the first strand and the 5' terminus of the second strand are joined by a chemical linker.

In one embodiment, a nucleotide of the second or first strand is substituted with a modified nucleotide that directs the orientation of Dicer cleavage.

In another embodiment, the dsRNA has a modified nucleotide that is a deoxyribonucleotide, a dideoxyribonucleotide, an acyclonucleotide, a 3'-deoxyadenosine (cordycepin), a 3'-azido-3'-deoxythymidine (AZT), a 2',3'-dideoxyinosine (ddI), a 2',3'-dideoxy-3'-thiacytidine (3TC), a 2',3'-didehydro-2',3'-dideoxythymidine (d4T), a monophosphate nucleotide of 3'-azido-3'-deoxythymidine (AZT), a 2',3'-dideoxy-3'-thiacytidine (3TC) and a monophosphate nucleotide of 2',3'-didehydro-2',3'-dideoxythymidine (d4T), a 4-thiouracil, a 5-bromouracil, a 5-iodouracil, a 5-(3-aminoallyl)-uracil, a 2'-O-alkyl ribonucleotide, a 2'-O-methyl ribonucleotide, a 2'-amino ribonucleotide, a 2'-fluoro ribonucleotide, or a locked nucleic acid.

In an additional embodiment, the dsRNA has a phosphonate, a phosphorothioate or a phosphotriesterphosphate backbone modification.

In a further embodiment, the dsRNA contains a morpholino nucleic acid or oligonucleotide, or a peptide nucleic acid (PNA).

In one embodiment, the invention provides a method for reducing expression of a target β-catenin gene in a mammalian cell having contacting a mammalian cell *in vitro* with an isolated dsRNA as described in an amount sufficient to reduce expression of a target β-catenin gene in the cell.

In one embodiment, target β-catenin gene expression is reduced by at least 10%, at least 50%, or at least 80-90%. In another embodiment, target β-catenin mRNA levels are reduced at least 90% at least 8 days after the cell is contacted with the dsRNA. In a further embodiment, β-catenin mRNA levels are reduced by at least 70% at least 10 days after the cell is contacted with the dsRNA.

In a further embodiment, the invention provides a method for reducing expression of a target β-catenin gene in a mammal by administering an isolated dsRNA as described to a mammal in an amount sufficient to reduce expression of a target β-catenin gene in the mammal.

In one embodiment, the isolated dsRNA is administered at a dosage of 1 microgram to 5 milligrams per kilogram of the mammal per day, 100 micrograms to

0.5 milligrams per kilogram, 0.001 to 0.25 milligrams per kilogram, 0.01 to 20 micrograms per kilogram, 0.01 to 10 micrograms per kilogram, 0.10 to 5 micrograms per kilogram, or 0.1 to 2.5 micrograms per kilogram.

In another embodiment, the isolated dsRNA possesses greater potency than isolated 21mer siRNAs directed to the identical at least 19 nucleotides of the target β-catenin cDNA in reducing target β-catenin gene expression when assayed *in vitro* in a mammalian cell at an effective concentration in the environment of a cell of 1 nanomolar or less.

In an additional embodiment, the administering step includes intravenous injection, intramuscular injection, intraperitoneal injection, infusion, subcutaneous injection, transdermal, aerosol, rectal, vaginal, topical, oral or inhaled delivery.

In a further embodiment, the invention provides a method for selectively inhibiting the growth of a cell by contacting a cell with an amount of an isolated dsRNA as described, in an amount sufficient to inhibit the growth of the cell.

In one embodiment, the cell is a tumor cell of a subject. Optionally, the cell is a tumor cell *in vitro*, *e.g.*, a hepatocellular (*e.g.*, HepG2 or HuH7) or colorectal (*e.g.*, HCT116) cancer cell, or a HeLa or other cancer cell. In certain embodiments, the cell is a mammalian liver cell. In a related embodiment, the cell is a human cell.

In an additional embodiment, the invention provides a formulation which includes an isolated dsRNA as described, where the dsRNA is present in an amount effective to reduce target β-catenin RNA levels when the dsRNA is introduced into a mammalian cell *in vitro* by at least 10%, at least 50% or at least 80-90%, and where the dsRNA possesses greater potency than isolated 21mer siRNAs directed to the identical at least 19 nucleotides of the target β-catenin cDNA in reducing target β-catenin RNA levels when assayed *in vitro* in a mammalian cell at an effective concentration in the environment of a cell of 1 nanomolar or less.

In one embodiment, the effective amount is 1 nanomolar or less, 200 picomolar or less, 100 picomolar or less, 50 picomolar or less, 20 picomolar or less, 10 picomolar or less, 5 picomolar or less, 2 picomolar or less or 1 picomolar or less in the environment of the cell.

In another embodiment, the invention provides a formulation which includes an isolated dsRNA as described, where the dsRNA is present in an amount effective to reduce target RNA levels when the dsRNA is introduced into a cell of a mammalian subject by at least 10%, at least 50% or at least 80-90%, and where the

dsRNA possesses greater potency than isolated 21mer siRNAs directed to the identical at least 19 nucleotides of the target β-catenin cDNA in reducing target β-catenin RNA levels when assayed *in vitro* in a mammalian cell at an effective concentration in the environment of a cell of 1 nanomolar or less.

In one embodiment, the effective amount is a dosage of 1 microgram to 5 milligrams per kilogram of the subject per day, 100 micrograms to 0.5 milligrams per kilogram, 0.001 to 0.25 milligrams per kilogram, 0.01 to 20 micrograms per kilogram, 0.01 to 10 micrograms per kilogram, 0.10 to 5 micrograms per kilogram, or 0.1 to 2.5 micrograms per kilogram.

In an additional embodiment, the invention provides a mammalian cell containing an isolated dsRNA as described.

Another embodiment of the invention provides a pharmaceutical composition which includes an isolated dsRNA as described and a pharmaceutically acceptable carrier. A further embodiment of the invention provides a kit having an isolated dsRNA as described and instructions for its use.

In an additional aspect, the invention provides a composition possessing β-catenin inhibitory activity consisiting essentially of an isolated double stranded ribonucleic acid (dsRNA) comprising first and second nucleic acid strands, wherein the first strand is 15-35 nucleotides in length and the second strand is 19-35 nucleotides in length, wherein the second oligonucleotide strand is sufficiently complementary to a target β-catenin cDNA sequence of Table 18 along at least 19 nucleotides of the second oligonucleotide strand length to reduce β-catenin target gene expression when the double stranded nucleic acid is introduced into a mammalian cell.

In another embodiment, the invention provides a method for treating or preventing a β-catenin-associated disease or disorder in a subject by administering a dsRNA and/or dsRNA-containing composition of the invention and a pharmaceutically acceptable carrier to a subject in an amount sufficient to treat or prevent a β-catenin-associated disease or disorder in the subject. In a related embodiment, the β-catenin-associated disease or disorder is hepatocellular or colorectal cancer, or, optionally, renal, breast, lung, ovarian, cervical, esophageal, oropharyngeal or pancreatic cancer.

In another aspect, the invention provides an isolated double stranded ribonucleic acid (dsRNA) comprising first and second nucleic acid strands, wherein

the dsRNA comprises blunt ends, wherein each of the first and second oligonucleotide strands consists of the same number of nucleotide residues and is at most 35 nucleotides in length, wherein the second oligonucleotide strand is sufficiently complementary to a target β-catenin cDNA sequence of Table 18 along at least 19 nucleotides of the second oligonucleotide strand length to reduce β-catenin target gene expression when the double stranded nucleic acid is introduced into a mammalian cell.

In one embodiment, the dsRNA is capable of reducing target gene expression at a concentration of less than 1 nanomolar in the environment of a cell. In another embodiment, each of the first and the second strands has a length which is at least 26 nucleotides. In a related embodiment, each of the first and the second strands has a length which is 26-30 nucleotides. Optionally, each of the first and the second strands has a length which is 27 nucleotides.

In certain embodiments, the second strand of the dsRNA includes a sequence selected from SEQ ID NOs: 1122, 1126, 1216, 1239, 1282, 1368, 1165, 1509, 1536 and 1552. In related embodiments, the first strand of the dsRNA includes a sequence selected from SEQ ID NOs: 6667, 6671, 6761, 6784, 6827, 6913, 6710, 7054, 7081 and 7097. In a further embodiment, the dsRNA includes a pair of first strand and corresponding second strand sequences selected from Tables 2-3, 6-9 and 11-13.

Another aspect of the invention provides an isolated double stranded ribonucleic acid (dsRNA) comprising first and second nucleic acid strands, wherein the dsRNA comprises a blunt end, wherein each of the first and second oligonucleotide strands consists of the same number of nucleotide residues and is at most 35 nucleotides in length, wherein the ultimate and penultimate residues of the 3' terminus of the first strand and the ultimate and penultimate residues of said 5' terminus of the second strand form one or two mismatched based pairs, wherein the second oligonucleotide strand is sufficiently complementary to a target β-catenin cDNA sequence of Table 18 along at least 19 nucleotides of the second oligonucleotide strand length to reduce β-catenin target gene expression when the double stranded nucleic acid is introduced into a mammalian cell.

In one embodiment, the first strand includes a sequence of SEQ ID NOs: 5558, 5562, 5652, 5675, 5718, 5804, 5601, 5945, 5972 and 5988.

In an additional aspect, the invention provides a composition possessing β-catenin inhibitory activity consisting essentially of an isolated double stranded

ribonucleic acid (dsRNA) comprising first and second nucleic acid strands, wherein the dsRNA comprises blunt ends, wherein each of the first and second oligonucleotide strands consists of the same number of nucleotide residues and is at most 35 nucleotides in length, wherein the second oligonucleotide strand is sufficiently complementary to a target β-catenin cDNA sequence of Table 18 along at least 19 nucleotides of the second oligonucleotide strand length to reduce β-catenin target gene expression when the double stranded nucleic acid is introduced into a mammalian cell.

In another aspect, the invention provides an isolated dsRNA molecule consisting of a sense region and an antisense region, where the sense region and the antisense region together form a duplex region consisting of 15-35 base pairs and the antisense region includes a sequence that is the complement of a sequence of Table 18, and the isolated dsRNA further includes from zero to two 3' overhang regions where each overhang region is six or fewer nucleotides in length. Optionally, the duplex region consists of 19-35 base pairs. In certain embodiments, the duplex region consists of 25-35 base pairs. In additional embodiments, the duplex region consists of 25-30 base pairs.

In a further aspect, the invention provides a siRNA molecule consisting of a sense region and an antisense region, where the sense region and the antisense region together form a duplex region consisting of 19-23 base pairs and the antisense region includes a sequence that is the complement of a sequence of Table 18, and the isolated dsRNA further includes from zero to four overhang regions, where each overhang region is six or fewer nucleotides in length.

In certain aspects, the invention is directed to Dicer substrate siRNAs ("DsiRNAs") with structures and modification patterns that act as effective and highly potent β-catenin inhibitory agents, optionally possessing extended duration of inhibitory effect. A number of such DsiRNAs possess target-specific inhibitory potencies and efficacies that are significantly enhanced relative to 19-23 base pair double stranded nucleic acids (e.g., 21 nucleotide siRNAs) directed against the same target RNA. In certain such embodiments, such a DsiRNA is more potent at reducing β-catenin target gene expression in a mammalian cell than a 19, 20, 21, 22 or 23 base pair sequence that is contained within it, when suitably formulated at a concentration of 1 nM or less.

The present invention is also directed to compounds, compositions, and methods relating to traits, diseases and conditions that respond to the modulation of expression and/or activity of genes involved in *CTNNB1* gene expression pathways or other cellular processes that mediate the maintenance or development of such traits, diseases and conditions. Specifically, the invention relates to small nucleic acid molecules that are capable of being processed by the Dicer enzyme, such as Dicer substrate siRNAs (DsiRNAs) capable of mediating RNA interference (RNAi) against *CTNNB1* (β-catenin) gene expression. Such anti-β-catenin DsiRNAs are useful, for example, in providing compositions for treatment of traits, diseases and conditions that can respond to modulation of β-catenin in a subject, such as cancer and/or other proliferative diseases, disorders, or conditions. Efficacy, potency, toxicity and other effects of an anti-β-catenin DsiRNA can be examined in one or more animal models of proliferative disease (exemplary suitable animal models of proliferative disease are recited below).

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 shows the structures of exemplary DsiRNA agents targeting a site in the β-catenin RNA referred to herein as the "βc-1569" target site. UPPER case = unmodified RNA, lower case = DNA, **Bold** = mismatch base pair nucleotides; arrowheads indicate projected Dicer enzyme cleavage sites; dashed line indicates sense strand (top strand) sequences corresponding to the projected Argonaute 2 (Ago2) cleavage site within the targeted β-catenin sequence.

Figures 2 and 3 show plots of human β-catenin inhibitory efficacies observed at 1 nM in the environment of HeLa cells for DsiRNAs targeting sites progressing from 5' to 3' across the human β-catenin transcript. Human β-catenin levels were normalized to HPRT and SFRS9 levels.

Figures 4 and 5 show plots of mouse β-catenin inhibitory efficacies observed at 1 nM in the environment of Hepa 1-6 cells for DsiRNAs targeting sites progressing from 5' to 3' across the mouse β-catenin transcript. Mouse β-catenin levels were normalized to HPRT and Rpl23 levels.

Figure 6 shows that human β-catenin targeting DsiRNAs effectively reduced β-catenin RNA levels by 90% or more in human HCT116 colon carcinoma cells.

HCT116 cells were transfected *in vitro* with indicated DsiRNAs at 3 nM or 10 nM, and cells were assayed for β-catenin RNA levels at a 24 hour timepoint.

Figure 7 shows that human β-catenin targeting DsiRNAs significantly inhibited growth of human HepG2 hepatocarcinoma cells. HepG2 cells were transfected *in vitro* with indicated DsiRNAs at 3 nM, and HepG2 cell lines were assayed for growth at a three day timepoint.

Figures 8-11 show histograms of human β-catenin inhibitory efficacies observed for indicated DsiRNAs. "P1" indicates phase 1, while "P2" indicates phase 2. In phase 1, DsiRNAs were tested at 1 nM in the environment of HeLa cells. In phase 2, DsiRNAs were tested at 1 nM, at 0.3 nM and at 0.1 nM in the environment of HeLa cells. Individual bars represent average human β-catenin levels observed in triplicate, with standard errors shown. Human β-catenin levels were normalized to HPRT and SFRS9 levels. Expression levels were assayed with probe amplicons positioned at both positions 1297-1397 and 3506-3659 in Hs CTNNB1. (It is noted that the histograms of Figure 8 reflect phase 2 values obtained for a subpar transfection.)

Figures 12-15 show histograms of mouse β-catenin inhibitory efficacies observed for indicated DsiRNAs. "P1" indicates phase 1, while "P2" indicates phase 2. In phase 1, DsiRNAs were tested at 1 nM in the environment of mouse Hepa 1-6 cells. In phase 2, DsiRNAs were tested at 1 nM, at 0.3 nM and at 0.1 nM in the environment of mouse Hepa 1-6 cells. Individual bars represent average human β-catenin levels observed in triplicate, with standard errors shown. Human β-catenin levels were normalized to HPRT and RPL23 levels. Expression levels were assayed with probe amplicons positioned at both positions 1232-1394 and 2848-2930 in Mm CTNNB1. (It is noted that the histograms of Figure 13 reflect phase 2 values obtained for a subpar transfection.)

Figure 16 shows antisense (guide) strand 2'-O-methyl modification patterns employed in phase 3 assays.

Figures 17-24 present histograms showing phase 3 efficacy data for six different guide strand modification patterns each across 32 β-catenin-targeting DsiRNAs in human HeLa cells at 0.1 nM (parallel assays) and 1 nM. Expression levels were assayed with probe amplicons positioned at both positions 1297-1397 and 3506-3659 in Hs CTNNB1, with human β-catenin levels normalized to HPRT and SFRS9 levels.

Figure 25 shows that assayed DsiRNAs targeting human β-catenin (βcat-h1569, βcat-h1683, βcat-h2612 and βcat-h3393) effectively inhibited expression of Axin-2, a downstream target of β-catenin, in both HCT116 (colon carcinoma) and HepG2 (hepatocellular carcinoma) cell lines. Cells were assayed at two days post-transfection at indicated concentrations (3 nM and 10 nM) with designated DsiRNAs.

Figure 26 shows that transfection of human colorectal cancer cell line HCT116 cells with certain DsiRNAs targeting human β-catenin (βc-h1683, βc-h2612 and βc-h3393) inhibited the growth of such cells at five days post-transfection, as compared to cells administered a control DsiRNA. Cell growth inhibition was assayed using a CellTiter-Blue® Cell Viability Assay (Promega) at five days post-transfection.

Figure 27 shows that transfection of human hepatocellular carcinoma cell line HuH7 cells with a DsiRNA targeting human β-catenin inhibited the growth of such cells at five days post-transfection, as compared to cells administered a control DsiRNA. Cell growth inhibition was assayed using a CellTiter-Blue® Cell Viability Assay (Promega) at five days post-transfection.

Figure 28 shows that transfection of human hepatocellular carcinoma cell line HuH7 cells with a DsiRNA targeting human β-catenin (specifically, a βc-h3393 25/27mer possessing an "M11" modified antisense (guide) strand consisting of 2'-O-methyl modifications at the following positions starting from the 5'-terminus (position 1) of the antisense strand: 1, 2, 3, 4, 11, 13, 25 and 27) produced knockdown of β-catenin levels of approximately 80% at two days post-transfection, when administered with a control DsiRNA, as compared to cells administered only the control DsiRNA.

Figure 29 shows fractionated human β-catenin protein levels found in HeLa (cervical cancer), HepG2 (hepatocellular liver carcinoma) and HCT116 (colorectal carcinoma) cell lines. Nuclear and cytoplasmic levels of β-catenin were identified for each cell line *via* Western blot, with β-actin levels assayed as an internal control. Cell extracts were obtained from confluent six well pates, using a NE-PER Nuclear and Cytoplasmic Extraction Reagents Kit (Thermo Fisher Scientific Inc). 75 ug of protein was loaded from each cell line. A known truncation mutant form of β-catenin protein was observed in HepG2 cells.

Figure 30 demonstrates that DsiRNAs targeting human β-catenin were active *in vivo* in normal mouse liver, inhibiting both β-catenin mRNA (top panel) and protein

(bottom panel) levels significantly (*e.g.*, in many instances, approximately 70-90% knockdown was observed) when administered as a single dose intravenously to normal mice (n=5 mice per group) at 10 mg/kg and formulated in Invivofectamine® 2.0 (Invitrogen™, Carlsbad, CA). Liver tissue was harvested at 72 hours post-administration. All DsiRNAs targeting human β-catenin possessed "M11" modified antisense (guide) strands.

Figure 31 shows that DsiRNAs targeting human β-catenin were active *in vivo* in normal mouse liver, inhibiting both β-catenin mRNA (top panel) and Axin-2 mRNA (bottom panel) levels significantly (*e.g.*, in many instances, approximately 70-90% knockdown was observed) when administered as a single dose intravenously to normal mice (n=5 mice per group) at 10 mg/kg and formulated in Invivofectamine® 2.0 (Invitrogen™, Carlsbad, CA). Liver tissue was harvested at 72 hours post-administration. DsiRNAs targeting human β-catenin possessed varying modification patterns as indicated, with, *e.g.*, an "M0/M11" pattern corresponding to a 25/27mer DsiRNA possessing an unmodified sense (passenger) strand and a modified antisense (guide) strand having the "M11" pattern of 2'-O-methlyation. It is noted that the "M14" modification pattern of the sense strand corresponds to modification of the sense strand at the following positions, starting from the 5'-terminus (position 1) of the sense strand: 2, 4, 6, 8, 12, 14, 16 and 18.

Figure 32 demonstrates that DsiRNAs targeting human β-catenin were also active at a 48 hour timepoint *in vivo* in normal mouse liver, inhibiting both β-catenin mRNA (top panel) and Axin-2 mRNA (bottom panel) levels significantly (*e.g.*, in many instances, approximately 70-90% knockdown was observed) when administered as a single dose intravenously to normal mice (n=5 mice per group) at 10 mg/kg and formulated in Invivofectamine® 2.0 (Invitrogen™, Carlsbad, CA). Liver tissue was harvested at 48 hours post-administration. DsiRNAs targeting human β-catenin possessed varying modification patterns as indicated and as described above. Control DsiRNAs possessed similar patterns of modification of sense and antisense strands.

DETAILED DESCRIPTION OF THE INVENTION

The present invention is directed to compositions that contain double stranded RNA ("dsRNA"), and methods for preparing them, that are capable of reducing the level and/or expression of the β-catenin gene *in vivo* or *in vitro*. One of the strands of

the dsRNA contains a region of nucleotide sequence that has a length that ranges from 19 to 35 nucleotides that can direct the destruction and/or translational inhibition of the targeted β-catenin transcript.

Definitions

Unless defined otherwise, all technical and scientific terms used herein have the meaning commonly understood by a person skilled in the art to which this invention belongs. The following references provide one of skill with a general definition of many of the terms used in this invention: Singleton *et al.*, Dictionary of Microbiology and Molecular Biology (2nd ed. 1994); The Cambridge Dictionary of Science and Technology (Walker ed., 1988); The Glossary of Genetics, 5th Ed., R. Rieger et al. (eds.), Springer Verlag (1991); and Hale & Marham, The Harper Collins Dictionary of Biology (1991). As used herein, the following terms have the meanings ascribed to them below, unless specified otherwise.

The present invention features one or more DsiRNA molecules that can modulate (*e.g.*, inhibit) β-catenin expression. The DsiRNAs of the invention optionally can be used in combination with modulators of other genes and/or gene products associated with the maintenance or development of diseases or disorders associated with β-catenin misregulation (*e.g.*, tumor formation and/or growth, etc.). The DsiRNA agents of the invention modulate β-catenin RNAs such as those corresponding to the cDNA sequences referred to by GenBank Accession Nos. NM_001904.3 (human β-catenin, transcript variant 1), NM_001098209.1 (human β-catenin, transcript variant 2), NM_001098210.1 (human β-catenin, transcript variant 3) and NM_ 007614.2 & NM_007614.3 (mouse β-catenin), which are recited below and referred to herein generally as "β-catenin."

The below description of the various aspects and embodiments of the invention is provided with reference to exemplary β-catenin RNAs, generally referred to herein as β-catenin. However, such reference is meant to be exemplary only and the various aspects and embodiments of the invention are also directed to alternate β-catenin RNAs, such as mutant β-catenin RNAs or additional β-catenin splice variants. Certain aspects and embodiments are also directed to other genes involved in β-catenin pathways, including genes whose misregulation acts in association with that of β-catenin (or is affected or affects β-catenin regulation) to produce phenotypic effects that may be targeted for treatment (*e.g.*, tumor formation and/or growth, etc.).

Such additional genes can be targeted using DsiRNA and the methods described herein for use of β-catenin targeting DsiRNAs. Thus, the inhibition and the effects of such inhibition of the other genes can be performed as described herein.

The terms "β-catenin" and "*CTNNB1*" refer to nucleic acid sequences encoding a β-catenin protein, peptide, or polypeptide (*e.g.*, β-catenin transcripts, such as the sequences of β-catenin Genbank Accession Nos. NM_001904.3, NM_001098209.1, NM_001098210.1, NM_ 007614.2 and NM_007614.3). In certain embodiments, the term "β-catenin" is also meant to include other β-catenin encoding sequence, such as other β-catenin isoforms, mutant β-catenin genes, splice variants of β-catenin genes, and β-catenin gene polymorphisms. The term "β-catenin" is used to refer to the polypeptide gene product of a β-catenin gene/transript, *e.g.*, a β-catenin protein, peptide, or polypeptide, such as those encoded by β-catenin Genbank Accession Nos. NM_001904.3, NM_001098209.1, NM_001098210.1, NM_ 007614.2 and NM_007614.3.

As used herein, a "β-catenin-associated disease or disorder" refers to a disease or disorder known in the art to be associated with altered β-catenin expression, level and/or activity. Notably, a "β-catenin-associated disease or disorder" includes cancer and/or proliferative diseases, conditions, or disorders. Two exemplary "β-catenin-associated diseases or disorders" are colorectal cancer and melanoma.

By "proliferative disease" or "cancer" as used herein is meant, a disease, condition, trait, genotype or phenotype characterized by unregulated cell growth or replication as is known in the art; including leukemias, for example, acute myelogenous leukemia (AML), chronic myelogenous leukemia (CML), acute lymphocytic leukemia (ALL), and chronic lymphocytic leukemia, AIDS related cancers such as Kaposi's sarcoma; breast cancers; bone cancers such as Osteosarcoma, Chondrosarcomas, Ewing's sarcoma, Fibrosarcomas, Giant cell tumors, Adamantinomas, and Chordomas; Brain cancers such as Meningiomas, Glioblastomas, Lower-Grade Astrocytomas, Oligodendrocytomas, Pituitary Tumors, Schwannomas, and Metastatic brain cancers; cancers of the head and neck including various lymphomas such as mantle cell lymphoma, non-Hodgkins lymphoma, adenoma, squamous cell carcinoma, laryngeal carcinoma, gallbladder and bile duct cancers, cancers of the retina such as retinoblastoma, cancers of the esophagus, gastric cancers, multiple myeloma, ovarian cancer, uterine cancer, thyroid cancer, testicular cancer, endometrial cancer, melanoma, colorectal cancer, lung cancer, bladder cancer,

prostate cancer, lung cancer (including non-small cell lung carcinoma), pancreatic cancer, sarcomas, Wilms' tumor, cervical cancer, head and neck cancer, skin cancers, nasopharyngeal carcinoma, liposarcoma, epithelial carcinoma, renal cell carcinoma, gallbladder adeno carcinoma, parotid adenocarcinoma, endometrial sarcoma, multidrug resistant cancers; and proliferative diseases and conditions, such as neovascularization associated with tumor angiogenesis, macular degeneration (e.g., wet/dry AMD), corneal neovascularization, diabetic retinopathy, neovascular glaucoma, myopic degeneration and other proliferative diseases and conditions such as restenosis and polycystic kidney disease, and other cancer or proliferative disease, condition, trait, genotype or phenotype that can respond to the modulation of disease related gene expression in a cell or tissue, alone or in combination with other therapies.

In certain embodiments, dsRNA-mediated inhibition of a β-catenin target sequence is assessed. In such embodiments, β-catenin RNA levels can be assessed by art-recognized methods (*e.g.*, RT-PCR, Northern blot, expression array, etc.), optionally *via* comparison of β-catenin levels in the presence of an anti-β-catenin dsRNA of the invention relative to the absence of such an anti-β-catenin dsRNA. In certain embodiments, β-catenin levels in the presence of an anti-β-catenin dsRNA are compared to those observed in the presence of vehicle alone, in the presence of a dsRNA directed against an unrelated target RNA, or in the absence of any treatment.

It is also recognized that levels of β-catenin protein can be assessed as indicative of β-catenin RNA levels, but only to the extent that it is known, under a given set of cellular and/or tissue conditions, whether the level of β-catenin protein is directly or indirectly related to β-catenin RNA levels and/or the extent to which a dsRNA inhibits β-catenin expression, thus art-recognized methods of assessing β-catenin protein levels (*e.g.*, Western blot, immunoprecipitation, other antibody-based methods, etc.) can also be employed to examine the inhibitory effect of a dsRNA of the invention.

An anti-β-catenin dsRNA of the invention is deemed to possess "β-catenin inhibitory activity" if a statistically significant reduction in β-catenin RNA level is seen when an anti-β-catenin dsRNA of the invention is administered to a system (*e.g.*, cell-free *in vitro* system), cell, tissue or organism, as compared to a selected control. The distribution of experimental values and the number of replicate assays performed will tend to dictate the parameters of what levels of reduction in β-catenin RNA

(either as a % or in absolute terms) is deemed statistically significant (as assessed by standard methods of determining statistical significance known in the art). However, in certain embodiments, "β-catenin inhibitory activity" is defined based upon a % or absolute level of reduction in the level of β-catenin mRNA in a system, cell, tissue or organism. For example, in certain embodiments, a DsiRNA of the invention is deemed to possess β-catenin inhibitory activity if at least a 5% reduction or at least a 10% reduction in β-catenin RNA is observed in the presence of a DsiRNA of the invention relative to β-catenin mRNA levels seen for a suitable control. (For example, *in vivo* β-catenin levels in a tissue and/or subject can, in certain embodiments, be deemed to be inhibited by a DsiRNA agent of the invention if, *e.g.*, a 5% or 10% reduction in β-catenin levels is observed relative to a control.) In certain other embodiments, a DsiRNA of the invention is deemed to possess β-catenin inhibitory activity if β-catenin RNA levels are observed to be reduced by at least 15% relative to a selected control, by at least 20% relative to a selected control, by at least 25% relative to a selected control, by at least 30% relative to a selected control, by at least 35% relative to a selected control, by at least 40% relative to a selected control, by at least 45% relative to a selected control, by at least 50% relative to a selected control, by at least 55% relative to a selected control, by at least 60% relative to a selected control, by at least 65% relative to a selected control, by at least 70% relative to a selected control, by at least 75% relative to a selected control, by at least 80% relative to a selected control, by at least 85% relative to a selected control, by at least 90% relative to a selected control, by at least 95% relative to a selected control, by at least 96% relative to a selected control, by at least 97% relative to a selected control, by at least 98% relative to a selected control or by at least 99% relative to a selected control. In some embodiments, complete inhibition of β-catenin is required for a DsiRNA to be deemed to possess β-catenin inhibitory activity. In certain models (*e.g.*, cell culture), a DsiRNA is deemed to possess β-catenin inhibitory activity if at least a 50% reduction in β-catenin levels is observed relative to a suitable control. In certain other embodiments, a DsiRNA is deemed to possess β-catenin inhibitory activity if at least an 80% reduction in β-catenin levels is observed relative to a suitable control.

By way of specific example, in the Examples below, a series of DsiRNAs targeting β-catenin were tested for the ability to reduce β-catenin mRNA levels in human HeLa or mouse Hepa 1-6 cells *in vitro*, at 1 nM concentrations in the

environment of such cells and in the presence of a transfection agent (Lipofectamine™ RNAiMAX, Invitrogen). Within the below Examples, β-catenin inhibitory activity was initially ascribed to those DsiRNAs that were observed to effect at least a 70% reduction of β-catenin mRNA levels under the assayed conditions. It is contemplated that β-catenin inhibitory activity could also be attributed to a dsRNA under either more or less stringent conditions than those employed for the Examples below, even when the same or a similar assay and conditions are employed. For example, in certain embodiments, a tested dsRNA of the invention is deemed to possess β-catenin inhibitory activity if at least a 10% reduction, at least a 20% reduction, at least a 30% reduction, at least a 40% reduction, at least a 50% reduction, at least a 60% reduction, at least a 75% reduction, at least an 80% reduction, at least an 85% reduction, at least a 90% reduction, or at least a 95% reduction in β-catenin mRNA levels is observed in a mammalian cell line *in vitro* at 1 nM dsRNA concentration or lower in the environment of a cell, relative to a suitable control.

Use of other endpoints for determination of whether a double stranded RNA of the invention possesses β-catenin inhibitory activity is also contemplated. Specfically, in one embodiment, in addition to or as an alternative to assessing β-catenin mRNA levels, the ability of a tested dsRNA to reduce β-catenin protein levels (*e.g.,* at 48 hours after contacting a mammalian cell *in vitro* or *in vivo*) is assessed, and a tested dsRNA is deemed to possess β-catenin inhibitory activity if at least a 10% reduction, at least a 20% reduction, at least a 30% reduction, at least a 40% reduction, at least a 50% reduction, at least a 60% reduction, at least a 70% reduction, at least a 75% reduction, at least an 80% reduction, at least an 85% reduction, at least a 90% reduction, or at least a 95% reduction in β-catenin protein levels is observed in a mammalian cell contacted with the assayed double stranded RNA *in vitro* or *in vivo*, relative to a suitable control. Additional endpoints contemplated include, *e.g.*, assessment of a phenotype associated with reduction of β-catenin levels – *e.g.*, reduction of growth of a contacted mammalian cell line *in vitro* and/or reduction of growth of a tumor *in vivo*, including, *e.g.*, halting or reducing the growth of tumor or cancer cell levels as described in greater detail elsewhere herein.

β-catenin inhibitory activity can also be evaluated over time (duration) and over concentration ranges (potency), with assessment of what constitutes a dsRNA possessing β-catenin inhibitory activity adjusted in accordance with concentrations

administered and duration of time following administration. Thus, in certain embodiments, a DsiRNA of the invention is deemed to possess β-catenin inhibitory activity if at least a 50% reduction in β-catenin activity is observed at a duration of time of 2 hours, 5 hours, 10 hours, 1 day, 2 days, 3 days, 4 days, 5 days, 6 days, 7 days, 8 days, 9 days, 10 days or more after administration is observed/persists. In additional embodiments, a DsiRNA of the invention is deemed to be a potent β-catenin inhibitory agent if β-catenin inihibitory activity (*e.g.*, in certain embodiments, at least 50% inhibition of β-catenin) is observed at a concentration of 1 nM or less, 500 pM or less, 200 pM or less, 100 pM or less, 50 pM or less, 20 pM or less, 10 pM or less, 5 pM or less, 2 pM or less or even 1 pM or less in the environment of a cell, for example, within an *in vitro* assay for β-catenin inihibitory activity as described herein. In certain embodiments, a potent β-catenin inhibitory dsRNA of the invention is defined as one that is capable of β-catenin inihibitory activity (*e.g.*, in certain embodiments, at least 20% reduction of β-catenin levels) at a formulated concentration of 10 mg/kg or less when administered to a subject in an effective delivery vehicle (*e.g.*, an effective lipid nanoparticle formulation). Preferably, a potent β-catenin inhibitory dsRNA of the invention is defined as one that is capable of β-catenin inihibitory activity (*e.g.*, in certain embodiments, at least 50% reduction of β-catenin levels) at a formulated concentration of 5 mg/kg or less when administered to a subject in an effective delivery vehicle. More preferably, a potent β-catenin inhibitory dsRNA of the invention is defined as one that is capable of β-catenin inihibitory activity (*e.g.*, in certain embodiments, at least 50% reduction of β-catenin levels) at a formulated concentration of 5 mg/kg or less when administered to a subject in an effective delivery vehicle. Optionally, a potent β-catenin inhibitory dsRNA of the invention is defined as one that is capable of β-catenin inihibitory activity (*e.g.*, in certain embodiments, at least 50% reduction of β-catenin levels) at a formulated concentration of 2 mg/kg or less, or even 1 mg/kg or less, when administered to a subject in an effective delivery vehicle.

In certain embodiments, potency of a dsRNA of the invention is determined in reference to the number of copies of a dsRNA present in the cytoplasm of a target cell that are required to achieve a certain level of target gene knockdown. For example, in certain embodiments, a potent dsRNA is one capable of causing 50% or greater knockdown of a target mRNA when present in the cytoplasm of a target cell at a copy number of 1000 or fewer RISC-loaded antisense strands per cell. More preferably, a

potent dsRNA is one capable of producing 50% or greater knockdown of a target mRNA when present in the cytoplasm of a target cell at a copy number of 500 or fewer RISC-loaded antisense strands per cell. Optionally, a potent dsRNA is one capable of producing 50% or greater knockdown of a target mRNA when present in the cytoplasm of a target cell at a copy number of 300 or fewer RISC-loaded antisense strands per cell.

In further embodiments, the potency of a DsiRNA of the invention can be defined in reference to a 19 to 23mer dsRNA directed to the same target sequence within the same target gene. For example, a DsiRNA of the invention that possesses enhanced potency relative to a corresponding 19 to 23mer dsRNA can be a DsiRNA that reduces a target gene by an additional 5% or more, an additional 10% or more, an additional 20% or more, an additional 30% or more, an additional 40% or more, or an additional 50% or more as compared to a corresponding 19 to 23mer dsRNA, when assayed in an in vitro assay as described herein at a sufficiently low concentration to allow for detection of a potency difference (e.g., transfection concentrations at or below 1 nM in the environment of a cell, at or below 100 pM in the environment of a cell, at or below 10 pM in the environment of a cell, at or below 1 nM in the environment of a cell, in an in vitro assay as described herein; notably, it is recognized that potency differences can be best detected via performance of such assays across a range of concentrations – e.g., 0.1 pM to 10 nM – for purpose of generating a dose-response curve and identifying an IC50 value associated with a DsiRNA/dsRNA).

β-catenin inhibitory levels and/or β-catenin levels may also be assessed indirectly, *e.g.*, measurement of a reduction in a β-catenin-associated disease marker protein or target gene, such as MYC, Cyclin D1, or Axin2, or reduction of the size or number of polyps or tumors (*e.g.*, colon tumors) in a subject may be used to assess β-catenin levels and/or β-catenin inhibitory efficacy of a double-stranded nucleic acid of the instant invention.

In certain embodiments, the phrase "consists essentially of" is used in reference to the anti-β-catenin dsRNAs of the invention. In some such embodiments, "consists essentially of" refers to a composition that comprises a dsRNA of the invention which possesse at least a certain level of β-catenin inhibitory activity (*e.g.*, at least 50% β-catenin inhibitory activity) and that also comprises one or more additional components and/or modifications that do not significantly impact the β-

catenin inhibitory activity of the dsRNA. For example, in certain embodiments, a composition "consists essentially of" a dsRNA of the invention where modifications of the dsRNA of the invention and/or dsRNA-associated components of the composition do not alter the β-catenin inhibitory activity (optionally including potency or duration of β-catenin inhibitory activity) by greater than 3%, greater than 5%, greater than 10%, greater than 15%, greater than 20%, greater than 25%, greater than 30%, greater than 35%, greater than 40%, greater than 45%, or greater than 50% relative to the dsRNA of the invention in isolation. In certain embodiments, a composition is deemed to consist essentially of a dsRNA of the invention even if more dramatic reduction of β-catenin inhibitory activity (e.g., 80% reduction, 90% reduction, etc. in efficacy, duration and/or potency) occurs in the presence of additional components or modifications, yet where β-catenin inhibitory activity is not significantly elevated (*e.g.*, observed levels of β-catenin inhibitory activity are within 10% of those observed for the isolated dsRNA of the invention) in the presence of additional components and/or modifications.

As used herein, the phrase "dsRNA reduces β-catenin mRNA levels by at least X% when assayed *in vitro* in a mammalian cell at an effective concentration in the environment of said cell of 1 nanomolar or less" refers to a requirement for the dsRNA to reduce the native β-catenin mRNA levels of a HeLa cell population by at least X%, when assayed at a transfection concentration of 1 nanomolar or less in the presence of Lipofectamine™ RNAiMAX (Invitrogen) and following manufacturer's instructions. Such HeLa cells are obtained from ATCC and maintained in DMEM (HyClone) supplemented with 10% fetal bovine serum (HyClone) at 37°C under 5% CO_2. β-catenin mRNA levels are then assayed at 24h or 48h post-transfection to assess % inhibition, with respect to an appropriate control as described elsewhere herein. In certain embodiments, the HeLa cells of such assays are replaced with HepG2, HCT116, HuH7 or other cell line.

As used herein, the term "nucleic acid" refers to deoxyribonucleotides, ribonucleotides, or modified nucleotides, and polymers thereof in single- or double-stranded form. The term encompasses nucleic acids containing known nucleotide analogs or modified backbone residues or linkages, which are synthetic, naturally occurring, and non-naturally occurring, which have similar binding properties as the reference nucleic acid, and which are metabolized in a manner similar to the reference nucleotides. Examples of such analogs include, without limitation, phosphorothioates,

phosphoramidates, methyl phosphonates, chiral-methyl phosphonates, 2-O-methyl ribonucleotides, peptide-nucleic acids (PNAs).

As used herein, "nucleotide" is used as recognized in the art to include those with natural bases (standard), and modified bases well known in the art. Such bases are generally located at the 1' position of a nucleotide sugar moiety. Nucleotides generally comprise a base, sugar and a phosphate group. The nucleotides can be unmodified or modified at the sugar, phosphate and/or base moiety, (also referred to interchangeably as nucleotide analogs, modified nucleotides, non-natural nucleotides, non-standard nucleotides and other; see, *e.g.*, Usman and McSwiggen US 2009/0137500; Eckstein *et al.*, International PCT Publication No. WO 92/07065; Usman *et al.*, International PCT Publication No. WO 93/15187; Uhlman & Peyman US 6,326,487, all are hereby incorporated by reference herein). There are several examples of modified nucleic acid bases known in the art as summarized by Limbach *et al.*, *Nucleic Acids Res.* 22:2183, 1994. Some of the non-limiting examples of base modifications that can be introduced into nucleic acid molecules include, hypoxanthine, purine, pyridin-4-one, pyridin-2-one, phenyl, pseudouracil, 2,4,6-trimethoxy benzene, 3-methyl uracil, dihydrouridine, naphthyl, aminophenyl, 5-alkylcytidines (e.g., 5-methylcytidine), 5-alkyluridines (e.g., ribothymidine), 5-halouridine (e.g., 5-bromouridine) or 6-azapyrimidines or 6-alkylpyrimidines (e.g. 6-methyluridine), propyne, and others (Burgin, et al., Biochemistry 35:14090, 1996; Uhlman & Peyman, *supra*). By "modified bases" in this aspect is meant nucleotide bases other than adenine, guanine, cytosine and uracil at 1' position or their equivalents.

As used herein, “modified nucleotide” refers to a nucleotide that has one or more modifications to the nucleoside, the nucleobase, pentose ring, or phosphate group. For example, modified nucleotides exclude ribonucleotides containing adenosine monophosphate, guanosine monophosphate, uridine monophosphate, and cytidine monophosphate and deoxyribonucleotides containing deoxyadenosine monophosphate, deoxyguanosine monophosphate, deoxythymidine monophosphate, and deoxycytidine monophosphate. Modifications include those naturally occuring that result from modification by enzymes that modify nucleotides, such as methyltransferases. Modified nucleotides also include synthetic or non-naturally occurring nucleotides. Synthetic or non-naturally occurring modifications in nucleotides include those with 2’ modifications, e.g., 2'-methoxyethoxy, 2'-fluoro, 2'-

allyl, 2'-O-[2-(methylamino)-2-oxoethyl], 4'-thio, 4'-CH_2-O-2'-bridge, 4'-$(CH_2)_2$-O-2'-bridge, 2'-LNA, and 2'-O-(N-methylcarbamate) or those comprising base analogs. In connection with 2'-modified nucleotides as described for the present disclosure, by "amino" is meant 2'-NH_2 or 2'-O-NH_2, which can be modified or unmodified. Such modified groups are described, *e.g.*, in Eckstein *et al.*, U.S. Pat. No. 5,672,695 and Matulic-Adamic *et al.*, U.S. Pat. No. 6,248,878.

In reference to the nucleic acid molecules of the present disclosure, modifications may exist upon these agents in patterns on one or both strands of the double stranded ribonucleic acid (dsRNA). As used herein, "alternating positions" refers to a pattern where every other nucleotide is a modified nucleotide or there is an unmodified nucleotide (*e.g.*, an unmodified ribonucleotide) between every modified nucleotide over a defined length of a strand of the dsRNA (*e.g.*, 5'-MNMNMN-3'; 3'-MNMNMN-5'; where M is a modified nucleotide and N is an unmodified nucleotide). The modification pattern starts from the first nucleotide position at either the 5' or 3' terminus according to a position numbering convention, e.g., as described herein (in certain embodiments, position 1 is designated in reference to the terminal residue of a strand following a projected Dicer cleavage event of a DsiRNA agent of the invention; thus, position 1 does not always constitute a 3' terminal or 5' terminal residue of a pre-processed agent of the invention). The pattern of modified nucleotides at alternating positions may run the full length of the strand, but in certain embodiments includes at least 4, 6, 8, 10, 12, 14 nucleotides containing at least 2, 3, 4, 5, 6 or 7 modified nucleotides, respectively. As used herein, "alternating pairs of positions" refers to a pattern where two consecutive modified nucleotides are separated by two consecutive unmodified nucleotides over a defined length of a strand of the dsRNA (e.g., 5'-MMNNMMNNMMNN-3'; 3'-MMNNMMNNMMNN-5'; where M is a modified nucleotide and N is an unmodified nucleotide). The modification pattern starts from the first nucleotide position at either the 5' or 3' terminus according to a position numbering convention such as those described herein. The pattern of modified nucleotides at alternating positions may run the full length of the strand, but preferably includes at least 8, 12, 16, 20, 24, 28 nucleotides containing at least 4, 6, 8, 10, 12 or 14 modified nucleotides, respectively. It is emphasized that the above modification patterns are exemplary and are not intended as limitations on the scope of the invention.

As used herein, "base analog" refers to a heterocyclic moiety which is located

at the 1' position of a nucleotide sugar moiety in a modified nucleotide that can be incorporated into a nucleic acid duplex (or the equivalent position in a nucleotide sugar moiety substitution that can be incorporated into a nucleic acid duplex). In the dsRNAs of the invention, a base analog is generally either a purine or pyrimidine base excluding the common bases guanine (G), cytosine (C), adenine (A), thymine (T), and uracil (U). Base analogs can duplex with other bases or base analogs in dsRNAs. Base analogs include those useful in the compounds and methods of the invention., e.g., those disclosed in US Pat. Nos. 5,432,272 and 6,001,983 to Benner and US Patent Publication No. 20080213891 to Manoharan, which are herein incorporated by reference. Non-limiting examples of bases include hypoxanthine (I), xanthine (X), 3β-D-ribofuranosyl-(2,6-diaminopyrimidine) (K), 3-β-D-ribofuranosyl-(1-methyl-pyrazolo[4,3-d]pyrimidine-5,7(4H,6H)-dione) (P), iso-cytosine (iso-C), iso-guanine (iso-G), 1-β-D-ribofuranosyl-(5-nitroindole), 1-β-D-ribofuranosyl-(3-nitropyrrole), 5-bromouracil, 2-aminopurine, 4-thio-dT, 7-(2-thienyl)-imidazo[4,5-b]pyridine (Ds) and pyrrole-2-carbaldehyde (Pa), 2-amino-6-(2-thienyl)purine (S), 2-oxopyridine (Y), difluorotolyl, 4-fluoro-6-methylbenzimidazole, 4-methylbenzimidazole, 3-methyl isocarbostyrilyl, 5-methyl isocarbostyrilyl, and 3-methyl-7-propynyl isocarbostyrilyl, 7-azaindolyl, 6-methyl-7-azaindolyl, imidizopyridinyl, 9-methyl-imidizopyridinyl, pyrrolopyrizinyl, isocarbostyrilyl, 7-propynyl isocarbostyrilyl, propynyl-7-azaindolyl, 2,4,5-trimethylphenyl, 4-methylindolyl, 4,6-dimethylindolyl, phenyl, napthalenyl, anthracenyl, phenanthracenyl, pyrenyl, stilbenzyl, tetracenyl, pentacenyl, and structural derivates thereof (Schweitzer et al., J. Org. Chem., 59:7238-7242 (1994); Berger et al., Nucleic Acids Research, 28(15):2911-2914 (2000); Moran et al., J. Am. Chem. Soc., 119:2056-2057 (1997); Morales et al., J. Am. Chem. Soc., 121:2323-2324 (1999); Guckian et al., J. Am. Chem. Soc., 118:8182-8183 (1996); Morales et al., J. Am. Chem. Soc., 122(6):1001-1007 (2000); McMinn et al., J. Am. Chem. Soc., 121:11585-11586 (1999); Guckian et al., J. Org. Chem., 63:9652-9656 (1998); Moran et al., Proc. Natl. Acad. Sci., 94:10506-10511 (1997); Das et al., J. Chem. Soc., Perkin Trans., 1:197-206 (2002); Shibata et al., J. Chem. Soc., Perkin Trans., 1: 1605-1611 (2001); Wu et al., J. Am. Chem. Soc., 122(32):7621-7632 (2000); O'Neill et al., J. Org. Chem., 67:5869-5875 (2002); Chaudhuri et al., J. Am. Chem. Soc., 117:10434-10442 (1995); and U.S. Pat. No. 6,218,108.). Base analogs may also be a universal base.

As used herein, "universal base" refers to a heterocyclic moiety located at the

1' position of a nucleotide sugar moiety in a modified nucleotide, or the equivalent position in a nucleotide sugar moiety substitution, that, when present in a nucleic acid duplex, can be positioned opposite more than one type of base without altering the double helical structure (e.g., the structure of the phosphate backbone). Additionally, the universal base does not destroy the ability of the single stranded nucleic acid in which it resides to duplex to a target nucleic acid. The ability of a single stranded nucleic acid containing a universal base to duplex a target nucleic can be assayed by methods apparent to one in the art (*e.g.*, UV absorbance, circular dichroism, gel shift, single stranded nuclease sensitivity, etc.). Additionally, conditions under which duplex formation is observed may be varied to determine duplex stability or formation, *e.g.*, temperature, as melting temperature (Tm) correlates with the stability of nucleic acid duplexes. Compared to a reference single stranded nucleic acid that is exactly complementary to a target nucleic acid, the single stranded nucleic acid containing a universal base forms a duplex with the target nucleic acid that has a lower Tm than a duplex formed with the complementary nucleic acid. However, compared to a reference single stranded nucleic acid in which the universal base has been replaced with a base to generate a single mismatch, the single stranded nucleic acid containing the universal base forms a duplex with the target nucleic acid that has a higher Tm than a duplex formed with the nucleic acid having the mismatched base.

Some universal bases are capable of base pairing by forming hydrogen bonds between the universal base and all of the bases guanine (G), cytosine (C), adenine (A), thymine (T), and uracil (U) under base pair forming conditions. A universal base is not a base that forms a base pair with only one single complementary base. In a duplex, a universal base may form no hydrogen bonds, one hydrogen bond, or more than one hydrogen bond with each of G, C, A, T, and U opposite to it on the opposite strand of a duplex. Preferably, the universal base does not interact with the base opposite to it on the opposite strand of a duplex. In a duplex, base pairing involving a universal base occurs without altering the double helical structure of the phosphate backbone. A universal base may also interact with bases in adjacent nucleotides on the same nucleic acid strand by stacking interactions. Such stacking interactions stabilize the duplex, especially in situations where the universal base does not form any hydrogen bonds with the base positioned opposite to it on the opposite strand of the duplex. Non-limiting examples of universal-binding nucleotides include inosine, 1-β-D-ribofuranosyl-5-nitroindole, and/or 1-β-D-ribofuranosyl-3-nitropyrrole (US

Pat. Appl. Publ. No. 20070254362 to Quay et al.; Van Aerschot et al., An acyclic 5-nitroindazole nucleoside analogue as ambiguous nucleoside. Nucleic Acids Res. 1995 Nov 11;23(21):4363-70; Loakes et al., 3-Nitropyrrole and 5-nitroindole as universal bases in primers for DNA sequencing and PCR. Nucleic Acids Res. 1995 Jul 11;23(13):2361-6; Loakes and Brown, 5-Nitroindole as an universal base analogue. Nucleic Acids Res. 1994 Oct 11;22(20):4039-43).

As used herein, "loop" refers to a structure formed by a single strand of a nucleic acid, in which complementary regions that flank a particular single stranded nucleotide region hybridize in a way that the single stranded nucleotide region between the complementary regions is excluded from duplex formation or Watson-Crick base pairing. A loop is a single stranded nucleotide region of any length. Examples of loops include the unpaired nucleotides present in such structures as hairpins, stem loops, or extended loops.

As used herein, "extended loop" in the context of a dsRNA refers to a single stranded loop and in addition 1, 2, 3, 4, 5, 6 or up to 20 base pairs or duplexes flanking the loop. In an extended loop, nucleotides that flank the loop on the 5' side form a duplex with nucleotides that flank the loop on the 3' side. An extended loop may form a hairpin or stem loop.

As used herein, "tetraloop" in the context of a dsRNA refers to a loop (a single stranded region) consisting of four nucleotides that forms a stable secondary structure that contributes to the stability of an adjacent Watson-Crick hybridized nucleotides. Without being limited to theory, a tetraloop may stabilize an adjacent Watson-Crick base pair by stacking interactions. In addition, interactions among the four nucleotides in a tetraloop include but are not limited to non-Watson-Crick base pairing, stacking interactions, hydrogen bonding, and contact interactions (Cheong *et al.*, *Nature* 1990 Aug 16;346(6285):680-2; Heus and Pardi, *Science* 1991 Jul 12;253(5016):191-4). A tetraloop confers an increase in the melting temperature (Tm) of an adjacent duplex that is higher than expected from a simple model loop sequence consisting of four random bases. For example, a tetraloop can confer a melting temperature of at least 55°C in 10mM $NaHPO_4$ to a hairpin comprising a duplex of at least 2 base pairs in length. A tetraloop may contain ribonucleotides, deoxyribonucleotides, modified nucleotides, and combinations thereof. Examples of RNA tetraloops include the UNCG family of tetraloops (e.g., UUCG), the GNRA family of tetraloops (e.g., GAAA), and the CUUG tetraloop. (Woese et al., Proc Natl

Acad Sci U S A. 1990 Nov;87(21):8467-71; Antao et al., Nucleic Acids Res. 1991 Nov 11;19(21):5901-5). Examples of DNA tetraloops include the d(GNNA) family of tetraloops (e.g., d(GTTA), the d(GNRA)) family of tetraloops, the d(GNAB) family of tetraloops, the d(CNNG) family of tetraloops, the d(TNCG) family of tetraloops (e.g., d(TTCG)). (Nakano et al. Biochemistry, 41 (48), 14281 -14292, 2002.; SHINJI et al. Nippon Kagakkai Koen Yokoshu VOL.78th; NO.2; PAGE.731 (2000).)

As used herein, the term "siRNA" refers to a double stranded nucleic acid in which each strand comprises RNA, RNA analog(s) or RNA and DNA. The siRNA comprises between 19 and 23 nucleotides or comprises 21 nucleotides. The siRNA typically has 2 bp overhangs on the 3' ends of each strand such that the duplex region in the siRNA comprises 17-21 nucleotides, or 19 nucleotides. Typically, the antisense strand of the siRNA is sufficiently complementary with the target sequence of the β-catenin gene/RNA.

An anti-β-catenin DsiRNA of the instant invention possesses strand lengths of at least 25 nucleotides. Accordingly, in certain embodiments, an anti-β-catenin DsiRNA contains one oligonucleotide sequence, a first sequence, that is at least 25 nucleotides in length and no longer than 35 or up to 50 or more nucleotides. This sequence of RNA can be between 26 and 35, 26 and 34, 26 and 33, 26 and 32, 26 and 31, 26 and 30, and 26 and 29 nucleotides in length. This sequence can be 27 or 28 nucleotides in length or 27 nucleotides in length. The second sequence of the DsiRNA agent can be a sequence that anneals to the first sequence under biological conditions, such as within the cytoplasm of a eukaryotic cell. Generally, the second oligonucleotide sequence will have at least 19 complementary base pairs with the first oligonucleotide sequence, more typically the second oligonucleotide sequence will have 21 or more complementary base pairs, or 25 or more complementary base pairs with the first oligonucleotide sequence. In one embodiment, the second sequence is the same length as the first sequence, and the DsiRNA agent is blunt ended. In another embodiment, the ends of the DsiRNA agent have one or more overhangs.

In certain embodiments, the first and second oligonucleotide sequences of the DsiRNA agent exist on separate oligonucleotide strands that can be and typically are chemically synthesized. In some embodiments, both strands are between 26 and 35 nucleotides in length. In other embodiments, both strands are between 25 and 30 or 26 and 30 nucleotides in length. In one embodiment, both strands are 27 nucleotides in

length, are completely complementary and have blunt ends. In certain embodiments of the instant invention, the first and second sequences of an anti-β-catenin DsiRNA exist on separate RNA oligonucleotides (strands). In one embodiment, one or both oligonucleotide strands are capable of serving as a substrate for Dicer. In other embodiments, at least one modification is present that promotes Dicer to bind to the double-stranded RNA structure in an orientation that maximizes the double-stranded RNA structure's effectiveness in inhibiting gene expression. In certain embodiments of the instant invention, the anti-β-catenin DsiRNA agent is comprised of two oligonucleotide strands of differing lengths, with the anti-β-catenin DsiRNA possessing a blunt end at the 3' terminus of a first strand (sense strand) and a 3' overhang at the 3' terminus of a second strand (antisense strand). The DsiRNA can also contain one or more deoxyribonucleic acid (DNA) base substitutions.

Suitable DsiRNA compositions that contain two separate oligonucleotides can be chemically linked outside their annealing region by chemical linking groups. Many suitable chemical linking groups are known in the art and can be used. Suitable groups will not block Dicer activity on the DsiRNA and will not interfere with the directed destruction of the RNA transcribed from the target gene. Alternatively, the two separate oligonucleotides can be linked by a third oligonucleotide such that a hairpin structure is produced upon annealing of the two oligonucleotides making up the DsiRNA composition. The hairpin structure will not block Dicer activity on the DsiRNA and will not interfere with the directed destruction of the target RNA.

As used herein, a dsRNA, *e.g.*, DsiRNA or siRNA, having a sequence "sufficiently complementary" to a target RNA or cDNA sequence (*e.g.*, β-catenin mRNA) means that the dsRNA has a sequence sufficient to trigger the destruction of the target RNA (where a cDNA sequence is recited, the RNA sequence corresponding to the recited cDNA sequence) by the RNAi machinery (*e.g.*, the RISC complex) or process. For example, a dsRNA that is "sufficiently complementary" to a target RNA or cDNA sequence to trigger the destruction of the target RNA by the RNAi machinery or process can be identified as a dsRNA that causes a detectable reduction in the level of the target RNA in an appropriate assay of dsRNA activity (*e.g.*, an *in vitro* assay as described in Example 2 below), or, in further examples, a dsRNA that is sufficiently complementary to a target RNA or cDNA sequence to trigger the destruction of the target RNA by the RNAi machinery or process can be identified as a dsRNA that produces at least a 5%, at least a 10%, at least a 15%, at least a 20%, at

least a 25%, at least a 30%, at least a 35%, at least a 40%, at least a 45%, at least a 50%, at least a 55%, at least a 60%, at least a 65%, at least a 70%, at least a 75%, at least a 80%, at least a 85%, at least a 90%, at least a 95%, at least a 98% or at least a 99% reduction in the level of the target RNA in an appropriate assay of dsRNA activity. In additional examples, a dsRNA that is sufficiently complementary to a target RNA or cDNA sequence to trigger the destruction of the target RNA by the RNAi machinery or process can be identified based upon assessment of the duration of a certain level of inhibitory activity with respect to the target RNA or protein levels in a cell or organism. For example, a dsRNA that is sufficiently complementary to a target RNA or cDNA sequence to trigger the destruction of the target RNA by the RNAi machinery or process can be identified as a dsRNA capable of reducing target mRNA levels by at least 20% at least 48 hours post-administration of said dsRNA to a cell or organism. Preferably, a dsRNA that is sufficiently complementary to a target RNA or cDNA sequence to trigger the destruction of the target RNA by the RNAi machinery or process is identified as a dsRNA capable of reducing target mRNA levels by at least 40% at least 72 hours post-administration of said dsRNA to a cell or organism, by at least 40% at least four, five or seven days post-administration of said dsRNA to a cell or organism, by at least 50% at least 48 hours post-administration of said dsRNA to a cell or organism, by at least 50% at least 72 hours post-administration of said dsRNA to a cell or organism, by at least 50% at least four, five or seven days post-administration of said dsRNA to a cell or organism, by at least 80% at least 48 hours post-administration of said dsRNA to a cell or organism, by at least 80% at least 72 hours post-administration of said dsRNA to a cell or organism, or by at least 80% at least four, five or seven days post-administration of said dsRNA to a cell or organism.

The dsRNA molecule can be designed such that every residue of the antisense strand is complementary to a residue in the target molecule. Alternatively, substitutions can be made within the molecule to increase stability and/or enhance processing activity of said molecule. Substitutions can be made within the strand or can be made to residues at the ends of the strand. In certain embodiments, substitutions and/or modifications are made at specific residues within a DsiRNA agent. Such substitutions and/or modifications can include, *e.g.*, deoxy- modifications at one or more residues of positions 1, 2 and 3 when numbering from the 3' terminal position of the sense strand of a DsiRNA agent; and introduction of 2'-O-alkyl (e.g.,

2'-O-methyl) modifications at the 3' terminal residue of the antisense strand of DsiRNA agents, with such modifications also being performed at overhang positions of the 3' portion of the antisense strand and at alternating residues of the antisense strand of the DsiRNA that are included within the region of a DsiRNA agent that is processed to form an active siRNA agent. The preceding modifications are offered as exemplary, and are not intended to be limiting in any manner. Further consideration of the structure of preferred DsiRNA agents, including further description of the modifications and substitutions that can be performed upon the anti-β-catenin DsiRNA agents of the instant invention, can be found below.

Where a first sequence is referred to as "substantially complementary" with respect to a second sequence herein, the two sequences can be fully complementary, or they may form one or more, but generally not more than 4, 3 or 2 mismatched base pairs upon hybridization, while retaining the ability to hybridize under the conditions most relevant to their ultimate application. However, where two oligonucleotides are designed to form, upon hybridization, one or more single stranded overhangs, such overhangs shall not be regarded as mismatches with regard to the determination of complementarity. For example, a dsRNA comprising one oligonucleotide 21 nucleotides in length and another oligonucleotide 23 nucleotides in length, wherein the longer oligonucleotide comprises a sequence of 21 nucleotides that is fully complementary to the shorter oligonucleotide, may yet be referred to as "fully complementary" for the purposes of the invention.

The term "double-stranded RNA" or "dsRNA", as used herein, refers to a complex of ribonucleic acid molecules, having a duplex structure comprising two anti-parallel and substantially complementary, as defined above, nucleic acid strands. The two strands forming the duplex structure may be different portions of one larger RNA molecule, or they may be separate RNA molecules. Where separate RNA molecules, such dsRNA are often referred to as siRNA ("short interfering RNA") or DsiRNA ("Dicer substrate siRNAs"). Where the two strands are part of one larger molecule, and therefore are connected by an uninterrupted chain of nucleotides between the 3'-end of one strand and the 5' end of the respective other strand forming the duplex structure, the connecting RNA chain is referred to as a "hairpin loop", "short hairpin RNA" or "shRNA". Where the two strands are connected covalently by means other than an uninterrupted chain of nucleotides between the 3'-end of one strand and the 5'end of the respective other strand forming the duplex structure, the

connecting structure is referred to as a "linker". The RNA strands may have the same or a different number of nucleotides. The maximum number of base pairs is the number of nucleotides in the shortest strand of the dsRNA minus any overhangs that are present in the duplex. In addition to the duplex structure, a dsRNA may comprise one or more nucleotide overhangs. In addition, as used herein, "dsRNA" may include chemical modifications to ribonucleotides, internucleoside linkages, end-groups, caps, and conjugated moieties, including substantial modifications at multiple nucleotides and including all types of modifications disclosed herein or known in the art. Any such modifications, as used in an siRNA- or DsiRNA-type molecule, are encompassed by "dsRNA" for the purposes of this specification and claims.

The phrase "duplex region" refers to the region in two complementary or substantially complementary oligonucleotides that form base pairs with one another, either by Watson-Crick base pairing or other manner that allows for a duplex between oligonucleotide strands that are complementary or substantially complementary. For example, an oligonucleotide strand having 21 nucleotide units can base pair with another oligonucleotide of 21 nucleotide units, yet only 19 bases on each strand are complementary or substantially complementary, such that the "duplex region" consists of 19 base pairs. The remaining base pairs may, for example, exist as 5' and 3' overhangs. Further, within the duplex region, 100% complementarity is not required; substantial complementarity is allowable within a duplex region. Substantial complementarity refers to complementarity between the strands such that they are capable of annealing under biological conditions. Techniques to empirically determine if two strands are capable of annealing under biological conditions are well know in the art. Alternatively, two strands can be synthesized and added together under biological conditions to determine if they anneal to one another.

Single-stranded nucleic acids that base pair over a number of bases are said to "hybridize." Hybridization is typically determined under physiological or biologically relevant conditions (e.g., intracellular: pH 7.2, 140 mM potassium ion; extracellular pH 7.4, 145 mM sodium ion). Hybridization conditions generally contain a monovalent cation and biologically acceptable buffer and may or may not contain a divalent cation, complex anions, e.g. gluconate from potassium gluconate, uncharged species such as sucrose, and inert polymers to reduce the activity of water in the sample, *e.g.* PEG. Such conditions include conditions under which base pairs can form.

Hybridization is measured by the temperature required to dissociate single stranded nucleic acids forming a duplex, *i.e.*, (the melting temperature; Tm). Hybridization conditions are also conditions under which base pairs can form. Various conditions of stringency can be used to determine hybridization (see, e.g., Wahl, G. M. and S. L. Berger (1987) Methods Enzymol. 152:399; Kimmel, A. R. (1987) Methods Enzymol. 152:507). Stringent temperature conditions will ordinarily include temperatures of at least about 30° C, more preferably of at least about 37° C, and most preferably of at least about 42° C. The hybridization temperature for hybrids anticipated to be less than 50 base pairs in length should be 5-10°C less than the melting temperature (Tm) of the hybrid, where Tm is determined according to the following equations. For hybrids less than 18 base pairs in length, Tm(°C)=2(# of A+T bases)+4(# of G+C bases). For hybrids between 18 and 49 base pairs in length, Tm(°C)=81.5+16.6(log 10[Na+])+0.41 (% G+C)-(600/N), where N is the number of bases in the hybrid, and [Na+] is the concentration of sodium ions in the hybridization buffer ([Na+] for 1xSSC=0.165 M). For example, a hybridization determination buffer is shown in Table 1.

Table 1.

	final conc.	Vender	Cat#	Lot#	m.w./Stock	To make 50 mL solution
NaCl	100 mM	Sigma	S-5150	41K8934	5M	1 mL
KCl	80 mM	Sigma	P-9541	70K0002	74.55	0.298 g
$MgCl_2$	8 mM	Sigma	M-1028	120K8933	1M	0.4 mL
sucrose	2% w/v	Fisher	BP220-212	907105	342.3	1 g
Tris-HCl	16 mM	Fisher	BP1757-500	12419	1M	0.8 mL
NaH_2PO_4	1 mM	Sigma	S-3193	52H-029515	120.0	0.006 g
EDTA	0.02 mM	Sigma	E-7889	110K89271	0.5M	2 µL
H_2O		Sigma	W-4502	51K2359		to 50 mL
pH = 7.0 at 20°C	adjust with HCl					

Useful variations on hybridization conditions will be readily apparent to those skilled in the art. Hybridization techniques are well known to those skilled in the art and are described, for example, in Benton and Davis (Science 196:180, 1977); Grunstein and Hogness (Proc. Natl. Acad. Sci., USA 72:3961, 1975); Ausubel et al. (Current Protocols in Molecular Biology, Wiley Interscience, New York, 2001); Berger and Kimmel (Antisense to Molecular Cloning Techniques, 1987, Academic Press, New York); and Sambrook et al., Molecular Cloning: A Laboratory Manual,

Cold Spring Harbor Laboratory Press, New York.

As used herein, "oligonucleotide strand" is a single stranded nucleic acid molecule. An oligonucleotide may comprise ribonucleotides, deoxyribonucleotides, modified nucleotides (*e.g.*, nucleotides with 2' modifications, synthetic base analogs, etc.) or combinations thereof. Such modified oligonucleotides can be preferred over native forms because of properties such as, for example, enhanced cellular uptake and increased stability in the presence of nucleases.

As used herein, the term "ribonucleotide" encompasses natural and synthetic, unmodified and modified ribonucleotides. Modifications include changes to the sugar moiety, to the base moiety and/or to the linkages between ribonucleotides in the oligonucleotide. As used herein, the term "ribonucleotide" specifically excludes a deoxyribonucleotide, which is a nucleotide possessing a single proton group at the 2' ribose ring position.

As used herein, the term "deoxyribonucleotide" encompasses natural and synthetic, unmodified and modified deoxyribonucleotides. Modifications include changes to the sugar moiety, to the base moiety and/or to the linkages between deoxyribonucleotide in the oligonucleotide. As used herein, the term "deoxyribonucleotide" also includes a modified ribonucleotide that does not permit Dicer cleavage of a dsRNA agent, *e.g.*, a 2'-O-methyl ribonucleotide, a phosphorothioate-modified ribonucleotide residue, etc., that does not permit Dicer cleavage to occur at a bond of such a residue.

As used herein, the term "PS-NA" refers to a phosphorothioate-modified nucleotide residue. The term "PS-NA" therefore encompasses both phosphorothioate-modified ribonucleotides ("PS-RNAs") and phosphorothioate-modified deoxyribonucleotides ("PS-DNAs").

As used herein, "Dicer" refers to an endoribonuclease in the RNase III family that cleaves a dsRNA or dsRNA-containing molecule, *e.g.*, double-stranded RNA (dsRNA) or pre-microRNA (miRNA), into double-stranded nucleic acid fragments 19-25 nucleotides long, usually with a two-base overhang on the 3' end. With respect to the dsRNAs of the invention, the duplex formed by a dsRNA region of an agent of the invention is recognized by Dicer and is a Dicer substrate on at least one strand of the duplex. Dicer catalyzes the first step in the RNA interference pathway, which consequently results in the degradation of a target RNA. The protein sequence of human Dicer is provided at the NCBI database under accession number NP_085124,

hereby incorporated by reference.

Dicer "cleavage" is determined as follows (*e.g.*, see Collingwood *et al.*, Oligonucleotides 18:187–200 (2008)). In a Dicer cleavage assay, RNA duplexes (100 pmol) are incubated in 20 μL of 20 mM Tris pH 8.0, 200 mM NaCl, 2.5 mM MgCl2 with or without 1 unit of recombinant human Dicer (Stratagene, La Jolla, CA) at 37°C for 18–24 hours. Samples are desalted using a Performa SR 96-well plate (Edge Biosystems, Gaithersburg, MD). Electrospray-ionization liquid chromatography mass spectroscopy (ESI-LCMS) of duplex RNAs pre- and post-treatment with Dicer is done using an Oligo HTCS system (Novatia, Princeton, NJ; Hail et al., 2004), which consists of a ThermoFinnigan TSQ7000, Xcalibur data system, ProMass data processing software and Paradigm MS4 HPLC (Michrom BioResources, Auburn, CA). In this assay, Dicer cleavage occurs where at least 5%, 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 95%, or even 100% of the Dicer substrate dsRNA, (i.e., 25-30 bp, dsRNA, preferably 26-30 bp dsRNA) is cleaved to a shorter dsRNA (e.g., 19-23 bp dsRNA, preferably, 21-23 bp dsRNA).

As used herein, "Dicer cleavage site" refers to the sites at which Dicer cleaves a dsRNA (*e.g.*, the dsRNA region of a DsiRNA agent of the invention). Dicer contains two RNase III domains which typically cleave both the sense and antisense strands of a dsRNA. The average distance between the RNase III domains and the PAZ domain determines the length of the short double-stranded nucleic acid fragments it produces and this distance can vary (Macrae *et al.* (2006) *Science* 311: 195–8). As shown in Figure 1, Dicer is projected to cleave certain double-stranded ribonucleic acids of the instant invention that possess an antisense strand having a 2 nucleotide 3' overhang at a site between the 21st and 22nd nucleotides removed from the 3' terminus of the antisense strand, and at a corresponding site between the 21st and 22nd nucleotides removed from the 5' terminus of the sense strand. The projected and/or prevalent Dicer cleavage site(s) for dsRNA molecules distinct from those depicted in Figure 1 may be similarly identified *via* art-recognized methods, including those described in Macrae *et al.* While the Dicer cleavage events depicted in Figure 1 generate 21 nucleotide siRNAs, it is noted that Dicer cleavage of a dsRNA (*e.g.*, DsiRNA) can result in generation of Dicer-processed siRNA lengths of 19 to 23 nucleotides in length. Indeed, in certain embodiments, a double-stranded DNA region may be included within a dsRNA for purpose of directing prevalent Dicer excision of a typically non-preferred 19mer or 20mer siRNA, rather than a 21mer.

As used herein, "overhang" refers to unpaired nucleotides, in the context of a duplex having one or more free ends at the 5' terminus or 3' terminus of a dsRNA. In certain embodiments, the overhang is a 3' or 5' overhang on the antisense strand or sense strand. In some embodiments, the overhang is a 3' overhang having a length of between one and six nucleotides, optionally one to five, one to four, one to three, one to two, two to six, two to five, two to four, two to three, three to six, three to five, three to four, four to six, four to five, five to six nucleotides, or one, two, three, four, five or six nucleotides.

A dsRNA of the invention comprises two RNA strands that are sufficiently complementary to hybridize to form a duplex structure. One strand of the dsRNA (the antisense strand) comprises a region of complementarity that is substantially complementary, and generally fully complementary, to a target sequence, derived from the sequence of an mRNA formed during the expression of the β-catenin target gene, the other strand (the sense strand) comprises a region which is complementary to the antisense strand, such that the two strands hybridize and form a duplex structure when combined under suitable conditions. Generally, the duplex structure is between 15 and 35, optionally between 25 and 30, between 26 and 30, between 18 and 25, between 19 and 24, or between 19 and 21 base pairs in length. Similarly, the region of complementarity to the target sequence is between 15 and 35, optionally between 18 and 30, between 25 and 30, between 19 and 24, or between 19 and 21 nucleotides in length. The dsRNA of the invention may further comprise one or more single-stranded nucleotide overhang(s). It has been identified that dsRNAs comprising duplex structures of between 15 and 35 base pairs in length can be effective in inducing RNA interference, including DsiRNAs (generally of at least 25 base pairs in length) and siRNAs (in certain embodiments, duplex structures of siRNAs are between 20 and 23, and optionally, specifically 21 base pairs (Elbashir *et al.*, *EMBO* 20: 6877-6888)). It has also been identified that dsRNAs possessing duplexes shorter than 20 base pairs can be effective as well (*e.g.*, 15, 16, 17, 18 or 19 base pair duplexes). In certain embodiments, the dsRNAs of the invention can comprise at least one strand of a length of 19 nucleotides or more. In certain embodiments, it can be reasonably expected that shorter dsRNAs comprising a sequence complementary to one of the sequences of Table 10 below, minus only a few nucleotides on one or both ends may be similarly effective as compared to the dsRNAs described above and in Tables 2-5 and 7-10. Hence, dsRNAs comprising a partial sequence of at least 15, 16,

17, 18, 19, 20, or more contiguous nucleotides sufficiently complementary to one of the sequences of Table 10, and differing in their ability to inhibit the expression of the β-catenin target gene in an assay as described herein by not more than 5, 10, 15, 20, 25, or 30% inhibition from a dsRNA comprising the full sequence, are contemplated by the invention. In one embodiment, at least one end of the dsRNA has a single-stranded nucleotide overhang of 1 to 5, optionally 1 to 4, in certain embodiments, 1 or 2 nucleotides. Certain dsRNA structures having at least one nucleotide overhang possess superior inhibitory properties as compared to counterparts possessing base-paired blunt ends at both ends of the dsRNA molecule.

As used herein, the term "RNA processing" refers to processing activities performed by components of the siRNA, miRNA or RNase H pathways (*e.g.*, Drosha, Dicer, Argonaute2 or other RISC endoribonucleases, and RNaseH), which are described in greater detail below (see "RNA Processing" section below). The term is explicitly distinguished from the post-transcriptional processes of 5' capping of RNA and degradation of RNA *via* non-RISC- or non-RNase H-mediated processes. Such "degradation" of an RNA can take several forms, *e.g.* deadenylation (removal of a 3' poly(A) tail), and/or nuclease digestion of part or all of the body of the RNA by one or more of several endo- or exo-nucleases (*e.g.*, RNase III, RNase P, RNase T1, RNase A (1, 2, 3, 4/5), oligonucleotidase, etc.).

By "homologous sequence" is meant, a nucleotide sequence that is shared by one or more polynucleotide sequences, such as genes, gene transcripts and/or non-coding polynucleotides. For example, a homologous sequence can be a nucleotide sequence that is shared by two or more genes encoding related but different proteins, such as different members of a gene family, different protein epitopes, different protein isoforms or completely divergent genes, such as a cytokine and its corresponding receptors. A homologous sequence can be a nucleotide sequence that is shared by two or more non-coding polynucleotides, such as noncoding DNA or RNA, regulatory sequences, introns, and sites of transcriptional control or regulation. Homologous sequences can also include conserved sequence regions shared by more than one polynucleotide sequence. Homology does not need to be perfect homology (e.g., 100%), as partially homologous sequences are also contemplated by the instant invention (e.g., 99%, 98%, 97%, 96%, 95%, 94%, 93%, 92%, 91%, 90%, 89%, 88%, 87%, 86%, 85%, 84%, 83%, 82%, 81%, 80% etc.). Indeed, design and use of the DsiRNA agents of the instant invention contemplates the possibility of using such

DsiRNA agents not only against target RNAs of β-catenin possessing perfect complementarity with the presently described DsiRNA agents, but also against target β-catenin RNAs possessing sequences that are, *e.g.*, only 99%, 98%, 97%, 96%, 95%, 94%, 93%, 92%, 91%, 90%, 89%, 88%, 87%, 86%, 85%, 84%, 83%, 82%, 81%, 80% etc. complementary to said DsiRNA agents. Similarly, it is contemplated that the presently described DsiRNA agents of the instant invention might be readily altered by the skilled artisan to enhance the extent of complementarity between said DsiRNA agents and a target β-catenin RNA, *e.g.*, of a specific allelic variant of β-catenin (*e.g.*, an allele of enhanced therapeutic interest). Indeed, DsiRNA agent sequences with insertions, deletions, and single point mutations relative to the target β-catenin sequence can also be effective for inhibition. Alternatively, DsiRNA agent sequences with nucleotide analog substitutions or insertions can be effective for inhibition.

Sequence identity may be determined by sequence comparison and alignment algorithms known in the art. To determine the percent identity of two nucleic acid sequences (or of two amino acid sequences), the sequences are aligned for comparison purposes (*e.g.*, gaps can be introduced in the first sequence or second sequence for optimal alignment). The nucleotides (or amino acid residues) at corresponding nucleotide (or amino acid) positions are then compared. When a position in the first sequence is occupied by the same residue as the corresponding position in the second sequence, then the molecules are identical at that position. The percent identity between the two sequences is a function of the number of identical positions shared by the sequences (i.e., % homology=# of identical positions/total # of positions.times.100), optionally penalizing the score for the number of gaps introduced and/or length of gaps introduced.

The comparison of sequences and determination of percent identity between two sequences can be accomplished using a mathematical algorithm. In one embodiment, the alignment generated over a certain portion of the sequence aligned having sufficient identity but not over portions having low degree of identity (i.e., a local alignment). A preferred, non-limiting example of a local alignment algorithm utilized for the comparison of sequences is the algorithm of Karlin and Altschul (1990) Proc. Natl. Acad. Sci. USA 87:2264-68, modified as in Karlin and Altschul (1993) Proc. Natl. Acad. Sci. USA 90:5873-77. Such an algorithm is incorporated into the BLAST programs (version 2.0) of Altschul, et al. (1990) J. Mol. Biol. 215:403-10.

In another embodiment, a gapped alignment is formed by introducing gaps, and percent identity is determined over the length of the aligned sequences. To obtain gapped alignments for comparison purposes, Gapped BLAST can be utilized as described in Altschul et al., (1997) Nucleic Acids Res. 25(17):3389-3402. In another embodiment, a global alignment is formed by introducing gaps, and percent identity is determined over the entire length of the sequences aligned. A preferred, non-limiting example of a mathematical algorithm utilized for the global comparison of sequences is the algorithm of Myers and Miller, CABIOS (1989). Such an algorithm is incorporated into the ALIGN program (version 2.0) which is part of the GCG sequence alignment software package. When utilizing the ALIGN program for comparing amino acid sequences, a PAM120 weight residue table, a gap length penalty of 12, and a gap penalty of 4 can be used.

Greater than 80% sequence identity, e.g., 80%, 81%, 82%, 83%, 84%, 85%, 86%, 87%, 88%, 89%, 90%, 91%, 92%, 93%, 94%, 95%, 96%, 97%, 98%, 99% or even 100% sequence identity, between the DsiRNA antisense strand and the portion of the β-catenin RNA sequence is preferred. Alternatively, the DsiRNA may be defined functionally as a nucleotide sequence (or oligonucleotide sequence) that is capable of hybridizing with a portion of the β-catenin RNA (e.g., 400 mM NaCl, 40 mM PIPES pH 6.4, 1 mM EDTA, 50°C or 70°C hybridization for 12-16 hours; followed by washing). Additional preferred hybridization conditions include hybridization at 70°C in 1xSSC or 50°C in 1xSSC, 50% formamide followed by washing at 70°C in 0.3xSSC or hybridization at 70°C. in 4xSSC or 50°C in 4xSSC, 50% formamide followed by washing at 67°C in 1xSSC. The hybridization temperature for hybrids anticipated to be less than 50 base pairs in length should be 5-10°C less than the melting temperature (Tm) of the hybrid, where Tm is determined according to the following equations. For hybrids less than 18 base pairs in length, Tm(°C)=2(# of A+T bases)+4(# of G+C bases). For hybrids between 18 and 49 base pairs in length, Tm(°C)=81.5+16.6(log 10[Na+])+0.41 (% G+C)-(600/N), where N is the number of bases in the hybrid, and [Na+] is the concentration of sodium ions in the hybridization buffer ([Na+] for 1xSSC=0.165 M). Additional examples of stringency conditions for polynucleotide hybridization are provided in Sambrook, J., E. F. Fritsch, and T. Maniatis, 1989, Molecular Cloning: A Laboratory Manual, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y., chapters 9 and 11, and Current Protocols in Molecular Biology, 1995, F. M. Ausubel et al., eds., John Wiley

& Sons, Inc., sections 2.10 and 6.3-6.4. The length of the identical nucleotide sequences may be at least 10, 12, 15, 17, 20, 22, 25, 27 or 30 bases.

By "conserved sequence region" is meant, a nucleotide sequence of one or more regions in a polynucleotide does not vary significantly between generations or from one biological system, subject, or organism to another biological system, subject, or organism. The polynucleotide can include both coding and non-coding DNA and RNA.

By "sense region" is meant a nucleotide sequence of a DsiRNA molecule having complementarity to an antisense region of the DsiRNA molecule. In addition, the sense region of a DsiRNA molecule can comprise a nucleic acid sequence having homology with a target nucleic acid sequence.

By "antisense region" is meant a nucleotide sequence of a DsiRNA molecule having complementarity to a target nucleic acid sequence. In addition, the antisense region of a DsiRNA molecule comprises a nucleic acid sequence having complementarity to a sense region of the DsiRNA molecule.

As used herein, "antisense strand" refers to a single stranded nucleic acid molecule which has a sequence complementary to that of a target RNA. When the antisense strand contains modified nucleotides with base analogs, it is not necessarily complementary over its entire length, but must at least hybridize with a target RNA.

As used herein, "sense strand" refers to a single stranded nucleic acid molecule which has a sequence complementary to that of an antisense strand. When the antisense strand contains modified nucleotides with base analogs, the sense strand need not be complementary over the entire length of the antisense strand, but must at least duplex with the antisense strand.

As used herein, "guide strand" refers to a single stranded nucleic acid molecule of a dsRNA or dsRNA-containing molecule, which has a sequence sufficiently complementary to that of a target RNA to result in RNA interference. After cleavage of the dsRNA or dsRNA-containing molecule by Dicer, a fragment of the guide strand remains associated with RISC, binds a target RNA as a component of the RISC complex, and promotes cleavage of a target RNA by RISC. As used herein, the guide strand does not necessarily refer to a continuous single stranded nucleic acid and may comprise a discontinuity, preferably at a site that is cleaved by Dicer. A guide strand is an antisense strand.

As used herein, "passenger strand" refers to an oligonucleotide strand of a

dsRNA or dsRNA-containing molecule, which has a sequence that is complementary to that of the guide strand. As used herein, the passenger strand does not necessarily refer to a continuous single stranded nucleic acid and may comprise a discontinuity, preferably at a site that is cleaved by Dicer. A passenger strand is a sense strand.

By "target nucleic acid" is meant a nucleic acid sequence whose expression, level or activity is to be modulated. The target nucleic acid can be DNA or RNA. For agents that target AR, in certain embodiments target nucleic acid is β-catenin RNA. β-catenin RNA target sites can also interchangeably be referenced by corresponding cDNA sequences. Levels of β-catenin may also be targeted *via* targeting of upstream effectors of β-catenin, or the effects of modulated or misregulated β-catenin may also be modulated by targeting of molecules downstream of β-catenin in the β-catenin signalling pathway.

By "complementarity" is meant that a nucleic acid can form hydrogen bond(s) with another nucleic acid sequence by either traditional Watson-Crick or other non-traditional types. In reference to the nucleic molecules of the present invention, the binding free energy for a nucleic acid molecule with its complementary sequence is sufficient to allow the relevant function of the nucleic acid to proceed, e.g., RNAi activity. Determination of binding free energies for nucleic acid molecules is well known in the art (see, e.g., Turner et al., 1987, CSH Symp. Quant. Biol. LII pp. 123-133; Frier et al., 1986, Proc. Nat. Acad. Sci. USA 83:9373-9377; Turner et al., 1987, J. Am. Chem. Soc. 109:3783-3785). A percent complementarity indicates the percentage of contiguous residues in a nucleic acid molecule that can form hydrogen bonds (e.g., Watson-Crick base pairing) with a second nucleic acid sequence (e.g., 5, 6, 7, 8, 9, or 10 nucleotides out of a total of 10 nucleotides in the first oligonucleotide being based paired to a second nucleic acid sequence having 10 nucleotides represents 50%, 60%, 70%, 80%, 90%, and 100% complementary respectively). "Perfectly complementary" means that all the contiguous residues of a nucleic acid sequence will hydrogen bond with the same number of contiguous residues in a second nucleic acid sequence. In one embodiment, a DsiRNA molecule of the invention comprises 19 to 30 (e.g., 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, or 30 or more) nucleotides that are complementary to one or more target nucleic acid molecules or a portion thereof.

In one embodiment, DsiRNA molecules of the invention that down regulate or reduce β-catenin gene expression are used for treating, preventing or reducing β-catenin-related diseases or disorders (*e.g.*, cancer) in a subject or organism.

In one embodiment of the present invention, each sequence of a DsiRNA molecule of the invention is independently 25 to 35 nucleotides in length, in specific embodiments 25, 26, 27, 28, 29, 30, 31, 32, 33, 34 or 35 nucleotides in length. In another embodiment, the DsiRNA duplexes of the invention independently comprise 25 to 30 base pairs (*e.g.*, 25, 26, 27, 28, 29, or 30). In another embodiment, one or more strands of the DsiRNA molecule of the invention independently comprises 19 to 35 nucleotides (e.g., 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34 or 35) that are complementary to a target (AR) nucleic acid molecule. In certain embodiments, a DsiRNA molecule of the invention possesses a length of duplexed nucleotides between 25 and 34 nucleotides in length (*e.g.*, 25, 26, 27, 28, 29, 30, 31, 32, 33 or 34 nucleotides in length; optionally, all such nucleotides base pair with cognate nucleotides of the opposite strand). (Exemplary DsiRNA molecules of the invention are shown in Figure 1, and below.

As used herein "cell" is used in its usual biological sense, and does not refer to an entire multicellular organism, e.g., specifically does not refer to a human. The cell can be present in an organism, e.g., birds, plants and mammals such as humans, cows, sheep, apes, monkeys, swine, dogs, and cats. The cell can be prokaryotic (e.g., bacterial cell) or eukaryotic (e.g., mammalian or plant cell). The cell can be of somatic or germ line origin, totipotent or pluripotent, dividing or non-dividing. The cell can also be derived from or can comprise a gamete or embryo, a stem cell, or a fully differentiated cell. Within certain aspects, the term “cell” refers specifically to mammalian cells, such as human cells, that contain one or more isolated dsRNA molecules of the present disclosure. In particular aspects, a cell processes dsRNAs or dsRNA-containing molecules resulting in RNA intereference of target nucleic acids, and contains proteins and protein complexes required for RNAi, *e.g.*, Dicer and RISC.

In certain embodiments, dsRNAs of the invention are Dicer substrate siRNAs (“DsiRNAs”). DsiRNAs can possess certain advantages as compared to inhibitory nucleic acids that are not dicer substrates (“non-DsiRNAs”). Such advantages include, but are not limited to, enhanced duration of effect of a DsiRNA relative to a non-DsiRNA, as well as enhanced inhibitory activity of a DsiRNA as compared to a non-DsiRNA (e.g., a 19-23mer siRNA) when each inhibitory nucleic acid is suitably formulated and assessed for inhibitory activity in a mammalian cell at the same concentration (in this latter scenario, the DsiRNA would be identified as more potent than the non-DsiRNA). Detection of the enhanced potency of a DsiRNA relative to a

non-DsiRNA is often most readily achieved at a formulated concentration (e.g., transfection concentration of the dsRNA) that results in the DsiRNA eliciting approximately 30-70% knockdown activity upon a target RNA (*e.g.*, a mRNA). For active DsiRNAs, such levels of knockdown activity are most often achieved at *in vitro* mammalian cell DsiRNA transfection concentrations of 1 nM or less of as suitably formulated, and in certain instances are observed at DsiRNA transfection concentrations of 200 pM or less, 100 pM or less, 50pM or less, 20 pM or less, 10 pM or less, 5 pM or less, or even 1 pM or less. Indeed, due to the variability among DsiRNAs of the precise concentration at which 30-70% knockdown of a target RNA is observed, construction of an IC50 curve *via* assessment of the inhibitory activity of DsiRNAs and non-DsiRNAs across a range of effective concentrations is a preferred method for detecting the enhanced potency of a DsiRNA relative to a non-DsiRNA inhibitory agent.

In certain embodiments, a DsiRNA (in a state as initially formed, prior to dicer cleavage) is more potent at reducing β-catenin target gene expression in a mammalian cell than a 19, 20, 21, 22 or 23 base pair sequence that is contained within it. In certain such embodiments, a DsiRNA prior to dicer cleavage is more potent than a 19-21mer contained within it. Optionally, a DsiRNA prior to dicer cleavage is more potent than a 19 base pair duplex contained within it that is synthesized with symmetric dTdT overhangs (thereby forming a siRNA possessing 21 nucleotide strand lengths having dTdT overhangs). In certain embodiments, the DsiRNA is more potent than a 19-23mer siRNA (e.g., a 19 base pair duplex with dTdT overhangs) that targets at least 15 nucleotides of the 21 nucleotide target sequence that is recited for a DsiRNA of the invention (without wishing to be bound by theory, the identity of a such a target site for a DsiRNA is identified *via* identification of the Ago2 cleavage site for the DsiRNA; once the Ago2 cleavage site of a DsiRNA is determined for a DsiRNA, identification of the Ago2 cleavage site for any other inhibitory dsRNA can be performed and these Ago2 cleavage sites can be aligned, thereby determining the alignment of projected target nucleotide sequences for multiple dsRNAs). In certain related embodiments, the DsiRNA is more potent than a 19-23mer siRNA that targets at least 20 nucleotides of the 21 nucleotide target sequence that is recited for a DsiRNA of the invention. Optionally, the DsiRNA is more potent than a 19-23mer siRNA that targets the same 21 nucleotide target sequence that is recited for a DsiRNA of the invention. In certain embodiments, the DsiRNA is more potent than

any 21mer siRNA that targets the same 21 nucleotide target sequence that is recited for a DsiRNA of the invention. Optionally, the DsiRNA is more potent than any 21 or 22mer siRNA that targets the same 21 nucleotide target sequence that is recited for a DsiRNA of the invention. In certain embodiments, the DsiRNA is more potent than any 21, 22 or 23mer siRNA that targets the same 21 nucleotide target sequence that is recited for a DsiRNA of the invention. As noted above, such potency assessments are most effectively performed upon dsRNAs that are suitably formulated (e.g., formulated with an appropriate transfection reagent) at a concentration of 1 nM or less. Optionally, an IC50 assessment is performed to evaluate activity across a range of effective inhibitory concentrations, thereby allowing for robust comparison of the relative potencies of dsRNAs so assayed.

The dsRNA molecules of the invention are added directly, or can be complexed with lipids (*e.g.*, cationic lipids), packaged within liposomes, or otherwise delivered to target cells or tissues. The nucleic acid or nucleic acid complexes can be locally administered to relevant tissues *ex vivo*, or *in vivo* through direct dermal application, transdermal application, or injection, with or without their incorporation in biopolymers. In particular embodiments, the nucleic acid molecules of the invention comprise sequences shown in Figure 1, and the below exemplary structures. Examples of such nucleic acid molecules consist essentially of sequences defined in these figures and exemplary structures. Furthermore, where such agents are modified in accordance with the below description of modification patterning of DsiRNA agents, chemically modified forms of constructs described in Figure 1, and the below exemplary structures can be used in all uses described for the DsiRNA agents of Figure 1, and the below exemplary structures.

In another aspect, the invention provides mammalian cells containing one or more DsiRNA molecules of this invention. The one or more DsiRNA molecules can independently be targeted to the same or different sites.

By "RNA" is meant a molecule comprising at least one, and preferably at least 4 , 8 and 12 ribonucleotide residues. The at least 4, 8 or 12 RNA residues may be contiguous. By "ribonucleotide" is meant a nucleotide with a hydroxyl group at the 2' position of a β-D-ribofuranose moiety. The terms include double-stranded RNA, single-stranded RNA, isolated RNA such as partially purified RNA, essentially pure RNA, synthetic RNA, recombinantly produced RNA, as well as altered RNA that

differs from naturally occurring RNA by the addition, deletion, substitution and/or alteration of one or more nucleotides. Such alterations can include addition of non-nucleotide material, such as to the end(s) of the DsiRNA or internally, for example at one or more nucleotides of the RNA. Nucleotides in the RNA molecules of the instant invention can also comprise non-standard nucleotides, such as non-naturally occurring nucleotides or chemically synthesized nucleotides or deoxynucleotides. These altered RNAs can be referred to as analogs or analogs of naturally-occurring RNA.

By "subject" is meant an organism, which is a donor or recipient of explanted cells or the cells themselves. "Subject" also refers to an organism to which the DsiRNA agents of the invention can be administered. A subject can be a mammal or mammalian cells, including a human or human cells.

The phrase "pharmaceutically acceptable carrier" refers to a carrier for the administration of a therapeutic agent. Exemplary carriers include saline, buffered saline, dextrose, water, glycerol, ethanol, and combinations thereof. For drugs administered orally, pharmaceutically acceptable carriers include, but are not limited to pharmaceutically acceptable excipients such as inert diluents, disintegrating agents, binding agents, lubricating agents, sweetening agents, flavoring agents, coloring agents and preservatives. Suitable inert diluents include sodium and calcium carbonate, sodium and calcium phosphate, and lactose, while corn starch and alginic acid are suitable disintegrating agents. Binding agents may include starch and gelatin, while the lubricating agent, if present, will generally be magnesium stearate, stearic acid or talc. If desired, the tablets may be coated with a material such as glyceryl monostearate or glyceryl distearate, to delay absorption in the gastrointestinal tract. The pharmaceutically acceptable carrier of the disclosed dsRNA compositions may be micellar structures, such as a liposomes, capsids, capsoids, polymeric nanocapsules, or polymeric microcapsules.

Polymeric nanocapsules or microcapsules facilitate transport and release of the encapsulated or bound dsRNA into the cell. They include polymeric and monomeric materials, especially including polybutylcyanoacrylate. A summary of materials and fabrication methods has been published (see Kreuter, 1991). The polymeric materials which are formed from monomeric and/or oligomeric precursors in the polymerization/nanoparticle generation step, are *per se* known from the prior art, as are the molecular weights and molecular weight distribution of the polymeric material

which a person skilled in the field of manufacturing nanoparticles may suitably select in accordance with the usual skill.

Various methodologies of the instant invention include step that involves comparing a value, level, feature, characteristic, property, etc. to a "suitable control", referred to interchangeably herein as an "appropriate control". A "suitable control" or "appropriate control" is a control or standard familiar to one of ordinary skill in the art useful for comparison purposes. In one embodiment, a "suitable control" or "appropriate control" is a value, level, feature, characteristic, property, etc. determined prior to performing an RNAi methodology, as described herein. For example, a transcription rate, mRNA level, translation rate, protein level, biological activity, cellular characteristic or property, genotype, phenotype, etc. can be determined prior to introducing an RNA silencing agent (*e.g.*, DsiRNA) of the invention into a cell or organism. In another embodiment, a "suitable control" or "appropriate control" is a value, level, feature, characteristic, property, etc. determined in a cell or organism, *e.g.*, a control or normal cell or organism, exhibiting, for example, normal traits. In yet another embodiment, a "suitable control" or "appropriate control" is a predefined value, level, feature, characteristic, property, etc.

The term "*in vitro*" has its art recognized meaning, *e.g.*, involving purified reagents or extracts, *e.g.*, cell extracts. The term "*in vivo*" also has its art recognized meaning, *e.g.*, involving living cells, *e.g.*, immortalized cells, primary cells, cell lines, and/or cells in an organism.

"Treatment", or "treating" as used herein, is defined as the application or administration of a therapeutic agent (*e.g.*, a DsiRNA agent or a vector or transgene encoding same) to a patient, or application or administration of a therapeutic agent to an isolated tissue or cell line from a patient, who has a disorder with the purpose to cure, heal, alleviate, relieve, alter, remedy, ameliorate, improve or affect the disease or disorder, or symptoms of the disease or disorder. The term "treatment" or "treating" is also used herein in the context of administering agents prophylactically. The term "effective dose" or "effective dosage" is defined as an amount sufficient to achieve or at least partially achieve the desired effect. The term "therapeutically effective dose" is defined as an amount sufficient to cure or at least partially arrest the disease and its complications in a patient already suffering from the disease. The term "patient" includes human and other mammalian subjects that receive either prophylactic or therapeutic treatment.

Structures of Anti-β-catenin DsiRNA Agents

In certain embodiments, the anti-β-catenin DsiRNA agents of the invention have the following structures:

In one such embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA and "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers. In a related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers, and "D"=DNA. In one embodiment, the top strand is the sense strand, and the bottom strand is the antisense strand. Alternatively, the bottom strand is the sense strand and the top strand is the antisense strand.

DsiRNAs of the invention can carry a broad range of modification patterns (*e.g.*, 2'-O-methyl RNA patterns, *e.g.*, within extended DsiRNA agents). Certain modification patterns of the second strand of DsiRNAs of the invention are presented below.

In one embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-Y$\underline{X}$X$\underline{X}$X$\underline{X}$X$\underline{X}$X$\underline{X}$X$\underline{X}$X$\underline{X}$XXXXXXXXXX-5′

wherein "X"=RNA, "$\underline{X}$"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers and underlined residues are 2'-O-methyl RNA monomers. In a related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-Y$\underline{X}$X$\underline{X}$X$\underline{X}$X$\underline{X}$X$\underline{X}$X$\underline{X}$X$\underline{X}$XXXXXXXXXX-5′

wherein "X"=RNA, "$\underline{X}$"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers and underlined residues are 2'-O-methyl RNA monomers, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand.

In another such embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-Y$\underline{X}$-5′

wherein "X"=RNA, "$\underline{X}$"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers and underlined residues are 2'-O-methyl RNA monomers. In a related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-Y$\underline{X}$-5′

wherein "X"=RNA, "$\underline{X}$"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers, underlined residues are 2'-O-methyl RNA monomers, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand.

In another such embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-Y$\underline{X}$-5′

wherein "X"=RNA, "$\underline{X}$"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers and underlined residues are 2'-O-methyl RNA monomers. In a related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-Y$\underline{X}$-5′

wherein "X"=RNA, "$\underline{X}$"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers, underlined residues are 2'-O-methyl RNA monomers, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand.

In further embodiments, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-YXXXXXXXXXXXX$\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}$XXXXXXXX$\underline{X}\underline{X}$-5′

wherein "X"=RNA, "$\underline{X}$"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers and underlined residues are 2'-O-methyl RNA monomers. In a related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-YXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers, underlined residues are 2'-O-methyl RNA monomers, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In one related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA and "X"=2'-O-methyl RNA. In a further related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand.

In additional embodiments, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-YXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers and underlined residues are 2'-O-methyl RNA monomers. In a related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-YXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers, underlined residues are 2'-O-methyl RNA monomers, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand. The top strand is the sense strand, and the bottom strand is the antisense strand. In another related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA and "X"=2'-O-methyl RNA. The top strand is the sense strand,

and the bottom strand is the antisense strand. In a further related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand.

In other embodiments, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers and underlined residues are 2'-O-methyl RNA monomers. The top strand is the sense strand, and the bottom strand is the antisense strand. In a related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers, underlined residues are 2'-O-methyl RNA monomers, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In one related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA and "X"=2'-O-methyl RNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In another related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand.

In further embodiments, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers and underlined residues are 2'-O-methyl RNA monomers. The top strand is the sense strand, and the bottom strand is the antisense strand. In a related embodiment, the DsiRNA comprises:

5'-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3'-YXXXXXXXXXXXXXXXXXXXXXXX-5'

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers, underlined residues are 2'-O-methyl RNA monomers, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In one related embodiment, the DsiRNA comprises:

5'-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3'-XXXXXXXXXXXXXXXXXXXXXXXXX-5'

wherein "X"=RNA and "X"=2'-O-methyl RNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In a further related embodiment, the DsiRNA comprises:

5'-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3'-XXXXXXXXXXXXXXXXXXXXXXX-5'

wherein "X"=RNA, "X"=2'-O-methyl RNA, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand.

In additional embodiments, the DsiRNA comprises:

5'-XXXXXXXXXXXXXXXXXXXXXXXX-3'

3'-YXXXXXXXXXXXXXXXXXXXXXXXX-5'

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers and underlined residues are 2'-O-methyl RNA monomers. The top strand is the sense strand, and the bottom strand is the antisense strand. In a related embodiment, the DsiRNA comprises:

5'-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3'-YXXXXXXXXXXXXXXXXXXXXXXX-5'

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers, underlined

residues are 2'-O-methyl RNA monomers, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In another related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA and "X"=2'-O-methyl RNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In a further related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand.

In other embodiments, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers and underlined residues are 2'-O-methyl RNA monomers. The top strand is the sense strand, and the bottom strand is the antisense strand. In one related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers, underlined residues are 2'-O-methyl RNA monomers, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In another related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA and "X"=2'-O-methyl RNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In a further related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand.

In additional embodiments, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers and underlined residues are 2'-O-methyl RNA monomers. The top strand is the sense strand, and the bottom strand is the antisense strand. In a related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers, underlined residues are 2'-O-methyl RNA monomers, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In another related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA and "X"=2'-O-methyl RNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In a further related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand.

In further embodiments, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers and underlined residues are 2'-O-methyl RNA monomers. The top strand is the sense strand, and the bottom strand is the antisense strand. In a related embodiment, the DsiRNA

comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers, underlined residues are 2'-O-methyl RNA monomers, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In another related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA and "X"=2'-O-methyl RNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In a further related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand.

In additional embodiments, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers and underlined residues are 2'-O-methyl RNA monomers. The top strand is the sense strand, and the bottom strand is the antisense strand. In one related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers, underlined residues are 2'-O-methyl RNA monomers, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In another related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA and "X"=2'-O-methyl RNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In a further related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand.

In other embodiments, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers and underlined residues are 2'-O-methyl RNA monomers. The top strand is the sense strand, and the bottom strand is the antisense strand. In a related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers, underlined residues are 2'-O-methyl RNA monomers, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In another related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA and "X"=2'-O-methyl RNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In a further related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand.

In further embodiments, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers and underlined residues are 2'-O-methyl RNA monomers. The top strand is the sense strand, and the bottom strand is the antisense strand. In one related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers, underlined residues are 2'-O-methyl RNA monomers, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In another related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA and "X"=2'-O-methyl RNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In a further related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand.

In additional embodiments, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers and underlined residues are 2'-O-methyl RNA monomers. The top strand is the sense strand, and the bottom strand is the antisense strand. In one related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers, underlined residues are 2'-O-methyl RNA monomers, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In another related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA and "X"=2'-O-methyl RNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In a further related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand.

In further embodiments, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers and underlined residues are 2'-O-methyl RNA monomers. The top strand is the sense strand, and the bottom strand is the antisense strand. In one related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers, underlined residues are 2'-O-methyl RNA monomers, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In another related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA and "X"=2'-O-methyl RNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In a further related embodiment, the

DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand.

In other embodiments, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers and underlined residues are 2'-O-methyl RNA monomers. The top strand is the sense strand, and the bottom strand is the antisense strand. In another related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers, underlined residues are 2'-O-methyl RNA monomers, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In another related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA and "X"=2'-O-methyl RNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In a further related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand.

In further embodiments, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of

1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers and underlined residues are 2'-O-methyl RNA monomers. The top strand is the sense strand, and the bottom strand is the antisense strand. In one related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers, underlined residues are 2'-O-methyl RNA monomers, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In another related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA and "X"=2'-O-methyl RNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In a further related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand.

In additional embodiments, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers and underlined residues are 2'-O-methyl RNA monomers. The top strand is the sense strand, and the bottom strand is the antisense strand. In one related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers, underlined residues are 2'-O-methyl RNA monomers, and "D"=DNA. The top strand is the

sense strand, and the bottom strand is the antisense strand. In another related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA and "X"=2'-O-methyl RNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In a further related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand.

In further embodiments, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers and underlined residues are 2'-O-methyl RNA monomers. The top strand is the sense strand, and the bottom strand is the antisense strand. In a related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers, underlined residues are 2'-O-methyl RNA monomers, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In another related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA and "X"=2'-O-methyl RNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In a further related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand.

In additional embodiments, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers and underlined residues are 2'-O-methyl RNA monomers. The top strand is the sense strand, and the bottom strand is the antisense strand. In one related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers, underlined residues are 2'-O-methyl RNA monomers, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In another related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA and "X"=2'-O-methyl RNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In a further related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand.

In further embodiments, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers and underlined residues are 2'-O-methyl RNA monomers. The top strand is the sense strand, and the bottom strand is the antisense strand. In one related embodiment, the DsiRNA

comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers, underlined residues are 2'-O-methyl RNA monomers, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In another related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA and "X"=2'-O-methyl RNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In a further related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand.

In additional embodiments, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers and underlined residues are 2'-O-methyl RNA monomers. The top strand is the sense strand, and the bottom strand is the antisense strand. In one related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers, underlined residues are 2'-O-methyl RNA monomers, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In another related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA and "X"=2'-O-methyl RNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In a further related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand.

In further embodiments, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers and underlined residues are 2'-O-methyl RNA monomers. The top strand is the sense strand, and the bottom strand is the antisense strand. In one related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers, underlined residues are 2'-O-methyl RNA monomers, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In another related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA and "X"=2'-O-methyl RNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In a further related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand.

In additional embodiments, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers and underlined residues are 2'-O-methyl RNA monomers. The top strand is the sense strand, and the bottom strand is the antisense strand. In one related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-YXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers, underlined residues are 2'-O-methyl RNA monomers, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In another related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXXX-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA and "X"=2'-O-methyl RNA. The top strand is the sense strand, and the bottom strand is the antisense strand. In a further related embodiment, the DsiRNA comprises:

5′-XXXXXXXXXXXXXXXXXXXXXXXDD-3'

3′-XXXXXXXXXXXXXXXXXXXXXXXX-5′

wherein "X"=RNA, "X"=2'-O-methyl RNA, and "D"=DNA. The top strand is the sense strand, and the bottom strand is the antisense strand.

The above modification patterns can also be incorporated into, *e.g.*, the extended DsiRNA structures and mismatch and/or frayed DsiRNA structures described below.

In another embodiment, the DsiRNA comprises strands having equal lengths possessing 1-3 mismatched residues that serve to orient Dicer cleavage (specifically, one or more of positions 1, 2 or 3 on the first strand of the DsiRNA, when numbering from the 3'-terminal residue, are mismatched with corresponding residues of the 5'-terminal region on the second strand when first and second strands are annealed to one another). An exemplary 27mer DsiRNA agent with two terminal mismatched

residues is shown:

5′-XXXXXXXXXXXXXXXXXXXXXXXXXX^{M}$^{M-3'}$

3′-XXXXXXXXXXXXXXXXXXXXXXXXXX$_{M}$$_{M-5'}$

wherein "X"=RNA, "M"=Nucleic acid residues (RNA, DNA or non-natural or modified nucleic acids) that do not base pair (hydrogen bond) with corresponding "M" residues of otherwise complementary strand when strands are annealed. Any of the residues of such agents can optionally be 2'-O-methyl RNA monomers – alternating positioning of 2'-O-methyl RNA monomers that commences from the 3'-terminal residue of the bottom (second) strand, as shown for above asymmetric agents, can also be used in the above "blunt/fray" DsiRNA agent. In one embodiment, the top strand is the sense strand, and the bottom strand is the antisense strand. Alternatively, the bottom strand is the sense strand and the top strand is the antisense strand.

In certain additional embodiments, the present invention provides compositions for RNA interference (RNAi) that possess one or more base paired deoxyribonucleotides within a region of a double stranded ribonucleic acid (dsRNA) that is positioned 3' of a projected sense strand Dicer cleavage site and correspondingly 5' of a projected antisense strand Dicer cleavage site. The compositions of the invention comprise a dsRNA which is a precursor molecule, *i.e.*, the dsRNA of the present invention is processed *in vivo* to produce an active small interfering nucleic acid (siRNA). The dsRNA is processed by Dicer to an active siRNA which is incorporated into RISC.

In certain embodiments, the DsiRNA agents of the invention can have the following exemplary structures (noting that any of the following exemplary structures can be combined, *e.g.*, with the bottom strand modification patterns of the above-described structures – in one specific example, the bottom strand modification pattern shown in any of the above structures is applied to the 27 most 3' residues of the bottom strand of any of the following structures; in another specific example, the bottom strand modification pattern shown in any of the above structures upon the 23 most 3' residues of the bottom strand is applied to the 23 most 3' residues of the bottom strand of any of the following structures):

In one such embodiment, the DsiRNA comprises the following (an exemplary "right-extended", "DNA extended" DsiRNA):

5'-XXXXXXXXXXXXXXXXXXXXXXXX$X_{N*}D_NDD$-3'

3'-YXXXXXXXXXXXXXXXXXXXXXXX$X_{N*}D_N$XX-5'

wherein "X"=RNA, "Y" is an optional overhang domain comprised of 0-10 RNA monomers that are optionally 2'-O-methyl RNA monomers – in certain embodiments, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers, "D"=DNA, and "N"=1 to 50 or more, but is optionally 1-8 or 1-10. "N*"=0 to 15 or more, but is optionally 0, 1, 2, 3, 4, 5 or 6. In one embodiment, the top strand is the sense strand, and the bottom strand is the antisense strand. Alternatively, the bottom strand is the sense strand and the top strand is the antisense strand.

In a related embodiment, the DsiRNA comprises:

5'-XXXXXXXXXXXXXXXXXXXXXXXX$X_{N*}D_NDD$-3'

3'-YXXXXXXXXXXXXXXXXXXXXXXX$X_{N*}D_N$DD-5'

wherein "X"=RNA, "Y" is an optional overhang domain comprised of 0-10 RNA monomers that are optionally 2'-O-methyl RNA monomers – in certain embodiments, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers, "D"=DNA, and "N"=1 to 50 or more, but is optionally 1-8 or 1-10. "N*"=0 to 15 or more, but is optionally 0, 1, 2, 3, 4, 5 or 6. In one embodiment, the top strand is the sense strand, and the bottom strand is the antisense strand. Alternatively, the bottom strand is the sense strand and the top strand is the antisense strand.

In an additional embodiment, the DsiRNA comprises:

5'-XXXXXXXXXXXXXXXXXXXXXXXX$X_{N*}D_NDD$-3'

3'-Y$\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}$XXXXXXXXXX$X_{N*}D_N$ZZ-5'

wherein "X"=RNA, "$\underline{X}$"=2'-O-methyl RNA, "Y" is an optional overhang domain comprised of 0-10 RNA monomers that are optionally 2'-O-methyl RNA monomers – in certain embodiments, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers, "D"=DNA, "Z"=DNA or RNA, and "N"=1 to 50 or more, but is optionally 1-8 or 1-10. "N*"=0 to 15 or more, but is optionally 0, 1, 2, 3, 4, 5 or 6. In one embodiment, the top strand is the sense strand, and the bottom strand is the antisense strand. Alternatively, the bottom strand is the sense strand and the top strand is the antisense strand, with 2'-O-methyl RNA monomers located at alternating residues along the top strand, rather than the bottom

strand presently depicted in the above schematic.

In another such embodiment, the DsiRNA comprises:

5'-XXXXXXXXXXXXXXXXXXXXXXXXX$_{N*}$D$_N$DD-3'

3'-Y$\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}$XXXXXXX$_{N*}D_N$ZZ-5'

wherein "X"=RNA, "$\underline{X}$"=2'-O-methyl RNA, "Y" is an optional overhang domain comprised of 0-10 RNA monomers that are optionally 2'-O-methyl RNA monomers – in certain embodiments, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers, "D"=DNA, "Z"=DNA or RNA, and "N"=1 to 50 or more, but is optionally 1-8 or 1-10. "N*"=0 to 15 or more, but is optionally 0, 1, 2, 3, 4, 5 or 6. In one embodiment, the top strand is the sense strand, and the bottom strand is the antisense strand. Alternatively, the bottom strand is the sense strand and the top strand is the antisense strand, with 2'-O-methyl RNA monomers located at alternating residues along the top strand, rather than the bottom strand presently depicted in the above schematic.

In another such embodiment, the DsiRNA comprises:

5'-XXXXXXXXXXXXXXXXXXXXXXXXX$_{N*}$D$_N$DD-3'

3'-Y$\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}\underline{X}$XXXXXX$_{N*}D_N$ZZ-5'

wherein "X"=RNA, "$\underline{X}$"=2'-O-methyl RNA, "Y" is an optional overhang domain comprised of 0-10 RNA monomers that are optionally 2'-O-methyl RNA monomers – in certain embodiments, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers, "D"=DNA, "Z"=DNA or RNA, and "N"=1 to 50 or more, but is optionally 1-8 or 1-10. "N*"=0 to 15 or more, but is optionally 0, 1, 2, 3, 4, 5 or 6. In one embodiment, the top strand is the sense strand, and the bottom strand is the antisense strand. Alternatively, the bottom strand is the sense strand and the top strand is the antisense strand, with 2'-O-methyl RNA monomers located at alternating residues along the top strand, rather than the bottom strand presently depicted in the above schematic.

In another embodiment, the DsiRNA comprises:

5'-XXXXXXXXXXXXXXXXXXXXXXXXX$_{N*}$[X1/D1]$_N$DD-3'

3'-YXXXXXXXXXXXXXXXXXXXXXXXX$_{N*}$[X2/D2]$_N$ZZ-5'

wherein "X"=RNA, "Y" is an optional overhang domain comprised of 0-10 RNA monomers that are optionally 2'-O-methyl RNA monomers – in certain embodiments, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-

O-methyl RNA monomers, "D"=DNA, "Z"=DNA or RNA, and "N"=1 to 50 or more, but is optionally 1-8 or 1-10, where at least one $D1_N$ is present in the top strand and is base paired with a corresponding $D2_N$ in the bottom strand. Optionally, $D1_N$ and $D1_{N+1}$ are base paired with corresponding $D2_N$ and $D2_{N+1}$; $D1_N$, $D1_{N+1}$ and $D1_{N+2}$ are base paired with corresponding $D2_N$, $D1_{N+1}$ and $D1_{N+2}$, etc. "N*"=0 to 15 or more, but is optionally 0, 1, 2, 3, 4, 5 or 6. In one embodiment, the top strand is the sense strand, and the bottom strand is the antisense strand. Alternatively, the bottom strand is the sense strand and the top strand is the antisense strand, with 2'-O-methyl RNA monomers located at alternating residues along the top strand, rather than the bottom strand presently depicted in the above schematic.

In the structures depicted herein, the 5' end of either the sense strand or antisense strand can optionally comprise a phosphate group.

In another embodiment, a DNA:DNA-extended DsiRNA comprises strands having equal lengths possessing 1-3 mismatched residues that serve to orient Dicer cleavage (specifically, one or more of positions 1, 2 or 3 on the first strand of the DsiRNA, when numbering from the 3'-terminal residue, are mismatched with corresponding residues of the 5'-terminal region on the second strand when first and second strands are annealed to one another). An exemplary DNA:DNA-extended DsiRNA agent with two terminal mismatched residues is shown:

$$5'\text{-}D_N XXXXXXXXXXXXXXXXXXXXXXXXX_{N^*}{}^{M}{}^{M-3'}$$

$$3'\text{-}D_N XXXXXXXXXXXXXXXXXXXXXXXXX_{N^*}M_{M-5'}$$

wherein "X"=RNA, "M"=Nucleic acid residues (RNA, DNA or non-natural or modified nucleic acids) that do not base pair (hydrogen bond) with corresponding "M" residues of otherwise complementary strand when strands are annealed, "D"=DNA and "N"=1 to 50 or more, but is optionally 1-15 or, optionally, 1-8. "N*"=0 to 15 or more, but is optionally 0, 1, 2, 3, 4, 5 or 6. Any of the residues of such agents can optionally be 2'-O-methyl RNA monomers – alternating positioning of 2'-O-methyl RNA monomers that commences from the 3'-terminal residue of the bottom (second) strand, as shown for above asymmetric agents, can also be used in the above "blunt/fray" DsiRNA agent. In one embodiment, the top strand (first strand) is the sense strand, and the bottom strand (second strand) is the antisense strand. Alternatively, the bottom strand is the sense strand and the top strand is the antisense strand. Modification and DNA:DNA extension patterns paralleling those

shown above for asymmetric/overhang agents can also be incorporated into such "blunt/frayed" agents.

In one embodiment, a length-extended DsiRNA agent is provided that comprises deoxyribonucleotides positioned at sites modeled to function *via* specific direction of Dicer cleavage, yet which does not require the presence of a base-paired deoxyribonucleotide in the dsRNA structure. An exemplary structure for such a molecule is shown:

5'-XXXXXXXXXXXXXXXXXXXDDXX-3'

3'-YXXXXXXXXXXXXXXXXXDDXXXX-5'

wherein "X"=RNA, "Y" is an optional overhang domain comprised of 0-10 RNA monomers that are optionally 2'-O-methyl RNA monomers – in certain embodiments, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers, and "D"=DNA. In one embodiment, the top strand is the sense strand, and the bottom strand is the antisense strand. Alternatively, the bottom strand is the sense strand and the top strand is the antisense strand. The above structure is modeled to force Dicer to cleave a minimum of a 21mer duplex as its primary post-processing form. In embodiments where the bottom strand of the above structure is the antisense strand, the positioning of two deoxyribonucleotide residues at the ultimate and penultimate residues of the 5' end of the antisense strand may reduce off-target effects for a given compound.

In one embodiment, the DsiRNA comprises the following (an exemplary "left-extended", "DNA extended" DsiRNA):

5'-D_NXXXXXXXXXXXXXXXXXXXXXXXXX_{N*}Y-3'

3'-D_NXXXXXXXXXXXXXXXXXXXXXXXXX_{N*}-5'

wherein "X"=RNA, "Y" is an optional overhang domain comprised of 0-10 RNA monomers that are optionally 2'-O-methyl RNA monomers – in certain embodiments, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers, "D"=DNA, and "N"=1 to 50 or more, but is optionally 1-8 or 1-10. "N*"=0 to 15 or more, but is optionally 0, 1, 2, 3, 4, 5 or 6. In one embodiment, the top strand is the sense strand, and the bottom strand is the antisense strand. Alternatively, the bottom strand is the sense strand and the top strand is the antisense strand.

In a related embodiment, the DsiRNA comprises:

5'-D_NXXXXXXXXXXXXXXXXXXXXXXX$_{N*}$DD-3'

3'-D_NXXXXXXXXXXXXXXXXXXXXXXX$_{N*}$XX-5'

wherein "X"=RNA, optionally a 2'-O-methyl RNA monomers "D"=DNA, "N"=1 to 50 or more, but is optionally 1-8 or 1-10. "N*"=0 to 15 or more, but is optionally 0, 1, 2, 3, 4, 5 or 6. In one embodiment, the top strand is the sense strand, and the bottom strand is the antisense strand. Alternatively, the bottom strand is the sense strand and the top strand is the antisense strand.

In an additional embodiment, the DsiRNA comprises:

5'-D_NXXXXXXXXXXXXXXXXXXXXXXX$_{N*}$DD-3'

3'-D_NXXXXXXXXXXXXXXXXXXXXXXX$_{N*}$ZZ-5'

wherein "X"=RNA, optionally a 2'-O-methyl RNA monomers "D"=DNA, "N"=1 to 50 or more, but is optionally 1-8 or 1-10. "N*"=0 to 15 or more, but is optionally 0, 1, 2, 3, 4, 5 or 6. "Z"=DNA or RNA. In one embodiment, the top strand is the sense strand, and the bottom strand is the antisense strand. Alternatively, the bottom strand is the sense strand and the top strand is the antisense strand, with 2'-O-methyl RNA monomers located at alternating residues along the top strand, rather than the bottom strand presently depicted in the above schematic.

In another such embodiment, the DsiRNA comprises:

5'-D_NXXXXXXXXXXXXXXXXXXXXXXX$_{N*}$DD-3'

3'-D_NXXXXXXXXXXXXXXXXXXXXXXX$_{N*}$ZZ-5'

wherein "X"=RNA, optionally a 2'-O-methyl RNA monomers "D"=DNA, "N"=1 to 50 or more, but is optionally 1-8 or 1-10. "N*"=0 to 15 or more, but is optionally 0, 1, 2, 3, 4, 5 or 6. "Z"=DNA or RNA. In one embodiment, the top strand is the sense strand, and the bottom strand is the antisense strand. Alternatively, the bottom strand is the sense strand and the top strand is the antisense strand, with 2'-O-methyl RNA monomers located at alternating residues along the top strand, rather than the bottom strand presently depicted in the above schematic.

In another such embodiment, the DsiRNA comprises:

5'-D_NZZXXXXXXXXXXXXXXXXXXXXXX$_{N*}$DD-3'

3'-D_NXXXXXXXXXXXXXXXXXXXXXXX$_{N*}$ZZ-5'

wherein "X"=RNA, "X"=2'-O-methyl RNA, "D"=DNA, "Z"=DNA or RNA, and "N"=1 to 50 or more, but is optionally 1-8 or 1-10. "N*"=0 to 15 or more, but is optionally 0, 1, 2, 3, 4, 5 or 6. In one embodiment, the top strand is the sense strand,

and the bottom strand is the antisense strand. Alternatively, the bottom strand is the sense strand and the top strand is the antisense strand, with 2'-O-methyl RNA monomers located at alternating residues along the top strand, rather than the bottom strand presently depicted in the above schematic.

In another such embodiment, the DsiRNA comprises:

5'-D_NZZXXXXXXXXXXXXXXXXXXXXXXX$_{N*}$Y-3'

3'-D_NXXXXXXXXXXXXXXXXXXXXXXXX$_{N*}$-5'

wherein "X"=RNA, "X"=2'-O-methyl RNA, "D"=DNA, "Z"=DNA or RNA, and "N"=1 to 50 or more, but is optionally 1-8 or 1-10. "N*"=0 to 15 or more, but is optionally 0, 1, 2, 3, 4, 5 or 6. "Y" is an optional overhang domain comprised of 0-10 RNA monomers that are optionally 2'-O-methyl RNA monomers – in certain embodiments, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers. In one embodiment, the top strand is the sense strand, and the bottom strand is the antisense strand. Alternatively, the bottom strand is the sense strand and the top strand is the antisense strand, with 2'-O-methyl RNA monomers located at alternating residues along the top strand, rather than the bottom strand presently depicted in the above schematic.

In another embodiment, the DsiRNA comprises:

5'-[X1/D1]$_N$XXXXXXXXXXXXXXXXXXXXXXXX$_{N*}$DD-3'

3'-[X2/D2]$_N$XXXXXXXXXXXXXXXXXXXXXXXX$_{N*}$ZZ-5'

wherein "X"=RNA, "D"=DNA, "Z"=DNA or RNA, and "N"=1 to 50 or more, but is optionally 1-8 or 1-10, where at least one $D1_N$ is present in the top strand and is base paired with a corresponding $D2_N$ in the bottom strand. Optionally, $D1_N$ and $D1_{N+1}$ are base paired with corresponding $D2_N$ and $D2_{N+1}$; $D1_N$, $D1_{N+1}$ and $D1_{N+2}$ are base paired with corresponding $D2_N$, $D1_{N+1}$ and $D1_{N+2}$, etc. "N*"=0 to 15 or more, but is optionally 0, 1, 2, 3, 4, 5 or 6. In one embodiment, the top strand is the sense strand, and the bottom strand is the antisense strand. Alternatively, the bottom strand is the sense strand and the top strand is the antisense strand, with 2'-O-methyl RNA monomers located at alternating residues along the top strand, rather than the bottom strand presently depicted in the above schematic.

In a related embodiment, the DsiRNA comprises:

5'-[X1/D1]$_N$XXXXXXXXXXXXXXXXXXXXXXXX$_{N*}$Y-3'

3'-[X2/D2]$_N$XXXXXXXXXXXXXXXXXXXXXXXX$_{N*}$-5'

wherein "X"=RNA, "D"=DNA, "Y" is an optional overhang domain comprised of 0-10 RNA monomers that are optionally 2'-O-methyl RNA monomers – in certain embodiments, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers, and "N"=1 to 50 or more, but is optionally 1-8 or 1-10, where at least one $D1_N$ is present in the top strand and is base paired with a corresponding $D2_N$ in the bottom strand. Optionally, $D1_N$ and $D1_{N+1}$ are base paired with corresponding $D2_N$ and $D2_{N+1}$; $D1_N$, $D1_{N+1}$ and $D1_{N+2}$ are base paired with corresponding $D2_N$, $D1_{N+1}$ and $D1_{N+2}$, etc. "N*"=0 to 15 or more, but is optionally 0, 1, 2, 3, 4, 5 or 6. In one embodiment, the top strand is the sense strand, and the bottom strand is the antisense strand. Alternatively, the bottom strand is the sense strand and the top strand is the antisense strand, with 2'-O-methyl RNA monomers located at alternating residues along the top strand, rather than the bottom strand presently depicted in the above schematic.

In another embodiment, the DNA:DNA-extended DsiRNA comprises strands having equal lengths possessing 1-3 mismatched residues that serve to orient Dicer cleavage (specifically, one or more of positions 1, 2 or 3 on the first strand of the DsiRNA, when numbering from the 3'-terminal residue, are mismatched with corresponding residues of the 5'-terminal region on the second strand when first and second strands are annealed to one another). An exemplary DNA:DNA-extended DsiRNA agent with two terminal mismatched residues is shown:

$$5'\text{-}D_N XXXXXXXXXXXXXXXXXXXXXXXXX_{N^*}{}^{M}{}^{M-3'}$$

$$3'\text{-}D_N XXXXXXXXXXXXXXXXXXXXXXXXX_{N^*}M_{M-5'}$$

wherein "X"=RNA, "M"=Nucleic acid residues (RNA, DNA or non-natural or modified nucleic acids) that do not base pair (hydrogen bond) with corresponding "M" residues of otherwise complementary strand when strands are annealed, "D"=DNA and "N"=1 to 50 or more, but is optionally 1-8 or 1-10. "N*"=0 to 15 or more, but is optionally 0, 1, 2, 3, 4, 5 or 6. Any of the residues of such agents can optionally be 2'-O-methyl RNA monomers – alternating positioning of 2'-O-methyl RNA monomers that commences from the 3'-terminal residue of the bottom (second) strand, as shown for above asymmetric agents, can also be used in the above "blunt/fray" DsiRNA agent. In one embodiment, the top strand (first strand) is the sense strand, and the bottom strand (second strand) is the antisense strand. Alternatively, the bottom strand is the sense strand and the top strand is the antisense

strand. Modification and DNA:DNA extension patterns paralleling those shown above for asymmetric/overhang agents can also be incorporated into such "blunt/frayed" agents.

In another embodiment, a length-extended DsiRNA agent is provided that comprises deoxyribonucleotides positioned at sites modeled to function *via* specific direction of Dicer cleavage, yet which does not require the presence of a base-paired deoxyribonucleotide in the dsRNA structure. Exemplary structures for such a molecule are shown:

5'-XXDDXXXXXXXXXXXXXXXXXXX$_{N*}$Y-3'

3'-DDXXXXXXXXXXXXXXXXXXXXX$_{N*}$-5'

or

5'-XDXDXXXXXXXXXXXXXXXXXXX$_{N*}$Y-3'

3'-DXDXXXXXXXXXXXXXXXXXXXX$_{N*}$-5'

wherein "X"=RNA, "Y" is an optional overhang domain comprised of 0-10 RNA monomers that are optionally 2'-O-methyl RNA monomers – in certain embodiments, "Y" is an overhang domain comprised of 1-4 RNA monomers that are optionally 2'-O-methyl RNA monomers, and "D"=DNA. "N*"=0 to 15 or more, but is optionally 0, 1, 2, 3, 4, 5 or 6. In one embodiment, the top strand is the sense strand, and the bottom strand is the antisense strand. Alternatively, the bottom strand is the sense strand and the top strand is the antisense strand.

In any of the above embodiments where the bottom strand of the above structure is the antisense strand, the positioning of two deoxyribonucleotide residues at the ultimate and penultimate residues of the 5' end of the antisense strand may reduce off-target effects .

In certain embodiments, the "D" residues of the above structures include at least one PS-DNA or PS-RNA. Optionally, the "D" residues of the above structures include at least one modified nucleotide that inhibits Dicer cleavage.

While the above-described "DNA-extended" DsiRNA agents can be categorized as either "left extended" or "right extended", DsiRNA agents comprising both left- and right-extended DNA-containing sequences within a single agent (*e.g.*, both flanks surrounding a core dsRNA structure are dsDNA extensions) can also be generated and used in similar manner to those described herein for "right-extended" and "left-extended" agents.

In some embodiments, the DsiRNA of the instant invention further comprises

a linking moiety or domain that joins the sense and antisense strands of a DNA:DNA-extended DsiRNA agent. Optionally, such a linking moiety domain joins the 3' end of the sense strand and the 5' end of the antisense strand. The linking moiety may be a chemical (non-nucleotide) linker, such as an oligomethylenediol linker, oligoethylene glycol linker, or other art-recognized linker moiety. Alternatively, the linker can be a nucleotide linker, optionally including an extended loop and/or tetraloop.

In one embodiment, the DsiRNA agent has an asymmetric structure, with the sense strand having a 25-base pair length, and the antisense strand having a 27-base pair length with a 1-4 base 3'-overhang (*e.g.*, a one base 3'-overhang, a two base 3'-overhang, a three base 3'-overhang or a four base 3'-overhang). In another embodiment, this DsiRNA agent has an asymmetric structure further containing 2 deoxynucleotides at the 3' end of the sense strand.

In another embodiment, the DsiRNA agent has an asymmetric structure, with the antisense strand having a 25-base pair length, and the sense strand having a 27-base pair length with a 1-4 base 3'-overhang (*e.g.*, a one base 3'-overhang, a two base 3'-overhang, a three base 3'-overhang or a four base 3'-overhang). In another embodiment, this DsiRNA agent has an asymmetric structure further containing 2 deoxyribonucleotides at the 3' end of the antisense strand.

Exemplary β-catenin targeting DsiRNA agents of the invention include the following:

Table 2: Selected Anti-β-catenin DsiRNAs, *Homo sapiens* Unique Duplexes

```
  5'-CUGAGGGUAUUUGAAGUAUACCAta-3' (SEQ ID NO: 8)
3'-GGGACUCCCAUAAACUUCAUAUGGUAU-5' (SEQ ID NO: 1117)

βc-240 Target: 5'-CCCTGAGGGTATTTGAAGTATACCATA-3' (SEQ ID NO: 2226)

  5'-GGGUAUUUGAAGUAUACCAUACAac-3' (SEQ ID NO: 9)
3'-CUCCCAUAAACUUCAUAUGGUAUGUUG-5' (SEQ ID NO: 1118)

βc-244 Target: 5'-GAGGGTATTTGAAGTATACCATACAAC-3' (SEQ ID NO: 2227)

  5'-AAGUAUACCAUACAACUGUUUUGaa-3' (SEQ ID NO: 10)
3'-ACUUCAUAUGGUAUGUUGACAAAACUU-5' (SEQ ID NO: 1119)

βc-253 Target: 5'-TGAAGTATACCATACAACTGTTTTGAA-3' (SEQ ID NO: 2228)

  5'-ACCAUACAACUGUUUUGAAAAUCca-3' (SEQ ID NO: 11)
3'-UAUGGUAUGUUGACAAAACUUUUAGGU-5' (SEQ ID NO: 1120)
```

βc-259 Target: 5'-ATACCATACAACTGTTTTGAAAATCCA-3' (SEQ ID NO: 2229)

5'-ACAACUGUUUUGAAAAUCCAGCGtg-3' (SEQ ID NO: 12)
3'-UAUGUUGACAAAACUUUUAGGUCGCAC-5' (SEQ ID NO: 1121)

βc-264 Target: 5'-ATACAACTGTTTTGAAAATCCAGCGTG-3' (SEQ ID NO: 2230)

5'-GGGAUUUUCUCAGUCCUUCACUCaa-3' (SEQ ID NO: 13)
3'-GUCCCUAAAAGAGUCAGGAAGUGAGUU-5' (SEQ ID NO: 1122)

βc-496 Target: 5'-CAGGGATTTTCTCAGTCCTTCACTCAA-3' (SEQ ID NO: 2231)

5'-CUCAAGAACAAGUAGCUGAUAUUga-3' (SEQ ID NO: 14)
3'-GUGAGUUCUUGUUCAUCGACUAUAACU-5' (SEQ ID NO: 1123)

βc-516 Target: 5'-CACTCAAGAACAAGTAGCTGATATTGA-3' (SEQ ID NO: 2232)

5'-AACAAGUAGCUGAUAUUGAUGGAca-3' (SEQ ID NO: 15)
3'-UCUUGUUCAUCGACUAUAACUACCUGU-5' (SEQ ID NO: 1124)

βc-522 Target: 5'-AGAACAAGTAGCTGATATTGATGGACA-3' (SEQ ID NO: 2233)

5'-CAAGUAGCUGAUAUUGAUGGACAgt-3' (SEQ ID NO: 16)
3'-UUGUUCAUCGACUAUAACUACCUGUCA-5' (SEQ ID NO: 1125)

βc-524 Target: 5'-AACAAGTAGCTGATATTGATGGACAGT-3' (SEQ ID NO: 2234)

5'-AUGGACAGUAUGCAAUGACUCGAgc-3' (SEQ ID NO: 17)
3'-ACUACCUGUCAUACGUUACUGAGCUCG-5' (SEQ ID NO: 1126)

βc-540 Target: 5'-TGATGGACAGTATGCAATGACTCGAGC-3' (SEQ ID NO: 2235)

5'-CUAUGUUCCCUGAGACAUUAGAUga-3' (SEQ ID NO: 18)
3'-ACGAUACAAGGGACUCUGUAAUCUACU-5' (SEQ ID NO: 1127)

βc-582 Target: 5'-TGCTATGTTCCCTGAGACATTAGATGA-3' (SEQ ID NO: 2236)

5'-CUGAAACAUGCAGUUGUAAACUUga-3' (SEQ ID NO: 19)
3'-ACGACUUUGUACGUCAACAUUUGAACU-5' (SEQ ID NO: 1128)

βc-686 Target: 5'-TGCTGAAACATGCAGTTGTAAACTTGA-3' (SEQ ID NO: 2237)

5'-CAUGCAGUUGUAAACUUGAUUAAct-3' (SEQ ID NO: 20)
3'-UUGUACGUCAACAUUUGAACUAAUUGA-5' (SEQ ID NO: 1129)

βc-692 Target: 5'-AACATGCAGTTGTAAACTTGATTAACT-3' (SEQ ID NO: 2238)

5'-AGUUGUAAACUUGAUUAACUAUCaa-3' (SEQ ID NO: 21)
3'-CGUCAACAUUUGAACUAAUUGAUAGUU-5' (SEQ ID NO: 1130)

βc-697 Target: 5'-GCAGTTGTAAACTTGATTAACTATCAA-3' (SEQ ID NO: 2239)

5'-UUGAUUAACUAUCAAGAUGAUGCag-3' (SEQ ID NO: 22)
3'-UGAACUAAUUGAUAGUUCUACUACGUC-5' (SEQ ID NO: 1131)

βc-707 Target: 5'-ACTTGATTAACTATCAAGATGATGCAG-3' (SEQ ID NO: 2240)

5'-CUGAACUGACAAAACUGCUAAAUga-3' (SEQ ID NO: 23)
3'-GGGACUUGACUGUUUUGACGAUUUACU-5' (SEQ ID NO: 1132)

βc-753 Target: 5'-CCCTGAACTGACAAAACTGCTAAATGA-3' (SEQ ID NO: 2241)

5'-AGAUGGUGUCUGCUAUUGUACGUac-3' (SEQ ID NO: 24)
3'-AGUCUACCACAGACGAUAACAUGCAUG-5' (SEQ ID NO: 1133)

βc-870 Target: 5'-TCAGATGGTGTCTGCTATTGTACGTAC-3' (SEQ ID NO: 2242)

5'-ACGUACCAUGCAGAAUACAAAUGat-3' (SEQ ID NO: 25)
3'-CAUGCAUGGUACGUCUUAUGUUUACUA-5' (SEQ ID NO: 1134)

βc-889 Target: 5'-GTACGTACCATGCAGAATACAAATGAT-3' (SEQ ID NO: 2243)

5'-UACAACUCUCCACAACCUUUUAUta-3' (SEQ ID NO: 26)
3'-UAAUGUUGAGAGGUGUUGGAAAAUAAU-5' (SEQ ID NO: 1135)

βc-1060 Target: 5'-ATTACAACTCTCCACAACCTTTTATTA-3' (SEQ ID NO: 2244)

5'-CUCUCCACAACCUUUUAUUACAUca-3' (SEQ ID NO: 27)
3'-UUGAGAGGUGUUGGAAAAUAAUGUAGU-5' (SEQ ID NO: 1136)

βc-1065 Target: 5'-AACTCTCCACAACCTTTTATTACATCA-3' (SEQ ID NO: 2245)

5'-CACAACCUUUUAUUACAUCAAGAag-3' (SEQ ID NO: 28)
3'-AGGUGUUGGAAAAUAAUGUAGUUCUUC-5' (SEQ ID NO: 1137)

βc-1070 Target: 5'-TCCACAACCTTTTATTACATCAAGAAG-3' (SEQ ID NO: 2246)

5'-CUUUUAUUACAUCAAGAAGGAGCta-3' (SEQ ID NO: 29)
3'-UGGAAAAUAAUGUAGUUCUUCCUCGAU-5' (SEQ ID NO: 1138)

βc-1076 Target: 5'-ACCTTTTATTACATCAAGAAGGAGCTA-3' (SEQ ID NO: 2247)

5'-AAAACAAAUGUUAAAUUCUUGGCta-3' (SEQ ID NO: 30)
3'-UGUUUUGUUUACAAUUUAAGAACCGAU-5' (SEQ ID NO: 1139)

βc-1154 Target: 5'-ACAAAACAAATGTTAAATTCTTGGCTA-3' (SEQ ID NO: 2248)

5'-UACGACAGACUGCCUUCAAAUUUta-3' (SEQ ID NO: 31)
3'-UAAUGCUGUCUGACGGAAGUUUAAAAU-5' (SEQ ID NO: 1140)

βc-1180 Target: 5'-ATTACGACAGACTGCCTTCAAATTTTA-3' (SEQ ID NO: 2249)

5'-CAGACUGCCUUCAAAUUUUAGCUta-3' (SEQ ID NO: 32)
3'-CUGUCUGACGGAAGUUUAAAAUCGAAU-5' (SEQ ID NO: 1141)

βc-1185 Target: 5'-GACAGACTGCCTTCAAATTTTAGCTTA-3' (SEQ ID NO: 2250)

5'-CUUUAGUAAAUAUAAUGAGGACCta-3' (SEQ ID NO: 33)
3'-UCGAAAUCAUUUAUAUUACUCCUGGAU-5' (SEQ ID NO: 1142)

βc-1260 Target: 5'-AGCTTTAGTAAATATAATGAGGACCTA-3' (SEQ ID NO: 2251)

5'-AAAACUACUGUGGACCACAAGCAga-3' (SEQ ID NO: 34)
3'-CUUUUUGAUGACACCUGGUGUUCGUCU-5' (SEQ ID NO: 1143)

βc-1294 Target: 5'-GAAAAACTACTGTGGACCACAAGCAGA-3' (SEQ ID NO: 2252)

5'-AGUCAACGUCUUGUUCAGAACUGtc-3' (SEQ ID NO: 35)
3'-GUUCAGUUGCAGAACAAGUCUUGACAG-5' (SEQ ID NO: 1144)

βc-1412 Target: 5'-CAAGTCAACGTCTTGTTCAGAACTGTC-3' (SEQ ID NO: 2253)

5'-CGUCUUGUUCAGAACUGUCUUUGga-3' (SEQ ID NO: 36)
3'-UUGCAGAACAAGUCUUGACAGAAACCU-5' (SEQ ID NO: 1145)

βc-1418 Target: 5'-AACGTCTTGTTCAGAACTGTCTTTGGA-3' (SEQ ID NO: 2254)

5'-UGUUCAGAACUGUCUUUGGACUCtc-3' (SEQ ID NO: 37)
3'-GAACAAGUCUUGACAGAAACCUGAGAG-5' (SEQ ID NO: 1146)

βc-1423 Target: 5'-CTTGTTCAGAACTGTCTTTGGACTCTC-3' (SEQ ID NO: 2255)

5'-GGUUCAGAUGAUAUAAAUGUGGUca-3' (SEQ ID NO: 38)
3'-ACCCAAGUCUACUAUAUUUACACCAGU-5' (SEQ ID NO: 1147)

βc-1520 Target: 5'-TGGGTTCAGATGATATAAATGTGGTCA-3' (SEQ ID NO: 2256)

5'-UCUUUCUAACCUCACUUGCAAUAat-3' (SEQ ID NO: 39)
3'-UAAGAAAGAUUGGAGUGAACGUUAUUA-5' (SEQ ID NO: 1148)

βc-1561 Target: 5'-ATTCTTTCTAACCTCACTTGCAATAAT-3' (SEQ ID NO: 2257)

5'-CUCACUUGCAAUAAUUAUAAGAAca-3' (SEQ ID NO: 40)
3'-UGGAGUGAACGUUAUUAAUAUUCUUGU-5' (SEQ ID NO: 1149)

βc-1571 Target: 5'-ACCTCACTTGCAATAATTATAAGAACA-3' (SEQ ID NO: 2258)

5'-CAAUAAUUAUAAGAACAAGAUGAtg-3' (SEQ ID NO: 41)
3'-ACGUUAUUAAUAUUCUUGUUCUACUAC-5' (SEQ ID NO: 1150)

βc-1579 Target: 5'-TGCAATAATTATAAGAACAAGATGATG-3' (SEQ ID NO: 2259)

5'-GUAUAGAGGCUCUUGUGCGUACUgt-3' (SEQ ID NO: 42)
3'-ACCAUAUCUCCGAGAACACGCAUGACA-5' (SEQ ID NO: 1151)

βc-1620 Target: 5'-TGGTATAGAGGCTCTTGTGCGTACTGT-3' (SEQ ID NO: 2260)

5'-GGCUACUGUUGGAUUGAUUCGAAat-3' (SEQ ID NO: 43)
3'-UUCCGAUGACAACCUAACUAAGCUUUA-5' (SEQ ID NO: 1152)

βc-1816 Target: 5'-AAGGCTACTGTTGGATTGATTCGAAAT-3' (SEQ ID NO: 2261)

5'-CAUGGAAGAAAUAGUUGAAGGUUgt-3' (SEQ ID NO: 44)
3'-GCGUACCUUCUUUAUCAACUUCCAACA-5' (SEQ ID NO: 1153)

βc-1987 Target: 5'-CGCATGGAAGAAATAGTTGAAGGTTGT-3' (SEQ ID NO: 2262)

5'-UGGAAGAAAUAGUUGAAGGUUGUac-3' (SEQ ID NO: 45)
3'-GUACCUUCUUUAUCAACUUCCAACAUG-5' (SEQ ID NO: 1154)

βc-1989 Target: 5'-CATGGAAGAAATAGTTGAAGGTTGTAC-3' (SEQ ID NO: 2263)

5'-AUUGAAAACAUCCAAAGAGUAGCtg-3' (SEQ ID NO: 46)
3'-GGUAACUUUUGUAGGUUUCUCAUCGAC-5' (SEQ ID NO: 1155)

βc-2111 Target: 5'-CCATTGAAAACATCCAAAGAGTAGCTG-3' (SEQ ID NO: 2264)

5'-GAGGACAAGCCACAAGAUUACAAga-3' (SEQ ID NO: 47)
3'-GACUCCUGUUCGGUGUUCUAAUGUUCU-5' (SEQ ID NO: 1156)

βc-2282 Target: 5'-CTGAGGACAAGCCACAAGATTACAAGA-3' (SEQ ID NO: 2265)

5'-GAUACUGACCUGUAAAUCAUCCUtt-3' (SEQ ID NO: 48)
3'-AACUAUGACUGGACAUUUAGUAGGAAA-5' (SEQ ID NO: 1157)

βc-2624 Target: 5'-TTGATACTGACCTGTAAATCATCCTTT-3' (SEQ ID NO: 2266)

5'-UUAGGUAAGAAGUUUUAAAAAGCca-3' (SEQ ID NO: 49)
3'-GAAAUCCAUUCUUCAAAAUUUUUCGGU-5' (SEQ ID NO: 1158)

βc-2647 Target: 5'-CTTTAGGTAAGAAGTTTTAAAAAGCCA-3' (SEQ ID NO: 2267)

5'-CAGGUAUAUACUUUGAAAGGAGAtg-3' (SEQ ID NO: 50)
3'-UUGUCCAUAUAUGAAACUUUCCUCUAC-5' (SEQ ID NO: 1159)

βc-2770 Target: 5'-AACAGGTATATACTTTGAAAGGAGATG-3' (SEQ ID NO: 2268)

5'-GAAGUUAUUAACUUUAAUGUUUUtt-3' (SEQ ID NO: 51)
3'-ACCUUCAAUAAUUGAAAUUACAAAAAA-5' (SEQ ID NO: 1160)

βc-2848 Target: 5'-TGGAAGTTATTAACTTTAATGTTTTTT-3' (SEQ ID NO: 2269)

5'-CCACAGCUUUUGCAACUUAAUACtc-3' (SEQ ID NO: 52)
3'-ACGGUGUCGAAAACGUUGAAUUAUGAG-5' (SEQ ID NO: 1161)

βc-2874 Target: 5'-TGCCACAGCTTTTGCAACTTAATACTC-3' (SEQ ID NO: 2270)

5'-CAUUUGCUGUUUUAAACAUUAAUag-3' (SEQ ID NO: 53)
3'-UUGUAAACGACAAAAUUUGUAAUUAUC-5' (SEQ ID NO: 1162)

βc-2909 Target: 5'-AACATTTGCTGTTTTAAACATTAATAG-3' (SEQ ID NO: 2271)

5'-CAAUUGAAGUAAACUUUUUGUUCtg-3' (SEQ ID NO: 54)
3'-UUGUUAACUUCAUUUGAAAAACAAGAC-5' (SEQ ID NO: 1163)

βc-3074 Target: 5'-AACAATTGAAGTAAACTTTTTGTTCTG-3' (SEQ ID NO: 2272)

5'-ACCCUAGCCUUGCUUGUUAAAUUtt-3' (SEQ ID NO: 55)
3'-UUUGGGAUCGGAACGAACAAUUUAAAA-5' (SEQ ID NO: 1164)

βc-3197 Target: 5'-AAACCCTAGCCTTGCTTGTTAAATTTT-3' (SEQ ID NO: 2273)

5'-GCCUUGCUUGUUAAAUUUUUUUUUtt-3' (SEQ ID NO: 56)
3'-AUCGGAACGAACAAUUUAAAAAAAAAA-5' (SEQ ID NO: 1165)

βc-3203 Target: 5'-TAGCCTTGCTTGTTAAATTTTTTTTTT-3' (SEQ ID NO: 2274)

5'-GAAGUAGCUCUUUUUUUUUUUUUtt-3' (SEQ ID NO: 57)
3'-AACUUCAUCGAGAAAAAAAAAAAAAAA-5' (SEQ ID NO: 1166)

βc-3273 Target: 5'-TTGAAGTAGCTCTTTTTTTTTTTTTT-3' (SEQ ID NO: 2275)

5'-GUAGUGUUAAGUUAUAGUGAAUAct-3' (SEQ ID NO: 58)
3'-AGCAUCACAAUUCAAUAUCACUUAUGA-5' (SEQ ID NO: 1167)

βc-3333 Target: 5'-TCGTAGTGTTAAGTTATAGTGAATACT-3' (SEQ ID NO: 2276)

5'-GUGAAUACUGCUACAGCAAUUUCta-3' (SEQ ID NO: 59)
3'-AUCACUUAUGACGAUGUCGUUAAAGAU-5' (SEQ ID NO: 1168)

βc-3349 Target: 5'-TAGTGAATACTGCTACAGCAATTTCTA-3' (SEQ ID NO: 2277)

5'-UACUGCUACAGCAAUUUCUAAUUtt-3' (SEQ ID NO: 60)
3'-UUAUGACGAUGUCGUUAAAGAUUAAAA-5' (SEQ ID NO: 1169)

βc-3354 Target: 5'-AATACTGCTACAGCAATTTCTAATTTT-3' (SEQ ID NO: 2278)

5'-CUAAUUUUUAAGAAUUGAGUAAUgg-3' (SEQ ID NO: 61)
3'-AAGAUUAAAAAUUCUUAACUCAUUACC-5' (SEQ ID NO: 1170)

βc-3371 Target: 5'-TTCTAATTTTTAAGAATTGAGTAATGG-3' (SEQ ID NO: 2279)

5'-UUUUAAGAAUUGAGUAAUGGUGUag-3' (SEQ ID NO: 62)
3'-UAAAAAUUCUUAACUCAUUACCACAUC-5' (SEQ ID NO: 1171)

βc-3376 Target: 5'-ATTTTTAAGAATTGAGTAATGGTGTAG-3' (SEQ ID NO: 2280)

5'-CAUAAUCACUCUAAUUAAUUGUAat-3' (SEQ ID NO: 63)
3'-AAGUAUUAGUGAGAUUAAUUAACAUUA-5' (SEQ ID NO: 1172)

βc-3411 Target: 5'-TTCATAATCACTCTAATTAATTGTAAT-3' (SEQ ID NO: 2281)

5'-UAAUUGUAAUCUGAAUAAAGUGUaa-3' (SEQ ID NO: 64)
3'-UAAUUAACAUUAGACUUAUUUCACAUU-5' (SEQ ID NO: 1173)

βc-3426 Target: 5'-ATTAATTGTAATCTGAATAAAGTGTAA-3' (SEQ ID NO: 2282)

5'-GUAAUCUGAAUAAAGUGUAACAAtt-3' (SEQ ID NO: 65)
3'-AACAUUAGACUUAUUUCACAUUGUUAA-5' (SEQ ID NO: 1174)

βc-3431 Target: 5'-TTGTAATCTGAATAAAGTGTAACAATT-3' (SEQ ID NO: 2283)

5'-UGAAUAAAGUGUAACAAUUGUGUag-3' (SEQ ID NO: 66)
3'-AGACUUAUUUCACAUUGUUAACACAUC-5' (SEQ ID NO: 1175)

βc-3437 Target: 5'-TCTGAATAAAGTGTAACAATTGTGTAG-3' (SEQ ID NO: 2284)

5'-GUAGCCUUUUUGUAUAAAAUAGAca-3' (SEQ ID NO: 67)
3'-CACAUCGGAAAAACAUAUUUUAUCUGU-5' (SEQ ID NO: 1176)

βc-3458 Target: 5'-GTGTAGCCTTTTTGTATAAAATAGACA-3' (SEQ ID NO: 2285)

5'-UGUAUAAAAUAGACAAAUAGAAAat-3' (SEQ ID NO: 68)
3'-AAACAUAUUUUAUCUGUUUAUCUUUUA-5' (SEQ ID NO: 1177)

βc-3468 Target: 5'-TTTGTATAAAATAGACAAATAGAAAAT-3' (SEQ ID NO: 2286)

5'-AAAAUGGUCCAAUUAGUUUCCUUtt-3' (SEQ ID NO: 69)
3'-UCUUUUACCAGGUUAAUCAAAGGAAAA-5' (SEQ ID NO: 1178)

βc-3488 Target: 5'-AGAAAATGGTCCAATTAGTTTCCTTTT-3' (SEQ ID NO: 2287)

5'-CCAAUUAGUUUCCUUUUUAAUAUgc-3' (SEQ ID NO: 70)
3'-CAGGUUAAUCAAAGGAAAAAUUAUACG-5' (SEQ ID NO: 1179)

βc-3496 Target: 5'-GTCCAATTAGTTTCCTTTTTAATATGC-3' (SEQ ID NO: 2288)

5'-UUUGAUCAAAAACUAUUUGGGAUat-3' (SEQ ID NO: 71)
3'-AAAAACUAGUUUUUGAUAAACCCUAUA-5' (SEQ ID NO: 1180)

βc-3552 Target: 5'-TTTTTGATCAAAAACTATTTGGGATAT-3' (SEQ ID NO: 2289)

5'-GAGGUGUUAUUUGGAACCUUGUUtt-3' (SEQ ID NO: 72)
3'-UUCUCCACAAUAAACCUUGGAACAAAA-5' (SEQ ID NO: 1181)

βc-3600 Target: 5'-AAGAGGTGTTATTTGGAACCTTGTTTT-3' (SEQ ID NO: 2290)

5'-GUUAUUUGGAACCUUGUUUUGGAca-3' (SEQ ID NO: 73)
3'-CACAAUAAACCUUGGAACAAAACCUGU-5' (SEQ ID NO: 1182)

βc-3605 Target: 5'-GTGTTATTTGGAACCTTGTTTTGGACA-3' (SEQ ID NO: 2291)

5'-ACCUUGUUUUGGACAGUUUACCAgt-3' (SEQ ID NO: 74)
3'-CUUGGAACAAAACCUGUCAAAUGGUCA-5' (SEQ ID NO: 1183)

βc-3615 Target: 5'-GAACCTTGTTTTGGACAGTTTACCAGT-3' (SEQ ID NO: 2292)

5'-GAUACGAUGCUUCAAGAGAAAAUgc-3' (SEQ ID NO: 75)
3'-CACUAUGCUACGAAGUUCUCUUUUACG-5' (SEQ ID NO: 1184)

βc-3674 Target: 5'-GTGATACGATGCTTCAAGAGAAAATGC-3' (SEQ ID NO: 2293)

5'-CAAGAGAAAAUGCGGUUAUAAAAaa-3' (SEQ ID NO: 76)
3'-AAGUUCUCUUUUACGCCAAUAUUUUUU-5' (SEQ ID NO: 1185)

βc-3686 Target: 5'-TTCAAGAGAAAATGCGGTTATAAAAAA-3' (SEQ ID NO: 2294)

5'-GAAAAUGCGGUUAUAAAAAAUGGtt-3' (SEQ ID NO: 77)
3'-CUCUUUUACGCCAAUAUUUUUUACCAA-5' (SEQ ID NO: 1186)

βc-3691 Target: 5'-GAGAAAATGCGGTTATAAAAAATGGTT-3' (SEQ ID NO: 2295)

5'-GUUAUAAAAAAUGGUUCAGAAUUaa-3' (SEQ ID NO: 78)
3'-GCCAAUAUUUUUUACCAAGUCUUAAUU-5' (SEQ ID NO: 1187)

βc-3700 Target: 5'-CGGTTATAAAAAATGGTTCAGAATTAA-3' (SEQ ID NO: 2296)

5'-AAAAUGGUUCAGAAUUAAACUUUta-3' (SEQ ID NO: 79)
3'-UUUUUUACCAAGUCUUAAUUUGAAAAU-5' (SEQ ID NO: 1188)

βc-3707 Target: 5'-AAAAAATGGTTCAGAATTAAACTTTTA-3' (SEQ ID NO: 2297)

Table 3: Selected Anti-β-catenin DsiRNAs, Duplexes Targeting Both Human and Mouse Sequences

5'-GCGUGGACAAUGGCUACUCAAGCtg-3' (SEQ ID NO: 80)
3'-GUCGCACCUGUUACCGAUGAGUUCGAC-5' (SEQ ID NO: 1189)

βc-284 Target: 5'-CAGCGTGGACAATGGCTACTCAAGCTG-3' (SEQ ID NO: 2298)

5'-CGUGGACAAUGGCUACUCAAGCUga-3' (SEQ ID NO: 81)
3'-UCGCACCUGUUACCGAUGAGUUCGACU-5' (SEQ ID NO: 1190)

βc-285 Target: 5'-AGCGTGGACAATGGCTACTCAAGCTGA-3' (SEQ ID NO: 2299)

5'-GUGGACAAUGGCUACUCAAGCUGat-3' (SEQ ID NO: 82)
3'-CGCACCUGUUACCGAUGAGUUCGACUA-5' (SEQ ID NO: 1191)

βc-286 Target: 5'-GCGTGGACAATGGCTACTCAAGCTGAT-3' (SEQ ID NO: 2300)

5'-UGGACAAUGGCUACUCAAGCUGAtt-3' (SEQ ID NO: 83)
3'-GCACCUGUUACCGAUGAGUUCGACUAA-5' (SEQ ID NO: 1192)

βc-287 Target: 5'-CGTGGACAATGGCTACTCAAGCTGATT-3' (SEQ ID NO: 2301)

5'-GGACAAUGGCUACUCAAGCUGAUtt-3' (SEQ ID NO: 84)
3'-CACCUGUUACCGAUGAGUUCGACUAAA-5' (SEQ ID NO: 1193)

βc-288 Target: 5'-GTGGACAATGGCTACTCAAGCTGATTT-3' (SEQ ID NO: 2302)

5'-GACAAUGGCUACUCAAGCUGAUUtg-3' (SEQ ID NO: 85)
3'-ACCUGUUACCGAUGAGUUCGACUAAAC-5' (SEQ ID NO: 1194)

βc-289 Target: 5'-TGGACAATGGCTACTCAAGCTGATTTG-3' (SEQ ID NO: 2303)

5'-ACAAUGGCUACUCAAGCUGAUUUga-3' (SEQ ID NO: 86)
3'-CCUGUUACCGAUGAGUUCGACUAAACU-5' (SEQ ID NO: 1195)

βc-290 Target: 5'-GGACAATGGCTACTCAAGCTGATTTGA-3' (SEQ ID NO: 2304)

5'-CAAUGGCUACUCAAGCUGAUUUGat-3' (SEQ ID NO: 87)
3'-CUGUUACCGAUGAGUUCGACUAAACUA-5' (SEQ ID NO: 1196)

βc-291 Target: 5'-GACAATGGCTACTCAAGCTGATTTGAT-3' (SEQ ID NO: 2305)

5'-UGAUGGAGUUGGACAUGGCCAUGga-3' (SEQ ID NO: 88)
3'-AAACUACCUCAACCUGUACCGGUACCU-5' (SEQ ID NO: 1197)

βc-312 Target: 5'-TTTGATGGAGTTGGACATGGCCATGGA-3' (SEQ ID NO: 2306)

5'-GAUGGAGUUGGACAUGGCCAUGGaa-3' (SEQ ID NO: 89)
3'-AACUACCUCAACCUGUACCGGUACCUU-5' (SEQ ID NO: 1198)

βc-313 Target: 5'-TTGATGGAGTTGGACATGGCCATGGAA-3' (SEQ ID NO: 2307)

5'-AUGGAGUUGGACAUGGCCAUGGAac-3' (SEQ ID NO: 90)
3'-ACUACCUCAACCUGUACCGGUACCUUG-5' (SEQ ID NO: 1199)

βc-314 Target: 5'-TGATGGAGTTGGACATGGCCATGGAAC-3' (SEQ ID NO: 2308)

5'-UGGAGUUGGACAUGGCCAUGGAAcc-3' (SEQ ID NO: 91)
3'-CUACCUCAACCUGUACCGGUACCUUGG-5' (SEQ ID NO: 1200)

βc-315 Target: 5'-GATGGAGTTGGACATGGCCATGGAACC-3' (SEQ ID NO: 2309)

5'-GGAGUUGGACAUGGCCAUGGAACca-3' (SEQ ID NO: 92)
3'-UACCUCAACCUGUACCGGUACCUUGGU-5' (SEQ ID NO: 1201)

βc-316 Target: 5'-ATGGAGTTGGACATGGCCATGGAACCA-3' (SEQ ID NO: 2310)

5'-GAGUUGGACAUGGCCAUGGAACCag-3' (SEQ ID NO: 93)
3'-ACCUCAACCUGUACCGGUACCUUGGUC-5' (SEQ ID NO: 1202)

βc-317 Target: 5'-TGGAGTTGGACATGGCCATGGAACCAG-3' (SEQ ID NO: 2311)

5'-AGUUGGACAUGGCCAUGGAACCAga-3' (SEQ ID NO: 94)
3'-CCUCAACCUGUACCGGUACCUUGGUCU-5' (SEQ ID NO: 1203)

βc-318 Target: 5'-GGAGTTGGACATGGCCATGGAACCAGA-3' (SEQ ID NO: 2312)

5'-UCUGGAAUCCAUUCUGGUGCCACta-3' (SEQ ID NO: 95)
3'-UGAGACCUUAGGUAAGACCACGGUGAU-5' (SEQ ID NO: 1204)

βc-389 Target: 5'-ACTCTGGAATCCATTCTGGTGCCACTA-3' (SEQ ID NO: 2313)

5'-CUGGAAUCCAUUCUGGUGCCACUac-3' (SEQ ID NO: 96)
3'-GAGACCUUAGGUAAGACCACGGUGAUG-5' (SEQ ID NO: 1205)

βc-390 Target: 5'-CTCTGGAATCCATTCTGGTGCCACTAC-3' (SEQ ID NO: 2314)

5'-UGGAAUCCAUUCUGGUGCCACUAcc-3' (SEQ ID NO: 97)
3'-AGACCUUAGGUAAGACCACGGUGAUGG-5' (SEQ ID NO: 1206)

βc-391 Target: 5'-TCTGGAATCCATTCTGGTGCCACTACC-3' (SEQ ID NO: 2315)

5'-GGAAUCCAUUCUGGUGCCACUACca-3' (SEQ ID NO: 98)
3'-GACCUUAGGUAAGACCACGGUGAUGGU-5' (SEQ ID NO: 1207)

βc-392 Target: 5'-CTGGAATCCATTCTGGTGCCACTACCA-3' (SEQ ID NO: 2316)

5'-GAAUCCAUUCUGGUGCCACUACCac-3' (SEQ ID NO: 99)
3'-ACCUUAGGUAAGACCACGGUGAUGGUG-5' (SEQ ID NO: 1208)

βc-393 Target: 5'-TGGAATCCATTCTGGTGCCACTACCAC-3' (SEQ ID NO: 2317)

5'-UAGAUGAGGGCAUGCAGAUCCCAtc-3' (SEQ ID NO: 100)
3'-UAAUCUACUCCCGUACGUCUAGGGUAG-5' (SEQ ID NO: 1209)

βc-600 Target: 5'-ATTAGATGAGGGCATGCAGATCCCATC-3' (SEQ ID NO: 2318)

5'-AGAUGAGGGCAUGCAGAUCCCAUct-3' (SEQ ID NO: 101)
3'-AAUCUACUCCCGUACGUCUAGGGUAGA-5' (SEQ ID NO: 1210)

βc-601 Target: 5'-TTAGATGAGGGCATGCAGATCCCATCT-3' (SEQ ID NO: 2319)

5'-GAUGAGGGCAUGCAGAUCCCAUCta-3' (SEQ ID NO: 102)
3'-AUCUACUCCCGUACGUCUAGGGUAGAU-5' (SEQ ID NO: 1211)

βc-602 Target: 5'-TAGATGAGGGCATGCAGATCCCATCTA-3' (SEQ ID NO: 2320)

5'-AUGAGGGCAUGCAGAUCCCAUCUac-3' (SEQ ID NO: 103)
3'-UCUACUCCCGUACGUCUAGGGUAGAUG-5' (SEQ ID NO: 1212)

βc-603 Target: 5'-AGATGAGGGCATGCAGATCCCATCTAC-3' (SEQ ID NO: 2321)

5'-UGAGGGCAUGCAGAUCCCAUCUAca-3' (SEQ ID NO: 104)
3'-CUACUCCCGUACGUCUAGGGUAGAUGU-5' (SEQ ID NO: 1213)

βc-604 Target: 5'-GATGAGGGCATGCAGATCCCATCTACA-3' (SEQ ID NO: 2322)

5'-GAGGGCAUGCAGAUCCCAUCUACac-3' (SEQ ID NO: 105)
3'-UACUCCCGUACGUCUAGGGUAGAUGUG-5' (SEQ ID NO: 1214)

βc-605 Target: 5'-ATGAGGGCATGCAGATCCCATCTACAC-3' (SEQ ID NO: 2323)

5'-GCUGCUCAUCCCACUAAUGUCCAgc-3' (SEQ ID NO: 106)
3'-UACGACGAGUAGGGUGAUUACAGGUCG-5' (SEQ ID NO: 1215)

βc-638 Target: 5'-ATGCTGCTCATCCCACTAATGTCCAGC-3' (SEQ ID NO: 2324)

5'-CUGCUCAUCCCACUAAUGUCCAGcg-3' (SEQ ID NO: 107)
3'-ACGACGAGUAGGGUGAUUACAGGUCGC-5' (SEQ ID NO: 1216)

βc-639 Target: 5'-TGCTGCTCATCCCACTAATGTCCAGCG-3' (SEQ ID NO: 2325)

5'-UGCUCAUCCCACUAAUGUCCAGCgt-3' (SEQ ID NO: 108)
3'-CGACGAGUAGGGUGAUUACAGGUCGCA-5' (SEQ ID NO: 1217)

βc-640 Target: 5'-GCTGCTCATCCCACTAATGTCCAGCGT-3' (SEQ ID NO: 2326)

5'-GCUCAUCCCACUAAUGUCCAGCGtt-3' (SEQ ID NO: 109)
3'-GACGAGUAGGGUGAUUACAGGUCGCAA-5' (SEQ ID NO: 1218)

βc-641 Target: 5'-CTGCTCATCCCACTAATGTCCAGCGTT-3' (SEQ ID NO: 2327)

5'-CUCAUCCCACUAAUGUCCAGCGUtt-3' (SEQ ID NO: 110)
3'-ACGAGUAGGGUGAUUACAGGUCGCAAA-5' (SEQ ID NO: 1219)

βc-642 Target: 5'-TGCTCATCCCACTAATGTCCAGCGTTT-3' (SEQ ID NO: 2328)

5'-UCAUCCCACUAAUGUCCAGCGUUtg-3' (SEQ ID NO: 111)
3'-CGAGUAGGGUGAUUACAGGUCGCAAAC-5' (SEQ ID NO: 1220)

βc-643 Target: 5'-GCTCATCCCACTAATGTCCAGCGTTTG-3' (SEQ ID NO: 2329)

5'-CAUCCCACUAAUGUCCAGCGUUUgg-3' (SEQ ID NO: 112)
3'-GAGUAGGGUGAUUACAGGUCGCAAACC-5' (SEQ ID NO: 1221)

βc-644 Target: 5'-CTCATCCCACTAATGTCCAGCGTTTGG-3' (SEQ ID NO: 2330)

5'-AUCCCACUAAUGUCCAGCGUUUGgc-3' (SEQ ID NO: 113)
3'-AGUAGGGUGAUUACAGGUCGCAAACCG-5' (SEQ ID NO: 1222)

βc-645 Target: 5'-TCATCCCACTAATGTCCAGCGTTTGGC-3' (SEQ ID NO: 2331)

5'-UUGGCUGAACCAUCACAGAUGCUga-3' (SEQ ID NO: 114)
3'-CAAACCGACUUGGUAGUGUCUACGACU-5' (SEQ ID NO: 1223)

βc-665 Target: 5'-GTTTGGCTGAACCATCACAGATGCTGA-3' (SEQ ID NO: 2332)

5'-UGGCUGAACCAUCACAGAUGCUGaa-3' (SEQ ID NO: 115)
3'-AAACCGACUUGGUAGUGUCUACGACUU-5' (SEQ ID NO: 1224)

βc-666 Target: 5'-TTTGGCTGAACCATCACAGATGCTGAA-3' (SEQ ID NO: 2333)

5'-GGCUGAACCAUCACAGAUGCUGAaa-3' (SEQ ID NO: 116)
3'-AACCGACUUGGUAGUGUCUACGACUUU-5' (SEQ ID NO: 1225)

βc-667 Target: 5'-TTGGCTGAACCATCACAGATGCTGAAA-3' (SEQ ID NO: 2334)

5'-GAACUUGCCACACGUGCAAUCCCtg-3' (SEQ ID NO: 117)
3'-GUCUUGAACGGUGUGCACGUUAGGGAC-5' (SEQ ID NO: 1226)

βc-731 Target: 5'-CAGAACTTGCCACACGTGCAATCCCTG-3' (SEQ ID NO: 2335)

5'-AACUUGCCACACGUGCAAUCCCUga-3' (SEQ ID NO: 118)
3'-UCUUGAACGGUGUGCACGUUAGGGACU-5' (SEQ ID NO: 1227)

βc-732 Target: 5'-AGAACTTGCCACACGTGCAATCCCTGA-3' (SEQ ID NO: 2336)

5'-GUUAUGGUCCAUCAGCUUUCUAAaa-3' (SEQ ID NO: 119)
3'-GUCAAUACCAGGUAGUCGAAAGAUUUU-5' (SEQ ID NO: 1228)

βc-809 Target: 5'-CAGTTATGGTCCATCAGCTTTCTAAAA-3' (SEQ ID NO: 2337)

5'-UUAUGGUCCAUCAGCUUUCUAAAaa-3' (SEQ ID NO: 120)
3'-UCAAUACCAGGUAGUCGAAAGAUUUUU-5' (SEQ ID NO: 1229)

βc-810 Target: 5'-AGTTATGGTCCATCAGCTTTCTAAAAA-3' (SEQ ID NO: 2338)

5'-AAAAAGGAAGCUUCCAGACACGCta-3' (SEQ ID NO: 121)
3'-GAUUUUUCCUUCGAAGGUCUGUGCGAU-5' (SEQ ID NO: 1230)

βc-830 Target: 5'-CTAAAAAGGAAGCTTCCAGACACGCTA-3' (SEQ ID NO: 2339)

5'-AAAAGGAAGCUUCCAGACACGCUat-3' (SEQ ID NO: 122)
3'-AUUUUUCCUUCGAAGGUCUGUGCGAUA-5' (SEQ ID NO: 1231)

βc-831 Target: 5'-TAAAAAGGAAGCTTCCAGACACGCTAT-3' (SEQ ID NO: 2340)

5'-ACCAUGCAGAAUACAAAUGAUGUag-3' (SEQ ID NO: 123)
3'-CAUGGUACGUCUUAUGUUUACUACAUC-5' (SEQ ID NO: 1232)

βc-893 Target: 5'-GTACCATGCAGAATACAAATGATGTAG-3' (SEQ ID NO: 2341)

5'-CCAUGCAGAAUACAAAUGAUGUAga-3' (SEQ ID NO: 124)
3'-AUGGUACGUCUUAUGUUUACUACAUCU-5' (SEQ ID NO: 1233)

βc-894 Target: 5'-TACCATGCAGAATACAAATGATGTAGA-3' (SEQ ID NO: 2342)

5'-CAUGCAGAAUACAAAUGAUGUAGaa-3' (SEQ ID NO: 125)
3'-UGGUACGUCUUAUGUUUACUACAUCUU-5' (SEQ ID NO: 1234)

βc-895 Target: 5'-ACCATGCAGAATACAAATGATGTAGAA-3' (SEQ ID NO: 2343)

5'-AUGCAGAAUACAAAUGAUGUAGAaa-3' (SEQ ID NO: 126)
3'-GGUACGUCUUAUGUUUACUACAUCUUU-5' (SEQ ID NO: 1235)

βc-896 Target: 5'-CCATGCAGAATACAAATGATGTAGAAA-3' (SEQ ID NO: 2344)

5'-UGCAGAAUACAAAUGAUGUAGAAac-3' (SEQ ID NO: 127)
3'-GUACGUCUUAUGUUUACUACAUCUUUG-5' (SEQ ID NO: 1236)

βc-897 Target: 5'-CATGCAGAATACAAATGATGTAGAAAC-3' (SEQ ID NO: 2345)

5'-GCAGAAUACAAAUGAUGUAGAAAca-3' (SEQ ID NO: 128)
3'-UACGUCUUAUGUUUACUACAUCUUUGU-5' (SEQ ID NO: 1237)

βc-898 Target: 5'-ATGCAGAATACAAATGATGTAGAAACA-3' (SEQ ID NO: 2346)

5'-CAGAAUACAAAUGAUGUAGAAACag-3' (SEQ ID NO: 129)
3'-ACGUCUUAUGUUUACUACAUCUUUGUC-5' (SEQ ID NO: 1238)

βc-899 Target: 5'-TGCAGAATACAAATGATGTAGAAACAG-3' (SEQ ID NO: 2347)

5'-AGAAUACAAAUGAUGUAGAAACAgc-3' (SEQ ID NO: 130)
3'-CGUCUUAUGUUUACUACAUCUUUGUCG-5' (SEQ ID NO: 1239)

βc-900 Target: 5'-GCAGAATACAAATGATGTAGAAACAGC-3' (SEQ ID NO: 2348)

5'-CUGGCCAUCUUUAAGUCUGGAGGca-3' (SEQ ID NO: 131)
3'-AUGACCGGUAGAAAUUCAGACCUCCGU-5' (SEQ ID NO: 1240)

βc-977 Target: 5'-TACTGGCCATCTTTAAGTCTGGAGGCA-3' (SEQ ID NO: 2349)

5'-UGGCCAUCUUUAAGUCUGGAGGCat-3' (SEQ ID NO: 132)
3'-UGACCGGUAGAAAUUCAGACCUCCGUA-5' (SEQ ID NO: 1241)

βc-978 Target: 5'-ACTGGCCATCTTTAAGTCTGGAGGC-3' (SEQ ID NO: 2350)

5'-GAAGGAGCUAAAAUGGCAGUGCGtt-3' (SEQ ID NO: 133)
3'-UUCUUCCUCGAUUUUACCGUCACGCAA-5' (SEQ ID NO: 1242)

βc-1091 Target: 5'-AAGAAGGAGCTAAAATGGCAGTGCGTT-3' (SEQ ID NO: 2351)

5'-AAGGAGCUAAAAUGGCAGUGCGUtt-3' (SEQ ID NO: 134)
3'-UCUUCCUCGAUUUUACCGUCACGCAAA-5' (SEQ ID NO: 1243)

βc-1092 Target: 5'-AGAAGGAGCTAAAATGGCAGTGCGTTT-3' (SEQ ID NO: 2352)

5'-AGGAGCUAAAAUGGCAGUGCGUUta-3' (SEQ ID NO: 135)
3'-CUUCCUCGAUUUUACCGUCACGCAAAU-5' (SEQ ID NO: 1244)

βc-1093 Target: 5'-GAAGGAGCTAAAATGGCAGTGCGTTTA-3' (SEQ ID NO: 2353)

5'-GGAGCUAAAAUGGCAGUGCGUUUag-3' (SEQ ID NO: 136)
3'-UUCCUCGAUUUUACCGUCACGCAAAUC-5' (SEQ ID NO: 1245)

βc-1094 Target: 5'-AAGGAGCTAAAATGGCAGTGCGTTTAG-3' (SEQ ID NO: 2354)

5'-GAGCUAAAAUGGCAGUGCGUUUAgc-3' (SEQ ID NO: 137)
3'-UCCUCGAUUUUACCGUCACGCAAAUCG-5' (SEQ ID NO: 1246)

βc-1095 Target: 5'-AGGAGCTAAAATGGCAGTGCGTTTAGC-3' (SEQ ID NO: 2355)

5'-CUGUGGACCACAAGCAGAGUGCUga-3' (SEQ ID NO: 138)
3'-AUGACACCUGGUGUUCGUCUCACGACU-5' (SEQ ID NO: 1247)

βc-1301 Target: 5'-TACTGTGGACCACAAGCAGAGTGCTGA-3' (SEQ ID NO: 2356)

5'-UGUGGACCACAAGCAGAGUGCUGaa-3' (SEQ ID NO: 139)
3'-UGACACCUGGUGUUCGUCUCACGACUU-5' (SEQ ID NO: 1248)

βc-1302 Target: 5'-ACTGTGGACCACAAGCAGAGTGCTGAA-3' (SEQ ID NO: 2357)

5'-GUGGACCACAAGCAGAGUGCUGAag-3' (SEQ ID NO: 140)
3'-GACACCUGGUGUUCGUCUCACGACUUC-5' (SEQ ID NO: 1249)

βc-1303 Target: 5'-CTGTGGACCACAAGCAGAGTGCTGAAG-3' (SEQ ID NO: 2358)

5'-UGGACCACAAGCAGAGUGCUGAAgg-3' (SEQ ID NO: 141)
3'-ACACCUGGUGUUCGUCUCACGACUUCC-5' (SEQ ID NO: 1250)

βc-1304 Target: 5'-TGTGGACCACAAGCAGAGTGCTGAAGG-3' (SEQ ID NO: 2359)

5'-GGACCACAAGCAGAGUGCUGAAGgt-3' (SEQ ID NO: 142)
3'-CACCUGGUGUUCGUCUCACGACUUCCA-5' (SEQ ID NO: 1251)

βc-1305 Target: 5'-GTGGACCACAAGCAGAGTGCTGAAGGT-3' (SEQ ID NO: 2360)

5'-GACCACAAGCAGAGUGCUGAAGGtg-3' (SEQ ID NO: 143)
3'-ACCUGGUGUUCGUCUCACGACUUCCAC-5' (SEQ ID NO: 1252)

βc-1306 Target: 5'-TGGACCACAAGCAGAGTGCTGAAGGTG-3' (SEQ ID NO: 2361)

5'-ACCACAAGCAGAGUGCUGAAGGUgc-3' (SEQ ID NO: 144)
3'-CCUGGUGUUCGUCUCACGACUUCCACG-5' (SEQ ID NO: 1253)

βc-1307 Target: 5'-GGACCACAAGCAGAGTGCTGAAGGTGC-3' (SEQ ID NO: 2362)

5'-CCACAAGCAGAGUGCUGAAGGUGct-3' (SEQ ID NO: 145)
3'-CUGGUGUUCGUCUCACGACUUCCACGA-5' (SEQ ID NO: 1254)

βc-1308 Target: 5'-GACCACAAGCAGAGTGCTGAAGGTGCT-3' (SEQ ID NO: 2363)

5'-CACAAGCAGAGUGCUGAAGGUGCta-3' (SEQ ID NO: 146)
3'-UGGUGUUCGUCUCACGACUUCCACGAU-5' (SEQ ID NO: 1255)

βc-1309 Target: 5'-ACCACAAGCAGAGTGCTGAAGGTGCTA-3' (SEQ ID NO: 2364)

5'-ACAAGCAGAGUGCUGAAGGUGCUat-3' (SEQ ID NO: 147)
3'-GGUGUUCGUCUCACGACUUCCACGAUA-5' (SEQ ID NO: 1256)

βc-1310 Target: 5'-CCACAAGCAGAGTGCTGAAGGTGCTAT-3' (SEQ ID NO: 2365)

5'-CAAGCAGAGUGCUGAAGGUGCUAtc-3' (SEQ ID NO: 148)
3'-GUGUUCGUCUCACGACUUCCACGAUAG-5' (SEQ ID NO: 1257)

βc-1311 Target: 5'-CACAAGCAGAGTGCTGAAGGTGCTATC-3' (SEQ ID NO: 2366)

5'-AAGCAGAGUGCUGAAGGUGCUAUct-3' (SEQ ID NO: 149)
3'-UGUUCGUCUCACGACUUCCACGAUAGA-5' (SEQ ID NO: 1258)

βc-1312 Target: 5'-ACAAGCAGAGTGCTGAAGGTGCTATCT-3' (SEQ ID NO: 2367)

5'-AGCAGAGUGCUGAAGGUGCUAUCtg-3' (SEQ ID NO: 150)
3'-GUUCGUCUCACGACUUCCACGAUAGAC-5' (SEQ ID NO: 1259)

βc-1313 Target: 5'-CAAGCAGAGTGCTGAAGGTGCTATCTG-3' (SEQ ID NO: 2368)

5'-GCAGAGUGCUGAAGGUGCUAUCUgt-3' (SEQ ID NO: 151)
3'-UUCGUCUCACGACUUCCACGAUAGACA-5' (SEQ ID NO: 1260)

βc-1314 Target: 5'-AAGCAGAGTGCTGAAGGTGCTATCTGT-3' (SEQ ID NO: 2369)

5'-AACUGUCUUUGGACUCUCAGGAAtc-3' (SEQ ID NO: 152)
3'-UCUUGACAGAAACCUGAGAGUCCUUAG-5' (SEQ ID NO: 1261)

βc-1430 Target: 5'-AGAACTGTCTTTGGACTCTCAGGAATC-3' (SEQ ID NO: 2370)

5'-ACUGUCUUUGGACUCUCAGGAAUct-3' (SEQ ID NO: 153)
3'-CUUGACAGAAACCUGAGAGUCCUUAGA-5' (SEQ ID NO: 1262)

βc-1431 Target: 5'-GAACTGTCTTTGGACTCTCAGGAATCT-3' (SEQ ID NO: 2371)

5'-GAUGAUAUAAAUGUGGUCACCUGtg-3' (SEQ ID NO: 154)
3'-GUCUACUAUAUUUACACCAGUGGACAC-5' (SEQ ID NO: 1263)

βc-1526 Target: 5'-CAGATGATATAAATGTGGTCACCTGTG-3' (SEQ ID NO: 2372)

5'-AUGAUAUAAAUGUGGUCACCUGUgc-3' (SEQ ID NO: 155)
3'-UCUACUAUAUUUACACCAGUGGACACG-5' (SEQ ID NO: 1264)

βc-1527 Target: 5'-AGATGATATAAATGTGGTCACCTGTGC-3' (SEQ ID NO: 2373)

5'-UGAUAUAAAUGUGGUCACCUGUGca-3' (SEQ ID NO: 156)
3'-CUACUAUAUUUACACCAGUGGACACGU-5' (SEQ ID NO: 1265)

βc-1528 Target: 5'-GATGATATAAATGTGGTCACCTGTGCA-3' (SEQ ID NO: 2374)

5'-GAUAUAAAUGUGGUCACCUGUGCag-3' (SEQ ID NO: 157)
3'-UACUAUAUUUACACCAGUGGACACGUC-5' (SEQ ID NO: 1266)

βc-1529 Target: 5'-ATGATATAAATGTGGTCACCTGTGCAG-3' (SEQ ID NO: 2375)

5'-AUAUAAAUGUGGUCACCUGUGCAgc-3' (SEQ ID NO: 158)
3'-ACUAUAUUUACACCAGUGGACACGUCG-5' (SEQ ID NO: 1267)

βc-1530 Target: 5'-TGATATAAATGTGGTCACCTGTGCAGC-3' (SEQ ID NO: 2376)

5'-UAUAAAUGUGGUCACCUGUGCAGct-3' (SEQ ID NO: 159)
3'-CUAUAUUUACACCAGUGGACACGUCGA-5' (SEQ ID NO: 1268)

βc-1531 Target: 5'-GATATAAATGTGGTCACCTGTGCAGCT-3' (SEQ ID NO: 2377)

5'-AUAAAUGUGGUCACCUGUGCAGCtg-3' (SEQ ID NO: 160)
3'-UAUAUUUACACCAGUGGACACGUCGAC-5' (SEQ ID NO: 1269)

βc-1532 Target: 5'-ATATAAATGTGGTCACCTGTGCAGCTG-3' (SEQ ID NO: 2378)

5'-UAAAUGUGGUCACCUGUGCAGCUgg-3' (SEQ ID NO: 161)
3'-AUAUUUACACCAGUGGACACGUCGACC-5' (SEQ ID NO: 1270)

βc-1533 Target: 5'-TATAAATGTGGTCACCTGTGCAGCTGG-3' (SEQ ID NO: 2379)

5'-AAAUGUGGUCACCUGUGCAGCUGga-3' (SEQ ID NO: 162)
3'-UAUUUACACCAGUGGACACGUCGACCU-5' (SEQ ID NO: 1271)

βc-1534 Target: 5'-ATAAATGTGGTCACCTGTGCAGCTGGA-3' (SEQ ID NO: 2380)

5'-AAUGUGGUCACCUGUGCAGCUGGaa-3' (SEQ ID NO: 163)
3'-AUUUACACCAGUGGACACGUCGACCUU-5' (SEQ ID NO: 1272)

βc-1535 Target: 5'-TAAATGTGGTCACCTGTGCAGCTGGAA-3' (SEQ ID NO: 2381)

5'-AUGUGGUCACCUGUGCAGCUGGAat-3' (SEQ ID NO: 164)
3'-UUUACACCAGUGGACACGUCGACCUUA-5' (SEQ ID NO: 1273)

βc-1536 Target: 5'-AAATGTGGTCACCTGTGCAGCTGGAAT-3' (SEQ ID NO: 2382)

5'-UGUGGUCACCUGUGCAGCUGGAAtt-3' (SEQ ID NO: 165)
3'-UUACACCAGUGGACACGUCGACCUUAA-5' (SEQ ID NO: 1274)

βc-1537 Target: 5'-AATGTGGTCACCTGTGCAGCTGGAATT-3' (SEQ ID NO: 2383)

5'-GUGGUCACCUGUGCAGCUGGAAUtc-3' (SEQ ID NO: 166)
3'-UACACCAGUGGACACGUCGACCUUAAG-5' (SEQ ID NO: 1275)

βc-1538 Target: 5'-ATGTGGTCACCTGTGCAGCTGGAATTC-3' (SEQ ID NO: 2384)

5'-UGGUCACCUGUGCAGCUGGAAUUct-3' (SEQ ID NO: 167)
3'-ACACCAGUGGACACGUCGACCUUAAGA-5' (SEQ ID NO: 1276)

βc-1539 Target: 5'-TGTGGTCACCTGTGCAGCTGGAATTCT-3' (SEQ ID NO: 2385)

5'-GGUCACCUGUGCAGCUGGAAUUCtt-3' (SEQ ID NO: 168)
3'-CACCAGUGGACACGUCGACCUUAAGAA-5' (SEQ ID NO: 1277)

βc-1540 Target: 5'-GTGGTCACCTGTGCAGCTGGAATTCTT-3' (SEQ ID NO: 2386)

5'-GUCACCUGUGCAGCUGGAAUUCUtt-3' (SEQ ID NO: 169)
3'-ACCAGUGGACACGUCGACCUUAAGAAA-5' (SEQ ID NO: 1278)

βc-1541 Target: 5'-TGGTCACCTGTGCAGCTGGAATTCTTT-3' (SEQ ID NO: 2387)

5'-UCACCUGUGCAGCUGGAAUUCUUtc-3' (SEQ ID NO: 170)
3'-CCAGUGGACACGUCGACCUUAAGAAAG-5' (SEQ ID NO: 1279)

βc-1542 Target: 5'-GGTCACCTGTGCAGCTGGAATTCTTTC-3' (SEQ ID NO: 2388)

5'-CACCUGUGCAGCUGGAAUUCUUUct-3' (SEQ ID NO: 171)
3'-CAGUGGACACGUCGACCUUAAGAAAGA-5' (SEQ ID NO: 1280)

βc-1543 Target: 5'-GTCACCTGTGCAGCTGGAATTCTTTCT-3' (SEQ ID NO: 2389)

5'-ACCUGUGCAGCUGGAAUUCUUUCta-3' (SEQ ID NO: 172)
3'-AGUGGACACGUCGACCUUAAGAAAGAU-5' (SEQ ID NO: 1281)

βc-1544 Target: 5'-TCACCTGTGCAGCTGGAATTCTTTCTA-3' (SEQ ID NO: 2390)

5'-CCUGUGCAGCUGGAAUUCUUUCUaa-3' (SEQ ID NO: 173)
3'-GUGGACACGUCGACCUUAAGAAAGAUU-5' (SEQ ID NO: 1282)

βc-1545 Target: 5'-CACCTGTGCAGCTGGAATTCTTTCTAA-3' (SEQ ID NO: 2391)

5'-UCUAACCUCACUUGCAAUAAUUAta-3' (SEQ ID NO: 174)
3'-AAAGAUUGGAGUGAACGUUAUUAAUAU-5' (SEQ ID NO: 1283)

βc-1565 Target: 5'-TTTCTAACCTCACTTGCAATAATTATA-3' (SEQ ID NO: 2392)

5'-CUAACCUCACUUGCAAUAAUUAUaa-3' (SEQ ID NO: 175)
3'-AAGAUUGGAGUGAACGUUAUUAAUAUU-5' (SEQ ID NO: 1284)

βc-1566 Target: 5'-TTCTAACCTCACTTGCAATAATTATAA-3' (SEQ ID NO: 2393)

5'-UAACCUCACUUGCAAUAAUUAUAag-3' (SEQ ID NO: 176)
3'-AGAUUGGAGUGAACGUUAUUAAUAUUC-5' (SEQ ID NO: 1285)

βc-1567 Target: 5'-TCTAACCTCACTTGCAATAATTATAAG-3' (SEQ ID NO: 2394)

5'-AACCUCACUUGCAAUAAUUAUAAga-3' (SEQ ID NO: 177)
3'-GAUUGGAGUGAACGUUAUUAAUAUUCU-5' (SEQ ID NO: 1286)

βc-1568 Target: 5'-CTAACCTCACTTGCAATAATTATAAGA-3' (SEQ ID NO: 2395)

5'-ACCUCACUUGCAAUAAUUAUAAGaa-3' (SEQ ID NO: 178)
3'-AUUGGAGUGAACGUUAUUAAUAUUCUU-5' (SEQ ID NO: 1287)

βc-1569 Target: 5'-TAACCTCACTTGCAATAATTATAAGAA-3' (SEQ ID NO: 2396)

5'-GCUGGUGACAGGGAAGACAUCACtg-3' (SEQ ID NO: 179)
3'-CCCGACCACUGUCCCUUCUGUAGUGAC-5' (SEQ ID NO: 1288)

βc-1652 Target: 5'-GGGCTGGTGACAGGGAAGACATCACTG-3' (SEQ ID NO: 2397)

5'-CUGGUGACAGGGAAGACAUCACUga-3' (SEQ ID NO: 180)
3'-CCGACCACUGUCCCUUCUGUAGUGACU-5' (SEQ ID NO: 1289)

βc-1653 Target: 5'-GGCTGGTGACAGGGAAGACATCACTGA-3' (SEQ ID NO: 2398)

5'-UGGUGACAGGGAAGACAUCACUGag-3' (SEQ ID NO: 181)
3'-CGACCACUGUCCCUUCUGUAGUGACUC-5' (SEQ ID NO: 1290)

βc-1654 Target: 5'-GCTGGTGACAGGGAAGACATCACTGAG-3' (SEQ ID NO: 2399)

5'-GGUGACAGGGAAGACAUCACUGAgc-3' (SEQ ID NO: 182)
3'-GACCACUGUCCCUUCUGUAGUGACUCG-5' (SEQ ID NO: 1291)

βc-1655 Target: 5'-CTGGTGACAGGGAAGACATCACTGAGC-3' (SEQ ID NO: 2400)

5'-GUGACAGGGAAGACAUCACUGAGcc-3' (SEQ ID NO: 183)
3'-ACCACUGUCCCUUCUGUAGUGACUCGG-5' (SEQ ID NO: 1292)

βc-1656 Target: 5'-TGGTGACAGGGAAGACATCACTGAGCC-3' (SEQ ID NO: 2401)

5'-UGACAGGGAAGACAUCACUGAGCct-3' (SEQ ID NO: 184)
3'-CCACUGUCCCUUCUGUAGUGACUCGGA-5' (SEQ ID NO: 1293)

βc-1657 Target: 5'-GGTGACAGGGAAGACATCACTGAGCCT-3' (SEQ ID NO: 2402)

5'-GACAGGGAAGACAUCACUGAGCCtg-3' (SEQ ID NO: 185)
3'-CACUGUCCCUUCUGUAGUGACUCGGAC-5' (SEQ ID NO: 1294)

βc-1658 Target: 5'-GTGACAGGGAAGACATCACTGAGCCTG-3' (SEQ ID NO: 2403)

5'-ACAGGGAAGACAUCACUGAGCCUgc-3' (SEQ ID NO: 186)
3'-ACUGUCCCUUCUGUAGUGACUCGGACG-5' (SEQ ID NO: 1295)

βc-1659 Target: 5'-TGACAGGGAAGACATCACTGAGCCTGC-3' (SEQ ID NO: 2404)

5'-CAGGGAAGACAUCACUGAGCCUGcc-3' (SEQ ID NO: 187)
3'-CUGUCCCUUCUGUAGUGACUCGGACGG-5' (SEQ ID NO: 1296)

βc-1660 Target: 5'-GACAGGGAAGACATCACTGAGCCTGCC-3' (SEQ ID NO: 2405)

5'-AGGGAAGACAUCACUGAGCCUGCca-3' (SEQ ID NO: 188)
3'-UGUCCCUUCUGUAGUGACUCGGACGGU-5' (SEQ ID NO: 1297)

βc-1661 Target: 5'-ACAGGGAAGACATCACTGAGCCTGCCA-3' (SEQ ID NO: 2406)

5'-GGGAAGACAUCACUGAGCCUGCCat-3' (SEQ ID NO: 189)
3'-GUCCCUUCUGUAGUGACUCGGACGGUA-5' (SEQ ID NO: 1298)

βc-1662 Target: 5'-CAGGGAAGACATCACTGAGCCTGCC-3' (SEQ ID NO: 2407)

5'-GGAAGACAUCACUGAGCCUGCCAtc-3' (SEQ ID NO: 190)
3'-UCCCUUCUGUAGUGACUCGGACGGUAG-5' (SEQ ID NO: 1299)

βc-1663 Target: 5'-AGGGAAGACATCACTGAGCCTGCCATC-3' (SEQ ID NO: 2408)

5'-GAAGACAUCACUGAGCCUGCCAUct-3' (SEQ ID NO: 191)
3'-CCCUUCUGUAGUGACUCGGACGGUAGA-5' (SEQ ID NO: 1300)

βc-1664 Target: 5'-GGGAAGACATCACTGAGCCTGCCATCT-3' (SEQ ID NO: 2409)

5'-AAGACAUCACUGAGCCUGCCAUCtg-3' (SEQ ID NO: 192)
3'-CCUUCUGUAGUGACUCGGACGGUAGAC-5' (SEQ ID NO: 1301)

βc-1665 Target: 5'-GGAAGACATCACTGAGCCTGCCATCTG-3' (SEQ ID NO: 2410)

5'-AGACAUCACUGAGCCUGCCAUCUgt-3' (SEQ ID NO: 193)
3'-CUUCUGUAGUGACUCGGACGGUAGACA-5' (SEQ ID NO: 1302)

βc-1666 Target: 5'-GAAGACATCACTGAGCCTGCCATCTGT-3' (SEQ ID NO: 2411)

5'-GACAUCACUGAGCCUGCCAUCUGtg-3' (SEQ ID NO: 194)
3'-UUCUGUAGUGACUCGGACGGUAGACAC-5' (SEQ ID NO: 1303)

βc-1667 Target: 5'-AAGACATCACTGAGCCTGCCATCTGTG-3' (SEQ ID NO: 2412)

5'-ACAUCACUGAGCCUGCCAUCUGUgc-3' (SEQ ID NO: 195)
3'-UCUGUAGUGACUCGGACGGUAGACACG-5' (SEQ ID NO: 1304)

βc-1668 Target: 5'-AGACATCACTGAGCCTGCCATCTGTGC-3' (SEQ ID NO: 2413)

5'-CAUCACUGAGCCUGCCAUCUGUGct-3' (SEQ ID NO: 196)
3'-CUGUAGUGACUCGGACGGUAGACACGA-5' (SEQ ID NO: 1305)

βc-1669 Target: 5'-GACATCACTGAGCCTGCCATCTGTGCT-3' (SEQ ID NO: 2414)

5'-AUCACUGAGCCUGCCAUCUGUGCtc-3' (SEQ ID NO: 197)
3'-UGUAGUGACUCGGACGGUAGACACGAG-5' (SEQ ID NO: 1306)

βc-1670 Target: 5'-ACATCACTGAGCCTGCCATCTGTGCTC-3' (SEQ ID NO: 2415)

5'-UCACUGAGCCUGCCAUCUGUGCUct-3' (SEQ ID NO: 198)
3'-GUAGUGACUCGGACGGUAGACACGAGA-5' (SEQ ID NO: 1307)

βc-1671 Target: 5'-CATCACTGAGCCTGCCATCTGTGCTCT-3' (SEQ ID NO: 2416)

5'-CACUGAGCCUGCCAUCUGUGCUCtt-3' (SEQ ID NO: 199)
3'-UAGUGACUCGGACGGUAGACACGAGAA-5' (SEQ ID NO: 1308)

βc-1672 Target: 5'-ATCACTGAGCCTGCCATCTGTGCTCTT-3' (SEQ ID NO: 2417)

5'-ACUGAGCCUGCCAUCUGUGCUCUtc-3' (SEQ ID NO: 200)
3'-AGUGACUCGGACGGUAGACACGAGAAG-5' (SEQ ID NO: 1309)

βc-1673 Target: 5'-TCACTGAGCCTGCCATCTGTGCTCTTC-3' (SEQ ID NO: 2418)

5'-CUGAGCCUGCCAUCUGUGCUCUUcg-3' (SEQ ID NO: 201)
3'-GUGACUCGGACGGUAGACACGAGAAGC-5' (SEQ ID NO: 1310)

βc-1674 Target: 5'-CACTGAGCCTGCCATCTGTGCTCTTCG-3' (SEQ ID NO: 2419)

5'-UGAGCCUGCCAUCUGUGCUCUUCgt-3' (SEQ ID NO: 202)
3'-UGACUCGGACGGUAGACACGAGAAGCA-5' (SEQ ID NO: 1311)

βc-1675 Target: 5'-ACTGAGCCTGCCATCTGTGCTCTTCGT-3' (SEQ ID NO: 2420)

5'-GAGCCUGCCAUCUGUGCUCUUCGtc-3' (SEQ ID NO: 203)
3'-GACUCGGACGGUAGACACGAGAAGCAG-5' (SEQ ID NO: 1312)

βc-1676 Target: 5'-CTGAGCCTGCCATCTGTGCTCTTCGTC-3' (SEQ ID NO: 2421)

5'-AGCCUGCCAUCUGUGCUCUUCGUca-3' (SEQ ID NO: 204)
3'-ACUCGGACGGUAGACACGAGAAGCAGU-5' (SEQ ID NO: 1313)

βc-1677 Target: 5'-TGAGCCTGCCATCTGTGCTCTTCGTCA-3' (SEQ ID NO: 2422)

5'-GCCUGCCAUCUGUGCUCUUCGUCat-3' (SEQ ID NO: 205)
3'-CUCGGACGGUAGACACGAGAAGCAGUA-5' (SEQ ID NO: 1314)

βc-1678 Target: 5'-GAGCCTGCCATCTGTGCTCTTCGTC-3' (SEQ ID NO: 2423)

5'-CCUGCCAUCUGUGCUCUUCGUCAtc-3' (SEQ ID NO: 206)
3'-UCGGACGGUAGACACGAGAAGCAGUAG-5' (SEQ ID NO: 1315)

βc-1679 Target: 5'-AGCCTGCCATCTGTGCTCTTCGTCATC-3' (SEQ ID NO: 2424)

5'-CUGCCAUCUGUGCUCUUCGUCAUct-3' (SEQ ID NO: 207)
3'-CGGACGGUAGACACGAGAAGCAGUAGA-5' (SEQ ID NO: 1316)

βc-1680 Target: 5'-GCCTGCCATCTGTGCTCTTCGTCATCT-3' (SEQ ID NO: 2425)

5'-UGCCAUCUGUGCUCUUCGUCAUCtg-3' (SEQ ID NO: 208)
3'-GGACGGUAGACACGAGAAGCAGUAGAC-5' (SEQ ID NO: 1317)

βc-1681 Target: 5'-CCTGCCATCTGTGCTCTTCGTCATCTG-3' (SEQ ID NO: 2426)

5'-GCCAUCUGUGCUCUUCGUCAUCUga-3' (SEQ ID NO: 209)
3'-GACGGUAGACACGAGAAGCAGUAGACU-5' (SEQ ID NO: 1318)

βc-1682 Target: 5'-CTGCCATCTGTGCTCTTCGTCATCTGA-3' (SEQ ID NO: 2427)

5'-CCAUCUGUGCUCUUCGUCAUCUGac-3' (SEQ ID NO: 210)
3'-ACGGUAGACACGAGAAGCAGUAGACUG-5' (SEQ ID NO: 1319)

βc-1683 Target: 5'-TGCCATCTGTGCTCTTCGTCATCTGAC-3' (SEQ ID NO: 2428)

5'-CAUCUGUGCUCUUCGUCAUCUGAcc-3' (SEQ ID NO: 211)
3'-CGGUAGACACGAGAAGCAGUAGACUGG-5' (SEQ ID NO: 1320)

βc-1684 Target: 5'-GCCATCTGTGCTCTTCGTCATCTGACC-3' (SEQ ID NO: 2429)

5'-AUCUGUGCUCUUCGUCAUCUGACca-3' (SEQ ID NO: 212)
3'-GGUAGACACGAGAAGCAGUAGACUGGU-5' (SEQ ID NO: 1321)

βc-1685 Target: 5'-CCATCTGTGCTCTTCGTCATCTGACCA-3' (SEQ ID NO: 2430)

5'-UCUGUGCUCUUCGUCAUCUGACCag-3' (SEQ ID NO: 213)
3'-GUAGACACGAGAAGCAGUAGACUGGUC-5' (SEQ ID NO: 1322)

βc-1686 Target: 5'-CATCTGTGCTCTTCGTCATCTGACCAG-3' (SEQ ID NO: 2431)

5'-CUGUGCUCUUCGUCAUCUGACCAgc-3' (SEQ ID NO: 214)
3'-UAGACACGAGAAGCAGUAGACUGGUCG-5' (SEQ ID NO: 1323)

βc-1687 Target: 5'-ATCTGTGCTCTTCGTCATCTGACCAGC-3' (SEQ ID NO: 2432)

5'-UGUGCUCUUCGUCAUCUGACCAGcc-3' (SEQ ID NO: 215)
3'-AGACACGAGAAGCAGUAGACUGGUCGG-5' (SEQ ID NO: 1324)

βc-1688 Target: 5'-TCTGTGCTCTTCGTCATCTGACCAGCC-3' (SEQ ID NO: 2433)

5'-GUGCUCUUCGUCAUCUGACCAGCcg-3' (SEQ ID NO: 216)
3'-GACACGAGAAGCAGUAGACUGGUCGGC-5' (SEQ ID NO: 1325)

βc-1689 Target: 5'-CTGTGCTCTTCGTCATCTGACCAGCCG-3' (SEQ ID NO: 2434)

5'-UGCUCUUCGUCAUCUGACCAGCCga-3' (SEQ ID NO: 217)
3'-ACACGAGAAGCAGUAGACUGGUCGGCU-5' (SEQ ID NO: 1326)

βc-1690 Target: 5'-TGTGCTCTTCGTCATCTGACCAGCCGA-3' (SEQ ID NO: 2435)

5'-GCUCUUCGUCAUCUGACCAGCCGac-3' (SEQ ID NO: 218)
3'-CACGAGAAGCAGUAGACUGGUCGGCUG-5' (SEQ ID NO: 1327)

βc-1691 Target: 5'-GTGCTCTTCGTCATCTGACCAGCCGAC-3' (SEQ ID NO: 2436)

5'-CUCUUCGUCAUCUGACCAGCCGAca-3' (SEQ ID NO: 219)
3'-ACGAGAAGCAGUAGACUGGUCGGCUGU-5' (SEQ ID NO: 1328)

βc-1692 Target: 5'-TGCTCTTCGTCATCTGACCAGCCGACA-3' (SEQ ID NO: 2437)

5'-UCUUCGUCAUCUGACCAGCCGACac-3' (SEQ ID NO: 220)
3'-CGAGAAGCAGUAGACUGGUCGGCUGUG-5' (SEQ ID NO: 1329)

βc-1693 Target: 5'-GCTCTTCGTCATCTGACCAGCCGACAC-3' (SEQ ID NO: 2438)

5'-CUUCGUCAUCUGACCAGCCGACAcc-3' (SEQ ID NO: 221)
3'-GAGAAGCAGUAGACUGGUCGGCUGUGG-5' (SEQ ID NO: 1330)

βc-1694 Target: 5'-CTCTTCGTCATCTGACCAGCCGACACC-3' (SEQ ID NO: 2439)

5'-UUCGUCAUCUGACCAGCCGACACca-3' (SEQ ID NO: 222)
3'-AGAAGCAGUAGACUGGUCGGCUGUGGU-5' (SEQ ID NO: 1331)

βc-1695 Target: 5'-TCTTCGTCATCTGACCAGCCGACACCA-3' (SEQ ID NO: 2440)

5'-CACCCACCAUCCCACUGGCCUCUga-3' (SEQ ID NO: 223)
3'-AUGUGGGUGGUAGGGUGACCGGAGACU-5' (SEQ ID NO: 1332)

βc-1787 Target: 5'-TACACCCACCATCCCACTGGCCTCTGA-3' (SEQ ID NO: 2441)

5'-ACCCACCAUCCCACUGGCCUCUGat-3' (SEQ ID NO: 224)
3'-UGUGGGUGGUAGGGUGACCGGAGACUA-5' (SEQ ID NO: 1333)

βc-1788 Target: 5'-ACACCCACCATCCCACTGGCCTCTGAT-3' (SEQ ID NO: 2442)

5'-CCCACCAUCCCACUGGCCUCUGAta-3' (SEQ ID NO: 225)
3'-GUGGGUGGUAGGGUGACCGGAGACUAU-5' (SEQ ID NO: 1334)

βc-1789 Target: 5'-CACCCACCATCCCACTGGCCTCTGATA-3' (SEQ ID NO: 2443)

5'-CCACCAUCCCACUGGCCUCUGAUaa-3' (SEQ ID NO: 226)
3'-UGGGUGGUAGGGUGACCGGAGACUAUU-5' (SEQ ID NO: 1335)

βc-1790 Target: 5'-ACCCACCATCCCACTGGCCTCTGATAA-3' (SEQ ID NO: 2444)

5'-CACCAUCCCACUGGCCUCUGAUAaa-3' (SEQ ID NO: 227)
3'-GGGUGGUAGGGUGACCGGAGACUAUUU-5' (SEQ ID NO: 1336)

βc-1791 Target: 5'-CCCACCATCCCACTGGCCTCTGATAAA-3' (SEQ ID NO: 2445)

5'-ACCAUCCCACUGGCCUCUGAUAAag-3' (SEQ ID NO: 228)
3'-GGUGGUAGGGUGACCGGAGACUAUUUC-5' (SEQ ID NO: 1337)

βc-1792 Target: 5'-CCACCATCCCACTGGCCTCTGATAAAG-3' (SEQ ID NO: 2446)

5'-CCAUCCCACUGGCCUCUGAUAAAgg-3' (SEQ ID NO: 229)
3'-GUGGUAGGGUGACCGGAGACUAUUUCC-5' (SEQ ID NO: 1338)

βc-1793 Target: 5'-CACCATCCCACTGGCCTCTGATAAAGG-3' (SEQ ID NO: 2447)

5'-CAUCCCACUGGCCUCUGAUAAAGgc-3' (SEQ ID NO: 230)
3'-UGGUAGGGUGACCGGAGACUAUUUCCG-5' (SEQ ID NO: 1339)

βc-1794 Target: 5'-ACCATCCCACTGGCCTCTGATAAAGGC-3' (SEQ ID NO: 2448)

5'-AUCCCACUGGCCUCUGAUAAAGGct-3' (SEQ ID NO: 231)
3'-GGUAGGGUGACCGGAGACUAUUUCCGA-5' (SEQ ID NO: 1340)

βc-1795 Target: 5'-CCATCCCACTGGCCTCTGATAAAGGCT-3' (SEQ ID NO: 2449)

5'-UCCCACUGGCCUCUGAUAAAGGCta-3' (SEQ ID NO: 232)
3'-GUAGGGUGACCGGAGACUAUUUCCGAU-5' (SEQ ID NO: 1341)

βc-1796 Target: 5'-CATCCCACTGGCCTCTGATAAAGGCTA-3' (SEQ ID NO: 2450)

5'-CCCACUGGCCUCUGAUAAAGGCUac-3' (SEQ ID NO: 233)
3'-UAGGGUGACCGGAGACUAUUUCCGAUG-5' (SEQ ID NO: 1342)

βc-1797 Target: 5'-ATCCCACTGGCCTCTGATAAAGGCTAC-3' (SEQ ID NO: 2451)

5'-CCACUGGCCUCUGAUAAAGGCUAct-3' (SEQ ID NO: 234)
3'-AGGGUGACCGGAGACUAUUUCCGAUGA-5' (SEQ ID NO: 1343)

βc-1798 Target: 5'-TCCCACTGGCCTCTGATAAAGGCTACT-3' (SEQ ID NO: 2452)

5'-CACUGGCCUCUGAUAAAGGCUACtg-3' (SEQ ID NO: 235)
3'-GGGUGACCGGAGACUAUUUCCGAUGAC-5' (SEQ ID NO: 1344)

βc-1799 Target: 5'-CCCACTGGCCTCTGATAAAGGCTACTG-3' (SEQ ID NO: 2453)

5'-ACUGGCCUCUGAUAAAGGCUACUgt-3' (SEQ ID NO: 236)
3'-GGUGACCGGAGACUAUUUCCGAUGACA-5' (SEQ ID NO: 1345)

βc-1800 Target: 5'-CCACTGGCCTCTGATAAAGGCTACTGT-3' (SEQ ID NO: 2454)

5'-ACUGUUGGAUUGAUUCGAAAUCUtg-3' (SEQ ID NO: 237)
3'-GAUGACAACCUAACUAAGCUUUAGAAC-5' (SEQ ID NO: 1346)

βc-1820 Target: 5'-CTACTGTTGGATTGATTCGAAATCTTG-3' (SEQ ID NO: 2455)

5'-CUGUUGGAUUGAUUCGAAAUCUUgc-3' (SEQ ID NO: 238)
3'-AUGACAACCUAACUAAGCUUUAGAACG-5' (SEQ ID NO: 1347)

βc-1821 Target: 5'-TACTGTTGGATTGATTCGAAATCTTGC-3' (SEQ ID NO: 2456)

5'-AAUACCAUUCCAUUGUUUGUGCAgc-3' (SEQ ID NO: 239)
3'-AUUUAUGGUAAGGUAACAAACACGUCG-5' (SEQ ID NO: 1348)

βc-2072 Target: 5'-TAAATACCATTCCATTGTTTGTGCAGC-3' (SEQ ID NO: 2457)

5'-AUACCAUUCCAUUGUUUGUGCAGct-3' (SEQ ID NO: 240)
3'-UUUAUGGUAAGGUAACAAACACGUCGA-5' (SEQ ID NO: 1349)

βc-2073 Target: 5'-AAATACCATTCCATTGTTTGTGCAGCT-3' (SEQ ID NO: 2458)

5'-UACCAUUCCAUUGUUUGUGCAGCtg-3' (SEQ ID NO: 241)
3'-UUAUGGUAAGGUAACAAACACGUCGAC-5' (SEQ ID NO: 1350)

βc-2074 Target: 5'-AATACCATTCCATTGTTTGTGCAGCTG-3' (SEQ ID NO: 2459)

5'-ACCAUUCCAUUGUUUGUGCAGCUgc-3' (SEQ ID NO: 242)
3'-UAUGGUAAGGUAACAAACACGUCGACG-5' (SEQ ID NO: 1351)

βc-2075 Target: 5'-ATACCATTCCATTGTTTGTGCAGCTGC-3' (SEQ ID NO: 2460)

5'-CCAUUCCAUUGUUUGUGCAGCUGct-3' (SEQ ID NO: 243)
3'-AUGGUAAGGUAACAAACACGUCGACGA-5' (SEQ ID NO: 1352)

βc-2076 Target: 5'-TACCATTCCATTGTTTGTGCAGCTGCT-3' (SEQ ID NO: 2461)

5'-CAUUCCAUUGUUUGUGCAGCUGCtt-3' (SEQ ID NO: 244)
3'-UGGUAAGGUAACAAACACGUCGACGAA-5' (SEQ ID NO: 1353)

βc-2077 Target: 5'-ACCATTCCATTGTTTGTGCAGCTGCTT-3' (SEQ ID NO: 2462)

5'-UGCUUUAUUCUCCCAUUGAAAACat-3' (SEQ ID NO: 245)
3'-CGACGAAAUAAGAGGGUAACUUUUGUA-5' (SEQ ID NO: 1354)

βc-2097 Target: 5'-GCTGCTTTATTCTCCCATTGAAAAC-3' (SEQ ID NO: 2463)

5'-GCUUUAUUCUCCCAUUGAAAACAtc-3' (SEQ ID NO: 246)
3'-GACGAAAUAAGAGGGUAACUUUUGUAG-5' (SEQ ID NO: 1355)

βc-2098 Target: 5'-CTGCTTTATTCTCCCATTGAAAACATC-3' (SEQ ID NO: 2464)

5'-CUUUAUUCUCCCAUUGAAAACAUcc-3' (SEQ ID NO: 247)
3'-ACGAAAUAAGAGGGUAACUUUUGUAGG-5' (SEQ ID NO: 1356)

βc-2099 Target: 5'-TGCTTTATTCTCCCATTGAAAACATCC-3' (SEQ ID NO: 2465)

5'-UUUAUUCUCCCAUUGAAAACAUCca-3' (SEQ ID NO: 248)
3'-CGAAAUAAGAGGGUAACUUUUGUAGGU-5' (SEQ ID NO: 1357)

βc-2100 Target: 5'-GCTTTATTCTCCCATTGAAAACATCCA-3' (SEQ ID NO: 2466)

5'-GUCCUCUGUGAACUUGCUCAGGAca-3' (SEQ ID NO: 249)
3'-CCCAGGAGACACUUGAACGAGUCCUGU-5' (SEQ ID NO: 1358)

βc-2141 Target: 5'-GGGTCCTCTGTGAACTTGCTCAGGACA-3' (SEQ ID NO: 2467)

5'-UCCUCUGUGAACUUGCUCAGGACaa-3' (SEQ ID NO: 250)
3'-CCAGGAGACACUUGAACGAGUCCUGUU-5' (SEQ ID NO: 1359)

βc-2142 Target: 5'-GGTCCTCTGTGAACTTGCTCAGGACAA-3' (SEQ ID NO: 2468)

5'-CCUCUGUGAACUUGCUCAGGACAag-3' (SEQ ID NO: 251)
3'-CAGGAGACACUUGAACGAGUCCUGUUC-5' (SEQ ID NO: 1360)

βc-2143 Target: 5'-GTCCTCTGTGAACTTGCTCAGGACAAG-3' (SEQ ID NO: 2469)

5'-CUCUGUGAACUUGCUCAGGACAAgg-3' (SEQ ID NO: 252)
3'-AGGAGACACUUGAACGAGUCCUGUUCC-5' (SEQ ID NO: 1361)

βc-2144 Target: 5'-TCCTCTGTGAACTTGCTCAGGACAAGG-3' (SEQ ID NO: 2470)

5'-UCUGUGAACUUGCUCAGGACAAGga-3' (SEQ ID NO: 253)
3'-GGAGACACUUGAACGAGUCCUGUUCCU-5' (SEQ ID NO: 1362)

βc-2145 Target: 5'-CCTCTGTGAACTTGCTCAGGACAAGGA-3' (SEQ ID NO: 2471)

5'-CUGUGAACUUGCUCAGGACAAGGaa-3' (SEQ ID NO: 254)
3'-GAGACACUUGAACGAGUCCUGUUCCUU-5' (SEQ ID NO: 1363)

βc-2146 Target: 5'-CTCTGTGAACTTGCTCAGGACAAGGAA-3' (SEQ ID NO: 2472)

5'-UGUGAACUUGCUCAGGACAAGGAag-3' (SEQ ID NO: 255)
3'-AGACACUUGAACGAGUCCUGUUCCUUC-5' (SEQ ID NO: 1364)

βc-2147 Target: 5'-TCTGTGAACTTGCTCAGGACAAGGAAG-3' (SEQ ID NO: 2473)

5'-GUGAACUUGCUCAGGACAAGGAAgc-3' (SEQ ID NO: 256)
3'-GACACUUGAACGAGUCCUGUUCCUUCG-5' (SEQ ID NO: 1365)

βc-2148 Target: 5'-CTGTGAACTTGCTCAGGACAAGGAAGC-3' (SEQ ID NO: 2474)

5'-UGAACUUGCUCAGGACAAGGAAGct-3' (SEQ ID NO: 257)
3'-ACACUUGAACGAGUCCUGUUCCUUCGA-5' (SEQ ID NO: 1366)

βc-2149 Target: 5'-TGTGAACTTGCTCAGGACAAGGAAGCT-3' (SEQ ID NO: 2475)

5'-GAACUUGCUCAGGACAAGGAAGCtg-3' (SEQ ID NO: 258)
3'-CACUUGAACGAGUCCUGUUCCUUCGAC-5' (SEQ ID NO: 1367)

βc-2150 Target: 5'-GTGAACTTGCTCAGGACAAGGAAGCTG-3' (SEQ ID NO: 2476)

5'-AACUUGCUCAGGACAAGGAAGCUgc-3' (SEQ ID NO: 259)
3'-ACUUGAACGAGUCCUGUUCCUUCGACG-5' (SEQ ID NO: 1368)

βc-2151 Target: 5'-TGAACTTGCTCAGGACAAGGAAGCTGC-3' (SEQ ID NO: 2477)

5'-AUUGAAGCUGAGGGAGCCACAGCtc-3' (SEQ ID NO: 260)
3'-GAUAACUUCGACUCCCUCGGUGUCGAG-5' (SEQ ID NO: 1369)

βc-2183 Target: 5'-CTATTGAAGCTGAGGGAGCCACAGCTC-3' (SEQ ID NO: 2478)

5'-UUGAAGCUGAGGGAGCCACAGCUcc-3' (SEQ ID NO: 261)
3'-AUAACUUCGACUCCCUCGGUGUCGAGG-5' (SEQ ID NO: 1370)

βc-2184 Target: 5'-TATTGAAGCTGAGGGAGCCACAGCTCC-3' (SEQ ID NO: 2479)

5'-UGAAGCUGAGGGAGCCACAGCUCct-3' (SEQ ID NO: 262)
3'-UAACUUCGACUCCCUCGGUGUCGAGGA-5' (SEQ ID NO: 1371)

βc-2185 Target: 5'-ATTGAAGCTGAGGGAGCCACAGCTCCT-3' (SEQ ID NO: 2480)

5'-UUCCGAAUGUCUGAGGACAAGCCac-3' (SEQ ID NO: 263)
3'-ACAAGGCUUACAGACUCCUGUUCGGUG-5' (SEQ ID NO: 1372)

βc-2270 Target: 5'-TGTTCCGAATGTCTGAGGACAAGCCAC-3' (SEQ ID NO: 2481)

5'-UCCGAAUGUCUGAGGACAAGCCAca-3' (SEQ ID NO: 264)
3'-CAAGGCUUACAGACUCCUGUUCGGUGU-5' (SEQ ID NO: 1373)

βc-2271 Target: 5'-GTTCCGAATGTCTGAGGACAAGCCACA-3' (SEQ ID NO: 2482)

5'-CCGAAUGUCUGAGGACAAGCCACaa-3' (SEQ ID NO: 265)
3'-AAGGCUUACAGACUCCUGUUCGGUGUU-5' (SEQ ID NO: 1374)

βc-2272 Target: 5'-TTCCGAATGTCTGAGGACAAGCCACAA-3' (SEQ ID NO: 2483)

5'-CGAAUGUCUGAGGACAAGCCACAag-3' (SEQ ID NO: 266)
3'-AGGCUUACAGACUCCUGUUCGGUGUUC-5' (SEQ ID NO: 1375)

βc-2273 Target: 5'-TCCGAATGTCTGAGGACAAGCCACAAG-3' (SEQ ID NO: 2484)

5'-GAAUGUCUGAGGACAAGCCACAAga-3' (SEQ ID NO: 267)
3'-GGCUUACAGACUCCUGUUCGGUGUUCU-5' (SEQ ID NO: 1376)

βc-2274 Target: 5'-CCGAATGTCTGAGGACAAGCCACAAGA-3' (SEQ ID NO: 2485)

5'-AAUGUCUGAGGACAAGCCACAAGat-3' (SEQ ID NO: 268)
3'-GCUUACAGACUCCUGUUCGGUGUUCUA-5' (SEQ ID NO: 1377)

βc-2275 Target: 5'-CGAATGTCTGAGGACAAGCCACAAGAT-3' (SEQ ID NO: 2486)

5'-AUGUCUGAGGACAAGCCACAAGAtt-3' (SEQ ID NO: 269)
3'-CUUACAGACUCCUGUUCGGUGUUCUAA-5' (SEQ ID NO: 1378)

βc-2276 Target: 5'-GAATGTCTGAGGACAAGCCACAAGATT-3' (SEQ ID NO: 2487)

5'-UGUCUGAGGACAAGCCACAAGAUta-3' (SEQ ID NO: 270)
3'-UUACAGACUCCUGUUCGGUGUUCUAAU-5' (SEQ ID NO: 1379)

βc-2277 Target: 5'-AATGTCTGAGGACAAGCCACAAGATTA-3' (SEQ ID NO: 2488)

5'-ACAGAGCCAAUGGCUUGGAAUGAga-3' (SEQ ID NO: 271)
3'-CUUGUCUCGGUUACCGAACCUUACUCU-5' (SEQ ID NO: 1380)

βc-2345 Target: 5'-GAACAGAGCCAATGGCTTGGAATGAGA-3' (SEQ ID NO: 2489)

5'-CAGAGCCAAUGGCUUGGAAUGAGac-3' (SEQ ID NO: 272)
3'-UUGUCUCGGUUACCGAACCUUACUCUG-5' (SEQ ID NO: 1381)

βc-2346 Target: 5'-AACAGAGCCAATGGCTTGGAATGAGAC-3' (SEQ ID NO: 2490)

5'-AGAGCCAAUGGCUUGGAAUGAGAct-3' (SEQ ID NO: 273)
3'-UGUCUCGGUUACCGAACCUUACUCUGA-5' (SEQ ID NO: 1382)

βc-2347 Target: 5'-ACAGAGCCAATGGCTTGGAATGAGACT-3' (SEQ ID NO: 2491)

5'-GAGCCAAUGGCUUGGAAUGAGACtg-3' (SEQ ID NO: 274)
3'-GUCUCGGUUACCGAACCUUACUCUGAC-5' (SEQ ID NO: 1383)

βc-2348 Target: 5'-CAGAGCCAATGGCTTGGAATGAGACTG-3' (SEQ ID NO: 2492)

5'-AGCCAAUGGCUUGGAAUGAGACUgc-3' (SEQ ID NO: 275)
3'-UCUCGGUUACCGAACCUUACUCUGACG-5' (SEQ ID NO: 1384)

βc-2349 Target: 5'-AGAGCCAATGGCTTGGAATGAGACTGC-3' (SEQ ID NO: 2493)

5'-GCCAAUGGCUUGGAAUGAGACUGct-3' (SEQ ID NO: 276)
3'-CUCGGUUACCGAACCUUACUCUGACGA-5' (SEQ ID NO: 1385)

βc-2350 Target: 5'-GAGCCAATGGCTTGGAATGAGACTGCT-3' (SEQ ID NO: 2494)

5'-CCAAUGGCUUGGAAUGAGACUGCtg-3' (SEQ ID NO: 277)
3'-UCGGUUACCGAACCUUACUCUGACGAC-5' (SEQ ID NO: 1386)

βc-2351 Target: 5'-AGCCAATGGCTTGGAATGAGACTGCTG-3' (SEQ ID NO: 2495)

5'-CAAUGGCUUGGAAUGAGACUGCUga-3' (SEQ ID NO: 278)
3'-CGGUUACCGAACCUUACUCUGACGACU-5' (SEQ ID NO: 1387)

βc-2352 Target: 5'-GCCAATGGCTTGGAATGAGACTGCTGA-3' (SEQ ID NO: 2496)

5'-AAUGGCUUGGAAUGAGACUGCUGat-3' (SEQ ID NO: 279)
3'-GGUUACCGAACCUUACUCUGACGACUA-5' (SEQ ID NO: 1388)

βc-2353 Target: 5'-CCAATGGCTTGGAATGAGACTGCTGAT-3' (SEQ ID NO: 2497)

5'-AUGGCUUGGAAUGAGACUGCUGAtc-3' (SEQ ID NO: 280)
3'-GUUACCGAACCUUACUCUGACGACUAG-5' (SEQ ID NO: 1389)

βc-2354 Target: 5'-CAATGGCTTGGAATGAGACTGCTGATC-3' (SEQ ID NO: 2498)

5'-UGGCUUGGAAUGAGACUGCUGAUct-3' (SEQ ID NO: 281)
3'-UUACCGAACCUUACUCUGACGACUAGA-5' (SEQ ID NO: 1390)

βc-2355 Target: 5'-AATGGCTTGGAATGAGACTGCTGATCT-3' (SEQ ID NO: 2499)

5'-CUUGGAUAUCGCCAGGAUGAUCCta-3' (SEQ ID NO: 282)
3'-GGGAACCUAUAGCGGUCCUACUAGGAU-5' (SEQ ID NO: 1391)

βc-2411 Target: 5'-CCCTTGGATATCGCCAGGATGATCCTA-3' (SEQ ID NO: 2500)

5'-UUGGAUAUCGCCAGGAUGAUCCUag-3' (SEQ ID NO: 283)
3'-GGAACCUAUAGCGGUCCUACUAGGAUC-5' (SEQ ID NO: 1392)

βc-2412 Target: 5'-CCTTGGATATCGCCAGGATGATCCTAG-3' (SEQ ID NO: 2501)

5'-UGGAUAUCGCCAGGAUGAUCCUAgc-3' (SEQ ID NO: 284)
3'-GAACCUAUAGCGGUCCUACUAGGAUCG-5' (SEQ ID NO: 1393)

βc-2413 Target: 5'-CTTGGATATCGCCAGGATGATCCTAGC-3' (SEQ ID NO: 2502)

5'-GGAUAUCGCCAGGAUGAUCCUAGct-3' (SEQ ID NO: 285)
3'-AACCUAUAGCGGUCCUACUAGGAUCGA-5' (SEQ ID NO: 1394)

βc-2414 Target: 5'-TTGGATATCGCCAGGATGATCCTAGCT-3' (SEQ ID NO: 2503)

5'-GAUAUCGCCAGGAUGAUCCUAGCta-3' (SEQ ID NO: 286)
3'-ACCUAUAGCGGUCCUACUAGGAUCGAU-5' (SEQ ID NO: 1395)

βc-2415 Target: 5'-TGGATATCGCCAGGATGATCCTAGCTA-3' (SEQ ID NO: 2504)

5'-CGUUCUUUUCACUCUGGUGGAUAtg-3' (SEQ ID NO: 287)
3'-UAGCAAGAAAAGUGAGACCACCUAUAC-5' (SEQ ID NO: 1396)

βc-2441 Target: 5'-ATCGTTCTTTTCACTCTGGTGGATATG-3' (SEQ ID NO: 2505)

5'-GUUCUUUUCACUCUGGUGGAUAUgg-3' (SEQ ID NO: 288)
3'-AGCAAGAAAAGUGAGACCACCUAUACC-5' (SEQ ID NO: 1397)

βc-2442 Target: 5'-TCGTTCTTTTCACTCTGGTGGATATGG-3' (SEQ ID NO: 2506)

5'-UUCUUUUCACUCUGGUGGAUAUGgc-3' (SEQ ID NO: 289)
3'-GCAAGAAAAGUGAGACCACCUAUACCG-5' (SEQ ID NO: 1398)

βc-2443 Target: 5'-CGTTCTTTTCACTCTGGTGGATATGGC-3' (SEQ ID NO: 2507)

5'-UCUUUUCACUCUGGUGGAUAUGGcc-3' (SEQ ID NO: 290)
3'-CAAGAAAAGUGAGACCACCUAUACCGG-5' (SEQ ID NO: 1399)

βc-2444 Target: 5'-GTTCTTTTCACTCTGGTGGATATGGCC-3' (SEQ ID NO: 2508)

5'-CUUUUCACUCUGGUGGAUAUGGCca-3' (SEQ ID NO: 291)
3'-AAGAAAAGUGAGACCACCUAUACCGGU-5' (SEQ ID NO: 1400)

βc-2445 Target: 5'-TTCTTTTCACTCTGGTGGATATGGCCA-3' (SEQ ID NO: 2509)

5'-CAUGAGAUGGGUGGCCACCACCCtg-3' (SEQ ID NO: 292)
3'-UUGUACUCUACCCACCGGUGGUGGGAC-5' (SEQ ID NO: 1401)

βc-2501 Target: 5'-AACATGAGATGGGTGGCCACCACCCTG-3' (SEQ ID NO: 2510)

5'-AUGAGAUGGGUGGCCACCACCCUgg-3' (SEQ ID NO: 293)
3'-UGUACUCUACCCACCGGUGGUGGGACC-5' (SEQ ID NO: 1402)

βc-2502 Target: 5'-ACATGAGATGGGTGGCCACCACCCTGG-3' (SEQ ID NO: 2511)

5'-UGAGAUGGGUGGCCACCACCCUGgt-3' (SEQ ID NO: 294)
3'-GUACUCUACCCACCGGUGGUGGGACCA-5' (SEQ ID NO: 1403)

βc-2503 Target: 5'-CATGAGATGGGTGGCCACCACCCTGGT-3' (SEQ ID NO: 2512)

5'-GAGAUGGGUGGCCACCACCCUGGtg-3' (SEQ ID NO: 295)
3'-UACUCUACCCACCGGUGGUGGGACCAC-5' (SEQ ID NO: 1404)

βc-2504 Target: 5'-ATGAGATGGGTGGCCACCACCCTGGTG-3' (SEQ ID NO: 2513)

5'-AGAUGGGUGGCCACCACCCUGGUgc-3' (SEQ ID NO: 296)
3'-ACUCUACCCACCGGUGGUGGGACCACG-5' (SEQ ID NO: 1405)

βc-2505 Target: 5'-TGAGATGGGTGGCCACCACCCTGGTGC-3' (SEQ ID NO: 2514)

5'-GAUGGGUGGCCACCACCCUGGUGct-3' (SEQ ID NO: 297)
3'-CUCUACCCACCGGUGGUGGGACCACGA-5' (SEQ ID NO: 1406)

βc-2506 Target: 5'-GAGATGGGTGGCCACCACCCTGGTGCT-3' (SEQ ID NO: 2515)

5'-AUGGGUGGCCACCACCCUGGUGCtg-3' (SEQ ID NO: 298)
3'-UCUACCCACCGGUGGUGGGACCACGAC-5' (SEQ ID NO: 1407)

βc-2507 Target: 5'-AGATGGGTGGCCACCACCCTGGTGCTG-3' (SEQ ID NO: 2516)

5'-UGGGUGGCCACCACCCUGGUGCUga-3' (SEQ ID NO: 299)
3'-CUACCCACCGGUGGUGGGACCACGACU-5' (SEQ ID NO: 1408)

βc-2508 Target: 5'-GATGGGTGGCCACCACCCTGGTGCTGA-3' (SEQ ID NO: 2517)

5'-GGGUGGCCACCACCCUGGUGCUGac-3' (SEQ ID NO: 300)
3'-UACCCACCGGUGGUGGGACCACGACUG-5' (SEQ ID NO: 1409)

βc-2509 Target: 5'-ATGGGTGGCCACCACCCTGGTGCTGAC-3' (SEQ ID NO: 2518)

5'-GGUGGCCACCACCCUGGUGCUGAct-3' (SEQ ID NO: 301)
3'-ACCCACCGGUGGUGGGACCACGACUGA-5' (SEQ ID NO: 1410)

βc-2510 Target: 5'-TGGGTGGCCACCACCCTGGTGCTGACT-3' (SEQ ID NO: 2519)

5'-GUGGCCACCACCCUGGUGCUGACta-3' (SEQ ID NO: 302)
3'-CCCACCGGUGGUGGGACCACGACUGAU-5' (SEQ ID NO: 1411)

βc-2511 Target: 5'-GGGTGGCCACCACCCTGGTGCTGACTA-3' (SEQ ID NO: 2520)

5'-UGGCCACCACCCUGGUGCUGACUat-3' (SEQ ID NO: 303)
3'-CCACCGGUGGUGGGACCACGACUGAUA-5' (SEQ ID NO: 1412)

βc-2512 Target: 5'-GGTGGCCACCACCCTGGTGCTGACTAT-3' (SEQ ID NO: 2521)

5'-GGCCACCACCCUGGUGCUGACUAtc-3' (SEQ ID NO: 304)
3'-CACCGGUGGUGGGACCACGACUGAUAG-5' (SEQ ID NO: 1413)

βc-2513 Target: 5'-GTGGCCACCACCCTGGTGCTGACTATC-3' (SEQ ID NO: 2522)

5'-GCCACCACCCUGGUGCUGACUAUcc-3' (SEQ ID NO: 305)
3'-ACCGGUGGUGGGACCACGACUGAUAGG-5' (SEQ ID NO: 1414)

βc-2514 Target: 5'-TGGCCACCACCCTGGTGCTGACTATCC-3' (SEQ ID NO: 2523)

5'-CCACCACCCUGGUGCUGACUAUCca-3' (SEQ ID NO: 306)
3'-CCGGUGGUGGGACCACGACUGAUAGGU-5' (SEQ ID NO: 1415)

βc-2515 Target: 5'-GGCCACCACCCTGGTGCTGACTATCCA-3' (SEQ ID NO: 2524)

5'-CACCACCCUGGUGCUGACUAUCCag-3' (SEQ ID NO: 307)
3'-CGGUGGUGGGACCACGACUGAUAGGUC-5' (SEQ ID NO: 1416)

βc-2516 Target: 5'-GCCACCACCCTGGTGCTGACTATCCAG-3' (SEQ ID NO: 2525)

5'-ACCACCCUGGUGCUGACUAUCCAgt-3' (SEQ ID NO: 308)
3'-GGUGGUGGGACCACGACUGAUAGGUCA-5' (SEQ ID NO: 1417)

βc-2517 Target: 5'-CCACCACCCTGGTGCTGACTATCCAGT-3' (SEQ ID NO: 2526)

5'-CCACCCUGGUGCUGACUAUCCAGtt-3' (SEQ ID NO: 309)
3'-GUGGUGGGACCACGACUGAUAGGUCAA-5' (SEQ ID NO: 1418)

βc-2518 Target: 5'-CACCACCCTGGTGCTGACTATCCAGTT-3' (SEQ ID NO: 2527)

5'-CACCCUGGUGCUGACUAUCCAGUtg-3' (SEQ ID NO: 310)
3'-UGGUGGGACCACGACUGAUAGGUCAAC-5' (SEQ ID NO: 1419)

βc-2519 Target: 5'-ACCACCCTGGTGCTGACTATCCAGTTG-3' (SEQ ID NO: 2528)

5'-ACCCUGGUGCUGACUAUCCAGUUga-3' (SEQ ID NO: 311)
3'-GGUGGGACCACGACUGAUAGGUCAACU-5' (SEQ ID NO: 1420)

βc-2520 Target: 5'-CCACCCTGGTGCTGACTATCCAGTTGA-3' (SEQ ID NO: 2529)

5'-CCCUGGUGCUGACUAUCCAGUUGat-3' (SEQ ID NO: 312)
3'-GUGGGACCACGACUGAUAGGUCAACUA-5' (SEQ ID NO: 1421)

βc-2521 Target: 5'-CACCCTGGTGCTGACTATCCAGTTGAT-3' (SEQ ID NO: 2530)

5'-CCUGGUGCUGACUAUCCAGUUGAtg-3' (SEQ ID NO: 313)
3'-UGGGACCACGACUGAUAGGUCAACUAC-5' (SEQ ID NO: 1422)

βc-2522 Target: 5'-ACCCTGGTGCTGACTATCCAGTTGATG-3' (SEQ ID NO: 2531)

5'-CUGGUGCUGACUAUCCAGUUGAUgg-3' (SEQ ID NO: 314)
3'-GGGACCACGACUGAUAGGUCAACUACC-5' (SEQ ID NO: 1423)

βc-2523 Target: 5'-CCCTGGTGCTGACTATCCAGTTGATGG-3' (SEQ ID NO: 2532)

5'-UGGUGCUGACUAUCCAGUUGAUGgg-3' (SEQ ID NO: 315)
3'-GGACCACGACUGAUAGGUCAACUACCC-5' (SEQ ID NO: 1424)

βc-2524 Target: 5'-CCTGGTGCTGACTATCCAGTTGATGGG-3' (SEQ ID NO: 2533)

5'-GGUGCUGACUAUCCAGUUGAUGGgc-3' (SEQ ID NO: 316)
3'-GACCACGACUGAUAGGUCAACUACCCG-5' (SEQ ID NO: 1425)

βc-2525 Target: 5'-CTGGTGCTGACTATCCAGTTGATGGGC-3' (SEQ ID NO: 2534)

5'-GUGCUGACUAUCCAGUUGAUGGGct-3' (SEQ ID NO: 317)
3'-ACCACGACUGAUAGGUCAACUACCCGA-5' (SEQ ID NO: 1426)

βc-2526 Target: 5'-TGGTGCTGACTATCCAGTTGATGGGCT-3' (SEQ ID NO: 2535)

5'-UGCUGACUAUCCAGUUGAUGGGCtg-3' (SEQ ID NO: 318)
3'-CCACGACUGAUAGGUCAACUACCCGAC-5' (SEQ ID NO: 1427)

βc-2527 Target: 5'-GGTGCTGACTATCCAGTTGATGGGCTG-3' (SEQ ID NO: 2536)

5'-GCUGACUAUCCAGUUGAUGGGCUgc-3' (SEQ ID NO: 319)
3'-CACGACUGAUAGGUCAACUACCCGACG-5' (SEQ ID NO: 1428)

βc-2528 Target: 5'-GTGCTGACTATCCAGTTGATGGGCTGC-3' (SEQ ID NO: 2537)

5'-CUGACUAUCCAGUUGAUGGGCUGcc-3' (SEQ ID NO: 320)
3'-ACGACUGAUAGGUCAACUACCCGACGG-5' (SEQ ID NO: 1429)

βc-2529 Target: 5'-TGCTGACTATCCAGTTGATGGGCTGCC-3' (SEQ ID NO: 2538)

5'-UGACUAUCCAGUUGAUGGGCUGCca-3' (SEQ ID NO: 321)
3'-CGACUGAUAGGUCAACUACCCGACGGU-5' (SEQ ID NO: 1430)

βc-2530 Target: 5'-GCTGACTATCCAGTTGATGGGCTGCCA-3' (SEQ ID NO: 2539)

5'-GACUAUCCAGUUGAUGGGCUGCCag-3' (SEQ ID NO: 322)
3'-GACUGAUAGGUCAACUACCCGACGGUC-5' (SEQ ID NO: 1431)

βc-2531 Target: 5'-CTGACTATCCAGTTGATGGGCTGCCAG-3' (SEQ ID NO: 2540)

5'-ACUAUCCAGUUGAUGGGCUGCCAga-3' (SEQ ID NO: 323)
3'-ACUGAUAGGUCAACUACCCGACGGUCU-5' (SEQ ID NO: 1432)

βc-2532 Target: 5'-TGACTATCCAGTTGATGGGCTGCCAGA-3' (SEQ ID NO: 2541)

5'-CUAUCCAGUUGAUGGGCUGCCAGat-3' (SEQ ID NO: 324)
3'-CUGAUAGGUCAACUACCCGACGGUCUA-5' (SEQ ID NO: 1433)

βc-2533 Target: 5'-GACTATCCAGTTGATGGGCTGCCAGAT-3' (SEQ ID NO: 2542)

5'-UAUCCAGUUGAUGGGCUGCCAGAtc-3' (SEQ ID NO: 325)
3'-UGAUAGGUCAACUACCCGACGGUCUAG-5' (SEQ ID NO: 1434)

βc-2534 Target: 5'-ACTATCCAGTTGATGGGCTGCCAGATC-3' (SEQ ID NO: 2543)

5'-AUCCAGUUGAUGGGCUGCCAGAUct-3' (SEQ ID NO: 326)
3'-GAUAGGUCAACUACCCGACGGUCUAGA-5' (SEQ ID NO: 1435)

βc-2535 Target: 5'-CTATCCAGTTGATGGGCTGCCAGATCT-3' (SEQ ID NO: 2544)

5'-GCCCAGGACCUCAUGGAUGGGCUgc-3' (SEQ ID NO: 327)
3'-UACGGGUCCUGGAGUACCUACCCGACG-5' (SEQ ID NO: 1436)

βc-2567 Target: 5'-ATGCCCAGGACCTCATGGATGGGCTGC-3' (SEQ ID NO: 2545)

5'-CCCAGGACCUCAUGGAUGGGCUGcc-3' (SEQ ID NO: 328)
3'-ACGGGUCCUGGAGUACCUACCCGACGG-5' (SEQ ID NO: 1437)

βc-2568 Target: 5'-TGCCCAGGACCTCATGGATGGGCTGCC-3' (SEQ ID NO: 2546)

5'-CCAGGACCUCAUGGAUGGGCUGCct-3' (SEQ ID NO: 329)
3'-CGGGUCCUGGAGUACCUACCCGACGGA-5' (SEQ ID NO: 1438)

βc-2569 Target: 5'-GCCCAGGACCTCATGGATGGGCTGCCT-3' (SEQ ID NO: 2547)

5'-AGCAAUCAGCUGGCCUGGUUUGAta-3' (SEQ ID NO: 330)
3'-UGUCGUUAGUCGACCGGACCAAACUAU-5' (SEQ ID NO: 1439)

βc-2603 Target: 5'-ACAGCAATCAGCTGGCCTGGTTTGATA-3' (SEQ ID NO: 2548)

5'-GCAAUCAGCUGGCCUGGUUUGAUac-3' (SEQ ID NO: 331)
3'-GUCGUUAGUCGACCGGACCAAACUAUG-5' (SEQ ID NO: 1440)

βc-2604 Target: 5'-CAGCAATCAGCTGGCCTGGTTTGATAC-3' (SEQ ID NO: 2549)

5'-CAAUCAGCUGGCCUGGUUUGAUAct-3' (SEQ ID NO: 332)
3'-UCGUUAGUCGACCGGACCAAACUAUGA-5' (SEQ ID NO: 1441)

βc-2605 Target: 5'-AGCAATCAGCTGGCCTGGTTTGATACT-3' (SEQ ID NO: 2550)

5'-AAUCAGCUGGCCUGGUUUGAUACtg-3' (SEQ ID NO: 333)
3'-CGUUAGUCGACCGGACCAAACUAUGAC-5' (SEQ ID NO: 1442)

βc-2606 Target: 5'-GCAATCAGCTGGCCTGGTTTGATACTG-3' (SEQ ID NO: 2551)

5'-AUCAGCUGGCCUGGUUUGAUACUga-3' (SEQ ID NO: 334)
3'-GUUAGUCGACCGGACCAAACUAUGACU-5' (SEQ ID NO: 1443)

βc-2607 Target: 5'-CAATCAGCTGGCCTGGTTTGATACTGA-3' (SEQ ID NO: 2552)

5'-UCAGCUGGCCUGGUUUGAUACUGac-3' (SEQ ID NO: 335)
3'-UUAGUCGACCGGACCAAACUAUGACUG-5' (SEQ ID NO: 1444)

βc-2608 Target: 5'-AATCAGCTGGCCTGGTTTGATACTGAC-3' (SEQ ID NO: 2553)

5'-CAGCUGGCCUGGUUUGAUACUGAcc-3' (SEQ ID NO: 336)
3'-UAGUCGACCGGACCAAACUAUGACUGG-5' (SEQ ID NO: 1445)

βc-2609 Target: 5'-ATCAGCTGGCCTGGTTTGATACTGACC-3' (SEQ ID NO: 2554)

5'-AGCUGGCCUGGUUUGAUACUGACct-3' (SEQ ID NO: 337)
3'-AGUCGACCGGACCAAACUAUGACUGGA-5' (SEQ ID NO: 1446)

βc-2610 Target: 5'-TCAGCTGGCCTGGTTTGATACTGACCT-3' (SEQ ID NO: 2555)

5'-GCUGGCCUGGUUUGAUACUGACCtg-3' (SEQ ID NO: 338)
3'-GUCGACCGGACCAAACUAUGACUGGAC-5' (SEQ ID NO: 1447)

βc-2611 Target: 5'-CAGCTGGCCTGGTTTGATACTGACCTG-3' (SEQ ID NO: 2556)

5'-CUGGCCUGGUUUGAUACUGACCUgt-3' (SEQ ID NO: 339)
3'-UCGACCGGACCAAACUAUGACUGGACA-5' (SEQ ID NO: 1448)

βc-2612 Target: 5'-AGCTGGCCTGGTTTGATACTGACCTGT-3' (SEQ ID NO: 2557)

5'-UGGCCUGGUUUGAUACUGACCUGta-3' (SEQ ID NO: 340)
3'-CGACCGGACCAAACUAUGACUGGACAU-5' (SEQ ID NO: 1449)

βc-2613 Target: 5'-GCTGGCCTGGTTTGATACTGACCTGTA-3' (SEQ ID NO: 2558)

5'-GGCCUGGUUUGAUACUGACCUGUaa-3' (SEQ ID NO: 341)
3'-GACCGGACCAAACUAUGACUGGACAUU-5' (SEQ ID NO: 1450)

βc-2614 Target: 5'-CTGGCCTGGTTTGATACTGACCTGTAA-3' (SEQ ID NO: 2559)

5'-GCCUGGUUUGAUACUGACCUGUAaa-3' (SEQ ID NO: 342)
3'-ACCGGACCAAACUAUGACUGGACAUUU-5' (SEQ ID NO: 1451)

βc-2615 Target: 5'-TGGCCTGGTTTGATACTGACCTGTAAA-3' (SEQ ID NO: 2560)

5'-CCUGGUUUGAUACUGACCUGUAAat-3' (SEQ ID NO: 343)
3'-CCGGACCAAACUAUGACUGGACAUUUA-5' (SEQ ID NO: 1452)

βc-2616 Target: 5'-GGCCTGGTTTGATACTGACCTGTAAAT-3' (SEQ ID NO: 2561)

5'-CUGGUUUGAUACUGACCUGUAAAtc-3' (SEQ ID NO: 344)
3'-CGGACCAAACUAUGACUGGACAUUUAG-5' (SEQ ID NO: 1453)

βc-2617 Target: 5'-GCCTGGTTTGATACTGACCTGTAAATC-3' (SEQ ID NO: 2562)

5'-UGGUUUGAUACUGACCUGUAAAUca-3' (SEQ ID NO: 345)
3'-GGACCAAACUAUGACUGGACAUUUAGU-5' (SEQ ID NO: 1454)

βc-2618 Target: 5'-CCTGGTTTGATACTGACCTGTAAATCA-3' (SEQ ID NO: 2563)

5'-GGUUUGAUACUGACCUGUAAAUCat-3' (SEQ ID NO: 346)
3'-GACCAAACUAUGACUGGACAUUUAGUA-5' (SEQ ID NO: 1455)

βc-2619 Target: 5'-CTGGTTTGATACTGACCTGTAAATC-3' (SEQ ID NO: 2564)

5'-GUUUGAUACUGACCUGUAAAUCAtc-3' (SEQ ID NO: 347)
3'-ACCAAACUAUGACUGGACAUUUAGUAG-5' (SEQ ID NO: 1456)

βc-2620 Target: 5'-TGGTTTGATACTGACCTGTAAATCATC-3' (SEQ ID NO: 2565)

5'-UUUGAUACUGACCUGUAAAUCAUcc-3' (SEQ ID NO: 348)
3'-CCAAACUAUGACUGGACAUUUAGUAGG-5' (SEQ ID NO: 1457)

βc-2621 Target: 5'-GGTTTGATACTGACCTGTAAATCATCC-3' (SEQ ID NO: 2566)

5'-UUGAUACUGACCUGUAAAUCAUCct-3' (SEQ ID NO: 349)
3'-CAAACUAUGACUGGACAUUUAGUAGGA-5' (SEQ ID NO: 1458)

βc-2622 Target: 5'-GTTTGATACTGACCTGTAAATCATCCT-3' (SEQ ID NO: 2567)

5'-UGAUACUGACCUGUAAAUCAUCCtt-3' (SEQ ID NO: 350)
3'-AAACUAUGACUGGACAUUUAGUAGGAA-5' (SEQ ID NO: 1459)

βc-2623 Target: 5'-TTTGATACTGACCTGTAAATCATCCTT-3' (SEQ ID NO: 2568)

5'-UUUUGCCACAGCUUUUGCAACUUaa-3' (SEQ ID NO: 351)
3'-AAAAAACGGUGUCGAAAACGUUGAAUU-5' (SEQ ID NO: 1460)

βc-2869 Target: 5'-TTTTTTGCCACAGCTTTTGCAACTTAA-3' (SEQ ID NO: 2569)

5'-UGAGUAACAUUUGCUGUUUUAAAca-3' (SEQ ID NO: 352)
3'-UUACUCAUUGUAAACGACAAAAUUUGU-5' (SEQ ID NO: 1461)

βc-2902 Target: 5'-AATGAGTAACATTTGCTGTTTTAAACA-3' (SEQ ID NO: 2570)

5'-AACAUUAAUAGCAGCCUUUCUCUct-3' (SEQ ID NO: 353)
3'-AUUUGUAAUUAUCGUCGGAAAGAGAGA-5' (SEQ ID NO: 1462)

βc-2923 Target: 5'-TAAACATTAATAGCAGCCTTTCTCTCT-3' (SEQ ID NO: 2571)

5'-CAUUAAUAGCAGCCUUUCUCUCUtt-3' (SEQ ID NO: 354)
3'-UUGUAAUUAUCGUCGGAAAGAGAGAAA-5' (SEQ ID NO: 1463)

βc-2925 Target: 5'-AACATTAATAGCAGCCTTTCTCTCTTT-3' (SEQ ID NO: 2572)

5'-UUAAUAGCAGCCUUUCUCUCUUUat-3' (SEQ ID NO: 355)
3'-GUAAUUAUCGUCGGAAAGAGAGAAAUA-5' (SEQ ID NO: 1464)

βc-2927 Target: 5'-CATTAATAGCAGCCTTTCTCTCTTTAT-3' (SEQ ID NO: 2573)

5'-AAUAGCAGCCUUUCUCUCUUUAUac-3' (SEQ ID NO: 356)
3'-AAUUAUCGUCGGAAAGAGAGAAAUAUG-5' (SEQ ID NO: 1465)

βc-2929 Target: 5'-TTAATAGCAGCCTTTCTCTCTTTATAC-3' (SEQ ID NO: 2574)

5'-GCAUUGUGAUUGGCCUGUAGAGUtg-3' (SEQ ID NO: 357)
3'-AACGUAACACUAACCGGACAUCUCAAC-5' (SEQ ID NO: 1466)

βc-2973 Target: 5'-TTGCATTGTGATTGGCCTGTAGAGTTG-3' (SEQ ID NO: 2575)

5'-AUUGUGAUUGGCCUGUAGAGUUGct-3' (SEQ ID NO: 358)
3'-CGUAACACUAACCGGACAUCUCAACGA-5' (SEQ ID NO: 1467)

βc-2975 Target: 5'-GCATTGTGATTGGCCTGTAGAGTTGCT-3' (SEQ ID NO: 2576)

5'-UGUGAUUGGCCUGUAGAGUUGCUga-3' (SEQ ID NO: 359)
3'-UAACACUAACCGGACAUCUCAACGACU-5' (SEQ ID NO: 1468)

βc-2977 Target: 5'-ATTGTGATTGGCCTGTAGAGTTGCTGA-3' (SEQ ID NO: 2577)

5'-UGAUUGGCCUGUAGAGUUGCUGAga-3' (SEQ ID NO: 360)
3'-ACACUAACCGGACAUCUCAACGACUCU-5' (SEQ ID NO: 1469)

βc-2979 Target: 5'-TGTGATTGGCCTGTAGAGTTGCTGAGA-3' (SEQ ID NO: 2578)

5'-AUUGGCCUGUAGAGUUGCUGAGAgg-3' (SEQ ID NO: 361)
3'-ACUAACCGGACAUCUCAACGACUCUCC-5' (SEQ ID NO: 1470)

βc-2981 Target: 5'-TGATTGGCCTGTAGAGTTGCTGAGAGG-3' (SEQ ID NO: 2579)

5'-UGGCCUGUAGAGUUGCUGAGAGGgc-3' (SEQ ID NO: 362)
3'-UAACCGGACAUCUCAACGACUCUCCCG-5' (SEQ ID NO: 1471)

βc-2983 Target: 5'-ATTGGCCTGTAGAGTTGCTGAGAGGGC-3' (SEQ ID NO: 2580)

5'-GCCUGUAGAGUUGCUGAGAGGGCtc-3' (SEQ ID NO: 363)
3'-ACCGGACAUCUCAACGACUCUCCCGAG-5' (SEQ ID NO: 1472)

βc-2985 Target: 5'-TGGCCTGTAGAGTTGCTGAGAGGGCTC-3' (SEQ ID NO: 2581)

5'-CUGUAGAGUUGCUGAGAGGGCUCga-3' (SEQ ID NO: 364)
3'-CGGACAUCUCAACGACUCUCCCGAGCU-5' (SEQ ID NO: 1473)

βc-2987 Target: 5'-GCCTGTAGAGTTGCTGAGAGGGCTCGA-3' (SEQ ID NO: 2582)

5'-GUAGAGUUGCUGAGAGGGCUCGAgg-3' (SEQ ID NO: 365)
3'-GACAUCUCAACGACUCUCCCGAGCUCC-5' (SEQ ID NO: 1474)

βc-2989 Target: 5'-CTGTAGAGTTGCTGAGAGGGCTCGAGG-3' (SEQ ID NO: 2583)

5'-GUGGGCUGGUAUCUCAGAAAGUGcc-3' (SEQ ID NO: 366)
3'-CCCACCCGACCAUAGAGUCUUUCACGG-5' (SEQ ID NO: 1475)

βc-3015 Target: 5'-GGGTGGGCTGGTATCTCAGAAAGTGCC-3' (SEQ ID NO: 2584)

5'-GGGCUGGUAUCUCAGAAAGUGCCtg-3' (SEQ ID NO: 367)
3'-CACCCGACCAUAGAGUCUUUCACGGAC-5' (SEQ ID NO: 1476)

βc-3017 Target: 5'-GTGGGCTGGTATCTCAGAAAGTGCCTG-3' (SEQ ID NO: 2585)

5'-GCUGGUAUCUCAGAAAGUGCCUGac-3' (SEQ ID NO: 368)
3'-CCCGACCAUAGAGUCUUUCACGGACUG-5' (SEQ ID NO: 1477)

βc-3019 Target: 5'-GGGCTGGTATCTCAGAAAGTGCCTGAC-3' (SEQ ID NO: 2586)

5'-UGGUAUCUCAGAAAGUGCCUGACac-3' (SEQ ID NO: 369)
3'-CGACCAUAGAGUCUUUCACGGACUGUG-5' (SEQ ID NO: 1478)

βc-3021 Target: 5'-GCTGGTATCTCAGAAAGTGCCTGACAC-3' (SEQ ID NO: 2587)

5'-ACUAACCAAGCUGAGUUUCCUAUgg-3' (SEQ ID NO: 370)
3'-UGUGAUUGGUUCGACUCAAAGGAUACC-5' (SEQ ID NO: 1479)

βc-3046 Target: 5'-ACACTAACCAAGCTGAGTTTCCTATGG-3' (SEQ ID NO: 2588)

5'-UAACCAAGCUGAGUUUCCUAUGGga-3' (SEQ ID NO: 371)
3'-UGAUUGGUUCGACUCAAAGGAUACCCU-5' (SEQ ID NO: 1480)

βc-3048 Target: 5'-ACTAACCAAGCTGAGTTTCCTATGGGA-3' (SEQ ID NO: 2589)

5'-ACCAAGCUGAGUUUCCUAUGGGAac-3' (SEQ ID NO: 372)
3'-AUUGGUUCGACUCAAAGGAUACCCUUG-5' (SEQ ID NO: 1481)

βc-3050 Target: 5'-TAACCAAGCTGAGTTTCCTATGGGAAC-3' (SEQ ID NO: 2590)

5'-CAAGCUGAGUUUCCUAUGGGAACaa-3' (SEQ ID NO: 373)
3'-UGGUUCGACUCAAAGGAUACCCUUGUU-5' (SEQ ID NO: 1482)

βc-3052 Target: 5'-ACCAAGCTGAGTTTCCTATGGGAACAA-3' (SEQ ID NO: 2591)

5'-AGCUGAGUUUCCUAUGGGAACAAtt-3' (SEQ ID NO: 374)
3'-GUUCGACUCAAAGGAUACCCUUGUUAA-5' (SEQ ID NO: 1483)

βc-3054 Target: 5'-CAAGCTGAGTTTCCTATGGGAACAATT-3' (SEQ ID NO: 2592)

5'-CUGAGUUUCCUAUGGGAACAAUUga-3' (SEQ ID NO: 375)
3'-UCGACUCAAAGGAUACCCUUGUUAACU-5' (SEQ ID NO: 1484)

βc-3056 Target: 5'-AGCTGAGTTTCCTATGGGAACAATTGA-3' (SEQ ID NO: 2593)

5'-CUUUUUGUUCUGGUCCUUUUUGGtc-3' (SEQ ID NO: 376)
3'-UUGAAAAACAAGACCAGGAAAAACCAG-5' (SEQ ID NO: 1485)

βc-3087 Target: 5'-AACTTTTTGTTCTGGTCCTTTTTGGTC-3' (SEQ ID NO: 2594)

5'-UUUUGUUCUGGUCCUUUUUGGUCga-3' (SEQ ID NO: 377)
3'-GAAAAACAAGACCAGGAAAAACCAGCU-5' (SEQ ID NO: 1486)

βc-3089 Target: 5'-CTTTTTGTTCTGGTCCTTTTTGGTCGA-3' (SEQ ID NO: 2595)

5'-UUGUUCUGGUCCUUUUUGGUCGAgg-3' (SEQ ID NO: 378)
3'-AAAACAAGACCAGGAAAAACCAGCUCC-5' (SEQ ID NO: 1487)

βc-3091 Target: 5'-TTTTGTTCTGGTCCTTTTTGGTCGAGG-3' (SEQ ID NO: 2596)

5'-GUUCUGGUCCUUUUUGGUCGAGGag-3' (SEQ ID NO: 379)
3'-AACAAGACCAGGAAAAACCAGCUCCUC-5' (SEQ ID NO: 1488)

βc-3093 Target: 5'-TTGTTCTGGTCCTTTTTGGTCGAGGAG-3' (SEQ ID NO: 2597)

5'-UCUGGUCCUUUUUGGUCGAGGAGta-3' (SEQ ID NO: 380)
3'-CAAGACCAGGAAAAACCAGCUCCUCAU-5' (SEQ ID NO: 1489)

βc-3095 Target: 5'-GTTCTGGTCCTTTTTGGTCGAGGAGTA-3' (SEQ ID NO: 2598)

5'-UGGUCCUUUUUGGUCGAGGAGUAac-3' (SEQ ID NO: 381)
3'-AGACCAGGAAAAACCAGCUCCUCAUUG-5' (SEQ ID NO: 1490)

βc-3097 Target: 5'-TCTGGTCCTTTTTGGTCGAGGAGTAAC-3' (SEQ ID NO: 2599)

5'-GUCCUUUUUGGUCGAGGAGUAACaa-3' (SEQ ID NO: 382)
3'-ACCAGGAAAAACCAGCUCCUCAUUGUU-5' (SEQ ID NO: 1491)

βc-3099 Target: 5'-TGGTCCTTTTTGGTCGAGGAGTAACAA-3' (SEQ ID NO: 2600)

5'-CCUUUUUGGUCGAGGAGUAACAAta-3' (SEQ ID NO: 383)
3'-CAGGAAAAACCAGCUCCUCAUUGUUAU-5' (SEQ ID NO: 1492)

βc-3101 Target: 5'-GTCCTTTTTGGTCGAGGAGTAACAATA-3' (SEQ ID NO: 2601)

5'-UUUUUGGUCGAGGAGUAACAAUAca-3' (SEQ ID NO: 384)
3'-GGAAAAACCAGCUCCUCAUUGUUAUGU-5' (SEQ ID NO: 1493)

βc-3103 Target: 5'-CCTTTTTGGTCGAGGAGTAACAATACA-3' (SEQ ID NO: 2602)

5'-UUUGGUCGAGGAGUAACAAUACAaa-3' (SEQ ID NO: 385)
3'-AAAAACCAGCUCCUCAUUGUUAUGUUU-5' (SEQ ID NO: 1494)

βc-3105 Target: 5'-TTTTTGGTCGAGGAGTAACAATACAAA-3' (SEQ ID NO: 2603)

5'-UGGUCGAGGAGUAACAAUACAAAtg-3' (SEQ ID NO: 386)
3'-AAACCAGCUCCUCAUUGUUAUGUUUAC-5' (SEQ ID NO: 1495)

βc-3107 Target: 5'-TTTGGTCGAGGAGTAACAATACAAATG-3' (SEQ ID NO: 2604)

5'-GUCGAGGAGUAACAAUACAAAUGga-3' (SEQ ID NO: 387)
3'-ACCAGCUCCUCAUUGUUAUGUUUACCU-5' (SEQ ID NO: 1496)

βc-3109 Target: 5'-TGGTCGAGGAGTAACAATACAAATGGA-3' (SEQ ID NO: 2605)

5'-CGAGGAGUAACAAUACAAAUGGAtt-3' (SEQ ID NO: 388)
3'-CAGCUCCUCAUUGUUAUGUUUACCUAA-5' (SEQ ID NO: 1497)

βc-3111 Target: 5'-GTCGAGGAGTAACAATACAAATGGATT-3' (SEQ ID NO: 2606)

5'-AGGAGUAACAAUACAAAUGGAUUtt-3' (SEQ ID NO: 389)
3'-GCUCCUCAUUGUUAUGUUUACCUAAAA-5' (SEQ ID NO: 1498)

βc-3113 Target: 5'-CGAGGAGTAACAATACAAATGGATTTT-3' (SEQ ID NO: 2607)

5'-GAGUAACAAUACAAAUGGAUUUUgg-3' (SEQ ID NO: 390)
3'-UCCUCAUUGUUAUGUUUACCUAAAACC-5' (SEQ ID NO: 1499)

βc-3115 Target: 5'-AGGAGTAACAATACAAATGGATTTTGG-3' (SEQ ID NO: 2608)

5'-UAUCAAACCCUAGCCUUGCUUGUta-3' (SEQ ID NO: 391)
3'-AAAUAGUUUGGGAUCGGAACGAACAAU-5' (SEQ ID NO: 1500)

βc-3191 Target: 5'-TTTATCAAACCCTAGCCTTGCTTGTTA-3' (SEQ ID NO: 2609)

5'-UCAAACCCUAGCCUUGCUUGUUAaa-3' (SEQ ID NO: 392)
3'-AUAGUUUGGGAUCGGAACGAACAAUUU-5' (SEQ ID NO: 1501)

βc-3193 Target: 5'-TATCAAACCCTAGCCTTGCTTGTTAAA-3' (SEQ ID NO: 2610)

5'-AAACCCUAGCCUUGCUUGUUAAAtt-3' (SEQ ID NO: 393)
3'-AGUUUGGGAUCGGAACGAACAAUUUAA-5' (SEQ ID NO: 1502)

βc-3195 Target: 5'-TCAAACCCTAGCCTTGCTTGTTAAATT-3' (SEQ ID NO: 2611)

5'-GAGUAAUGGUGUAGAACACUAAUtc-3' (SEQ ID NO: 394)
3'-AACUCAUUACCACAUCUUGUGAUUAAG-5' (SEQ ID NO: 1503)

βc-3387 Target: 5'-TTGAGTAATGGTGTAGAACACTAATTC-3' (SEQ ID NO: 2612)

5'-GUAAUGGUGUAGAACACUAAUUCat-3' (SEQ ID NO: 395)
3'-CUCAUUACCACAUCUUGUGAUUAAGUA-5' (SEQ ID NO: 1504)

βc-3389 Target: 5'-GAGTAATGGTGTAGAACACTAATTC-3' (SEQ ID NO: 2613)

5'-AAUGGUGUAGAACACUAAUUCAUaa-3' (SEQ ID NO: 396)
3'-CAUUACCACAUCUUGUGAUUAAGUAUU-5' (SEQ ID NO: 1505)

βc-3391 Target: 5'-GTAATGGTGTAGAACACTAATTCATAA-3' (SEQ ID NO: 2614)

5'-UGGUGUAGAACACUAAUUCAUAAtc-3' (SEQ ID NO: 397)
3'-UUACCACAUCUUGUGAUUAAGUAUUAG-5' (SEQ ID NO: 1506)

βc-3393 Target: 5'-AATGGTGTAGAACACTAATTCATAATC-3' (SEQ ID NO: 2615)

5'-GUGUAGAACACUAAUUCAUAAUCac-3' (SEQ ID NO: 398)
3'-ACCACAUCUUGUGAUUAAGUAUUAGUG-5' (SEQ ID NO: 1507)

βc-3395 Target: 5'-TGGTGTAGAACACTAATTCATAATCAC-3' (SEQ ID NO: 2616)

5'-GUAGAACACUAAUUCAUAAUCACtc-3' (SEQ ID NO: 399)
3'-CACAUCUUGUGAUUAAGUAUUAGUGAG-5' (SEQ ID NO: 1508)

βc-3397 Target: 5'-GTGTAGAACACTAATTCATAATCACTC-3' (SEQ ID NO: 2617)

5'-AGAACACUAAUUCAUAAUCACUCta-3' (SEQ ID NO: 400)
3'-CAUCUUGUGAUUAAGUAUUAGUGAGAU-5' (SEQ ID NO: 1509)

βc-3399 Target: 5'-GTAGAACACTAATTCATAATCACTCTA-3' (SEQ ID NO: 2618)

5'-AACACUAAUUCAUAAUCACUCUAat-3' (SEQ ID NO: 401)
3'-UCUUGUGAUUAAGUAUUAGUGAGAUUA-5' (SEQ ID NO: 1510)

βc-3401 Target: 5'-AGAACACTAATTCATAATCACTCTAAT-3' (SEQ ID NO: 2619)

5'-UUAGUUUCCUUUUUAAUAUGCUUaa-3' (SEQ ID NO: 402)
3'-UUAAUCAAAGGAAAAAUUAUACGAAUU-5' (SEQ ID NO: 1511)

βc-3500 Target: 5'-AATTAGTTTCCTTTTTAATATGCTTAA-3' (SEQ ID NO: 2620)

5'-AGUUUCCUUUUUAAUAUGCUUAAaa-3' (SEQ ID NO: 403)
3'-AAUCAAAGGAAAAAUUAUACGAAUUUU-5' (SEQ ID NO: 1512)

βc-3502 Target: 5'-TTAGTTTCCTTTTTAATATGCTTAAAA-3' (SEQ ID NO: 2621)

5'-UUUCCUUUUUAAUAUGCUUAAAAta-3' (SEQ ID NO: 404)
3'-UCAAAGGAAAAAUUAUACGAAUUUUAU-5' (SEQ ID NO: 1513)

βc-3504 Target: 5'-AGTTTCCTTTTTAATATGCTTAAAATA-3' (SEQ ID NO: 2622)

5'-UCCUUUUUAAUAUGCUUAAAAUAag-3' (SEQ ID NO: 405)
3'-AAAGGAAAAAUUAUACGAAUUUUAUUC-5' (SEQ ID NO: 1514)

βc-3506 Target: 5'-TTTCCTTTTTAATATGCTTAAAATAAG-3' (SEQ ID NO: 2623)

5'-CUUUUUAAUAUGCUUAAAAUAAGca-3' (SEQ ID NO: 406)
3'-AGGAAAAAUUAUACGAAUUUUAUUCGU-5' (SEQ ID NO: 1515)

βc-3508 Target: 5'-TCCTTTTTAATATGCTTAAAATAAGCA-3' (SEQ ID NO: 2624)

5'-UUUUUAAUAUGCUUAAAAUAAGCag-3' (SEQ ID NO: 407)
3'-GGAAAAAUUAUACGAAUUUUAUUCGUC-5' (SEQ ID NO: 1516)

βc-3509 Target: 5'-CCTTTTTAATATGCTTAAAATAAGCAG-3' (SEQ ID NO: 2625)

5'-UUUUAAUAUGCUUAAAAUAAGCAgg-3' (SEQ ID NO: 408)
3'-GAAAAAUUAUACGAAUUUUAUUCGUCC-5' (SEQ ID NO: 1517)

βc-3510 Target: 5'-CTTTTTAATATGCTTAAAATAAGCAGG-3' (SEQ ID NO: 2626)

5'-UUAAUAUGCUUAAAAUAAGCAGGtg-3' (SEQ ID NO: 409)
3'-AAAAUUAUACGAAUUUUAUUCGUCCAC-5' (SEQ ID NO: 1518)

βc-3512 Target: 5'-TTTTAATATGCTTAAAATAAGCAGGTG-3' (SEQ ID NO: 2627)

5'-AAUAUGCUUAAAAUAAGCAGGUGga-3' (SEQ ID NO: 410)
3'-AAUUAUACGAAUUUUAUUCGUCCACCU-5' (SEQ ID NO: 1519)

βc-3514 Target: 5'-TTAATATGCTTAAAATAAGCAGGTGGA-3' (SEQ ID NO: 2628)

5'-UAUGCUUAAAAUAAGCAGGUGGAtc-3' (SEQ ID NO: 411)
3'-UUAUACGAAUUUUAUUCGUCCACCUAG-5' (SEQ ID NO: 1520)

βc-3516 Target: 5'-AATATGCTTAAAATAAGCAGGTGGATC-3' (SEQ ID NO: 2629)

5'-UGCUUAAAAUAAGCAGGUGGAUCta-3' (SEQ ID NO: 412)
3'-AUACGAAUUUUAUUCGUCCACCUAGAU-5' (SEQ ID NO: 1521)

βc-3518 Target: 5'-TATGCTTAAAATAAGCAGGTGGATCTA-3' (SEQ ID NO: 2630)

5'-CUUAAAAUAAGCAGGUGGAUCUAtt-3' (SEQ ID NO: 413)
3'-ACGAAUUUUAUUCGUCCACCUAGAUAA-5' (SEQ ID NO: 1522)

βc-3520 Target: 5'-TGCTTAAAATAAGCAGGTGGATCTATT-3' (SEQ ID NO: 2631)

5'-UAAAAUAAGCAGGUGGAUCUAUUtc-3' (SEQ ID NO: 414)
3'-GAAUUUUAUUCGUCCACCUAGAUAAAG-5' (SEQ ID NO: 1523)

βc-3522 Target: 5'-CTTAAAATAAGCAGGTGGATCTATTTC-3' (SEQ ID NO: 2632)

5'-AAAUAAGCAGGUGGAUCUAUUUCat-3' (SEQ ID NO: 415)
3'-AUUUUAUUCGUCCACCUAGAUAAAGUA-5' (SEQ ID NO: 1524)

βc-3524 Target: 5'-TAAAATAAGCAGGTGGATCTATTTC-3' (SEQ ID NO: 2633)

5'-AUAAGCAGGUGGAUCUAUUUCAUgt-3' (SEQ ID NO: 416)
3'-UUUAUUCGUCCACCUAGAUAAAGUACA-5' (SEQ ID NO: 1525)

βc-3526 Target: 5'-AAATAAGCAGGTGGATCTATTTCATGT-3' (SEQ ID NO: 2634)

5'-AAGCAGGUGGAUCUAUUUCAUGUtt-3' (SEQ ID NO: 417)
3'-UAUUCGUCCACCUAGAUAAAGUACAAA-5' (SEQ ID NO: 1526)

βc-3528 Target: 5'-ATAAGCAGGTGGATCTATTTCATGTTT-3' (SEQ ID NO: 2635)

5'-GCAGGUGGAUCUAUUUCAUGUUUtt-3' (SEQ ID NO: 418)
3'-UUCGUCCACCUAGAUAAAGUACAAAAA-5' (SEQ ID NO: 1527)

βc-3530 Target: 5'-AAGCAGGTGGATCTATTTCATGTTTTT-3' (SEQ ID NO: 2636)

5'-AGGUGGAUCUAUUUCAUGUUUUUga-3' (SEQ ID NO: 419)
3'-CGUCCACCUAGAUAAAGUACAAAAACU-5' (SEQ ID NO: 1528)

βc-3532 Target: 5'-GCAGGTGGATCTATTTCATGTTTTTGA-3' (SEQ ID NO: 2637)

5'-GUGGAUCUAUUUCAUGUUUUUGAtc-3' (SEQ ID NO: 420)
3'-UCCACCUAGAUAAAGUACAAAAACUAG-5' (SEQ ID NO: 1529)

βc-3534 Target: 5'-AGGTGGATCTATTTCATGTTTTTGATC-3' (SEQ ID NO: 2638)

5'-GGAUCUAUUUCAUGUUUUUGAUCaa-3' (SEQ ID NO: 421)
3'-CACCUAGAUAAAGUACAAAAACUAGUU-5' (SEQ ID NO: 1530)

βc-3536 Target: 5'-GTGGATCTATTTCATGTTTTTGATCAA-3' (SEQ ID NO: 2639)

5'-AUCUAUUUCAUGUUUUUGAUCAAaa-3' (SEQ ID NO: 422)
3'-CCUAGAUAAAGUACAAAAACUAGUUUU-5' (SEQ ID NO: 1531)

βc-3538 Target: 5'-GGATCTATTTCATGTTTTTGATCAAAA-3' (SEQ ID NO: 2640)

5'-GUAGGGUAAAUCAGUAAGAGGUGtt-3' (SEQ ID NO: 423)
3'-CCCAUCCCAUUUAGUCAUUCUCCACAA-5' (SEQ ID NO: 1532)

βc-3583 Target: 5'-GGGTAGGGTAAATCAGTAAGAGGTGTT-3' (SEQ ID NO: 2641)

5'-AGGGUAAAUCAGUAAGAGGUGUUat-3' (SEQ ID NO: 424)
3'-CAUCCCAUUUAGUCAUUCUCCACAAUA-5' (SEQ ID NO: 1533)

βc-3585 Target: 5'-GTAGGGTAAATCAGTAAGAGGTGTTAT-3' (SEQ ID NO: 2642)

5'-GGUAAAUCAGUAAGAGGUGUUAUtt-3' (SEQ ID NO: 425)
3'-UCCCAUUUAGUCAUUCUCCACAAUAAA-5' (SEQ ID NO: 1534)

βc-3587 Target: 5'-AGGGTAAATCAGTAAGAGGTGTTATTT-3' (SEQ ID NO: 2643)

5'-UAAAUCAGUAAGAGGUGUUAUUUgg-3' (SEQ ID NO: 426)
3'-CCAUUUAGUCAUUCUCCACAAUAAACC-5' (SEQ ID NO: 1535)

βc-3589 Target: 5'-GGTAAATCAGTAAGAGGTGTTATTTGG-3' (SEQ ID NO: 2644)

5'-AAUCAGUAAGAGGUGUUAUUUGGaa-3' (SEQ ID NO: 427)
3'-AUUUAGUCAUUCUCCACAAUAAACCUU-5' (SEQ ID NO: 1536)

βc-3591 Target: 5'-TAAATCAGTAAGAGGTGTTATTTGGAA-3' (SEQ ID NO: 2645)

5'-UCAGUAAGAGGUGUUAUUUGGAAcc-3' (SEQ ID NO: 428)
3'-UUAGUCAUUCUCCACAAUAAACCUUGG-5' (SEQ ID NO: 1537)

βc-3593 Target: 5'-AATCAGTAAGAGGTGTTATTTGGAACC-3' (SEQ ID NO: 2646)

5'-UACCAGUUGCCUUUUAUCCCAAAgt-3' (SEQ ID NO: 429)
3'-AAAUGGUCAACGGAAAAUAGGGUUUCA-5' (SEQ ID NO: 1538)

βc-3633 Target: 5'-TTTACCAGTTGCCTTTTATCCCAAAGT-3' (SEQ ID NO: 2647)

5'-CCAGUUGCCUUUUAUCCCAAAGUtg-3' (SEQ ID NO: 430)
3'-AUGGUCAACGGAAAAUAGGGUUUCAAC-5' (SEQ ID NO: 1539)

βc-3635 Target: 5'-TACCAGTTGCCTTTTATCCCAAAGTTG-3' (SEQ ID NO: 2648)

5'-AGUUGCCUUUUAUCCCAAAGUUGtt-3' (SEQ ID NO: 431)
3'-GGUCAACGGAAAAUAGGGUUUCAACAA-5' (SEQ ID NO: 1540)

βc-3637 Target: 5'-CCAGTTGCCTTTTATCCCAAAGTTGTT-3' (SEQ ID NO: 2649)

5'-UUGCCUUUUAUCCCAAAGUUGUUgt-3' (SEQ ID NO: 432)
3'-UCAACGGAAAAUAGGGUUUCAACAACA-5' (SEQ ID NO: 1541)

βc-3639 Target: 5'-AGTTGCCTTTTATCCCAAAGTTGTTGT-3' (SEQ ID NO: 2650)

5'-GCCUUUUAUCCCAAAGUUGUUGUaa-3' (SEQ ID NO: 433)
3'-AACGGAAAAUAGGGUUUCAACAACAUU-5' (SEQ ID NO: 1542)

βc-3641 Target: 5'-TTGCCTTTTATCCCAAAGTTGTTGTAA-3' (SEQ ID NO: 2651)

5'-CUUUUAUCCCAAAGUUGUUGUAAcc-3' (SEQ ID NO: 434)
3'-CGGAAAAUAGGGUUUCAACAACAUUGG-5' (SEQ ID NO: 1543)

βc-3643 Target: 5'-GCCTTTTATCCCAAAGTTGTTGTAACC-3' (SEQ ID NO: 2652)

5'-UUUAUCCCAAAGUUGUUGUAACCtg-3' (SEQ ID NO: 435)
3'-GAAAAUAGGGUUUCAACAACAUUGGAC-5' (SEQ ID NO: 1544)

βc-3645 Target: 5'-CTTTTATCCCAAAGTTGTTGTAACCTG-3' (SEQ ID NO: 2653)

5'-UAUCCCAAAGUUGUUGUAACCUGct-3' (SEQ ID NO: 436)
3'-AAAUAGGGUUUCAACAACAUUGGACGA-5' (SEQ ID NO: 1545)

βc-3647 Target: 5'-TTTATCCCAAAGTTGTTGTAACCTGCT-3' (SEQ ID NO: 2654)

5'-UCCCAAAGUUGUUGUAACCUGCUgt-3' (SEQ ID NO: 437)
3'-AUAGGGUUUCAACAACAUUGGACGACA-5' (SEQ ID NO: 1546)

βc-3649 Target: 5'-TATCCCAAAGTTGTTGTAACCTGCTGT-3' (SEQ ID NO: 2655)

5'-CCAAAGUUGUUGUAACCUGCUGUga-3' (SEQ ID NO: 438)
3'-AGGGUUUCAACAACAUUGGACGACACU-5' (SEQ ID NO: 1547)

βc-3651 Target: 5'-TCCCAAAGTTGTTGTAACCTGCTGTGA-3' (SEQ ID NO: 2656)

5'-AAAGUUGUUGUAACCUGCUGUGAta-3' (SEQ ID NO: 439)
3'-GGUUUCAACAACAUUGGACGACACUAU-5' (SEQ ID NO: 1548)

βc-3653 Target: 5'-CCAAAGTTGTTGTAACCTGCTGTGATA-3' (SEQ ID NO: 2657)

5'-AGUUGUUGUAACCUGCUGUGAUAcg-3' (SEQ ID NO: 440)
3'-UUUCAACAACAUUGGACGACACUAUGC-5' (SEQ ID NO: 1549)

βc-3655 Target: 5'-AAAGTTGTTGTAACCTGCTGTGATACG-3' (SEQ ID NO: 2658)

5'-UUGUUGUAACCUGCUGUGAUACGat-3' (SEQ ID NO: 441)
3'-UCAACAACAUUGGACGACACUAUGCUA-5' (SEQ ID NO: 1550)

βc-3657 Target: 5'-AGTTGTTGTAACCTGCTGTGATACGAT-3' (SEQ ID NO: 2659)

5'-GUUGUAACCUGCUGUGAUACGAUgc-3' (SEQ ID NO: 442)
3'-AACAACAUUGGACGACACUAUGCUACG-5' (SEQ ID NO: 1551)

βc-3659 Target: 5'-TTGTTGTAACCTGCTGTGATACGATGC-3' (SEQ ID NO: 2660)

5'-AAAUGGUUCAGAAUUAAACUUUUaa-3' (SEQ ID NO: 443)
3'-UUUUUACCAAGUCUUAAUUUGAAAAUU-5' (SEQ ID NO: 1552)

βc-3708 Target: 5'-AAAAATGGTTCAGAATTAAACTTTTAA-3' (SEQ ID NO: 2661)

5'-AUGGUUCAGAAUUAAACUUUUAAtt-3' (SEQ ID NO: 444)
3'-UUUACCAAGUCUUAAUUUGAAAAUUAA-5' (SEQ ID NO: 1553)

βc-3710 Target: 5'-AAATGGTTCAGAATTAAACTTTTAATT-3' (SEQ ID NO: 2662)

5'-GGUUCAGAAUUAAACUUUUAAUUca-3' (SEQ ID NO: 445)
3'-UACCAAGUCUUAAUUUGAAAAUUAAGU-5' (SEQ ID NO: 1554)

βc-3712 Target: 5'-ATGGTTCAGAATTAAACTTTTAATTCA-3' (SEQ ID NO: 2663)

5'-UUCAGAAUUAAACUUUUAAUUCAtt-3' (SEQ ID NO: 446)
3'-CCAAGUCUUAAUUUGAAAAUUAAGUAA-5' (SEQ ID NO: 1555)

βc-3714 Target: 5'-GGTTCAGAATTAAACTTTTAATTCATT-3' (SEQ ID NO: 2664)

5'-CAGAAUUAAACUUUUAAUUCAUUcg-3' (SEQ ID NO: 447)
3'-AAGUCUUAAUUUGAAAAUUAAGUAAGC-5' (SEQ ID NO: 1556)

βc-3716 Target: 5'-TTCAGAATTAAACTTTTAATTCATTCG-3' (SEQ ID NO: 2665)

Table 4: Selected Anti-β-catenin DsiRNAs, *Mus musculus* Unique Duplexes

5'-GCAGCAGUCUUACUUGGAUUCUGga-3' (SEQ ID NO: 448)
3'-GUCGUCGUCAGAAUGAACCUAAGACCU-5' (SEQ ID NO: 1557)

βc-m314 Target: 5'-CAGCAGCAGTCTTACTTGGATTCTGGA-3' (SEQ ID NO: 2666)

5'-ACUUGGAUUCUGGAAUCCAUUCUgg-3' (SEQ ID NO: 449)
3'-AAUGAACCUAAGACCUUAGGUAAGACC-5' (SEQ ID NO: 1558)

βc-m325 Target: 5'-TTACTTGGATTCTGGAATCCATTCTGG-3' (SEQ ID NO: 2667)

5'-GACACCUCCCAAGUCCUUUAUGAat-3' (SEQ ID NO: 450)
3'-AACUGUGGAGGGUUCAGGAAAUACUUA-5' (SEQ ID NO: 1559)

βc-m408 Target: 5'-TTGACACCTCCCAAGTCCTTTATGAAT-3' (SEQ ID NO: 2668)

5'-CGCAAGAGCAAGUAGCUGAUAUUga-3' (SEQ ID NO: 451)
3'-GUGCGUUCUCGUUCAUCGACUAUAACU-5' (SEQ ID NO: 1560)

βc-m460 Target: 5'-CACGCAAGAGCAAGTAGCTGATATTGA-3' (SEQ ID NO: 2669)

5'-CCAUGUUCCCUGAGACGCUAGAUga-3' (SEQ ID NO: 452)
3'-ACGGUACAAGGGACUCUGCGAUCUACU-5' (SEQ ID NO: 1561)

βc-m526 Target: 5'-TGCCATGTTCCCTGAGACGCTAGATGA-3' (SEQ ID NO: 2670)

5'-UGAAACAUGCAGUUGUCAAUUUGat-3' (SEQ ID NO: 453)
3'-CAACUUUGUACGUCAACAGUUAAACUA-5' (SEQ ID NO: 1562)

βc-m631 Target: 5'-GTTGAAACATGCAGTTGTCAATTTGAT-3' (SEQ ID NO: 2671)

5'-CAUGCAGUUGUCAAUUUGAUUAAct-3' (SEQ ID NO: 454)
3'-UUGUACGUCAACAGUUAAACUAAUUGA-5' (SEQ ID NO: 1563)

βc-m636 Target: 5'-AACATGCAGTTGTCAATTTGATTAACT-3' (SEQ ID NO: 2672)

5'-GUUGUCAAUUUGAUUAACUAUCAgg-3' (SEQ ID NO: 455)
3'-GUCAACAGUUAAACUAAUUGAUAGUCC-5' (SEQ ID NO: 1564)

βc-m642 Target: 5'-CAGTTGTCAATTTGATTAACTATCAGG-3' (SEQ ID NO: 2673)

5'-GAGGACCAGGUGGUAGUUAAUAAag-3' (SEQ ID NO: 456)
3'-UACUCCUGGUCCACCAUCAAUUAUUUC-5' (SEQ ID NO: 1565)

βc-m723 Target: 5'-ATGAGGACCAGGTGGTAGTTAATAAAG-3' (SEQ ID NO: 2674)

5'-GGUCACCAGUGGAUUCUGUACUGtt-3' (SEQ ID NO: 457)
3'-ACCCAGUGGUCACCUAAGACAUGACAA-5' (SEQ ID NO: 1566)

βc-m970 Target: 5'-TGGGTCACCAGTGGATTCTGTACTGTT-3' (SEQ ID NO: 2675)

5'-CAGUGGAUUCUGUACUGUUCUACgc-3' (SEQ ID NO: 458)
3'-UGGUCACCUAAGACAUGACAAGAUGCG-5' (SEQ ID NO: 1567)

βc-m976 Target: 5'-ACCAGTGGATTCTGTACTGTTCTACGC-3' (SEQ ID NO: 2676)

5'-GAUUCUGUACUGUUCUACGCCAUca-3' (SEQ ID NO: 459)
3'-ACCUAAGACAUGACAAGAUGCGGUAGU-5' (SEQ ID NO: 1568)

βc-m981 Target: 5'-TGGATTCTGTACTGTTCTACGCCATCA-3' (SEQ ID NO: 2677)

5'-GUGGACUGCAGAAAAUGGUUGCUtt-3' (SEQ ID NO: 460)
3'-ACCACCUGACGUCUUUUACCAACGAAA-5' (SEQ ID NO: 1569)

βc-m1066 Target: 5'-TGGTGGACTGCAGAAAATGGTTGCTTT-3' (SEQ ID NO: 2678)

5'-CGUGAAAUUCUUGGCUAUUACAAca-3' (SEQ ID NO: 461)
3'-UUGCACUUUAAGAACCGAUAAUGUUGU-5' (SEQ ID NO: 1570)

βc-m1106 Target: 5'-AACGTGAAATTCTTGGCTATTACAACA-3' (SEQ ID NO: 2679)

5'-CAAGUCAGCGACUUGUUCAAAACtg-3' (SEQ ID NO: 462)
3'-GGGUUCAGUCGCUGAACAAGUUUUGAC-5' (SEQ ID NO: 1571)

βc-m1354 Target: 5'-CCCAAGTCAGCGACTTGTTCAAAACTG-3' (SEQ ID NO: 2680)

5'-GACUUGUUCAAAACUGUCUUUGGac-3' (SEQ ID NO: 463)
3'-CGCUGAACAAGUUUUGACAGAAACCUG-5' (SEQ ID NO: 1572)

βc-m1363 Target: 5'-GCGACTTGTTCAAAACTGTCTTTGGAC-3' (SEQ ID NO: 2681)

5'-AAACUGUCUUUGGACUCUCAGAAac-3' (SEQ ID NO: 464)
3'-GUUUUGACAGAAACCUGAGAGUCUUUG-5' (SEQ ID NO: 1573)

βc-m1373 Target: 5'-CAAAACTGTCTTTGGACTCTCAGAAAC-3' (SEQ ID NO: 2682)

5'-CUCUAACCUCACUUGCAAUAAUUac-3' (SEQ ID NO: 465)
3'-GAGAGAUUGGAGUGAACGUUAUUAAUG-5' (SEQ ID NO: 1574)

βc-m1508 Target: 5'-CTCTCTAACCTCACTTGCAATAATTAC-3' (SEQ ID NO: 2683)

5'-CUCACUUGCAAUAAUUACAAAAAca-3' (SEQ ID NO: 466)
3'-UGGAGUGAACGUUAUUAAUGUUUUUGU-5' (SEQ ID NO: 1575)

βc-m1515 Target: 5'-ACCTCACTTGCAATAATTACAAAAACA-3' (SEQ ID NO: 2684)

5'-GAAUGCCGUUCGCCUUCAUUAUGga-3' (SEQ ID NO: 467)
3'-GUCUUACGGCAAGCGGAAGUAAUACCU-5' (SEQ ID NO: 1576)

βc-m1682 Target: 5'-CAGAATGCCGTTCGCCTTCATTATGGA-3' (SEQ ID NO: 2685)

5'-GCCUUCAUUAUGGACUGCCUGUUgt-3' (SEQ ID NO: 468)
3'-AGCGGAAGUAAUACCUGACGGACAACA-5' (SEQ ID NO: 1577)

βc-m1693 Target: 5'-TCGCCTTCATTATGGACTGCCTGTTGT-3' (SEQ ID NO: 2686)

5'-CAUUAUGGACUGCCUGUUGUGGUta-3' (SEQ ID NO: 469)
3'-AAGUAAUACCUGACGGACAACACCAAU-5' (SEQ ID NO: 1578)

βc-m1698 Target: 5'-TTCATTATGGACTGCCTGTTGTGGTTA-3' (SEQ ID NO: 2687)

5'-GACUGCCUGUUGUGGUUAAACUCct-3' (SEQ ID NO: 470)
3'-ACCUGACGGACAACACCAAUUUGAGGA-5' (SEQ ID NO: 1579)

βc-m1705 Target: 5'-TGGACTGCCTGTTGTGGTTAAACTCCT-3' (SEQ ID NO: 2688)

5'-AACUGUUGGAUUGAUUCGAAACCtt-3' (SEQ ID NO: 471)
3'-CGUUGACAACCUAACUAAGCUUUGGAA-5' (SEQ ID NO: 1580)

βc-m1763 Target: 5'-GCAACTGTTGGATTGATTCGAAACCTT-3' (SEQ ID NO: 2689)

5'-GAGGACUCAAUACCAUUCCAUUGtt-3' (SEQ ID NO: 472)
3'-GGCUCCUGAGUUAUGGUAAGGUAACAA-5' (SEQ ID NO: 1581)

βc-m2008 Target: 5'-CCGAGGACTCAATACCATTCCATTGTT-3' (SEQ ID NO: 2690)

5'-GAGGACAAGCCACAGGAUUACAAga-3' (SEQ ID NO: 473)
3'-GACUCCUGUUCGGUGUCCUAAUGUUCU-5' (SEQ ID NO: 1582)

βc-m2226 Target: 5'-CTGAGGACAAGCCACAGGATTACAAGA-3' (SEQ ID NO: 2691)

5'-AUGGACCCUAUGAUGGAGCAUGAga-3' (SEQ ID NO: 474)
3'-CCUACCUGGGAUACUACCUCGUACUCU-5' (SEQ ID NO: 1583)

βc-m2427 Target: 5'-GGATGGACCCTATGATGGAGCATGAGA-3' (SEQ ID NO: 2692)

5'-GAUACUGACCUGUAAAUCGUCCUtt-3' (SEQ ID NO: 475)
3'-AACUAUGACUGGACAUUUAGCAGGAAA-5' (SEQ ID NO: 1584)

βc-m2568 Target: 5'-TTGATACTGACCTGTAAATCGTCCTTT-3' (SEQ ID NO: 2693)

5'-CCAGUGUGGGUGAAUACUUUACUct-3' (SEQ ID NO: 476)
3'-UCGGUCACACCCACUUAUGAAAUGAGA-5' (SEQ ID NO: 1585)

βc-m2614 Target: 5'-AGCCAGTGTGGGTGAATACTTTACTCT-3' (SEQ ID NO: 2694)

5'-CCACAGCUUUUGCAGCGUUAUACtc-3' (SEQ ID NO: 477)
3'-ACGGUGUCGAAAACGUCGCAAUAUGAG-5' (SEQ ID NO: 1586)

βc-m2770 Target: 5'-TGCCACAGCTTTTGCAGCGTTATACTC-3' (SEQ ID NO: 2695)

5'-UUUUGCAGCGUUAUACUCAGAUGag-3' (SEQ ID NO: 478)
3'-CGAAAACGUCGCAAUAUGAGUCUACUC-5' (SEQ ID NO: 1587)

βc-m2777 Target: 5'-GCTTTTGCAGCGTTATACTCAGATGAG-3' (SEQ ID NO: 2696)

5'-GCGUUAUACUCAGAUGAGUAACAtt-3' (SEQ ID NO: 479)
3'-GUCGCAAUAUGAGUCUACUCAUUGUAA-5' (SEQ ID NO: 1588)

βc-m2784 Target: 5'-CAGCGTTATACTCAGATGAGTAACATT-3' (SEQ ID NO: 2697)

5'-AUUUGCUGUUUUCAACAUUAAUAgc-3' (SEQ ID NO: 480)
3'-UGUAAACGACAAAAGUUGUAAUUAUCG-5' (SEQ ID NO: 1589)

βc-m2806 Target: 5'-ACATTTGCTGTTTTCAACATTAATAGC-3' (SEQ ID NO: 2698)

5'-CUGUAGUGUCUGAACGUGCAUUGtg-3' (SEQ ID NO: 481)
3'-UCGACAUCACAGACUUGCACGUAACAC-5' (SEQ ID NO: 1590)

βc-m2850 Target: 5'-AGCTGTAGTGTCTGAACGTGCATTGTG-3' (SEQ ID NO: 2699)

5'-GAACAGUCGAAGUACGCUUUUUGtt-3' (SEQ ID NO: 482)
3'-CCCUUGUCAGCUUCAUGCGAAAAACAA-5' (SEQ ID NO: 1591)

βc-m2965 Target: 5'-GGGAACAGTCGAAGTACGCTTTTTGTT-3' (SEQ ID NO: 2700)

5'-GUCGAAGUACGCUUUUUGUUCUGgt-3' (SEQ ID NO: 483)
3'-GUCAGCUUCAUGCGAAAAACAAGACCA-5' (SEQ ID NO: 1592)

βc-m2970 Target: 5'-CAGTCGAAGTACGCTTTTTGTTCTGGT-3' (SEQ ID NO: 2701)

5'-GUACGCUUUUUGUUCUGGUCCUUtt-3' (SEQ ID NO: 484)
3'-UUCAUGCGAAAAACAAGACCAGGAAAA-5' (SEQ ID NO: 1593)

βc-m2976 Target: 5'-AAGTACGCTTTTTGTTCTGGTCCTTTT-3' (SEQ ID NO: 2702)

5'-CCUAGCCUUGCUUGUUCUUUGUUtt-3' (SEQ ID NO: 485)
3'-UGGGAUCGGAACGAACAAGAAACAAAA-5' (SEQ ID NO: 1594)

βc-m3092 Target: 5'-ACCCTAGCCTTGCTTGTTCTTTGTTTT-3' (SEQ ID NO: 2703)

5'-CCUUGCUUGUUCUUUGUUUUAAUat-3' (SEQ ID NO: 486)
3'-UCGGAACGAACAAGAAACAAAAUUAUA-5' (SEQ ID NO: 1595)

βc-m3097 Target: 5'-AGCCTTGCTTGTTCTTTGTTTTAATAT-3' (SEQ ID NO: 2704)

5'-AACCUGCUACAGCAAUUUCUGAUtt-3' (SEQ ID NO: 487)
3'-ACUUGGACGAUGUCGUUAAAGACUAAA-5' (SEQ ID NO: 1596)

βc-m3198 Target: 5'-TGAACCTGCTACAGCAATTTCTGATTT-3' (SEQ ID NO: 2705)

5'-CAGCAAUUUCUGAUUUCUAAGAAcc-3' (SEQ ID NO: 488)
3'-AUGUCGUUAAAGACUAAAGAUUCUUGG-5' (SEQ ID NO: 1597)

βc-m3207 Target: 5'-TACAGCAATTTCTGATTTCTAAGAACC-3' (SEQ ID NO: 2706)

5'-GUAAGAGGUGUUAUUUGAGCCUUgt-3' (SEQ ID NO: 489)
3'-GUCAUUCUCCACAAUAAACUCGGAACA-5' (SEQ ID NO: 1598)

βc-m3433 Target: 5'-CAGTAAGAGGTGTTATTTGAGCCTTGT-3' (SEQ ID NO: 2707)

5'-GGUGUUAUUUGAGCCUUGUUUUGga-3' (SEQ ID NO: 490)
3'-CUCCACAAUAAACUCGGAACAAAACCU-5' (SEQ ID NO: 1599)

βc-m3439 Target: 5'-GAGGTGTTATTTGAGCCTTGTTTTGGA-3' (SEQ ID NO: 2708)

5'-UAUUUGAGCCUUGUUUUGGACAGta-3' (SEQ ID NO: 491)
3'-CAAUAAACUCGGAACAAAACCUGUCAU-5' (SEQ ID NO: 1600)

βc-m3444 Target: 5'-GTTATTTGAGCCTTGTTTTGGACAGTA-3' (SEQ ID NO: 2709)

5'-GAGCCUUGUUUUGGACAGUAUACca-3' (SEQ ID NO: 492)
3'-AACUCGGAACAAAACCUGUCAUAUGGU-5' (SEQ ID NO: 1601)

βc-m3449 Target: 5'-TTGAGCCTTGTTTTGGACAGTATACCA-3' (SEQ ID NO: 2710)

5'-CAACAGAUGCGGUUAUAGAAAUGgt-3' (SEQ ID NO: 493)
3'-AAGUUGUCUACGCCAAUAUCUUUACCA-5' (SEQ ID NO: 1602)

βc-m3522 Target: 5'-TTCAACAGATGCGGTTATAGAAATGGT-3' (SEQ ID NO: 2711)

5'-GUUAUAGAAAUGGUUCAGAAUUAaa-3' (SEQ ID NO: 494)
3'-GCCAAUAUCUUUACCAAGUCUUAAUUU-5' (SEQ ID NO: 1603)

βc-m3533 Target: 5'-CGGTTATAGAAATGGTTCAGAATTAAA-3' (SEQ ID NO: 2712)

5'-AGAAAUGGUUCAGAAUUAAACUUtt-3' (SEQ ID NO: 495)
3'-UAUCUUUACCAAGUCUUAAUUUGAAAA-5' (SEQ ID NO: 1604)

βc-m3538 Target: 5'-ATAGAAATGGTTCAGAATTAAACTTTT-3' (SEQ ID NO: 2713)

Projected 21 nucleotide target sequences for each DsiRNA of Tables 2-4 above and of Tables 6-8 below are presented in Table 5.

Table 5: 21 Nucleotide Target Sequences of Selected DsiRNAs

βc-240 21 nt Target: 5'-CCCTGAGGGTATTTGAAGTAT-3' (SEQ ID NO: 4444)
βc-244 21 nt Target: 5'-GAGGGTATTTGAAGTATACCA-3' (SEQ ID NO: 4445)
βc-253 21 nt Target: 5'-TGAAGTATACCATACAACTGT-3' (SEQ ID NO: 4446)
βc-259 21 nt Target: 5'-ATACCATACAACTGTTTTGAA-3' (SEQ ID NO: 4447)
βc-264 21 nt Target: 5'-ATACAACTGTTTTGAAAATCC-3' (SEQ ID NO: 4448)
βc-496 21 nt Target: 5'-CAGGGATTTTCTCAGTCCTTC-3' (SEQ ID NO: 4449)
βc-516 21 nt Target: 5'-CACTCAAGAACAAGTAGCTGA-3' (SEQ ID NO: 4450)
βc-522 21 nt Target: 5'-AGAACAAGTAGCTGATATTGA-3' (SEQ ID NO: 4451)
βc-524 21 nt Target: 5'-AACAAGTAGCTGATATTGATG-3' (SEQ ID NO: 4452)
βc-540 21 nt Target: 5'-TGATGGACAGTATGCAATGAC-3' (SEQ ID NO: 4453)
βc-582 21 nt Target: 5'-TGCTATGTTCCCTGAGACATT-3' (SEQ ID NO: 4454)
βc-686 21 nt Target: 5'-TGCTGAAACATGCAGTTGTAA-3' (SEQ ID NO: 4455)
βc-692 21 nt Target: 5'-AACATGCAGTTGTAAACTTGA-3' (SEQ ID NO: 4456)
βc-697 21 nt Target: 5'-GCAGTTGTAAACTTGATTAAC-3' (SEQ ID NO: 4457)
βc-707 21 nt Target: 5'-ACTTGATTAACTATCAAGATG-3' (SEQ ID NO: 4458)
βc-753 21 nt Target: 5'-CCCTGAACTGACAAAACTGCT-3' (SEQ ID NO: 4459)
βc-870 21 nt Target: 5'-TCAGATGGTGTCTGCTATTGT-3' (SEQ ID NO: 4460)
βc-889 21 nt Target: 5'-GTACGTACCATGCAGAATACA-3' (SEQ ID NO: 4461)
βc-1060 21 nt Target: 5'-ATTACAACTCTCCACAACCTT-3' (SEQ ID NO: 4462)
βc-1065 21 nt Target: 5'-AACTCTCCACAACCTTTTATT-3' (SEQ ID NO: 4463)
βc-1070 21 nt Target: 5'-TCCACAACCTTTTATTACATC-3' (SEQ ID NO: 4464)
βc-1076 21 nt Target: 5'-ACCTTTTATTACATCAAGAAG-3' (SEQ ID NO: 4465)
βc-1154 21 nt Target: 5'-ACAAAACAAATGTTAAATTCT-3' (SEQ ID NO: 4466)
βc-1180 21 nt Target: 5'-ATTACGACAGACTGCCTTCAA-3' (SEQ ID NO: 4467)
βc-1185 21 nt Target: 5'-GACAGACTGCCTTCAAATTTT-3' (SEQ ID NO: 4468)
βc-1260 21 nt Target: 5'-AGCTTTAGTAAATATAATGAG-3' (SEQ ID NO: 4469)
βc-1294 21 nt Target: 5'-GAAAAACTACTGTGGACCACA-3' (SEQ ID NO: 4470)

βc-1412 21 nt Target: 5'-CAAGTCAACGTCTTGTTCAGA-3' (SEQ ID NO: 4471)
βc-1418 21 nt Target: 5'-AACGTCTTGTTCAGAACTGTC-3' (SEQ ID NO: 4472)
βc-1423 21 nt Target: 5'-CTTGTTCAGAACTGTCTTTGG-3' (SEQ ID NO: 4473)
βc-1520 21 nt Target: 5'-TGGGTTCAGATGATATAAATG-3' (SEQ ID NO: 4474)
βc-1561 21 nt Target: 5'-ATTCTTTCTAACCTCACTTGC-3' (SEQ ID NO: 4475)
βc-1571 21 nt Target: 5'-ACCTCACTTGCAATAATTATA-3' (SEQ ID NO: 4476)
βc-1579 21 nt Target: 5'-TGCAATAATTATAAGAACAAG-3' (SEQ ID NO: 4477)
βc-1620 21 nt Target: 5'-TGGTATAGAGGCTCTTGTGCG-3' (SEQ ID NO: 4478)
βc-1816 21 nt Target: 5'-AAGGCTACTGTTGGATTGATT-3' (SEQ ID NO: 4479)
βc-1987 21 nt Target: 5'-CGCATGGAAGAAATAGTTGAA-3' (SEQ ID NO: 4480)
βc-1989 21 nt Target: 5'-CATGGAAGAAATAGTTGAAGG-3' (SEQ ID NO: 4481)
βc-2111 21 nt Target: 5'-CCATTGAAAACATCCAAAGAG-3' (SEQ ID NO: 4482)
βc-2282 21 nt Target: 5'-CTGAGGACAAGCCACAAGATT-3' (SEQ ID NO: 4483)
βc-2624 21 nt Target: 5'-TTGATACTGACCTGTAAATCA-3' (SEQ ID NO: 4484)
βc-2647 21 nt Target: 5'-CTTTAGGTAAGAAGTTTTAAA-3' (SEQ ID NO: 4485)
βc-2770 21 nt Target: 5'-AACAGGTATATACTTTGAAAG-3' (SEQ ID NO: 4486)
βc-2848 21 nt Target: 5'-TGGAAGTTATTAACTTTAATG-3' (SEQ ID NO: 4487)
βc-2874 21 nt Target: 5'-TGCCACAGCTTTTGCAACTTA-3' (SEQ ID NO: 4488)
βc-2909 21 nt Target: 5'-AACATTTGCTGTTTTAAACAT-3' (SEQ ID NO: 4489)
βc-3074 21 nt Target: 5'-AACAATTGAAGTAAACTTTTT-3' (SEQ ID NO: 4490)
βc-3197 21 nt Target: 5'-AAACCCTAGCCTTGCTTGTTA-3' (SEQ ID NO: 4491)
βc-3203 21 nt Target: 5'-TAGCCTTGCTTGTTAAATTTT-3' (SEQ ID NO: 4492)
βc-3273 21 nt Target: 5'-TTGAAGTAGCTCTTTTTTTTT-3' (SEQ ID NO: 4493)
βc-3333 21 nt Target: 5'-TCGTAGTGTTAAGTTATAGTG-3' (SEQ ID NO: 4494)
βc-3349 21 nt Target: 5'-TAGTGAATACTGCTACAGCAA-3' (SEQ ID NO: 4495)
βc-3354 21 nt Target: 5'-AATACTGCTACAGCAATTTCT-3' (SEQ ID NO: 4496)
βc-3371 21 nt Target: 5'-TTCTAATTTTTAAGAATTGAG-3' (SEQ ID NO: 4497)
βc-3376 21 nt Target: 5'-ATTTTTAAGAATTGAGTAATG-3' (SEQ ID NO: 4498)
βc-3411 21 nt Target: 5'-TTCATAATCACTCTAATTAAT-3' (SEQ ID NO: 4499)
βc-3426 21 nt Target: 5'-ATTAATTGTAATCTGAATAAA-3' (SEQ ID NO: 4500)
βc-3431 21 nt Target: 5'-TTGTAATCTGAATAAAGTGTA-3' (SEQ ID NO: 4501)
βc-3437 21 nt Target: 5'-TCTGAATAAAGTGTAACAATT-3' (SEQ ID NO: 4502)
βc-3458 21 nt Target: 5'-GTGTAGCCTTTTTGTATAAAA-3' (SEQ ID NO: 4503)
βc-3468 21 nt Target: 5'-TTTGTATAAAATAGACAAATA-3' (SEQ ID NO: 4504)
βc-3488 21 nt Target: 5'-AGAAAATGGTCCAATTAGTTT-3' (SEQ ID NO: 4505)
βc-3496 21 nt Target: 5'-GTCCAATTAGTTTCCTTTTTA-3' (SEQ ID NO: 4506)
βc-3552 21 nt Target: 5'-TTTTTGATCAAAAACTATTTG-3' (SEQ ID NO: 4507)
βc-3600 21 nt Target: 5'-AAGAGGTGTTATTTGGAACCT-3' (SEQ ID NO: 4508)
βc-3605 21 nt Target: 5'-GTGTTATTTGGAACCTTGTTT-3' (SEQ ID NO: 4509)
βc-3615 21 nt Target: 5'-GAACCTTGTTTTGGACAGTTT-3' (SEQ ID NO: 4510)
βc-3674 21 nt Target: 5'-GTGATACGATGCTTCAAGAGA-3' (SEQ ID NO: 4511)
βc-3686 21 nt Target: 5'-TTCAAGAGAAAATGCGGTTAT-3' (SEQ ID NO: 4512)
βc-3691 21 nt Target: 5'-GAGAAAATGCGGTTATAAAAA-3' (SEQ ID NO: 4513)
βc-3700 21 nt Target: 5'-CGGTTATAAAAAATGGTTCAG-3' (SEQ ID NO: 4514)
βc-3707 21 nt Target: 5'-AAAAAATGGTTCAGAATTAAA-3' (SEQ ID NO: 4515)
βc-284 21 nt Target: 5'-CAGCGTGGACAATGGCTACTC-3' (SEQ ID NO: 4516)
βc-285 21 nt Target: 5'-AGCGTGGACAATGGCTACTCA-3' (SEQ ID NO: 4517)
βc-286 21 nt Target: 5'-GCGTGGACAATGGCTACTCAA-3' (SEQ ID NO: 4518)
βc-287 21 nt Target: 5'-CGTGGACAATGGCTACTCAAG-3' (SEQ ID NO: 4519)
βc-288 21 nt Target: 5'-GTGGACAATGGCTACTCAAGC-3' (SEQ ID NO: 4520)
βc-289 21 nt Target: 5'-TGGACAATGGCTACTCAAGCT-3' (SEQ ID NO: 4521)
βc-290 21 nt Target: 5'-GGACAATGGCTACTCAAGCTG-3' (SEQ ID NO: 4522)
βc-291 21 nt Target: 5'-GACAATGGCTACTCAAGCTGA-3' (SEQ ID NO: 4523)

βc-312 21 nt Target: 5'-TTTGATGGAGTTGGACATGGC-3' (SEQ ID NO: 4524)
βc-313 21 nt Target: 5'-TTGATGGAGTTGGACATGGCC-3' (SEQ ID NO: 4525)
βc-314 21 nt Target: 5'-TGATGGAGTTGGACATGGCCA-3' (SEQ ID NO: 4526)
βc-315 21 nt Target: 5'-GATGGAGTTGGACATGGCCAT-3' (SEQ ID NO: 4527)
βc-316 21 nt Target: 5'-ATGGAGTTGGACATGGCCATG-3' (SEQ ID NO: 4528)
βc-317 21 nt Target: 5'-TGGAGTTGGACATGGCCATGG-3' (SEQ ID NO: 4529)
βc-318 21 nt Target: 5'-GGAGTTGGACATGGCCATGGA-3' (SEQ ID NO: 4530)
βc-389 21 nt Target: 5'-ACTCTGGAATCCATTCTGGTG-3' (SEQ ID NO: 4531)
βc-390 21 nt Target: 5'-CTCTGGAATCCATTCTGGTGC-3' (SEQ ID NO: 4532)
βc-391 21 nt Target: 5'-TCTGGAATCCATTCTGGTGCC-3' (SEQ ID NO: 4533)
βc-392 21 nt Target: 5'-CTGGAATCCATTCTGGTGCCA-3' (SEQ ID NO: 4534)
βc-393 21 nt Target: 5'-TGGAATCCATTCTGGTGCCAC-3' (SEQ ID NO: 4535)
βc-600 21 nt Target: 5'-ATTAGATGAGGGCATGCAGAT-3' (SEQ ID NO: 4536)
βc-601 21 nt Target: 5'-TTAGATGAGGGCATGCAGATC-3' (SEQ ID NO: 4537)
βc-602 21 nt Target: 5'-TAGATGAGGGCATGCAGATCC-3' (SEQ ID NO: 4538)
βc-603 21 nt Target: 5'-AGATGAGGGCATGCAGATCCC-3' (SEQ ID NO: 4539)
βc-604 21 nt Target: 5'-GATGAGGGCATGCAGATCCCA-3' (SEQ ID NO: 4540)
βc-605 21 nt Target: 5'-ATGAGGGCATGCAGATCCCAT-3' (SEQ ID NO: 4541)
βc-638 21 nt Target: 5'-ATGCTGCTCATCCCACTAATG-3' (SEQ ID NO: 4542)
βc-639 21 nt Target: 5'-TGCTGCTCATCCCACTAATGT-3' (SEQ ID NO: 4543)
βc-640 21 nt Target: 5'-GCTGCTCATCCCACTAATGTC-3' (SEQ ID NO: 4544)
βc-641 21 nt Target: 5'-CTGCTCATCCCACTAATGTCC-3' (SEQ ID NO: 4545)
βc-642 21 nt Target: 5'-TGCTCATCCCACTAATGTCCA-3' (SEQ ID NO: 4546)
βc-643 21 nt Target: 5'-GCTCATCCCACTAATGTCCAG-3' (SEQ ID NO: 4547)
βc-644 21 nt Target: 5'-CTCATCCCACTAATGTCCAGC-3' (SEQ ID NO: 4548)
βc-645 21 nt Target: 5'-TCATCCCACTAATGTCCAGCG-3' (SEQ ID NO: 4549)
βc-665 21 nt Target: 5'-GTTTGGCTGAACCATCACAGA-3' (SEQ ID NO: 4550)
βc-666 21 nt Target: 5'-TTTGGCTGAACCATCACAGAT-3' (SEQ ID NO: 4551)
βc-667 21 nt Target: 5'-TTGGCTGAACCATCACAGATG-3' (SEQ ID NO: 4552)
βc-731 21 nt Target: 5'-CAGAACTTGCCACACGTGCAA-3' (SEQ ID NO: 4553)
βc-732 21 nt Target: 5'-AGAACTTGCCACACGTGCAAT-3' (SEQ ID NO: 4554)
βc-809 21 nt Target: 5'-CAGTTATGGTCCATCAGCTTT-3' (SEQ ID NO: 4555)
βc-810 21 nt Target: 5'-AGTTATGGTCCATCAGCTTTC-3' (SEQ ID NO: 4556)
βc-830 21 nt Target: 5'-CTAAAAAGGAAGCTTCCAGAC-3' (SEQ ID NO: 4557)
βc-831 21 nt Target: 5'-TAAAAAGGAAGCTTCCAGACA-3' (SEQ ID NO: 4558)
βc-893 21 nt Target: 5'-GTACCATGCAGAATACAAATG-3' (SEQ ID NO: 4559)
βc-894 21 nt Target: 5'-TACCATGCAGAATACAAATGA-3' (SEQ ID NO: 4560)
βc-895 21 nt Target: 5'-ACCATGCAGAATACAAATGAT-3' (SEQ ID NO: 4561)
βc-896 21 nt Target: 5'-CCATGCAGAATACAAATGATG-3' (SEQ ID NO: 4562)
βc-897 21 nt Target: 5'-CATGCAGAATACAAATGATGT-3' (SEQ ID NO: 4563)
βc-898 21 nt Target: 5'-ATGCAGAATACAAATGATGTA-3' (SEQ ID NO: 4564)
βc-899 21 nt Target: 5'-TGCAGAATACAAATGATGTAG-3' (SEQ ID NO: 4565)
βc-900 21 nt Target: 5'-GCAGAATACAAATGATGTAGA-3' (SEQ ID NO: 4566)
βc-977 21 nt Target: 5'-TACTGGCCATCTTTAAGTCTG-3' (SEQ ID NO: 4567)
βc-978 21 nt Target: 5'-ACTGGCCATCTTTAAGTCTGG-3' (SEQ ID NO: 4568)
βc-1091 21 nt Target: 5'-AAGAAGGAGCTAAAATGGCAG-3' (SEQ ID NO: 4569)
βc-1092 21 nt Target: 5'-AGAAGGAGCTAAAATGGCAGT-3' (SEQ ID NO: 4570)
βc-1093 21 nt Target: 5'-GAAGGAGCTAAAATGGCAGTG-3' (SEQ ID NO: 4571)
βc-1094 21 nt Target: 5'-AAGGAGCTAAAATGGCAGTGC-3' (SEQ ID NO: 4572)
βc-1095 21 nt Target: 5'-AGGAGCTAAAATGGCAGTGCG-3' (SEQ ID NO: 4573)
βc-1301 21 nt Target: 5'-TACTGTGGACCACAAGCAGAG-3' (SEQ ID NO: 4574)
βc-1302 21 nt Target: 5'-ACTGTGGACCACAAGCAGAGT-3' (SEQ ID NO: 4575)
βc-1303 21 nt Target: 5'-CTGTGGACCACAAGCAGAGTG-3' (SEQ ID NO: 4576)

βc-1304 21 nt Target: 5'-TGTGGACCACAAGCAGAGTGC-3' (SEQ ID NO: 4577)
βc-1305 21 nt Target: 5'-GTGGACCACAAGCAGAGTGCT-3' (SEQ ID NO: 4578)
βc-1306 21 nt Target: 5'-TGGACCACAAGCAGAGTGCTG-3' (SEQ ID NO: 4579)
βc-1307 21 nt Target: 5'-GGACCACAAGCAGAGTGCTGA-3' (SEQ ID NO: 4580)
βc-1308 21 nt Target: 5'-GACCACAAGCAGAGTGCTGAA-3' (SEQ ID NO: 4581)
βc-1309 21 nt Target: 5'-ACCACAAGCAGAGTGCTGAAG-3' (SEQ ID NO: 4582)
βc-1310 21 nt Target: 5'-CCACAAGCAGAGTGCTGAAGG-3' (SEQ ID NO: 4583)
βc-1311 21 nt Target: 5'-CACAAGCAGAGTGCTGAAGGT-3' (SEQ ID NO: 4584)
βc-1312 21 nt Target: 5'-ACAAGCAGAGTGCTGAAGGTG-3' (SEQ ID NO: 4585)
βc-1313 21 nt Target: 5'-CAAGCAGAGTGCTGAAGGTGC-3' (SEQ ID NO: 4586)
βc-1314 21 nt Target: 5'-AAGCAGAGTGCTGAAGGTGCT-3' (SEQ ID NO: 4587)
βc-1430 21 nt Target: 5'-AGAACTGTCTTTGGACTCTCA-3' (SEQ ID NO: 4588)
βc-1431 21 nt Target: 5'-GAACTGTCTTTGGACTCTCAG-3' (SEQ ID NO: 4589)
βc-1526 21 nt Target: 5'-CAGATGATATAAATGTGGTCA-3' (SEQ ID NO: 4590)
βc-1527 21 nt Target: 5'-AGATGATATAAATGTGGTCAC-3' (SEQ ID NO: 4591)
βc-1528 21 nt Target: 5'-GATGATATAAATGTGGTCACC-3' (SEQ ID NO: 4592)
βc-1529 21 nt Target: 5'-ATGATATAAATGTGGTCACCT-3' (SEQ ID NO: 4593)
βc-1530 21 nt Target: 5'-TGATATAAATGTGGTCACCTG-3' (SEQ ID NO: 4594)
βc-1531 21 nt Target: 5'-GATATAAATGTGGTCACCTGT-3' (SEQ ID NO: 4595)
βc-1532 21 nt Target: 5'-ATATAAATGTGGTCACCTGTG-3' (SEQ ID NO: 4596)
βc-1533 21 nt Target: 5'-TATAAATGTGGTCACCTGTGC-3' (SEQ ID NO: 4597)
βc-1534 21 nt Target: 5'-ATAAATGTGGTCACCTGTGCA-3' (SEQ ID NO: 4598)
βc-1535 21 nt Target: 5'-TAAATGTGGTCACCTGTGCAG-3' (SEQ ID NO: 4599)
βc-1536 21 nt Target: 5'-AAATGTGGTCACCTGTGCAGC-3' (SEQ ID NO: 4600)
βc-1537 21 nt Target: 5'-AATGTGGTCACCTGTGCAGCT-3' (SEQ ID NO: 4601)
βc-1538 21 nt Target: 5'-ATGTGGTCACCTGTGCAGCTG-3' (SEQ ID NO: 4602)
βc-1539 21 nt Target: 5'-TGTGGTCACCTGTGCAGCTGG-3' (SEQ ID NO: 4603)
βc-1540 21 nt Target: 5'-GTGGTCACCTGTGCAGCTGGA-3' (SEQ ID NO: 4604)
βc-1541 21 nt Target: 5'-TGGTCACCTGTGCAGCTGGAA-3' (SEQ ID NO: 4605)
βc-1542 21 nt Target: 5'-GGTCACCTGTGCAGCTGGAAT-3' (SEQ ID NO: 4606)
βc-1543 21 nt Target: 5'-GTCACCTGTGCAGCTGGAATT-3' (SEQ ID NO: 4607)
βc-1544 21 nt Target: 5'-TCACCTGTGCAGCTGGAATTC-3' (SEQ ID NO: 4608)
βc-1545 21 nt Target: 5'-CACCTGTGCAGCTGGAATTCT-3' (SEQ ID NO: 4609)
βc-1565 21 nt Target: 5'-TTTCTAACCTCACTTGCAATA-3' (SEQ ID NO: 4610)
βc-1566 21 nt Target: 5'-TTCTAACCTCACTTGCAATAA-3' (SEQ ID NO: 4611)
βc-1567 21 nt Target: 5'-TCTAACCTCACTTGCAATAAT-3' (SEQ ID NO: 4612)
βc-1568 21 nt Target: 5'-CTAACCTCACTTGCAATAATT-3' (SEQ ID NO: 4613)
βc-1569 21 nt Target: 5'-TAACCTCACTTGCAATAATTA-3' (SEQ ID NO: 4614)
βc-1652 21 nt Target: 5'-GGGCTGGTGACAGGGAAGACA-3' (SEQ ID NO: 4615)
βc-1653 21 nt Target: 5'-GGCTGGTGACAGGGAAGACAT-3' (SEQ ID NO: 4616)
βc-1654 21 nt Target: 5'-GCTGGTGACAGGGAAGACATC-3' (SEQ ID NO: 4617)
βc-1655 21 nt Target: 5'-CTGGTGACAGGGAAGACATCA-3' (SEQ ID NO: 4618)
βc-1656 21 nt Target: 5'-TGGTGACAGGGAAGACATCAC-3' (SEQ ID NO: 4619)
βc-1657 21 nt Target: 5'-GGTGACAGGGAAGACATCACT-3' (SEQ ID NO: 4620)
βc-1658 21 nt Target: 5'-GTGACAGGGAAGACATCACTG-3' (SEQ ID NO: 4621)
βc-1659 21 nt Target: 5'-TGACAGGGAAGACATCACTGA-3' (SEQ ID NO: 4622)
βc-1660 21 nt Target: 5'-GACAGGGAAGACATCACTGAG-3' (SEQ ID NO: 4623)
βc-1661 21 nt Target: 5'-ACAGGGAAGACATCACTGAGC-3' (SEQ ID NO: 4624)
βc-1662 21 nt Target: 5'-CAGGGAAGACATCACTGAGCC-3' (SEQ ID NO: 4625)
βc-1663 21 nt Target: 5'-AGGGAAGACATCACTGAGCCT-3' (SEQ ID NO: 4626)
βc-1664 21 nt Target: 5'-GGGAAGACATCACTGAGCCTG-3' (SEQ ID NO: 4627)
βc-1665 21 nt Target: 5'-GGAAGACATCACTGAGCCTGC-3' (SEQ ID NO: 4628)
βc-1666 21 nt Target: 5'-GAAGACATCACTGAGCCTGCC-3' (SEQ ID NO: 4629)

βc-1667 21 nt Target: 5'-AAGACATCACTGAGCCTGCCA-3' (SEQ ID NO: 4630)
βc-1668 21 nt Target: 5'-AGACATCACTGAGCCTGCCAT-3' (SEQ ID NO: 4631)
βc-1669 21 nt Target: 5'-GACATCACTGAGCCTGCCATC-3' (SEQ ID NO: 4632)
βc-1670 21 nt Target: 5'-ACATCACTGAGCCTGCCATCT-3' (SEQ ID NO: 4633)
βc-1671 21 nt Target: 5'-CATCACTGAGCCTGCCATCTG-3' (SEQ ID NO: 4634)
βc-1672 21 nt Target: 5'-ATCACTGAGCCTGCCATCTGT-3' (SEQ ID NO: 4635)
βc-1673 21 nt Target: 5'-TCACTGAGCCTGCCATCTGTG-3' (SEQ ID NO: 4636)
βc-1674 21 nt Target: 5'-CACTGAGCCTGCCATCTGTGC-3' (SEQ ID NO: 4637)
βc-1675 21 nt Target: 5'-ACTGAGCCTGCCATCTGTGCT-3' (SEQ ID NO: 4638)
βc-1676 21 nt Target: 5'-CTGAGCCTGCCATCTGTGCTC-3' (SEQ ID NO: 4639)
βc-1677 21 nt Target: 5'-TGAGCCTGCCATCTGTGCTCT-3' (SEQ ID NO: 4640)
βc-1678 21 nt Target: 5'-GAGCCTGCCATCTGTGCTCTT-3' (SEQ ID NO: 4641)
βc-1679 21 nt Target: 5'-AGCCTGCCATCTGTGCTCTTC-3' (SEQ ID NO: 4642)
βc-1680 21 nt Target: 5'-GCCTGCCATCTGTGCTCTTCG-3' (SEQ ID NO: 4643)
βc-1681 21 nt Target: 5'-CCTGCCATCTGTGCTCTTCGT-3' (SEQ ID NO: 4644)
βc-1682 21 nt Target: 5'-CTGCCATCTGTGCTCTTCGTC-3' (SEQ ID NO: 4645)
βc-1683 21 nt Target: 5'-TGCCATCTGTGCTCTTCGTCA-3' (SEQ ID NO: 4646)
βc-1684 21 nt Target: 5'-GCCATCTGTGCTCTTCGTCAT-3' (SEQ ID NO: 4647)
βc-1685 21 nt Target: 5'-CCATCTGTGCTCTTCGTCATC-3' (SEQ ID NO: 4648)
βc-1686 21 nt Target: 5'-CATCTGTGCTCTTCGTCATCT-3' (SEQ ID NO: 4649)
βc-1687 21 nt Target: 5'-ATCTGTGCTCTTCGTCATCTG-3' (SEQ ID NO: 4650)
βc-1688 21 nt Target: 5'-TCTGTGCTCTTCGTCATCTGA-3' (SEQ ID NO: 4651)
βc-1689 21 nt Target: 5'-CTGTGCTCTTCGTCATCTGAC-3' (SEQ ID NO: 4652)
βc-1690 21 nt Target: 5'-TGTGCTCTTCGTCATCTGACC-3' (SEQ ID NO: 4653)
βc-1691 21 nt Target: 5'-GTGCTCTTCGTCATCTGACCA-3' (SEQ ID NO: 4654)
βc-1692 21 nt Target: 5'-TGCTCTTCGTCATCTGACCAG-3' (SEQ ID NO: 4655)
βc-1693 21 nt Target: 5'-GCTCTTCGTCATCTGACCAGC-3' (SEQ ID NO: 4656)
βc-1694 21 nt Target: 5'-CTCTTCGTCATCTGACCAGCC-3' (SEQ ID NO: 4657)
βc-1695 21 nt Target: 5'-TCTTCGTCATCTGACCAGCCG-3' (SEQ ID NO: 4658)
βc-1787 21 nt Target: 5'-TACACCCACCATCCCACTGGC-3' (SEQ ID NO: 4659)
βc-1788 21 nt Target: 5'-ACACCCACCATCCCACTGGCC-3' (SEQ ID NO: 4660)
βc-1789 21 nt Target: 5'-CACCCACCATCCCACTGGCCT-3' (SEQ ID NO: 4661)
βc-1790 21 nt Target: 5'-ACCCACCATCCCACTGGCCTC-3' (SEQ ID NO: 4662)
βc-1791 21 nt Target: 5'-CCCACCATCCCACTGGCCTCT-3' (SEQ ID NO: 4663)
βc-1792 21 nt Target: 5'-CCACCATCCCACTGGCCTCTG-3' (SEQ ID NO: 4664)
βc-1793 21 nt Target: 5'-CACCATCCCACTGGCCTCTGA-3' (SEQ ID NO: 4665)
βc-1794 21 nt Target: 5'-ACCATCCCACTGGCCTCTGAT-3' (SEQ ID NO: 4666)
βc-1795 21 nt Target: 5'-CCATCCCACTGGCCTCTGATA-3' (SEQ ID NO: 4667)
βc-1796 21 nt Target: 5'-CATCCCACTGGCCTCTGATAA-3' (SEQ ID NO: 4668)
βc-1797 21 nt Target: 5'-ATCCCACTGGCCTCTGATAAA-3' (SEQ ID NO: 4669)
βc-1798 21 nt Target: 5'-TCCCACTGGCCTCTGATAAAG-3' (SEQ ID NO: 4670)
βc-1799 21 nt Target: 5'-CCCACTGGCCTCTGATAAAGG-3' (SEQ ID NO: 4671)
βc-1800 21 nt Target: 5'-CCACTGGCCTCTGATAAAGGC-3' (SEQ ID NO: 4672)
βc-1820 21 nt Target: 5'-CTACTGTTGGATTGATTCGAA-3' (SEQ ID NO: 4673)
βc-1821 21 nt Target: 5'-TACTGTTGGATTGATTCGAAA-3' (SEQ ID NO: 4674)
βc-2072 21 nt Target: 5'-TAAATACCATTCCATTGTTTG-3' (SEQ ID NO: 4675)
βc-2073 21 nt Target: 5'-AAATACCATTCCATTGTTTGT-3' (SEQ ID NO: 4676)
βc-2074 21 nt Target: 5'-AATACCATTCCATTGTTTGTG-3' (SEQ ID NO: 4677)
βc-2075 21 nt Target: 5'-ATACCATTCCATTGTTTGTGC-3' (SEQ ID NO: 4678)
βc-2076 21 nt Target: 5'-TACCATTCCATTGTTTGTGCA-3' (SEQ ID NO: 4679)
βc-2077 21 nt Target: 5'-ACCATTCCATTGTTTGTGCAG-3' (SEQ ID NO: 4680)
βc-2097 21 nt Target: 5'-GCTGCTTTATTCTCCCATTGA-3' (SEQ ID NO: 4681)
βc-2098 21 nt Target: 5'-CTGCTTTATTCTCCCATTGAA-3' (SEQ ID NO: 4682)

βc-2099 21 nt Target: 5'-TGCTTTATTCTCCCATTGAAA-3' (SEQ ID NO: 4683)
βc-2100 21 nt Target: 5'-GCTTTATTCTCCCATTGAAAA-3' (SEQ ID NO: 4684)
βc-2141 21 nt Target: 5'-GGGTCCTCTGTGAACTTGCTC-3' (SEQ ID NO: 4685)
βc-2142 21 nt Target: 5'-GGTCCTCTGTGAACTTGCTCA-3' (SEQ ID NO: 4686)
βc-2143 21 nt Target: 5'-GTCCTCTGTGAACTTGCTCAG-3' (SEQ ID NO: 4687)
βc-2144 21 nt Target: 5'-TCCTCTGTGAACTTGCTCAGG-3' (SEQ ID NO: 4688)
βc-2145 21 nt Target: 5'-CCTCTGTGAACTTGCTCAGGA-3' (SEQ ID NO: 4689)
βc-2146 21 nt Target: 5'-CTCTGTGAACTTGCTCAGGAC-3' (SEQ ID NO: 4690)
βc-2147 21 nt Target: 5'-TCTGTGAACTTGCTCAGGACA-3' (SEQ ID NO: 4691)
βc-2148 21 nt Target: 5'-CTGTGAACTTGCTCAGGACAA-3' (SEQ ID NO: 4692)
βc-2149 21 nt Target: 5'-TGTGAACTTGCTCAGGACAAG-3' (SEQ ID NO: 4693)
βc-2150 21 nt Target: 5'-GTGAACTTGCTCAGGACAAGG-3' (SEQ ID NO: 4694)
βc-2151 21 nt Target: 5'-TGAACTTGCTCAGGACAAGGA-3' (SEQ ID NO: 4695)
βc-2183 21 nt Target: 5'-CTATTGAAGCTGAGGGAGCCA-3' (SEQ ID NO: 4696)
βc-2184 21 nt Target: 5'-TATTGAAGCTGAGGGAGCCAC-3' (SEQ ID NO: 4697)
βc-2185 21 nt Target: 5'-ATTGAAGCTGAGGGAGCCACA-3' (SEQ ID NO: 4698)
βc-2270 21 nt Target: 5'-TGTTCCGAATGTCTGAGGACA-3' (SEQ ID NO: 4699)
βc-2271 21 nt Target: 5'-GTTCCGAATGTCTGAGGACAA-3' (SEQ ID NO: 4700)
βc-2272 21 nt Target: 5'-TTCCGAATGTCTGAGGACAAG-3' (SEQ ID NO: 4701)
βc-2273 21 nt Target: 5'-TCCGAATGTCTGAGGACAAGC-3' (SEQ ID NO: 4702)
βc-2274 21 nt Target: 5'-CCGAATGTCTGAGGACAAGCC-3' (SEQ ID NO: 4703)
βc-2275 21 nt Target: 5'-CGAATGTCTGAGGACAAGCCA-3' (SEQ ID NO: 4704)
βc-2276 21 nt Target: 5'-GAATGTCTGAGGACAAGCCAC-3' (SEQ ID NO: 4705)
βc-2277 21 nt Target: 5'-AATGTCTGAGGACAAGCCACA-3' (SEQ ID NO: 4706)
βc-2345 21 nt Target: 5'-GAACAGAGCCAATGGCTTGGA-3' (SEQ ID NO: 4707)
βc-2346 21 nt Target: 5'-AACAGAGCCAATGGCTTGGAA-3' (SEQ ID NO: 4708)
βc-2347 21 nt Target: 5'-ACAGAGCCAATGGCTTGGAAT-3' (SEQ ID NO: 4709)
βc-2348 21 nt Target: 5'-CAGAGCCAATGGCTTGGAATG-3' (SEQ ID NO: 4710)
βc-2349 21 nt Target: 5'-AGAGCCAATGGCTTGGAATGA-3' (SEQ ID NO: 4711)
βc-2350 21 nt Target: 5'-GAGCCAATGGCTTGGAATGAG-3' (SEQ ID NO: 4712)
βc-2351 21 nt Target: 5'-AGCCAATGGCTTGGAATGAGA-3' (SEQ ID NO: 4713)
βc-2352 21 nt Target: 5'-GCCAATGGCTTGGAATGAGAC-3' (SEQ ID NO: 4714)
βc-2353 21 nt Target: 5'-CCAATGGCTTGGAATGAGACT-3' (SEQ ID NO: 4715)
βc-2354 21 nt Target: 5'-CAATGGCTTGGAATGAGACTG-3' (SEQ ID NO: 4716)
βc-2355 21 nt Target: 5'-AATGGCTTGGAATGAGACTGC-3' (SEQ ID NO: 4717)
βc-2411 21 nt Target: 5'-CCCTTGGATATCGCCAGGATG-3' (SEQ ID NO: 4718)
βc-2412 21 nt Target: 5'-CCTTGGATATCGCCAGGATGA-3' (SEQ ID NO: 4719)
βc-2413 21 nt Target: 5'-CTTGGATATCGCCAGGATGAT-3' (SEQ ID NO: 4720)
βc-2414 21 nt Target: 5'-TTGGATATCGCCAGGATGATC-3' (SEQ ID NO: 4721)
βc-2415 21 nt Target: 5'-TGGATATCGCCAGGATGATCC-3' (SEQ ID NO: 4722)
βc-2441 21 nt Target: 5'-ATCGTTCTTTTCACTCTGGTG-3' (SEQ ID NO: 4723)
βc-2442 21 nt Target: 5'-TCGTTCTTTTCACTCTGGTGG-3' (SEQ ID NO: 4724)
βc-2443 21 nt Target: 5'-CGTTCTTTTCACTCTGGTGGA-3' (SEQ ID NO: 4725)
βc-2444 21 nt Target: 5'-GTTCTTTTCACTCTGGTGGAT-3' (SEQ ID NO: 4726)
βc-2445 21 nt Target: 5'-TTCTTTTCACTCTGGTGGATA-3' (SEQ ID NO: 4727)
βc-2501 21 nt Target: 5'-AACATGAGATGGGTGGCCACC-3' (SEQ ID NO: 4728)
βc-2502 21 nt Target: 5'-ACATGAGATGGGTGGCCACCA-3' (SEQ ID NO: 4729)
βc-2503 21 nt Target: 5'-CATGAGATGGGTGGCCACCAC-3' (SEQ ID NO: 4730)
βc-2504 21 nt Target: 5'-ATGAGATGGGTGGCCACCACC-3' (SEQ ID NO: 4731)
βc-2505 21 nt Target: 5'-TGAGATGGGTGGCCACCACCC-3' (SEQ ID NO: 4732)
βc-2506 21 nt Target: 5'-GAGATGGGTGGCCACCACCCT-3' (SEQ ID NO: 4733)
βc-2507 21 nt Target: 5'-AGATGGGTGGCCACCACCCTG-3' (SEQ ID NO: 4734)
βc-2508 21 nt Target: 5'-GATGGGTGGCCACCACCCTGG-3' (SEQ ID NO: 4735)

βc-2509 21 nt Target: 5'-ATGGGTGGCCACCACCCTGGT-3' (SEQ ID NO: 4736)
βc-2510 21 nt Target: 5'-TGGGTGGCCACCACCCTGGTG-3' (SEQ ID NO: 4737)
βc-2511 21 nt Target: 5'-GGGTGGCCACCACCCTGGTGC-3' (SEQ ID NO: 4738)
βc-2512 21 nt Target: 5'-GGTGGCCACCACCCTGGTGCT-3' (SEQ ID NO: 4739)
βc-2513 21 nt Target: 5'-GTGGCCACCACCCTGGTGCTG-3' (SEQ ID NO: 4740)
βc-2514 21 nt Target: 5'-TGGCCACCACCCTGGTGCTGA-3' (SEQ ID NO: 4741)
βc-2515 21 nt Target: 5'-GGCCACCACCCTGGTGCTGAC-3' (SEQ ID NO: 4742)
βc-2516 21 nt Target: 5'-GCCACCACCCTGGTGCTGACT-3' (SEQ ID NO: 4743)
βc-2517 21 nt Target: 5'-CCACCACCCTGGTGCTGACTA-3' (SEQ ID NO: 4744)
βc-2518 21 nt Target: 5'-CACCACCCTGGTGCTGACTAT-3' (SEQ ID NO: 4745)
βc-2519 21 nt Target: 5'-ACCACCCTGGTGCTGACTATC-3' (SEQ ID NO: 4746)
βc-2520 21 nt Target: 5'-CCACCCTGGTGCTGACTATCC-3' (SEQ ID NO: 4747)
βc-2521 21 nt Target: 5'-CACCCTGGTGCTGACTATCCA-3' (SEQ ID NO: 4748)
βc-2522 21 nt Target: 5'-ACCCTGGTGCTGACTATCCAG-3' (SEQ ID NO: 4749)
βc-2523 21 nt Target: 5'-CCCTGGTGCTGACTATCCAGT-3' (SEQ ID NO: 4750)
βc-2524 21 nt Target: 5'-CCTGGTGCTGACTATCCAGTT-3' (SEQ ID NO: 4751)
βc-2525 21 nt Target: 5'-CTGGTGCTGACTATCCAGTTG-3' (SEQ ID NO: 4752)
βc-2526 21 nt Target: 5'-TGGTGCTGACTATCCAGTTGA-3' (SEQ ID NO: 4753)
βc-2527 21 nt Target: 5'-GGTGCTGACTATCCAGTTGAT-3' (SEQ ID NO: 4754)
βc-2528 21 nt Target: 5'-GTGCTGACTATCCAGTTGATG-3' (SEQ ID NO: 4755)
βc-2529 21 nt Target: 5'-TGCTGACTATCCAGTTGATGG-3' (SEQ ID NO: 4756)
βc-2530 21 nt Target: 5'-GCTGACTATCCAGTTGATGGG-3' (SEQ ID NO: 4757)
βc-2531 21 nt Target: 5'-CTGACTATCCAGTTGATGGGC-3' (SEQ ID NO: 4758)
βc-2532 21 nt Target: 5'-TGACTATCCAGTTGATGGGCT-3' (SEQ ID NO: 4759)
βc-2533 21 nt Target: 5'-GACTATCCAGTTGATGGGCTG-3' (SEQ ID NO: 4760)
βc-2534 21 nt Target: 5'-ACTATCCAGTTGATGGGCTGC-3' (SEQ ID NO: 4761)
βc-2535 21 nt Target: 5'-CTATCCAGTTGATGGGCTGCC-3' (SEQ ID NO: 4762)
βc-2567 21 nt Target: 5'-ATGCCCAGGACCTCATGGATG-3' (SEQ ID NO: 4763)
βc-2568 21 nt Target: 5'-TGCCCAGGACCTCATGGATGG-3' (SEQ ID NO: 4764)
βc-2569 21 nt Target: 5'-GCCCAGGACCTCATGGATGGG-3' (SEQ ID NO: 4765)
βc-2603 21 nt Target: 5'-ACAGCAATCAGCTGGCCTGGT-3' (SEQ ID NO: 4766)
βc-2604 21 nt Target: 5'-CAGCAATCAGCTGGCCTGGTT-3' (SEQ ID NO: 4767)
βc-2605 21 nt Target: 5'-AGCAATCAGCTGGCCTGGTTT-3' (SEQ ID NO: 4768)
βc-2606 21 nt Target: 5'-GCAATCAGCTGGCCTGGTTTG-3' (SEQ ID NO: 4769)
βc-2607 21 nt Target: 5'-CAATCAGCTGGCCTGGTTTGA-3' (SEQ ID NO: 4770)
βc-2608 21 nt Target: 5'-AATCAGCTGGCCTGGTTTGAT-3' (SEQ ID NO: 4771)
βc-2609 21 nt Target: 5'-ATCAGCTGGCCTGGTTTGATA-3' (SEQ ID NO: 4772)
βc-2610 21 nt Target: 5'-TCAGCTGGCCTGGTTTGATAC-3' (SEQ ID NO: 4773)
βc-2611 21 nt Target: 5'-CAGCTGGCCTGGTTTGATACT-3' (SEQ ID NO: 4774)
βc-2612 21 nt Target: 5'-AGCTGGCCTGGTTTGATACTG-3' (SEQ ID NO: 4775)
βc-2613 21 nt Target: 5'-GCTGGCCTGGTTTGATACTGA-3' (SEQ ID NO: 4776)
βc-2614 21 nt Target: 5'-CTGGCCTGGTTTGATACTGAC-3' (SEQ ID NO: 4777)
βc-2615 21 nt Target: 5'-TGGCCTGGTTTGATACTGACC-3' (SEQ ID NO: 4778)
βc-2616 21 nt Target: 5'-GGCCTGGTTTGATACTGACCT-3' (SEQ ID NO: 4779)
βc-2617 21 nt Target: 5'-GCCTGGTTTGATACTGACCTG-3' (SEQ ID NO: 4780)
βc-2618 21 nt Target: 5'-CCTGGTTTGATACTGACCTGT-3' (SEQ ID NO: 4781)
βc-2619 21 nt Target: 5'-CTGGTTTGATACTGACCTGTA-3' (SEQ ID NO: 4782)
βc-2620 21 nt Target: 5'-TGGTTTGATACTGACCTGTAA-3' (SEQ ID NO: 4783)
βc-2621 21 nt Target: 5'-GGTTTGATACTGACCTGTAAA-3' (SEQ ID NO: 4784)
βc-2622 21 nt Target: 5'-GTTTGATACTGACCTGTAAAT-3' (SEQ ID NO: 4785)
βc-2623 21 nt Target: 5'-TTTGATACTGACCTGTAAATC-3' (SEQ ID NO: 4786)
βc-2869 21 nt Target: 5'-TTTTTTGCCACAGCTTTTGCA-3' (SEQ ID NO: 4787)
βc-2902 21 nt Target: 5'-AATGAGTAACATTTGCTGTTT-3' (SEQ ID NO: 4788)

βc-2923 21 nt Target: 5'-TAAACATTAATAGCAGCCTTT-3' (SEQ ID NO: 4789)
βc-2925 21 nt Target: 5'-AACATTAATAGCAGCCTTTCT-3' (SEQ ID NO: 4790)
βc-2927 21 nt Target: 5'-CATTAATAGCAGCCTTTCTCT-3' (SEQ ID NO: 4791)
βc-2929 21 nt Target: 5'-TTAATAGCAGCCTTTCTCTCT-3' (SEQ ID NO: 4792)
βc-2973 21 nt Target: 5'-TTGCATTGTGATTGGCCTGTA-3' (SEQ ID NO: 4793)
βc-2975 21 nt Target: 5'-GCATTGTGATTGGCCTGTAGA-3' (SEQ ID NO: 4794)
βc-2977 21 nt Target: 5'-ATTGTGATTGGCCTGTAGAGT-3' (SEQ ID NO: 4795)
βc-2979 21 nt Target: 5'-TGTGATTGGCCTGTAGAGTTG-3' (SEQ ID NO: 4796)
βc-2981 21 nt Target: 5'-TGATTGGCCTGTAGAGTTGCT-3' (SEQ ID NO: 4797)
βc-2983 21 nt Target: 5'-ATTGGCCTGTAGAGTTGCTGA-3' (SEQ ID NO: 4798)
βc-2985 21 nt Target: 5'-TGGCCTGTAGAGTTGCTGAGA-3' (SEQ ID NO: 4799)
βc-2987 21 nt Target: 5'-GCCTGTAGAGTTGCTGAGAGG-3' (SEQ ID NO: 4800)
βc-2989 21 nt Target: 5'-CTGTAGAGTTGCTGAGAGGGC-3' (SEQ ID NO: 4801)
βc-3015 21 nt Target: 5'-GGGTGGGCTGGTATCTCAGAA-3' (SEQ ID NO: 4802)
βc-3017 21 nt Target: 5'-GTGGGCTGGTATCTCAGAAAG-3' (SEQ ID NO: 4803)
βc-3019 21 nt Target: 5'-GGGCTGGTATCTCAGAAAGTG-3' (SEQ ID NO: 4804)
βc-3021 21 nt Target: 5'-GCTGGTATCTCAGAAAGTGCC-3' (SEQ ID NO: 4805)
βc-3046 21 nt Target: 5'-ACACTAACCAAGCTGAGTTTC-3' (SEQ ID NO: 4806)
βc-3048 21 nt Target: 5'-ACTAACCAAGCTGAGTTTCCT-3' (SEQ ID NO: 4807)
βc-3050 21 nt Target: 5'-TAACCAAGCTGAGTTTCCTAT-3' (SEQ ID NO: 4808)
βc-3052 21 nt Target: 5'-ACCAAGCTGAGTTTCCTATGG-3' (SEQ ID NO: 4809)
βc-3054 21 nt Target: 5'-CAAGCTGAGTTTCCTATGGGA-3' (SEQ ID NO: 4810)
βc-3056 21 nt Target: 5'-AGCTGAGTTTCCTATGGGAAC-3' (SEQ ID NO: 4811)
βc-3087 21 nt Target: 5'-AACTTTTTGTTCTGGTCCTTT-3' (SEQ ID NO: 4812)
βc-3089 21 nt Target: 5'-CTTTTTGTTCTGGTCCTTTTT-3' (SEQ ID NO: 4813)
βc-3091 21 nt Target: 5'-TTTTGTTCTGGTCCTTTTTGG-3' (SEQ ID NO: 4814)
βc-3093 21 nt Target: 5'-TTGTTCTGGTCCTTTTTGGTC-3' (SEQ ID NO: 4815)
βc-3095 21 nt Target: 5'-GTTCTGGTCCTTTTTGGTCGA-3' (SEQ ID NO: 4816)
βc-3097 21 nt Target: 5'-TCTGGTCCTTTTTGGTCGAGG-3' (SEQ ID NO: 4817)
βc-3099 21 nt Target: 5'-TGGTCCTTTTTGGTCGAGGAG-3' (SEQ ID NO: 4818)
βc-3101 21 nt Target: 5'-GTCCTTTTTGGTCGAGGAGTA-3' (SEQ ID NO: 4819)
βc-3103 21 nt Target: 5'-CCTTTTTGGTCGAGGAGTAAC-3' (SEQ ID NO: 4820)
βc-3105 21 nt Target: 5'-TTTTTGGTCGAGGAGTAACAA-3' (SEQ ID NO: 4821)
βc-3107 21 nt Target: 5'-TTTGGTCGAGGAGTAACAATA-3' (SEQ ID NO: 4822)
βc-3109 21 nt Target: 5'-TGGTCGAGGAGTAACAATACA-3' (SEQ ID NO: 4823)
βc-3111 21 nt Target: 5'-GTCGAGGAGTAACAATACAAA-3' (SEQ ID NO: 4824)
βc-3113 21 nt Target: 5'-CGAGGAGTAACAATACAAATG-3' (SEQ ID NO: 4825)
βc-3115 21 nt Target: 5'-AGGAGTAACAATACAAATGGA-3' (SEQ ID NO: 4826)
βc-3191 21 nt Target: 5'-TTTATCAAACCCTAGCCTTGC-3' (SEQ ID NO: 4827)
βc-3193 21 nt Target: 5'-TATCAAACCCTAGCCTTGCTT-3' (SEQ ID NO: 4828)
βc-3195 21 nt Target: 5'-TCAAACCCTAGCCTTGCTTGT-3' (SEQ ID NO: 4829)
βc-3387 21 nt Target: 5'-TTGAGTAATGGTGTAGAACAC-3' (SEQ ID NO: 4830)
βc-3389 21 nt Target: 5'-GAGTAATGGTGTAGAACACTA-3' (SEQ ID NO: 4831)
βc-3391 21 nt Target: 5'-GTAATGGTGTAGAACACTAAT-3' (SEQ ID NO: 4832)
βc-3393 21 nt Target: 5'-AATGGTGTAGAACACTAATTC-3' (SEQ ID NO: 4833)
βc-3395 21 nt Target: 5'-TGGTGTAGAACACTAATTCAT-3' (SEQ ID NO: 4834)
βc-3397 21 nt Target: 5'-GTGTAGAACACTAATTCATAA-3' (SEQ ID NO: 4835)
βc-3399 21 nt Target: 5'-GTAGAACACTAATTCATAATC-3' (SEQ ID NO: 4836)
βc-3401 21 nt Target: 5'-AGAACACTAATTCATAATCAC-3' (SEQ ID NO: 4837)
βc-3500 21 nt Target: 5'-AATTAGTTTCCTTTTTAATAT-3' (SEQ ID NO: 4838)
βc-3502 21 nt Target: 5'-TTAGTTTCCTTTTTAATATGC-3' (SEQ ID NO: 4839)
βc-3504 21 nt Target: 5'-AGTTTCCTTTTTAATATGCTT-3' (SEQ ID NO: 4840)
βc-3506 21 nt Target: 5'-TTTCCTTTTTAATATGCTTAA-3' (SEQ ID NO: 4841)

βc-3508 21 nt Target: 5'-TCCTTTTTAATATGCTTAAAA-3' (SEQ ID NO: 4842)
βc-3509 21 nt Target: 5'-CCTTTTTAATATGCTTAAAAT-3' (SEQ ID NO: 4843)
βc-3510 21 nt Target: 5'-CTTTTTAATATGCTTAAAATA-3' (SEQ ID NO: 4844)
βc-3512 21 nt Target: 5'-TTTTAATATGCTTAAAATAAG-3' (SEQ ID NO: 4845)
βc-3514 21 nt Target: 5'-TTAATATGCTTAAAATAAGCA-3' (SEQ ID NO: 4846)
βc-3516 21 nt Target: 5'-AATATGCTTAAAATAAGCAGG-3' (SEQ ID NO: 4847)
βc-3518 21 nt Target: 5'-TATGCTTAAAATAAGCAGGTG-3' (SEQ ID NO: 4848)
βc-3520 21 nt Target: 5'-TGCTTAAAATAAGCAGGTGGA-3' (SEQ ID NO: 4849)
βc-3522 21 nt Target: 5'-CTTAAAATAAGCAGGTGGATC-3' (SEQ ID NO: 4850)
βc-3524 21 nt Target: 5'-TAAAATAAGCAGGTGGATCTA-3' (SEQ ID NO: 4851)
βc-3526 21 nt Target: 5'-AAATAAGCAGGTGGATCTATT-3' (SEQ ID NO: 4852)
βc-3528 21 nt Target: 5'-ATAAGCAGGTGGATCTATTTC-3' (SEQ ID NO: 4853)
βc-3530 21 nt Target: 5'-AAGCAGGTGGATCTATTTCAT-3' (SEQ ID NO: 4854)
βc-3532 21 nt Target: 5'-GCAGGTGGATCTATTTCATGT-3' (SEQ ID NO: 4855)
βc-3534 21 nt Target: 5'-AGGTGGATCTATTTCATGTTT-3' (SEQ ID NO: 4856)
βc-3536 21 nt Target: 5'-GTGGATCTATTTCATGTTTTT-3' (SEQ ID NO: 4857)
βc-3538 21 nt Target: 5'-GGATCTATTTCATGTTTTTGA-3' (SEQ ID NO: 4858)
βc-3583 21 nt Target: 5'-GGGTAGGGTAAATCAGTAAGA-3' (SEQ ID NO: 4859)
βc-3585 21 nt Target: 5'-GTAGGGTAAATCAGTAAGAGG-3' (SEQ ID NO: 4860)
βc-3587 21 nt Target: 5'-AGGGTAAATCAGTAAGAGGTG-3' (SEQ ID NO: 4861)
βc-3589 21 nt Target: 5'-GGTAAATCAGTAAGAGGTGTT-3' (SEQ ID NO: 4862)
βc-3591 21 nt Target: 5'-TAAATCAGTAAGAGGTGTTAT-3' (SEQ ID NO: 4863)
βc-3593 21 nt Target: 5'-AATCAGTAAGAGGTGTTATTT-3' (SEQ ID NO: 4864)
βc-3633 21 nt Target: 5'-TTTACCAGTTGCCTTTTATCC-3' (SEQ ID NO: 4865)
βc-3635 21 nt Target: 5'-TACCAGTTGCCTTTTATCCCA-3' (SEQ ID NO: 4866)
βc-3637 21 nt Target: 5'-CCAGTTGCCTTTTATCCCAAA-3' (SEQ ID NO: 4867)
βc-3639 21 nt Target: 5'-AGTTGCCTTTTATCCCAAAGT-3' (SEQ ID NO: 4868)
βc-3641 21 nt Target: 5'-TTGCCTTTTATCCCAAAGTTG-3' (SEQ ID NO: 4869)
βc-3643 21 nt Target: 5'-GCCTTTTATCCCAAAGTTGTT-3' (SEQ ID NO: 4870)
βc-3645 21 nt Target: 5'-CTTTTATCCCAAAGTTGTTGT-3' (SEQ ID NO: 4871)
βc-3647 21 nt Target: 5'-TTTATCCCAAAGTTGTTGTAA-3' (SEQ ID NO: 4872)
βc-3649 21 nt Target: 5'-TATCCCAAAGTTGTTGTAACC-3' (SEQ ID NO: 4873)
βc-3651 21 nt Target: 5'-TCCCAAAGTTGTTGTAACCTG-3' (SEQ ID NO: 4874)
βc-3653 21 nt Target: 5'-CCAAAGTTGTTGTAACCTGCT-3' (SEQ ID NO: 4875)
βc-3655 21 nt Target: 5'-AAAGTTGTTGTAACCTGCTGT-3' (SEQ ID NO: 4876)
βc-3657 21 nt Target: 5'-AGTTGTTGTAACCTGCTGTGA-3' (SEQ ID NO: 4877)
βc-3659 21 nt Target: 5'-TTGTTGTAACCTGCTGTGATA-3' (SEQ ID NO: 4878)
βc-3708 21 nt Target: 5'-AAAAATGGTTCAGAATTAAAC-3' (SEQ ID NO: 4879)
βc-3710 21 nt Target: 5'-AAATGGTTCAGAATTAAACTT-3' (SEQ ID NO: 4880)
βc-3712 21 nt Target: 5'-ATGGTTCAGAATTAAACTTTT-3' (SEQ ID NO: 4881)
βc-3714 21 nt Target: 5'-GGTTCAGAATTAAACTTTTAA-3' (SEQ ID NO: 4882)
βc-3716 21 nt Target: 5'-TTCAGAATTAAACTTTTAATT-3' (SEQ ID NO: 4883)
βc-m314 21 nt Target: 5'-CAGCAGCAGTCTTACTTGGAT-3' (SEQ ID NO: 4884)
βc-m325 21 nt Target: 5'-TTACTTGGATTCTGGAATCCA-3' (SEQ ID NO: 4885)
βc-m408 21 nt Target: 5'-TTGACACCTCCCAAGTCCTTT-3' (SEQ ID NO: 4886)
βc-m460 21 nt Target: 5'-CACGCAAGAGCAAGTAGCTGA-3' (SEQ ID NO: 4887)
βc-m526 21 nt Target: 5'-TGCCATGTTCCCTGAGACGCT-3' (SEQ ID NO: 4888)
βc-m631 21 nt Target: 5'-GTTGAAACATGCAGTTGTCAA-3' (SEQ ID NO: 4889)
βc-m636 21 nt Target: 5'-AACATGCAGTTGTCAATTTGA-3' (SEQ ID NO: 4890)
βc-m642 21 nt Target: 5'-CAGTTGTCAATTTGATTAACT-3' (SEQ ID NO: 4891)
βc-m723 21 nt Target: 5'-ATGAGGACCAGGTGGTAGTTA-3' (SEQ ID NO: 4892)
βc-m970 21 nt Target: 5'-TGGGTCACCAGTGGATTCTGT-3' (SEQ ID NO: 4893)
βc-m976 21 nt Target: 5'-ACCAGTGGATTCTGTACTGTT-3' (SEQ ID NO: 4894)

βc-m981 21 nt Target: 5'-TGGATTCTGTACTGTTCTACG-3' (SEQ ID NO: 4895)
βc-m1066 21 nt Target: 5'-TGGTGGACTGCAGAAAATGGT-3' (SEQ ID NO: 4896)
βc-m1106 21 nt Target: 5'-AACGTGAAATTCTTGGCTATT-3' (SEQ ID NO: 4897)
βc-m1354 21 nt Target: 5'-CCCAAGTCAGCGACTTGTTCA-3' (SEQ ID NO: 4898)
βc-m1363 21 nt Target: 5'-GCGACTTGTTCAAAACTGTCT-3' (SEQ ID NO: 4899)
βc-m1373 21 nt Target: 5'-CAAAACTGTCTTTGGACTCTC-3' (SEQ ID NO: 4900)
βc-m1508 21 nt Target: 5'-CTCTCTAACCTCACTTGCAAT-3' (SEQ ID NO: 4901)
βc-m1515 21 nt Target: 5'-ACCTCACTTGCAATAATTACA-3' (SEQ ID NO: 4902)
βc-m1682 21 nt Target: 5'-CAGAATGCCGTTCGCCTTCAT-3' (SEQ ID NO: 4903)
βc-m1693 21 nt Target: 5'-TCGCCTTCATTATGGACTGCC-3' (SEQ ID NO: 4904)
βc-m1698 21 nt Target: 5'-TTCATTATGGACTGCCTGTTG-3' (SEQ ID NO: 4905)
βc-m1705 21 nt Target: 5'-TGGACTGCCTGTTGTGGTTAA-3' (SEQ ID NO: 4906)
βc-m1763 21 nt Target: 5'-GCAACTGTTGGATTGATTCGA-3' (SEQ ID NO: 4907)
βc-m2008 21 nt Target: 5'-CCGAGGACTCAATACCATTCC-3' (SEQ ID NO: 4908)
βc-m2226 21 nt Target: 5'-CTGAGGACAAGCCACAGGATT-3' (SEQ ID NO: 4909)
βc-m2427 21 nt Target: 5'-GGATGGACCCTATGATGGAGC-3' (SEQ ID NO: 4910)
βc-m2568 21 nt Target: 5'-TTGATACTGACCTGTAAATCG-3' (SEQ ID NO: 4911)
βc-m2614 21 nt Target: 5'-AGCCAGTGTGGGTGAATACTT-3' (SEQ ID NO: 4912)
βc-m2770 21 nt Target: 5'-TGCCACAGCTTTTGCAGCGTT-3' (SEQ ID NO: 4913)
βc-m2777 21 nt Target: 5'-GCTTTTGCAGCGTTATACTCA-3' (SEQ ID NO: 4914)
βc-m2784 21 nt Target: 5'-CAGCGTTATACTCAGATGAGT-3' (SEQ ID NO: 4915)
βc-m2806 21 nt Target: 5'-ACATTTGCTGTTTTCAACATT-3' (SEQ ID NO: 4916)
βc-m2850 21 nt Target: 5'-AGCTGTAGTGTCTGAACGTGC-3' (SEQ ID NO: 4917)
βc-m2965 21 nt Target: 5'-GGGAACAGTCGAAGTACGCTT-3' (SEQ ID NO: 4918)
βc-m2970 21 nt Target: 5'-CAGTCGAAGTACGCTTTTTGT-3' (SEQ ID NO: 4919)
βc-m2976 21 nt Target: 5'-AAGTACGCTTTTTGTTCTGGT-3' (SEQ ID NO: 4920)
βc-m3092 21 nt Target: 5'-ACCCTAGCCTTGCTTGTTCTT-3' (SEQ ID NO: 4921)
βc-m3097 21 nt Target: 5'-AGCCTTGCTTGTTCTTTGTTT-3' (SEQ ID NO: 4922)
βc-m3198 21 nt Target: 5'-TGAACCTGCTACAGCAATTTC-3' (SEQ ID NO: 4923)
βc-m3207 21 nt Target: 5'-TACAGCAATTTCTGATTTCTA-3' (SEQ ID NO: 4924)
βc-m3433 21 nt Target: 5'-CAGTAAGAGGTGTTATTTGAG-3' (SEQ ID NO: 4925)
βc-m3439 21 nt Target: 5'-GAGGTGTTATTTGAGCCTTGT-3' (SEQ ID NO: 4926)
βc-m3444 21 nt Target: 5'-GTTATTTGAGCCTTGTTTTGG-3' (SEQ ID NO: 4927)
βc-m3449 21 nt Target: 5'-TTGAGCCTTGTTTTGGACAGT-3' (SEQ ID NO: 4928)
βc-m3522 21 nt Target: 5'-TTCAACAGATGCGGTTATAGA-3' (SEQ ID NO: 4929)
βc-m3533 21 nt Target: 5'-CGGTTATAGAAATGGTTCAGA-3' (SEQ ID NO: 4930)
βc-m3538 21 nt Target: 5'-ATAGAAATGGTTCAGAATTAA-3' (SEQ ID NO: 4931)

Table 6: Selected Anti-β-catenin DsiRNA Agents, Unmodified Duplexes

5'-CUGAGGGUAUUUGAAGUAUACCAUA-3' (SEQ ID NO: 3335)
3'-GGGACUCCCAUAAACUUCAUAUGGUAU-5' (SEQ ID NO: 1117)

βc-240 Target: 5'-CCCTGAGGGTATTTGAAGTATACCATA-3' (SEQ ID NO: 2226)

5'-GGGUAUUUGAAGUAUACCAUACAAC-3' (SEQ ID NO: 3336)
3'-CUCCCAUAAACUUCAUAUGGUAUGUUG-5' (SEQ ID NO: 1118)

βc-244 Target: 5'-GAGGGTATTTGAAGTATACCATACAAC-3' (SEQ ID NO: 2227)

5'-AAGUAUACCAUACAACUGUUUUGAA-3' (SEQ ID NO: 3337)
3'-ACUUCAUAUGGUAUGUUGACAAAACUU-5' (SEQ ID NO: 1119)

βc-253 Target: 5'-TGAAGTATACCATACAACTGTTTTGAA-3' (SEQ ID NO: 2228)

5'-ACCAUACAACUGUUUUGAAAAUCCA-3' (SEQ ID NO: 3338)
3'-UAUGGUAUGUUGACAAAACUUUUAGGU-5' (SEQ ID NO: 1120)

βc-259 Target: 5'-ATACCATACAACTGTTTTGAAAATCCA-3' (SEQ ID NO: 2229)

5'-ACAACUGUUUUGAAAAUCCAGCGUG-3' (SEQ ID NO: 3339)
3'-UAUGUUGACAAAACUUUUAGGUCGCAC-5' (SEQ ID NO: 1121)

βc-264 Target: 5'-ATACAACTGTTTTGAAAATCCAGCGTG-3' (SEQ ID NO: 2230)

5'-GGGAUUUUCUCAGUCCUUCACUCAA-3' (SEQ ID NO: 3340)
3'-GUCCCUAAAAGAGUCAGGAAGUGAGUU-5' (SEQ ID NO: 1122)

βc-496 Target: 5'-CAGGGATTTTCTCAGTCCTTCACTCAA-3' (SEQ ID NO: 2231)

5'-CUCAAGAACAAGUAGCUGAUAUUGA-3' (SEQ ID NO: 3341)
3'-GUGAGUUCUUGUUCAUCGACUAUAACU-5' (SEQ ID NO: 1123)

βc-516 Target: 5'-CACTCAAGAACAAGTAGCTGATATTGA-3' (SEQ ID NO: 2232)

5'-AACAAGUAGCUGAUAUUGAUGGACA-3' (SEQ ID NO: 3342)
3'-UCUUGUUCAUCGACUAUAACUACCUGU-5' (SEQ ID NO: 1124)

βc-522 Target: 5'-AGAACAAGTAGCTGATATTGATGGACA-3' (SEQ ID NO: 2233)

5'-CAAGUAGCUGAUAUUGAUGGACAGU-3' (SEQ ID NO: 3343)
3'-UUGUUCAUCGACUAUAACUACCUGUCA-5' (SEQ ID NO: 1125)

βc-524 Target: 5'-AACAAGTAGCTGATATTGATGGACAGT-3' (SEQ ID NO: 2234)

5'-AUGGACAGUAUGCAAUGACUCGAGC-3' (SEQ ID NO: 3344)
3'-ACUACCUGUCAUACGUUACUGAGCUCG-5' (SEQ ID NO: 1126)

βc-540 Target: 5'-TGATGGACAGTATGCAATGACTCGAGC-3' (SEQ ID NO: 2235)

5'-CUAUGUUCCCUGAGACAUUAGAUGA-3' (SEQ ID NO: 3345)
3'-ACGAUACAAGGGACUCUGUAAUCUACU-5' (SEQ ID NO: 1127)

βc-582 Target: 5'-TGCTATGTTCCCTGAGACATTAGATGA-3' (SEQ ID NO: 2236)

5'-CUGAAACAUGCAGUUGUAAACUUGA-3' (SEQ ID NO: 3346)
3'-ACGACUUUGUACGUCAACAUUUGAACU-5' (SEQ ID NO: 1128)

βc-686 Target: 5'-TGCTGAAACATGCAGTTGTAAACTTGA-3' (SEQ ID NO: 2237)

5'-CAUGCAGUUGUAAACUUGAUUAACU-3' (SEQ ID NO: 3347)
3'-UUGUACGUCAACAUUUGAACUAAUUGA-5' (SEQ ID NO: 1129)

βc-692 Target: 5'-AACATGCAGTTGTAAACTTGATTAACT-3' (SEQ ID NO: 2238)

5'-AGUUGUAAACUUGAUUAACUAUCAA-3' (SEQ ID NO: 3348)
3'-CGUCAACAUUUGAACUAAUUGAUAGUU-5' (SEQ ID NO: 1130)

βc-697 Target: 5'-GCAGTTGTAAACTTGATTAACTATCAA-3' (SEQ ID NO: 2239)

5'-UUGAUUAACUAUCAAGAUGAUGCAG-3' (SEQ ID NO: 3349)
3'-UGAACUAAUUGAUAGUUCUACUACGUC-5' (SEQ ID NO: 1131)

βc-707 Target: 5'-ACTTGATTAACTATCAAGATGATGCAG-3' (SEQ ID NO: 2240)

5'-CUGAACUGACAAAACUGCUAAAUGA-3' (SEQ ID NO: 3350)
3'-GGGACUUGACUGUUUUGACGAUUUACU-5' (SEQ ID NO: 1132)

βc-753 Target: 5'-CCCTGAACTGACAAAACTGCTAAATGA-3' (SEQ ID NO: 2241)

5'-AGAUGGUGUCUGCUAUUGUACGUAC-3' (SEQ ID NO: 3351)
3'-AGUCUACCACAGACGAUAACAUGCAUG-5' (SEQ ID NO: 1133)

βc-870 Target: 5'-TCAGATGGTGTCTGCTATTGTACGTAC-3' (SEQ ID NO: 2242)

5'-ACGUACCAUGCAGAAUACAAAUGAU-3' (SEQ ID NO: 3352)
3'-CAUGCAUGGUACGUCUUAUGUUUACUA-5' (SEQ ID NO: 1134)

βc-889 Target: 5'-GTACGTACCATGCAGAATACAAATGAT-3' (SEQ ID NO: 2243)

5'-UACAACUCUCCACAACCUUUUAUUA-3' (SEQ ID NO: 3353)
3'-UAAUGUUGAGAGGUGUUGGAAAAUAAU-5' (SEQ ID NO: 1135)

βc-1060 Target: 5'-ATTACAACTCTCCACAACCTTTTATTA-3' (SEQ ID NO: 2244)

5'-CUCUCCACAACCUUUUAUUACAUCA-3' (SEQ ID NO: 3354)
3'-UUGAGAGGUGUUGGAAAAUAAUGUAGU-5' (SEQ ID NO: 1136)

βc-1065 Target: 5'-AACTCTCCACAACCTTTTATTACATCA-3' (SEQ ID NO: 2245)

5'-CACAACCUUUUAUUACAUCAAGAAG-3' (SEQ ID NO: 3355)
3'-AGGUGUUGGAAAAUAAUGUAGUUCUUC-5' (SEQ ID NO: 1137)

βc-1070 Target: 5'-TCCACAACCTTTTATTACATCAAGAAG-3' (SEQ ID NO: 2246)

5'-CUUUUAUUACAUCAAGAAGGAGCUA-3' (SEQ ID NO: 3356)
3'-UGGAAAAUAAUGUAGUUCUUCCUCGAU-5' (SEQ ID NO: 1138)

βc-1076 Target: 5'-ACCTTTTATTACATCAAGAAGGAGCTA-3' (SEQ ID NO: 2247)

5'-AAAACAAAUGUUAAAUUCUUGGCUA-3' (SEQ ID NO: 3357)
3'-UGUUUUGUUUACAAUUUAAGAACCGAU-5' (SEQ ID NO: 1139)

βc-1154 Target: 5'-ACAAAACAAATGTTAAATTCTTGGCTA-3' (SEQ ID NO: 2248)

5'-UACGACAGACUGCCUUCAAAUUUUA-3' (SEQ ID NO: 3358)
3'-UAAUGCUGUCUGACGGAAGUUUAAAAU-5' (SEQ ID NO: 1140)

βc-1180 Target: 5'-ATTACGACAGACTGCCTTCAAATTTTA-3' (SEQ ID NO: 2249)

5'-CAGACUGCCUUCAAAUUUUAGCUUA-3' (SEQ ID NO: 3359)
3'-CUGUCUGACGGAAGUUUAAAAUCGAAU-5' (SEQ ID NO: 1141)

βc-1185 Target: 5'-GACAGACTGCCTTCAAATTTTAGCTTA-3' (SEQ ID NO: 2250)

5'-CUUUAGUAAAUAUAAUGAGGACCUA-3' (SEQ ID NO: 3360)
3'-UCGAAAUCAUUUAUAUUACUCCUGGAU-5' (SEQ ID NO: 1142)

βc-1260 Target: 5'-AGCTTTAGTAAATATAATGAGGACCTA-3' (SEQ ID NO: 2251)

5'-AAAACUACUGUGGACCACAAGCAGA-3' (SEQ ID NO: 3361)
3'-CUUUUUGAUGACACCUGGUGUUCGUCU-5' (SEQ ID NO: 1143)

βc-1294 Target: 5'-GAAAAACTACTGTGGACCACAAGCAGA-3' (SEQ ID NO: 2252)

5'-AGUCAACGUCUUGUUCAGAACUGUC-3' (SEQ ID NO: 3362)
3'-GUUCAGUUGCAGAACAAGUCUUGACAG-5' (SEQ ID NO: 1144)

βc-1412 Target: 5'-CAAGTCAACGTCTTGTTCAGAACTGTC-3' (SEQ ID NO: 2253)

5'-CGUCUUGUUCAGAACUGUCUUUGGA-3' (SEQ ID NO: 3363)
3'-UUGCAGAACAAGUCUUGACAGAAACCU-5' (SEQ ID NO: 1145)

βc-1418 Target: 5'-AACGTCTTGTTCAGAACTGTCTTTGGA-3' (SEQ ID NO: 2254)

5'-UGUUCAGAACUGUCUUUGGACUCUC-3' (SEQ ID NO: 3364)
3'-GAACAAGUCUUGACAGAAACCUGAGAG-5' (SEQ ID NO: 1146)

βc-1423 Target: 5'-CTTGTTCAGAACTGTCTTTGGACTCTC-3' (SEQ ID NO: 2255)

5'-GGUUCAGAUGAUAUAAAUGUGGUCA-3' (SEQ ID NO: 3365)
3'-ACCCAAGUCUACUAUAUUUACACCAGU-5' (SEQ ID NO: 1147)

βc-1520 Target: 5'-TGGGTTCAGATGATATAAATGTGGTCA-3' (SEQ ID NO: 2256)

5'-UCUUUCUAACCUCACUUGCAAUAAU-3' (SEQ ID NO: 3366)
3'-UAAGAAAGAUUGGAGUGAACGUUAUUA-5' (SEQ ID NO: 1148)

βc-1561 Target: 5'-ATTCTTTCTAACCTCACTTGCAATAAT-3' (SEQ ID NO: 2257)

5'-CUCACUUGCAAUAAUUAUAAGAACA-3' (SEQ ID NO: 3367)
3'-UGGAGUGAACGUUAUUAAUAUUCUUGU-5' (SEQ ID NO: 1149)

βc-1571 Target: 5'-ACCTCACTTGCAATAATTATAAGAACA-3' (SEQ ID NO: 2258)

5'-CAAUAAUUAUAAGAACAAGAUGAUG-3' (SEQ ID NO: 3368)
3'-ACGUUAUUAAUAUUCUUGUUCUACUAC-5' (SEQ ID NO: 1150)

βc-1579 Target: 5'-TGCAATAATTATAAGAACAAGATGATG-3' (SEQ ID NO: 2259)

5'-GUAUAGAGGCUCUUGUGCGUACUGU-3' (SEQ ID NO: 3369)
3'-ACCAUAUCUCCGAGAACACGCAUGACA-5' (SEQ ID NO: 1151)

βc-1620 Target: 5'-TGGTATAGAGGCTCTTGTGCGTACTGT-3' (SEQ ID NO: 2260)

5'-GGCUACUGUUGGAUUGAUUCGAAAU-3' (SEQ ID NO: 3370)
3'-UUCCGAUGACAACCUAACUAAGCUUUA-5' (SEQ ID NO: 1152)

βc-1816 Target: 5'-AAGGCTACTGTTGGATTGATTCGAAAT-3' (SEQ ID NO: 2261)

5'-CAUGGAAGAAAUAGUUGAAGGUUGU-3' (SEQ ID NO: 3371)
3'-GCGUACCUUCUUUAUCAACUUCCAACA-5' (SEQ ID NO: 1153)

βc-1987 Target: 5'-CGCATGGAAGAAATAGTTGAAGGTTGT-3' (SEQ ID NO: 2262)

5'-UGGAAGAAAUAGUUGAAGGUUGUAC-3' (SEQ ID NO: 3372)
3'-GUACCUUCUUUAUCAACUUCCAACAUG-5' (SEQ ID NO: 1154)

βc-1989 Target: 5'-CATGGAAGAAATAGTTGAAGGTTGTAC-3' (SEQ ID NO: 2263)

5'-AUUGAAAACAUCCAAAGAGUAGCUG-3' (SEQ ID NO: 3373)
3'-GGUAACUUUUGUAGGUUUCUCAUCGAC-5' (SEQ ID NO: 1155)

βc-2111 Target: 5'-CCATTGAAAACATCCAAAGAGTAGCTG-3' (SEQ ID NO: 2264)

5'-GAGGACAAGCCACAAGAUUACAAGA-3' (SEQ ID NO: 3374)
3'-GACUCCUGUUCGGUGUUCUAAUGUUCU-5' (SEQ ID NO: 1156)

βc-2282 Target: 5'-CTGAGGACAAGCCACAAGATTACAAGA-3' (SEQ ID NO: 2265)

5'-GAUACUGACCUGUAAAUCAUCCUUU-3' (SEQ ID NO: 3375)
3'-AACUAUGACUGGACAUUUAGUAGGAAA-5' (SEQ ID NO: 1157)

βc-2624 Target: 5'-TTGATACTGACCTGTAAATCATCCTTT-3' (SEQ ID NO: 2266)

5'-UUAGGUAAGAAGUUUUAAAAAGCCA-3' (SEQ ID NO: 3376)
3'-GAAAUCCAUUCUUCAAAAUUUUUCGGU-5' (SEQ ID NO: 1158)

βc-2647 Target: 5'-CTTTAGGTAAGAAGTTTTAAAAAGCCA-3' (SEQ ID NO: 2267)

5'-CAGGUAUAUACUUUGAAAGGAGAUG-3' (SEQ ID NO: 3377)
3'-UUGUCCAUAUAUGAAACUUUCCUCUAC-5' (SEQ ID NO: 1159)

βc-2770 Target: 5'-AACAGGTATATACTTTGAAAGGAGATG-3' (SEQ ID NO: 2268)

5'-GAAGUUAUUAACUUUAAUGUUUUUU-3' (SEQ ID NO: 3378)
3'-ACCUUCAAUAAUUGAAAUUACAAAAAA-5' (SEQ ID NO: 1160)

βc-2848 Target: 5'-TGGAAGTTATTAACTTTAATGTTTTTT-3' (SEQ ID NO: 2269)

5'-CCACAGCUUUUGCAACUUAAUACUC-3' (SEQ ID NO: 3379)
3'-ACGGUGUCGAAAACGUUGAAUUAUGAG-5' (SEQ ID NO: 1161)

βc-2874 Target: 5'-TGCCACAGCTTTTGCAACTTAATACTC-3' (SEQ ID NO: 2270)

5'-CAUUUGCUGUUUUAAACAUUAAUAG-3' (SEQ ID NO: 3380)
3'-UUGUAAACGACAAAAUUUGUAAUUAUC-5' (SEQ ID NO: 1162)

βc-2909 Target: 5'-AACATTTGCTGTTTTAAACATTAATAG-3' (SEQ ID NO: 2271)

5'-CAAUUGAAGUAAACUUUUUGUUCUG-3' (SEQ ID NO: 3381)
3'-UUGUUAACUUCAUUUGAAAAACAAGAC-5' (SEQ ID NO: 1163)

βc-3074 Target: 5'-AACAATTGAAGTAAACTTTTTGTTCTG-3' (SEQ ID NO: 2272)

5'-ACCCUAGCCUUGCUUGUUAAAUUUU-3' (SEQ ID NO: 3382)
3'-UUUGGGAUCGGAACGAACAAUUUAAAA-5' (SEQ ID NO: 1164)

βc-3197 Target: 5'-AAACCCTAGCCTTGCTTGTTAAATTTT-3' (SEQ ID NO: 2273)

5'-GCCUUGCUUGUUAAAUUUUUUUUUU-3' (SEQ ID NO: 3383)
3'-AUCGGAACGAACAAUUUAAAAAAAAAA-5' (SEQ ID NO: 1165)

βc-3203 Target: 5'-TAGCCTTGCTTGTTAAATTTTTTTTT-3' (SEQ ID NO: 2274)

5'-GAAGUAGCUCUUUUUUUUUUUUUUU-3' (SEQ ID NO: 3384)
3'-AACUUCAUCGAGAAAAAAAAAAAAAAA-5' (SEQ ID NO: 1166)

βc-3273 Target: 5'-TTGAAGTAGCTCTTTTTTTTTTTTTT-3' (SEQ ID NO: 2275)

5'-GUAGUGUUAAGUUAUAGUGAAUACU-3' (SEQ ID NO: 3385)
3'-AGCAUCACAAUUCAAUAUCACUUAUGA-5' (SEQ ID NO: 1167)

βc-3333 Target: 5'-TCGTAGTGTTAAGTTATAGTGAATACT-3' (SEQ ID NO: 2276)

5'-GUGAAUACUGCUACAGCAAUUUCUA-3' (SEQ ID NO: 3386)
3'-AUCACUUAUGACGAUGUCGUUAAAGAU-5' (SEQ ID NO: 1168)

βc-3349 Target: 5'-TAGTGAATACTGCTACAGCAATTTCTA-3' (SEQ ID NO: 2277)

5'-UACUGCUACAGCAAUUUCUAAUUUU-3' (SEQ ID NO: 3387)
3'-UUAUGACGAUGUCGUUAAAGAUUAAAA-5' (SEQ ID NO: 1169)

βc-3354 Target: 5'-AATACTGCTACAGCAATTTCTAATTTT-3' (SEQ ID NO: 2278)

5'-CUAAUUUUUAAGAAUUGAGUAAUGG-3' (SEQ ID NO: 3388)
3'-AAGAUUAAAAAUUCUUAACUCAUUACC-5' (SEQ ID NO: 1170)

βc-3371 Target: 5'-TTCTAATTTTTAAGAATTGAGTAATGG-3' (SEQ ID NO: 2279)

5'-UUUUAAGAAUUGAGUAAUGGUGUAG-3' (SEQ ID NO: 3389)
3'-UAAAAAUUCUUAACUCAUUACCACAUC-5' (SEQ ID NO: 1171)

βc-3376 Target: 5'-ATTTTTAAGAATTGAGTAATGGTGTAG-3' (SEQ ID NO: 2280)

5'-CAUAAUCACUCUAAUUAAUUGUAAU-3' (SEQ ID NO: 3390)
3'-AAGUAUUAGUGAGAUUAAUUAACAUUA-5' (SEQ ID NO: 1172)

βc-3411 Target: 5'-TTCATAATCACTCTAATTAATTGTAAT-3' (SEQ ID NO: 2281)

5'-UAAUUGUAAUCUGAAUAAAGUGUAA-3' (SEQ ID NO: 3391)
3'-UAAUUAACAUUAGACUUAUUUCACAUU-5' (SEQ ID NO: 1173)

βc-3426 Target: 5'-ATTAATTGTAATCTGAATAAAGTGTAA-3' (SEQ ID NO: 2282)

5'-GUAAUCUGAAUAAAGUGUAACAAUU-3' (SEQ ID NO: 3392)
3'-AACAUUAGACUUAUUUCACAUUGUUAA-5' (SEQ ID NO: 1174)

βc-3431 Target: 5'-TTGTAATCTGAATAAAGTGTAACAATT-3' (SEQ ID NO: 2283)

5'-UGAAUAAAGUGUAACAAUUGUGUAG-3' (SEQ ID NO: 3393)
3'-AGACUUAUUUCACAUUGUUAACACAUC-5' (SEQ ID NO: 1175)

βc-3437 Target: 5'-TCTGAATAAAGTGTAACAATTGTGTAG-3' (SEQ ID NO: 2284)

5'-GUAGCCUUUUUGUAUAAAAUAGACA-3' (SEQ ID NO: 3394)
3'-CACAUCGGAAAAACAUAUUUUAUCUGU-5' (SEQ ID NO: 1176)

βc-3458 Target: 5'-GTGTAGCCTTTTTGTATAAAATAGACA-3' (SEQ ID NO: 2285)

5'-UGUAUAAAAUAGACAAAUAGAAAAU-3' (SEQ ID NO: 3395)
3'-AAACAUAUUUUAUCUGUUUAUCUUUUA-5' (SEQ ID NO: 1177)

βc-3468 Target: 5'-TTTGTATAAAATAGACAAATAGAAAAT-3' (SEQ ID NO: 2286)

5'-AAAAUGGUCCAAUUAGUUUCCUUUU-3' (SEQ ID NO: 3396)
3'-UCUUUUACCAGGUUAAUCAAAGGAAAA-5' (SEQ ID NO: 1178)

βc-3488 Target: 5'-AGAAAATGGTCCAATTAGTTTCCTTTT-3' (SEQ ID NO: 2287)

5'-CCAAUUAGUUUCCUUUUUAAUAUGC-3' (SEQ ID NO: 3397)
3'-CAGGUUAAUCAAAGGAAAAAUUAUACG-5' (SEQ ID NO: 1179)

βc-3496 Target: 5'-GTCCAATTAGTTTCCTTTTTAATATGC-3' (SEQ ID NO: 2288)

5'-UUUGAUCAAAAACUAUUUGGGAUAU-3' (SEQ ID NO: 3398)
3'-AAAAACUAGUUUUUGAUAAACCCUAUA-5' (SEQ ID NO: 1180)

βc-3552 Target: 5'-TTTTTGATCAAAAACTATTTGGGATAT-3' (SEQ ID NO: 2289)

5'-GAGGUGUUAUUUGGAACCUUGUUUU-3' (SEQ ID NO: 3399)
3'-UUCUCCACAAUAAACCUUGGAACAAAA-5' (SEQ ID NO: 1181)

βc-3600 Target: 5'-AAGAGGTGTTATTTGGAACCTTGTTTT-3' (SEQ ID NO: 2290)

5'-GUUAUUUGGAACCUUGUUUUGGACA-3' (SEQ ID NO: 3400)
3'-CACAAUAAACCUUGGAACAAAACCUGU-5' (SEQ ID NO: 1182)

βc-3605 Target: 5'-GTGTTATTTGGAACCTTGTTTTGGACA-3' (SEQ ID NO: 2291)

5'-ACCUUGUUUUGGACAGUUUACCAGU-3' (SEQ ID NO: 3401)
3'-CUUGGAACAAAACCUGUCAAAUGGUCA-5' (SEQ ID NO: 1183)

βc-3615 Target: 5'-GAACCTTGTTTTGGACAGTTTACCAGT-3' (SEQ ID NO: 2292)

5'-GAUACGAUGCUUCAAGAGAAAAUGC-3' (SEQ ID NO: 3402)
3'-CACUAUGCUACGAAGUUCUCUUUUACG-5' (SEQ ID NO: 1184)

βc-3674 Target: 5'-GTGATACGATGCTTCAAGAGAAAATGC-3' (SEQ ID NO: 2293)

5'-CAAGAGAAAAUGCGGUUAUAAAAAA-3' (SEQ ID NO: 3403)
3'-AAGUUCUCUUUUACGCCAAUAUUUUUU-5' (SEQ ID NO: 1185)

βc-3686 Target: 5'-TTCAAGAGAAAATGCGGTTATAAAAAA-3' (SEQ ID NO: 2294)

5'-GAAAAUGCGGUUAUAAAAAAUGGUU-3' (SEQ ID NO: 3404)
3'-CUCUUUUACGCCAAUAUUUUUUACCAA-5' (SEQ ID NO: 1186)

βc-3691 Target: 5'-GAGAAAATGCGGTTATAAAAAATGGTT-3' (SEQ ID NO: 2295)

5'-GUUAUAAAAAAUGGUUCAGAAUUAA-3' (SEQ ID NO: 3405)
3'-GCCAAUAUUUUUUACCAAGUCUUAAUU-5' (SEQ ID NO: 1187)

βc-3700 Target: 5'-CGGTTATAAAAAATGGTTCAGAATTAA-3' (SEQ ID NO: 2296)

5'-AAAAUGGUUCAGAAUUAAACUUUUA-3' (SEQ ID NO: 3406)
3'-UUUUUUACCAAGUCUUAAUUUGAAAAU-5' (SEQ ID NO: 1188)

βc-3707 Target: 5'-AAAAAATGGTTCAGAATTAAACTTTTA-3' (SEQ ID NO: 2297)

5'-GCGUGGACAAUGGCUACUCAAGCUG-3' (SEQ ID NO: 3407)
3'-GUCGCACCUGUUACCGAUGAGUUCGAC-5' (SEQ ID NO: 1189)

βc-284 Target: 5'-CAGCGTGGACAATGGCTACTCAAGCTG-3' (SEQ ID NO: 2298)

5'-CGUGGACAAUGGCUACUCAAGCUGA-3' (SEQ ID NO: 3408)
3'-UCGCACCUGUUACCGAUGAGUUCGACU-5' (SEQ ID NO: 1190)

βc-285 Target: 5'-AGCGTGGACAATGGCTACTCAAGCTGA-3' (SEQ ID NO: 2299)

5'-GUGGACAAUGGCUACUCAAGCUGAU-3' (SEQ ID NO: 3409)
3'-CGCACCUGUUACCGAUGAGUUCGACUA-5' (SEQ ID NO: 1191)

βc-286 Target: 5'-GCGTGGACAATGGCTACTCAAGCTGAT-3' (SEQ ID NO: 2300)

5'-UGGACAAUGGCUACUCAAGCUGAUU-3' (SEQ ID NO: 3410)
3'-GCACCUGUUACCGAUGAGUUCGACUAA-5' (SEQ ID NO: 1192)

βc-287 Target: 5'-CGTGGACAATGGCTACTCAAGCTGATT-3' (SEQ ID NO: 2301)

5'-GGACAAUGGCUACUCAAGCUGAUUU-3' (SEQ ID NO: 3411)
3'-CACCUGUUACCGAUGAGUUCGACUAAA-5' (SEQ ID NO: 1193)

βc-288 Target: 5'-GTGGACAATGGCTACTCAAGCTGATTT-3' (SEQ ID NO: 2302)

5'-GACAAUGGCUACUCAAGCUGAUUUG-3' (SEQ ID NO: 3412)
3'-ACCUGUUACCGAUGAGUUCGACUAAAC-5' (SEQ ID NO: 1194)

βc-289 Target: 5'-TGGACAATGGCTACTCAAGCTGATTTG-3' (SEQ ID NO: 2303)

5'-ACAAUGGCUACUCAAGCUGAUUUGA-3' (SEQ ID NO: 3413)
3'-CCUGUUACCGAUGAGUUCGACUAAACU-5' (SEQ ID NO: 1195)

βc-290 Target: 5'-GGACAATGGCTACTCAAGCTGATTTGA-3' (SEQ ID NO: 2304)

5'-CAAUGGCUACUCAAGCUGAUUUGAU-3' (SEQ ID NO: 3414)
3'-CUGUUACCGAUGAGUUCGACUAAACUA-5' (SEQ ID NO: 1196)

βc-291 Target: 5'-GACAATGGCTACTCAAGCTGATTTGAT-3' (SEQ ID NO: 2305)

5'-UGAUGGAGUUGGACAUGGCCAUGGA-3' (SEQ ID NO: 3415)
3'-AAACUACCUCAACCUGUACCGGUACCU-5' (SEQ ID NO: 1197)

βc-312 Target: 5'-TTTGATGGAGTTGGACATGGCCATGGA-3' (SEQ ID NO: 2306)

5'-GAUGGAGUUGGACAUGGCCAUGGAA-3' (SEQ ID NO: 3416)
3'-AACUACCUCAACCUGUACCGGUACCUU-5' (SEQ ID NO: 1198)

βc-313 Target: 5'-TTGATGGAGTTGGACATGGCCATGGAA-3' (SEQ ID NO: 2307)

5'-AUGGAGUUGGACAUGGCCAUGGAAC-3' (SEQ ID NO: 3417)
3'-ACUACCUCAACCUGUACCGGUACCUUG-5' (SEQ ID NO: 1199)

βc-314 Target: 5'-TGATGGAGTTGGACATGGCCATGGAAC-3' (SEQ ID NO: 2308)

5'-UGGAGUUGGACAUGGCCAUGGAACC-3' (SEQ ID NO: 3418)
3'-CUACCUCAACCUGUACCGGUACCUUGG-5' (SEQ ID NO: 1200)

βc-315 Target: 5'-GATGGAGTTGGACATGGCCATGGAACC-3' (SEQ ID NO: 2309)

5'-GGAGUUGGACAUGGCCAUGGAACCA-3' (SEQ ID NO: 3419)
3'-UACCUCAACCUGUACCGGUACCUUGGU-5' (SEQ ID NO: 1201)

βc-316 Target: 5'-ATGGAGTTGGACATGGCCATGGAACCA-3' (SEQ ID NO: 2310)

5'-GAGUUGGACAUGGCCAUGGAACCAG-3' (SEQ ID NO: 3420)
3'-ACCUCAACCUGUACCGGUACCUUGGUC-5' (SEQ ID NO: 1202)

βc-317 Target: 5'-TGGAGTTGGACATGGCCATGGAACCAG-3' (SEQ ID NO: 2311)

5'-AGUUGGACAUGGCCAUGGAACCAGA-3' (SEQ ID NO: 3421)
3'-CCUCAACCUGUACCGGUACCUUGGUCU-5' (SEQ ID NO: 1203)

βc-318 Target: 5'-GGAGTTGGACATGGCCATGGAACCAGA-3' (SEQ ID NO: 2312)

5'-UCUGGAAUCCAUUCUGGUGCCACUA-3' (SEQ ID NO: 3422)
3'-UGAGACCUUAGGUAAGACCACGGUGAU-5' (SEQ ID NO: 1204)

βc-389 Target: 5'-ACTCTGGAATCCATTCTGGTGCCACTA-3' (SEQ ID NO: 2313)

5'-CUGGAAUCCAUUCUGGUGCCACUAC-3' (SEQ ID NO: 3423)
3'-GAGACCUUAGGUAAGACCACGGUGAUG-5' (SEQ ID NO: 1205)

βc-390 Target: 5'-CTCTGGAATCCATTCTGGTGCCACTAC-3' (SEQ ID NO: 2314)

5'-UGGAAUCCAUUCUGGUGCCACUACC-3' (SEQ ID NO: 3424)
3'-AGACCUUAGGUAAGACCACGGUGAUGG-5' (SEQ ID NO: 1206)

βc-391 Target: 5'-TCTGGAATCCATTCTGGTGCCACTACC-3' (SEQ ID NO: 2315)

5'-GGAAUCCAUUCUGGUGCCACUACCA-3' (SEQ ID NO: 3425)
3'-GACCUUAGGUAAGACCACGGUGAUGGU-5' (SEQ ID NO: 1207)

βc-392 Target: 5'-CTGGAATCCATTCTGGTGCCACTACCA-3' (SEQ ID NO: 2316)

5'-GAAUCCAUUCUGGUGCCACUACCAC-3' (SEQ ID NO: 3426)
3'-ACCUUAGGUAAGACCACGGUGAUGGUG-5' (SEQ ID NO: 1208)

βc-393 Target: 5'-TGGAATCCATTCTGGTGCCACTACCAC-3' (SEQ ID NO: 2317)

5'-UAGAUGAGGGCAUGCAGAUCCCAUC-3' (SEQ ID NO: 3427)
3'-UAAUCUACUCCCGUACGUCUAGGGUAG-5' (SEQ ID NO: 1209)

βc-600 Target: 5'-ATTAGATGAGGGCATGCAGATCCCATC-3' (SEQ ID NO: 2318)

5'-AGAUGAGGGCAUGCAGAUCCCAUCU-3' (SEQ ID NO: 3428)
3'-AAUCUACUCCCGUACGUCUAGGGUAGA-5' (SEQ ID NO: 1210)

βc-601 Target: 5'-TTAGATGAGGGCATGCAGATCCCATCT-3' (SEQ ID NO: 2319)

5'-GAUGAGGGCAUGCAGAUCCCAUCUA-3' (SEQ ID NO: 3429)
3'-AUCUACUCCCGUACGUCUAGGGUAGAU-5' (SEQ ID NO: 1211)

βc-602 Target: 5'-TAGATGAGGGCATGCAGATCCCATCTA-3' (SEQ ID NO: 2320)

5'-AUGAGGGCAUGCAGAUCCCAUCUAC-3' (SEQ ID NO: 3430)
3'-UCUACUCCCGUACGUCUAGGGUAGAUG-5' (SEQ ID NO: 1212)

βc-603 Target: 5'-AGATGAGGGCATGCAGATCCCATCTAC-3' (SEQ ID NO: 2321)

5'-UGAGGGCAUGCAGAUCCCAUCUACA-3' (SEQ ID NO: 3431)
3'-CUACUCCCGUACGUCUAGGGUAGAUGU-5' (SEQ ID NO: 1213)

βc-604 Target: 5'-GATGAGGGCATGCAGATCCCATCTACA-3' (SEQ ID NO: 2322)

5'-GAGGGCAUGCAGAUCCCAUCUACAC-3' (SEQ ID NO: 3432)
3'-UACUCCCGUACGUCUAGGGUAGAUGUG-5' (SEQ ID NO: 1214)

βc-605 Target: 5'-ATGAGGGCATGCAGATCCCATCTACAC-3' (SEQ ID NO: 2323)

5'-GCUGCUCAUCCCACUAAUGUCCAGC-3' (SEQ ID NO: 3433)
3'-UACGACGAGUAGGGUGAUUACAGGUCG-5' (SEQ ID NO: 1215)

βc-638 Target: 5'-ATGCTGCTCATCCCACTAATGTCCAGC-3' (SEQ ID NO: 2324)

5'-CUGCUCAUCCCACUAAUGUCCAGCG-3' (SEQ ID NO: 3434)
3'-ACGACGAGUAGGGUGAUUACAGGUCGC-5' (SEQ ID NO: 1216)

βc-639 Target: 5'-TGCTGCTCATCCCACTAATGTCCAGCG-3' (SEQ ID NO: 2325)

5'-UGCUCAUCCCACUAAUGUCCAGCGU-3' (SEQ ID NO: 3435)
3'-CGACGAGUAGGGUGAUUACAGGUCGCA-5' (SEQ ID NO: 1217)

βc-640 Target: 5'-GCTGCTCATCCCACTAATGTCCAGCGT-3' (SEQ ID NO: 2326)

5'-GCUCAUCCCACUAAUGUCCAGCGUU-3' (SEQ ID NO: 3436)
3'-GACGAGUAGGGUGAUUACAGGUCGCAA-5' (SEQ ID NO: 1218)

βc-641 Target: 5'-CTGCTCATCCCACTAATGTCCAGCGTT-3' (SEQ ID NO: 2327)

5'-CUCAUCCCACUAAUGUCCAGCGUUU-3' (SEQ ID NO: 3437)
3'-ACGAGUAGGGUGAUUACAGGUCGCAAA-5' (SEQ ID NO: 1219)

βc-642 Target: 5'-TGCTCATCCCACTAATGTCCAGCGTTT-3' (SEQ ID NO: 2328)

5'-UCAUCCCACUAAUGUCCAGCGUUUG-3' (SEQ ID NO: 3438)
3'-CGAGUAGGGUGAUUACAGGUCGCAAAC-5' (SEQ ID NO: 1220)

βc-643 Target: 5'-GCTCATCCCACTAATGTCCAGCGTTTG-3' (SEQ ID NO: 2329)

5'-CAUCCCACUAAUGUCCAGCGUUUGG-3' (SEQ ID NO: 3439)
3'-GAGUAGGGUGAUUACAGGUCGCAAACC-5' (SEQ ID NO: 1221)

βc-644 Target: 5'-CTCATCCCACTAATGTCCAGCGTTTGG-3' (SEQ ID NO: 2330)

5'-AUCCCACUAAUGUCCAGCGUUUGGC-3' (SEQ ID NO: 3440)
3'-AGUAGGGUGAUUACAGGUCGCAAACCG-5' (SEQ ID NO: 1222)

βc-645 Target: 5'-TCATCCCACTAATGTCCAGCGTTTGGC-3' (SEQ ID NO: 2331)

5'-UUGGCUGAACCAUCACAGAUGCUGA-3' (SEQ ID NO: 3441)
3'-CAAACCGACUUGGUAGUGUCUACGACU-5' (SEQ ID NO: 1223)

βc-665 Target: 5'-GTTTGGCTGAACCATCACAGATGCTGA-3' (SEQ ID NO: 2332)

5'-UGGCUGAACCAUCACAGAUGCUGAA-3' (SEQ ID NO: 3442)
3'-AAACCGACUUGGUAGUGUCUACGACUU-5' (SEQ ID NO: 1224)

βc-666 Target: 5'-TTTGGCTGAACCATCACAGATGCTGAA-3' (SEQ ID NO: 2333)

5'-GGCUGAACCAUCACAGAUGCUGAAA-3' (SEQ ID NO: 3443)
3'-AACCGACUUGGUAGUGUCUACGACUUU-5' (SEQ ID NO: 1225)

βc-667 Target: 5'-TTGGCTGAACCATCACAGATGCTGAAA-3' (SEQ ID NO: 2334)

5'-GAACUUGCCACACGUGCAAUCCCUG-3' (SEQ ID NO: 3444)
3'-GUCUUGAACGGUGUGCACGUUAGGGAC-5' (SEQ ID NO: 1226)

βc-731 Target: 5'-CAGAACTTGCCACACGTGCAATCCCTG-3' (SEQ ID NO: 2335)

5'-AACUUGCCACACGUGCAAUCCCUGA-3' (SEQ ID NO: 3445)
3'-UCUUGAACGGUGUGCACGUUAGGGACU-5' (SEQ ID NO: 1227)

βc-732 Target: 5'-AGAACTTGCCACACGTGCAATCCCTGA-3' (SEQ ID NO: 2336)

5'-GUUAUGGUCCAUCAGCUUUCUAAAA-3' (SEQ ID NO: 3446)
3'-GUCAAUACCAGGUAGUCGAAAGAUUUU-5' (SEQ ID NO: 1228)

βc-809 Target: 5'-CAGTTATGGTCCATCAGCTTTCTAAAA-3' (SEQ ID NO: 2337)

5'-UUAUGGUCCAUCAGCUUUCUAAAAA-3' (SEQ ID NO: 3447)
3'-UCAAUACCAGGUAGUCGAAAGAUUUUU-5' (SEQ ID NO: 1229)

βc-810 Target: 5'-AGTTATGGTCCATCAGCTTTCTAAAAA-3' (SEQ ID NO: 2338)

5'-AAAAAGGAAGCUUCCAGACACGCUA-3' (SEQ ID NO: 3448)
3'-GAUUUUUCCUUCGAAGGUCUGUGCGAU-5' (SEQ ID NO: 1230)

βc-830 Target: 5'-CTAAAAAGGAAGCTTCCAGACACGCTA-3' (SEQ ID NO: 2339)

5'-AAAAGGAAGCUUCCAGACACGCUAU-3' (SEQ ID NO: 3449)
3'-AUUUUUCCUUCGAAGGUCUGUGCGAUA-5' (SEQ ID NO: 1231)

βc-831 Target: 5'-TAAAAAGGAAGCTTCCAGACACGCTAT-3' (SEQ ID NO: 2340)

5'-ACCAUGCAGAAUACAAAUGAUGUAG-3' (SEQ ID NO: 3450)
3'-CAUGGUACGUCUUAUGUUUACUACAUC-5' (SEQ ID NO: 1232)

βc-893 Target: 5'-GTACCATGCAGAATACAAATGATGTAG-3' (SEQ ID NO: 2341)

5'-CCAUGCAGAAUACAAAUGAUGUAGA-3' (SEQ ID NO: 3451)
3'-AUGGUACGUCUUAUGUUUACUACAUCU-5' (SEQ ID NO: 1233)

βc-894 Target: 5'-TACCATGCAGAATACAAATGATGTAGA-3' (SEQ ID NO: 2342)

5'-CAUGCAGAAUACAAAUGAUGUAGAA-3' (SEQ ID NO: 3452)
3'-UGGUACGUCUUAUGUUUACUACAUCUU-5' (SEQ ID NO: 1234)

βc-895 Target: 5'-ACCATGCAGAATACAAATGATGTAGAA-3' (SEQ ID NO: 2343)

5'-AUGCAGAAUACAAAUGAUGUAGAAA-3' (SEQ ID NO: 3453)
3'-GGUACGUCUUAUGUUUACUACAUCUUU-5' (SEQ ID NO: 1235)

βc-896 Target: 5'-CCATGCAGAATACAAATGATGTAGAAA-3' (SEQ ID NO: 2344)

5'-UGCAGAAUACAAAUGAUGUAGAAAC-3' (SEQ ID NO: 3454)
3'-GUACGUCUUAUGUUUACUACAUCUUUG-5' (SEQ ID NO: 1236)

βc-897 Target: 5'-CATGCAGAATACAAATGATGTAGAAAC-3' (SEQ ID NO: 2345)

5'-GCAGAAUACAAAUGAUGUAGAAACA-3' (SEQ ID NO: 3455)
3'-UACGUCUUAUGUUUACUACAUCUUUGU-5' (SEQ ID NO: 1237)

βc-898 Target: 5'-ATGCAGAATACAAATGATGTAGAAACA-3' (SEQ ID NO: 2346)

5'-CAGAAUACAAAUGAUGUAGAAACAG-3' (SEQ ID NO: 3456)
3'-ACGUCUUAUGUUUACUACAUCUUUGUC-5' (SEQ ID NO: 1238)

βc-899 Target: 5'-TGCAGAATACAAATGATGTAGAAACAG-3' (SEQ ID NO: 2347)

5'-AGAAUACAAAUGAUGUAGAAACAGC-3' (SEQ ID NO: 3457)
3'-CGUCUUAUGUUUACUACAUCUUUGUCG-5' (SEQ ID NO: 1239)

βc-900 Target: 5'-GCAGAATACAAATGATGTAGAAACAGC-3' (SEQ ID NO: 2348)

5'-CUGGCCAUCUUUAAGUCUGGAGGCA-3' (SEQ ID NO: 3458)
3'-AUGACCGGUAGAAAUUCAGACCUCCGU-5' (SEQ ID NO: 1240)

βc-977 Target: 5'-TACTGGCCATCTTTAAGTCTGGAGGCA-3' (SEQ ID NO: 2349)

5'-UGGCCAUCUUUAAGUCUGGAGGCAU-3' (SEQ ID NO: 3459)
3'-UGACCGGUAGAAAUUCAGACCUCCGUA-5' (SEQ ID NO: 1241)

βc-978 Target: 5'-ACTGGCCATCTTTAAGTCTGGAGGC-3' (SEQ ID NO: 2350)

5'-GAAGGAGCUAAAAUGGCAGUGCGUU-3' (SEQ ID NO: 3460)
3'-UUCUUCCUCGAUUUUACCGUCACGCAA-5' (SEQ ID NO: 1242)

βc-1091 Target: 5'-AAGAAGGAGCTAAAATGGCAGTGCGTT-3' (SEQ ID NO: 2351)

5'-AAGGAGCUAAAAUGGCAGUGCGUUU-3' (SEQ ID NO: 3461)
3'-UCUUCCUCGAUUUUACCGUCACGCAAA-5' (SEQ ID NO: 1243)

βc-1092 Target: 5'-AGAAGGAGCTAAAATGGCAGTGCGTTT-3' (SEQ ID NO: 2352)

5'-AGGAGCUAAAAUGGCAGUGCGUUUA-3' (SEQ ID NO: 3462)
3'-CUUCCUCGAUUUUACCGUCACGCAAAU-5' (SEQ ID NO: 1244)

βc-1093 Target: 5'-GAAGGAGCTAAAATGGCAGTGCGTTTA-3' (SEQ ID NO: 2353)

5'-GGAGCUAAAAUGGCAGUGCGUUUAG-3' (SEQ ID NO: 3463)
3'-UUCCUCGAUUUUACCGUCACGCAAAUC-5' (SEQ ID NO: 1245)

βc-1094 Target: 5'-AAGGAGCTAAAATGGCAGTGCGTTTAG-3' (SEQ ID NO: 2354)

5'-GAGCUAAAAUGGCAGUGCGUUUAGC-3' (SEQ ID NO: 3464)
3'-UCCUCGAUUUUACCGUCACGCAAAUCG-5' (SEQ ID NO: 1246)

βc-1095 Target: 5'-AGGAGCTAAAATGGCAGTGCGTTTAGC-3' (SEQ ID NO: 2355)

5'-CUGUGGACCACAAGCAGAGUGCUGA-3' (SEQ ID NO: 3465)
3'-AUGACACCUGGUGUUCGUCUCACGACU-5' (SEQ ID NO: 1247)

βc-1301 Target: 5'-TACTGTGGACCACAAGCAGAGTGCTGA-3' (SEQ ID NO: 2356)

5'-UGUGGACCACAAGCAGAGUGCUGAA-3' (SEQ ID NO: 3466)
3'-UGACACCUGGUGUUCGUCUCACGACUU-5' (SEQ ID NO: 1248)

βc-1302 Target: 5'-ACTGTGGACCACAAGCAGAGTGCTGAA-3' (SEQ ID NO: 2357)

5'-GUGGACCACAAGCAGAGUGCUGAAG-3' (SEQ ID NO: 3467)
3'-GACACCUGGUGUUCGUCUCACGACUUC-5' (SEQ ID NO: 1249)

βc-1303 Target: 5'-CTGTGGACCACAAGCAGAGTGCTGAAG-3' (SEQ ID NO: 2358)

5'-UGGACCACAAGCAGAGUGCUGAAGG-3' (SEQ ID NO: 3468)
3'-ACACCUGGUGUUCGUCUCACGACUUCC-5' (SEQ ID NO: 1250)

βc-1304 Target: 5'-TGTGGACCACAAGCAGAGTGCTGAAGG-3' (SEQ ID NO: 2359)

5'-GGACCACAAGCAGAGUGCUGAAGGU-3' (SEQ ID NO: 3469)
3'-CACCUGGUGUUCGUCUCACGACUUCCA-5' (SEQ ID NO: 1251)

βc-1305 Target: 5'-GTGGACCACAAGCAGAGTGCTGAAGGT-3' (SEQ ID NO: 2360)

5'-GACCACAAGCAGAGUGCUGAAGGUG-3' (SEQ ID NO: 3470)
3'-ACCUGGUGUUCGUCUCACGACUUCCAC-5' (SEQ ID NO: 1252)

βc-1306 Target: 5'-TGGACCACAAGCAGAGTGCTGAAGGTG-3' (SEQ ID NO: 2361)

5'-ACCACAAGCAGAGUGCUGAAGGUGC-3' (SEQ ID NO: 3471)
3'-CCUGGUGUUCGUCUCACGACUUCCACG-5' (SEQ ID NO: 1253)

βc-1307 Target: 5'-GGACCACAAGCAGAGTGCTGAAGGTGC-3' (SEQ ID NO: 2362)

5'-CCACAAGCAGAGUGCUGAAGGUGCU-3' (SEQ ID NO: 3472)
3'-CUGGUGUUCGUCUCACGACUUCCACGA-5' (SEQ ID NO: 1254)

βc-1308 Target: 5'-GACCACAAGCAGAGTGCTGAAGGTGCT-3' (SEQ ID NO: 2363)

5'-CACAAGCAGAGUGCUGAAGGUGCUA-3' (SEQ ID NO: 3473)
3'-UGGUGUUCGUCUCACGACUUCCACGAU-5' (SEQ ID NO: 1255)

βc-1309 Target: 5'-ACCACAAGCAGAGTGCTGAAGGTGCTA-3' (SEQ ID NO: 2364)

5'-ACAAGCAGAGUGCUGAAGGUGCUAU-3' (SEQ ID NO: 3474)
3'-GGUGUUCGUCUCACGACUUCCACGAUA-5' (SEQ ID NO: 1256)

βc-1310 Target: 5'-CCACAAGCAGAGTGCTGAAGGTGCTAT-3' (SEQ ID NO: 2365)

5'-CAAGCAGAGUGCUGAAGGUGCUAUC-3' (SEQ ID NO: 3475)
3'-GUGUUCGUCUCACGACUUCCACGAUAG-5' (SEQ ID NO: 1257)

βc-1311 Target: 5'-CACAAGCAGAGTGCTGAAGGTGCTATC-3' (SEQ ID NO: 2366)

5'-AAGCAGAGUGCUGAAGGUGCUAUCU-3' (SEQ ID NO: 3476)
3'-UGUUCGUCUCACGACUUCCACGAUAGA-5' (SEQ ID NO: 1258)

βc-1312 Target: 5'-ACAAGCAGAGTGCTGAAGGTGCTATCT-3' (SEQ ID NO: 2367)

5'-AGCAGAGUGCUGAAGGUGCUAUCUG-3' (SEQ ID NO: 3477)
3'-GUUCGUCUCACGACUUCCACGAUAGAC-5' (SEQ ID NO: 1259)

βc-1313 Target: 5'-CAAGCAGAGTGCTGAAGGTGCTATCTG-3' (SEQ ID NO: 2368)

5'-GCAGAGUGCUGAAGGUGCUAUCUGU-3' (SEQ ID NO: 3478)
3'-UUCGUCUCACGACUUCCACGAUAGACA-5' (SEQ ID NO: 1260)

βc-1314 Target: 5'-AAGCAGAGTGCTGAAGGTGCTATCTGT-3' (SEQ ID NO: 2369)

5'-AACUGUCUUUGGACUCUCAGGAAUC-3' (SEQ ID NO: 3479)
3'-UCUUGACAGAAACCUGAGAGUCCUUAG-5' (SEQ ID NO: 1261)

βc-1430 Target: 5'-AGAACTGTCTTTGGACTCTCAGGAATC-3' (SEQ ID NO: 2370)

5'-ACUGUCUUUGGACUCUCAGGAAUCU-3' (SEQ ID NO: 3480)
3'-CUUGACAGAAACCUGAGAGUCCUUAGA-5' (SEQ ID NO: 1262)

βc-1431 Target: 5'-GAACTGTCTTTGGACTCTCAGGAATCT-3' (SEQ ID NO: 2371)

5'-GAUGAUAUAAAUGUGGUCACCUGUG-3' (SEQ ID NO: 3481)
3'-GUCUACUAUAUUUACACCAGUGGACAC-5' (SEQ ID NO: 1263)

βc-1526 Target: 5'-CAGATGATATAAATGTGGTCACCTGTG-3' (SEQ ID NO: 2372)

5'-AUGAUAUAAAUGUGGUCACCUGUGC-3' (SEQ ID NO: 3482)
3'-UCUACUAUAUUUACACCAGUGGACACG-5' (SEQ ID NO: 1264)

βc-1527 Target: 5'-AGATGATATAAATGTGGTCACCTGTGC-3' (SEQ ID NO: 2373)

5'-UGAUAUAAAUGUGGUCACCUGUGCA-3' (SEQ ID NO: 3483)
3'-CUACUAUAUUUACACCAGUGGACACGU-5' (SEQ ID NO: 1265)

βc-1528 Target: 5'-GATGATATAAATGTGGTCACCTGTGCA-3' (SEQ ID NO: 2374)

5'-GAUAUAAAUGUGGUCACCUGUGCAG-3' (SEQ ID NO: 3484)
3'-UACUAUAUUUACACCAGUGGACACGUC-5' (SEQ ID NO: 1266)

βc-1529 Target: 5'-ATGATATAAATGTGGTCACCTGTGCAG-3' (SEQ ID NO: 2375)

5'-AUAUAAAUGUGGUCACCUGUGCAGC-3' (SEQ ID NO: 3485)
3'-ACUAUAUUUACACCAGUGGACACGUCG-5' (SEQ ID NO: 1267)

βc-1530 Target: 5'-TGATATAAATGTGGTCACCTGTGCAGC-3' (SEQ ID NO: 2376)

5'-UAUAAAUGUGGUCACCUGUGCAGCU-3' (SEQ ID NO: 3486)
3'-CUAUAUUUACACCAGUGGACACGUCGA-5' (SEQ ID NO: 1268)

βc-1531 Target: 5'-GATATAAATGTGGTCACCTGTGCAGCT-3' (SEQ ID NO: 2377)

5'-AUAAAUGUGGUCACCUGUGCAGCUG-3' (SEQ ID NO: 3487)
3'-UAUAUUUACACCAGUGGACACGUCGAC-5' (SEQ ID NO: 1269)

βc-1532 Target: 5'-ATATAAATGTGGTCACCTGTGCAGCTG-3' (SEQ ID NO: 2378)

5'-UAAAUGUGGUCACCUGUGCAGCUGG-3' (SEQ ID NO: 3488)
3'-AUAUUUACACCAGUGGACACGUCGACC-5' (SEQ ID NO: 1270)

βc-1533 Target: 5'-TATAAATGTGGTCACCTGTGCAGCTGG-3' (SEQ ID NO: 2379)

5'-AAAUGUGGUCACCUGUGCAGCUGGA-3' (SEQ ID NO: 3489)
3'-UAUUUACACCAGUGGACACGUCGACCU-5' (SEQ ID NO: 1271)

βc-1534 Target: 5'-ATAAATGTGGTCACCTGTGCAGCTGGA-3' (SEQ ID NO: 2380)

5'-AAUGUGGUCACCUGUGCAGCUGGAA-3' (SEQ ID NO: 3490)
3'-AUUUACACCAGUGGACACGUCGACCUU-5' (SEQ ID NO: 1272)

βc-1535 Target: 5'-TAAATGTGGTCACCTGTGCAGCTGGAA-3' (SEQ ID NO: 2381)

5'-AUGUGGUCACCUGUGCAGCUGGAAU-3' (SEQ ID NO: 3491)
3'-UUUACACCAGUGGACACGUCGACCUUA-5' (SEQ ID NO: 1273)

βc-1536 Target: 5'-AAATGTGGTCACCTGTGCAGCTGGAAT-3' (SEQ ID NO: 2382)

5'-UGUGGUCACCUGUGCAGCUGGAAUU-3' (SEQ ID NO: 3492)
3'-UUACACCAGUGGACACGUCGACCUUAA-5' (SEQ ID NO: 1274)

βc-1537 Target: 5'-AATGTGGTCACCTGTGCAGCTGGAATT-3' (SEQ ID NO: 2383)

5'-GUGGUCACCUGUGCAGCUGGAAUUC-3' (SEQ ID NO: 3493)
3'-UACACCAGUGGACACGUCGACCUUAAG-5' (SEQ ID NO: 1275)

βc-1538 Target: 5'-ATGTGGTCACCTGTGCAGCTGGAATTC-3' (SEQ ID NO: 2384)

5'-UGGUCACCUGUGCAGCUGGAAUUCU-3' (SEQ ID NO: 3494)
3'-ACACCAGUGGACACGUCGACCUUAAGA-5' (SEQ ID NO: 1276)

βc-1539 Target: 5'-TGTGGTCACCTGTGCAGCTGGAATTCT-3' (SEQ ID NO: 2385)

5'-GGUCACCUGUGCAGCUGGAAUUCUU-3' (SEQ ID NO: 3495)
3'-CACCAGUGGACACGUCGACCUUAAGAA-5' (SEQ ID NO: 1277)

βc-1540 Target: 5'-GTGGTCACCTGTGCAGCTGGAATTCTT-3' (SEQ ID NO: 2386)

5'-GUCACCUGUGCAGCUGGAAUUCUUU-3' (SEQ ID NO: 3496)
3'-ACCAGUGGACACGUCGACCUUAAGAAA-5' (SEQ ID NO: 1278)

βc-1541 Target: 5'-TGGTCACCTGTGCAGCTGGAATTCTTT-3' (SEQ ID NO: 2387)

5'-UCACCUGUGCAGCUGGAAUUCUUUC-3' (SEQ ID NO: 3497)
3'-CCAGUGGACACGUCGACCUUAAGAAAG-5' (SEQ ID NO: 1279)

βc-1542 Target: 5'-GGTCACCTGTGCAGCTGGAATTCTTTC-3' (SEQ ID NO: 2388)

5'-CACCUGUGCAGCUGGAAUUCUUUCU-3' (SEQ ID NO: 3498)
3'-CAGUGGACACGUCGACCUUAAGAAAGA-5' (SEQ ID NO: 1280)

βc-1543 Target: 5'-GTCACCTGTGCAGCTGGAATTCTTTCT-3' (SEQ ID NO: 2389)

5'-ACCUGUGCAGCUGGAAUUCUUUCUA-3' (SEQ ID NO: 3499)
3'-AGUGGACACGUCGACCUUAAGAAAGAU-5' (SEQ ID NO: 1281)

βc-1544 Target: 5'-TCACCTGTGCAGCTGGAATTCTTTCTA-3' (SEQ ID NO: 2390)

5'-CCUGUGCAGCUGGAAUUCUUUCUAA-3' (SEQ ID NO: 3500)
3'-GUGGACACGUCGACCUUAAGAAAGAUU-5' (SEQ ID NO: 1282)

βc-1545 Target: 5'-CACCTGTGCAGCTGGAATTCTTTCTAA-3' (SEQ ID NO: 2391)

5'-UCUAACCUCACUUGCAAUAAUUAUA-3' (SEQ ID NO: 3501)
3'-AAAGAUUGGAGUGAACGUUAUUAAUAU-5' (SEQ ID NO: 1283)

βc-1565 Target: 5'-TTTCTAACCTCACTTGCAATAATTATA-3' (SEQ ID NO: 2392)

5'-CUAACCUCACUUGCAAUAAUUAUAA-3' (SEQ ID NO: 3502)
3'-AAGAUUGGAGUGAACGUUAUUAAUAUU-5' (SEQ ID NO: 1284)

βc-1566 Target: 5'-TTCTAACCTCACTTGCAATAATTATAA-3' (SEQ ID NO: 2393)

5'-UAACCUCACUUGCAAUAAUUAUAAG-3' (SEQ ID NO: 3503)
3'-AGAUUGGAGUGAACGUUAUUAAUAUUC-5' (SEQ ID NO: 1285)

βc-1567 Target: 5'-TCTAACCTCACTTGCAATAATTATAAG-3' (SEQ ID NO: 2394)

5'-AACCUCACUUGCAAUAAUUAUAAGA-3' (SEQ ID NO: 3504)
3'-GAUUGGAGUGAACGUUAUUAAUAUUCU-5' (SEQ ID NO: 1286)

βc-1568 Target: 5'-CTAACCTCACTTGCAATAATTATAAGA-3' (SEQ ID NO: 2395)

5'-ACCUCACUUGCAAUAAUUAUAAGAA-3' (SEQ ID NO: 3505)
3'-AUUGGAGUGAACGUUAUUAAUAUUCUU-5' (SEQ ID NO: 1287)

βc-1569 Target: 5'-TAACCTCACTTGCAATAATTATAAGAA-3' (SEQ ID NO: 2396)

5'-GCUGGUGACAGGGAAGACAUCACUG-3' (SEQ ID NO: 3506)
3'-CCCGACCACUGUCCCUUCUGUAGUGAC-5' (SEQ ID NO: 1288)

βc-1652 Target: 5'-GGGCTGGTGACAGGGAAGACATCACTG-3' (SEQ ID NO: 2397)

5'-CUGGUGACAGGGAAGACAUCACUGA-3' (SEQ ID NO: 3507)
3'-CCGACCACUGUCCCUUCUGUAGUGACU-5' (SEQ ID NO: 1289)

βc-1653 Target: 5'-GGCTGGTGACAGGGAAGACATCACTGA-3' (SEQ ID NO: 2398)

5'-UGGUGACAGGGAAGACAUCACUGAG-3' (SEQ ID NO: 3508)
3'-CGACCACUGUCCCUUCUGUAGUGACUC-5' (SEQ ID NO: 1290)

βc-1654 Target: 5'-GCTGGTGACAGGGAAGACATCACTGAG-3' (SEQ ID NO: 2399)

5'-GGUGACAGGGAAGACAUCACUGAGC-3' (SEQ ID NO: 3509)
3'-GACCACUGUCCCUUCUGUAGUGACUCG-5' (SEQ ID NO: 1291)

βc-1655 Target: 5'-CTGGTGACAGGGAAGACATCACTGAGC-3' (SEQ ID NO: 2400)

5'-GUGACAGGGAAGACAUCACUGAGCC-3' (SEQ ID NO: 3510)
3'-ACCACUGUCCCUUCUGUAGUGACUCGG-5' (SEQ ID NO: 1292)

βc-1656 Target: 5'-TGGTGACAGGGAAGACATCACTGAGCC-3' (SEQ ID NO: 2401)

5'-UGACAGGGAAGACAUCACUGAGCCU-3' (SEQ ID NO: 3511)
3'-CCACUGUCCCUUCUGUAGUGACUCGGA-5' (SEQ ID NO: 1293)

βc-1657 Target: 5'-GGTGACAGGGAAGACATCACTGAGCCT-3' (SEQ ID NO: 2402)

5'-GACAGGGAAGACAUCACUGAGCCUG-3' (SEQ ID NO: 3512)
3'-CACUGUCCCUUCUGUAGUGACUCGGAC-5' (SEQ ID NO: 1294)

βc-1658 Target: 5'-GTGACAGGGAAGACATCACTGAGCCTG-3' (SEQ ID NO: 2403)

5'-ACAGGGAAGACAUCACUGAGCCUGC-3' (SEQ ID NO: 3513)
3'-ACUGUCCCUUCUGUAGUGACUCGGACG-5' (SEQ ID NO: 1295)

βc-1659 Target: 5'-TGACAGGGAAGACATCACTGAGCCTGC-3' (SEQ ID NO: 2404)

5'-CAGGGAAGACAUCACUGAGCCUGCC-3' (SEQ ID NO: 3514)
3'-CUGUCCCUUCUGUAGUGACUCGGACGG-5' (SEQ ID NO: 1296)

βc-1660 Target: 5'-GACAGGGAAGACATCACTGAGCCTGCC-3' (SEQ ID NO: 2405)

5'-AGGGAAGACAUCACUGAGCCUGCCA-3' (SEQ ID NO: 3515)
3'-UGUCCCUUCUGUAGUGACUCGGACGGU-5' (SEQ ID NO: 1297)

βc-1661 Target: 5'-ACAGGGAAGACATCACTGAGCCTGCCA-3' (SEQ ID NO: 2406)

5'-GGGAAGACAUCACUGAGCCUGCCAU-3' (SEQ ID NO: 3516)
3'-GUCCCUUCUGUAGUGACUCGGACGGUA-5' (SEQ ID NO: 1298)

βc-1662 Target: 5'-CAGGGAAGACATCACTGAGCCTGCC-3' (SEQ ID NO: 2407)

5'-GGAAGACAUCACUGAGCCUGCCAUC-3' (SEQ ID NO: 3517)
3'-UCCCUUCUGUAGUGACUCGGACGGUAG-5' (SEQ ID NO: 1299)

βc-1663 Target: 5'-AGGGAAGACATCACTGAGCCTGCCATC-3' (SEQ ID NO: 2408)

5'-GAAGACAUCACUGAGCCUGCCAUCU-3' (SEQ ID NO: 3518)
3'-CCCUUCUGUAGUGACUCGGACGGUAGA-5' (SEQ ID NO: 1300)

βc-1664 Target: 5'-GGGAAGACATCACTGAGCCTGCCATCT-3' (SEQ ID NO: 2409)

5'-AAGACAUCACUGAGCCUGCCAUCUG-3' (SEQ ID NO: 3519)
3'-CCUUCUGUAGUGACUCGGACGGUAGAC-5' (SEQ ID NO: 1301)

βc-1665 Target: 5'-GGAAGACATCACTGAGCCTGCCATCTG-3' (SEQ ID NO: 2410)

5'-AGACAUCACUGAGCCUGCCAUCUGU-3' (SEQ ID NO: 3520)
3'-CUUCUGUAGUGACUCGGACGGUAGACA-5' (SEQ ID NO: 1302)

βc-1666 Target: 5'-GAAGACATCACTGAGCCTGCCATCTGT-3' (SEQ ID NO: 2411)

5'-GACAUCACUGAGCCUGCCAUCUGUG-3' (SEQ ID NO: 3521)
3'-UUCUGUAGUGACUCGGACGGUAGACAC-5' (SEQ ID NO: 1303)

βc-1667 Target: 5'-AAGACATCACTGAGCCTGCCATCTGTG-3' (SEQ ID NO: 2412)

5'-ACAUCACUGAGCCUGCCAUCUGUGC-3' (SEQ ID NO: 3522)
3'-UCUGUAGUGACUCGGACGGUAGACACG-5' (SEQ ID NO: 1304)

βc-1668 Target: 5'-AGACATCACTGAGCCTGCCATCTGTGC-3' (SEQ ID NO: 2413)

5'-CAUCACUGAGCCUGCCAUCUGUGCU-3' (SEQ ID NO: 3523)
3'-CUGUAGUGACUCGGACGGUAGACACGA-5' (SEQ ID NO: 1305)

βc-1669 Target: 5'-GACATCACTGAGCCTGCCATCTGTGCT-3' (SEQ ID NO: 2414)

5'-AUCACUGAGCCUGCCAUCUGUGCUC-3' (SEQ ID NO: 3524)
3'-UGUAGUGACUCGGACGGUAGACACGAG-5' (SEQ ID NO: 1306)

βc-1670 Target: 5'-ACATCACTGAGCCTGCCATCTGTGCTC-3' (SEQ ID NO: 2415)

5'-UCACUGAGCCUGCCAUCUGUGCUCU-3' (SEQ ID NO: 3525)
3'-GUAGUGACUCGGACGGUAGACACGAGA-5' (SEQ ID NO: 1307)

βc-1671 Target: 5'-CATCACTGAGCCTGCCATCTGTGCTCT-3' (SEQ ID NO: 2416)

5'-CACUGAGCCUGCCAUCUGUGCUCUU-3' (SEQ ID NO: 3526)
3'-UAGUGACUCGGACGGUAGACACGAGAA-5' (SEQ ID NO: 1308)

βc-1672 Target: 5'-ATCACTGAGCCTGCCATCTGTGCTCTT-3' (SEQ ID NO: 2417)

5'-ACUGAGCCUGCCAUCUGUGCUCUUC-3' (SEQ ID NO: 3527)
3'-AGUGACUCGGACGGUAGACACGAGAAG-5' (SEQ ID NO: 1309)

βc-1673 Target: 5'-TCACTGAGCCTGCCATCTGTGCTCTTC-3' (SEQ ID NO: 2418)

5'-CUGAGCCUGCCAUCUGUGCUCUUCG-3' (SEQ ID NO: 3528)
3'-GUGACUCGGACGGUAGACACGAGAAGC-5' (SEQ ID NO: 1310)

βc-1674 Target: 5'-CACTGAGCCTGCCATCTGTGCTCTTCG-3' (SEQ ID NO: 2419)

5'-UGAGCCUGCCAUCUGUGCUCUUCGU-3' (SEQ ID NO: 3529)
3'-UGACUCGGACGGUAGACACGAGAAGCA-5' (SEQ ID NO: 1311)

βc-1675 Target: 5'-ACTGAGCCTGCCATCTGTGCTCTTCGT-3' (SEQ ID NO: 2420)

5'-GAGCCUGCCAUCUGUGCUCUUCGUC-3' (SEQ ID NO: 3530)
3'-GACUCGGACGGUAGACACGAGAAGCAG-5' (SEQ ID NO: 1312)

βc-1676 Target: 5'-CTGAGCCTGCCATCTGTGCTCTTCGTC-3' (SEQ ID NO: 2421)

5'-AGCCUGCCAUCUGUGCUCUUCGUCA-3' (SEQ ID NO: 3531)
3'-ACUCGGACGGUAGACACGAGAAGCAGU-5' (SEQ ID NO: 1313)

βc-1677 Target: 5'-TGAGCCTGCCATCTGTGCTCTTCGTCA-3' (SEQ ID NO: 2422)

5'-GCCUGCCAUCUGUGCUCUUCGUCAU-3' (SEQ ID NO: 3532)
3'-CUCGGACGGUAGACACGAGAAGCAGUA-5' (SEQ ID NO: 1314)

βc-1678 Target: 5'-GAGCCTGCCATCTGTGCTCTTCGTC-3' (SEQ ID NO: 2423)

5'-CCUGCCAUCUGUGCUCUUCGUCAUC-3' (SEQ ID NO: 3533)
3'-UCGGACGGUAGACACGAGAAGCAGUAG-5' (SEQ ID NO: 1315)

βc-1679 Target: 5'-AGCCTGCCATCTGTGCTCTTCGTCATC-3' (SEQ ID NO: 2424)

5'-CUGCCAUCUGUGCUCUUCGUCAUCU-3' (SEQ ID NO: 3534)
3'-CGGACGGUAGACACGAGAAGCAGUAGA-5' (SEQ ID NO: 1316)

βc-1680 Target: 5'-GCCTGCCATCTGTGCTCTTCGTCATCT-3' (SEQ ID NO: 2425)

5'-UGCCAUCUGUGCUCUUCGUCAUCUG-3' (SEQ ID NO: 3535)
3'-GGACGGUAGACACGAGAAGCAGUAGAC-5' (SEQ ID NO: 1317)

βc-1681 Target: 5'-CCTGCCATCTGTGCTCTTCGTCATCTG-3' (SEQ ID NO: 2426)

5'-GCCAUCUGUGCUCUUCGUCAUCUGA-3' (SEQ ID NO: 3536)
3'-GACGGUAGACACGAGAAGCAGUAGACU-5' (SEQ ID NO: 1318)

βc-1682 Target: 5'-CTGCCATCTGTGCTCTTCGTCATCTGA-3' (SEQ ID NO: 2427)

5'-CCAUCUGUGCUCUUCGUCAUCUGAC-3' (SEQ ID NO: 3537)
3'-ACGGUAGACACGAGAAGCAGUAGACUG-5' (SEQ ID NO: 1319)

βc-1683 Target: 5'-TGCCATCTGTGCTCTTCGTCATCTGAC-3' (SEQ ID NO: 2428)

5'-CAUCUGUGCUCUUCGUCAUCUGACC-3' (SEQ ID NO: 3538)
3'-CGGUAGACACGAGAAGCAGUAGACUGG-5' (SEQ ID NO: 1320)

βc-1684 Target: 5'-GCCATCTGTGCTCTTCGTCATCTGACC-3' (SEQ ID NO: 2429)

5'-AUCUGUGCUCUUCGUCAUCUGACCA-3' (SEQ ID NO: 3539)
3'-GGUAGACACGAGAAGCAGUAGACUGGU-5' (SEQ ID NO: 1321)

βc-1685 Target: 5'-CCATCTGTGCTCTTCGTCATCTGACCA-3' (SEQ ID NO: 2430)

5'-UCUGUGCUCUUCGUCAUCUGACCAG-3' (SEQ ID NO: 3540)
3'-GUAGACACGAGAAGCAGUAGACUGGUC-5' (SEQ ID NO: 1322)

βc-1686 Target: 5'-CATCTGTGCTCTTCGTCATCTGACCAG-3' (SEQ ID NO: 2431)

5'-CUGUGCUCUUCGUCAUCUGACCAGC-3' (SEQ ID NO: 3541)
3'-UAGACACGAGAAGCAGUAGACUGGUCG-5' (SEQ ID NO: 1323)

βc-1687 Target: 5'-ATCTGTGCTCTTCGTCATCTGACCAGC-3' (SEQ ID NO: 2432)

5'-UGUGCUCUUCGUCAUCUGACCAGCC-3' (SEQ ID NO: 3542)
3'-AGACACGAGAAGCAGUAGACUGGUCGG-5' (SEQ ID NO: 1324)

βc-1688 Target: 5'-TCTGTGCTCTTCGTCATCTGACCAGCC-3' (SEQ ID NO: 2433)

5'-GUGCUCUUCGUCAUCUGACCAGCCG-3' (SEQ ID NO: 3543)
3'-GACACGAGAAGCAGUAGACUGGUCGGC-5' (SEQ ID NO: 1325)

βc-1689 Target: 5'-CTGTGCTCTTCGTCATCTGACCAGCCG-3' (SEQ ID NO: 2434)

5'-UGCUCUUCGUCAUCUGACCAGCCGA-3' (SEQ ID NO: 3544)
3'-ACACGAGAAGCAGUAGACUGGUCGGCU-5' (SEQ ID NO: 1326)

βc-1690 Target: 5'-TGTGCTCTTCGTCATCTGACCAGCCGA-3' (SEQ ID NO: 2435)

5'-GCUCUUCGUCAUCUGACCAGCCGAC-3' (SEQ ID NO: 3545)
3'-CACGAGAAGCAGUAGACUGGUCGGCUG-5' (SEQ ID NO: 1327)

βc-1691 Target: 5'-GTGCTCTTCGTCATCTGACCAGCCGAC-3' (SEQ ID NO: 2436)

5'-CUCUUCGUCAUCUGACCAGCCGACA-3' (SEQ ID NO: 3546)
3'-ACGAGAAGCAGUAGACUGGUCGGCUGU-5' (SEQ ID NO: 1328)

βc-1692 Target: 5'-TGCTCTTCGTCATCTGACCAGCCGACA-3' (SEQ ID NO: 2437)

5'-UCUUCGUCAUCUGACCAGCCGACAC-3' (SEQ ID NO: 3547)
3'-CGAGAAGCAGUAGACUGGUCGGCUGUG-5' (SEQ ID NO: 1329)

βc-1693 Target: 5'-GCTCTTCGTCATCTGACCAGCCGACAC-3' (SEQ ID NO: 2438)

5'-CUUCGUCAUCUGACCAGCCGACACC-3' (SEQ ID NO: 3548)
3'-GAGAAGCAGUAGACUGGUCGGCUGUGG-5' (SEQ ID NO: 1330)

βc-1694 Target: 5'-CTCTTCGTCATCTGACCAGCCGACACC-3' (SEQ ID NO: 2439)

5'-UUCGUCAUCUGACCAGCCGACACCA-3' (SEQ ID NO: 3549)
3'-AGAAGCAGUAGACUGGUCGGCUGUGGU-5' (SEQ ID NO: 1331)

βc-1695 Target: 5'-TCTTCGTCATCTGACCAGCCGACACCA-3' (SEQ ID NO: 2440)

5'-CACCCACCAUCCCACUGGCCUCUGA-3' (SEQ ID NO: 3550)
3'-AUGUGGGUGGUAGGGUGACCGGAGACU-5' (SEQ ID NO: 1332)

βc-1787 Target: 5'-TACACCCACCATCCCACTGGCCTCTGA-3' (SEQ ID NO: 2441)

5'-ACCCACCAUCCCACUGGCCUCUGAU-3' (SEQ ID NO: 3551)
3'-UGUGGGUGGUAGGGUGACCGGAGACUA-5' (SEQ ID NO: 1333)

βc-1788 Target: 5'-ACACCCACCATCCCACTGGCCTCTGAT-3' (SEQ ID NO: 2442)

5'-CCCACCAUCCCACUGGCCUCUGAUA-3' (SEQ ID NO: 3552)
3'-GUGGGUGGUAGGGUGACCGGAGACUAU-5' (SEQ ID NO: 1334)

βc-1789 Target: 5'-CACCCACCATCCCACTGGCCTCTGATA-3' (SEQ ID NO: 2443)

5'-CCACCAUCCCACUGGCCUCUGAUAA-3' (SEQ ID NO: 3553)
3'-UGGGUGGUAGGGUGACCGGAGACUAUU-5' (SEQ ID NO: 1335)

βc-1790 Target: 5'-ACCCACCATCCCACTGGCCTCTGATAA-3' (SEQ ID NO: 2444)

5'-CACCAUCCCACUGGCCUCUGAUAAA-3' (SEQ ID NO: 3554)
3'-GGGUGGUAGGGUGACCGGAGACUAUUU-5' (SEQ ID NO: 1336)

βc-1791 Target: 5'-CCCACCATCCCACTGGCCTCTGATAAA-3' (SEQ ID NO: 2445)

5'-ACCAUCCCACUGGCCUCUGAUAAAG-3' (SEQ ID NO: 3555)
3'-GGUGGUAGGGUGACCGGAGACUAUUUC-5' (SEQ ID NO: 1337)

βc-1792 Target: 5'-CCACCATCCCACTGGCCTCTGATAAAG-3' (SEQ ID NO: 2446)

5'-CCAUCCCACUGGCCUCUGAUAAAGG-3' (SEQ ID NO: 3556)
3'-GUGGUAGGGUGACCGGAGACUAUUUCC-5' (SEQ ID NO: 1338)

βc-1793 Target: 5'-CACCATCCCACTGGCCTCTGATAAAGG-3' (SEQ ID NO: 2447)

5'-CAUCCCACUGGCCUCUGAUAAAGGC-3' (SEQ ID NO: 3557)
3'-UGGUAGGGUGACCGGAGACUAUUUCCG-5' (SEQ ID NO: 1339)

βc-1794 Target: 5'-ACCATCCCACTGGCCTCTGATAAAGGC-3' (SEQ ID NO: 2448)

5'-AUCCCACUGGCCUCUGAUAAAGGCU-3' (SEQ ID NO: 3558)
3'-GGUAGGGUGACCGGAGACUAUUUCCGA-5' (SEQ ID NO: 1340)

βc-1795 Target: 5'-CCATCCCACTGGCCTCTGATAAAGGCT-3' (SEQ ID NO: 2449)

5'-UCCCACUGGCCUCUGAUAAAGGCUA-3' (SEQ ID NO: 3559)
3'-GUAGGGUGACCGGAGACUAUUUCCGAU-5' (SEQ ID NO: 1341)

βc-1796 Target: 5'-CATCCCACTGGCCTCTGATAAAGGCTA-3' (SEQ ID NO: 2450)

5'-CCCACUGGCCUCUGAUAAAGGCUAC-3' (SEQ ID NO: 3560)
3'-UAGGGUGACCGGAGACUAUUUCCGAUG-5' (SEQ ID NO: 1342)

βc-1797 Target: 5'-ATCCCACTGGCCTCTGATAAAGGCTAC-3' (SEQ ID NO: 2451)

5'-CCACUGGCCUCUGAUAAAGGCUACU-3' (SEQ ID NO: 3561)
3'-AGGGUGACCGGAGACUAUUUCCGAUGA-5' (SEQ ID NO: 1343)

βc-1798 Target: 5'-TCCCACTGGCCTCTGATAAAGGCTACT-3' (SEQ ID NO: 2452)

5'-CACUGGCCUCUGAUAAAGGCUACUG-3' (SEQ ID NO: 3562)
3'-GGGUGACCGGAGACUAUUUCCGAUGAC-5' (SEQ ID NO: 1344)

βc-1799 Target: 5'-CCCACTGGCCTCTGATAAAGGCTACTG-3' (SEQ ID NO: 2453)

5'-ACUGGCCUCUGAUAAAGGCUACUGU-3' (SEQ ID NO: 3563)
3'-GGUGACCGGAGACUAUUUCCGAUGACA-5' (SEQ ID NO: 1345)

βc-1800 Target: 5'-CCACTGGCCTCTGATAAAGGCTACTGT-3' (SEQ ID NO: 2454)

5'-ACUGUUGGAUUGAUUCGAAAUCUUG-3' (SEQ ID NO: 3564)
3'-GAUGACAACCUAACUAAGCUUUAGAAC-5' (SEQ ID NO: 1346)

βc-1820 Target: 5'-CTACTGTTGGATTGATTCGAAATCTTG-3' (SEQ ID NO: 2455)

5'-CUGUUGGAUUGAUUCGAAAUCUUGC-3' (SEQ ID NO: 3565)
3'-AUGACAACCUAACUAAGCUUUAGAACG-5' (SEQ ID NO: 1347)

βc-1821 Target: 5'-TACTGTTGGATTGATTCGAAATCTTGC-3' (SEQ ID NO: 2456)

5'-AAUACCAUUCCAUUGUUUGUGCAGC-3' (SEQ ID NO: 3566)
3'-AUUUAUGGUAAGGUAACAAACACGUCG-5' (SEQ ID NO: 1348)

βc-2072 Target: 5'-TAAATACCATTCCATTGTTTGTGCAGC-3' (SEQ ID NO: 2457)

5'-AUACCAUUCCAUUGUUUGUGCAGCU-3' (SEQ ID NO: 3567)
3'-UUUAUGGUAAGGUAACAAACACGUCGA-5' (SEQ ID NO: 1349)

βc-2073 Target: 5'-AAATACCATTCCATTGTTTGTGCAGCT-3' (SEQ ID NO: 2458)

5'-UACCAUUCCAUUGUUUGUGCAGCUG-3' (SEQ ID NO: 3568)
3'-UUAUGGUAAGGUAACAAACACGUCGAC-5' (SEQ ID NO: 1350)

βc-2074 Target: 5'-AATACCATTCCATTGTTTGTGCAGCTG-3' (SEQ ID NO: 2459)

5'-ACCAUUCCAUUGUUUGUGCAGCUGC-3' (SEQ ID NO: 3569)
3'-UAUGGUAAGGUAACAAACACGUCGACG-5' (SEQ ID NO: 1351)

βc-2075 Target: 5'-ATACCATTCCATTGTTTGTGCAGCTGC-3' (SEQ ID NO: 2460)

5'-CCAUUCCAUUGUUUGUGCAGCUGCU-3' (SEQ ID NO: 3570)
3'-AUGGUAAGGUAACAAACACGUCGACGA-5' (SEQ ID NO: 1352)

βc-2076 Target: 5'-TACCATTCCATTGTTTGTGCAGCTGCT-3' (SEQ ID NO: 2461)

5'-CAUUCCAUUGUUUGUGCAGCUGCUU-3' (SEQ ID NO: 3571)
3'-UGGUAAGGUAACAAACACGUCGACGAA-5' (SEQ ID NO: 1353)

βc-2077 Target: 5'-ACCATTCCATTGTTTGTGCAGCTGCTT-3' (SEQ ID NO: 2462)

5'-UGCUUUAUUCUCCCAUUGAAAACAU-3' (SEQ ID NO: 3572)
3'-CGACGAAAUAAGAGGGUAACUUUUGUA-5' (SEQ ID NO: 1354)

βc-2097 Target: 5'-GCTGCTTTATTCTCCCATTGAAAAC-3' (SEQ ID NO: 2463)

5'-GCUUUAUUCUCCCAUUGAAAACAUC-3' (SEQ ID NO: 3573)
3'-GACGAAAUAAGAGGGUAACUUUUGUAG-5' (SEQ ID NO: 1355)

βc-2098 Target: 5'-CTGCTTTATTCTCCCATTGAAAACATC-3' (SEQ ID NO: 2464)

5'-CUUUAUUCUCCCAUUGAAAACAUCC-3' (SEQ ID NO: 3574)
3'-ACGAAAUAAGAGGGUAACUUUUGUAGG-5' (SEQ ID NO: 1356)

βc-2099 Target: 5'-TGCTTTATTCTCCCATTGAAAACATCC-3' (SEQ ID NO: 2465)

5'-UUUAUUCUCCCAUUGAAAACAUCCA-3' (SEQ ID NO: 3575)
3'-CGAAAUAAGAGGGUAACUUUUGUAGGU-5' (SEQ ID NO: 1357)

βc-2100 Target: 5'-GCTTTATTCTCCCATTGAAAACATCCA-3' (SEQ ID NO: 2466)

5'-GUCCUCUGUGAACUUGCUCAGGACA-3' (SEQ ID NO: 3576)
3'-CCCAGGAGACACUUGAACGAGUCCUGU-5' (SEQ ID NO: 1358)

βc-2141 Target: 5'-GGGTCCTCTGTGAACTTGCTCAGGACA-3' (SEQ ID NO: 2467)

5'-UCCUCUGUGAACUUGCUCAGGACAA-3' (SEQ ID NO: 3577)
3'-CCAGGAGACACUUGAACGAGUCCUGUU-5' (SEQ ID NO: 1359)

βc-2142 Target: 5'-GGTCCTCTGTGAACTTGCTCAGGACAA-3' (SEQ ID NO: 2468)

5'-CCUCUGUGAACUUGCUCAGGACAAG-3' (SEQ ID NO: 3578)
3'-CAGGAGACACUUGAACGAGUCCUGUUC-5' (SEQ ID NO: 1360)

βc-2143 Target: 5'-GTCCTCTGTGAACTTGCTCAGGACAAG-3' (SEQ ID NO: 2469)

5'-CUCUGUGAACUUGCUCAGGACAAGG-3' (SEQ ID NO: 3579)
3'-AGGAGACACUUGAACGAGUCCUGUUCC-5' (SEQ ID NO: 1361)

βc-2144 Target: 5'-TCCTCTGTGAACTTGCTCAGGACAAGG-3' (SEQ ID NO: 2470)

5'-UCUGUGAACUUGCUCAGGACAAGGA-3' (SEQ ID NO: 3580)
3'-GGAGACACUUGAACGAGUCCUGUUCCU-5' (SEQ ID NO: 1362)

βc-2145 Target: 5'-CCTCTGTGAACTTGCTCAGGACAAGGA-3' (SEQ ID NO: 2471)

5'-CUGUGAACUUGCUCAGGACAAGGAA-3' (SEQ ID NO: 3581)
3'-GAGACACUUGAACGAGUCCUGUUCCUU-5' (SEQ ID NO: 1363)

βc-2146 Target: 5'-CTCTGTGAACTTGCTCAGGACAAGGAA-3' (SEQ ID NO: 2472)

5'-UGUGAACUUGCUCAGGACAAGGAAG-3' (SEQ ID NO: 3582)
3'-AGACACUUGAACGAGUCCUGUUCCUUC-5' (SEQ ID NO: 1364)

βc-2147 Target: 5'-TCTGTGAACTTGCTCAGGACAAGGAAG-3' (SEQ ID NO: 2473)

5'-GUGAACUUGCUCAGGACAAGGAAGC-3' (SEQ ID NO: 3583)
3'-GACACUUGAACGAGUCCUGUUCCUUCG-5' (SEQ ID NO: 1365)

βc-2148 Target: 5'-CTGTGAACTTGCTCAGGACAAGGAAGC-3' (SEQ ID NO: 2474)

5'-UGAACUUGCUCAGGACAAGGAAGCU-3' (SEQ ID NO: 3584)
3'-ACACUUGAACGAGUCCUGUUCCUUCGA-5' (SEQ ID NO: 1366)

βc-2149 Target: 5'-TGTGAACTTGCTCAGGACAAGGAAGCT-3' (SEQ ID NO: 2475)

5'-GAACUUGCUCAGGACAAGGAAGCUG-3' (SEQ ID NO: 3585)
3'-CACUUGAACGAGUCCUGUUCCUUCGAC-5' (SEQ ID NO: 1367)

βc-2150 Target: 5'-GTGAACTTGCTCAGGACAAGGAAGCTG-3' (SEQ ID NO: 2476)

5'-AACUUGCUCAGGACAAGGAAGCUGC-3' (SEQ ID NO: 3586)
3'-ACUUGAACGAGUCCUGUUCCUUCGACG-5' (SEQ ID NO: 1368)

βc-2151 Target: 5'-TGAACTTGCTCAGGACAAGGAAGCTGC-3' (SEQ ID NO: 2477)

5'-AUUGAAGCUGAGGGAGCCACAGCUC-3' (SEQ ID NO: 3587)
3'-GAUAACUUCGACUCCCUCGGUGUCGAG-5' (SEQ ID NO: 1369)

βc-2183 Target: 5'-CTATTGAAGCTGAGGGAGCCACAGCTC-3' (SEQ ID NO: 2478)

5'-UUGAAGCUGAGGGAGCCACAGCUCC-3' (SEQ ID NO: 3588)
3'-AUAACUUCGACUCCCUCGGUGUCGAGG-5' (SEQ ID NO: 1370)

βc-2184 Target: 5'-TATTGAAGCTGAGGGAGCCACAGCTCC-3' (SEQ ID NO: 2479)

5'-UGAAGCUGAGGGAGCCACAGCUCCU-3' (SEQ ID NO: 3589)
3'-UAACUUCGACUCCCUCGGUGUCGAGGA-5' (SEQ ID NO: 1371)

βc-2185 Target: 5'-ATTGAAGCTGAGGGAGCCACAGCTCCT-3' (SEQ ID NO: 2480)

5'-UUCCGAAUGUCUGAGGACAAGCCAC-3' (SEQ ID NO: 3590)
3'-ACAAGGCUUACAGACUCCUGUUCGGUG-5' (SEQ ID NO: 1372)

βc-2270 Target: 5'-TGTTCCGAATGTCTGAGGACAAGCCAC-3' (SEQ ID NO: 2481)

5'-UCCGAAUGUCUGAGGACAAGCCACA-3' (SEQ ID NO: 3591)
3'-CAAGGCUUACAGACUCCUGUUCGGUGU-5' (SEQ ID NO: 1373)

βc-2271 Target: 5'-GTTCCGAATGTCTGAGGACAAGCCACA-3' (SEQ ID NO: 2482)

5'-CCGAAUGUCUGAGGACAAGCCACAA-3' (SEQ ID NO: 3592)
3'-AAGGCUUACAGACUCCUGUUCGGUGUU-5' (SEQ ID NO: 1374)

βc-2272 Target: 5'-TTCCGAATGTCTGAGGACAAGCCACAA-3' (SEQ ID NO: 2483)

5'-CGAAUGUCUGAGGACAAGCCACAAG-3' (SEQ ID NO: 3593)
3'-AGGCUUACAGACUCCUGUUCGGUGUUC-5' (SEQ ID NO: 1375)

βc-2273 Target: 5'-TCCGAATGTCTGAGGACAAGCCACAAG-3' (SEQ ID NO: 2484)

5'-GAAUGUCUGAGGACAAGCCACAAGA-3' (SEQ ID NO: 3594)
3'-GGCUUACAGACUCCUGUUCGGUGUUCU-5' (SEQ ID NO: 1376)

βc-2274 Target: 5'-CCGAATGTCTGAGGACAAGCCACAAGA-3' (SEQ ID NO: 2485)

5'-AAUGUCUGAGGACAAGCCACAAGAU-3' (SEQ ID NO: 3595)
3'-GCUUACAGACUCCUGUUCGGUGUUCUA-5' (SEQ ID NO: 1377)

βc-2275 Target: 5'-CGAATGTCTGAGGACAAGCCACAAGAT-3' (SEQ ID NO: 2486)

5'-AUGUCUGAGGACAAGCCACAAGAUU-3' (SEQ ID NO: 3596)
3'-CUUACAGACUCCUGUUCGGUGUUCUAA-5' (SEQ ID NO: 1378)

βc-2276 Target: 5'-GAATGTCTGAGGACAAGCCACAAGATT-3' (SEQ ID NO: 2487)

5'-UGUCUGAGGACAAGCCACAAGAUUA-3' (SEQ ID NO: 3597)
3'-UUACAGACUCCUGUUCGGUGUUCUAAU-5' (SEQ ID NO: 1379)

βc-2277 Target: 5'-AATGTCTGAGGACAAGCCACAAGATTA-3' (SEQ ID NO: 2488)

5'-ACAGAGCCAAUGGCUUGGAAUGAGA-3' (SEQ ID NO: 3598)
3'-CUUGUCUCGGUUACCGAACCUUACUCU-5' (SEQ ID NO: 1380)

βc-2345 Target: 5'-GAACAGAGCCAATGGCTTGGAATGAGA-3' (SEQ ID NO: 2489)

5'-CAGAGCCAAUGGCUUGGAAUGAGAC-3' (SEQ ID NO: 3599)
3'-UUGUCUCGGUUACCGAACCUUACUCUG-5' (SEQ ID NO: 1381)

βc-2346 Target: 5'-AACAGAGCCAATGGCTTGGAATGAGAC-3' (SEQ ID NO: 2490)

5'-AGAGCCAAUGGCUUGGAAUGAGACU-3' (SEQ ID NO: 3600)
3'-UGUCUCGGUUACCGAACCUUACUCUGA-5' (SEQ ID NO: 1382)

βc-2347 Target: 5'-ACAGAGCCAATGGCTTGGAATGAGACT-3' (SEQ ID NO: 2491)

5'-GAGCCAAUGGCUUGGAAUGAGACUG-3' (SEQ ID NO: 3601)
3'-GUCUCGGUUACCGAACCUUACUCUGAC-5' (SEQ ID NO: 1383)

βc-2348 Target: 5'-CAGAGCCAATGGCTTGGAATGAGACTG-3' (SEQ ID NO: 2492)

5'-AGCCAAUGGCUUGGAAUGAGACUGC-3' (SEQ ID NO: 3602)
3'-UCUCGGUUACCGAACCUUACUCUGACG-5' (SEQ ID NO: 1384)

βc-2349 Target: 5'-AGAGCCAATGGCTTGGAATGAGACTGC-3' (SEQ ID NO: 2493)

5'-GCCAAUGGCUUGGAAUGAGACUGCU-3' (SEQ ID NO: 3603)
3'-CUCGGUUACCGAACCUUACUCUGACGA-5' (SEQ ID NO: 1385)

βc-2350 Target: 5'-GAGCCAATGGCTTGGAATGAGACTGCT-3' (SEQ ID NO: 2494)

5'-CCAAUGGCUUGGAAUGAGACUGCUG-3' (SEQ ID NO: 3604)
3'-UCGGUUACCGAACCUUACUCUGACGAC-5' (SEQ ID NO: 1386)

βc-2351 Target: 5'-AGCCAATGGCTTGGAATGAGACTGCTG-3' (SEQ ID NO: 2495)

5'-CAAUGGCUUGGAAUGAGACUGCUGA-3' (SEQ ID NO: 3605)
3'-CGGUUACCGAACCUUACUCUGACGACU-5' (SEQ ID NO: 1387)

βc-2352 Target: 5'-GCCAATGGCTTGGAATGAGACTGCTGA-3' (SEQ ID NO: 2496)

5'-AAUGGCUUGGAAUGAGACUGCUGAU-3' (SEQ ID NO: 3606)
3'-GGUUACCGAACCUUACUCUGACGACUA-5' (SEQ ID NO: 1388)

βc-2353 Target: 5'-CCAATGGCTTGGAATGAGACTGCTGAT-3' (SEQ ID NO: 2497)

5'-AUGGCUUGGAAUGAGACUGCUGAUC-3' (SEQ ID NO: 3607)
3'-GUUACCGAACCUUACUCUGACGACUAG-5' (SEQ ID NO: 1389)

βc-2354 Target: 5'-CAATGGCTTGGAATGAGACTGCTGATC-3' (SEQ ID NO: 2498)

5'-UGGCUUGGAAUGAGACUGCUGAUCU-3' (SEQ ID NO: 3608)
3'-UUACCGAACCUUACUCUGACGACUAGA-5' (SEQ ID NO: 1390)

βc-2355 Target: 5'-AATGGCTTGGAATGAGACTGCTGATCT-3' (SEQ ID NO: 2499)

5'-CUUGGAUAUCGCCAGGAUGAUCCUA-3' (SEQ ID NO: 3609)
3'-GGGAACCUAUAGCGGUCCUACUAGGAU-5' (SEQ ID NO: 1391)

βc-2411 Target: 5'-CCCTTGGATATCGCCAGGATGATCCTA-3' (SEQ ID NO: 2500)

5'-UUGGAUAUCGCCAGGAUGAUCCUAG-3' (SEQ ID NO: 3610)
3'-GGAACCUAUAGCGGUCCUACUAGGAUC-5' (SEQ ID NO: 1392)

βc-2412 Target: 5'-CCTTGGATATCGCCAGGATGATCCTAG-3' (SEQ ID NO: 2501)

5'-UGGAUAUCGCCAGGAUGAUCCUAGC-3' (SEQ ID NO: 3611)
3'-GAACCUAUAGCGGUCCUACUAGGAUCG-5' (SEQ ID NO: 1393)

βc-2413 Target: 5'-CTTGGATATCGCCAGGATGATCCTAGC-3' (SEQ ID NO: 2502)

5'-GGAUAUCGCCAGGAUGAUCCUAGCU-3' (SEQ ID NO: 3612)
3'-AACCUAUAGCGGUCCUACUAGGAUCGA-5' (SEQ ID NO: 1394)

βc-2414 Target: 5'-TTGGATATCGCCAGGATGATCCTAGCT-3' (SEQ ID NO: 2503)

5'-GAUAUCGCCAGGAUGAUCCUAGCUA-3' (SEQ ID NO: 3613)
3'-ACCUAUAGCGGUCCUACUAGGAUCGAU-5' (SEQ ID NO: 1395)

βc-2415 Target: 5'-TGGATATCGCCAGGATGATCCTAGCTA-3' (SEQ ID NO: 2504)

5'-CGUUCUUUUCACUCUGGUGGAUAUG-3' (SEQ ID NO: 3614)
3'-UAGCAAGAAAAGUGAGACCACCUAUAC-5' (SEQ ID NO: 1396)

βc-2441 Target: 5'-ATCGTTCTTTTCACTCTGGTGGATATG-3' (SEQ ID NO: 2505)

5'-GUUCUUUUCACUCUGGUGGAUAUGG-3' (SEQ ID NO: 3615)
3'-AGCAAGAAAAGUGAGACCACCUAUACC-5' (SEQ ID NO: 1397)

βc-2442 Target: 5'-TCGTTCTTTTCACTCTGGTGGATATGG-3' (SEQ ID NO: 2506)

5'-UUCUUUUCACUCUGGUGGAUAUGGC-3' (SEQ ID NO: 3616)
3'-GCAAGAAAAGUGAGACCACCUAUACCG-5' (SEQ ID NO: 1398)

βc-2443 Target: 5'-CGTTCTTTTCACTCTGGTGGATATGGC-3' (SEQ ID NO: 2507)

5'-UCUUUUCACUCUGGUGGAUAUGGCC-3' (SEQ ID NO: 3617)
3'-CAAGAAAAGUGAGACCACCUAUACCGG-5' (SEQ ID NO: 1399)

βc-2444 Target: 5'-GTTCTTTTCACTCTGGTGGATATGGCC-3' (SEQ ID NO: 2508)

5'-CUUUUCACUCUGGUGGAUAUGGCCA-3' (SEQ ID NO: 3618)
3'-AAGAAAAGUGAGACCACCUAUACCGGU-5' (SEQ ID NO: 1400)

βc-2445 Target: 5'-TTCTTTTCACTCTGGTGGATATGGCCA-3' (SEQ ID NO: 2509)

5'-CAUGAGAUGGGUGGCCACCACCCUG-3' (SEQ ID NO: 3619)
3'-UUGUACUCUACCCACCGGUGGUGGGAC-5' (SEQ ID NO: 1401)

βc-2501 Target: 5'-AACATGAGATGGGTGGCCACCACCCTG-3' (SEQ ID NO: 2510)

5'-AUGAGAUGGGUGGCCACCACCCUGG-3' (SEQ ID NO: 3620)
3'-UGUACUCUACCCACCGGUGGUGGGACC-5' (SEQ ID NO: 1402)

βc-2502 Target: 5'-ACATGAGATGGGTGGCCACCACCCTGG-3' (SEQ ID NO: 2511)

5'-UGAGAUGGGUGGCCACCACCCUGGU-3' (SEQ ID NO: 3621)
3'-GUACUCUACCCACCGGUGGUGGGACCA-5' (SEQ ID NO: 1403)

βc-2503 Target: 5'-CATGAGATGGGTGGCCACCACCCTGGT-3' (SEQ ID NO: 2512)

5'-GAGAUGGGUGGCCACCACCCUGGUG-3' (SEQ ID NO: 3622)
3'-UACUCUACCCACCGGUGGUGGGACCAC-5' (SEQ ID NO: 1404)

βc-2504 Target: 5'-ATGAGATGGGTGGCCACCACCCTGGTG-3' (SEQ ID NO: 2513)

5'-AGAUGGGUGGCCACCACCCUGGUGC-3' (SEQ ID NO: 3623)
3'-ACUCUACCCACCGGUGGUGGGACCACG-5' (SEQ ID NO: 1405)

βc-2505 Target: 5'-TGAGATGGGTGGCCACCACCCTGGTGC-3' (SEQ ID NO: 2514)

5'-GAUGGGUGGCCACCACCCUGGUGCU-3' (SEQ ID NO: 3624)
3'-CUCUACCCACCGGUGGUGGGACCACGA-5' (SEQ ID NO: 1406)

βc-2506 Target: 5'-GAGATGGGTGGCCACCACCCTGGTGCT-3' (SEQ ID NO: 2515)

5'-AUGGGUGGCCACCACCCUGGUGCUG-3' (SEQ ID NO: 3625)
3'-UCUACCCACCGGUGGUGGGACCACGAC-5' (SEQ ID NO: 1407)

βc-2507 Target: 5'-AGATGGGTGGCCACCACCCTGGTGCTG-3' (SEQ ID NO: 2516)

5'-UGGGUGGCCACCACCCUGGUGCUGA-3' (SEQ ID NO: 3626)
3'-CUACCCACCGGUGGUGGGACCACGACU-5' (SEQ ID NO: 1408)

βc-2508 Target: 5'-GATGGGTGGCCACCACCCTGGTGCTGA-3' (SEQ ID NO: 2517)

5'-GGGUGGCCACCACCCUGGUGCUGAC-3' (SEQ ID NO: 3627)
3'-UACCCACCGGUGGUGGGACCACGACUG-5' (SEQ ID NO: 1409)

βc-2509 Target: 5'-ATGGGTGGCCACCACCCTGGTGCTGAC-3' (SEQ ID NO: 2518)

5'-GGUGGCCACCACCCUGGUGCUGACU-3' (SEQ ID NO: 3628)
3'-ACCCACCGGUGGUGGGACCACGACUGA-5' (SEQ ID NO: 1410)

βc-2510 Target: 5'-TGGGTGGCCACCACCCTGGTGCTGACT-3' (SEQ ID NO: 2519)

5'-GUGGCCACCACCCUGGUGCUGACUA-3' (SEQ ID NO: 3629)
3'-CCCACCGGUGGUGGGACCACGACUGAU-5' (SEQ ID NO: 1411)

βc-2511 Target: 5'-GGGTGGCCACCACCCTGGTGCTGACTA-3' (SEQ ID NO: 2520)

5'-UGGCCACCACCCUGGUGCUGACUAU-3' (SEQ ID NO: 3630)
3'-CCACCGGUGGUGGGACCACGACUGAUA-5' (SEQ ID NO: 1412)

βc-2512 Target: 5'-GGTGGCCACCACCCTGGTGCTGACTAT-3' (SEQ ID NO: 2521)

5'-GGCCACCACCCUGGUGCUGACUAUC-3' (SEQ ID NO: 3631)
3'-CACCGGUGGUGGGACCACGACUGAUAG-5' (SEQ ID NO: 1413)

βc-2513 Target: 5'-GTGGCCACCACCCTGGTGCTGACTATC-3' (SEQ ID NO: 2522)

5'-GCCACCACCCUGGUGCUGACUAUCC-3' (SEQ ID NO: 3632)
3'-ACCGGUGGUGGGACCACGACUGAUAGG-5' (SEQ ID NO: 1414)

βc-2514 Target: 5'-TGGCCACCACCCTGGTGCTGACTATCC-3' (SEQ ID NO: 2523)

5'-CCACCACCCUGGUGCUGACUAUCCA-3' (SEQ ID NO: 3633)
3'-CCGGUGGUGGGACCACGACUGAUAGGU-5' (SEQ ID NO: 1415)

βc-2515 Target: 5'-GGCCACCACCCTGGTGCTGACTATCCA-3' (SEQ ID NO: 2524)

5'-CACCACCCUGGUGCUGACUAUCCAG-3' (SEQ ID NO: 3634)
3'-CGGUGGUGGGACCACGACUGAUAGGUC-5' (SEQ ID NO: 1416)

βc-2516 Target: 5'-GCCACCACCCTGGTGCTGACTATCCAG-3' (SEQ ID NO: 2525)

5'-ACCACCCUGGUGCUGACUAUCCAGU-3' (SEQ ID NO: 3635)
3'-GGUGGUGGGACCACGACUGAUAGGUCA-5' (SEQ ID NO: 1417)

βc-2517 Target: 5'-CCACCACCCTGGTGCTGACTATCCAGT-3' (SEQ ID NO: 2526)

5'-CCACCCUGGUGCUGACUAUCCAGUU-3' (SEQ ID NO: 3636)
3'-GUGGUGGGACCACGACUGAUAGGUCAA-5' (SEQ ID NO: 1418)

βc-2518 Target: 5'-CACCACCCTGGTGCTGACTATCCAGTT-3' (SEQ ID NO: 2527)

5'-CACCCUGGUGCUGACUAUCCAGUUG-3' (SEQ ID NO: 3637)
3'-UGGUGGGACCACGACUGAUAGGUCAAC-5' (SEQ ID NO: 1419)

βc-2519 Target: 5'-ACCACCCTGGTGCTGACTATCCAGTTG-3' (SEQ ID NO: 2528)

5'-ACCCUGGUGCUGACUAUCCAGUUGA-3' (SEQ ID NO: 3638)
3'-GGUGGGACCACGACUGAUAGGUCAACU-5' (SEQ ID NO: 1420)

βc-2520 Target: 5'-CCACCCTGGTGCTGACTATCCAGTTGA-3' (SEQ ID NO: 2529)

5'-CCCUGGUGCUGACUAUCCAGUUGAU-3' (SEQ ID NO: 3639)
3'-GUGGGACCACGACUGAUAGGUCAACUA-5' (SEQ ID NO: 1421)

βc-2521 Target: 5'-CACCCTGGTGCTGACTATCCAGTTGAT-3' (SEQ ID NO: 2530)

5'-CCUGGUGCUGACUAUCCAGUUGAUG-3' (SEQ ID NO: 3640)
3'-UGGGACCACGACUGAUAGGUCAACUAC-5' (SEQ ID NO: 1422)

βc-2522 Target: 5'-ACCCTGGTGCTGACTATCCAGTTGATG-3' (SEQ ID NO: 2531)

5'-CUGGUGCUGACUAUCCAGUUGAUGG-3' (SEQ ID NO: 3641)
3'-GGGACCACGACUGAUAGGUCAACUACC-5' (SEQ ID NO: 1423)

βc-2523 Target: 5'-CCCTGGTGCTGACTATCCAGTTGATGG-3' (SEQ ID NO: 2532)

5'-UGGUGCUGACUAUCCAGUUGAUGGG-3' (SEQ ID NO: 3642)
3'-GGACCACGACUGAUAGGUCAACUACCC-5' (SEQ ID NO: 1424)

βc-2524 Target: 5'-CCTGGTGCTGACTATCCAGTTGATGGG-3' (SEQ ID NO: 2533)

5'-GGUGCUGACUAUCCAGUUGAUGGGC-3' (SEQ ID NO: 3643)
3'-GACCACGACUGAUAGGUCAACUACCCG-5' (SEQ ID NO: 1425)

βc-2525 Target: 5'-CTGGTGCTGACTATCCAGTTGATGGGC-3' (SEQ ID NO: 2534)

5'-GUGCUGACUAUCCAGUUGAUGGGCU-3' (SEQ ID NO: 3644)
3'-ACCACGACUGAUAGGUCAACUACCCGA-5' (SEQ ID NO: 1426)

βc-2526 Target: 5'-TGGTGCTGACTATCCAGTTGATGGGCT-3' (SEQ ID NO: 2535)

5'-UGCUGACUAUCCAGUUGAUGGGCUG-3' (SEQ ID NO: 3645)
3'-CCACGACUGAUAGGUCAACUACCCGAC-5' (SEQ ID NO: 1427)

βc-2527 Target: 5'-GGTGCTGACTATCCAGTTGATGGGCTG-3' (SEQ ID NO: 2536)

5'-GCUGACUAUCCAGUUGAUGGGCUGC-3' (SEQ ID NO: 3646)
3'-CACGACUGAUAGGUCAACUACCCGACG-5' (SEQ ID NO: 1428)

βc-2528 Target: 5'-GTGCTGACTATCCAGTTGATGGGCTGC-3' (SEQ ID NO: 2537)

5'-CUGACUAUCCAGUUGAUGGGCUGCC-3' (SEQ ID NO: 3647)
3'-ACGACUGAUAGGUCAACUACCCGACGG-5' (SEQ ID NO: 1429)

βc-2529 Target: 5'-TGCTGACTATCCAGTTGATGGGCTGCC-3' (SEQ ID NO: 2538)

5'-UGACUAUCCAGUUGAUGGGCUGCCA-3' (SEQ ID NO: 3648)
3'-CGACUGAUAGGUCAACUACCCGACGGU-5' (SEQ ID NO: 1430)

βc-2530 Target: 5'-GCTGACTATCCAGTTGATGGGCTGCCA-3' (SEQ ID NO: 2539)

5'-GACUAUCCAGUUGAUGGGCUGCCAG-3' (SEQ ID NO: 3649)
3'-GACUGAUAGGUCAACUACCCGACGGUC-5' (SEQ ID NO: 1431)

βc-2531 Target: 5'-CTGACTATCCAGTTGATGGGCTGCCAG-3' (SEQ ID NO: 2540)

5'-ACUAUCCAGUUGAUGGGCUGCCAGA-3' (SEQ ID NO: 3650)
3'-ACUGAUAGGUCAACUACCCGACGGUCU-5' (SEQ ID NO: 1432)

βc-2532 Target: 5'-TGACTATCCAGTTGATGGGCTGCCAGA-3' (SEQ ID NO: 2541)

5'-CUAUCCAGUUGAUGGGCUGCCAGAU-3' (SEQ ID NO: 3651)
3'-CUGAUAGGUCAACUACCCGACGGUCUA-5' (SEQ ID NO: 1433)

βc-2533 Target: 5'-GACTATCCAGTTGATGGGCTGCCAGAT-3' (SEQ ID NO: 2542)

5'-UAUCCAGUUGAUGGGCUGCCAGAUC-3' (SEQ ID NO: 3652)
3'-UGAUAGGUCAACUACCCGACGGUCUAG-5' (SEQ ID NO: 1434)

βc-2534 Target: 5'-ACTATCCAGTTGATGGGCTGCCAGATC-3' (SEQ ID NO: 2543)

5'-AUCCAGUUGAUGGGCUGCCAGAUCU-3' (SEQ ID NO: 3653)
3'-GAUAGGUCAACUACCCGACGGUCUAGA-5' (SEQ ID NO: 1435)

βc-2535 Target: 5'-CTATCCAGTTGATGGGCTGCCAGATCT-3' (SEQ ID NO: 2544)

5'-GCCCAGGACCUCAUGGAUGGGCUGC-3' (SEQ ID NO: 3654)
3'-UACGGGUCCUGGAGUACCUACCCGACG-5' (SEQ ID NO: 1436)

βc-2567 Target: 5'-ATGCCCAGGACCTCATGGATGGGCTGC-3' (SEQ ID NO: 2545)

5'-CCCAGGACCUCAUGGAUGGGCUGCC-3' (SEQ ID NO: 3655)
3'-ACGGGUCCUGGAGUACCUACCCGACGG-5' (SEQ ID NO: 1437)

βc-2568 Target: 5'-TGCCCAGGACCTCATGGATGGGCTGCC-3' (SEQ ID NO: 2546)

5'-CCAGGACCUCAUGGAUGGGCUGCCU-3' (SEQ ID NO: 3656)
3'-CGGGUCCUGGAGUACCUACCCGACGGA-5' (SEQ ID NO: 1438)

βc-2569 Target: 5'-GCCCAGGACCTCATGGATGGGCTGCCT-3' (SEQ ID NO: 2547)

5'-AGCAAUCAGCUGGCCUGGUUUGAUA-3' (SEQ ID NO: 3657)
3'-UGUCGUUAGUCGACCGGACCAAACUAU-5' (SEQ ID NO: 1439)

βc-2603 Target: 5'-ACAGCAATCAGCTGGCCTGGTTTGATA-3' (SEQ ID NO: 2548)

5'-GCAAUCAGCUGGCCUGGUUUGAUAC-3' (SEQ ID NO: 3658)
3'-GUCGUUAGUCGACCGGACCAAACUAUG-5' (SEQ ID NO: 1440)

βc-2604 Target: 5'-CAGCAATCAGCTGGCCTGGTTTGATAC-3' (SEQ ID NO: 2549)

5'-CAAUCAGCUGGCCUGGUUUGAUACU-3' (SEQ ID NO: 3659)
3'-UCGUUAGUCGACCGGACCAAACUAUGA-5' (SEQ ID NO: 1441)

βc-2605 Target: 5'-AGCAATCAGCTGGCCTGGTTTGATACT-3' (SEQ ID NO: 2550)

5'-AAUCAGCUGGCCUGGUUUGAUACUG-3' (SEQ ID NO: 3660)
3'-CGUUAGUCGACCGGACCAAACUAUGAC-5' (SEQ ID NO: 1442)

βc-2606 Target: 5'-GCAATCAGCTGGCCTGGTTTGATACTG-3' (SEQ ID NO: 2551)

5'-AUCAGCUGGCCUGGUUUGAUACUGA-3' (SEQ ID NO: 3661)
3'-GUUAGUCGACCGGACCAAACUAUGACU-5' (SEQ ID NO: 1443)

βc-2607 Target: 5'-CAATCAGCTGGCCTGGTTTGATACTGA-3' (SEQ ID NO: 2552)

5'-UCAGCUGGCCUGGUUUGAUACUGAC-3' (SEQ ID NO: 3662)
3'-UUAGUCGACCGGACCAAACUAUGACUG-5' (SEQ ID NO: 1444)

βc-2608 Target: 5'-AATCAGCTGGCCTGGTTTGATACTGAC-3' (SEQ ID NO: 2553)

5'-CAGCUGGCCUGGUUUGAUACUGACC-3' (SEQ ID NO: 3663)
3'-UAGUCGACCGGACCAAACUAUGACUGG-5' (SEQ ID NO: 1445)

βc-2609 Target: 5'-ATCAGCTGGCCTGGTTTGATACTGACC-3' (SEQ ID NO: 2554)

5'-AGCUGGCCUGGUUUGAUACUGACCU-3' (SEQ ID NO: 3664)
3'-AGUCGACCGGACCAAACUAUGACUGGA-5' (SEQ ID NO: 1446)

βc-2610 Target: 5'-TCAGCTGGCCTGGTTTGATACTGACCT-3' (SEQ ID NO: 2555)

5'-GCUGGCCUGGUUUGAUACUGACCUG-3' (SEQ ID NO: 3665)
3'-GUCGACCGGACCAAACUAUGACUGGAC-5' (SEQ ID NO: 1447)

βc-2611 Target: 5'-CAGCTGGCCTGGTTTGATACTGACCTG-3' (SEQ ID NO: 2556)

5'-CUGGCCUGGUUUGAUACUGACCUGU-3' (SEQ ID NO: 3666)
3'-UCGACCGGACCAAACUAUGACUGGACA-5' (SEQ ID NO: 1448)

βc-2612 Target: 5'-AGCTGGCCTGGTTTGATACTGACCTGT-3' (SEQ ID NO: 2557)

5'-UGGCCUGGUUUGAUACUGACCUGUA-3' (SEQ ID NO: 3667)
3'-CGACCGGACCAAACUAUGACUGGACAU-5' (SEQ ID NO: 1449)

βc-2613 Target: 5'-GCTGGCCTGGTTTGATACTGACCTGTA-3' (SEQ ID NO: 2558)

5'-GGCCUGGUUUGAUACUGACCUGUAA-3' (SEQ ID NO: 3668)
3'-GACCGGACCAAACUAUGACUGGACAUU-5' (SEQ ID NO: 1450)

βc-2614 Target: 5'-CTGGCCTGGTTTGATACTGACCTGTAA-3' (SEQ ID NO: 2559)

5'-GCCUGGUUUGAUACUGACCUGUAAA-3' (SEQ ID NO: 3669)
3'-ACCGGACCAAACUAUGACUGGACAUUU-5' (SEQ ID NO: 1451)

βc-2615 Target: 5'-TGGCCTGGTTTGATACTGACCTGTAAA-3' (SEQ ID NO: 2560)

5'-CCUGGUUUGAUACUGACCUGUAAAU-3' (SEQ ID NO: 3670)
3'-CCGGACCAAACUAUGACUGGACAUUUA-5' (SEQ ID NO: 1452)

βc-2616 Target: 5'-GGCCTGGTTTGATACTGACCTGTAAAT-3' (SEQ ID NO: 2561)

5'-CUGGUUUGAUACUGACCUGUAAAUC-3' (SEQ ID NO: 3671)
3'-CGGACCAAACUAUGACUGGACAUUUAG-5' (SEQ ID NO: 1453)

βc-2617 Target: 5'-GCCTGGTTTGATACTGACCTGTAAATC-3' (SEQ ID NO: 2562)

5'-UGGUUUGAUACUGACCUGUAAAUCA-3' (SEQ ID NO: 3672)
3'-GGACCAAACUAUGACUGGACAUUUAGU-5' (SEQ ID NO: 1454)

βc-2618 Target: 5'-CCTGGTTTGATACTGACCTGTAAATCA-3' (SEQ ID NO: 2563)

5'-GGUUUGAUACUGACCUGUAAAUCAU-3' (SEQ ID NO: 3673)
3'-GACCAAACUAUGACUGGACAUUUAGUA-5' (SEQ ID NO: 1455)

βc-2619 Target: 5'-CTGGTTTGATACTGACCTGTAAATC-3' (SEQ ID NO: 2564)

5'-GUUUGAUACUGACCUGUAAAUCAUC-3' (SEQ ID NO: 3674)
3'-ACCAAACUAUGACUGGACAUUUAGUAG-5' (SEQ ID NO: 1456)

βc-2620 Target: 5'-TGGTTTGATACTGACCTGTAAATCATC-3' (SEQ ID NO: 2565)

5'-UUUGAUACUGACCUGUAAAUCAUCC-3' (SEQ ID NO: 3675)
3'-CCAAACUAUGACUGGACAUUUAGUAGG-5' (SEQ ID NO: 1457)

βc-2621 Target: 5'-GGTTTGATACTGACCTGTAAATCATCC-3' (SEQ ID NO: 2566)

5'-UUGAUACUGACCUGUAAAUCAUCCU-3' (SEQ ID NO: 3676)
3'-CAAACUAUGACUGGACAUUUAGUAGGA-5' (SEQ ID NO: 1458)

βc-2622 Target: 5'-GTTTGATACTGACCTGTAAATCATCCT-3' (SEQ ID NO: 2567)

5'-UGAUACUGACCUGUAAAUCAUCCUU-3' (SEQ ID NO: 3677)
3'-AAACUAUGACUGGACAUUUAGUAGGAA-5' (SEQ ID NO: 1459)

βc-2623 Target: 5'-TTTGATACTGACCTGTAAATCATCCTT-3' (SEQ ID NO: 2568)

5'-UUUUGCCACAGCUUUUGCAACUUAA-3' (SEQ ID NO: 3678)
3'-AAAAAACGGUGUCGAAAACGUUGAAUU-5' (SEQ ID NO: 1460)

βc-2869 Target: 5'-TTTTTTGCCACAGCTTTTGCAACTTAA-3' (SEQ ID NO: 2569)

5'-UGAGUAACAUUUGCUGUUUUAAACA-3' (SEQ ID NO: 3679)
3'-UUACUCAUUGUAAACGACAAAAUUUGU-5' (SEQ ID NO: 1461)

βc-2902 Target: 5'-AATGAGTAACATTTGCTGTTTTAAACA-3' (SEQ ID NO: 2570)

5'-AACAUUAAUAGCAGCCUUUCUCUCU-3' (SEQ ID NO: 3680)
3'-AUUUGUAAUUAUCGUCGGAAAGAGAGA-5' (SEQ ID NO: 1462)

βc-2923 Target: 5'-TAAACATTAATAGCAGCCTTTCTCTCT-3' (SEQ ID NO: 2571)

5'-CAUUAAUAGCAGCCUUUCUCUCUUU-3' (SEQ ID NO: 3681)
3'-UUGUAAUUAUCGUCGGAAAGAGAGAAA-5' (SEQ ID NO: 1463)

βc-2925 Target: 5'-AACATTAATAGCAGCCTTTCTCTCTTT-3' (SEQ ID NO: 2572)

5'-UUAAUAGCAGCCUUUCUCUCUUUAU-3' (SEQ ID NO: 3682)
3'-GUAAUUAUCGUCGGAAAGAGAGAAAUA-5' (SEQ ID NO: 1464)

βc-2927 Target: 5'-CATTAATAGCAGCCTTTCTCTCTTTAT-3' (SEQ ID NO: 2573)

5'-AAUAGCAGCCUUUCUCUCUUUAUAC-3' (SEQ ID NO: 3683)
3'-AAUUAUCGUCGGAAAGAGAGAAAUAUG-5' (SEQ ID NO: 1465)

βc-2929 Target: 5'-TTAATAGCAGCCTTTCTCTCTTTATAC-3' (SEQ ID NO: 2574)

5'-GCAUUGUGAUUGGCCUGUAGAGUUG-3' (SEQ ID NO: 3684)
3'-AACGUAACACUAACCGGACAUCUCAAC-5' (SEQ ID NO: 1466)

βc-2973 Target: 5'-TTGCATTGTGATTGGCCTGTAGAGTTG-3' (SEQ ID NO: 2575)

5'-AUUGUGAUUGGCCUGUAGAGUUGCU-3' (SEQ ID NO: 3685)
3'-CGUAACACUAACCGGACAUCUCAACGA-5' (SEQ ID NO: 1467)

βc-2975 Target: 5'-GCATTGTGATTGGCCTGTAGAGTTGCT-3' (SEQ ID NO: 2576)

5'-UGUGAUUGGCCUGUAGAGUUGCUGA-3' (SEQ ID NO: 3686)
3'-UAACACUAACCGGACAUCUCAACGACU-5' (SEQ ID NO: 1468)

βc-2977 Target: 5'-ATTGTGATTGGCCTGTAGAGTTGCTGA-3' (SEQ ID NO: 2577)

5'-UGAUUGGCCUGUAGAGUUGCUGAGA-3' (SEQ ID NO: 3687)
3'-ACACUAACCGGACAUCUCAACGACUCU-5' (SEQ ID NO: 1469)

βc-2979 Target: 5'-TGTGATTGGCCTGTAGAGTTGCTGAGA-3' (SEQ ID NO: 2578)

5'-AUUGGCCUGUAGAGUUGCUGAGAGG-3' (SEQ ID NO: 3688)
3'-ACUAACCGGACAUCUCAACGACUCUCC-5' (SEQ ID NO: 1470)

βc-2981 Target: 5'-TGATTGGCCTGTAGAGTTGCTGAGAGG-3' (SEQ ID NO: 2579)

5'-UGGCCUGUAGAGUUGCUGAGAGGGC-3' (SEQ ID NO: 3689)
3'-UAACCGGACAUCUCAACGACUCUCCCG-5' (SEQ ID NO: 1471)

βc-2983 Target: 5'-ATTGGCCTGTAGAGTTGCTGAGAGGGC-3' (SEQ ID NO: 2580)

5'-GCCUGUAGAGUUGCUGAGAGGGCUC-3' (SEQ ID NO: 3690)
3'-ACCGGACAUCUCAACGACUCUCCCGAG-5' (SEQ ID NO: 1472)

βc-2985 Target: 5'-TGGCCTGTAGAGTTGCTGAGAGGGCTC-3' (SEQ ID NO: 2581)

5'-CUGUAGAGUUGCUGAGAGGGCUCGA-3' (SEQ ID NO: 3691)
3'-CGGACAUCUCAACGACUCUCCCGAGCU-5' (SEQ ID NO: 1473)

βc-2987 Target: 5'-GCCTGTAGAGTTGCTGAGAGGGCTCGA-3' (SEQ ID NO: 2582)

5'-GUAGAGUUGCUGAGAGGGCUCGAGG-3' (SEQ ID NO: 3692)
3'-GACAUCUCAACGACUCUCCCGAGCUCC-5' (SEQ ID NO: 1474)

βc-2989 Target: 5'-CTGTAGAGTTGCTGAGAGGGCTCGAGG-3' (SEQ ID NO: 2583)

5'-GUGGGCUGGUAUCUCAGAAAGUGCC-3' (SEQ ID NO: 3693)
3'-CCCACCCGACCAUAGAGUCUUUCACGG-5' (SEQ ID NO: 1475)

βc-3015 Target: 5'-GGGTGGGCTGGTATCTCAGAAAGTGCC-3' (SEQ ID NO: 2584)

5'-GGGCUGGUAUCUCAGAAAGUGCCUG-3' (SEQ ID NO: 3694)
3'-CACCCGACCAUAGAGUCUUUCACGGAC-5' (SEQ ID NO: 1476)

βc-3017 Target: 5'-GTGGGCTGGTATCTCAGAAAGTGCCTG-3' (SEQ ID NO: 2585)

5'-GCUGGUAUCUCAGAAAGUGCCUGAC-3' (SEQ ID NO: 3695)
3'-CCCGACCAUAGAGUCUUUCACGGACUG-5' (SEQ ID NO: 1477)

βc-3019 Target: 5'-GGGCTGGTATCTCAGAAAGTGCCTGAC-3' (SEQ ID NO: 2586)

5'-UGGUAUCUCAGAAAGUGCCUGACAC-3' (SEQ ID NO: 3696)
3'-CGACCAUAGAGUCUUUCACGGACUGUG-5' (SEQ ID NO: 1478)

βc-3021 Target: 5'-GCTGGTATCTCAGAAAGTGCCTGACAC-3' (SEQ ID NO: 2587)

5'-ACUAACCAAGCUGAGUUUCCUAUGG-3' (SEQ ID NO: 3697)
3'-UGUGAUUGGUUCGACUCAAAGGAUACC-5' (SEQ ID NO: 1479)

βc-3046 Target: 5'-ACACTAACCAAGCTGAGTTTCCTATGG-3' (SEQ ID NO: 2588)

5'-UAACCAAGCUGAGUUUCCUAUGGGA-3' (SEQ ID NO: 3698)
3'-UGAUUGGUUCGACUCAAAGGAUACCCU-5' (SEQ ID NO: 1480)

βc-3048 Target: 5'-ACTAACCAAGCTGAGTTTCCTATGGGA-3' (SEQ ID NO: 2589)

5'-ACCAAGCUGAGUUUCCUAUGGGAAC-3' (SEQ ID NO: 3699)
3'-AUUGGUUCGACUCAAAGGAUACCCUUG-5' (SEQ ID NO: 1481)

βc-3050 Target: 5'-TAACCAAGCTGAGTTTCCTATGGGAAC-3' (SEQ ID NO: 2590)

5'-CAAGCUGAGUUUCCUAUGGGAACAA-3' (SEQ ID NO: 3700)
3'-UGGUUCGACUCAAAGGAUACCCUUGUU-5' (SEQ ID NO: 1482)

βc-3052 Target: 5'-ACCAAGCTGAGTTTCCTATGGGAACAA-3' (SEQ ID NO: 2591)

5'-AGCUGAGUUUCCUAUGGGAACAAUU-3' (SEQ ID NO: 3701)
3'-GUUCGACUCAAAGGAUACCCUUGUUAA-5' (SEQ ID NO: 1483)

βc-3054 Target: 5'-CAAGCTGAGTTTCCTATGGGAACAATT-3' (SEQ ID NO: 2592)

5'-CUGAGUUUCCUAUGGGAACAAUUGA-3' (SEQ ID NO: 3702)
3'-UCGACUCAAAGGAUACCCUUGUUAACU-5' (SEQ ID NO: 1484)

βc-3056 Target: 5'-AGCTGAGTTTCCTATGGGAACAATTGA-3' (SEQ ID NO: 2593)

5'-CUUUUUGUUCUGGUCCUUUUUGGUC-3' (SEQ ID NO: 3703)
3'-UUGAAAAACAAGACCAGGAAAAACCAG-5' (SEQ ID NO: 1485)

βc-3087 Target: 5'-AACTTTTTGTTCTGGTCCTTTTTGGTC-3' (SEQ ID NO: 2594)

5'-UUUUGUUCUGGUCCUUUUUGGUCGA-3' (SEQ ID NO: 3704)
3'-GAAAAACAAGACCAGGAAAAACCAGCU-5' (SEQ ID NO: 1486)

βc-3089 Target: 5'-CTTTTTGTTCTGGTCCTTTTTGGTCGA-3' (SEQ ID NO: 2595)

5'-UUGUUCUGGUCCUUUUUGGUCGAGG-3' (SEQ ID NO: 3705)
3'-AAAACAAGACCAGGAAAAACCAGCUCC-5' (SEQ ID NO: 1487)

βc-3091 Target: 5'-TTTTGTTCTGGTCCTTTTTGGTCGAGG-3' (SEQ ID NO: 2596)

5'-GUUCUGGUCCUUUUUGGUCGAGGAG-3' (SEQ ID NO: 3706)
3'-AACAAGACCAGGAAAAACCAGCUCCUC-5' (SEQ ID NO: 1488)

βc-3093 Target: 5'-TTGTTCTGGTCCTTTTTGGTCGAGGAG-3' (SEQ ID NO: 2597)

5'-UCUGGUCCUUUUUGGUCGAGGAGUA-3' (SEQ ID NO: 3707)
3'-CAAGACCAGGAAAAACCAGCUCCUCAU-5' (SEQ ID NO: 1489)

βc-3095 Target: 5'-GTTCTGGTCCTTTTTGGTCGAGGAGTA-3' (SEQ ID NO: 2598)

5'-UGGUCCUUUUUGGUCGAGGAGUAAC-3' (SEQ ID NO: 3708)
3'-AGACCAGGAAAAACCAGCUCCUCAUUG-5' (SEQ ID NO: 1490)

βc-3097 Target: 5'-TCTGGTCCTTTTTGGTCGAGGAGTAAC-3' (SEQ ID NO: 2599)

5'-GUCCUUUUUGGUCGAGGAGUAACAA-3' (SEQ ID NO: 3709)
3'-ACCAGGAAAAACCAGCUCCUCAUUGUU-5' (SEQ ID NO: 1491)

βc-3099 Target: 5'-TGGTCCTTTTTGGTCGAGGAGTAACAA-3' (SEQ ID NO: 2600)

5'-CCUUUUUGGUCGAGGAGUAACAAUA-3' (SEQ ID NO: 3710)
3'-CAGGAAAAACCAGCUCCUCAUUGUUAU-5' (SEQ ID NO: 1492)

βc-3101 Target: 5'-GTCCTTTTTGGTCGAGGAGTAACAATA-3' (SEQ ID NO: 2601)

5'-UUUUUGGUCGAGGAGUAACAAUACA-3' (SEQ ID NO: 3711)
3'-GGAAAAACCAGCUCCUCAUUGUUAUGU-5' (SEQ ID NO: 1493)

βc-3103 Target: 5'-CCTTTTTGGTCGAGGAGTAACAATACA-3' (SEQ ID NO: 2602)

5'-UUUGGUCGAGGAGUAACAAUACAAA-3' (SEQ ID NO: 3712)
3'-AAAAACCAGCUCCUCAUUGUUAUGUUU-5' (SEQ ID NO: 1494)

βc-3105 Target: 5'-TTTTTGGTCGAGGAGTAACAATACAAA-3' (SEQ ID NO: 2603)

5'-UGGUCGAGGAGUAACAAUACAAAUG-3' (SEQ ID NO: 3713)
3'-AAACCAGCUCCUCAUUGUUAUGUUUAC-5' (SEQ ID NO: 1495)

βc-3107 Target: 5'-TTTGGTCGAGGAGTAACAATACAAATG-3' (SEQ ID NO: 2604)

5'-GUCGAGGAGUAACAAUACAAAUGGA-3' (SEQ ID NO: 3714)
3'-ACCAGCUCCUCAUUGUUAUGUUUACCU-5' (SEQ ID NO: 1496)

βc-3109 Target: 5'-TGGTCGAGGAGTAACAATACAAATGGA-3' (SEQ ID NO: 2605)

5'-CGAGGAGUAACAAUACAAAUGGAUU-3' (SEQ ID NO: 3715)
3'-CAGCUCCUCAUUGUUAUGUUUACCUAA-5' (SEQ ID NO: 1497)

βc-3111 Target: 5'-GTCGAGGAGTAACAATACAAATGGATT-3' (SEQ ID NO: 2606)

5'-AGGAGUAACAAUACAAAUGGAUUUU-3' (SEQ ID NO: 3716)
3'-GCUCCUCAUUGUUAUGUUUACCUAAAA-5' (SEQ ID NO: 1498)

βc-3113 Target: 5'-CGAGGAGTAACAATACAAATGGATTTT-3' (SEQ ID NO: 2607)

5'-GAGUAACAAUACAAAUGGAUUUUGG-3' (SEQ ID NO: 3717)
3'-UCCUCAUUGUUAUGUUUACCUAAAACC-5' (SEQ ID NO: 1499)

βc-3115 Target: 5'-AGGAGTAACAATACAAATGGATTTTGG-3' (SEQ ID NO: 2608)

5'-UAUCAAACCCUAGCCUUGCUUGUUA-3' (SEQ ID NO: 3718)
3'-AAAUAGUUUGGGAUCGGAACGAACAAU-5' (SEQ ID NO: 1500)

βc-3191 Target: 5'-TTTATCAAACCCTAGCCTTGCTTGTTA-3' (SEQ ID NO: 2609)

5'-UCAAACCCUAGCCUUGCUUGUUAAA-3' (SEQ ID NO: 3719)
3'-AUAGUUUGGGAUCGGAACGAACAAUUU-5' (SEQ ID NO: 1501)

βc-3193 Target: 5'-TATCAAACCCTAGCCTTGCTTGTTAAA-3' (SEQ ID NO: 2610)

5'-AAACCCUAGCCUUGCUUGUUAAAUU-3' (SEQ ID NO: 3720)
3'-AGUUUGGGAUCGGAACGAACAAUUUAA-5' (SEQ ID NO: 1502)

βc-3195 Target: 5'-TCAAACCCTAGCCTTGCTTGTTAAATT-3' (SEQ ID NO: 2611)

5'-GAGUAAUGGUGUAGAACACUAAUUC-3' (SEQ ID NO: 3721)
3'-AACUCAUUACCACAUCUUGUGAUUAAG-5' (SEQ ID NO: 1503)

βc-3387 Target: 5'-TTGAGTAATGGTGTAGAACACTAATTC-3' (SEQ ID NO: 2612)

5'-GUAAUGGUGUAGAACACUAAUUCAU-3' (SEQ ID NO: 3722)
3'-CUCAUUACCACAUCUUGUGAUUAAGUA-5' (SEQ ID NO: 1504)

βc-3389 Target: 5'-GAGTAATGGTGTAGAACACTAATTC-3' (SEQ ID NO: 2613)

5'-AAUGGUGUAGAACACUAAUUCAUAA-3' (SEQ ID NO: 3723)
3'-CAUUACCACAUCUUGUGAUUAAGUAUU-5' (SEQ ID NO: 1505)

βc-3391 Target: 5'-GTAATGGTGTAGAACACTAATTCATAA-3' (SEQ ID NO: 2614)

5'-UGGUGUAGAACACUAAUUCAUAAUC-3' (SEQ ID NO: 3724)
3'-UUACCACAUCUUGUGAUUAAGUAUUAG-5' (SEQ ID NO: 1506)

βc-3393 Target: 5'-AATGGTGTAGAACACTAATTCATAATC-3' (SEQ ID NO: 2615)

5'-GUGUAGAACACUAAUUCAUAAUCAC-3' (SEQ ID NO: 3725)
3'-ACCACAUCUUGUGAUUAAGUAUUAGUG-5' (SEQ ID NO: 1507)

βc-3395 Target: 5'-TGGTGTAGAACACTAATTCATAATCAC-3' (SEQ ID NO: 2616)

5'-GUAGAACACUAAUUCAUAAUCACUC-3' (SEQ ID NO: 3726)
3'-CACAUCUUGUGAUUAAGUAUUAGUGAG-5' (SEQ ID NO: 1508)

βc-3397 Target: 5'-GTGTAGAACACTAATTCATAATCACTC-3' (SEQ ID NO: 2617)

5'-AGAACACUAAUUCAUAAUCACUCUA-3' (SEQ ID NO: 3727)
3'-CAUCUUGUGAUUAAGUAUUAGUGAGAU-5' (SEQ ID NO: 1509)

βc-3399 Target: 5'-GTAGAACACTAATTCATAATCACTCTA-3' (SEQ ID NO: 2618)

5'-AACACUAAUUCAUAAUCACUCUAAU-3' (SEQ ID NO: 3728)
3'-UCUUGUGAUUAAGUAUUAGUGAGAUUA-5' (SEQ ID NO: 1510)

βc-3401 Target: 5'-AGAACACTAATTCATAATCACTCTAAT-3' (SEQ ID NO: 2619)

5'-UUAGUUUCCUUUUUAAUAUGCUUAA-3' (SEQ ID NO: 3729)
3'-UUAAUCAAAGGAAAAAUUAUACGAAUU-5' (SEQ ID NO: 1511)

βc-3500 Target: 5'-AATTAGTTTCCTTTTTAATATGCTTAA-3' (SEQ ID NO: 2620)

5'-AGUUUCCUUUUUAAUAUGCUUAAAA-3' (SEQ ID NO: 3730)
3'-AAUCAAAGGAAAAAUUAUACGAAUUUU-5' (SEQ ID NO: 1512)

βc-3502 Target: 5'-TTAGTTTCCTTTTTAATATGCTTAAAA-3' (SEQ ID NO: 2621)

5'-UUUCCUUUUUAAUAUGCUUAAAAUA-3' (SEQ ID NO: 3731)
3'-UCAAAGGAAAAAUUAUACGAAUUUUAU-5' (SEQ ID NO: 1513)

βc-3504 Target: 5'-AGTTTCCTTTTTAATATGCTTAAAATA-3' (SEQ ID NO: 2622)

5'-UCCUUUUUAAUAUGCUUAAAAUAAG-3' (SEQ ID NO: 3732)
3'-AAAGGAAAAAUUAUACGAAUUUUAUUC-5' (SEQ ID NO: 1514)

βc-3506 Target: 5'-TTTCCTTTTTAATATGCTTAAAATAAG-3' (SEQ ID NO: 2623)

5'-CUUUUUAAUAUGCUUAAAAUAAGCA-3' (SEQ ID NO: 3733)
3'-AGGAAAAAUUAUACGAAUUUUAUUCGU-5' (SEQ ID NO: 1515)

βc-3508 Target: 5'-TCCTTTTTAATATGCTTAAAATAAGCA-3' (SEQ ID NO: 2624)

5'-UUUUUAAUAUGCUUAAAAUAAGCAG-3' (SEQ ID NO: 3734)
3'-GGAAAAAUUAUACGAAUUUUAUUCGUC-5' (SEQ ID NO: 1516)

βc-3509 Target: 5'-CCTTTTTAATATGCTTAAAATAAGCAG-3' (SEQ ID NO: 2625)

5'-UUUUAAUAUGCUUAAAAUAAGCAGG-3' (SEQ ID NO: 3735)
3'-GAAAAAUUAUACGAAUUUUAUUCGUCC-5' (SEQ ID NO: 1517)

βc-3510 Target: 5'-CTTTTTAATATGCTTAAAATAAGCAGG-3' (SEQ ID NO: 2626)

5'-UUAAUAUGCUUAAAAUAAGCAGGUG-3' (SEQ ID NO: 3736)
3'-AAAAUUAUACGAAUUUUAUUCGUCCAC-5' (SEQ ID NO: 1518)

βc-3512 Target: 5'-TTTTAATATGCTTAAAATAAGCAGGTG-3' (SEQ ID NO: 2627)

5'-AAUAUGCUUAAAAUAAGCAGGUGGA-3' (SEQ ID NO: 3737)
3'-AAUUAUACGAAUUUUAUUCGUCCACCU-5' (SEQ ID NO: 1519)

βc-3514 Target: 5'-TTAATATGCTTAAAATAAGCAGGTGGA-3' (SEQ ID NO: 2628)

5'-UAUGCUUAAAAUAAGCAGGUGGAUC-3' (SEQ ID NO: 3738)
3'-UUAUACGAAUUUUAUUCGUCCACCUAG-5' (SEQ ID NO: 1520)

βc-3516 Target: 5'-AATATGCTTAAAATAAGCAGGTGGATC-3' (SEQ ID NO: 2629)

5'-UGCUUAAAAUAAGCAGGUGGAUCUA-3' (SEQ ID NO: 3739)
3'-AUACGAAUUUUAUUCGUCCACCUAGAU-5' (SEQ ID NO: 1521)

βc-3518 Target: 5'-TATGCTTAAAATAAGCAGGTGGATCTA-3' (SEQ ID NO: 2630)

5'-CUUAAAAUAAGCAGGUGGAUCUAUU-3' (SEQ ID NO: 3740)
3'-ACGAAUUUUAUUCGUCCACCUAGAUAA-5' (SEQ ID NO: 1522)

βc-3520 Target: 5'-TGCTTAAAATAAGCAGGTGGATCTATT-3' (SEQ ID NO: 2631)

5'-UAAAAUAAGCAGGUGGAUCUAUUUC-3' (SEQ ID NO: 3741)
3'-GAAUUUUAUUCGUCCACCUAGAUAAAG-5' (SEQ ID NO: 1523)

βc-3522 Target: 5'-CTTAAAATAAGCAGGTGGATCTATTTC-3' (SEQ ID NO: 2632)

5'-AAAUAAGCAGGUGGAUCUAUUUCAU-3' (SEQ ID NO: 3742)
3'-AUUUUAUUCGUCCACCUAGAUAAAGUA-5' (SEQ ID NO: 1524)

βc-3524 Target: 5'-TAAAATAAGCAGGTGGATCTATTTC-3' (SEQ ID NO: 2633)

5'-AUAAGCAGGUGGAUCUAUUUCAUGU-3' (SEQ ID NO: 3743)
3'-UUUAUUCGUCCACCUAGAUAAAGUACA-5' (SEQ ID NO: 1525)

βc-3526 Target: 5'-AAATAAGCAGGTGGATCTATTTCATGT-3' (SEQ ID NO: 2634)

5'-AAGCAGGUGGAUCUAUUUCAUGUUU-3' (SEQ ID NO: 3744)
3'-UAUUCGUCCACCUAGAUAAAGUACAAA-5' (SEQ ID NO: 1526)

βc-3528 Target: 5'-ATAAGCAGGTGGATCTATTTCATGTTT-3' (SEQ ID NO: 2635)

5'-GCAGGUGGAUCUAUUUCAUGUUUUU-3' (SEQ ID NO: 3745)
3'-UUCGUCCACCUAGAUAAAGUACAAAAA-5' (SEQ ID NO: 1527)

βc-3530 Target: 5'-AAGCAGGTGGATCTATTTCATGTTTTT-3' (SEQ ID NO: 2636)

5'-AGGUGGAUCUAUUUCAUGUUUUUGA-3' (SEQ ID NO: 3746)
3'-CGUCCACCUAGAUAAAGUACAAAAACU-5' (SEQ ID NO: 1528)

βc-3532 Target: 5'-GCAGGTGGATCTATTTCATGTTTTTGA-3' (SEQ ID NO: 2637)

5'-GUGGAUCUAUUUCAUGUUUUUGAUC-3' (SEQ ID NO: 3747)
3'-UCCACCUAGAUAAAGUACAAAAACUAG-5' (SEQ ID NO: 1529)

βc-3534 Target: 5'-AGGTGGATCTATTTCATGTTTTTGATC-3' (SEQ ID NO: 2638)

5'-GGAUCUAUUUCAUGUUUUUGAUCAA-3' (SEQ ID NO: 3748)
3'-CACCUAGAUAAAGUACAAAAACUAGUU-5' (SEQ ID NO: 1530)

βc-3536 Target: 5'-GTGGATCTATTTCATGTTTTTGATCAA-3' (SEQ ID NO: 2639)

5'-AUCUAUUUCAUGUUUUUGAUCAAAA-3' (SEQ ID NO: 3749)
3'-CCUAGAUAAAGUACAAAAACUAGUUUU-5' (SEQ ID NO: 1531)

βc-3538 Target: 5'-GGATCTATTTCATGTTTTTGATCAAAA-3' (SEQ ID NO: 2640)

5'-GUAGGGUAAAUCAGUAAGAGGUGUU-3' (SEQ ID NO: 3750)
3'-CCCAUCCCAUUUAGUCAUUCUCCACAA-5' (SEQ ID NO: 1532)

βc-3583 Target: 5'-GGGTAGGGTAAATCAGTAAGAGGTGTT-3' (SEQ ID NO: 2641)

5'-AGGGUAAAUCAGUAAGAGGUGUUAU-3' (SEQ ID NO: 3751)
3'-CAUCCCAUUUAGUCAUUCUCCACAAUA-5' (SEQ ID NO: 1533)

βc-3585 Target: 5'-GTAGGGTAAATCAGTAAGAGGTGTTAT-3' (SEQ ID NO: 2642)

5'-GGUAAAUCAGUAAGAGGUGUUAUUU-3' (SEQ ID NO: 3752)
3'-UCCCAUUUAGUCAUUCUCCACAAUAAA-5' (SEQ ID NO: 1534)

βc-3587 Target: 5'-AGGGTAAATCAGTAAGAGGTGTTATTT-3' (SEQ ID NO: 2643)

5'-UAAAUCAGUAAGAGGUGUUAUUUGG-3' (SEQ ID NO: 3753)
3'-CCAUUUAGUCAUUCUCCACAAUAAACC-5' (SEQ ID NO: 1535)

βc-3589 Target: 5'-GGTAAATCAGTAAGAGGTGTTATTTGG-3' (SEQ ID NO: 2644)

5'-AAUCAGUAAGAGGUGUUAUUUGGAA-3' (SEQ ID NO: 3754)
3'-AUUUAGUCAUUCUCCACAAUAAACCUU-5' (SEQ ID NO: 1536)

βc-3591 Target: 5'-TAAATCAGTAAGAGGTGTTATTTGGAA-3' (SEQ ID NO: 2645)

5'-UCAGUAAGAGGUGUUAUUUGGAACC-3' (SEQ ID NO: 3755)
3'-UUAGUCAUUCUCCACAAUAAACCUUGG-5' (SEQ ID NO: 1537)

βc-3593 Target: 5'-AATCAGTAAGAGGTGTTATTTGGAACC-3' (SEQ ID NO: 2646)

5'-UACCAGUUGCCUUUUAUCCCAAAGU-3' (SEQ ID NO: 3756)
3'-AAAUGGUCAACGGAAAAUAGGGUUUCA-5' (SEQ ID NO: 1538)

βc-3633 Target: 5'-TTTACCAGTTGCCTTTTATCCCAAAGT-3' (SEQ ID NO: 2647)

5'-CCAGUUGCCUUUUAUCCCAAAGUUG-3' (SEQ ID NO: 3757)
3'-AUGGUCAACGGAAAAUAGGGUUUCAAC-5' (SEQ ID NO: 1539)

βc-3635 Target: 5'-TACCAGTTGCCTTTTATCCCAAAGTTG-3' (SEQ ID NO: 2648)

5'-AGUUGCCUUUUAUCCCAAAGUUGUU-3' (SEQ ID NO: 3758)
3'-GGUCAACGGAAAAUAGGGUUUCAACAA-5' (SEQ ID NO: 1540)

βc-3637 Target: 5'-CCAGTTGCCTTTTATCCCAAAGTTGTT-3' (SEQ ID NO: 2649)

5'-UUGCCUUUUAUCCCAAAGUUGUUGU-3' (SEQ ID NO: 3759)
3'-UCAACGGAAAAUAGGGUUUCAACAACA-5' (SEQ ID NO: 1541)

βc-3639 Target: 5'-AGTTGCCTTTTATCCCAAAGTTGTTGT-3' (SEQ ID NO: 2650)

5'-GCCUUUUAUCCCAAAGUUGUUGUAA-3' (SEQ ID NO: 3760)
3'-AACGGAAAAUAGGGUUUCAACAACAUU-5' (SEQ ID NO: 1542)

βc-3641 Target: 5'-TTGCCTTTTATCCCAAAGTTGTTGTAA-3' (SEQ ID NO: 2651)

5'-CUUUUAUCCCAAAGUUGUUGUAACC-3' (SEQ ID NO: 3761)
3'-CGGAAAAUAGGGUUUCAACAACAUUGG-5' (SEQ ID NO: 1543)

βc-3643 Target: 5'-GCCTTTTATCCCAAAGTTGTTGTAACC-3' (SEQ ID NO: 2652)

5'-UUUAUCCCAAAGUUGUUGUAACCUG-3' (SEQ ID NO: 3762)
3'-GAAAAUAGGGUUUCAACAACAUUGGAC-5' (SEQ ID NO: 1544)

βc-3645 Target: 5'-CTTTTATCCCAAAGTTGTTGTAACCTG-3' (SEQ ID NO: 2653)

5'-UAUCCCAAAGUUGUUGUAACCUGCU-3' (SEQ ID NO: 3763)
3'-AAAUAGGGUUUCAACAACAUUGGACGA-5' (SEQ ID NO: 1545)

βc-3647 Target: 5'-TTTATCCCAAAGTTGTTGTAACCTGCT-3' (SEQ ID NO: 2654)

5'-UCCCAAAGUUGUUGUAACCUGCUGU-3' (SEQ ID NO: 3764)
3'-AUAGGGUUUCAACAACAUUGGACGACA-5' (SEQ ID NO: 1546)

βc-3649 Target: 5'-TATCCCAAAGTTGTTGTAACCTGCTGT-3' (SEQ ID NO: 2655)

5'-CCAAAGUUGUUGUAACCUGCUGUGA-3' (SEQ ID NO: 3765)
3'-AGGGUUUCAACAACAUUGGACGACACU-5' (SEQ ID NO: 1547)

βc-3651 Target: 5'-TCCCAAAGTTGTTGTAACCTGCTGTGA-3' (SEQ ID NO: 2656)

5'-AAAGUUGUUGUAACCUGCUGUGAUA-3' (SEQ ID NO: 3766)
3'-GGUUUCAACAACAUUGGACGACACUAU-5' (SEQ ID NO: 1548)

βc-3653 Target: 5'-CCAAAGTTGTTGTAACCTGCTGTGATA-3' (SEQ ID NO: 2657)

5'-AGUUGUUGUAACCUGCUGUGAUACG-3' (SEQ ID NO: 3767)
3'-UUUCAACAACAUUGGACGACACUAUGC-5' (SEQ ID NO: 1549)

βc-3655 Target: 5'-AAAGTTGTTGTAACCTGCTGTGATACG-3' (SEQ ID NO: 2658)

5'-UUGUUGUAACCUGCUGUGAUACGAU-3' (SEQ ID NO: 3768)
3'-UCAACAACAUUGGACGACACUAUGCUA-5' (SEQ ID NO: 1550)

βc-3657 Target: 5'-AGTTGTTGTAACCTGCTGTGATACGAT-3' (SEQ ID NO: 2659)

5'-GUUGUAACCUGCUGUGAUACGAUGC-3' (SEQ ID NO: 3769)
3'-AACAACAUUGGACGACACUAUGCUACG-5' (SEQ ID NO: 1551)

βc-3659 Target: 5'-TTGTTGTAACCTGCTGTGATACGATGC-3' (SEQ ID NO: 2660)

5'-AAAUGGUUCAGAAUUAAACUUUUAA-3' (SEQ ID NO: 3770)
3'-UUUUUACCAAGUCUUAAUUUGAAAAUU-5' (SEQ ID NO: 1552)

βc-3708 Target: 5'-AAAAATGGTTCAGAATTAAACTTTTAA-3' (SEQ ID NO: 2661)

5'-AUGGUUCAGAAUUAAACUUUUAAUU-3' (SEQ ID NO: 3771)
3'-UUUACCAAGUCUUAAUUUGAAAAUUAA-5' (SEQ ID NO: 1553)

βc-3710 Target: 5'-AAATGGTTCAGAATTAAACTTTTAATT-3' (SEQ ID NO: 2662)

5'-GGUUCAGAAUUAAACUUUUAAUUCA-3' (SEQ ID NO: 3772)
3'-UACCAAGUCUUAAUUUGAAAAUUAAGU-5' (SEQ ID NO: 1554)

βc-3712 Target: 5'-ATGGTTCAGAATTAAACTTTTAATTCA-3' (SEQ ID NO: 2663)

5'-UUCAGAAUUAAACUUUUAAUUCAUU-3' (SEQ ID NO: 3773)
3'-CCAAGUCUUAAUUUGAAAAUUAAGUAA-5' (SEQ ID NO: 1555)

βc-3714 Target: 5'-GGTTCAGAATTAAACTTTTAATTCATT-3' (SEQ ID NO: 2664)

5'-CAGAAUUAAACUUUUAAUUCAUUCG-3' (SEQ ID NO: 3774)
3'-AAGUCUUAAUUUGAAAAUUAAGUAAGC-5' (SEQ ID NO: 1556)

βc-3716 Target: 5'-TTCAGAATTAAACTTTTAATTCATTCG-3' (SEQ ID NO: 2665)

5'-GCAGCAGUCUUACUUGGAUUCUGGA-3' (SEQ ID NO: 3775)
3'-GUCGUCGUCAGAAUGAACCUAAGACCU-5' (SEQ ID NO: 1557)

βc-m314 Target: 5'-CAGCAGCAGTCTTACTTGGATTCTGGA-3' (SEQ ID NO: 2666)

5'-ACUUGGAUUCUGGAAUCCAUUCUGG-3' (SEQ ID NO: 3776)
3'-AAUGAACCUAAGACCUUAGGUAAGACC-5' (SEQ ID NO: 1558)

βc-m325 Target: 5'-TTACTTGGATTCTGGAATCCATTCTGG-3' (SEQ ID NO: 2667)

5'-GACACCUCCCAAGUCCUUUAUGAAU-3' (SEQ ID NO: 3777)
3'-AACUGUGGAGGGUUCAGGAAAUACUUA-5' (SEQ ID NO: 1559)

βc-m408 Target: 5'-TTGACACCTCCCAAGTCCTTTATGAAT-3' (SEQ ID NO: 2668)

5'-CGCAAGAGCAAGUAGCUGAUAUUGA-3' (SEQ ID NO: 3778)
3'-GUGCGUUCUCGUUCAUCGACUAUAACU-5' (SEQ ID NO: 1560)

βc-m460 Target: 5'-CACGCAAGAGCAAGTAGCTGATATTGA-3' (SEQ ID NO: 2669)

5'-CCAUGUUCCCUGAGACGCUAGAUGA-3' (SEQ ID NO: 3779)
3'-ACGGUACAAGGGACUCUGCGAUCUACU-5' (SEQ ID NO: 1561)

βc-m526 Target: 5'-TGCCATGTTCCCTGAGACGCTAGATGA-3' (SEQ ID NO: 2670)

5'-UGAAACAUGCAGUUGUCAAUUUGAU-3' (SEQ ID NO: 3780)
3'-CAACUUUGUACGUCAACAGUUAAACUA-5' (SEQ ID NO: 1562)

βc-m631 Target: 5'-GTTGAAACATGCAGTTGTCAATTTGAT-3' (SEQ ID NO: 2671)

5'-CAUGCAGUUGUCAAUUUGAUUAACU-3' (SEQ ID NO: 3781)
3'-UUGUACGUCAACAGUUAAACUAAUUGA-5' (SEQ ID NO: 1563)

βc-m636 Target: 5'-AACATGCAGTTGTCAATTTGATTAACT-3' (SEQ ID NO: 2672)

5'-GUUGUCAAUUUGAUUAACUAUCAGG-3' (SEQ ID NO: 3782)
3'-GUCAACAGUUAAACUAAUUGAUAGUCC-5' (SEQ ID NO: 1564)

βc-m642 Target: 5'-CAGTTGTCAATTTGATTAACTATCAGG-3' (SEQ ID NO: 2673)

5'-GAGGACCAGGUGGUAGUUAAUAAAG-3' (SEQ ID NO: 3783)
3'-UACUCCUGGUCCACCAUCAAUUAUUUC-5' (SEQ ID NO: 1565)

βc-m723 Target: 5'-ATGAGGACCAGGTGGTAGTTAATAAAG-3' (SEQ ID NO: 2674)

5'-GGUCACCAGUGGAUUCUGUACUGUU-3' (SEQ ID NO: 3784)
3'-ACCCAGUGGUCACCUAAGACAUGACAA-5' (SEQ ID NO: 1566)

βc-m970 Target: 5'-TGGGTCACCAGTGGATTCTGTACTGTT-3' (SEQ ID NO: 2675)

5'-CAGUGGAUUCUGUACUGUUCUACGC-3' (SEQ ID NO: 3785)
3'-UGGUCACCUAAGACAUGACAAGAUGCG-5' (SEQ ID NO: 1567)

βc-m976 Target: 5'-ACCAGTGGATTCTGTACTGTTCTACGC-3' (SEQ ID NO: 2676)

5'-GAUUCUGUACUGUUCUACGCCAUCA-3' (SEQ ID NO: 3786)
3'-ACCUAAGACAUGACAAGAUGCGGUAGU-5' (SEQ ID NO: 1568)

βc-m981 Target: 5'-TGGATTCTGTACTGTTCTACGCCATCA-3' (SEQ ID NO: 2677)

5'-GUGGACUGCAGAAAAUGGUUGCUUU-3' (SEQ ID NO: 3787)
3'-ACCACCUGACGUCUUUUACCAACGAAA-5' (SEQ ID NO: 1569)

βc-m1066 Target: 5'-TGGTGGACTGCAGAAAATGGTTGCTTT-3' (SEQ ID NO: 2678)

5'-CGUGAAAUUCUUGGCUAUUACAACA-3' (SEQ ID NO: 3788)
3'-UUGCACUUUAAGAACCGAUAAUGUUGU-5' (SEQ ID NO: 1570)

βc-m1106 Target: 5'-AACGTGAAATTCTTGGCTATTACAACA-3' (SEQ ID NO: 2679)

5'-CAAGUCAGCGACUUGUUCAAAACUG-3' (SEQ ID NO: 3789)
3'-GGGUUCAGUCGCUGAACAAGUUUUGAC-5' (SEQ ID NO: 1571)

βc-m1354 Target: 5'-CCCAAGTCAGCGACTTGTTCAAAACTG-3' (SEQ ID NO: 2680)

5'-GACUUGUUCAAAACUGUCUUUGGAC-3' (SEQ ID NO: 3790)
3'-CGCUGAACAAGUUUUGACAGAAACCUG-5' (SEQ ID NO: 1572)

βc-m1363 Target: 5'-GCGACTTGTTCAAAACTGTCTTTGGAC-3' (SEQ ID NO: 2681)

5'-AAACUGUCUUUGGACUCUCAGAAAC-3' (SEQ ID NO: 3791)
3'-GUUUUGACAGAAACCUGAGAGUCUUUG-5' (SEQ ID NO: 1573)

βc-m1373 Target: 5'-CAAAACTGTCTTTGGACTCTCAGAAAC-3' (SEQ ID NO: 2682)

5'-CUCUAACCUCACUUGCAAUAAUUAC-3' (SEQ ID NO: 3792)
3'-GAGAGAUUGGAGUGAACGUUAUUAAUG-5' (SEQ ID NO: 1574)

βc-m1508 Target: 5'-CTCTCTAACCTCACTTGCAATAATTAC-3' (SEQ ID NO: 2683)

5'-CUCACUUGCAAUAAUUACAAAAACA-3' (SEQ ID NO: 3793)
3'-UGGAGUGAACGUUAUUAAUGUUUUUGU-5' (SEQ ID NO: 1575)

βc-m1515 Target: 5'-ACCTCACTTGCAATAATTACAAAAACA-3' (SEQ ID NO: 2684)

5'-GAAUGCCGUUCGCCUUCAUUAUGGA-3' (SEQ ID NO: 3794)
3'-GUCUUACGGCAAGCGGAAGUAAUACCU-5' (SEQ ID NO: 1576)

βc-m1682 Target: 5'-CAGAATGCCGTTCGCCTTCATTATGGA-3' (SEQ ID NO: 2685)

5'-GCCUUCAUUAUGGACUGCCUGUUGU-3' (SEQ ID NO: 3795)
3'-AGCGGAAGUAAUACCUGACGGACAACA-5' (SEQ ID NO: 1577)

βc-m1693 Target: 5'-TCGCCTTCATTATGGACTGCCTGTTGT-3' (SEQ ID NO: 2686)

5'-CAUUAUGGACUGCCUGUUGUGGUUA-3' (SEQ ID NO: 3796)
3'-AAGUAAUACCUGACGGACAACACCAAU-5' (SEQ ID NO: 1578)

βc-m1698 Target: 5'-TTCATTATGGACTGCCTGTTGTGGTTA-3' (SEQ ID NO: 2687)

5'-GACUGCCUGUUGUGGUUAAACUCCU-3' (SEQ ID NO: 3797)
3'-ACCUGACGGACAACACCAAUUUGAGGA-5' (SEQ ID NO: 1579)

βc-m1705 Target: 5'-TGGACTGCCTGTTGTGGTTAAACTCCT-3' (SEQ ID NO: 2688)

5'-AACUGUUGGAUUGAUUCGAAACCUU-3' (SEQ ID NO: 3798)
3'-CGUUGACAACCUAACUAAGCUUUGGAA-5' (SEQ ID NO: 1580)

βc-m1763 Target: 5'-GCAACTGTTGGATTGATTCGAAACCTT-3' (SEQ ID NO: 2689)

5'-GAGGACUCAAUACCAUUCCAUUGUU-3' (SEQ ID NO: 3799)
3'-GGCUCCUGAGUUAUGGUAAGGUAACAA-5' (SEQ ID NO: 1581)

βc-m2008 Target: 5'-CCGAGGACTCAATACCATTCCATTGTT-3' (SEQ ID NO: 2690)

5'-GAGGACAAGCCACAGGAUUACAAGA-3' (SEQ ID NO: 3800)
3'-GACUCCUGUUCGGUGUCCUAAUGUUCU-5' (SEQ ID NO: 1582)

βc-m2226 Target: 5'-CTGAGGACAAGCCACAGGATTACAAGA-3' (SEQ ID NO: 2691)

5'-AUGGACCCUAUGAUGGAGCAUGAGA-3' (SEQ ID NO: 3801)
3'-CCUACCUGGGAUACUACCUCGUACUCU-5' (SEQ ID NO: 1583)

βc-m2427 Target: 5'-GGATGGACCCTATGATGGAGCATGAGA-3' (SEQ ID NO: 2692)

5'-GAUACUGACCUGUAAAUCGUCCUUU-3' (SEQ ID NO: 3802)
3'-AACUAUGACUGGACAUUUAGCAGGAAA-5' (SEQ ID NO: 1584)

βc-m2568 Target: 5'-TTGATACTGACCTGTAAATCGTCCTTT-3' (SEQ ID NO: 2693)

5'-CCAGUGUGGGUGAAUACUUUACUCU-3' (SEQ ID NO: 3803)
3'-UCGGUCACACCCACUUAUGAAAUGAGA-5' (SEQ ID NO: 1585)

βc-m2614 Target: 5'-AGCCAGTGTGGGTGAATACTTTACTCT-3' (SEQ ID NO: 2694)

5'-CCACAGCUUUUGCAGCGUUAUACUC-3' (SEQ ID NO: 3804)
3'-ACGGUGUCGAAAACGUCGCAAUAUGAG-5' (SEQ ID NO: 1586)

βc-m2770 Target: 5'-TGCCACAGCTTTTGCAGCGTTATACTC-3' (SEQ ID NO: 2695)

5'-UUUUGCAGCGUUAUACUCAGAUGAG-3' (SEQ ID NO: 3805)
3'-CGAAAACGUCGCAAUAUGAGUCUACUC-5' (SEQ ID NO: 1587)

βc-m2777 Target: 5'-GCTTTTGCAGCGTTATACTCAGATGAG-3' (SEQ ID NO: 2696)

5'-GCGUUAUACUCAGAUGAGUAACAUU-3' (SEQ ID NO: 3806)
3'-GUCGCAAUAUGAGUCUACUCAUUGUAA-5' (SEQ ID NO: 1588)

βc-m2784 Target: 5'-CAGCGTTATACTCAGATGAGTAACATT-3' (SEQ ID NO: 2697)

5'-AUUUGCUGUUUUCAACAUUAAUAGC-3' (SEQ ID NO: 3807)
3'-UGUAAACGACAAAAGUUGUAAUUAUCG-5' (SEQ ID NO: 1589)

βc-m2806 Target: 5'-ACATTTGCTGTTTTCAACATTAATAGC-3' (SEQ ID NO: 2698)

5'-CUGUAGUGUCUGAACGUGCAUUGUG-3' (SEQ ID NO: 3808)
3'-UCGACAUCACAGACUUGCACGUAACAC-5' (SEQ ID NO: 1590)

βc-m2850 Target: 5'-AGCTGTAGTGTCTGAACGTGCATTGTG-3' (SEQ ID NO: 2699)

5'-GAACAGUCGAAGUACGCUUUUUGUU-3' (SEQ ID NO: 3809)
3'-CCCUUGUCAGCUUCAUGCGAAAAACAA-5' (SEQ ID NO: 1591)

βc-m2965 Target: 5'-GGGAACAGTCGAAGTACGCTTTTTGTT-3' (SEQ ID NO: 2700)

5'-GUCGAAGUACGCUUUUUGUUCUGGU-3' (SEQ ID NO: 3810)
3'-GUCAGCUUCAUGCGAAAAACAAGACCA-5' (SEQ ID NO: 1592)

βc-m2970 Target: 5'-CAGTCGAAGTACGCTTTTTGTTCTGGT-3' (SEQ ID NO: 2701)

5'-GUACGCUUUUUGUUCUGGUCCUUUU-3' (SEQ ID NO: 3811)
3'-UUCAUGCGAAAAACAAGACCAGGAAAA-5' (SEQ ID NO: 1593)

βc-m2976 Target: 5'-AAGTACGCTTTTTGTTCTGGTCCTTTT-3' (SEQ ID NO: 2702)

5'-CCUAGCCUUGCUUGUUCUUUGUUUU-3' (SEQ ID NO: 3812)
3'-UGGGAUCGGAACGAACAAGAAACAAAA-5' (SEQ ID NO: 1594)

βc-m3092 Target: 5'-ACCCTAGCCTTGCTTGTTCTTTGTTTT-3' (SEQ ID NO: 2703)

5'-CCUUGCUUGUUCUUUGUUUUAAUAU-3' (SEQ ID NO: 3813)
3'-UCGGAACGAACAAGAAACAAAAUUAUA-5' (SEQ ID NO: 1595)

βc-m3097 Target: 5'-AGCCTTGCTTGTTCTTTGTTTTAATAT-3' (SEQ ID NO: 2704)

5'-AACCUGCUACAGCAAUUUCUGAUUU-3' (SEQ ID NO: 3814)
3'-ACUUGGACGAUGUCGUUAAAGACUAAA-5' (SEQ ID NO: 1596)

βc-m3198 Target: 5'-TGAACCTGCTACAGCAATTTCTGATTT-3' (SEQ ID NO: 2705)

5'-CAGCAAUUUCUGAUUUCUAAGAACC-3' (SEQ ID NO: 3815)
3'-AUGUCGUUAAAGACUAAAGAUUCUUGG-5' (SEQ ID NO: 1597)

βc-m3207 Target: 5'-TACAGCAATTTCTGATTTCTAAGAACC-3' (SEQ ID NO: 2706)

5'-GUAAGAGGUGUUAUUUGAGCCUUGU-3' (SEQ ID NO: 3816)
3'-GUCAUUCUCCACAAUAAACUCGGAACA-5' (SEQ ID NO: 1598)

βc-m3433 Target: 5'-CAGTAAGAGGTGTTATTTGAGCCTTGT-3' (SEQ ID NO: 2707)

5'-GGUGUUAUUUGAGCCUUGUUUUGGA-3' (SEQ ID NO: 3817)
3'-CUCCACAAUAAACUCGGAACAAAACCU-5' (SEQ ID NO: 1599)

βc-m3439 Target: 5'-GAGGTGTTATTTGAGCCTTGTTTTGGA-3' (SEQ ID NO: 2708)

5'-UAUUUGAGCCUUGUUUUGGACAGUA-3' (SEQ ID NO: 3818)
3'-CAAUAAACUCGGAACAAAACCUGUCAU-5' (SEQ ID NO: 1600)

βc-m3444 Target: 5'-GTTATTTGAGCCTTGTTTTGGACAGTA-3' (SEQ ID NO: 2709)

5'-GAGCCUUGUUUUGGACAGUAUACCA-3' (SEQ ID NO: 3819)
3'-AACUCGGAACAAAACCUGUCAUAUGGU-5' (SEQ ID NO: 1601)

βc-m3449 Target: 5'-TTGAGCCTTGTTTTGGACAGTATACCA-3' (SEQ ID NO: 2710)

5'-CAACAGAUGCGGUUAUAGAAAUGGU-3' (SEQ ID NO: 3820)
3'-AAGUUGUCUACGCCAAUAUCUUUACCA-5' (SEQ ID NO: 1602)

βc-m3522 Target: 5'-TTCAACAGATGCGGTTATAGAAATGGT-3' (SEQ ID NO: 2711)

5'-GUUAUAGAAAUGGUUCAGAAUUAAA-3' (SEQ ID NO: 3821)
3'-GCCAAUAUCUUUACCAAGUCUUAAUUU-5' (SEQ ID NO: 1603)

βc-m3533 Target: 5'-CGGTTATAGAAATGGTTCAGAATTAAA-3' (SEQ ID NO: 2712)

5'-AGAAAUGGUUCAGAAUUAAACUUUU-3' (SEQ ID NO: 3822)
3'-UAUCUUUACCAAGUCUUAAUUUGAAAA-5' (SEQ ID NO: 1604)

βc-m3538 Target: 5'-ATAGAAATGGTTCAGAATTAAACTTTT-3' (SEQ ID NO: 2713)

Table 7: Selected Anti-β-catenin DsiRNA Agents, Blunt/Frayed Duplexes

5'-CCCUGAGGGUAUUUGAAGUAUACCA$^{CC-3'}$ (SEQ ID NO: 5553)
3'-GGGACUCCCAUAAACUUCAUAUGGU$_{AU-5'}$ (SEQ ID NO: 1117)

βc-240 Target: 5'-CCCTGAGGGTATTTGAAGTATACCATA-3' (SEQ ID NO: 2226)

5'-GAGGGUAUUUGAAGUAUACCAUACA$^{CA-3'}$ (SEQ ID NO: 5554)
3'-CUCCCAUAAACUUCAUAUGGUAUGU$_{UG-5'}$ (SEQ ID NO: 1118)

βc-244 Target: 5'-GAGGGTATTTGAAGTATACCATACAAC-3' (SEQ ID NO: 2227)

5'-UGAAGUAUACCAUACAACUGUUUUG$^{CC-3'}$ (SEQ ID NO: 5555)
3'-ACUUCAUAUGGUAUGUUGACAAAAC$_{UU-5'}$ (SEQ ID NO: 1119)

βc-253 Target: 5'-TGAAGTATACCATACAACTGTTTTGAA-3' (SEQ ID NO: 2228)

5'-AUACCAUACAACUGUUUUGAAAAUC$^{AC-3'}$ (SEQ ID NO: 5556)
3'-UAUGGUAUGUUGACAAAACUUUUAG$_{GU-5'}$ (SEQ ID NO: 1120)

βc-259 Target: 5'-ATACCATACAACTGTTTTGAAAATCCA-3' (SEQ ID NO: 2229)

5'-AUACAACUGUUUUGAAAAUCCAGCG$^{CA-3'}$ (SEQ ID NO: 5557)
3'-UAUGUUGACAAAACUUUUAGGUCGC$_{AC-5'}$ (SEQ ID NO: 1121)

βc-264 Target: 5'-ATACAACTGTTTTGAAAATCCAGCGTG-3' (SEQ ID NO: 2230)

5'-CAGGGAUUUUCUCAGUCCUUCACUC$^{CC-3'}$ (SEQ ID NO: 5558)
3'-GUCCCUAAAAGAGUCAGGAAGUGAG$_{UU-5'}$ (SEQ ID NO: 1122)

βc-496 Target: 5'-CAGGGATTTTCTCAGTCCTTCACTCAA-3' (SEQ ID NO: 2231)

5'-CACUCAAGAACAAGUAGCUGAUAUU$^{AC-3'}$ (SEQ ID NO: 5559)
3'-GUGAGUUCUUGUUCAUCGACUAUAA$_{CU-5'}$ (SEQ ID NO: 1123)

βc-516 Target: 5'-CACTCAAGAACAAGTAGCTGATATTGA-3' (SEQ ID NO: 2232)

5'-AGAACAAGUAGCUGAUAUUGAUGGA$^{AC-3'}$ (SEQ ID NO: 5560)
3'-UCUUGUUCAUCGACUAUAACUACCU$_{GU-5'}$ (SEQ ID NO: 1124)

βc-522 Target: 5'-AGAACAAGTAGCTGATATTGATGGACA-3' (SEQ ID NO: 2233)

5'-AACAAGUAGCUGAUAUUGAUGGACA$^{AC-3'}$ (SEQ ID NO: 5561)
3'-UUGUUCAUCGACUAUAACUACCUGU$_{CA-5'}$ (SEQ ID NO: 1125)

βc-524 Target: 5'-AACAAGTAGCTGATATTGATGGACAGT-3' (SEQ ID NO: 2234)

5'-UGAUGGACAGUAUGCAAUGACUCGA$^{AA-3'}$ (SEQ ID NO: 5562)
3'-ACUACCUGUCAUACGUUACUGAGCU$_{CG-5'}$ (SEQ ID NO: 1126)

βc-540 Target: 5'-TGATGGACAGTATGCAATGACTCGAGC-3' (SEQ ID NO: 2235)

5'-UGCUAUGUUCCCUGAGACAUUAGAU$^{AC-3'}$ (SEQ ID NO: 5563)
3'-ACGAUACAAGGGACUCUGUAAUCUA$_{CU-5'}$ (SEQ ID NO: 1127)

βc-582 Target: 5'-TGCTATGTTCCCTGAGACATTAGATGA-3' (SEQ ID NO: 2236)

5'-UGCUGAAACAUGCAGUUGUAAACUU$^{AC-3'}$ (SEQ ID NO: 5564)
3'-ACGACUUUGUACGUCAACAUUUGAA$_{CU-5'}$ (SEQ ID NO: 1128)

βc-686 Target: 5'-TGCTGAAACATGCAGTTGTAAACTTGA-3' (SEQ ID NO: 2237)

5'-AACAUGCAGUUGUAAACUUGAUUAA$^{AC-3'}$ (SEQ ID NO: 5565)
3'-UUGUACGUCAACAUUUGAACUAAUU$_{GA-5'}$ (SEQ ID NO: 1129)

βc-692 Target: 5'-AACATGCAGTTGTAAACTTGATTAACT-3' (SEQ ID NO: 2238)

5'-GCAGUUGUAAACUUGAUUAACUAUC$^{CC-3'}$ (SEQ ID NO: 5566)
3'-CGUCAACAUUUGAACUAAUUGAUAG$_{UU-5'}$ (SEQ ID NO: 1130)

βc-697 Target: 5'-GCAGTTGTAAACTTGATTAACTATCAA-3' (SEQ ID NO: 2239)

5'-ACUUGAUUAACUAUCAAGAUGAUGC$^{CA-3'}$ (SEQ ID NO: 5567)
3'-UGAACUAAUUGAUAGUUCUACUACG$_{UC-5'}$ (SEQ ID NO: 1131)

βc-707 Target: 5'-ACTTGATTAACTATCAAGATGATGCAG-3' (SEQ ID NO: 2240)

5'-CCCUGAACUGACAAAACUGCUAAAU$^{AC-3'}$ (SEQ ID NO: 5568)
3'-GGGACUUGACUGUUUUGACGAUUUA$_{CU-5'}$ (SEQ ID NO: 1132)

βc-753 Target: 5'-CCCTGAACTGACAAAACTGCTAAATGA-3' (SEQ ID NO: 2241)

5'-UCAGAUGGUGUCUGCUAUUGUACGU$^{CA-3'}$ (SEQ ID NO: 5569)
3'-AGUCUACCACAGACGAUAACAUGCA$_{UG-5'}$ (SEQ ID NO: 1133)

βc-870 Target: 5'-TCAGATGGTGTCTGCTATTGTACGTAC-3' (SEQ ID NO: 2242)

5'-GUACGUACCAUGCAGAAUACAAAUG$^{CC-3'}$ (SEQ ID NO: 5570)

3'-CAUGCAUGGUACGUCUUAUGUUUAC$_{U_{A-5'}}$ (SEQ ID NO: 1134)

βc-889 Target: 5'-GTACGTACCATGCAGAATACAAATGAT-3' (SEQ ID NO: 2243)

5'-AUUACAACUCUCCACAACCUUUUAU$^{C_{C-3'}}$ (SEQ ID NO: 5571)
3'-UAAUGUUGAGAGGUGUUGGAAAAUA$_{A_{U-5'}}$ (SEQ ID NO: 1135)

βc-1060 Target: 5'-ATTACAACTCTCCACAACCTTTTATTA-3' (SEQ ID NO: 2244)

5'-AACUCUCCACAACCUUUUAUUACAU$^{A_{C-3'}}$ (SEQ ID NO: 5572)
3'-UUGAGAGGUGUUGGAAAAUAAUGUA$_{G_{U-5'}}$ (SEQ ID NO: 1136)

βc-1065 Target: 5'-AACTCTCCACAACCTTTTATTACATCA-3' (SEQ ID NO: 2245)

5'-UCCACAACCUUUUAUUACAUCAAGA$^{C_{A-3'}}$ (SEQ ID NO: 5573)
3'-AGGUGUUGGAAAAUAAUGUAGUUCU$_{U_{C-5'}}$ (SEQ ID NO: 1137)

βc-1070 Target: 5'-TCCACAACCTTTTATTACATCAAGAAG-3' (SEQ ID NO: 2246)

5'-ACCUUUUAUUACAUCAAGAAGGAGC$^{C_{C-3'}}$ (SEQ ID NO: 5574)
3'-UGGAAAAUAAUGUAGUUCUUCCUCG$_{A_{U-5'}}$ (SEQ ID NO: 1138)

βc-1076 Target: 5'-ACCTTTTATTACATCAAGAAGGAGCTA-3' (SEQ ID NO: 2247)

5'-ACAAAACAAAUGUUAAAUUCUUGGC$^{C_{C-3'}}$ (SEQ ID NO: 5575)
3'-UGUUUUGUUUACAAUUUAAGAACCG$_{A_{U-5'}}$ (SEQ ID NO: 1139)

βc-1154 Target: 5'-ACAAAACAAATGTTAAATTCTTGGCTA-3' (SEQ ID NO: 2248)

5'-AUUACGACAGACUGCCUUCAAAUUU$^{C_{C-3'}}$ (SEQ ID NO: 5576)
3'-UAAUGCUGUCUGACGGAAGUUUAAA$_{A_{U-5'}}$ (SEQ ID NO: 1140)

βc-1180 Target: 5'-ATTACGACAGACTGCCTTCAAATTTTA-3' (SEQ ID NO: 2249)

5'-GACAGACUGCCUUCAAAUUUUAGCU$^{C_{C-3'}}$ (SEQ ID NO: 5577)
3'-CUGUCUGACGGAAGUUUAAAAUCGA$_{A_{U-5'}}$ (SEQ ID NO: 1141)

βc-1185 Target: 5'-GACAGACTGCCTTCAAATTTTAGCTTA-3' (SEQ ID NO: 2250)

5'-AGCUUUAGUAAAUAUAAUGAGGACC$^{C_{C-3'}}$ (SEQ ID NO: 5578)
3'-UCGAAAUCAUUUAUAUUACUCCUGG$_{A_{U-5'}}$ (SEQ ID NO: 1142)

βc-1260 Target: 5'-AGCTTTAGTAAATATAATGAGGACCTA-3' (SEQ ID NO: 2251)

5'-GAAAAACUACUGUGGACCACAAGCA$^{A_{C-3'}}$ (SEQ ID NO: 5579)
3'-CUUUUUGAUGACACCUGGUGUUCGU$_{C_{U-5'}}$ (SEQ ID NO: 1143)

βc-1294 Target: 5'-GAAAAACTACTGTGGACCACAAGCAGA-3' (SEQ ID NO: 2252)

5'-CAAGUCAACGUCUUGUUCAGAACUG$^{C_{A-3'}}$ (SEQ ID NO: 5580)
3'-GUUCAGUUGCAGAACAAGUCUUGAC$_{A_{G-5'}}$ (SEQ ID NO: 1144)

βc-1412 Target: 5'-CAAGTCAACGTCTTGTTCAGAACTGTC-3' (SEQ ID NO: 2253)

5'-AACGUCUUGUUCAGAACUGUCUUUG$^{AC-3'}$ (SEQ ID NO: 5581)
3'-UUGCAGAACAAGUCUUGACAGAAAC$_{CU-5'}$ (SEQ ID NO: 1145)

βc-1418 Target: 5'-AACGTCTTGTTCAGAACTGTCTTTGGA-3' (SEQ ID NO: 2254)

5'-CUUGUUCAGAACUGUCUUUGGACUC$^{CA-3'}$ (SEQ ID NO: 5582)
3'-GAACAAGUCUUGACAGAAACCUGAG$_{AG-5'}$ (SEQ ID NO: 1146)

βc-1423 Target: 5'-CTTGTTCAGAACTGTCTTTGGACTCTC-3' (SEQ ID NO: 2255)

5'-UGGGUUCAGAUGAUAUAAAUGUGGU$^{AC-3'}$ (SEQ ID NO: 5583)
3'-ACCCAAGUCUACUAUAUUUACACCA$_{GU-5'}$ (SEQ ID NO: 1147)

βc-1520 Target: 5'-TGGGTTCAGATGATATAAATGTGGTCA-3' (SEQ ID NO: 2256)

5'-AUUCUUUCUAACCUCACUUGCAAUA$^{CC-3'}$ (SEQ ID NO: 5584)
3'-UAAGAAAGAUUGGAGUGAACGUUAU$_{UA-5'}$ (SEQ ID NO: 1148)

βc-1561 Target: 5'-ATTCTTTCTAACCTCACTTGCAATAAT-3' (SEQ ID NO: 2257)

5'-ACCUCACUUGCAAUAAUUAUAAGAA$^{AC-3'}$ (SEQ ID NO: 5585)
3'-UGGAGUGAACGUUAUUAAUAUUCUU$_{GU-5'}$ (SEQ ID NO: 1149)

βc-1571 Target: 5'-ACCTCACTTGCAATAATTATAAGAACA-3' (SEQ ID NO: 2258)

5'-UGCAAUAAUUAUAAGAACAAGAUGA$^{CA-3'}$ (SEQ ID NO: 5586)
3'-ACGUUAUUAAUAUUCUUGUUCUACU$_{AC-5'}$ (SEQ ID NO: 1150)

βc-1579 Target: 5'-TGCAATAATTATAAGAACAAGATGATG-3' (SEQ ID NO: 2259)

5'-UGGUAUAGAGGCUCUUGUGCGUACU$^{AC-3'}$ (SEQ ID NO: 5587)
3'-ACCAUAUCUCCGAGAACACGCAUGA$_{CA-5'}$ (SEQ ID NO: 1151)

βc-1620 Target: 5'-TGGTATAGAGGCTCTTGTGCGTACTGT-3' (SEQ ID NO: 2260)

5'-AAGGCUACUGUUGGAUUGAUUCGAA$^{CC-3'}$ (SEQ ID NO: 5588)
3'-UUCCGAUGACAACCUAACUAAGCUU$_{UA-5'}$ (SEQ ID NO: 1152)

βc-1816 Target: 5'-AAGGCTACTGTTGGATTGATTCGAAAT-3' (SEQ ID NO: 2261)

5'-CGCAUGGAAGAAAUAGUUGAAGGUU$^{AC-3'}$ (SEQ ID NO: 5589)
3'-GCGUACCUUCUUUAUCAACUUCCAA$_{CA-5'}$ (SEQ ID NO: 1153)

βc-1987 Target: 5'-CGCATGGAAGAAATAGTTGAAGGTTGT-3' (SEQ ID NO: 2262)

5'-CAUGGAAGAAAUAGUUGAAGGUUGU$^{CA-3'}$ (SEQ ID NO: 5590)
3'-GUACCUUCUUUAUCAACUUCCAACA$_{UG-5'}$ (SEQ ID NO: 1154)

βc-1989 Target: 5'-CATGGAAGAAATAGTTGAAGGTTGTAC-3' (SEQ ID NO: 2263)

5'-CCAUUGAAAACAUCCAAAGAGUAGC$^{CA-3'}$ (SEQ ID NO: 5591)
3'-GGUAACUUUUGUAGGUUUCUCAUCG$_{AC-5'}$ (SEQ ID NO: 1155)

βc-2111 Target: 5'-CCATTGAAAACATCCAAAGAGTAGCTG-3' (SEQ ID NO: 2264)

5'-CUGAGGACAAGCCACAAGAUUACAA$^{AC-3'}$ (SEQ ID NO: 5592)
3'-GACUCCUGUUCGGUGUUCUAAUGUU$_{CU-5'}$ (SEQ ID NO: 1156)

βc-2282 Target: 5'-CTGAGGACAAGCCACAAGATTACAAGA-3' (SEQ ID NO: 2265)

5'-UUGAUACUGACCUGUAAAUCAUCCU$^{CC-3'}$ (SEQ ID NO: 5593)
3'-AACUAUGACUGGACAUUUAGUAGGA$_{AA-5'}$ (SEQ ID NO: 1157)

βc-2624 Target: 5'-TTGATACTGACCTGTAAATCATCCTTT-3' (SEQ ID NO: 2266)

5'-CUUUAGGUAAGAAGUUUUAAAAAGC$^{AC-3'}$ (SEQ ID NO: 5594)
3'-GAAAUCCAUUCUUCAAAAUUUUUCG$_{GU-5'}$ (SEQ ID NO: 1158)

βc-2647 Target: 5'-CTTTAGGTAAGAAGTTTTAAAAAGCCA-3' (SEQ ID NO: 2267)

5'-AACAGGUAUAUACUUUGAAAGGAGA$^{CA-3'}$ (SEQ ID NO: 5595)
3'-UUGUCCAUAUAUGAAACUUUCCUCU$_{AC-5'}$ (SEQ ID NO: 1159)

βc-2770 Target: 5'-AACAGGTATATACTTTGAAAGGAGATG-3' (SEQ ID NO: 2268)

5'-UGGAAGUUAUUAACUUUAAUGUUUU$^{CC-3'}$ (SEQ ID NO: 5596)
3'-ACCUUCAAUAAUUGAAAUUACAAAA$_{AA-5'}$ (SEQ ID NO: 1160)

βc-2848 Target: 5'-TGGAAGTTATTAACTTTAATGTTTTTT-3' (SEQ ID NO: 2269)

5'-UGCCACAGCUUUUGCAACUUAAUAC$^{CA-3'}$ (SEQ ID NO: 5597)
3'-ACGGUGUCGAAAACGUUGAAUUAUG$_{AG-5'}$ (SEQ ID NO: 1161)

βc-2874 Target: 5'-TGCCACAGCTTTTGCAACTTAATACTC-3' (SEQ ID NO: 2270)

5'-AACAUUUGCUGUUUUAAACAUUAAU$^{CA-3'}$ (SEQ ID NO: 5598)
3'-UUGUAAACGACAAAAUUUGUAAUUA$_{UC-5'}$ (SEQ ID NO: 1162)

βc-2909 Target: 5'-AACATTTGCTGTTTTAAACATTAATAG-3' (SEQ ID NO: 2271)

5'-AACAAUUGAAGUAAACUUUUUGUUC$^{CA-3'}$ (SEQ ID NO: 5599)
3'-UUGUUAACUUCAUUUGAAAAACAAG$_{AC-5'}$ (SEQ ID NO: 1163)

βc-3074 Target: 5'-AACAATTGAAGTAAACTTTTTGTTCTG-3' (SEQ ID NO: 2272)

5'-AAACCCUAGCCUUGCUUGUUAAAUU$^{CC-3'}$ (SEQ ID NO: 5600)
3'-UUUGGGAUCGGAACGAACAAUUUAA$_{AA-5'}$ (SEQ ID NO: 1164)

βc-3197 Target: 5'-AAACCCTAGCCTTGCTTGTTAAATTTT-3' (SEQ ID NO: 2273)

5'-UAGCCUUGCUUGUUAAAUUUUUUUU$^{CC-3'}$ (SEQ ID NO: 5601)
3'-AUCGGAACGAACAAUUUAAAAAAAA$_{AA-5'}$ (SEQ ID NO: 1165)

βc-3203 Target: 5'-TAGCCTTGCTTGTTAAATTTTTTTTT-3' (SEQ ID NO: 2274)

5'-UUGAAGUAGCUCUUUUUUUUUUUU$^{CC-3'}$ (SEQ ID NO: 5602)

3'-AACUUCAUCGAGAAAAAAAAAAAAA$_{A_{A-5'}}$ (SEQ ID NO: 1166)

βc-3273 Target: 5'-TTGAAGTAGCTCTTTTTTTTTTTTTT-3' (SEQ ID NO: 2275)

5'-UCGUAGUGUUAAGUUAUAGUGAAUA$^{AC-3'}$ (SEQ ID NO: 5603)
3'-AGCAUCACAAUUCAAUAUCACUUAU$_{GA-5'}$ (SEQ ID NO: 1167)

βc-3333 Target: 5'-TCGTAGTGTTAAGTTATAGTGAATACT-3' (SEQ ID NO: 2276)

5'-UAGUGAAUACUGCUACAGCAAUUUC$^{CC-3'}$ (SEQ ID NO: 5604)
3'-AUCACUUAUGACGAUGUCGUUAAAG$_{AU-5'}$ (SEQ ID NO: 1168)

βc-3349 Target: 5'-TAGTGAATACTGCTACAGCAATTTCTA-3' (SEQ ID NO: 2277)

5'-AAUACUGCUACAGCAAUUUCUAAUU$^{CC-3'}$ (SEQ ID NO: 5605)
3'-UUAUGACGAUGUCGUUAAAGAUUAA$_{AA-5'}$ (SEQ ID NO: 1169)

βc-3354 Target: 5'-AATACTGCTACAGCAATTTCTAATTTT-3' (SEQ ID NO: 2278)

5'-UUCUAAUUUUUAAGAAUUGAGUAAU$^{AA-3'}$ (SEQ ID NO: 5606)
3'-AAGAUUAAAAAUUCUUAACUCAUUA$_{CC-5'}$ (SEQ ID NO: 1170)

βc-3371 Target: 5'-TTCTAATTTTTAAGAATTGAGTAATGG-3' (SEQ ID NO: 2279)

5'-AUUUUUAAGAAUUGAGUAAUGGUGU$^{CA-3'}$ (SEQ ID NO: 5607)
3'-UAAAAAUUCUUAACUCAUUACCACA$_{UC-5'}$ (SEQ ID NO: 1171)

βc-3376 Target: 5'-ATTTTTAAGAATTGAGTAATGGTGTAG-3' (SEQ ID NO: 2280)

5'-UUCAUAAUCACUCUAAUUAAUUGUA$^{CC-3'}$ (SEQ ID NO: 5608)
3'-AAGUAUUAGUGAGAUUAAUUAACAU$_{UA-5'}$ (SEQ ID NO: 1172)

βc-3411 Target: 5'-TTCATAATCACTCTAATTAATTGTAAT-3' (SEQ ID NO: 2281)

5'-AUUAAUUGUAAUCUGAAUAAAGUGU$^{CC-3'}$ (SEQ ID NO: 5609)
3'-UAAUUAACAUUAGACUUAUUUCACA$_{UU-5'}$ (SEQ ID NO: 1173)

βc-3426 Target: 5'-ATTAATTGTAATCTGAATAAAGTGTAA-3' (SEQ ID NO: 2282)

5'-UUGUAAUCUGAAUAAAGUGUAACAA$^{CC-3'}$ (SEQ ID NO: 5610)
3'-AACAUUAGACUUAUUUCACAUUGUU$_{AA-5'}$ (SEQ ID NO: 1174)

βc-3431 Target: 5'-TTGTAATCTGAATAAAGTGTAACAATT-3' (SEQ ID NO: 2283)

5'-UCUGAAUAAAGUGUAACAAUUGUGU$^{CA-3'}$ (SEQ ID NO: 5611)
3'-AGACUUAUUUCACAUUGUUAACACA$_{UC-5'}$ (SEQ ID NO: 1175)

βc-3437 Target: 5'-TCTGAATAAAGTGTAACAATTGTGTAG-3' (SEQ ID NO: 2284)

5'-GUGUAGCCUUUUUGUAUAAAAUAGA$^{AC-3'}$ (SEQ ID NO: 5612)
3'-CACAUCGGAAAAACAUAUUUUAUCU$_{GU-5'}$ (SEQ ID NO: 1176)

βc-3458 Target: 5'-GTGTAGCCTTTTTGTATAAAATAGACA-3' (SEQ ID NO: 2285)

5'-UUUGUAUAAAAUAGACAAAUAGAAA^{C}C-3' (SEQ ID NO: 5613)
3'-AAACAUAUUUUAUCUGUUUAUCUUU$_{U}A$-5' (SEQ ID NO: 1177)

βc-3468 Target: 5'-TTTGTATAAAATAGACAAATAGAAAAT-3' (SEQ ID NO: 2286)

5'-AGAAAAUGGUCCAAUUAGUUUCCUU^{C}C-3' (SEQ ID NO: 5614)
3'-UCUUUUACCAGGUUAAUCAAAGGAA$_{A}A$-5' (SEQ ID NO: 1178)

βc-3488 Target: 5'-AGAAAATGGTCCAATTAGTTTCCTTTT-3' (SEQ ID NO: 2287)

5'-GUCCAAUUAGUUUCCUUUUUAAUAU^{A}A-3' (SEQ ID NO: 5615)
3'-CAGGUUAAUCAAAGGAAAAAUUAUA$_{C}G$-5' (SEQ ID NO: 1179)

βc-3496 Target: 5'-GTCCAATTAGTTTCCTTTTTAATATGC-3' (SEQ ID NO: 2288)

5'-UUUUUGAUCAAAAACUAUUUGGGAU^{C}C-3' (SEQ ID NO: 5616)
3'-AAAAACUAGUUUUUGAUAAACCCUA$_{U}A$-5' (SEQ ID NO: 1180)

βc-3552 Target: 5'-TTTTTGATCAAAAACTATTTGGGATAT-3' (SEQ ID NO: 2289)

5'-AAGAGGUGUUAUUUGGAACCUUGUU^{C}C-3' (SEQ ID NO: 5617)
3'-UUCUCCACAAUAAACCUUGGAACAA$_{A}A$-5' (SEQ ID NO: 1181)

βc-3600 Target: 5'-AAGAGGTGTTATTTGGAACCTTGTTTT-3' (SEQ ID NO: 2290)

5'-GUGUUAUUUGGAACCUUGUUUUGGA^{A}C-3' (SEQ ID NO: 5618)
3'-CACAAUAAACCUUGGAACAAAACCU$_{G}U$-5' (SEQ ID NO: 1182)

βc-3605 Target: 5'-GTGTTATTTGGAACCTTGTTTTGGACA-3' (SEQ ID NO: 2291)

5'-GAACCUUGUUUUGGACAGUUUACCA^{A}C-3' (SEQ ID NO: 5619)
3'-CUUGGAACAAAACCUGUCAAAUGGU$_{C}A$-5' (SEQ ID NO: 1183)

βc-3615 Target: 5'-GAACCTTGTTTTGGACAGTTTACCAGT-3' (SEQ ID NO: 2292)

5'-GUGAUACGAUGCUUCAAGAGAAAAU^{A}A-3' (SEQ ID NO: 5620)
3'-CACUAUGCUACGAAGUUCUCUUUUA$_{C}G$-5' (SEQ ID NO: 1184)

βc-3674 Target: 5'-GTGATACGATGCTTCAAGAGAAAATGC-3' (SEQ ID NO: 2293)

5'-UUCAAGAGAAAAUGCGGUUAUAAAA^{C}C-3' (SEQ ID NO: 5621)
3'-AAGUUCUCUUUUACGCCAAUAUUUU$_{U}U$-5' (SEQ ID NO: 1185)

βc-3686 Target: 5'-TTCAAGAGAAAATGCGGTTATAAAAAA-3' (SEQ ID NO: 2294)

5'-GAGAAAAUGCGGUUAUAAAAAAUGG^{C}C-3' (SEQ ID NO: 5622)
3'-CUCUUUUACGCCAAUAUUUUUUACC$_{A}A$-5' (SEQ ID NO: 1186)

βc-3691 Target: 5'-GAGAAAATGCGGTTATAAAAAATGGTT-3' (SEQ ID NO: 2295)

5'-CGGUUAUAAAAAAUGGUUCAGAAUU^{C}C-3' (SEQ ID NO: 5623)
3'-GCCAAUAUUUUUUACCAAGUCUUAA$_{U}U$-5' (SEQ ID NO: 1187)

βc-3700 Target: 5'-CGGTTATAAAAAATGGTTCAGAATTAA-3' (SEQ ID NO: 2296)

5'-AAAAAAUGGUUCAGAAUUAAACUUU^{C}C-3' (SEQ ID NO: 5624)
3'-UUUUUUACCAAGUCUUAAUUUGAAA$_{A}A_{U-5'}$ (SEQ ID NO: 1188)

βc-3707 Target: 5'-AAAAAATGGTTCAGAATTAAACTTTTA-3' (SEQ ID NO: 2297)

5'-CAGCGUGGACAAUGGCUACUCAAGC^{C}C-3' (SEQ ID NO: 5625)
3'-GUCGCACCUGUUACCGAUGAGUUCG$_{A}A_{C-5'}$ (SEQ ID NO: 1189)

βc-284 Target: 5'-CAGCGTGGACAATGGCTACTCAAGCTG-3' (SEQ ID NO: 2298)

5'-AGCGUGGACAAUGGCUACUCAAGCU^{A}C-3' (SEQ ID NO: 5626)
3'-UCGCACCUGUUACCGAUGAGUUCGA$_{C}U_{U-5'}$ (SEQ ID NO: 1190)

βc-285 Target: 5'-AGCGTGGACAATGGCTACTCAAGCTGA-3' (SEQ ID NO: 2299)

5'-GCGUGGACAAUGGCUACUCAAGCUG^{C}C-3' (SEQ ID NO: 5627)
3'-CGCACCUGUUACCGAUGAGUUCGAC$_{U}A_{A-5'}$ (SEQ ID NO: 1191)

βc-286 Target: 5'-GCGTGGACAATGGCTACTCAAGCTGAT-3' (SEQ ID NO: 2300)

5'-CGUGGACAAUGGCUACUCAAGCUGA^{C}C-3' (SEQ ID NO: 5628)
3'-GCACCUGUUACCGAUGAGUUCGACU$_{A}A_{A-5'}$ (SEQ ID NO: 1192)

βc-287 Target: 5'-CGTGGACAATGGCTACTCAAGCTGATT-3' (SEQ ID NO: 2301)

5'-GUGGACAAUGGCUACUCAAGCUGAU^{C}C-3' (SEQ ID NO: 5629)
3'-CACCUGUUACCGAUGAGUUCGACUA$_{A}A_{A-5'}$ (SEQ ID NO: 1193)

βc-288 Target: 5'-GTGGACAATGGCTACTCAAGCTGATTT-3' (SEQ ID NO: 2302)

5'-UGGACAAUGGCUACUCAAGCUGAUU^{C}A-3' (SEQ ID NO: 5630)
3'-ACCUGUUACCGAUGAGUUCGACUAA$_{A}A_{C-5'}$ (SEQ ID NO: 1194)

βc-289 Target: 5'-TGGACAATGGCTACTCAAGCTGATTTG-3' (SEQ ID NO: 2303)

5'-GGACAAUGGCUACUCAAGCUGAUUU^{A}C-3' (SEQ ID NO: 5631)
3'-CCUGUUACCGAUGAGUUCGACUAAA$_{C}U_{U-5'}$ (SEQ ID NO: 1195)

βc-290 Target: 5'-GGACAATGGCTACTCAAGCTGATTTGA-3' (SEQ ID NO: 2304)

5'-GACAAUGGCUACUCAAGCUGAUUUG^{C}C-3' (SEQ ID NO: 5632)
3'-CUGUUACCGAUGAGUUCGACUAAAC$_{U}A_{A-5'}$ (SEQ ID NO: 1196)

βc-291 Target: 5'-GACAATGGCTACTCAAGCTGATTTGAT-3' (SEQ ID NO: 2305)

5'-UUUGAUGGAGUUGGACAUGGCCAUG^{A}C-3' (SEQ ID NO: 5633)
3'-AAACUACCUCAACCUGUACCGGUAC$_{C}U_{U-5'}$ (SEQ ID NO: 1197)

βc-312 Target: 5'-TTTGATGGAGTTGGACATGGCCATGGA-3' (SEQ ID NO: 2306)

5'-UUGAUGGAGUUGGACAUGGCCAUGG^{C}C-3' (SEQ ID NO: 5634)

3'-AACUACCUCAACCUGUACCGGUACC$_{U_{U-5'}}$ (SEQ ID NO: 1198)

βc-313 Target: 5'-TTGATGGAGTTGGACATGGCCATGGAA-3' (SEQ ID NO: 2307)

5'-UGAUGGAGUUGGACAUGGCCAUGGA$^{C_{A-3'}}$ (SEQ ID NO: 5635)
3'-ACUACCUCAACCUGUACCGGUACCU$_{U_{G-5'}}$ (SEQ ID NO: 1199)

βc-314 Target: 5'-TGATGGAGTTGGACATGGCCATGGAAC-3' (SEQ ID NO: 2308)

5'-GAUGGAGUUGGACAUGGCCAUGGAA$^{A_{A-3'}}$ (SEQ ID NO: 5636)
3'-CUACCUCAACCUGUACCGGUACCUU$_{G_{G-5'}}$ (SEQ ID NO: 1200)

βc-315 Target: 5'-GATGGAGTTGGACATGGCCATGGAACC-3' (SEQ ID NO: 2309)

5'-AUGGAGUUGGACAUGGCCAUGGAAC$^{A_{C-3'}}$ (SEQ ID NO: 5637)
3'-UACCUCAACCUGUACCGGUACCUUG$_{G_{U-5'}}$ (SEQ ID NO: 1201)

βc-316 Target: 5'-ATGGAGTTGGACATGGCCATGGAACCA-3' (SEQ ID NO: 2310)

5'-UGGAGUUGGACAUGGCCAUGGAACC$^{C_{A-3'}}$ (SEQ ID NO: 5638)
3'-ACCUCAACCUGUACCGGUACCUUGG$_{U_{C-5'}}$ (SEQ ID NO: 1202)

βc-317 Target: 5'-TGGAGTTGGACATGGCCATGGAACCAG-3' (SEQ ID NO: 2311)

5'-GGAGUUGGACAUGGCCAUGGAACCA$^{A_{C-3'}}$ (SEQ ID NO: 5639)
3'-CCUCAACCUGUACCGGUACCUUGGU$_{C_{U-5'}}$ (SEQ ID NO: 1203)

βc-318 Target: 5'-GGAGTTGGACATGGCCATGGAACCAGA-3' (SEQ ID NO: 2312)

5'-ACUCUGGAAUCCAUUCUGGUGCCAC$^{C_{C-3'}}$ (SEQ ID NO: 5640)
3'-UGAGACCUUAGGUAAGACCACGGUG$_{A_{U-5'}}$ (SEQ ID NO: 1204)

βc-389 Target: 5'-ACTCTGGAATCCATTCTGGTGCCACTA-3' (SEQ ID NO: 2313)

5'-CUCUGGAAUCCAUUCUGGUGCCACU$^{C_{A-3'}}$ (SEQ ID NO: 5641)
3'-GAGACCUUAGGUAAGACCACGGUGA$_{U_{G-5'}}$ (SEQ ID NO: 1205)

βc-390 Target: 5'-CTCTGGAATCCATTCTGGTGCCACTAC-3' (SEQ ID NO: 2314)

5'-UCUGGAAUCCAUUCUGGUGCCACUA$^{A_{A-3'}}$ (SEQ ID NO: 5642)
3'-AGACCUUAGGUAAGACCACGGUGAU$_{G_{G-5'}}$ (SEQ ID NO: 1206)

βc-391 Target: 5'-TCTGGAATCCATTCTGGTGCCACTACC-3' (SEQ ID NO: 2315)

5'-CUGGAAUCCAUUCUGGUGCCACUAC$^{A_{C-3'}}$ (SEQ ID NO: 5643)
3'-GACCUUAGGUAAGACCACGGUGAUG$_{G_{U-5'}}$ (SEQ ID NO: 1207)

βc-392 Target: 5'-CTGGAATCCATTCTGGTGCCACTACCA-3' (SEQ ID NO: 2316)

5'-UGGAAUCCAUUCUGGUGCCACUACC$^{C_{A-3'}}$ (SEQ ID NO: 5644)
3'-ACCUUAGGUAAGACCACGGUGAUGG$_{U_{G-5'}}$ (SEQ ID NO: 1208)

βc-393 Target: 5'-TGGAATCCATTCTGGTGCCACTACCAC-3' (SEQ ID NO: 2317)

5'-AUUAGAUGAGGGCAUGCAGAUCCCA$^{CA-3'}$ (SEQ ID NO: 5645)
3'-UAAUCUACUCCCGUACGUCUAGGGU$_{AG-5'}$ (SEQ ID NO: 1209)

βc-600 Target: 5'-ATTAGATGAGGGCATGCAGATCCCATC-3' (SEQ ID NO: 2318)

5'-UUAGAUGAGGGCAUGCAGAUCCCAU$^{AC-3'}$ (SEQ ID NO: 5646)
3'-AAUCUACUCCCGUACGUCUAGGGUA$_{GA-5'}$ (SEQ ID NO: 1210)

βc-601 Target: 5'-TTAGATGAGGGCATGCAGATCCCATCT-3' (SEQ ID NO: 2319)

5'-UAGAUGAGGGCAUGCAGAUCCCAUC$^{CC-3'}$ (SEQ ID NO: 5647)
3'-AUCUACUCCCGUACGUCUAGGGUAG$_{AU-5'}$ (SEQ ID NO: 1211)

βc-602 Target: 5'-TAGATGAGGGCATGCAGATCCCATCTA-3' (SEQ ID NO: 2320)

5'-AGAUGAGGGCAUGCAGAUCCCAUCU$^{CA-3'}$ (SEQ ID NO: 5648)
3'-UCUACUCCCGUACGUCUAGGGUAGA$_{UG-5'}$ (SEQ ID NO: 1212)

βc-603 Target: 5'-AGATGAGGGCATGCAGATCCCATCTAC-3' (SEQ ID NO: 2321)

5'-GAUGAGGGCAUGCAGAUCCCAUCUA$^{AC-3'}$ (SEQ ID NO: 5649)
3'-CUACUCCCGUACGUCUAGGGUAGAU$_{GU-5'}$ (SEQ ID NO: 1213)

βc-604 Target: 5'-GATGAGGGCATGCAGATCCCATCTACA-3' (SEQ ID NO: 2322)

5'-AUGAGGGCAUGCAGAUCCCAUCUAC$^{CA-3'}$ (SEQ ID NO: 5650)
3'-UACUCCCGUACGUCUAGGGUAGAUG$_{UG-5'}$ (SEQ ID NO: 1214)

βc-605 Target: 5'-ATGAGGGCATGCAGATCCCATCTACAC-3' (SEQ ID NO: 2323)

5'-AUGCUGCUCAUCCCACUAAUGUCCA$^{AA-3'}$ (SEQ ID NO: 5651)
3'-UACGACGAGUAGGGUGAUUACAGGU$_{CG-5'}$ (SEQ ID NO: 1215)

βc-638 Target: 5'-ATGCTGCTCATCCCACTAATGTCCAGC-3' (SEQ ID NO: 2324)

5'-UGCUGCUCAUCCCACUAAUGUCCAG$^{AA-3'}$ (SEQ ID NO: 5652)
3'-ACGACGAGUAGGGUGAUUACAGGUC$_{GC-5'}$ (SEQ ID NO: 1216)

βc-639 Target: 5'-TGCTGCTCATCCCACTAATGTCCAGCG-3' (SEQ ID NO: 2325)

5'-GCUGCUCAUCCCACUAAUGUCCAGC$^{AC-3'}$ (SEQ ID NO: 5653)
3'-CGACGAGUAGGGUGAUUACAGGUCG$_{CA-5'}$ (SEQ ID NO: 1217)

βc-640 Target: 5'-GCTGCTCATCCCACTAATGTCCAGCGT-3' (SEQ ID NO: 2326)

5'-CUGCUCAUCCCACUAAUGUCCAGCG$^{CC-3'}$ (SEQ ID NO: 5654)
3'-GACGAGUAGGGUGAUUACAGGUCGC$_{AA-5'}$ (SEQ ID NO: 1218)

βc-641 Target: 5'-CTGCTCATCCCACTAATGTCCAGCGTT-3' (SEQ ID NO: 2327)

5'-UGCUCAUCCCACUAAUGUCCAGCGU$^{CC-3'}$ (SEQ ID NO: 5655)
3'-ACGAGUAGGGUGAUUACAGGUCGCA$_{AA-5'}$ (SEQ ID NO: 1219)

βc-642 Target: 5'-TGCTCATCCCACTAATGTCCAGCGTTT-3' (SEQ ID NO: 2328)

5'-GCUCAUCCCACUAAUGUCCAGCGUU$^{CA-3'}$ (SEQ ID NO: 5656)
3'-CGAGUAGGGUGAUUACAGGUCGCAA$_{AC-5'}$ (SEQ ID NO: 1220)

βc-643 Target: 5'-GCTCATCCCACTAATGTCCAGCGTTTG-3' (SEQ ID NO: 2329)

5'-CUCAUCCCACUAAUGUCCAGCGUUU$^{AA-3'}$ (SEQ ID NO: 5657)
3'-GAGUAGGGUGAUUACAGGUCGCAAA$_{CC-5'}$ (SEQ ID NO: 1221)

βc-644 Target: 5'-CTCATCCCACTAATGTCCAGCGTTTGG-3' (SEQ ID NO: 2330)

5'-UCAUCCCACUAAUGUCCAGCGUUUG$^{AA-3'}$ (SEQ ID NO: 5658)
3'-AGUAGGGUGAUUACAGGUCGCAAAC$_{CG-5'}$ (SEQ ID NO: 1222)

βc-645 Target: 5'-TCATCCCACTAATGTCCAGCGTTTGGC-3' (SEQ ID NO: 2331)

5'-GUUUGGCUGAACCAUCACAGAUGCU$^{AC-3'}$ (SEQ ID NO: 5659)
3'-CAAACCGACUUGGUAGUGUCUACGA$_{CU-5'}$ (SEQ ID NO: 1223)

βc-665 Target: 5'-GTTTGGCTGAACCATCACAGATGCTGA-3' (SEQ ID NO: 2332)

5'-UUUGGCUGAACCAUCACAGAUGCUG$^{CC-3'}$ (SEQ ID NO: 5660)
3'-AAACCGACUUGGUAGUGUCUACGAC$_{UU-5'}$ (SEQ ID NO: 1224)

βc-666 Target: 5'-TTTGGCTGAACCATCACAGATGCTGAA-3' (SEQ ID NO: 2333)

5'-UUGGCUGAACCAUCACAGAUGCUGA$^{CC-3'}$ (SEQ ID NO: 5661)
3'-AACCGACUUGGUAGUGUCUACGACU$_{UU-5'}$ (SEQ ID NO: 1225)

βc-667 Target: 5'-TTGGCTGAACCATCACAGATGCTGAAA-3' (SEQ ID NO: 2334)

5'-CAGAACUUGCCACACGUGCAAUCCC$^{CA-3'}$ (SEQ ID NO: 5662)
3'-GUCUUGAACGGUGUGCACGUUAGGG$_{AC-5'}$ (SEQ ID NO: 1226)

βc-731 Target: 5'-CAGAACTTGCCACACGTGCAATCCCTG-3' (SEQ ID NO: 2335)

5'-AGAACUUGCCACACGUGCAAUCCCU$^{AC-3'}$ (SEQ ID NO: 5663)
3'-UCUUGAACGGUGUGCACGUUAGGGA$_{CU-5'}$ (SEQ ID NO: 1227)

βc-732 Target: 5'-AGAACTTGCCACACGTGCAATCCCTGA-3' (SEQ ID NO: 2336)

5'-CAGUUAUGGUCCAUCAGCUUUCUAA$^{CC-3'}$ (SEQ ID NO: 5664)
3'-GUCAAUACCAGGUAGUCGAAAGAUU$_{UU-5'}$ (SEQ ID NO: 1228)

βc-809 Target: 5'-CAGTTATGGTCCATCAGCTTTCTAAAA-3' (SEQ ID NO: 2337)

5'-AGUUAUGGUCCAUCAGCUUUCUAAA$^{CC-3'}$ (SEQ ID NO: 5665)
3'-UCAAUACCAGGUAGUCGAAAGAUUU$_{UU-5'}$ (SEQ ID NO: 1229)

βc-810 Target: 5'-AGTTATGGTCCATCAGCTTTCTAAAAA-3' (SEQ ID NO: 2338)

5'-CUAAAAAGGAAGCUUCCAGACACGC$^{CC-3'}$ (SEQ ID NO: 5666)

3'-GAUUUUUCCUUCGAAGGUCUGUGCG$_{A_{U-5'}}$ (SEQ ID NO: 1230)

βc-830 Target: 5'-CTAAAAAGGAAGCTTCCAGACACGCTA-3' (SEQ ID NO: 2339)

5'-UAAAAAGGAAGCUUCCAGACACGCU$^{C_{C-3'}}$ (SEQ ID NO: 5667)
3'-AUUUUUCCUUCGAAGGUCUGUGCGA$_{U_{A-5'}}$ (SEQ ID NO: 1231)

βc-831 Target: 5'-TAAAAAGGAAGCTTCCAGACACGCTAT-3' (SEQ ID NO: 2340)

5'-GUACCAUGCAGAAUACAAAUGAUGU$^{C_{A-3'}}$ (SEQ ID NO: 5668)
3'-CAUGGUACGUCUUAUGUUUACUACA$_{U_{C-5'}}$ (SEQ ID NO: 1232)

βc-893 Target: 5'-GTACCATGCAGAATACAAATGATGTAG-3' (SEQ ID NO: 2341)

5'-UACCAUGCAGAAUACAAAUGAUGUA$^{A_{C-3'}}$ (SEQ ID NO: 5669)
3'-AUGGUACGUCUUAUGUUUACUACAU$_{C_{U-5'}}$ (SEQ ID NO: 1233)

βc-894 Target: 5'-TACCATGCAGAATACAAATGATGTAGA-3' (SEQ ID NO: 2342)

5'-ACCAUGCAGAAUACAAAUGAUGUAG$^{C_{C-3'}}$ (SEQ ID NO: 5670)
3'-UGGUACGUCUUAUGUUUACUACAUC$_{U_{U-5'}}$ (SEQ ID NO: 1234)

βc-895 Target: 5'-ACCATGCAGAATACAAATGATGTAGAA-3' (SEQ ID NO: 2343)

5'-CCAUGCAGAAUACAAAUGAUGUAGA$^{C_{C-3'}}$ (SEQ ID NO: 5671)
3'-GGUACGUCUUAUGUUUACUACAUCU$_{U_{U-5'}}$ (SEQ ID NO: 1235)

βc-896 Target: 5'-CCATGCAGAATACAAATGATGTAGAAA-3' (SEQ ID NO: 2344)

5'-CAUGCAGAAUACAAAUGAUGUAGAA$^{C_{A-3'}}$ (SEQ ID NO: 5672)
3'-GUACGUCUUAUGUUUACUACAUCUU$_{U_{G-5'}}$ (SEQ ID NO: 1236)

βc-897 Target: 5'-CATGCAGAATACAAATGATGTAGAAAC-3' (SEQ ID NO: 2345)

5'-AUGCAGAAUACAAAUGAUGUAGAAA$^{A_{C-3'}}$ (SEQ ID NO: 5673)
3'-UACGUCUUAUGUUUACUACAUCUUU$_{G_{U-5'}}$ (SEQ ID NO: 1237)

βc-898 Target: 5'-ATGCAGAATACAAATGATGTAGAAACA-3' (SEQ ID NO: 2346)

5'-UGCAGAAUACAAAUGAUGUAGAAAC$^{C_{A-3'}}$ (SEQ ID NO: 5674)
3'-ACGUCUUAUGUUUACUACAUCUUUG$_{U_{C-5'}}$ (SEQ ID NO: 1238)

βc-899 Target: 5'-TGCAGAATACAAATGATGTAGAAACAG-3' (SEQ ID NO: 2347)

5'-GCAGAAUACAAAUGAUGUAGAAACA$^{A_{A-3'}}$ (SEQ ID NO: 5675)
3'-CGUCUUAUGUUUACUACAUCUUUGU$_{C_{G-5'}}$ (SEQ ID NO: 1239)

βc-900 Target: 5'-GCAGAATACAAATGATGTAGAAACAGC-3' (SEQ ID NO: 2348)

5'-UACUGGCCAUCUUUAAGUCUGGAGG$^{A_{C-3'}}$ (SEQ ID NO: 5676)
3'-AUGACCGGUAGAAAUUCAGACCUCC$_{G_{U-5'}}$ (SEQ ID NO: 1240)

βc-977 Target: 5'-TACTGGCCATCTTTAAGTCTGGAGGCA-3' (SEQ ID NO: 2349)

5'-ACUGGCCAUCUUUAAGUCUGGAGGC^{C}C-3' (SEQ ID NO: 5677)
3'-UGACCGGUAGAAAUUCAGACCUCCG$_{U}$A-5' (SEQ ID NO: 1241)

βc-978 Target: 5'-ACTGGCCATCTTTAAGTCTGGAGGC-3' (SEQ ID NO: 2350)

5'-AAGAAGGAGCUAAAAUGGCAGUGCG^{C}C-3' (SEQ ID NO: 5678)
3'-UUCUUCCUCGAUUUUACCGUCACGC$_{A}$A-5' (SEQ ID NO: 1242)

βc-1091 Target: 5'-AAGAAGGAGCTAAAATGGCAGTGCGTT-3' (SEQ ID NO: 2351)

5'-AGAAGGAGCUAAAAUGGCAGUGCGU^{C}C-3' (SEQ ID NO: 5679)
3'-UCUUCCUCGAUUUUACCGUCACGCA$_{A}$A-5' (SEQ ID NO: 1243)

βc-1092 Target: 5'-AGAAGGAGCTAAAATGGCAGTGCGTTT-3' (SEQ ID NO: 2352)

5'-GAAGGAGCUAAAAUGGCAGUGCGUU^{C}C-3' (SEQ ID NO: 5680)
3'-CUUCCUCGAUUUUACCGUCACGCAA$_{A}$U-5' (SEQ ID NO: 1244)

βc-1093 Target: 5'-GAAGGAGCTAAAATGGCAGTGCGTTTA-3' (SEQ ID NO: 2353)

5'-AAGGAGCUAAAAUGGCAGUGCGUUU^{C}A-3' (SEQ ID NO: 5681)
3'-UUCCUCGAUUUUACCGUCACGCAAA$_{U}$C-5' (SEQ ID NO: 1245)

βc-1094 Target: 5'-AAGGAGCTAAAATGGCAGTGCGTTTAG-3' (SEQ ID NO: 2354)

5'-AGGAGCUAAAAUGGCAGUGCGUUUA^{A}A-3' (SEQ ID NO: 5682)
3'-UCCUCGAUUUUACCGUCACGCAAAU$_{G}$G-5' (SEQ ID NO: 1246)

βc-1095 Target: 5'-AGGAGCTAAAATGGCAGTGCGTTTAGC-3' (SEQ ID NO: 2355)

5'-UACUGUGGACCACAAGCAGAGUGCU^{A}C-3' (SEQ ID NO: 5683)
3'-AUGACACCUGGUGUUCGUCUCACGA$_{C}$U-5' (SEQ ID NO: 1247)

βc-1301 Target: 5'-TACTGTGGACCACAAGCAGAGTGCTGA-3' (SEQ ID NO: 2356)

5'-ACUGUGGACCACAAGCAGAGUGCUG^{C}C-3' (SEQ ID NO: 5684)
3'-UGACACCUGGUGUUCGUCUCACGAC$_{U}$U-5' (SEQ ID NO: 1248)

βc-1302 Target: 5'-ACTGTGGACCACAAGCAGAGTGCTGAA-3' (SEQ ID NO: 2357)

5'-CUGUGGACCACAAGCAGAGUGCUGA^{C}A-3' (SEQ ID NO: 5685)
3'-GACACCUGGUGUUCGUCUCACGACU$_{U}$C-5' (SEQ ID NO: 1249)

βc-1303 Target: 5'-CTGTGGACCACAAGCAGAGTGCTGAAG-3' (SEQ ID NO: 2358)

5'-UGUGGACCACAAGCAGAGUGCUGAA^{A}A-3' (SEQ ID NO: 5686)
3'-ACACCUGGUGUUCGUCUCACGACUU$_{C}$C-5' (SEQ ID NO: 1250)

βc-1304 Target: 5'-TGTGGACCACAAGCAGAGTGCTGAAGG-3' (SEQ ID NO: 2359)

5'-GUGGACCACAAGCAGAGUGCUGAAG^{A}C-3' (SEQ ID NO: 5687)
3'-CACCUGGUGUUCGUCUCACGACUUC$_{A}$G-5' (SEQ ID NO: 1251)

βc-1305 Target: 5'-GTGGACCACAAGCAGAGTGCTGAAGGT-3' (SEQ ID NO: 2360)

5'-UGGACCACAAGCAGAGUGCUGAAGG$^{CA-3'}$ (SEQ ID NO: 5688)
3'-ACCUGGUGUUCGUCUCACGACUUCC$_{AC-5'}$ (SEQ ID NO: 1252)

βc-1306 Target: 5'-TGGACCACAAGCAGAGTGCTGAAGGTG-3' (SEQ ID NO: 2361)

5'-GGACCACAAGCAGAGUGCUGAAGGU$^{AA-3'}$ (SEQ ID NO: 5689)
3'-CCUGGUGUUCGUCUCACGACUUCCA$_{CG-5'}$ (SEQ ID NO: 1253)

βc-1307 Target: 5'-GGACCACAAGCAGAGTGCTGAAGGTGC-3' (SEQ ID NO: 2362)

5'-GACCACAAGCAGAGUGCUGAAGGUG$^{AC-3'}$ (SEQ ID NO: 5690)
3'-CUGGUGUUCGUCUCACGACUUCCAC$_{GA-5'}$ (SEQ ID NO: 1254)

βc-1308 Target: 5'-GACCACAAGCAGAGTGCTGAAGGTGCT-3' (SEQ ID NO: 2363)

5'-ACCACAAGCAGAGUGCUGAAGGUGC$^{CC-3'}$ (SEQ ID NO: 5691)
3'-UGGUGUUCGUCUCACGACUUCCACG$_{AU-5'}$ (SEQ ID NO: 1255)

βc-1309 Target: 5'-ACCACAAGCAGAGTGCTGAAGGTGCTA-3' (SEQ ID NO: 2364)

5'-CCACAAGCAGAGUGCUGAAGGUGCU$^{CC-3'}$ (SEQ ID NO: 5692)
3'-GGUGUUCGUCUCACGACUUCCACGA$_{UA-5'}$ (SEQ ID NO: 1256)

βc-1310 Target: 5'-CCACAAGCAGAGTGCTGAAGGTGCTAT-3' (SEQ ID NO: 2365)

5'-CACAAGCAGAGUGCUGAAGGUGCUA$^{CA-3'}$ (SEQ ID NO: 5693)
3'-GUGUUCGUCUCACGACUUCCACGAU$_{AG-5'}$ (SEQ ID NO: 1257)

βc-1311 Target: 5'-CACAAGCAGAGTGCTGAAGGTGCTATC-3' (SEQ ID NO: 2366)

5'-ACAAGCAGAGUGCUGAAGGUGCUAU$^{AC-3'}$ (SEQ ID NO: 5694)
3'-UGUUCGUCUCACGACUUCCACGAUA$_{GA-5'}$ (SEQ ID NO: 1258)

βc-1312 Target: 5'-ACAAGCAGAGTGCTGAAGGTGCTATCT-3' (SEQ ID NO: 2367)

5'-CAAGCAGAGUGCUGAAGGUGCUAUC$^{CA-3'}$ (SEQ ID NO: 5695)
3'-GUUCGUCUCACGACUUCCACGAUAG$_{AC-5'}$ (SEQ ID NO: 1259)

βc-1313 Target: 5'-CAAGCAGAGTGCTGAAGGTGCTATCTG-3' (SEQ ID NO: 2368)

5'-AAGCAGAGUGCUGAAGGUGCUAUCU$^{AC-3'}$ (SEQ ID NO: 5696)
3'-UUCGUCUCACGACUUCCACGAUAGA$_{CA-5'}$ (SEQ ID NO: 1260)

βc-1314 Target: 5'-AAGCAGAGTGCTGAAGGTGCTATCTGT-3' (SEQ ID NO: 2369)

5'-AGAACUGUCUUUGGACUCUCAGGAA$^{CA-3'}$ (SEQ ID NO: 5697)
3'-UCUUGACAGAAACCUGAGAGUCCUU$_{AG-5'}$ (SEQ ID NO: 1261)

βc-1430 Target: 5'-AGAACTGTCTTTGGACTCTCAGGAATC-3' (SEQ ID NO: 2370)

5'-GAACUGUCUUUGGACUCUCAGGAAU$^{AC-3'}$ (SEQ ID NO: 5698)

3'-CUUGACAGAAACCUGAGAGUCCUUA$_{G_{A-5'}}$ (SEQ ID NO: 1262)

βc-1431 Target: 5'-GAACTGTCTTTGGACTCTCAGGAATCT-3' (SEQ ID NO: 2371)

5'-CAGAUGAUAUAAAUGUGGUCACCUG$^{C_{A-3'}}$ (SEQ ID NO: 5699)
3'-GUCUACUAUAUUUACACCAGUGGAC$_{A_{C-5'}}$ (SEQ ID NO: 1263)

βc-1526 Target: 5'-CAGATGATATAAATGTGGTCACCTGTG-3' (SEQ ID NO: 2372)

5'-AGAUGAUAUAAAUGUGGUCACCUGU$^{A_{A-3'}}$ (SEQ ID NO: 5700)
3'-UCUACUAUAUUUACACCAGUGGACA$_{C_{G-5'}}$ (SEQ ID NO: 1264)

βc-1527 Target: 5'-AGATGATATAAATGTGGTCACCTGTGC-3' (SEQ ID NO: 2373)

5'-GAUGAUAUAAAUGUGGUCACCUGUG$^{A_{C-3'}}$ (SEQ ID NO: 5701)
3'-CUACUAUAUUUACACCAGUGGACAC$_{G_{U-5'}}$ (SEQ ID NO: 1265)

βc-1528 Target: 5'-GATGATATAAATGTGGTCACCTGTGCA-3' (SEQ ID NO: 2374)

5'-AUGAUAUAAAUGUGGUCACCUGUGC$^{C_{A-3'}}$ (SEQ ID NO: 5702)
3'-UACUAUAUUUACACCAGUGGACACG$_{U_{C-5'}}$ (SEQ ID NO: 1266)

βc-1529 Target: 5'-ATGATATAAATGTGGTCACCTGTGCAG-3' (SEQ ID NO: 2375)

5'-UGAUAUAAAUGUGGUCACCUGUGCA$^{A_{A-3'}}$ (SEQ ID NO: 5703)
3'-ACUAUAUUUACACCAGUGGACACGU$_{C_{G-5'}}$ (SEQ ID NO: 1267)

βc-1530 Target: 5'-TGATATAAATGTGGTCACCTGTGCAGC-3' (SEQ ID NO: 2376)

5'-GAUAUAAAUGUGGUCACCUGUGCAG$^{A_{C-3'}}$ (SEQ ID NO: 5704)
3'-CUAUAUUUACACCAGUGGACACGUC$_{G_{A-5'}}$ (SEQ ID NO: 1268)

βc-1531 Target: 5'-GATATAAATGTGGTCACCTGTGCAGCT-3' (SEQ ID NO: 2377)

5'-AUAUAAAUGUGGUCACCUGUGCAGC$^{C_{A-3'}}$ (SEQ ID NO: 5705)
3'-UAUAUUUACACCAGUGGACACGUCG$_{A_{C-5'}}$ (SEQ ID NO: 1269)

βc-1532 Target: 5'-ATATAAATGTGGTCACCTGTGCAGCTG-3' (SEQ ID NO: 2378)

5'-UAUAAAUGUGGUCACCUGUGCAGCU$^{A_{A-3'}}$ (SEQ ID NO: 5706)
3'-AUAUUUACACCAGUGGACACGUCGA$_{C_{C-5'}}$ (SEQ ID NO: 1270)

βc-1533 Target: 5'-TATAAATGTGGTCACCTGTGCAGCTGG-3' (SEQ ID NO: 2379)

5'-AUAAAUGUGGUCACCUGUGCAGCUG$^{A_{C-3'}}$ (SEQ ID NO: 5707)
3'-UAUUUACACCAGUGGACACGUCGAC$_{C_{U-5'}}$ (SEQ ID NO: 1271)

βc-1534 Target: 5'-ATAAATGTGGTCACCTGTGCAGCTGGA-3' (SEQ ID NO: 2380)

5'-UAAAUGUGGUCACCUGUGCAGCUGG$^{C_{C-3'}}$ (SEQ ID NO: 5708)
3'-AUUUACACCAGUGGACACGUCGACC$_{U_{U-5'}}$ (SEQ ID NO: 1272)

βc-1535 Target: 5'-TAAATGTGGTCACCTGTGCAGCTGGAA-3' (SEQ ID NO: 2381)

5'-AAAUGUGGUCACCUGUGCAGCUGGA^{C}C-3' (SEQ ID NO: 5709)
3'-UUUACACCAGUGGACACGUCGACCU$_{U}$A-5' (SEQ ID NO: 1273)

βc-1536 Target: 5'-AAATGTGGTCACCTGTGCAGCTGGAAT-3' (SEQ ID NO: 2382)

5'-AAUGUGGUCACCUGUGCAGCUGGAA^{C}C-3' (SEQ ID NO: 5710)
3'-UUACACCAGUGGACACGUCGACCUU$_{A}$A-5' (SEQ ID NO: 1274)

βc-1537 Target: 5'-AATGTGGTCACCTGTGCAGCTGGAATT-3' (SEQ ID NO: 2383)

5'-AUGUGGUCACCUGUGCAGCUGGAAU^{C}A-3' (SEQ ID NO: 5711)
3'-UACACCAGUGGACACGUCGACCUUA$_{A}$G-5' (SEQ ID NO: 1275)

βc-1538 Target: 5'-ATGTGGTCACCTGTGCAGCTGGAATTC-3' (SEQ ID NO: 2384)

5'-UGUGGUCACCUGUGCAGCUGGAAUU^{A}C-3' (SEQ ID NO: 5712)
3'-ACACCAGUGGACACGUCGACCUUAA$_{G}$A-5' (SEQ ID NO: 1276)

βc-1539 Target: 5'-TGTGGTCACCTGTGCAGCTGGAATTCT-3' (SEQ ID NO: 2385)

5'-GUGGUCACCUGUGCAGCUGGAAUUC^{C}C-3' (SEQ ID NO: 5713)
3'-CACCAGUGGACACGUCGACCUUAAG$_{A}$A-5' (SEQ ID NO: 1277)

βc-1540 Target: 5'-GTGGTCACCTGTGCAGCTGGAATTCTT-3' (SEQ ID NO: 2386)

5'-UGGUCACCUGUGCAGCUGGAAUUCU^{C}C-3' (SEQ ID NO: 5714)
3'-ACCAGUGGACACGUCGACCUUAAGA$_{A}$A-5' (SEQ ID NO: 1278)

βc-1541 Target: 5'-TGGTCACCTGTGCAGCTGGAATTCTTT-3' (SEQ ID NO: 2387)

5'-GGUCACCUGUGCAGCUGGAAUUCUU^{C}A-3' (SEQ ID NO: 5715)
3'-CCAGUGGACACGUCGACCUUAAGAA$_{A}$G-5' (SEQ ID NO: 1279)

βc-1542 Target: 5'-GGTCACCTGTGCAGCTGGAATTCTTTC-3' (SEQ ID NO: 2388)

5'-GUCACCUGUGCAGCUGGAAUUCUUU^{A}C-3' (SEQ ID NO: 5716)
3'-CAGUGGACACGUCGACCUUAAGAAA$_{G}$A-5' (SEQ ID NO: 1280)

βc-1543 Target: 5'-GTCACCTGTGCAGCTGGAATTCTTTCT-3' (SEQ ID NO: 2389)

5'-UCACCUGUGCAGCUGGAAUUCUUUC^{C}C-3' (SEQ ID NO: 5717)
3'-AGUGGACACGUCGACCUUAAGAAAG$_{A}$U-5' (SEQ ID NO: 1281)

βc-1544 Target: 5'-TCACCTGTGCAGCTGGAATTCTTTCTA-3' (SEQ ID NO: 2390)

5'-CACCUGUGCAGCUGGAAUUCUUUCU^{C}C-3' (SEQ ID NO: 5718)
3'-GUGGACACGUCGACCUUAAGAAAGA$_{U}$U-5' (SEQ ID NO: 1282)

βc-1545 Target: 5'-CACCTGTGCAGCTGGAATTCTTTCTAA-3' (SEQ ID NO: 2391)

5'-UUUCUAACCUCACUUGCAAUAAUUA^{C}C-3' (SEQ ID NO: 5719)
3'-AAAGAUUGGAGUGAACGUUAUUAAU$_{A}$U-5' (SEQ ID NO: 1283)

βc-1565 Target: 5'-TTTCTAACCTCACTTGCAATAATTATA-3' (SEQ ID NO: 2392)

5'-UUCUAACCUCACUUGCAAUAAUUAU^{C}$^{C-3'}$ (SEQ ID NO: 5720)
3'-AAGAUUGGAGUGAACGUUAUUAAUA$_{U}$$_{U-5'}$ (SEQ ID NO: 1284)

βc-1566 Target: 5'-TTCTAACCTCACTTGCAATAATTATAA-3' (SEQ ID NO: 2393)

5'-UCUAACCUCACUUGCAAUAAUUAUA^{C}$^{A-3'}$ (SEQ ID NO: 5721)
3'-AGAUUGGAGUGAACGUUAUUAAUAU$_{U}$$_{C-5'}$ (SEQ ID NO: 1285)

βc-1567 Target: 5'-TCTAACCTCACTTGCAATAATTATAAG-3' (SEQ ID NO: 2394)

5'-CUAACCUCACUUGCAAUAAUUAUAA^{A}$^{C-3'}$ (SEQ ID NO: 5722)
3'-GAUUGGAGUGAACGUUAUUAAUAUU$_{C}$$_{U-5'}$ (SEQ ID NO: 1286)

βc-1568 Target: 5'-CTAACCTCACTTGCAATAATTATAAGA-3' (SEQ ID NO: 2395)

5'-UAACCUCACUUGCAAUAAUUAUAAG^{C}$^{C-3'}$ (SEQ ID NO: 5723)
3'-AUUGGAGUGAACGUUAUUAAUAUUC$_{U}$$_{U-5'}$ (SEQ ID NO: 1287)

βc-1569 Target: 5'-TAACCTCACTTGCAATAATTATAAGAA-3' (SEQ ID NO: 2396)

5'-GGGCUGGUGACAGGGAAGACAUCAC^{C}$^{A-3'}$ (SEQ ID NO: 5724)
3'-CCCGACCACUGUCCCUUCUGUAGUG$_{A}$$_{C-5'}$ (SEQ ID NO: 1288)

βc-1652 Target: 5'-GGGCTGGTGACAGGGAAGACATCACTG-3' (SEQ ID NO: 2397)

5'-GGCUGGUGACAGGGAAGACAUCACU^{A}$^{C-3'}$ (SEQ ID NO: 5725)
3'-CCGACCACUGUCCCUUCUGUAGUGA$_{C}$$_{U-5'}$ (SEQ ID NO: 1289)

βc-1653 Target: 5'-GGCTGGTGACAGGGAAGACATCACTGA-3' (SEQ ID NO: 2398)

5'-GCUGGUGACAGGGAAGACAUCACUG^{C}$^{A-3'}$ (SEQ ID NO: 5726)
3'-CGACCACUGUCCCUUCUGUAGUGAC$_{U}$$_{C-5'}$ (SEQ ID NO: 1290)

βc-1654 Target: 5'-GCTGGTGACAGGGAAGACATCACTGAG-3' (SEQ ID NO: 2399)

5'-CUGGUGACAGGGAAGACAUCACUGA^{A}$^{A-3'}$ (SEQ ID NO: 5727)
3'-GACCACUGUCCCUUCUGUAGUGACU$_{C}$$_{G-5'}$ (SEQ ID NO: 1291)

βc-1655 Target: 5'-CTGGTGACAGGGAAGACATCACTGAGC-3' (SEQ ID NO: 2400)

5'-UGGUGACAGGGAAGACAUCACUGAG^{A}$^{A-3'}$ (SEQ ID NO: 5728)
3'-ACCACUGUCCCUUCUGUAGUGACUC$_{G}$$_{G-5'}$ (SEQ ID NO: 1292)

βc-1656 Target: 5'-TGGTGACAGGGAAGACATCACTGAGCC-3' (SEQ ID NO: 2401)

5'-GGUGACAGGGAAGACAUCACUGAGC^{A}$^{C-3'}$ (SEQ ID NO: 5729)
3'-CCACUGUCCCUUCUGUAGUGACUCG$_{G}$$_{A-5'}$ (SEQ ID NO: 1293)

βc-1657 Target: 5'-GGTGACAGGGAAGACATCACTGAGCCT-3' (SEQ ID NO: 2402)

5'-GUGACAGGGAAGACAUCACUGAGCC^{C}$^{A-3'}$ (SEQ ID NO: 5730)

3'-CACUGUCCCUUCUGUAGUGACUCGG$_{A_{C-5'}}$ (SEQ ID NO: 1294)

βc-1658 Target: 5'-GTGACAGGGAAGACATCACTGAGCCTG-3' (SEQ ID NO: 2403)

5'-UGACAGGGAAGACAUCACUGAGCCU$^{A^{A-3'}}$ (SEQ ID NO: 5731)
3'-ACUGUCCCUUCUGUAGUGACUCGGA$_{C_{G-5'}}$ (SEQ ID NO: 1295)

βc-1659 Target: 5'-TGACAGGGAAGACATCACTGAGCCTGC-3' (SEQ ID NO: 2404)

5'-GACAGGGAAGACAUCACUGAGCCUG$^{A^{A-3'}}$ (SEQ ID NO: 5732)
3'-CUGUCCCUUCUGUAGUGACUCGGAC$_{G_{G-5'}}$ (SEQ ID NO: 1296)

βc-1660 Target: 5'-GACAGGGAAGACATCACTGAGCCTGCC-3' (SEQ ID NO: 2405)

5'-ACAGGGAAGACAUCACUGAGCCUGC$^{A^{C-3'}}$ (SEQ ID NO: 5733)
3'-UGUCCCUUCUGUAGUGACUCGGACG$_{G_{U-5'}}$ (SEQ ID NO: 1297)

βc-1661 Target: 5'-ACAGGGAAGACATCACTGAGCCTGCCA-3' (SEQ ID NO: 2406)

5'-CAGGGAAGACAUCACUGAGCCUGCC$^{C^{C-3'}}$ (SEQ ID NO: 5734)
3'-GUCCCUUCUGUAGUGACUCGGACGG$_{U_{A-5'}}$ (SEQ ID NO: 1298)

βc-1662 Target: 5'-CAGGGAAGACATCACTGAGCCTGCC-3' (SEQ ID NO: 2407)

5'-AGGGAAGACAUCACUGAGCCUGCCA$^{C^{A-3'}}$ (SEQ ID NO: 5735)
3'-UCCCUUCUGUAGUGACUCGGACGGU$_{A_{G-5'}}$ (SEQ ID NO: 1299)

βc-1663 Target: 5'-AGGGAAGACATCACTGAGCCTGCCATC-3' (SEQ ID NO: 2408)

5'-GGGAAGACAUCACUGAGCCUGCCAU$^{A^{C-3'}}$ (SEQ ID NO: 5736)
3'-CCCUUCUGUAGUGACUCGGACGGUA$_{G_{A-5'}}$ (SEQ ID NO: 1300)

βc-1664 Target: 5'-GGGAAGACATCACTGAGCCTGCCATCT-3' (SEQ ID NO: 2409)

5'-GGAAGACAUCACUGAGCCUGCCAUC$^{C^{A-3'}}$ (SEQ ID NO: 5737)
3'-CCUUCUGUAGUGACUCGGACGGUAG$_{A_{C-5'}}$ (SEQ ID NO: 1301)

βc-1665 Target: 5'-GGAAGACATCACTGAGCCTGCCATCTG-3' (SEQ ID NO: 2410)

5'-GAAGACAUCACUGAGCCUGCCAUCU$^{A^{C-3'}}$ (SEQ ID NO: 5738)
3'-CUUCUGUAGUGACUCGGACGGUAGA$_{C_{A-5'}}$ (SEQ ID NO: 1302)

βc-1666 Target: 5'-GAAGACATCACTGAGCCTGCCATCTGT-3' (SEQ ID NO: 2411)

5'-AAGACAUCACUGAGCCUGCCAUCUG$^{C^{A-3'}}$ (SEQ ID NO: 5739)
3'-UUCUGUAGUGACUCGGACGGUAGAC$_{A_{C-5'}}$ (SEQ ID NO: 1303)

βc-1667 Target: 5'-AAGACATCACTGAGCCTGCCATCTGTG-3' (SEQ ID NO: 2412)

5'-AGACAUCACUGAGCCUGCCAUCUGU$^{A^{A-3'}}$ (SEQ ID NO: 5740)
3'-UCUGUAGUGACUCGGACGGUAGACA$_{C_{G-5'}}$ (SEQ ID NO: 1304)

βc-1668 Target: 5'-AGACATCACTGAGCCTGCCATCTGTGC-3' (SEQ ID NO: 2413)

5'-GACAUCACUGAGCCUGCCAUCUGUG^{A}C-3' (SEQ ID NO: 5741)
3'-CUGUAGUGACUCGGACGGUAGACAC$_{G}$$_{A-5}$' (SEQ ID NO: 1305)

βc-1669 Target: 5'-GACATCACTGAGCCTGCCATCTGTGCT-3' (SEQ ID NO: 2414)

5'-ACAUCACUGAGCCUGCCAUCUGUGC^{C}A-3' (SEQ ID NO: 5742)
3'-UGUAGUGACUCGGACGGUAGACACG$_{A}$$_{G-5}$' (SEQ ID NO: 1306)

βc-1670 Target: 5'-ACATCACTGAGCCTGCCATCTGTGCTC-3' (SEQ ID NO: 2415)

5'-CAUCACUGAGCCUGCCAUCUGUGCU^{A}C-3' (SEQ ID NO: 5743)
3'-GUAGUGACUCGGACGGUAGACACGA$_{G}$$_{A-5}$' (SEQ ID NO: 1307)

βc-1671 Target: 5'-CATCACTGAGCCTGCCATCTGTGCTCT-3' (SEQ ID NO: 2416)

5'-AUCACUGAGCCUGCCAUCUGUGCUC^{C}C-3' (SEQ ID NO: 5744)
3'-UAGUGACUCGGACGGUAGACACGAG$_{A}$$_{A-5}$' (SEQ ID NO: 1308)

βc-1672 Target: 5'-ATCACTGAGCCTGCCATCTGTGCTCTT-3' (SEQ ID NO: 2417)

5'-UCACUGAGCCUGCCAUCUGUGCUCU^{C}A-3' (SEQ ID NO: 5745)
3'-AGUGACUCGGACGGUAGACACGAGA$_{A}$$_{G-5}$' (SEQ ID NO: 1309)

βc-1673 Target: 5'-TCACTGAGCCTGCCATCTGTGCTCTTC-3' (SEQ ID NO: 2418)

5'-CACUGAGCCUGCCAUCUGUGCUCUU^{A}A-3' (SEQ ID NO: 5746)
3'-GUGACUCGGACGGUAGACACGAGAA$_{G}$$_{C-5}$' (SEQ ID NO: 1310)

βc-1674 Target: 5'-CACTGAGCCTGCCATCTGTGCTCTTCG-3' (SEQ ID NO: 2419)

5'-ACUGAGCCUGCCAUCUGUGCUCUUC^{A}C-3' (SEQ ID NO: 5747)
3'-UGACUCGGACGGUAGACACGAGAAG$_{C}$$_{A-5}$' (SEQ ID NO: 1311)

βc-1675 Target: 5'-ACTGAGCCTGCCATCTGTGCTCTTCGT-3' (SEQ ID NO: 2420)

5'-CUGAGCCUGCCAUCUGUGCUCUUCG^{C}A-3' (SEQ ID NO: 5748)
3'-GACUCGGACGGUAGACACGAGAAGC$_{A}$$_{G-5}$' (SEQ ID NO: 1312)

βc-1676 Target: 5'-CTGAGCCTGCCATCTGTGCTCTTCGTC-3' (SEQ ID NO: 2421)

5'-UGAGCCUGCCAUCUGUGCUCUUCGU^{A}C-3' (SEQ ID NO: 5749)
3'-ACUCGGACGGUAGACACGAGAAGCA$_{G}$$_{U-5}$' (SEQ ID NO: 1313)

βc-1677 Target: 5'-TGAGCCTGCCATCTGTGCTCTTCGTCA-3' (SEQ ID NO: 2422)

5'-GAGCCUGCCAUCUGUGCUCUUCGUC^{C}C-3' (SEQ ID NO: 5750)
3'-CUCGGACGGUAGACACGAGAAGCAG$_{U}$$_{A-5}$' (SEQ ID NO: 1314)

βc-1678 Target: 5'-GAGCCTGCCATCTGTGCTCTTCGTC-3' (SEQ ID NO: 2423)

5'-AGCCUGCCAUCUGUGCUCUUCGUCA^{C}A-3' (SEQ ID NO: 5751)
3'-UCGGACGGUAGACACGAGAAGCAGU$_{A}$$_{G-5}$' (SEQ ID NO: 1315)

βc-1679 Target: 5'-AGCCTGCCATCTGTGCTCTTCGTCATC-3' (SEQ ID NO: 2424)

5'-GCCUGCCAUCUGUGCUCUUCGUCAU$^{AC-3'}$ (SEQ ID NO: 5752)
3'-CGGACGGUAGACACGAGAAGCAGUA$_{GA-5'}$ (SEQ ID NO: 1316)

βc-1680 Target: 5'-GCCTGCCATCTGTGCTCTTCGTCATCT-3' (SEQ ID NO: 2425)

5'-CCUGCCAUCUGUGCUCUUCGUCAUC$^{CA-3'}$ (SEQ ID NO: 5753)
3'-GGACGGUAGACACGAGAAGCAGUAG$_{AC-5'}$ (SEQ ID NO: 1317)

βc-1681 Target: 5'-CCTGCCATCTGTGCTCTTCGTCATCTG-3' (SEQ ID NO: 2426)

5'-CUGCCAUCUGUGCUCUUCGUCAUCU$^{AC-3'}$ (SEQ ID NO: 5754)
3'-GACGGUAGACACGAGAAGCAGUAGA$_{CU-5'}$ (SEQ ID NO: 1318)

βc-1682 Target: 5'-CTGCCATCTGTGCTCTTCGTCATCTGA-3' (SEQ ID NO: 2427)

5'-UGCCAUCUGUGCUCUUCGUCAUCUG$^{CA-3'}$ (SEQ ID NO: 5755)
3'-ACGGUAGACACGAGAAGCAGUAGAC$_{UG-5'}$ (SEQ ID NO: 1319)

βc-1683 Target: 5'-TGCCATCTGTGCTCTTCGTCATCTGAC-3' (SEQ ID NO: 2428)

5'-GCCAUCUGUGCUCUUCGUCAUCUGA$^{AA-3'}$ (SEQ ID NO: 5756)
3'-CGGUAGACACGAGAAGCAGUAGACU$_{GG-5'}$ (SEQ ID NO: 1320)

βc-1684 Target: 5'-GCCATCTGTGCTCTTCGTCATCTGACC-3' (SEQ ID NO: 2429)

5'-CCAUCUGUGCUCUUCGUCAUCUGAC$^{AC-3'}$ (SEQ ID NO: 5757)
3'-GGUAGACACGAGAAGCAGUAGACUG$_{GU-5'}$ (SEQ ID NO: 1321)

βc-1685 Target: 5'-CCATCTGTGCTCTTCGTCATCTGACCA-3' (SEQ ID NO: 2430)

5'-CAUCUGUGCUCUUCGUCAUCUGACC$^{CA-3'}$ (SEQ ID NO: 5758)
3'-GUAGACACGAGAAGCAGUAGACUGG$_{UC-5'}$ (SEQ ID NO: 1322)

βc-1686 Target: 5'-CATCTGTGCTCTTCGTCATCTGACCAG-3' (SEQ ID NO: 2431)

5'-AUCUGUGCUCUUCGUCAUCUGACCA$^{AA-3'}$ (SEQ ID NO: 5759)
3'-UAGACACGAGAAGCAGUAGACUGGU$_{CG-5'}$ (SEQ ID NO: 1323)

βc-1687 Target: 5'-ATCTGTGCTCTTCGTCATCTGACCAGC-3' (SEQ ID NO: 2432)

5'-UCUGUGCUCUUCGUCAUCUGACCAG$^{AA-3'}$ (SEQ ID NO: 5760)
3'-AGACACGAGAAGCAGUAGACUGGUC$_{GG-5'}$ (SEQ ID NO: 1324)

βc-1688 Target: 5'-TCTGTGCTCTTCGTCATCTGACCAGCC-3' (SEQ ID NO: 2433)

5'-CUGUGCUCUUCGUCAUCUGACCAGC$^{AA-3'}$ (SEQ ID NO: 5761)
3'-GACACGAGAAGCAGUAGACUGGUCG$_{GC-5'}$ (SEQ ID NO: 1325)

βc-1689 Target: 5'-CTGTGCTCTTCGTCATCTGACCAGCCG-3' (SEQ ID NO: 2434)

5'-UGUGCUCUUCGUCAUCUGACCAGCC$^{AC-3'}$ (SEQ ID NO: 5762)

3'-ACACGAGAAGCAGUAGACUGGUCGG$_{C_{U-5'}}$ (SEQ ID NO: 1326)

βc-1690 Target: 5'-TGTGCTCTTCGTCATCTGACCAGCCGA-3' (SEQ ID NO: 2435)

5'-GUGCUCUUCGUCAUCUGACCAGCCG$^{C_{A-3'}}$ (SEQ ID NO: 5763)
3'-CACGAGAAGCAGUAGACUGGUCGGC$_{U_{G-5'}}$ (SEQ ID NO: 1327)

βc-1691 Target: 5'-GTGCTCTTCGTCATCTGACCAGCCGAC-3' (SEQ ID NO: 2436)

5'-UGCUCUUCGUCAUCUGACCAGCCGA$^{A_{C-3'}}$ (SEQ ID NO: 5764)
3'-ACGAGAAGCAGUAGACUGGUCGGCU$_{G_{U-5'}}$ (SEQ ID NO: 1328)

βc-1692 Target: 5'-TGCTCTTCGTCATCTGACCAGCCGACA-3' (SEQ ID NO: 2437)

5'-GCUCUUCGUCAUCUGACCAGCCGAC$^{C_{A-3'}}$ (SEQ ID NO: 5765)
3'-CGAGAAGCAGUAGACUGGUCGGCUG$_{U_{G-5'}}$ (SEQ ID NO: 1329)

βc-1693 Target: 5'-GCTCTTCGTCATCTGACCAGCCGACAC-3' (SEQ ID NO: 2438)

5'-CUCUUCGUCAUCUGACCAGCCGACA$^{A_{A-3'}}$ (SEQ ID NO: 5766)
3'-GAGAAGCAGUAGACUGGUCGGCUGU$_{G_{G-5'}}$ (SEQ ID NO: 1330)

βc-1694 Target: 5'-CTCTTCGTCATCTGACCAGCCGACACC-3' (SEQ ID NO: 2439)

5'-UCUUCGUCAUCUGACCAGCCGACAC$^{A_{C-3'}}$ (SEQ ID NO: 5767)
3'-AGAAGCAGUAGACUGGUCGGCUGUG$_{G_{U-5'}}$ (SEQ ID NO: 1331)

βc-1695 Target: 5'-TCTTCGTCATCTGACCAGCCGACACCA-3' (SEQ ID NO: 2440)

5'-UACACCCACCAUCCCACUGGCCUCU$^{A_{C-3'}}$ (SEQ ID NO: 5768)
3'-AUGUGGGUGGUAGGGUGACCGGAGA$_{C_{U-5'}}$ (SEQ ID NO: 1332)

βc-1787 Target: 5'-TACACCCACCATCCCACTGGCCTCTGA-3' (SEQ ID NO: 2441)

5'-ACACCCACCAUCCCACUGGCCUCUG$^{C_{C-3'}}$ (SEQ ID NO: 5769)
3'-UGUGGGUGGUAGGGUGACCGGAGAC$_{U_{A-5'}}$ (SEQ ID NO: 1333)

βc-1788 Target: 5'-ACACCCACCATCCCACTGGCCTCTGAT-3' (SEQ ID NO: 2442)

5'-CACCCACCAUCCCACUGGCCUCUGA$^{C_{C-3'}}$ (SEQ ID NO: 5770)
3'-GUGGGUGGUAGGGUGACCGGAGACU$_{A_{U-5'}}$ (SEQ ID NO: 1334)

βc-1789 Target: 5'-CACCCACCATCCCACTGGCCTCTGATA-3' (SEQ ID NO: 2443)

5'-ACCCACCAUCCCACUGGCCUCUGAU$^{C_{C-3'}}$ (SEQ ID NO: 5771)
3'-UGGGUGGUAGGGUGACCGGAGACUA$_{U_{U-5'}}$ (SEQ ID NO: 1335)

βc-1790 Target: 5'-ACCCACCATCCCACTGGCCTCTGATAA-3' (SEQ ID NO: 2444)

5'-CCCACCAUCCCACUGGCCUCUGAUA$^{C_{C-3'}}$ (SEQ ID NO: 5772)
3'-GGGUGGUAGGGUGACCGGAGACUAU$_{U_{U-5'}}$ (SEQ ID NO: 1336)

βc-1791 Target: 5'-CCCACCATCCCACTGGCCTCTGATAAA-3' (SEQ ID NO: 2445)

5'-CCACCAUCCCACUGGCCUCUGAUAA$^{CA-3'}$ (SEQ ID NO: 5773)
3'-GGUGGUAGGGUGACCGGAGACUAUU$_{UC-5'}$ (SEQ ID NO: 1337)

βc-1792 Target: 5'-CCACCATCCCACTGGCCTCTGATAAAG-3' (SEQ ID NO: 2446)

5'-CACCAUCCCACUGGCCUCUGAUAAA$^{AA-3'}$ (SEQ ID NO: 5774)
3'-GUGGUAGGGUGACCGGAGACUAUUU$_{CC-5'}$ (SEQ ID NO: 1338)

βc-1793 Target: 5'-CACCATCCCACTGGCCTCTGATAAAGG-3' (SEQ ID NO: 2447)

5'-ACCAUCCCACUGGCCUCUGAUAAAG$^{AA-3'}$ (SEQ ID NO: 5775)
3'-UGGUAGGGUGACCGGAGACUAUUUC$_{CG-5'}$ (SEQ ID NO: 1339)

βc-1794 Target: 5'-ACCATCCCACTGGCCTCTGATAAAGGC-3' (SEQ ID NO: 2448)

5'-CCAUCCCACUGGCCUCUGAUAAAGG$^{AC-3'}$ (SEQ ID NO: 5776)
3'-GGUAGGGUGACCGGAGACUAUUUCC$_{GA-5'}$ (SEQ ID NO: 1340)

βc-1795 Target: 5'-CCATCCCACTGGCCTCTGATAAAGGCT-3' (SEQ ID NO: 2449)

5'-CAUCCCACUGGCCUCUGAUAAAGGC$^{CC-3'}$ (SEQ ID NO: 5777)
3'-GUAGGGUGACCGGAGACUAUUUCCG$_{AU-5'}$ (SEQ ID NO: 1341)

βc-1796 Target: 5'-CATCCCACTGGCCTCTGATAAAGGCTA-3' (SEQ ID NO: 2450)

5'-AUCCCACUGGCCUCUGAUAAAGGCU$^{CA-3'}$ (SEQ ID NO: 5778)
3'-UAGGGUGACCGGAGACUAUUUCCGA$_{UG-5'}$ (SEQ ID NO: 1342)

βc-1797 Target: 5'-ATCCCACTGGCCTCTGATAAAGGCTAC-3' (SEQ ID NO: 2451)

5'-UCCCACUGGCCUCUGAUAAAGGCUA$^{AC-3'}$ (SEQ ID NO: 5779)
3'-AGGGUGACCGGAGACUAUUUCCGAU$_{GA-5'}$ (SEQ ID NO: 1343)

βc-1798 Target: 5'-TCCCACTGGCCTCTGATAAAGGCTACT-3' (SEQ ID NO: 2452)

5'-CCCACUGGCCUCUGAUAAAGGCUAC$^{CA-3'}$ (SEQ ID NO: 5780)
3'-GGGUGACCGGAGACUAUUUCCGAUG$_{AC-5'}$ (SEQ ID NO: 1344)

βc-1799 Target: 5'-CCCACTGGCCTCTGATAAAGGCTACTG-3' (SEQ ID NO: 2453)

5'-CCACUGGCCUCUGAUAAAGGCUACU$^{AC-3'}$ (SEQ ID NO: 5781)
3'-GGUGACCGGAGACUAUUUCCGAUGA$_{CA-5'}$ (SEQ ID NO: 1345)

βc-1800 Target: 5'-CCACTGGCCTCTGATAAAGGCTACTGT-3' (SEQ ID NO: 2454)

5'-CUACUGUUGGAUUGAUUCGAAAUCU$^{CA-3'}$ (SEQ ID NO: 5782)
3'-GAUGACAACCUAACUAAGCUUUAGA$_{AC-5'}$ (SEQ ID NO: 1346)

βc-1820 Target: 5'-CTACTGTTGGATTGATTCGAAATCTTG-3' (SEQ ID NO: 2455)

5'-UACUGUUGGAUUGAUUCGAAAUCUU$^{AA-3'}$ (SEQ ID NO: 5783)
3'-AUGACAACCUAACUAAGCUUUAGAA$_{CG-5'}$ (SEQ ID NO: 1347)

βc-1821 Target: 5'-TACTGTTGGATTGATTCGAAATCTTGC-3' (SEQ ID NO: 2456)

5'-UAAAUACCAUUCCAUUGUUUGUGCA$^{AA-3'}$ (SEQ ID NO: 5784)
3'-AUUUAUGGUAAGGUAACAAACACGU$_{CG-5'}$ (SEQ ID NO: 1348)

βc-2072 Target: 5'-TAAATACCATTCCATTGTTTGTGCAGC-3' (SEQ ID NO: 2457)

5'-AAAUACCAUUCCAUUGUUUGUGCAG$^{AC-3'}$ (SEQ ID NO: 5785)
3'-UUUAUGGUAAGGUAACAAACACGUC$_{GA-5'}$ (SEQ ID NO: 1349)

βc-2073 Target: 5'-AAATACCATTCCATTGTTTGTGCAGCT-3' (SEQ ID NO: 2458)

5'-AAUACCAUUCCAUUGUUUGUGCAGC$^{CA-3'}$ (SEQ ID NO: 5786)
3'-UUAUGGUAAGGUAACAAACACGUCG$_{AC-5'}$ (SEQ ID NO: 1350)

βc-2074 Target: 5'-AATACCATTCCATTGTTTGTGCAGCTG-3' (SEQ ID NO: 2459)

5'-AUACCAUUCCAUUGUUUGUGCAGCU$^{AA-3'}$ (SEQ ID NO: 5787)
3'-UAUGGUAAGGUAACAAACACGUCGA$_{CG-5'}$ (SEQ ID NO: 1351)

βc-2075 Target: 5'-ATACCATTCCATTGTTTGTGCAGCTGC-3' (SEQ ID NO: 2460)

5'-UACCAUUCCAUUGUUUGUGCAGCUG$^{AC-3'}$ (SEQ ID NO: 5788)
3'-AUGGUAAGGUAACAAACACGUCGAC$_{GA-5'}$ (SEQ ID NO: 1352)

βc-2076 Target: 5'-TACCATTCCATTGTTTGTGCAGCTGCT-3' (SEQ ID NO: 2461)

5'-ACCAUUCCAUUGUUUGUGCAGCUGC$^{CC-3'}$ (SEQ ID NO: 5789)
3'-UGGUAAGGUAACAAACACGUCGACG$_{AA-5'}$ (SEQ ID NO: 1353)

βc-2077 Target: 5'-ACCATTCCATTGTTTGTGCAGCTGCTT-3' (SEQ ID NO: 2462)

5'-GCUGCUUUAUUCUCCCAUUGAAAAC$^{CC-3'}$ (SEQ ID NO: 5790)
3'-CGACGAAAUAAGAGGGUAACUUUUG$_{UA-5'}$ (SEQ ID NO: 1354)

βc-2097 Target: 5'-GCTGCTTTATTCTCCCATTGAAAAC-3' (SEQ ID NO: 2463)

5'-CUGCUUUAUUCUCCCAUUGAAAACA$^{CA-3'}$ (SEQ ID NO: 5791)
3'-GACGAAAUAAGAGGGUAACUUUUGU$_{AG-5'}$ (SEQ ID NO: 1355)

βc-2098 Target: 5'-CTGCTTTATTCTCCCATTGAAAACATC-3' (SEQ ID NO: 2464)

5'-UGCUUUAUUCUCCCAUUGAAAACAU$^{AA-3'}$ (SEQ ID NO: 5792)
3'-ACGAAAUAAGAGGGUAACUUUUGUA$_{GG-5'}$ (SEQ ID NO: 1356)

βc-2099 Target: 5'-TGCTTTATTCTCCCATTGAAAACATCC-3' (SEQ ID NO: 2465)

5'-GCUUUAUUCUCCCAUUGAAAACAUC$^{AC-3'}$ (SEQ ID NO: 5793)
3'-CGAAAUAAGAGGGUAACUUUUGUAG$_{GU-5'}$ (SEQ ID NO: 1357)

βc-2100 Target: 5'-GCTTTATTCTCCCATTGAAAACATCCA-3' (SEQ ID NO: 2466)

5'-GGGUCCUCUGUGAACUUGCUCAGGA$^{AC-3'}$ (SEQ ID NO: 5794)

3'-CCCAGGAGACACUUGAACGAGUCCU$_{G_{U-5'}}$ (SEQ ID NO: 1358)

βc-2141 Target: 5'-GGGTCCTCTGTGAACTTGCTCAGGACA-3' (SEQ ID NO: 2467)

5'-GGUCCUCUGUGAACUUGCUCAGGAC$^{C^{C-3'}}$ (SEQ ID NO: 5795)
3'-CCAGGAGACACUUGAACGAGUCCUG$_{U_{U-5'}}$ (SEQ ID NO: 1359)

βc-2142 Target: 5'-GGTCCTCTGTGAACTTGCTCAGGACAA-3' (SEQ ID NO: 2468)

5'-GUCCUCUGUGAACUUGCUCAGGACA$^{C^{A-3'}}$ (SEQ ID NO: 5796)
3'-CAGGAGACACUUGAACGAGUCCUGU$_{U_{C-5'}}$ (SEQ ID NO: 1360)

βc-2143 Target: 5'-GTCCTCTGTGAACTTGCTCAGGACAAG-3' (SEQ ID NO: 2469)

5'-UCCUCUGUGAACUUGCUCAGGACAA$^{A^{A-3'}}$ (SEQ ID NO: 5797)
3'-AGGAGACACUUGAACGAGUCCUGUU$_{C_{C-5'}}$ (SEQ ID NO: 1361)

βc-2144 Target: 5'-TCCTCTGTGAACTTGCTCAGGACAAGG-3' (SEQ ID NO: 2470)

5'-CCUCUGUGAACUUGCUCAGGACAAG$^{A^{C-3'}}$ (SEQ ID NO: 5798)
3'-GGAGACACUUGAACGAGUCCUGUUC$_{C_{U-5'}}$ (SEQ ID NO: 1362)

βc-2145 Target: 5'-CCTCTGTGAACTTGCTCAGGACAAGGA-3' (SEQ ID NO: 2471)

5'-CUCUGUGAACUUGCUCAGGACAAGG$^{C^{C-3'}}$ (SEQ ID NO: 5799)
3'-GAGACACUUGAACGAGUCCUGUUCC$_{U_{U-5'}}$ (SEQ ID NO: 1363)

βc-2146 Target: 5'-CTCTGTGAACTTGCTCAGGACAAGGAA-3' (SEQ ID NO: 2472)

5'-UCUGUGAACUUGCUCAGGACAAGGA$^{C^{A-3'}}$ (SEQ ID NO: 5800)
3'-AGACACUUGAACGAGUCCUGUUCCU$_{U_{C-5'}}$ (SEQ ID NO: 1364)

βc-2147 Target: 5'-TCTGTGAACTTGCTCAGGACAAGGAAG-3' (SEQ ID NO: 2473)

5'-CUGUGAACUUGCUCAGGACAAGGAA$^{A^{A-3'}}$ (SEQ ID NO: 5801)
3'-GACACUUGAACGAGUCCUGUUCCUU$_{C_{G-5'}}$ (SEQ ID NO: 1365)

βc-2148 Target: 5'-CTGTGAACTTGCTCAGGACAAGGAAGC-3' (SEQ ID NO: 2474)

5'-UGUGAACUUGCUCAGGACAAGGAAG$^{A^{C-3'}}$ (SEQ ID NO: 5802)
3'-ACACUUGAACGAGUCCUGUUCCUUC$_{G_{A-5'}}$ (SEQ ID NO: 1366)

βc-2149 Target: 5'-TGTGAACTTGCTCAGGACAAGGAAGCT-3' (SEQ ID NO: 2475)

5'-GUGAACUUGCUCAGGACAAGGAAGC$^{C^{A-3'}}$ (SEQ ID NO: 5803)
3'-CACUUGAACGAGUCCUGUUCCUUCG$_{A_{C-5'}}$ (SEQ ID NO: 1367)

βc-2150 Target: 5'-GTGAACTTGCTCAGGACAAGGAAGCTG-3' (SEQ ID NO: 2476)

5'-UGAACUUGCUCAGGACAAGGAAGCU$^{A^{A-3'}}$ (SEQ ID NO: 5804)
3'-ACUUGAACGAGUCCUGUUCCUUCGA$_{C_{G-5'}}$ (SEQ ID NO: 1368)

βc-2151 Target: 5'-TGAACTTGCTCAGGACAAGGAAGCTGC-3' (SEQ ID NO: 2477)

5'-CUAUUGAAGCUGAGGGAGCCACAGC$^{CA-3'}$ (SEQ ID NO: 5805)
3'-GAUAACUUCGACUCCCUCGGUGUCG$_{AG-5'}$ (SEQ ID NO: 1369)

βc-2183 Target: 5'-CTATTGAAGCTGAGGGAGCCACAGCTC-3' (SEQ ID NO: 2478)

5'-UAUUGAAGCUGAGGGAGCCACAGCU$^{AA-3'}$ (SEQ ID NO: 5806)
3'-AUAACUUCGACUCCCUCGGUGUCGA$_{GG-5'}$ (SEQ ID NO: 1370)

βc-2184 Target: 5'-TATTGAAGCTGAGGGAGCCACAGCTCC-3' (SEQ ID NO: 2479)

5'-AUUGAAGCUGAGGGAGCCACAGCUC$^{AC-3'}$ (SEQ ID NO: 5807)
3'-UAACUUCGACUCCCUCGGUGUCGAG$_{GA-5'}$ (SEQ ID NO: 1371)

βc-2185 Target: 5'-ATTGAAGCTGAGGGAGCCACAGCTCCT-3' (SEQ ID NO: 2480)

5'-UGUUCCGAAUGUCUGAGGACAAGCC$^{CA-3'}$ (SEQ ID NO: 5808)
3'-ACAAGGCUUACAGACUCCUGUUCGG$_{UG-5'}$ (SEQ ID NO: 1372)

βc-2270 Target: 5'-TGTTCCGAATGTCTGAGGACAAGCCAC-3' (SEQ ID NO: 2481)

5'-GUUCCGAAUGUCUGAGGACAAGCCA$^{AC-3'}$ (SEQ ID NO: 5809)
3'-CAAGGCUUACAGACUCCUGUUCGGU$_{GU-5'}$ (SEQ ID NO: 1373)

βc-2271 Target: 5'-GTTCCGAATGTCTGAGGACAAGCCACA-3' (SEQ ID NO: 2482)

5'-UUCCGAAUGUCUGAGGACAAGCCAC$^{CC-3'}$ (SEQ ID NO: 5810)
3'-AAGGCUUACAGACUCCUGUUCGGUG$_{UU-5'}$ (SEQ ID NO: 1374)

βc-2272 Target: 5'-TTCCGAATGTCTGAGGACAAGCCACAA-3' (SEQ ID NO: 2483)

5'-UCCGAAUGUCUGAGGACAAGCCACA$^{CA-3'}$ (SEQ ID NO: 5811)
3'-AGGCUUACAGACUCCUGUUCGGUGU$_{UC-5'}$ (SEQ ID NO: 1375)

βc-2273 Target: 5'-TCCGAATGTCTGAGGACAAGCCACAAG-3' (SEQ ID NO: 2484)

5'-CCGAAUGUCUGAGGACAAGCCACAA$^{AC-3'}$ (SEQ ID NO: 5812)
3'-GGCUUACAGACUCCUGUUCGGUGUU$_{CU-5'}$ (SEQ ID NO: 1376)

βc-2274 Target: 5'-CCGAATGTCTGAGGACAAGCCACAAGA-3' (SEQ ID NO: 2485)

5'-CGAAUGUCUGAGGACAAGCCACAAG$^{CC-3'}$ (SEQ ID NO: 5813)
3'-GCUUACAGACUCCUGUUCGGUGUUC$_{UA-5'}$ (SEQ ID NO: 1377)

βc-2275 Target: 5'-CGAATGTCTGAGGACAAGCCACAAGAT-3' (SEQ ID NO: 2486)

5'-GAAUGUCUGAGGACAAGCCACAAGA$^{CC-3'}$ (SEQ ID NO: 5814)
3'-CUUACAGACUCCUGUUCGGUGUUCU$_{AA-5'}$ (SEQ ID NO: 1378)

βc-2276 Target: 5'-GAATGTCTGAGGACAAGCCACAAGATT-3' (SEQ ID NO: 2487)

5'-AAUGUCUGAGGACAAGCCACAAGAU$^{CC-3'}$ (SEQ ID NO: 5815)
3'-UUACAGACUCCUGUUCGGUGUUCUA$_{AU-5'}$ (SEQ ID NO: 1379)

βc-2277 Target: 5'-AATGTCTGAGGACAAGCCACAAGATTA-3' (SEQ ID NO: 2488)

5'-GAACAGAGCCAAUGGCUUGGAAUGA$^{AC-3'}$ (SEQ ID NO: 5816)
3'-CUUGUCUCGGUUACCGAACCUUACU$_{CU-5'}$ (SEQ ID NO: 1380)

βc-2345 Target: 5'-GAACAGAGCCAATGGCTTGGAATGAGA-3' (SEQ ID NO: 2489)

5'-AACAGAGCCAAUGGCUUGGAAUGAG$^{CA-3'}$ (SEQ ID NO: 5817)
3'-UUGUCUCGGUUACCGAACCUUACUC$_{UG-5'}$ (SEQ ID NO: 1381)

βc-2346 Target: 5'-AACAGAGCCAATGGCTTGGAATGAGAC-3' (SEQ ID NO: 2490)

5'-ACAGAGCCAAUGGCUUGGAAUGAGA$^{AC-3'}$ (SEQ ID NO: 5818)
3'-UGUCUCGGUUACCGAACCUUACUCU$_{GA-5'}$ (SEQ ID NO: 1382)

βc-2347 Target: 5'-ACAGAGCCAATGGCTTGGAATGAGACT-3' (SEQ ID NO: 2491)

5'-CAGAGCCAAUGGCUUGGAAUGAGAC$^{CA-3'}$ (SEQ ID NO: 5819)
3'-GUCUCGGUUACCGAACCUUACUCUG$_{AC-5'}$ (SEQ ID NO: 1383)

βc-2348 Target: 5'-CAGAGCCAATGGCTTGGAATGAGACTG-3' (SEQ ID NO: 2492)

5'-AGAGCCAAUGGCUUGGAAUGAGACU$^{AA-3'}$ (SEQ ID NO: 5820)
3'-UCUCGGUUACCGAACCUUACUCUGA$_{CG-5'}$ (SEQ ID NO: 1384)

βc-2349 Target: 5'-AGAGCCAATGGCTTGGAATGAGACTGC-3' (SEQ ID NO: 2493)

5'-GAGCCAAUGGCUUGGAAUGAGACUG$^{AC-3'}$ (SEQ ID NO: 5821)
3'-CUCGGUUACCGAACCUUACUCUGAC$_{GA-5'}$ (SEQ ID NO: 1385)

βc-2350 Target: 5'-GAGCCAATGGCTTGGAATGAGACTGCT-3' (SEQ ID NO: 2494)

5'-AGCCAAUGGCUUGGAAUGAGACUGC$^{CA-3'}$ (SEQ ID NO: 5822)
3'-UCGGUUACCGAACCUUACUCUGACG$_{AC-5'}$ (SEQ ID NO: 1386)

βc-2351 Target: 5'-AGCCAATGGCTTGGAATGAGACTGCTG-3' (SEQ ID NO: 2495)

5'-GCCAAUGGCUUGGAAUGAGACUGCU$^{AC-3'}$ (SEQ ID NO: 5823)
3'-CGGUUACCGAACCUUACUCUGACGA$_{CU-5'}$ (SEQ ID NO: 1387)

βc-2352 Target: 5'-GCCAATGGCTTGGAATGAGACTGCTGA-3' (SEQ ID NO: 2496)

5'-CCAAUGGCUUGGAAUGAGACUGCUG$^{CC-3'}$ (SEQ ID NO: 5824)
3'-GGUUACCGAACCUUACUCUGACGAC$_{UA-5'}$ (SEQ ID NO: 1388)

βc-2353 Target: 5'-CCAATGGCTTGGAATGAGACTGCTGAT-3' (SEQ ID NO: 2497)

5'-CAAUGGCUUGGAAUGAGACUGCUGA$^{CA-3'}$ (SEQ ID NO: 5825)
3'-GUUACCGAACCUUACUCUGACGACU$_{AG-5'}$ (SEQ ID NO: 1389)

βc-2354 Target: 5'-CAATGGCTTGGAATGAGACTGCTGATC-3' (SEQ ID NO: 2498)

5'-AAUGGCUUGGAAUGAGACUGCUGAU$^{AC-3'}$ (SEQ ID NO: 5826)

3'-UUACCGAACCUUACUCUGACGACUA$_{G_{A-5'}}$ (SEQ ID NO: 1390)

βc-2355 Target: 5'-AATGGCTTGGAATGAGACTGCTGATCT-3' (SEQ ID NO: 2499)

5'-CCCUUGGAUAUCGCCAGGAUGAUCC$^{C_{C-3'}}$ (SEQ ID NO: 5827)
3'-GGGAACCUAUAGCGGUCCUACUAGG$_{A_{U-5'}}$ (SEQ ID NO: 1391)

βc-2411 Target: 5'-CCCTTGGATATCGCCAGGATGATCCTA-3' (SEQ ID NO: 2500)

5'-CCUUGGAUAUCGCCAGGAUGAUCCU$^{C_{A-3'}}$ (SEQ ID NO: 5828)
3'-GGAACCUAUAGCGGUCCUACUAGGA$_{U_{C-5'}}$ (SEQ ID NO: 1392)

βc-2412 Target: 5'-CCTTGGATATCGCCAGGATGATCCTAG-3' (SEQ ID NO: 2501)

5'-CUUGGAUAUCGCCAGGAUGAUCCUA$^{A_{A-3'}}$ (SEQ ID NO: 5829)
3'-GAACCUAUAGCGGUCCUACUAGGAU$_{C_{G-5'}}$ (SEQ ID NO: 1393)

βc-2413 Target: 5'-CTTGGATATCGCCAGGATGATCCTAGC-3' (SEQ ID NO: 2502)

5'-UUGGAUAUCGCCAGGAUGAUCCUAG$^{A_{C-3'}}$ (SEQ ID NO: 5830)
3'-AACCUAUAGCGGUCCUACUAGGAUC$_{G_{A-5'}}$ (SEQ ID NO: 1394)

βc-2414 Target: 5'-TTGGATATCGCCAGGATGATCCTAGCT-3' (SEQ ID NO: 2503)

5'-UGGAUAUCGCCAGGAUGAUCCUAGC$^{C_{C-3'}}$ (SEQ ID NO: 5831)
3'-ACCUAUAGCGGUCCUACUAGGAUCG$_{A_{U-5'}}$ (SEQ ID NO: 1395)

βc-2415 Target: 5'-TGGATATCGCCAGGATGATCCTAGCTA-3' (SEQ ID NO: 2504)

5'-AUCGUUCUUUUCACUCUGGUGGAUA$^{C_{A-3'}}$ (SEQ ID NO: 5832)
3'-UAGCAAGAAAAGUGAGACCACCUAU$_{A_{C-5'}}$ (SEQ ID NO: 1396)

βc-2441 Target: 5'-ATCGTTCTTTTCACTCTGGTGGATATG-3' (SEQ ID NO: 2505)

5'-UCGUUCUUUUCACUCUGGUGGAUAU$^{A_{A-3'}}$ (SEQ ID NO: 5833)
3'-AGCAAGAAAAGUGAGACCACCUAUA$_{C_{C-5'}}$ (SEQ ID NO: 1397)

βc-2442 Target: 5'-TCGTTCTTTTCACTCTGGTGGATATGG-3' (SEQ ID NO: 2506)

5'-CGUUCUUUUCACUCUGGUGGAUAUG$^{A_{A-3'}}$ (SEQ ID NO: 5834)
3'-GCAAGAAAAGUGAGACCACCUAUAC$_{G_{G-5'}}$ (SEQ ID NO: 1398)

βc-2443 Target: 5'-CGTTCTTTTCACTCTGGTGGATATGGC-3' (SEQ ID NO: 2507)

5'-GUUCUUUUCACUCUGGUGGAUAUGG$^{A_{A-3'}}$ (SEQ ID NO: 5835)
3'-CAAGAAAAGUGAGACCACCUAUACC$_{G_{G-5'}}$ (SEQ ID NO: 1399)

βc-2444 Target: 5'-GTTCTTTTCACTCTGGTGGATATGGCC-3' (SEQ ID NO: 2508)

5'-UUCUUUUCACUCUGGUGGAUAUGGC$^{A_{C-3'}}$ (SEQ ID NO: 5836)
3'-AAGAAAAGUGAGACCACCUAUACCG$_{G_{U-5'}}$ (SEQ ID NO: 1400)

βc-2445 Target: 5'-TTCTTTTCACTCTGGTGGATATGGCCA-3' (SEQ ID NO: 2509)

5'-AACAUGAGAUGGGUGGCCACCACCC$^{CA-3'}$ (SEQ ID NO: 5837)
3'-UUGUACUCUACCCACCGGUGGUGGG$_{AC-5'}$ (SEQ ID NO: 1401)

βc-2501 Target: 5'-AACATGAGATGGGTGGCCACCACCCTG-3' (SEQ ID NO: 2510)

5'-ACAUGAGAUGGGUGGCCACCACCCU$^{AA-3'}$ (SEQ ID NO: 5838)
3'-UGUACUCUACCCACCGGUGGUGGGA$_{CC-5'}$ (SEQ ID NO: 1402)

βc-2502 Target: 5'-ACATGAGATGGGTGGCCACCACCCTGG-3' (SEQ ID NO: 2511)

5'-CAUGAGAUGGGUGGCCACCACCCUG$^{AC-3'}$ (SEQ ID NO: 5839)
3'-GUACUCUACCCACCGGUGGUGGGAC$_{CA-5'}$ (SEQ ID NO: 1403)

βc-2503 Target: 5'-CATGAGATGGGTGGCCACCACCCTGGT-3' (SEQ ID NO: 2512)

5'-AUGAGAUGGGUGGCCACCACCCUGG$^{CA-3'}$ (SEQ ID NO: 5840)
3'-UACUCUACCCACCGGUGGUGGGACC$_{AC-5'}$ (SEQ ID NO: 1404)

βc-2504 Target: 5'-ATGAGATGGGTGGCCACCACCCTGGTG-3' (SEQ ID NO: 2513)

5'-UGAGAUGGGUGGCCACCACCCUGGU$^{AA-3'}$ (SEQ ID NO: 5841)
3'-ACUCUACCCACCGGUGGUGGGACCA$_{CG-5'}$ (SEQ ID NO: 1405)

βc-2505 Target: 5'-TGAGATGGGTGGCCACCACCCTGGTGC-3' (SEQ ID NO: 2514)

5'-GAGAUGGGUGGCCACCACCCUGGUG$^{AC-3'}$ (SEQ ID NO: 5842)
3'-CUCUACCCACCGGUGGUGGGACCAC$_{GA-5'}$ (SEQ ID NO: 1406)

βc-2506 Target: 5'-GAGATGGGTGGCCACCACCCTGGTGCT-3' (SEQ ID NO: 2515)

5'-AGAUGGGUGGCCACCACCCUGGUGC$^{CA-3'}$ (SEQ ID NO: 5843)
3'-UCUACCCACCGGUGGUGGGACCACG$_{AC-5'}$ (SEQ ID NO: 1407)

βc-2507 Target: 5'-AGATGGGTGGCCACCACCCTGGTGCTG-3' (SEQ ID NO: 2516)

5'-GAUGGGUGGCCACCACCCUGGUGCU$^{AC-3'}$ (SEQ ID NO: 5844)
3'-CUACCCACCGGUGGUGGGACCACGA$_{CU-5'}$ (SEQ ID NO: 1408)

βc-2508 Target: 5'-GATGGGTGGCCACCACCCTGGTGCTGA-3' (SEQ ID NO: 2517)

5'-AUGGGUGGCCACCACCCUGGUGCUG$^{CA-3'}$ (SEQ ID NO: 5845)
3'-UACCCACCGGUGGUGGGACCACGAC$_{UG-5'}$ (SEQ ID NO: 1409)

βc-2509 Target: 5'-ATGGGTGGCCACCACCCTGGTGCTGAC-3' (SEQ ID NO: 2518)

5'-UGGGUGGCCACCACCCUGGUGCUGA$^{AC-3'}$ (SEQ ID NO: 5846)
3'-ACCCACCGGUGGUGGGACCACGACU$_{GA-5'}$ (SEQ ID NO: 1410)

βc-2510 Target: 5'-TGGGTGGCCACCACCCTGGTGCTGACT-3' (SEQ ID NO: 2519)

5'-GGGUGGCCACCACCCUGGUGCUGAC$^{CC-3'}$ (SEQ ID NO: 5847)
3'-CCCACCGGUGGUGGGACCACGACUG$_{AU-5'}$ (SEQ ID NO: 1411)

βc-2511 Target: 5'-GGGTGGCCACCACCCTGGTGCTGACTA-3' (SEQ ID NO: 2520)

5'-GGUGGCCACCACCCUGGUGCUGACU^{C}$^{C-3'}$ (SEQ ID NO: 5848)
3'-CCACCGGUGGUGGGACCACGACUGA$_{U}$$_{A-5'}$ (SEQ ID NO: 1412)

βc-2512 Target: 5'-GGTGGCCACCACCCTGGTGCTGACTAT-3' (SEQ ID NO: 2521)

5'-GUGGCCACCACCCUGGUGCUGACUA^{C}$^{A-3'}$ (SEQ ID NO: 5849)
3'-CACCGGUGGUGGGACCACGACUGAU$_{A}$$_{G-5'}$ (SEQ ID NO: 1413)

βc-2513 Target: 5'-GTGGCCACCACCCTGGTGCTGACTATC-3' (SEQ ID NO: 2522)

5'-UGGCCACCACCCUGGUGCUGACUAU^{A}$^{A-3'}$ (SEQ ID NO: 5850)
3'-ACCGGUGGUGGGACCACGACUGAUA$_{G}$$_{G-5'}$ (SEQ ID NO: 1414)

βc-2514 Target: 5'-TGGCCACCACCCTGGTGCTGACTATCC-3' (SEQ ID NO: 2523)

5'-GGCCACCACCCUGGUGCUGACUAUC^{A}$^{C-3'}$ (SEQ ID NO: 5851)
3'-CCGGUGGUGGGACCACGACUGAUAG$_{G}$$_{U-5'}$ (SEQ ID NO: 1415)

βc-2515 Target: 5'-GGCCACCACCCTGGTGCTGACTATCCA-3' (SEQ ID NO: 2524)

5'-GCCACCACCCUGGUGCUGACUAUCC^{C}$^{A-3'}$ (SEQ ID NO: 5852)
3'-CGGUGGUGGGACCACGACUGAUAGG$_{U}$$_{C-5'}$ (SEQ ID NO: 1416)

βc-2516 Target: 5'-GCCACCACCCTGGTGCTGACTATCCAG-3' (SEQ ID NO: 2525)

5'-CCACCACCCUGGUGCUGACUAUCCA^{A}$^{C-3'}$ (SEQ ID NO: 5853)
3'-GGUGGUGGGACCACGACUGAUAGGU$_{C}$$_{A-5'}$ (SEQ ID NO: 1417)

βc-2517 Target: 5'-CCACCACCCTGGTGCTGACTATCCAGT-3' (SEQ ID NO: 2526)

5'-CACCACCCUGGUGCUGACUAUCCAG^{C}$^{C-3'}$ (SEQ ID NO: 5854)
3'-GUGGUGGGACCACGACUGAUAGGUC$_{A}$$_{A-5'}$ (SEQ ID NO: 1418)

βc-2518 Target: 5'-CACCACCCTGGTGCTGACTATCCAGTT-3' (SEQ ID NO: 2527)

5'-ACCACCCUGGUGCUGACUAUCCAGU^{C}$^{A-3'}$ (SEQ ID NO: 5855)
3'-UGGUGGGACCACGACUGAUAGGUCA$_{A}$$_{C-5'}$ (SEQ ID NO: 1419)

βc-2519 Target: 5'-ACCACCCTGGTGCTGACTATCCAGTTG-3' (SEQ ID NO: 2528)

5'-CCACCCUGGUGCUGACUAUCCAGUU^{A}$^{C-3'}$ (SEQ ID NO: 5856)
3'-GGUGGGACCACGACUGAUAGGUCAA$_{C}$$_{U-5'}$ (SEQ ID NO: 1420)

βc-2520 Target: 5'-CCACCCTGGTGCTGACTATCCAGTTGA-3' (SEQ ID NO: 2529)

5'-CACCCUGGUGCUGACUAUCCAGUUG^{C}$^{C-3'}$ (SEQ ID NO: 5857)
3'-GUGGGACCACGACUGAUAGGUCAAC$_{U}$$_{A-5'}$ (SEQ ID NO: 1421)

βc-2521 Target: 5'-CACCCTGGTGCTGACTATCCAGTTGAT-3' (SEQ ID NO: 2530)

5'-ACCCUGGUGCUGACUAUCCAGUUGA^{C}$^{A-3'}$ (SEQ ID NO: 5858)

3'-UGGGACCACGACUGAUAGGUCAACU$_{AC-5'}$ (SEQ ID NO: 1422)

βc-2522 Target: 5'-ACCCTGGTGCTGACTATCCAGTTGATG-3' (SEQ ID NO: 2531)

5'-CCCUGGUGCUGACUAUCCAGUUGAU$^{AA-3'}$ (SEQ ID NO: 5859)
3'-GGGACCACGACUGAUAGGUCAACUA$_{CC-5'}$ (SEQ ID NO: 1423)

βc-2523 Target: 5'-CCCTGGTGCTGACTATCCAGTTGATGG-3' (SEQ ID NO: 2532)

5'-CCUGGUGCUGACUAUCCAGUUGAUG$^{AA-3'}$ (SEQ ID NO: 5860)
3'-GGACCACGACUGAUAGGUCAACUAC$_{CC-5'}$ (SEQ ID NO: 1424)

βc-2524 Target: 5'-CCTGGTGCTGACTATCCAGTTGATGGG-3' (SEQ ID NO: 2533)

5'-CUGGUGCUGACUAUCCAGUUGAUGG$^{AA-3'}$ (SEQ ID NO: 5861)
3'-GACCACGACUGAUAGGUCAACUACC$_{CG-5'}$ (SEQ ID NO: 1425)

βc-2525 Target: 5'-CTGGTGCTGACTATCCAGTTGATGGGC-3' (SEQ ID NO: 2534)

5'-UGGUGCUGACUAUCCAGUUGAUGGG$^{AC-3'}$ (SEQ ID NO: 5862)
3'-ACCACGACUGAUAGGUCAACUACCC$_{GA-5'}$ (SEQ ID NO: 1426)

βc-2526 Target: 5'-TGGTGCTGACTATCCAGTTGATGGGCT-3' (SEQ ID NO: 2535)

5'-GGUGCUGACUAUCCAGUUGAUGGGC$^{CA-3'}$ (SEQ ID NO: 5863)
3'-CCACGACUGAUAGGUCAACUACCCG$_{AC-5'}$ (SEQ ID NO: 1427)

βc-2527 Target: 5'-GGTGCTGACTATCCAGTTGATGGGCTG-3' (SEQ ID NO: 2536)

5'-GUGCUGACUAUCCAGUUGAUGGGCU$^{AA-3'}$ (SEQ ID NO: 5864)
3'-CACGACUGAUAGGUCAACUACCCGA$_{CG-5'}$ (SEQ ID NO: 1428)

βc-2528 Target: 5'-GTGCTGACTATCCAGTTGATGGGCTGC-3' (SEQ ID NO: 2537)

5'-UGCUGACUAUCCAGUUGAUGGGCUG$^{AA-3'}$ (SEQ ID NO: 5865)
3'-ACGACUGAUAGGUCAACUACCCGAC$_{GG-5'}$ (SEQ ID NO: 1429)

βc-2529 Target: 5'-TGCTGACTATCCAGTTGATGGGCTGCC-3' (SEQ ID NO: 2538)

5'-GCUGACUAUCCAGUUGAUGGGCUGC$^{AC-3'}$ (SEQ ID NO: 5866)
3'-CGACUGAUAGGUCAACUACCCGACG$_{GU-5'}$ (SEQ ID NO: 1430)

βc-2530 Target: 5'-GCTGACTATCCAGTTGATGGGCTGCCA-3' (SEQ ID NO: 2539)

5'-CUGACUAUCCAGUUGAUGGGCUGCC$^{CA-3'}$ (SEQ ID NO: 5867)
3'-GACUGAUAGGUCAACUACCCGACGG$_{UC-5'}$ (SEQ ID NO: 1431)

βc-2531 Target: 5'-CTGACTATCCAGTTGATGGGCTGCCAG-3' (SEQ ID NO: 2540)

5'-UGACUAUCCAGUUGAUGGGCUGCCA$^{AC-3'}$ (SEQ ID NO: 5868)
3'-ACUGAUAGGUCAACUACCCGACGGU$_{CU-5'}$ (SEQ ID NO: 1432)

βc-2532 Target: 5'-TGACTATCCAGTTGATGGGCTGCCAGA-3' (SEQ ID NO: 2541)

5'-GACUAUCCAGUUGAUGGGCUGCCAG$^{C}C-3'$ (SEQ ID NO: 5869)
3'-CUGAUAGGUCAACUACCCGACGGUC$_{U}A-5'$, (SEQ ID NO: 1433)

βc-2533 Target: 5'-GACTATCCAGTTGATGGGCTGCCAGAT-3' (SEQ ID NO: 2542)

5'-ACUAUCCAGUUGAUGGGCUGCCAGA$^{C}A-3'$ (SEQ ID NO: 5870)
3'-UGAUAGGUCAACUACCCGACGGUCU$_{A}G-5'$, (SEQ ID NO: 1434)

βc-2534 Target: 5'-ACTATCCAGTTGATGGGCTGCCAGATC-3' (SEQ ID NO: 2543)

5'-CUAUCCAGUUGAUGGGCUGCCAGAU$^{A}C-3'$ (SEQ ID NO: 5871)
3'-GAUAGGUCAACUACCCGACGGUCUA$_{G}A-5'$, (SEQ ID NO: 1435)

βc-2535 Target: 5'-CTATCCAGTTGATGGGCTGCCAGATCT-3' (SEQ ID NO: 2544)

5'-AUGCCCAGGACCUCAUGGAUGGGCU$^{A}A-3'$ (SEQ ID NO: 5872)
3'-UACGGGUCCUGGAGUACCUACCCGA$_{C}G-5'$, (SEQ ID NO: 1436)

βc-2567 Target: 5'-ATGCCCAGGACCTCATGGATGGGCTGC-3' (SEQ ID NO: 2545)

5'-UGCCCAGGACCUCAUGGAUGGGCUG$^{A}A-3'$ (SEQ ID NO: 5873)
3'-ACGGGUCCUGGAGUACCUACCCGAC$_{G}G-5'$, (SEQ ID NO: 1437)

βc-2568 Target: 5'-TGCCCAGGACCTCATGGATGGGCTGCC-3' (SEQ ID NO: 2546)

5'-GCCCAGGACCUCAUGGAUGGGCUGC$^{A}C-3'$ (SEQ ID NO: 5874)
3'-CGGGUCCUGGAGUACCUACCCGACG$_{G}A-5'$, (SEQ ID NO: 1438)

βc-2569 Target: 5'-GCCCAGGACCTCATGGATGGGCTGCCT-3' (SEQ ID NO: 2547)

5'-ACAGCAAUCAGCUGGCCUGGUUUGA$^{C}C-3'$ (SEQ ID NO: 5875)
3'-UGUCGUUAGUCGACCGGACCAAACU$_{A}U-5'$, (SEQ ID NO: 1439)

βc-2603 Target: 5'-ACAGCAATCAGCTGGCCTGGTTTGATA-3' (SEQ ID NO: 2548)

5'-CAGCAAUCAGCUGGCCUGGUUUGAU$^{C}A-3'$ (SEQ ID NO: 5876)
3'-GUCGUUAGUCGACCGGACCAAACUA$_{U}G-5'$, (SEQ ID NO: 1440)

βc-2604 Target: 5'-CAGCAATCAGCTGGCCTGGTTTGATAC-3' (SEQ ID NO: 2549)

5'-AGCAAUCAGCUGGCCUGGUUUGAUA$^{A}C-3'$ (SEQ ID NO: 5877)
3'-UCGUUAGUCGACCGGACCAAACUAU$_{G}A-5'$, (SEQ ID NO: 1441)

βc-2605 Target: 5'-AGCAATCAGCTGGCCTGGTTTGATACT-3' (SEQ ID NO: 2550)

5'-GCAAUCAGCUGGCCUGGUUUGAUAC$^{C}A-3'$ (SEQ ID NO: 5878)
3'-CGUUAGUCGACCGGACCAAACUAUG$_{A}C-5'$, (SEQ ID NO: 1442)

βc-2606 Target: 5'-GCAATCAGCTGGCCTGGTTTGATACTG-3' (SEQ ID NO: 2551)

5'-CAAUCAGCUGGCCUGGUUUGAUACU$^{A}C-3'$ (SEQ ID NO: 5879)
3'-GUUAGUCGACCGGACCAAACUAUGA$_{C}U-5'$, (SEQ ID NO: 1443)

βc-2607 Target: 5'-CAATCAGCTGGCCTGGTTTGATACTGA-3' (SEQ ID NO: 2552)

5'-AAUCAGCUGGCCUGGUUUGAUACUG$^{CA-3'}$ (SEQ ID NO: 5880)
3'-UUAGUCGACCGGACCAAACUAUGAC$_{UG-5'}$ (SEQ ID NO: 1444)

βc-2608 Target: 5'-AATCAGCTGGCCTGGTTTGATACTGAC-3' (SEQ ID NO: 2553)

5'-AUCAGCUGGCCUGGUUUGAUACUGA$^{AA-3'}$ (SEQ ID NO: 5881)
3'-UAGUCGACCGGACCAAACUAUGACU$_{GG-5'}$ (SEQ ID NO: 1445)

βc-2609 Target: 5'-ATCAGCTGGCCTGGTTTGATACTGACC-3' (SEQ ID NO: 2554)

5'-UCAGCUGGCCUGGUUUGAUACUGAC$^{AC-3'}$ (SEQ ID NO: 5882)
3'-AGUCGACCGGACCAAACUAUGACUG$_{GA-5'}$ (SEQ ID NO: 1446)

βc-2610 Target: 5'-TCAGCTGGCCTGGTTTGATACTGACCT-3' (SEQ ID NO: 2555)

5'-CAGCUGGCCUGGUUUGAUACUGACC$^{CA-3'}$ (SEQ ID NO: 5883)
3'-GUCGACCGGACCAAACUAUGACUGG$_{AC-5'}$ (SEQ ID NO: 1447)

βc-2611 Target: 5'-CAGCTGGCCTGGTTTGATACTGACCTG-3' (SEQ ID NO: 2556)

5'-AGCUGGCCUGGUUUGAUACUGACCU$^{AC-3'}$ (SEQ ID NO: 5884)
3'-UCGACCGGACCAAACUAUGACUGGA$_{CA-5'}$ (SEQ ID NO: 1448)

βc-2612 Target: 5'-AGCTGGCCTGGTTTGATACTGACCTGT-3' (SEQ ID NO: 2557)

5'-GCUGGCCUGGUUUGAUACUGACCUG$^{CC-3'}$ (SEQ ID NO: 5885)
3'-CGACCGGACCAAACUAUGACUGGAC$_{AU-5'}$ (SEQ ID NO: 1449)

βc-2613 Target: 5'-GCTGGCCTGGTTTGATACTGACCTGTA-3' (SEQ ID NO: 2558)

5'-CUGGCCUGGUUUGAUACUGACCUGU$^{CC-3'}$ (SEQ ID NO: 5886)
3'-GACCGGACCAAACUAUGACUGGACA$_{UU-5'}$ (SEQ ID NO: 1450)

βc-2614 Target: 5'-CTGGCCTGGTTTGATACTGACCTGTAA-3' (SEQ ID NO: 2559)

5'-UGGCCUGGUUUGAUACUGACCUGUA$^{CC-3'}$ (SEQ ID NO: 5887)
3'-ACCGGACCAAACUAUGACUGGACAU$_{UU-5'}$ (SEQ ID NO: 1451)

βc-2615 Target: 5'-TGGCCTGGTTTGATACTGACCTGTAAA-3' (SEQ ID NO: 2560)

5'-GGCCUGGUUUGAUACUGACCUGUAA$^{CC-3'}$ (SEQ ID NO: 5888)
3'-CCGGACCAAACUAUGACUGGACAUU$_{UA-5'}$ (SEQ ID NO: 1452)

βc-2616 Target: 5'-GGCCTGGTTTGATACTGACCTGTAAAT-3' (SEQ ID NO: 2561)

5'-GCCUGGUUUGAUACUGACCUGUAAA$^{CA-3'}$ (SEQ ID NO: 5889)
3'-CGGACCAAACUAUGACUGGACAUUU$_{AG-5'}$ (SEQ ID NO: 1453)

βc-2617 Target: 5'-GCCTGGTTTGATACTGACCTGTAAATC-3' (SEQ ID NO: 2562)

5'-CCUGGUUUGAUACUGACCUGUAAAU$^{AC-3'}$ (SEQ ID NO: 5890)

3'-GGACCAAACUAUGACUGGACAUUUA$_{G_{U-5'}}$ (SEQ ID NO: 1454)

βc-2618 Target: 5'-CCTGGTTTGATACTGACCTGTAAATCA-3' (SEQ ID NO: 2563)

5'-CUGGUUUGAUACUGACCUGUAAAUC$^{C_{C-3'}}$ (SEQ ID NO: 5891)
3'-GACCAAACUAUGACUGGACAUUUAG$_{U_{A-5'}}$ (SEQ ID NO: 1455)

βc-2619 Target: 5'-CTGGTTTGATACTGACCTGTAAATC-3' (SEQ ID NO: 2564)

5'-UGGUUUGAUACUGACCUGUAAAUCA$^{C_{A-3'}}$ (SEQ ID NO: 5892)
3'-ACCAAACUAUGACUGGACAUUUAGU$_{A_{G-5'}}$ (SEQ ID NO: 1456)

βc-2620 Target: 5'-TGGTTTGATACTGACCTGTAAATCATC-3' (SEQ ID NO: 2565)

5'-GGUUUGAUACUGACCUGUAAAUCAU$^{A_{A-3'}}$ (SEQ ID NO: 5893)
3'-CCAAACUAUGACUGGACAUUUAGUA$_{G_{G-5'}}$ (SEQ ID NO: 1457)

βc-2621 Target: 5'-GGTTTGATACTGACCTGTAAATCATCC-3' (SEQ ID NO: 2566)

5'-GUUUGAUACUGACCUGUAAAUCAUC$^{A_{C-3'}}$ (SEQ ID NO: 5894)
3'-CAAACUAUGACUGGACAUUUAGUAG$_{G_{A-5'}}$ (SEQ ID NO: 1458)

βc-2622 Target: 5'-GTTTGATACTGACCTGTAAATCATCCT-3' (SEQ ID NO: 2567)

5'-UUUGAUACUGACCUGUAAAUCAUCC$^{C_{C-3'}}$ (SEQ ID NO: 5895)
3'-AAACUAUGACUGGACAUUUAGUAGG$_{A_{A-5'}}$ (SEQ ID NO: 1459)

βc-2623 Target: 5'-TTTGATACTGACCTGTAAATCATCCTT-3' (SEQ ID NO: 2568)

5'-UUUUUUGCCACAGCUUUUGCAACUU$^{C_{C-3'}}$ (SEQ ID NO: 5896)
3'-AAAAAACGGUGUCGAAAACGUUGAA$_{U_{U-5'}}$ (SEQ ID NO: 1460)

βc-2869 Target: 5'-TTTTTTGCCACAGCTTTTGCAACTTAA-3' (SEQ ID NO: 2569)

5'-AAUGAGUAACAUUUGCUGUUUUAAA$^{A_{C-3'}}$ (SEQ ID NO: 5897)
3'-UUACUCAUUGUAAACGACAAAAUUU$_{G_{U-5'}}$ (SEQ ID NO: 1461)

βc-2902 Target: 5'-AATGAGTAACATTTGCTGTTTTAAACA-3' (SEQ ID NO: 2570)

5'-UAAACAUUAAUAGCAGCCUUUCUCU$^{A_{C-3'}}$ (SEQ ID NO: 5898)
3'-AUUUGUAAUUAUCGUCGGAAAGAGA$_{G_{A-5'}}$ (SEQ ID NO: 1462)

βc-2923 Target: 5'-TAAACATTAATAGCAGCCTTTCTCTCT-3' (SEQ ID NO: 2571)

5'-AACAUUAAUAGCAGCCUUUCUCUCU$^{C_{C-3'}}$ (SEQ ID NO: 5899)
3'-UUGUAAUUAUCGUCGGAAAGAGAGA$_{A_{A-5'}}$ (SEQ ID NO: 1463)

βc-2925 Target: 5'-AACATTAATAGCAGCCTTTCTCTCTTT-3' (SEQ ID NO: 2572)

5'-CAUUAAUAGCAGCCUUUCUCUCUUU$^{C_{C-3'}}$ (SEQ ID NO: 5900)
3'-GUAAUUAUCGUCGGAAAGAGAGAAA$_{U_{A-5'}}$ (SEQ ID NO: 1464)

βc-2927 Target: 5'-CATTAATAGCAGCCTTTCTCTCTTTAT-3' (SEQ ID NO: 2573)

5'-UUAAUAGCAGCCUUUCUCUCUUUAU$^{CA-3'}$ (SEQ ID NO: 5901)
3'-AAUUAUCGUCGGAAAGAGAGAAAUA$_{UG-5'}$ (SEQ ID NO: 1465)

βc-2929 Target: 5'-TTAATAGCAGCCTTTCTCTCTTTATAC-3' (SEQ ID NO: 2574)

5'-UUGCAUUGUGAUUGGCCUGUAGAGU$^{CA-3'}$ (SEQ ID NO: 5902)
3'-AACGUAACACUAACCGGACAUCUCA$_{AC-5'}$ (SEQ ID NO: 1466)

βc-2973 Target: 5'-TTGCATTGTGATTGGCCTGTAGAGTTG-3' (SEQ ID NO: 2575)

5'-GCAUUGUGAUUGGCCUGUAGAGUUG$^{AC-3'}$ (SEQ ID NO: 5903)
3'-CGUAACACUAACCGGACAUCUCAAC$_{GA-5'}$ (SEQ ID NO: 1467)

βc-2975 Target: 5'-GCATTGTGATTGGCCTGTAGAGTTGCT-3' (SEQ ID NO: 2576)

5'-AUUGUGAUUGGCCUGUAGAGUUGCU$^{AC-3'}$ (SEQ ID NO: 5904)
3'-UAACACUAACCGGACAUCUCAACGA$_{CU-5'}$ (SEQ ID NO: 1468)

βc-2977 Target: 5'-ATTGTGATTGGCCTGTAGAGTTGCTGA-3' (SEQ ID NO: 2577)

5'-UGUGAUUGGCCUGUAGAGUUGCUGA$^{AC-3'}$ (SEQ ID NO: 5905)
3'-ACACUAACCGGACAUCUCAACGACU$_{CU-5'}$ (SEQ ID NO: 1469)

βc-2979 Target: 5'-TGTGATTGGCCTGTAGAGTTGCTGAGA-3' (SEQ ID NO: 2578)

5'-UGAUUGGCCUGUAGAGUUGCUGAGA$^{AA-3'}$ (SEQ ID NO: 5906)
3'-ACUAACCGGACAUCUCAACGACUCU$_{CC-5'}$ (SEQ ID NO: 1470)

βc-2981 Target: 5'-TGATTGGCCTGTAGAGTTGCTGAGAGG-3' (SEQ ID NO: 2579)

5'-AUUGGCCUGUAGAGUUGCUGAGAGG$^{AA-3'}$ (SEQ ID NO: 5907)
3'-UAACCGGACAUCUCAACGACUCUCC$_{CG-5'}$ (SEQ ID NO: 1471)

βc-2983 Target: 5'-ATTGGCCTGTAGAGTTGCTGAGAGGGC-3' (SEQ ID NO: 2580)

5'-UGGCCUGUAGAGUUGCUGAGAGGGC$^{CA-3'}$ (SEQ ID NO: 5908)
3'-ACCGGACAUCUCAACGACUCUCCCG$_{AG-5'}$ (SEQ ID NO: 1472)

βc-2985 Target: 5'-TGGCCTGTAGAGTTGCTGAGAGGGCTC-3' (SEQ ID NO: 2581)

5'-GCCUGUAGAGUUGCUGAGAGGGCUC$^{AC-3'}$ (SEQ ID NO: 5909)
3'-CGGACAUCUCAACGACUCUCCCGAG$_{CU-5'}$ (SEQ ID NO: 1473)

βc-2987 Target: 5'-GCCTGTAGAGTTGCTGAGAGGGCTCGA-3' (SEQ ID NO: 2582)

5'-CUGUAGAGUUGCUGAGAGGGCUCGA$^{AA-3'}$ (SEQ ID NO: 5910)
3'-GACAUCUCAACGACUCUCCCGAGCU$_{CC-5'}$ (SEQ ID NO: 1474)

βc-2989 Target: 5'-CTGTAGAGTTGCTGAGAGGGCTCGAGG-3' (SEQ ID NO: 2583)

5'-GGGUGGGCUGGUAUCUCAGAAAGUG$^{AA-3'}$ (SEQ ID NO: 5911)
3'-CCCACCCGACCAUAGAGUCUUUCAC$_{GG-5'}$ (SEQ ID NO: 1475)

βc-3015 Target: 5'-GGGTGGGCTGGTATCTCAGAAAGTGCC-3' (SEQ ID NO: 2584)

5'-GUGGGCUGGUAUCUCAGAAAGUGCC$^{CA-3'}$ (SEQ ID NO: 5912)
3'-CACCCGACCAUAGAGUCUUUCACGG$_{AC-5'}$ (SEQ ID NO: 1476)

βc-3017 Target: 5'-GTGGGCTGGTATCTCAGAAAGTGCCTG-3' (SEQ ID NO: 2585)

5'-GGGCUGGUAUCUCAGAAAGUGCCUG$^{CA-3'}$ (SEQ ID NO: 5913)
3'-CCCGACCAUAGAGUCUUUCACGGAC$_{UG-5'}$ (SEQ ID NO: 1477)

βc-3019 Target: 5'-GGGCTGGTATCTCAGAAAGTGCCTGAC-3' (SEQ ID NO: 2586)

5'-GCUGGUAUCUCAGAAAGUGCCUGAC$^{CA-3'}$ (SEQ ID NO: 5914)
3'-CGACCAUAGAGUCUUUCACGGACUG$_{UG-5'}$ (SEQ ID NO: 1478)

βc-3021 Target: 5'-GCTGGTATCTCAGAAAGTGCCTGACAC-3' (SEQ ID NO: 2587)

5'-ACACUAACCAAGCUGAGUUUCCUAU$^{AA-3'}$ (SEQ ID NO: 5915)
3'-UGUGAUUGGUUCGACUCAAAGGAUA$_{CC-5'}$ (SEQ ID NO: 1479)

βc-3046 Target: 5'-ACACTAACCAAGCTGAGTTTCCTATGG-3' (SEQ ID NO: 2588)

5'-ACUAACCAAGCUGAGUUUCCUAUGG$^{AC-3'}$ (SEQ ID NO: 5916)
3'-UGAUUGGUUCGACUCAAAGGAUACC$_{CU-5'}$ (SEQ ID NO: 1480)

βc-3048 Target: 5'-ACTAACCAAGCTGAGTTTCCTATGGGA-3' (SEQ ID NO: 2589)

5'-UAACCAAGCUGAGUUUCCUAUGGGA$^{CA-3'}$ (SEQ ID NO: 5917)
3'-AUUGGUUCGACUCAAAGGAUACCCU$_{UG-5'}$ (SEQ ID NO: 1481)

βc-3050 Target: 5'-TAACCAAGCTGAGTTTCCTATGGGAAC-3' (SEQ ID NO: 2590)

5'-ACCAAGCUGAGUUUCCUAUGGGAAC$^{CC-3'}$ (SEQ ID NO: 5918)
3'-UGGUUCGACUCAAAGGAUACCCUUG$_{UU-5'}$ (SEQ ID NO: 1482)

βc-3052 Target: 5'-ACCAAGCTGAGTTTCCTATGGGAACAA-3' (SEQ ID NO: 2591)

5'-CAAGCUGAGUUUCCUAUGGGAACAA$^{CC-3'}$ (SEQ ID NO: 5919)
3'-GUUCGACUCAAAGGAUACCCUUGUU$_{AA-5'}$ (SEQ ID NO: 1483)

βc-3054 Target: 5'-CAAGCTGAGTTTCCTATGGGAACAATT-3' (SEQ ID NO: 2592)

5'-AGCUGAGUUUCCUAUGGGAACAAUU$^{AC-3'}$ (SEQ ID NO: 5920)
3'-UCGACUCAAAGGAUACCCUUGUUAA$_{CU-5'}$ (SEQ ID NO: 1484)

βc-3056 Target: 5'-AGCTGAGTTTCCTATGGGAACAATTGA-3' (SEQ ID NO: 2593)

5'-AACUUUUUGUUCUGGUCCUUUUUGG$^{CA-3'}$ (SEQ ID NO: 5921)
3'-UUGAAAAACAAGACCAGGAAAAACC$_{AG-5'}$ (SEQ ID NO: 1485)

βc-3087 Target: 5'-AACTTTTTGTTCTGGTCCTTTTTGGTC-3' (SEQ ID NO: 2594)

5'-CUUUUUGUUCUGGUCCUUUUUGGUC$^{AC-3'}$ (SEQ ID NO: 5922)

3'-GAAAAACAAGACCAGGAAAAACCAG$_{C_{U-5}}$, (SEQ ID NO: 1486)

βc-3089 Target: 5'-CTTTTTGTTCTGGTCCTTTTTGGTCGA-3' (SEQ ID NO: 2595)

5'-UUUUGUUCUGGUCCUUUUUGGUCGA$^{A^{A-3'}}$ (SEQ ID NO: 5923)
3'-AAAACAAGACCAGGAAAAACCAGCU$_{C_{C-5'}}$ (SEQ ID NO: 1487)

βc-3091 Target: 5'-TTTTGTTCTGGTCCTTTTTGGTCGAGG-3' (SEQ ID NO: 2596)

5'-UUGUUCUGGUCCUUUUUGGUCGAGG$^{C^{A-3'}}$ (SEQ ID NO: 5924)
3'-AACAAGACCAGGAAAAACCAGCUCC$_{U_{C-5'}}$ (SEQ ID NO: 1488)

βc-3093 Target: 5'-TTGTTCTGGTCCTTTTTGGTCGAGGAG-3' (SEQ ID NO: 2597)

5'-GUUCUGGUCCUUUUUGGUCGAGGAG$^{C^{C-3'}}$ (SEQ ID NO: 5925)
3'-CAAGACCAGGAAAAACCAGCUCCUC$_{A_{U-5'}}$ (SEQ ID NO: 1489)

βc-3095 Target: 5'-GTTCTGGTCCTTTTTGGTCGAGGAGTA-3' (SEQ ID NO: 2598)

5'-UCUGGUCCUUUUUGGUCGAGGAGUA$^{C^{A-3'}}$ (SEQ ID NO: 5926)
3'-AGACCAGGAAAAACCAGCUCCUCAU$_{U_{G-5'}}$ (SEQ ID NO: 1490)

βc-3097 Target: 5'-TCTGGTCCTTTTTGGTCGAGGAGTAAC-3' (SEQ ID NO: 2599)

5'-UGGUCCUUUUUGGUCGAGGAGUAAC$^{C^{C-3'}}$ (SEQ ID NO: 5927)
3'-ACCAGGAAAAACCAGCUCCUCAUUG$_{U_{U-5'}}$ (SEQ ID NO: 1491)

βc-3099 Target: 5'-TGGTCCTTTTTGGTCGAGGAGTAACAA-3' (SEQ ID NO: 2600)

5'-GUCCUUUUUGGUCGAGGAGUAACAA$^{C^{C-3'}}$ (SEQ ID NO: 5928)
3'-CAGGAAAAACCAGCUCCUCAUUGUU$_{A_{U-5'}}$ (SEQ ID NO: 1492)

βc-3101 Target: 5'-GTCCTTTTTGGTCGAGGAGTAACAATA-3' (SEQ ID NO: 2601)

5'-CCUUUUUGGUCGAGGAGUAACAAUA$^{A^{C-3'}}$ (SEQ ID NO: 5929)
3'-GGAAAAACCAGCUCCUCAUUGUUAU$_{G_{U-5'}}$ (SEQ ID NO: 1493)

βc-3103 Target: 5'-CCTTTTTGGTCGAGGAGTAACAATACA-3' (SEQ ID NO: 2602)

5'-UUUUUGGUCGAGGAGUAACAAUACA$^{C^{C-3'}}$ (SEQ ID NO: 5930)
3'-AAAAACCAGCUCCUCAUUGUUAUGU$_{U_{U-5'}}$ (SEQ ID NO: 1494)

βc-3105 Target: 5'-TTTTTGGTCGAGGAGTAACAATACAAA-3' (SEQ ID NO: 2603)

5'-UUUGGUCGAGGAGUAACAAUACAAA$^{C^{A-3'}}$ (SEQ ID NO: 5931)
3'-AAACCAGCUCCUCAUUGUUAUGUUU$_{A_{C-5'}}$ (SEQ ID NO: 1495)

βc-3107 Target: 5'-TTTGGTCGAGGAGTAACAATACAAATG-3' (SEQ ID NO: 2604)

5'-UGGUCGAGGAGUAACAAUACAAAUG$^{A^{C-3'}}$ (SEQ ID NO: 5932)
3'-ACCAGCUCCUCAUUGUUAUGUUUAC$_{C_{U-5'}}$ (SEQ ID NO: 1496)

βc-3109 Target: 5'-TGGTCGAGGAGTAACAATACAAATGGA-3' (SEQ ID NO: 2605)

5'-GUCGAGGAGUAACAAUACAAAUGGA^{C}$^{C-3'}$ (SEQ ID NO: 5933)
3'-CAGCUCCUCAUUGUUAUGUUUACCU$_{A}$$_{A-5'}$ (SEQ ID NO: 1497)

βc-3111 Target: 5'-GTCGAGGAGTAACAATACAAATGGATT-3' (SEQ ID NO: 2606)

5'-CGAGGAGUAACAAUACAAAUGGAUU^{C}$^{C-3'}$ (SEQ ID NO: 5934)
3'-GCUCCUCAUUGUUAUGUUUACCUAA$_{A}$$_{A-5'}$ (SEQ ID NO: 1498)

βc-3113 Target: 5'-CGAGGAGTAACAATACAAATGGATTTT-3' (SEQ ID NO: 2607)

5'-AGGAGUAACAAUACAAAUGGAUUUU^{A}$^{A-3'}$ (SEQ ID NO: 5935)
3'-UCCUCAUUGUUAUGUUUACCUAAAA$_{C}$$_{C-5'}$ (SEQ ID NO: 1499)

βc-3115 Target: 5'-AGGAGTAACAATACAAATGGATTTTGG-3' (SEQ ID NO: 2608)

5'-UUUAUCAAACCCUAGCCUUGCUUGU^{C}$^{C-3'}$ (SEQ ID NO: 5936)
3'-AAAUAGUUUGGGAUCGGAACGAACA$_{A}$$_{U-5'}$ (SEQ ID NO: 1500)

βc-3191 Target: 5'-TTTATCAAACCCTAGCCTTGCTTGTTA-3' (SEQ ID NO: 2609)

5'-UAUCAAACCCUAGCCUUGCUUGUUA^{C}$^{C-3'}$ (SEQ ID NO: 5937)
3'-AUAGUUUGGGAUCGGAACGAACAAU$_{U}$$_{U-5'}$ (SEQ ID NO: 1501)

βc-3193 Target: 5'-TATCAAACCCTAGCCTTGCTTGTTAAA-3' (SEQ ID NO: 2610)

5'-UCAAACCCUAGCCUUGCUUGUUAAA^{C}$^{C-3'}$ (SEQ ID NO: 5938)
3'-AGUUUGGGAUCGGAACGAACAAUUU$_{A}$$_{A-5'}$ (SEQ ID NO: 1502)

βc-3195 Target: 5'-TCAAACCCTAGCCTTGCTTGTTAAATT-3' (SEQ ID NO: 2611)

5'-UUGAGUAAUGGUGUAGAACACUAAU^{C}$^{A-3'}$ (SEQ ID NO: 5939)
3'-AACUCAUUACCACAUCUUGUGAUUA$_{A}$$_{G-5'}$ (SEQ ID NO: 1503)

βc-3387 Target: 5'-TTGAGTAATGGTGTAGAACACTAATTC-3' (SEQ ID NO: 2612)

5'-GAGUAAUGGUGUAGAACACUAAUUC^{C}$^{C-3'}$ (SEQ ID NO: 5940)
3'-CUCAUUACCACAUCUUGUGAUUAAG$_{U}$$_{A-5'}$ (SEQ ID NO: 1504)

βc-3389 Target: 5'-GAGTAATGGTGTAGAACACTAATTC-3' (SEQ ID NO: 2613)

5'-GUAAUGGUGUAGAACACUAAUUCAU^{C}$^{C-3'}$ (SEQ ID NO: 5941)
3'-CAUUACCACAUCUUGUGAUUAAGUA$_{U}$$_{U-5'}$ (SEQ ID NO: 1505)

βc-3391 Target: 5'-GTAATGGTGTAGAACACTAATTCATAA-3' (SEQ ID NO: 2614)

5'-AAUGGUGUAGAACACUAAUUCAUAA^{C}$^{A-3'}$ (SEQ ID NO: 5942)
3'-UUACCACAUCUUGUGAUUAAGUAUU$_{A}$$_{G-5'}$ (SEQ ID NO: 1506)

βc-3393 Target: 5'-AATGGTGTAGAACACTAATTCATAATC-3' (SEQ ID NO: 2615)

5'-UGGUGUAGAACACUAAUUCAUAAUC^{C}$^{A-3'}$ (SEQ ID NO: 5943)
3'-ACCACAUCUUGUGAUUAAGUAUUAG$_{U}$$_{G-5'}$ (SEQ ID NO: 1507)

βc-3395 Target: 5'-TGGTGTAGAACACTAATTCATAATCAC-3' (SEQ ID NO: 2616)

5'-GUGUAGAACACUAAUUCAUAAUCAC$^{CA-3'}$ (SEQ ID NO: 5944)
3'-CACAUCUUGUGAUUAAGUAUUAGUG$_{AG-5'}$ (SEQ ID NO: 1508)

βc-3397 Target: 5'-GTGTAGAACACTAATTCATAATCACTC-3' (SEQ ID NO: 2617)

5'-GUAGAACACUAAUUCAUAAUCACUC$^{CC-3'}$ (SEQ ID NO: 5945)
3'-CAUCUUGUGAUUAAGUAUUAGUGAG$_{AU-5'}$ (SEQ ID NO: 1509)

βc-3399 Target: 5'-GTAGAACACTAATTCATAATCACTCTA-3' (SEQ ID NO: 2618)

5'-AGAACACUAAUUCAUAAUCACUCUA$^{CC-3'}$ (SEQ ID NO: 5946)
3'-UCUUGUGAUUAAGUAUUAGUGAGAU$_{UA-5'}$ (SEQ ID NO: 1510)

βc-3401 Target: 5'-AGAACACTAATTCATAATCACTCTAAT-3' (SEQ ID NO: 2619)

5'-AAUUAGUUUCCUUUUUAAUAUGCUU$^{CC-3'}$ (SEQ ID NO: 5947)
3'-UUAAUCAAAGGAAAAAUUAUACGAA$_{UU-5'}$ (SEQ ID NO: 1511)

βc-3500 Target: 5'-AATTAGTTTCCTTTTTAATATGCTTAA-3' (SEQ ID NO: 2620)

5'-UUAGUUUCCUUUUUAAUAUGCUUAA$^{CC-3'}$ (SEQ ID NO: 5948)
3'-AAUCAAAGGAAAAAUUAUACGAAUU$_{UU-5'}$ (SEQ ID NO: 1512)

βc-3502 Target: 5'-TTAGTTTCCTTTTTAATATGCTTAAAA-3' (SEQ ID NO: 2621)

5'-AGUUUCCUUUUUAAUAUGCUUAAAA$^{CC-3'}$ (SEQ ID NO: 5949)
3'-UCAAAGGAAAAAUUAUACGAAUUUU$_{AU-5'}$ (SEQ ID NO: 1513)

βc-3504 Target: 5'-AGTTTCCTTTTTAATATGCTTAAAATA-3' (SEQ ID NO: 2622)

5'-UUUCCUUUUUAAUAUGCUUAAAAUA$^{CA-3'}$ (SEQ ID NO: 5950)
3'-AAAGGAAAAAUUAUACGAAUUUUAU$_{UC-5'}$ (SEQ ID NO: 1514)

βc-3506 Target: 5'-TTTCCTTTTTAATATGCTTAAAATAAG-3' (SEQ ID NO: 2623)

5'-UCCUUUUUAAUAUGCUUAAAAUAAG$^{AC-3'}$ (SEQ ID NO: 5951)
3'-AGGAAAAAUUAUACGAAUUUUAUUC$_{GU-5'}$ (SEQ ID NO: 1515)

βc-3508 Target: 5'-TCCTTTTTAATATGCTTAAAATAAGCA-3' (SEQ ID NO: 2624)

5'-CCUUUUUAAUAUGCUUAAAAUAAGC$^{CA-3'}$ (SEQ ID NO: 5952)
3'-GGAAAAAUUAUACGAAUUUUAUUCG$_{UC-5'}$ (SEQ ID NO: 1516)

βc-3509 Target: 5'-CCTTTTTAATATGCTTAAAATAAGCAG-3' (SEQ ID NO: 2625)

5'-CUUUUUAAUAUGCUUAAAAUAAGCA$^{AA-3'}$ (SEQ ID NO: 5953)
3'-GAAAAAUUAUACGAAUUUUAUUCGU$_{CC-5'}$ (SEQ ID NO: 1517)

βc-3510 Target: 5'-CTTTTTAATATGCTTAAAATAAGCAGG-3' (SEQ ID NO: 2626)

5'-UUUUAAUAUGCUUAAAAUAAGCAGG$^{CA-3'}$ (SEQ ID NO: 5954)

3'-AAAAUUAUACGAAUUUUAUUCGUCC$_{A_{C-5'}}$ (SEQ ID NO: 1518)

βc-3512 Target: 5'-TTTTAATATGCTTAAAATAAGCAGGTG-3' (SEQ ID NO: 2627)

5'-UUAAUAUGCUUAAAAUAAGCAGGUG$^{A_{C-3'}}$ (SEQ ID NO: 5955)
3'-AAUUAUACGAAUUUUAUUCGUCCAC$_{C_{U-5'}}$ (SEQ ID NO: 1519)

βc-3514 Target: 5'-TTAATATGCTTAAAATAAGCAGGTGGA-3' (SEQ ID NO: 2628)

5'-AAUAUGCUUAAAAUAAGCAGGUGGA$^{C_{A-3'}}$ (SEQ ID NO: 5956)
3'-UUAUACGAAUUUUAUUCGUCCACCU$_{A_{G-5'}}$ (SEQ ID NO: 1520)

βc-3516 Target: 5'-AATATGCTTAAAATAAGCAGGTGGATC-3' (SEQ ID NO: 2629)

5'-UAUGCUUAAAAUAAGCAGGUGGAUC$^{C_{C-3'}}$ (SEQ ID NO: 5957)
3'-AUACGAAUUUUAUUCGUCCACCUAG$_{A_{U-5'}}$ (SEQ ID NO: 1521)

βc-3518 Target: 5'-TATGCTTAAAATAAGCAGGTGGATCTA-3' (SEQ ID NO: 2630)

5'-UGCUUAAAAUAAGCAGGUGGAUCUA$^{C_{C-3'}}$ (SEQ ID NO: 5958)
3'-ACGAAUUUUAUUCGUCCACCUAGAU$_{A_{A-5'}}$ (SEQ ID NO: 1522)

βc-3520 Target: 5'-TGCTTAAAATAAGCAGGTGGATCTATT-3' (SEQ ID NO: 2631)

5'-CUUAAAAUAAGCAGGUGGAUCUAUU$^{C_{A-3'}}$ (SEQ ID NO: 5959)
3'-GAAUUUUAUUCGUCCACCUAGAUAA$_{A_{G-5'}}$ (SEQ ID NO: 1523)

βc-3522 Target: 5'-CTTAAAATAAGCAGGTGGATCTATTTC-3' (SEQ ID NO: 2632)

5'-UAAAAUAAGCAGGUGGAUCUAUUUC$^{C_{C-3'}}$ (SEQ ID NO: 5960)
3'-AUUUUAUUCGUCCACCUAGAUAAAG$_{U_{A-5'}}$ (SEQ ID NO: 1524)

βc-3524 Target: 5'-TAAAATAAGCAGGTGGATCTATTTC-3' (SEQ ID NO: 2633)

5'-AAAUAAGCAGGUGGAUCUAUUUCAU$^{A_{C-3'}}$ (SEQ ID NO: 5961)
3'-UUUAUUCGUCCACCUAGAUAAAGUA$_{C_{A-5'}}$ (SEQ ID NO: 1525)

βc-3526 Target: 5'-AAATAAGCAGGTGGATCTATTTCATGT-3' (SEQ ID NO: 2634)

5'-AUAAGCAGGUGGAUCUAUUUCAUGU$^{C_{C-3'}}$ (SEQ ID NO: 5962)
3'-UAUUCGUCCACCUAGAUAAAGUACA$_{A_{A-5'}}$ (SEQ ID NO: 1526)

βc-3528 Target: 5'-ATAAGCAGGTGGATCTATTTCATGTTT-3' (SEQ ID NO: 2635)

5'-AAGCAGGUGGAUCUAUUUCAUGUUU$^{C_{C-3'}}$ (SEQ ID NO: 5963)
3'-UUCGUCCACCUAGAUAAAGUACAAA$_{A_{A-5'}}$ (SEQ ID NO: 1527)

βc-3530 Target: 5'-AAGCAGGTGGATCTATTTCATGTTTTT-3' (SEQ ID NO: 2636)

5'-GCAGGUGGAUCUAUUUCAUGUUUUU$^{A_{C-3'}}$ (SEQ ID NO: 5964)
3'-CGUCCACCUAGAUAAAGUACAAAAA$_{C_{U-5'}}$ (SEQ ID NO: 1528)

βc-3532 Target: 5'-GCAGGTGGATCTATTTCATGTTTTTGA-3' (SEQ ID NO: 2637)

5'-AGGUGGAUCUAUUUCAUGUUUUUGA$^{CA-3'}$ (SEQ ID NO: 5965)
3'-UCCACCUAGAUAAAGUACAAAAACU$_{AG-5'}$ (SEQ ID NO: 1529)

βc-3534 Target: 5'-AGGTGGATCTATTTCATGTTTTTGATC-3' (SEQ ID NO: 2638)

5'-GUGGAUCUAUUUCAUGUUUUUGAUC$^{CC-3'}$ (SEQ ID NO: 5966)
3'-CACCUAGAUAAAGUACAAAAACUAG$_{UU-5'}$ (SEQ ID NO: 1530)

βc-3536 Target: 5'-GTGGATCTATTTCATGTTTTTGATCAA-3' (SEQ ID NO: 2639)

5'-GGAUCUAUUUCAUGUUUUUGAUCAA$^{CC-3'}$ (SEQ ID NO: 5967)
3'-CCUAGAUAAAGUACAAAAACUAGUU$_{UU-5'}$ (SEQ ID NO: 1531)

βc-3538 Target: 5'-GGATCTATTTCATGTTTTTGATCAAAA-3' (SEQ ID NO: 2640)

5'-GGGUAGGGUAAAUCAGUAAGAGGUG$^{CC-3'}$ (SEQ ID NO: 5968)
3'-CCCAUCCCAUUUAGUCAUUCUCCAC$_{AA-5'}$ (SEQ ID NO: 1532)

βc-3583 Target: 5'-GGGTAGGGTAAATCAGTAAGAGGTGTT-3' (SEQ ID NO: 2641)

5'-GUAGGGUAAAUCAGUAAGAGGUGUU$^{CC-3'}$ (SEQ ID NO: 5969)
3'-CAUCCCAUUUAGUCAUUCUCCACAA$_{UA-5'}$ (SEQ ID NO: 1533)

βc-3585 Target: 5'-GTAGGGTAAATCAGTAAGAGGTGTTAT-3' (SEQ ID NO: 2642)

5'-AGGGUAAAUCAGUAAGAGGUGUUAU$^{CC-3'}$ (SEQ ID NO: 5970)
3'-UCCCAUUUAGUCAUUCUCCACAAUA$_{AA-5'}$ (SEQ ID NO: 1534)

βc-3587 Target: 5'-AGGGTAAATCAGTAAGAGGTGTTATTT-3' (SEQ ID NO: 2643)

5'-GGUAAAUCAGUAAGAGGUGUUAUUU$^{AA-3'}$ (SEQ ID NO: 5971)
3'-CCAUUUAGUCAUUCUCCACAAUAAA$_{C-5'}$ (SEQ ID NO: 1535)

βc-3589 Target: 5'-GGTAAATCAGTAAGAGGTGTTATTTGG-3' (SEQ ID NO: 2644)

5'-UAAAUCAGUAAGAGGUGUUAUUUGG$^{CC-3'}$ (SEQ ID NO: 5972)
3'-AUUUAGUCAUUCUCCACAAUAAACC$_{UU-5'}$ (SEQ ID NO: 1536)

βc-3591 Target: 5'-TAAATCAGTAAGAGGTGTTATTTGGAA-3' (SEQ ID NO: 2645)

5'-AAUCAGUAAGAGGUGUUAUUUGGAA$^{AA-3'}$ (SEQ ID NO: 5973)
3'-UUAGUCAUUCUCCACAAUAAACCUU$_{G-5'}$ (SEQ ID NO: 1537)

βc-3593 Target: 5'-AATCAGTAAGAGGTGTTATTTGGAACC-3' (SEQ ID NO: 2646)

5'-UUUACCAGUUGCCUUUUAUCCCAAA$^{AC-3'}$ (SEQ ID NO: 5974)
3'-AAAUGGUCAACGGAAAAUAGGGUUU$_{CA-5'}$ (SEQ ID NO: 1538)

βc-3633 Target: 5'-TTTACCAGTTGCCTTTTATCCCAAAGT-3' (SEQ ID NO: 2647)

5'-UACCAGUUGCCUUUUAUCCCAAAGU$^{CA-3'}$ (SEQ ID NO: 5975)
3'-AUGGUCAACGGAAAAUAGGGUUUCA$_{AC-5'}$ (SEQ ID NO: 1539)

βc-3635 Target: 5'-TACCAGTTGCCTTTTATCCCAAAGTTG-3' (SEQ ID NO: 2648)

5'-CCAGUUGCCUUUUAUCCCAAAGUUG$^{C}C-3'$ (SEQ ID NO: 5976)
3'-GGUCAACGGAAAAUAGGGUUUCAAC$_{A}A_{-5}'$ (SEQ ID NO: 1540)

βc-3637 Target: 5'-CCAGTTGCCTTTTATCCCAAAGTTGTT-3' (SEQ ID NO: 2649)

5'-AGUUGCCUUUUAUCCCAAAGUUGUU$^{A}C-3'$ (SEQ ID NO: 5977)
3'-UCAACGGAAAAUAGGGUUUCAACAA$_{C}A_{-5}'$ (SEQ ID NO: 1541)

βc-3639 Target: 5'-AGTTGCCTTTTATCCCAAAGTTGTTGT-3' (SEQ ID NO: 2650)

5'-UUGCCUUUUAUCCCAAAGUUGUUGU$^{C}C-3'$ (SEQ ID NO: 5978)
3'-AACGGAAAAUAGGGUUUCAACAACA$_{U}U_{-5}'$ (SEQ ID NO: 1542)

βc-3641 Target: 5'-TTGCCTTTTATCCCAAAGTTGTTGTAA-3' (SEQ ID NO: 2651)

5'-GCCUUUUAUCCCAAAGUUGUUGUAA$^{A}A-3'$ (SEQ ID NO: 5979)
3'-CGGAAAAUAGGGUUUCAACAACAUU$_{G}G_{-5}'$ (SEQ ID NO: 1543)

βc-3643 Target: 5'-GCCTTTTATCCCAAAGTTGTTGTAACC-3' (SEQ ID NO: 2652)

5'-CUUUUAUCCCAAAGUUGUUGUAACC$^{C}A-3'$ (SEQ ID NO: 5980)
3'-GAAAAUAGGGUUUCAACAACAUUGG$_{A}C_{-5}'$ (SEQ ID NO: 1544)

βc-3645 Target: 5'-CTTTTATCCCAAAGTTGTTGTAACCTG-3' (SEQ ID NO: 2653)

5'-UUUAUCCCAAAGUUGUUGUAACCUG$^{A}C-3'$ (SEQ ID NO: 5981)
3'-AAAUAGGGUUUCAACAACAUUGGAC$_{G}A_{-5}'$ (SEQ ID NO: 1545)

βc-3647 Target: 5'-TTTATCCCAAAGTTGTTGTAACCTGCT-3' (SEQ ID NO: 2654)

5'-UAUCCCAAAGUUGUUGUAACCUGCU$^{A}C-3'$ (SEQ ID NO: 5982)
3'-AUAGGGUUUCAACAACAUUGGACGA$_{C}A_{-5}'$ (SEQ ID NO: 1546)

βc-3649 Target: 5'-TATCCCAAAGTTGTTGTAACCTGCTGT-3' (SEQ ID NO: 2655)

5'-UCCCAAAGUUGUUGUAACCUGCUGU$^{A}C-3'$ (SEQ ID NO: 5983)
3'-AGGGUUUCAACAACAUUGGACGACA$_{C}U_{-5}'$ (SEQ ID NO: 1547)

βc-3651 Target: 5'-TCCCAAAGTTGTTGTAACCTGCTGTGA-3' (SEQ ID NO: 2656)

5'-CCAAAGUUGUUGUAACCUGCUGUGA$^{C}C-3'$ (SEQ ID NO: 5984)
3'-GGUUUCAACAACAUUGGACGACACU$_{A}U_{-5}'$ (SEQ ID NO: 1548)

βc-3653 Target: 5'-CCAAAGTTGTTGTAACCTGCTGTGATA-3' (SEQ ID NO: 2657)

5'-AAAGUUGUUGUAACCUGCUGUGAUA$^{A}A-3'$ (SEQ ID NO: 5985)
3'-UUUCAACAACAUUGGACGACACUAU$_{G}C_{-5}'$ (SEQ ID NO: 1549)

βc-3655 Target: 5'-AAAGTTGTTGTAACCTGCTGTGATACG-3' (SEQ ID NO: 2658)

5'-AGUUGUUGUAACCUGCUGUGAUACG$^{C}C-3'$ (SEQ ID NO: 5986)

3'-UCAACAACAUUGGACGACACUAUGC$_{U_{A-5'}}$ (SEQ ID NO: 1550)

βc-3657 Target: 5'-AGTTGTTGTAACCTGCTGTGATACGAT-3' (SEQ ID NO: 2659)

5'-UUGUUGUAACCUGCUGUGAUACGAU$^{A^{A-3'}}$ (SEQ ID NO: 5987)
3'-AACAACAUUGGACGACACUAUGCUA$_{C_{G-5'}}$ (SEQ ID NO: 1551)

βc-3659 Target: 5'-TTGTTGTAACCTGCTGTGATACGATGC-3' (SEQ ID NO: 2660)

5'-AAAAAUGGUUCAGAAUUAAACUUUU$^{C^{C-3'}}$ (SEQ ID NO: 5988)
3'-UUUUUACCAAGUCUUAAUUUGAAAA$_{U_{U-5'}}$ (SEQ ID NO: 1552)

βc-3708 Target: 5'-AAAAATGGTTCAGAATTAAACTTTTAA-3' (SEQ ID NO: 2661)

5'-AAAUGGUUCAGAAUUAAACUUUUAA$^{C^{C-3'}}$ (SEQ ID NO: 5989)
3'-UUUACCAAGUCUUAAUUUGAAAAUU$_{A_{A-5'}}$ (SEQ ID NO: 1553)

βc-3710 Target: 5'-AAATGGTTCAGAATTAAACTTTTAATT-3' (SEQ ID NO: 2662)

5'-AUGGUUCAGAAUUAAACUUUUAAUU$^{A^{C-3'}}$ (SEQ ID NO: 5990)
3'-UACCAAGUCUUAAUUUGAAAAUUAA$_{G_{U-5'}}$ (SEQ ID NO: 1554)

βc-3712 Target: 5'-ATGGTTCAGAATTAAACTTTTAATTCA-3' (SEQ ID NO: 2663)

5'-GGUUCAGAAUUAAACUUUUAAUUCA$^{C^{C-3'}}$ (SEQ ID NO: 5991)
3'-CCAAGUCUUAAUUUGAAAAUUAAGU$_{A_{A-5'}}$ (SEQ ID NO: 1555)

βc-3714 Target: 5'-GGTTCAGAATTAAACTTTTAATTCATT-3' (SEQ ID NO: 2664)

5'-UUCAGAAUUAAACUUUUAAUUCAUU$^{A^{A-3'}}$ (SEQ ID NO: 5992)
3'-AAGUCUUAAUUUGAAAAUUAAGUAA$_{G_{C-5'}}$ (SEQ ID NO: 1556)

βc-3716 Target: 5'-TTCAGAATTAAACTTTTAATTCATTCG-3' (SEQ ID NO: 2665)

5'-CAGCAGCAGUCUUACUUGGAUUCUG$^{A^{C-3'}}$ (SEQ ID NO: 5993)
3'-GUCGUCGUCAGAAUGAACCUAAGAC$_{C_{U-5'}}$ (SEQ ID NO: 1557)

βc-m314 Target: 5'-CAGCAGCAGTCTTACTTGGATTCTGGA-3' (SEQ ID NO: 2666)

5'-UUACUUGGAUUCUGGAAUCCAUUCU$^{A^{A-3'}}$ (SEQ ID NO: 5994)
3'-AAUGAACCUAAGACCUUAGGUAAGA$_{C_{C-5'}}$ (SEQ ID NO: 1558)

βc-m325 Target: 5'-TTACTTGGATTCTGGAATCCATTCTGG-3' (SEQ ID NO: 2667)

5'-UUGACACCUCCCAAGUCCUUUAUGA$^{C^{C-3'}}$ (SEQ ID NO: 5995)
3'-AACUGUGGAGGGUUCAGGAAAUACU$_{U_{A-5'}}$ (SEQ ID NO: 1559)

βc-m408 Target: 5'-TTGACACCTCCCAAGTCCTTTATGAAT-3' (SEQ ID NO: 2668)

5'-CACGCAAGAGCAAGUAGCUGAUAUU$^{A^{C-3'}}$ (SEQ ID NO: 5996)
3'-GUGCGUUCUCGUUCAUCGACUAUAA$_{C_{U-5'}}$ (SEQ ID NO: 1560)

βc-m460 Target: 5'-CACGCAAGAGCAAGTAGCTGATATTGA-3' (SEQ ID NO: 2669)

5'-UGCCAUGUUCCCUGAGACGCUAGAU$^{A}C_{U-5}$' (SEQ ID NO: 5997)
3'-ACGGUACAAGGGACUCUGCGAUCUA$_{C}$, (SEQ ID NO: 1561)

βc-m526 Target: 5'-TGCCATGTTCCCTGAGACGCTAGATGA-3' (SEQ ID NO: 2670)

5'-GUUGAAACAUGCAGUUGUCAAUUUG$^{C}C_{A-5}$' (SEQ ID NO: 5998)
3'-CAACUUUGUACGUCAACAGUUAAAC$_{U}$, (SEQ ID NO: 1562)

βc-m631 Target: 5'-GTTGAAACATGCAGTTGTCAATTTGAT-3' (SEQ ID NO: 2671)

5'-AACAUGCAGUUGUCAAUUUGAUUAA$^{A}C_{A-5}$' (SEQ ID NO: 5999)
3'-UUGUACGUCAACAGUUAAACUAAUU$_{G}$, (SEQ ID NO: 1563)

βc-m636 Target: 5'-AACATGCAGTTGTCAATTTGATTAACT-3' (SEQ ID NO: 2672)

5'-CAGUUGUCAAUUUGAUUAACUAUCA$^{A}A_{C-5}$' (SEQ ID NO: 6000)
3'-GUCAACAGUUAAACUAAUUGAUAGU$_{C}$, (SEQ ID NO: 1564)

βc-m642 Target: 5'-CAGTTGTCAATTTGATTAACTATCAGG-3' (SEQ ID NO: 2673)

5'-AUGAGGACCAGGUGGUAGUUAAUAA$^{C}A_{C-5}$' (SEQ ID NO: 6001)
3'-UACUCCUGGUCCACCAUCAAUUAUU$_{U}$, (SEQ ID NO: 1565)

βc-m723 Target: 5'-ATGAGGACCAGGTGGTAGTTAATAAAG-3' (SEQ ID NO: 2674)

5'-UGGGUCACCAGUGGAUUCUGUACUG$^{C}C_{A-5}$' (SEQ ID NO: 6002)
3'-ACCCAGUGGUCACCUAAGACAUGAC$_{A}$, (SEQ ID NO: 1566)

βc-m970 Target: 5'-TGGGTCACCAGTGGATTCTGTACTGTT-3' (SEQ ID NO: 2675)

5'-ACCAGUGGAUUCUGUACUGUUCUAC$^{A}A_{G-5}$' (SEQ ID NO: 6003)
3'-UGGUCACCUAAGACAUGACAAGAUG$_{C}$, (SEQ ID NO: 1567)

βc-m976 Target: 5'-ACCAGTGGATTCTGTACTGTTCTACGC-3' (SEQ ID NO: 2676)

5'-UGGAUUCUGUACUGUUCUACGCCAU$^{A}C_{U-5}$' (SEQ ID NO: 6004)
3'-ACCUAAGACAUGACAAGAUGCGGUA$_{G}$, (SEQ ID NO: 1568)

βc-m981 Target: 5'-TGGATTCTGTACTGTTCTACGCCATCA-3' (SEQ ID NO: 2677)

5'-UGGUGGACUGCAGAAAAUGGUUGCU$^{C}C_{A-5}$' (SEQ ID NO: 6005)
3'-ACCACCUGACGUCUUUUACCAACGA$_{A}$, (SEQ ID NO: 1569)

βc-m1066 Target: 5'-TGGTGGACTGCAGAAAATGGTTGCTTT-3' (SEQ ID NO: 2678)

5'-AACGUGAAAUUCUUGGCUAUUACAA$^{A}C_{U-5}$' (SEQ ID NO: 6006)
3'-UUGCACUUUAAGAACCGAUAAUGUU$_{G}$, (SEQ ID NO: 1570)

βc-m1106 Target: 5'-AACGTGAAATTCTTGGCTATTACAACA-3' (SEQ ID NO: 2679)

5'-CCCAAGUCAGCGACUUGUUCAAAAC$^{C}A_{C-5}$' (SEQ ID NO: 6007)
3'-GGGUUCAGUCGCUGAACAAGUUUUG$_{A}$, (SEQ ID NO: 1571)

βc-m1354 Target: 5'-CCCAAGTCAGCGACTTGTTCAAAACTG-3' (SEQ ID NO: 2680)

5'-GCGACUUGUUCAAAACUGUCUUUGG$^{CA-3'}$ (SEQ ID NO: 6008)
3'-CGCUGAACAAGUUUUGACAGAAACC$_{UG-5'}$ (SEQ ID NO: 1572)

βc-m1363 Target: 5'-GCGACTTGTTCAAAACTGTCTTTGGAC-3' (SEQ ID NO: 2681)

5'-CAAAACUGUCUUUGGACUCUCAGAA$^{CA-3'}$ (SEQ ID NO: 6009)
3'-GUUUUGACAGAAACCUGAGAGUCUU$_{UG-5'}$ (SEQ ID NO: 1573)

βc-m1373 Target: 5'-CAAAACTGTCTTTGGACTCTCAGAAAC-3' (SEQ ID NO: 2682)

5'-CUCUCUAACCUCACUUGCAAUAAUU$^{CA-3'}$ (SEQ ID NO: 6010)
3'-GAGAGAUUGGAGUGAACGUUAUUAA$_{UG-5'}$ (SEQ ID NO: 1574)

βc-m1508 Target: 5'-CTCTCTAACCTCACTTGCAATAATTAC-3' (SEQ ID NO: 2683)

5'-ACCUCACUUGCAAUAAUUACAAAAA$^{AC-3'}$ (SEQ ID NO: 6011)
3'-UGGAGUGAACGUUAUUAAUGUUUUU$_{GU-5'}$ (SEQ ID NO: 1575)

βc-m1515 Target: 5'-ACCTCACTTGCAATAATTACAAAAACA-3' (SEQ ID NO: 2684)

5'-CAGAAUGCCGUUCGCCUUCAUUAUG$^{AC-3'}$ (SEQ ID NO: 6012)
3'-GUCUUACGGCAAGCGGAAGUAAUAC$_{CU-5'}$ (SEQ ID NO: 1576)

βc-m1682 Target: 5'-CAGAATGCCGTTCGCCTTCATTATGGA-3' (SEQ ID NO: 2685)

5'-UCGCCUUCAUUAUGGACUGCCUGUU$^{AC-3'}$ (SEQ ID NO: 6013)
3'-AGCGGAAGUAAUACCUGACGGACAA$_{CA-5'}$ (SEQ ID NO: 1577)

βc-m1693 Target: 5'-TCGCCTTCATTATGGACTGCCTGTTGT-3' (SEQ ID NO: 2686)

5'-UUCAUUAUGGACUGCCUGUUGUGGU$^{CC-3'}$ (SEQ ID NO: 6014)
3'-AAGUAAUACCUGACGGACAACACCA$_{AU-5'}$ (SEQ ID NO: 1578)

βc-m1698 Target: 5'-TTCATTATGGACTGCCTGTTGTGGTTA-3' (SEQ ID NO: 2687)

5'-UGGACUGCCUGUUGUGGUUAAACUC$^{AC-3'}$ (SEQ ID NO: 6015)
3'-ACCUGACGGACAACACCAAUUUGAG$_{GA-5'}$ (SEQ ID NO: 1579)

βc-m1705 Target: 5'-TGGACTGCCTGTTGTGGTTAAACTCCT-3' (SEQ ID NO: 2688)

5'-GCAACUGUUGGAUUGAUUCGAAACC$^{CC-3'}$ (SEQ ID NO: 6016)
3'-CGUUGACAACCUAACUAAGCUUUGG$_{AA-5'}$ (SEQ ID NO: 1580)

βc-m1763 Target: 5'-GCAACTGTTGGATTGATTCGAAACCTT-3' (SEQ ID NO: 2689)

5'-CCGAGGACUCAAUACCAUUCCAUUG$^{CC-3'}$ (SEQ ID NO: 6017)
3'-GGCUCCUGAGUUAUGGUAAGGUAAC$_{AA-5'}$ (SEQ ID NO: 1581)

βc-m2008 Target: 5'-CCGAGGACTCAATACCATTCCATTGTT-3' (SEQ ID NO: 2690)

5'-CUGAGGACAAGCCACAGGAUUACAA$^{AC-3'}$ (SEQ ID NO: 6018)

3'-GACUCCUGUUCGGUGUCCUAAUGUU$_{C_{U-5'}}$ (SEQ ID NO: 1582)

βc-m2226 Target: 5'-CTGAGGACAAGCCACAGGATTACAAGA-3' (SEQ ID NO: 2691)

5'-GGAUGGACCCUAUGAUGGAGCAUGA$^{A^{C-3'}}$ (SEQ ID NO: 6019)
3'-CCUACCUGGGAUACUACCUCGUACU$_{C_{U-5'}}$ (SEQ ID NO: 1583)

βc-m2427 Target: 5'-GGATGGACCCTATGATGGAGCATGAGA-3' (SEQ ID NO: 2692)

5'-UUGAUACUGACCUGUAAAUCGUCCU$^{C^{C-3'}}$ (SEQ ID NO: 6020)
3'-AACUAUGACUGGACAUUUAGCAGGA$_{A_{A-5'}}$ (SEQ ID NO: 1584)

βc-m2568 Target: 5'-TTGATACTGACCTGTAAATCGTCCTTT-3' (SEQ ID NO: 2693)

5'-AGCCAGUGUGGGUGAAUACUUUACU$^{A^{C-3'}}$ (SEQ ID NO: 6021)
3'-UCGGUCACACCCACUUAUGAAAUGA$_{G_{A-5'}}$ (SEQ ID NO: 1585)

βc-m2614 Target: 5'-AGCCAGTGTGGGTGAATACTTTACTCT-3' (SEQ ID NO: 2694)

5'-UGCCACAGCUUUUGCAGCGUUAUAC$^{C^{A-3'}}$ (SEQ ID NO: 6022)
3'-ACGGUGUCGAAAACGUCGCAAUAUG$_{A_{G-5'}}$ (SEQ ID NO: 1586)

βc-m2770 Target: 5'-TGCCACAGCTTTTGCAGCGTTATACTC-3' (SEQ ID NO: 2695)

5'-GCUUUUGCAGCGUUAUACUCAGAUG$^{C^{A-3'}}$ (SEQ ID NO: 6023)
3'-CGAAAACGUCGCAAUAUGAGUCUAC$_{U_{C-5'}}$ (SEQ ID NO: 1587)

βc-m2777 Target: 5'-GCTTTTGCAGCGTTATACTCAGATGAG-3' (SEQ ID NO: 2696)

5'-CAGCGUUAUACUCAGAUGAGUAACA$^{C^{C-3'}}$ (SEQ ID NO: 6024)
3'-GUCGCAAUAUGAGUCUACUCAUUGU$_{A_{A-5'}}$ (SEQ ID NO: 1588)

βc-m2784 Target: 5'-CAGCGTTATACTCAGATGAGTAACATT-3' (SEQ ID NO: 2697)

5'-ACAUUUGCUGUUUUCAACAUUAAUA$^{A^{A-3'}}$ (SEQ ID NO: 6025)
3'-UGUAAACGACAAAAGUUGUAAUUAU$_{C_{G-5'}}$ (SEQ ID NO: 1589)

βc-m2806 Target: 5'-ACATTTGCTGTTTTCAACATTAATAGC-3' (SEQ ID NO: 2698)

5'-AGCUGUAGUGUCUGAACGUGCAUUG$^{C^{A-3'}}$ (SEQ ID NO: 6026)
3'-UCGACAUCACAGACUUGCACGUAAC$_{A_{C-5'}}$ (SEQ ID NO: 1590)

βc-m2850 Target: 5'-AGCTGTAGTGTCTGAACGTGCATTGTG-3' (SEQ ID NO: 2699)

5'-GGGAACAGUCGAAGUACGCUUUUUG$^{C^{C-3'}}$ (SEQ ID NO: 6027)
3'-CCCUUGUCAGCUUCAUGCGAAAAAC$_{A_{A-5'}}$ (SEQ ID NO: 1591)

βc-m2965 Target: 5'-GGGAACAGTCGAAGTACGCTTTTTGTT-3' (SEQ ID NO: 2700)

5'-CAGUCGAAGUACGCUUUUUGUUCUG$^{A^{C-3'}}$ (SEQ ID NO: 6028)
3'-GUCAGCUUCAUGCGAAAAACAAGAC$_{C_{A-5'}}$ (SEQ ID NO: 1592)

βc-m2970 Target: 5'-CAGTCGAAGTACGCTTTTTGTTCTGGT-3' (SEQ ID NO: 2701)

5'-AAGUACGCUUUUUGUUCUGGUCCUU$^{CC-3'}$ (SEQ ID NO: 6029)
3'-UUCAUGCGAAAAACAAGACCAGGAA$_{AA-5'}$ (SEQ ID NO: 1593)

βc-m2976 Target: 5'-AAGTACGCTTTTTGTTCTGGTCCTTTT-3' (SEQ ID NO: 2702)

5'-ACCCUAGCCUUGCUUGUUCUUUGUU$^{CC-3'}$ (SEQ ID NO: 6030)
3'-UGGGAUCGGAACGAACAAGAAACAA$_{AA-5'}$ (SEQ ID NO: 1594)

βc-m3092 Target: 5'-ACCCTAGCCTTGCTTGTTCTTTGTTTT-3' (SEQ ID NO: 2703)

5'-AGCCUUGCUUGUUCUUUGUUUUAAU$^{CC-3'}$ (SEQ ID NO: 6031)
3'-UCGGAACGAACAAGAAACAAAAUUA$_{UA-5'}$ (SEQ ID NO: 1595)

βc-m3097 Target: 5'-AGCCTTGCTTGTTCTTTGTTTTAATAT-3' (SEQ ID NO: 2704)

5'-UGAACCUGCUACAGCAAUUUCUGAU$^{CC-3'}$ (SEQ ID NO: 6032)
3'-ACUUGGACGAUGUCGUUAAAGACUA$_{AA-5'}$ (SEQ ID NO: 1596)

βc-m3198 Target: 5'-TGAACCTGCTACAGCAATTTCTGATTT-3' (SEQ ID NO: 2705)

5'-UACAGCAAUUUCUGAUUUCUAAGAA$^{AA-3'}$ (SEQ ID NO: 6033)
3'-AUGUCGUUAAAGACUAAAGAUUCUU$_{GG-5'}$ (SEQ ID NO: 1597)

βc-m3207 Target: 5'-TACAGCAATTTCTGATTTCTAAGAACC-3' (SEQ ID NO: 2706)

5'-CAGUAAGAGGUGUUAUUUGAGCCUU$^{AC-3'}$ (SEQ ID NO: 6034)
3'-GUCAUUCUCCACAAUAAACUCGGAA$_{CA-5'}$ (SEQ ID NO: 1598)

βc-m3433 Target: 5'-CAGTAAGAGGTGTTATTTGAGCCTTGT-3' (SEQ ID NO: 2707)

5'-GAGGUGUUAUUUGAGCCUUGUUUUG$^{AC-3'}$ (SEQ ID NO: 6035)
3'-CUCCACAAUAAACUCGGAACAAAAC$_{CU-5'}$ (SEQ ID NO: 1599)

βc-m3439 Target: 5'-GAGGTGTTATTTGAGCCTTGTTTTGGA-3' (SEQ ID NO: 2708)

5'-GUUAUUUGAGCCUUGUUUUGGACAG$^{CC-3'}$ (SEQ ID NO: 6036)
3'-CAAUAAACUCGGAACAAAACCUGUC$_{AU-5'}$ (SEQ ID NO: 1600)

βc-m3444 Target: 5'-GTTATTTGAGCCTTGTTTTGGACAGTA-3' (SEQ ID NO: 2709)

5'-UUGAGCCUUGUUUUGGACAGUAUAC$^{AC-3'}$ (SEQ ID NO: 6037)
3'-AACUCGGAACAAAACCUGUCAUAUG$_{GU-5'}$ (SEQ ID NO: 1601)

βc-m3449 Target: 5'-TTGAGCCTTGTTTTGGACAGTATACCA-3' (SEQ ID NO: 2710)

5'-UUCAACAGAUGCGGUUAUAGAAAUG$^{AC-3'}$ (SEQ ID NO: 6038)
3'-AAGUUGUCUACGCCAAUAUCUUUAC$_{CA-5'}$ (SEQ ID NO: 1602)

βc-m3522 Target: 5'-TTCAACAGATGCGGTTATAGAAATGGT-3' (SEQ ID NO: 2711)

5'-CGGUUAUAGAAAUGGUUCAGAAUUA$^{CC-3'}$ (SEQ ID NO: 6039)
3'-GCCAAUAUCUUUACCAAGUCUUAAU$_{UU-5'}$ (SEQ ID NO: 1603)

βc-m3533 Target: 5'-CGGTTATAGAAATGGTTCAGAATTAAA-3' (SEQ ID NO: 2712)

5'-AUAGAAAUGGUUCAGAAUUAAACUU$^{CC-3'}$ (SEQ ID NO: 6040)
3'-UAUCUUUACCAAGUCUUAAUUUGAA$_{AA-5'}$ (SEQ ID NO: 1604)

βc-m3538 Target: 5'-ATAGAAATGGTTCAGAATTAAACTTTT-3' (SEQ ID NO: 2713)

Table 8: Selected Anti-β-catenin DsiRNA Agents, Blunt Duplexes

5'-CCCUGAGGGUAUUUGAAGUAUACCAUA-3' (SEQ ID NO: 6662)
3'-GGGACUCCCAUAAACUUCAUAUGGUAU-5' (SEQ ID NO: 1117)

βc-240 Target: 5'-CCCTGAGGGTATTTGAAGTATACCATA-3' (SEQ ID NO: 2226)

5'-GAGGGUAUUUGAAGUAUACCAUACAAC-3' (SEQ ID NO: 6663)
3'-CUCCCAUAAACUUCAUAUGGUAUGUUG-5' (SEQ ID NO: 1118)

βc-244 Target: 5'-GAGGGTATTTGAAGTATACCATACAAC-3' (SEQ ID NO: 2227)

5'-UGAAGUAUACCAUACAACUGUUUUGAA-3' (SEQ ID NO: 6664)
3'-ACUUCAUAUGGUAUGUUGACAAAACUU-5' (SEQ ID NO: 1119)

βc-253 Target: 5'-TGAAGTATACCATACAACTGTTTTGAA-3' (SEQ ID NO: 2228)

5'-AUACCAUACAACUGUUUUGAAAAUCCA-3' (SEQ ID NO: 6665)
3'-UAUGGUAUGUUGACAAAACUUUUAGGU-5' (SEQ ID NO: 1120)

βc-259 Target: 5'-ATACCATACAACTGTTTTGAAAATCCA-3' (SEQ ID NO: 2229)

5'-AUACAACUGUUUUGAAAAUCCAGCGUG-3' (SEQ ID NO: 6666)
3'-UAUGUUGACAAAACUUUUAGGUCGCAC-5' (SEQ ID NO: 1121)

βc-264 Target: 5'-ATACAACTGTTTTGAAAATCCAGCGTG-3' (SEQ ID NO: 2230)

5'-CAGGGAUUUUCUCAGUCCUUCACUCAA-3' (SEQ ID NO: 6667)
3'-GUCCCUAAAAGAGUCAGGAAGUGAGUU-5' (SEQ ID NO: 1122)

βc-496 Target: 5'-CAGGGATTTTCTCAGTCCTTCACTCAA-3' (SEQ ID NO: 2231)

5'-CACUCAAGAACAAGUAGCUGAUAUUGA-3' (SEQ ID NO: 6668)
3'-GUGAGUUCUUGUUCAUCGACUAUAACU-5' (SEQ ID NO: 1123)

βc-516 Target: 5'-CACTCAAGAACAAGTAGCTGATATTGA-3' (SEQ ID NO: 2232)

5'-AGAACAAGUAGCUGAUAUUGAUGGACA-3' (SEQ ID NO: 6669)
3'-UCUUGUUCAUCGACUAUAACUACCUGU-5' (SEQ ID NO: 1124)

βc-522 Target: 5'-AGAACAAGTAGCTGATATTGATGGACA-3' (SEQ ID NO: 2233)

5'-AACAAGUAGCUGAUAUUGAUGGACAGU-3' (SEQ ID NO: 6670)
3'-UUGUUCAUCGACUAUAACUACCUGUCA-5' (SEQ ID NO: 1125)

βc-524 Target: 5'-AACAAGTAGCTGATATTGATGGACAGT-3' (SEQ ID NO: 2234)

5'-UGAUGGACAGUAUGCAAUGACUCGAGC-3' (SEQ ID NO: 6671)
3'-ACUACCUGUCAUACGUUACUGAGCUCG-5' (SEQ ID NO: 1126)

βc-540 Target: 5'-TGATGGACAGTATGCAATGACTCGAGC-3' (SEQ ID NO: 2235)

5'-UGCUAUGUUCCCUGAGACAUUAGAUGA-3' (SEQ ID NO: 6672)
3'-ACGAUACAAGGGACUCUGUAAUCUACU-5' (SEQ ID NO: 1127)

βc-582 Target: 5'-TGCTATGTTCCCTGAGACATTAGATGA-3' (SEQ ID NO: 2236)

5'-UGCUGAAACAUGCAGUUGUAAACUUGA-3' (SEQ ID NO: 6673)
3'-ACGACUUUGUACGUCAACAUUUGAACU-5' (SEQ ID NO: 1128)

βc-686 Target: 5'-TGCTGAAACATGCAGTTGTAAACTTGA-3' (SEQ ID NO: 2237)

5'-AACAUGCAGUUGUAAACUUGAUUAACU-3' (SEQ ID NO: 6674)
3'-UUGUACGUCAACAUUUGAACUAAUUGA-5' (SEQ ID NO: 1129)

βc-692 Target: 5'-AACATGCAGTTGTAAACTTGATTAACT-3' (SEQ ID NO: 2238)

5'-GCAGUUGUAAACUUGAUUAACUAUCAA-3' (SEQ ID NO: 6675)
3'-CGUCAACAUUUGAACUAAUUGAUAGUU-5' (SEQ ID NO: 1130)

βc-697 Target: 5'-GCAGTTGTAAACTTGATTAACTATCAA-3' (SEQ ID NO: 2239)

5'-ACUUGAUUAACUAUCAAGAUGAUGCAG-3' (SEQ ID NO: 6676)
3'-UGAACUAAUUGAUAGUUCUACUACGUC-5' (SEQ ID NO: 1131)

βc-707 Target: 5'-ACTTGATTAACTATCAAGATGATGCAG-3' (SEQ ID NO: 2240)

5'-CCCUGAACUGACAAAACUGCUAAAUGA-3' (SEQ ID NO: 6677)
3'-GGGACUUGACUGUUUUGACGAUUUACU-5' (SEQ ID NO: 1132)

βc-753 Target: 5'-CCCTGAACTGACAAAACTGCTAAATGA-3' (SEQ ID NO: 2241)

5'-UCAGAUGGUGUCUGCUAUUGUACGUAC-3' (SEQ ID NO: 6678)
3'-AGUCUACCACAGACGAUAACAUGCAUG-5' (SEQ ID NO: 1133)

βc-870 Target: 5'-TCAGATGGTGTCTGCTATTGTACGTAC-3' (SEQ ID NO: 2242)

5'-GUACGUACCAUGCAGAAUACAAAUGAU-3' (SEQ ID NO: 6679)
3'-CAUGCAUGGUACGUCUUAUGUUUACUA-5' (SEQ ID NO: 1134)

βc-889 Target: 5'-GTACGTACCATGCAGAATACAAATGAT-3' (SEQ ID NO: 2243)

5'-AUUACAACUCUCCACAACCUUUUAUUA-3' (SEQ ID NO: 6680)
3'-UAAUGUUGAGAGGUGUUGGAAAAUAAU-5' (SEQ ID NO: 1135)

βc-1060 Target: 5'-ATTACAACTCTCCACAACCTTTTATTA-3' (SEQ ID NO: 2244)

5'-AACUCUCCACAACCUUUUAUUACAUCA-3' (SEQ ID NO: 6681)
3'-UUGAGAGGUGUUGGAAAAUAAUGUAGU-5' (SEQ ID NO: 1136)

βc-1065 Target: 5'-AACTCTCCACAACCTTTTATTACATCA-3' (SEQ ID NO: 2245)

5'-UCCACAACCUUUUAUUACAUCAAGAAG-3' (SEQ ID NO: 6682)
3'-AGGUGUUGGAAAAUAAUGUAGUUCUUC-5' (SEQ ID NO: 1137)

βc-1070 Target: 5'-TCCACAACCTTTTATTACATCAAGAAG-3' (SEQ ID NO: 2246)

5'-ACCUUUUAUUACAUCAAGAAGGAGCUA-3' (SEQ ID NO: 6683)
3'-UGGAAAAUAAUGUAGUUCUUCCUCGAU-5' (SEQ ID NO: 1138)

βc-1076 Target: 5'-ACCTTTTATTACATCAAGAAGGAGCTA-3' (SEQ ID NO: 2247)

5'-ACAAAACAAAUGUUAAAUUCUUGGCUA-3' (SEQ ID NO: 6684)
3'-UGUUUUGUUUACAAUUUAAGAACCGAU-5' (SEQ ID NO: 1139)

βc-1154 Target: 5'-ACAAAACAAATGTTAAATTCTTGGCTA-3' (SEQ ID NO: 2248)

5'-AUUACGACAGACUGCCUUCAAAUUUUA-3' (SEQ ID NO: 6685)
3'-UAAUGCUGUCUGACGGAAGUUUAAAAU-5' (SEQ ID NO: 1140)

βc-1180 Target: 5'-ATTACGACAGACTGCCTTCAAATTTTA-3' (SEQ ID NO: 2249)

5'-GACAGACUGCCUUCAAAUUUUAGCUUA-3' (SEQ ID NO: 6686)
3'-CUGUCUGACGGAAGUUUAAAAUCGAAU-5' (SEQ ID NO: 1141)

βc-1185 Target: 5'-GACAGACTGCCTTCAAATTTTAGCTTA-3' (SEQ ID NO: 2250)

5'-AGCUUUAGUAAAUAUAAUGAGGACCUA-3' (SEQ ID NO: 6687)
3'-UCGAAAUCAUUUAUAUUACUCCUGGAU-5' (SEQ ID NO: 1142)

βc-1260 Target: 5'-AGCTTTAGTAAATATAATGAGGACCTA-3' (SEQ ID NO: 2251)

5'-GAAAAACUACUGUGGACCACAAGCAGA-3' (SEQ ID NO: 6688)
3'-CUUUUUGAUGACACCUGGUGUUCGUCU-5' (SEQ ID NO: 1143)

βc-1294 Target: 5'-GAAAAACTACTGTGGACCACAAGCAGA-3' (SEQ ID NO: 2252)

5'-CAAGUCAACGUCUUGUUCAGAACUGUC-3' (SEQ ID NO: 6689)
3'-GUUCAGUUGCAGAACAAGUCUUGACAG-5' (SEQ ID NO: 1144)

βc-1412 Target: 5'-CAAGTCAACGTCTTGTTCAGAACTGTC-3' (SEQ ID NO: 2253)

5'-AACGUCUUGUUCAGAACUGUCUUUGGA-3' (SEQ ID NO: 6690)
3'-UUGCAGAACAAGUCUUGACAGAAACCU-5' (SEQ ID NO: 1145)

βc-1418 Target: 5'-AACGTCTTGTTCAGAACTGTCTTTGGA-3' (SEQ ID NO: 2254)

5'-CUUGUUCAGAACUGUCUUUGGACUCUC-3' (SEQ ID NO: 6691)
3'-GAACAAGUCUUGACAGAAACCUGAGAG-5' (SEQ ID NO: 1146)

βc-1423 Target: 5'-CTTGTTCAGAACTGTCTTTGGACTCTC-3' (SEQ ID NO: 2255)

5'-UGGGUUCAGAUGAUAUAAAUGUGGUCA-3' (SEQ ID NO: 6692)
3'-ACCCAAGUCUACUAUAUUUACACCAGU-5' (SEQ ID NO: 1147)

βc-1520 Target: 5'-TGGGTTCAGATGATATAAATGTGGTCA-3' (SEQ ID NO: 2256)

5'-AUUCUUUCUAACCUCACUUGCAAUAAU-3' (SEQ ID NO: 6693)
3'-UAAGAAAGAUUGGAGUGAACGUUAUUA-5' (SEQ ID NO: 1148)

βc-1561 Target: 5'-ATTCTTTCTAACCTCACTTGCAATAAT-3' (SEQ ID NO: 2257)

5'-ACCUCACUUGCAAUAAUUAUAAGAACA-3' (SEQ ID NO: 6694)
3'-UGGAGUGAACGUUAUUAAUAUUCUUGU-5' (SEQ ID NO: 1149)

βc-1571 Target: 5'-ACCTCACTTGCAATAATTATAAGAACA-3' (SEQ ID NO: 2258)

5'-UGCAAUAAUUAUAAGAACAAGAUGAUG-3' (SEQ ID NO: 6695)
3'-ACGUUAUUAAUAUUCUUGUUCUACUAC-5' (SEQ ID NO: 1150)

βc-1579 Target: 5'-TGCAATAATTATAAGAACAAGATGATG-3' (SEQ ID NO: 2259)

5'-UGGUAUAGAGGCUCUUGUGCGUACUGU-3' (SEQ ID NO: 6696)
3'-ACCAUAUCUCCGAGAACACGCAUGACA-5' (SEQ ID NO: 1151)

βc-1620 Target: 5'-TGGTATAGAGGCTCTTGTGCGTACTGT-3' (SEQ ID NO: 2260)

5'-AAGGCUACUGUUGGAUUGAUUCGAAAU-3' (SEQ ID NO: 6697)
3'-UUCCGAUGACAACCUAACUAAGCUUUA-5' (SEQ ID NO: 1152)

βc-1816 Target: 5'-AAGGCTACTGTTGGATTGATTCGAAAT-3' (SEQ ID NO: 2261)

5'-CGCAUGGAAGAAAUAGUUGAAGGUUGU-3' (SEQ ID NO: 6698)
3'-GCGUACCUUCUUUAUCAACUUCCAACA-5' (SEQ ID NO: 1153)

βc-1987 Target: 5'-CGCATGGAAGAAATAGTTGAAGGTTGT-3' (SEQ ID NO: 2262)

5'-CAUGGAAGAAAUAGUUGAAGGUUGUAC-3' (SEQ ID NO: 6699)
3'-GUACCUUCUUUAUCAACUUCCAACAUG-5' (SEQ ID NO: 1154)

βc-1989 Target: 5'-CATGGAAGAAATAGTTGAAGGTTGTAC-3' (SEQ ID NO: 2263)

5'-CCAUUGAAAACAUCCAAAGAGUAGCUG-3' (SEQ ID NO: 6700)
3'-GGUAACUUUUGUAGGUUUCUCAUCGAC-5' (SEQ ID NO: 1155)

βc-2111 Target: 5'-CCATTGAAAACATCCAAAGAGTAGCTG-3' (SEQ ID NO: 2264)

5'-CUGAGGACAAGCCACAAGAUUACAAGA-3' (SEQ ID NO: 6701)
3'-GACUCCUGUUCGGUGUUCUAAUGUUCU-5' (SEQ ID NO: 1156)

βc-2282 Target: 5'-CTGAGGACAAGCCACAAGATTACAAGA-3' (SEQ ID NO: 2265)

5'-UUGAUACUGACCUGUAAAUCAUCCUUU-3' (SEQ ID NO: 6702)
3'-AACUAUGACUGGACAUUUAGUAGGAAA-5' (SEQ ID NO: 1157)

βc-2624 Target: 5'-TTGATACTGACCTGTAAATCATCCTTT-3' (SEQ ID NO: 2266)

5'-CUUUAGGUAAGAAGUUUUAAAAAGCCA-3' (SEQ ID NO: 6703)
3'-GAAAUCCAUUCUUCAAAAUUUUUCGGU-5' (SEQ ID NO: 1158)

βc-2647 Target: 5'-CTTTAGGTAAGAAGTTTTAAAAAGCCA-3' (SEQ ID NO: 2267)

5'-AACAGGUAUAUACUUUGAAAGGAGAUG-3' (SEQ ID NO: 6704)
3'-UUGUCCAUAUAUGAAACUUUCCUCUAC-5' (SEQ ID NO: 1159)

βc-2770 Target: 5'-AACAGGTATATACTTTGAAAGGAGATG-3' (SEQ ID NO: 2268)

5'-UGGAAGUUAUUAACUUUAAUGUUUUUU-3' (SEQ ID NO: 6705)
3'-ACCUUCAAUAAUUGAAAUUACAAAAAA-5' (SEQ ID NO: 1160)

βc-2848 Target: 5'-TGGAAGTTATTAACTTTAATGTTTTTT-3' (SEQ ID NO: 2269)

5'-UGCCACAGCUUUUGCAACUUAAUACUC-3' (SEQ ID NO: 6706)
3'-ACGGUGUCGAAAACGUUGAAUUAUGAG-5' (SEQ ID NO: 1161)

βc-2874 Target: 5'-TGCCACAGCTTTTGCAACTTAATACTC-3' (SEQ ID NO: 2270)

5'-AACAUUUGCUGUUUUAAACAUUAAUAG-3' (SEQ ID NO: 6707)
3'-UUGUAAACGACAAAAUUUGUAAUUAUC-5' (SEQ ID NO: 1162)

βc-2909 Target: 5'-AACATTTGCTGTTTTAAACATTAATAG-3' (SEQ ID NO: 2271)

5'-AACAAUUGAAGUAAACUUUUUGUUCUG-3' (SEQ ID NO: 6708)
3'-UUGUUAACUUCAUUUGAAAAACAAGAC-5' (SEQ ID NO: 1163)

βc-3074 Target: 5'-AACAATTGAAGTAAACTTTTTGTTCTG-3' (SEQ ID NO: 2272)

5'-AAACCCUAGCCUUGCUUGUUAAAUUUU-3' (SEQ ID NO: 6709)
3'-UUUGGGAUCGGAACGAACAAUUUAAAA-5' (SEQ ID NO: 1164)

βc-3197 Target: 5'-AAACCCTAGCCTTGCTTGTTAAATTTT-3' (SEQ ID NO: 2273)

5'-UAGCCUUGCUUGUUAAAUUUUUUUUUU-3' (SEQ ID NO: 6710)
3'-AUCGGAACGAACAAUUUAAAAAAAAAA-5' (SEQ ID NO: 1165)

βc-3203 Target: 5'-TAGCCTTGCTTGTTAAATTTTTTTTT-3' (SEQ ID NO: 2274)

5'-UUGAAGUAGCUCUUUUUUUUUUUUUUU-3' (SEQ ID NO: 6711)
3'-AACUUCAUCGAGAAAAAAAAAAAAAAA-5' (SEQ ID NO: 1166)

βc-3273 Target: 5'-TTGAAGTAGCTCTTTTTTTTTTTTTT-3' (SEQ ID NO: 2275)

5'-UCGUAGUGUUAAGUUAUAGUGAAUACU-3' (SEQ ID NO: 6712)
3'-AGCAUCACAAUUCAAUAUCACUUAUGA-5' (SEQ ID NO: 1167)

βc-3333 Target: 5'-TCGTAGTGTTAAGTTATAGTGAATACT-3' (SEQ ID NO: 2276)

5'-UAGUGAAUACUGCUACAGCAAUUUCUA-3' (SEQ ID NO: 6713)
3'-AUCACUUAUGACGAUGUCGUUAAAGAU-5' (SEQ ID NO: 1168)

βc-3349 Target: 5'-TAGTGAATACTGCTACAGCAATTTCTA-3' (SEQ ID NO: 2277)

5'-AAUACUGCUACAGCAAUUUCUAAUUUU-3' (SEQ ID NO: 6714)
3'-UUAUGACGAUGUCGUUAAAGAUUAAAA-5' (SEQ ID NO: 1169)

βc-3354 Target: 5'-AATACTGCTACAGCAATTTCTAATTTT-3' (SEQ ID NO: 2278)

5'-UUCUAAUUUUUAAGAAUUGAGUAAUGG-3' (SEQ ID NO: 6715)
3'-AAGAUUAAAAAUUCUUAACUCAUUACC-5' (SEQ ID NO: 1170)

βc-3371 Target: 5'-TTCTAATTTTTAAGAATTGAGTAATGG-3' (SEQ ID NO: 2279)

5'-AUUUUUAAGAAUUGAGUAAUGGUGUAG-3' (SEQ ID NO: 6716)
3'-UAAAAAUUCUUAACUCAUUACCACAUC-5' (SEQ ID NO: 1171)

βc-3376 Target: 5'-ATTTTTAAGAATTGAGTAATGGTGTAG-3' (SEQ ID NO: 2280)

5'-UUCAUAAUCACUCUAAUUAAUUGUAAU-3' (SEQ ID NO: 6717)
3'-AAGUAUUAGUGAGAUUAAUUAACAUUA-5' (SEQ ID NO: 1172)

βc-3411 Target: 5'-TTCATAATCACTCTAATTAATTGTAAT-3' (SEQ ID NO: 2281)

5'-AUUAAUUGUAAUCUGAAUAAAGUGUAA-3' (SEQ ID NO: 6718)
3'-UAAUUAACAUUAGACUUAUUUCACAUU-5' (SEQ ID NO: 1173)

βc-3426 Target: 5'-ATTAATTGTAATCTGAATAAAGTGTAA-3' (SEQ ID NO: 2282)

5'-UUGUAAUCUGAAUAAAGUGUAACAAUU-3' (SEQ ID NO: 6719)
3'-AACAUUAGACUUAUUUCACAUUGUUAA-5' (SEQ ID NO: 1174)

βc-3431 Target: 5'-TTGTAATCTGAATAAAGTGTAACAATT-3' (SEQ ID NO: 2283)

5'-UCUGAAUAAAGUGUAACAAUUGUGUAG-3' (SEQ ID NO: 6720)
3'-AGACUUAUUUCACAUUGUUAACACAUC-5' (SEQ ID NO: 1175)

βc-3437 Target: 5'-TCTGAATAAAGTGTAACAATTGTGTAG-3' (SEQ ID NO: 2284)

5'-GUGUAGCCUUUUUGUAUAAAAUAGACA-3' (SEQ ID NO: 6721)
3'-CACAUCGGAAAAACAUAUUUUAUCUGU-5' (SEQ ID NO: 1176)

βc-3458 Target: 5'-GTGTAGCCTTTTTGTATAAAATAGACA-3' (SEQ ID NO: 2285)

5'-UUUGUAUAAAAUAGACAAAUAGAAAAU-3' (SEQ ID NO: 6722)
3'-AAACAUAUUUUAUCUGUUUAUCUUUUA-5' (SEQ ID NO: 1177)

βc-3468 Target: 5'-TTTGTATAAAATAGACAAATAGAAAAT-3' (SEQ ID NO: 2286)

5'-AGAAAAUGGUCCAAUUAGUUUCCUUUU-3' (SEQ ID NO: 6723)
3'-UCUUUUACCAGGUUAAUCAAAGGAAAA-5' (SEQ ID NO: 1178)

βc-3488 Target: 5'-AGAAAATGGTCCAATTAGTTTCCTTTT-3' (SEQ ID NO: 2287)

5'-GUCCAAUUAGUUUCCUUUUUAAUAUGC-3' (SEQ ID NO: 6724)
3'-CAGGUUAAUCAAAGGAAAAAUUAUACG-5' (SEQ ID NO: 1179)

βc-3496 Target: 5'-GTCCAATTAGTTTCCTTTTTAATATGC-3' (SEQ ID NO: 2288)

5'-UUUUUGAUCAAAAACUAUUUGGGAUAU-3' (SEQ ID NO: 6725)
3'-AAAAACUAGUUUUUGAUAAACCCUAUA-5' (SEQ ID NO: 1180)

βc-3552 Target: 5'-TTTTTGATCAAAAACTATTTGGGATAT-3' (SEQ ID NO: 2289)

5'-AAGAGGUGUUAUUUGGAACCUUGUUUU-3' (SEQ ID NO: 6726)
3'-UUCUCCACAAUAAACCUUGGAACAAAA-5' (SEQ ID NO: 1181)

βc-3600 Target: 5'-AAGAGGTGTTATTTGGAACCTTGTTTT-3' (SEQ ID NO: 2290)

5'-GUGUUAUUUGGAACCUUGUUUUGGACA-3' (SEQ ID NO: 6727)
3'-CACAAUAAACCUUGGAACAAAACCUGU-5' (SEQ ID NO: 1182)

βc-3605 Target: 5'-GTGTTATTTGGAACCTTGTTTTGGACA-3' (SEQ ID NO: 2291)

5'-GAACCUUGUUUUGGACAGUUUACCAGU-3' (SEQ ID NO: 6728)
3'-CUUGGAACAAAACCUGUCAAAUGGUCA-5' (SEQ ID NO: 1183)

βc-3615 Target: 5'-GAACCTTGTTTTGGACAGTTTACCAGT-3' (SEQ ID NO: 2292)

5'-GUGAUACGAUGCUUCAAGAGAAAAUGC-3' (SEQ ID NO: 6729)
3'-CACUAUGCUACGAAGUUCUCUUUUACG-5' (SEQ ID NO: 1184)

βc-3674 Target: 5'-GTGATACGATGCTTCAAGAGAAAATGC-3' (SEQ ID NO: 2293)

5'-UUCAAGAGAAAAUGCGGUUAUAAAAAA-3' (SEQ ID NO: 6730)
3'-AAGUUCUCUUUUACGCCAAUAUUUUUU-5' (SEQ ID NO: 1185)

βc-3686 Target: 5'-TTCAAGAGAAAATGCGGTTATAAAAAA-3' (SEQ ID NO: 2294)

5'-GAGAAAAUGCGGUUAUAAAAAAUGGUU-3' (SEQ ID NO: 6731)
3'-CUCUUUUACGCCAAUAUUUUUUACCAA-5' (SEQ ID NO: 1186)

βc-3691 Target: 5'-GAGAAAATGCGGTTATAAAAAATGGTT-3' (SEQ ID NO: 2295)

5'-CGGUUAUAAAAAAUGGUUCAGAAUUAA-3' (SEQ ID NO: 6732)
3'-GCCAAUAUUUUUUACCAAGUCUUAAUU-5' (SEQ ID NO: 1187)

βc-3700 Target: 5'-CGGTTATAAAAAATGGTTCAGAATTAA-3' (SEQ ID NO: 2296)

5'-AAAAAAUGGUUCAGAAUUAAACUUUUA-3' (SEQ ID NO: 6733)
3'-UUUUUUACCAAGUCUUAAUUUGAAAAU-5' (SEQ ID NO: 1188)

βc-3707 Target: 5'-AAAAAATGGTTCAGAATTAAACTTTTA-3' (SEQ ID NO: 2297)

5'-CAGCGUGGACAAUGGCUACUCAAGCUG-3' (SEQ ID NO: 6734)
3'-GUCGCACCUGUUACCGAUGAGUUCGAC-5' (SEQ ID NO: 1189)

βc-284 Target: 5'-CAGCGTGGACAATGGCTACTCAAGCTG-3' (SEQ ID NO: 2298)

5'-AGCGUGGACAAUGGCUACUCAAGCUGA-3' (SEQ ID NO: 6735)
3'-UCGCACCUGUUACCGAUGAGUUCGACU-5' (SEQ ID NO: 1190)

βc-285 Target: 5'-AGCGTGGACAATGGCTACTCAAGCTGA-3' (SEQ ID NO: 2299)

5'-GCGUGGACAAUGGCUACUCAAGCUGAU-3' (SEQ ID NO: 6736)
3'-CGCACCUGUUACCGAUGAGUUCGACUA-5' (SEQ ID NO: 1191)

βc-286 Target: 5'-GCGTGGACAATGGCTACTCAAGCTGAT-3' (SEQ ID NO: 2300)

5'-CGUGGACAAUGGCUACUCAAGCUGAUU-3' (SEQ ID NO: 6737)
3'-GCACCUGUUACCGAUGAGUUCGACUAA-5' (SEQ ID NO: 1192)

βc-287 Target: 5'-CGTGGACAATGGCTACTCAAGCTGATT-3' (SEQ ID NO: 2301)

5'-GUGGACAAUGGCUACUCAAGCUGAUUU-3' (SEQ ID NO: 6738)
3'-CACCUGUUACCGAUGAGUUCGACUAAA-5' (SEQ ID NO: 1193)

βc-288 Target: 5'-GTGGACAATGGCTACTCAAGCTGATTT-3' (SEQ ID NO: 2302)

5'-UGGACAAUGGCUACUCAAGCUGAUUUG-3' (SEQ ID NO: 6739)
3'-ACCUGUUACCGAUGAGUUCGACUAAAC-5' (SEQ ID NO: 1194)

βc-289 Target: 5'-TGGACAATGGCTACTCAAGCTGATTTG-3' (SEQ ID NO: 2303)

5'-GGACAAUGGCUACUCAAGCUGAUUUGA-3' (SEQ ID NO: 6740)
3'-CCUGUUACCGAUGAGUUCGACUAAACU-5' (SEQ ID NO: 1195)

βc-290 Target: 5'-GGACAATGGCTACTCAAGCTGATTTGA-3' (SEQ ID NO: 2304)

5'-GACAAUGGCUACUCAAGCUGAUUUGAU-3' (SEQ ID NO: 6741)
3'-CUGUUACCGAUGAGUUCGACUAAACUA-5' (SEQ ID NO: 1196)

βc-291 Target: 5'-GACAATGGCTACTCAAGCTGATTTGAT-3' (SEQ ID NO: 2305)

5'-UUUGAUGGAGUUGGACAUGGCCAUGGA-3' (SEQ ID NO: 6742)
3'-AAACUACCUCAACCUGUACCGGUACCU-5' (SEQ ID NO: 1197)

βc-312 Target: 5'-TTTGATGGAGTTGGACATGGCCATGGA-3' (SEQ ID NO: 2306)

5'-UUGAUGGAGUUGGACAUGGCCAUGGAA-3' (SEQ ID NO: 6743)
3'-AACUACCUCAACCUGUACCGGUACCUU-5' (SEQ ID NO: 1198)

βc-313 Target: 5'-TTGATGGAGTTGGACATGGCCATGGAA-3' (SEQ ID NO: 2307)

5'-UGAUGGAGUUGGACAUGGCCAUGGAAC-3' (SEQ ID NO: 6744)
3'-ACUACCUCAACCUGUACCGGUACCUUG-5' (SEQ ID NO: 1199)

βc-314 Target: 5'-TGATGGAGTTGGACATGGCCATGGAAC-3' (SEQ ID NO: 2308)

5'-GAUGGAGUUGGACAUGGCCAUGGAACC-3' (SEQ ID NO: 6745)
3'-CUACCUCAACCUGUACCGGUACCUUGG-5' (SEQ ID NO: 1200)

βc-315 Target: 5'-GATGGAGTTGGACATGGCCATGGAACC-3' (SEQ ID NO: 2309)

5'-AUGGAGUUGGACAUGGCCAUGGAACCA-3' (SEQ ID NO: 6746)
3'-UACCUCAACCUGUACCGGUACCUUGGU-5' (SEQ ID NO: 1201)

βc-316 Target: 5'-ATGGAGTTGGACATGGCCATGGAACCA-3' (SEQ ID NO: 2310)

5'-UGGAGUUGGACAUGGCCAUGGAACCAG-3' (SEQ ID NO: 6747)
3'-ACCUCAACCUGUACCGGUACCUUGGUC-5' (SEQ ID NO: 1202)

βc-317 Target: 5'-TGGAGTTGGACATGGCCATGGAACCAG-3' (SEQ ID NO: 2311)

5'-GGAGUUGGACAUGGCCAUGGAACCAGA-3' (SEQ ID NO: 6748)
3'-CCUCAACCUGUACCGGUACCUUGGUCU-5' (SEQ ID NO: 1203)

βc-318 Target: 5'-GGAGTTGGACATGGCCATGGAACCAGA-3' (SEQ ID NO: 2312)

5'-ACUCUGGAAUCCAUUCUGGUGCCACUA-3' (SEQ ID NO: 6749)
3'-UGAGACCUUAGGUAAGACCACGGUGAU-5' (SEQ ID NO: 1204)

βc-389 Target: 5'-ACTCTGGAATCCATTCTGGTGCCACTA-3' (SEQ ID NO: 2313)

5'-CUCUGGAAUCCAUUCUGGUGCCACUAC-3' (SEQ ID NO: 6750)
3'-GAGACCUUAGGUAAGACCACGGUGAUG-5' (SEQ ID NO: 1205)

βc-390 Target: 5'-CTCTGGAATCCATTCTGGTGCCACTAC-3' (SEQ ID NO: 2314)

5'-UCUGGAAUCCAUUCUGGUGCCACUACC-3' (SEQ ID NO: 6751)
3'-AGACCUUAGGUAAGACCACGGUGAUGG-5' (SEQ ID NO: 1206)

βc-391 Target: 5'-TCTGGAATCCATTCTGGTGCCACTACC-3' (SEQ ID NO: 2315)

5'-CUGGAAUCCAUUCUGGUGCCACUACCA-3' (SEQ ID NO: 6752)
3'-GACCUUAGGUAAGACCACGGUGAUGGU-5' (SEQ ID NO: 1207)

βc-392 Target: 5'-CTGGAATCCATTCTGGTGCCACTACCA-3' (SEQ ID NO: 2316)

5'-UGGAAUCCAUUCUGGUGCCACUACCAC-3' (SEQ ID NO: 6753)
3'-ACCUUAGGUAAGACCACGGUGAUGGUG-5' (SEQ ID NO: 1208)

βc-393 Target: 5'-TGGAATCCATTCTGGTGCCACTACCAC-3' (SEQ ID NO: 2317)

5'-AUUAGAUGAGGGCAUGCAGAUCCCAUC-3' (SEQ ID NO: 6754)
3'-UAAUCUACUCCCGUACGUCUAGGGUAG-5' (SEQ ID NO: 1209)

βc-600 Target: 5'-ATTAGATGAGGGCATGCAGATCCCATC-3' (SEQ ID NO: 2318)

5'-UUAGAUGAGGGCAUGCAGAUCCCAUCU-3' (SEQ ID NO: 6755)
3'-AAUCUACUCCCGUACGUCUAGGGUAGA-5' (SEQ ID NO: 1210)

βc-601 Target: 5'-TTAGATGAGGGCATGCAGATCCCATCT-3' (SEQ ID NO: 2319)

5'-UAGAUGAGGGCAUGCAGAUCCCAUCUA-3' (SEQ ID NO: 6756)
3'-AUCUACUCCCGUACGUCUAGGGUAGAU-5' (SEQ ID NO: 1211)

βc-602 Target: 5'-TAGATGAGGGCATGCAGATCCCATCTA-3' (SEQ ID NO: 2320)

5'-AGAUGAGGGCAUGCAGAUCCCAUCUAC-3' (SEQ ID NO: 6757)
3'-UCUACUCCCGUACGUCUAGGGUAGAUG-5' (SEQ ID NO: 1212)

βc-603 Target: 5'-AGATGAGGGCATGCAGATCCCATCTAC-3' (SEQ ID NO: 2321)

5'-GAUGAGGGCAUGCAGAUCCCAUCUACA-3' (SEQ ID NO: 6758)
3'-CUACUCCCGUACGUCUAGGGUAGAUGU-5' (SEQ ID NO: 1213)

βc-604 Target: 5'-GATGAGGGCATGCAGATCCCATCTACA-3' (SEQ ID NO: 2322)

5'-AUGAGGGCAUGCAGAUCCCAUCUACAC-3' (SEQ ID NO: 6759)
3'-UACUCCCGUACGUCUAGGGUAGAUGUG-5' (SEQ ID NO: 1214)

βc-605 Target: 5'-ATGAGGGCATGCAGATCCCATCTACAC-3' (SEQ ID NO: 2323)

5'-AUGCUGCUCAUCCCACUAAUGUCCAGC-3' (SEQ ID NO: 6760)
3'-UACGACGAGUAGGGUGAUUACAGGUCG-5' (SEQ ID NO: 1215)

βc-638 Target: 5'-ATGCTGCTCATCCCACTAATGTCCAGC-3' (SEQ ID NO: 2324)

5'-UGCUGCUCAUCCCACUAAUGUCCAGCG-3' (SEQ ID NO: 6761)
3'-ACGACGAGUAGGGUGAUUACAGGUCGC-5' (SEQ ID NO: 1216)

βc-639 Target: 5'-TGCTGCTCATCCCACTAATGTCCAGCG-3' (SEQ ID NO: 2325)

5'-GCUGCUCAUCCCACUAAUGUCCAGCGU-3' (SEQ ID NO: 6762)
3'-CGACGAGUAGGGUGAUUACAGGUCGCA-5' (SEQ ID NO: 1217)

βc-640 Target: 5'-GCTGCTCATCCCACTAATGTCCAGCGT-3' (SEQ ID NO: 2326)

5'-CUGCUCAUCCCACUAAUGUCCAGCGUU-3' (SEQ ID NO: 6763)
3'-GACGAGUAGGGUGAUUACAGGUCGCAA-5' (SEQ ID NO: 1218)

βc-641 Target: 5'-CTGCTCATCCCACTAATGTCCAGCGTT-3' (SEQ ID NO: 2327)

5'-UGCUCAUCCCACUAAUGUCCAGCGUUU-3' (SEQ ID NO: 6764)
3'-ACGAGUAGGGUGAUUACAGGUCGCAAA-5' (SEQ ID NO: 1219)

βc-642 Target: 5'-TGCTCATCCCACTAATGTCCAGCGTTT-3' (SEQ ID NO: 2328)

5'-GCUCAUCCCACUAAUGUCCAGCGUUUG-3' (SEQ ID NO: 6765)
3'-CGAGUAGGGUGAUUACAGGUCGCAAAC-5' (SEQ ID NO: 1220)

βc-643 Target: 5'-GCTCATCCCACTAATGTCCAGCGTTTG-3' (SEQ ID NO: 2329)

5'-CUCAUCCCACUAAUGUCCAGCGUUUGG-3' (SEQ ID NO: 6766)
3'-GAGUAGGGUGAUUACAGGUCGCAAACC-5' (SEQ ID NO: 1221)

βc-644 Target: 5'-CTCATCCCACTAATGTCCAGCGTTTGG-3' (SEQ ID NO: 2330)

5'-UCAUCCCACUAAUGUCCAGCGUUUGGC-3' (SEQ ID NO: 6767)
3'-AGUAGGGUGAUUACAGGUCGCAAACCG-5' (SEQ ID NO: 1222)

βc-645 Target: 5'-TCATCCCACTAATGTCCAGCGTTTGGC-3' (SEQ ID NO: 2331)

5'-GUUUGGCUGAACCAUCACAGAUGCUGA-3' (SEQ ID NO: 6768)
3'-CAAACCGACUUGGUAGUGUCUACGACU-5' (SEQ ID NO: 1223)

βc-665 Target: 5'-GTTTGGCTGAACCATCACAGATGCTGA-3' (SEQ ID NO: 2332)

5'-UUUGGCUGAACCAUCACAGAUGCUGAA-3' (SEQ ID NO: 6769)
3'-AAACCGACUUGGUAGUGUCUACGACUU-5' (SEQ ID NO: 1224)

βc-666 Target: 5'-TTTGGCTGAACCATCACAGATGCTGAA-3' (SEQ ID NO: 2333)

5'-UUGGCUGAACCAUCACAGAUGCUGAAA-3' (SEQ ID NO: 6770)
3'-AACCGACUUGGUAGUGUCUACGACUUU-5' (SEQ ID NO: 1225)

βc-667 Target: 5'-TTGGCTGAACCATCACAGATGCTGAAA-3' (SEQ ID NO: 2334)

5'-CAGAACUUGCCACACGUGCAAUCCCUG-3' (SEQ ID NO: 6771)
3'-GUCUUGAACGGUGUGCACGUUAGGGAC-5' (SEQ ID NO: 1226)

βc-731 Target: 5'-CAGAACTTGCCACACGTGCAATCCCTG-3' (SEQ ID NO: 2335)

5'-AGAACUUGCCACACGUGCAAUCCCUGA-3' (SEQ ID NO: 6772)
3'-UCUUGAACGGUGUGCACGUUAGGGACU-5' (SEQ ID NO: 1227)

βc-732 Target: 5'-AGAACTTGCCACACGTGCAATCCCTGA-3' (SEQ ID NO: 2336)

5'-CAGUUAUGGUCCAUCAGCUUUCUAAAA-3' (SEQ ID NO: 6773)
3'-GUCAAUACCAGGUAGUCGAAAGAUUUU-5' (SEQ ID NO: 1228)

βc-809 Target: 5'-CAGTTATGGTCCATCAGCTTTCTAAAA-3' (SEQ ID NO: 2337)

5'-AGUUAUGGUCCAUCAGCUUUCUAAAAA-3' (SEQ ID NO: 6774)
3'-UCAAUACCAGGUAGUCGAAAGAUUUUU-5' (SEQ ID NO: 1229)

βc-810 Target: 5'-AGTTATGGTCCATCAGCTTTCTAAAAA-3' (SEQ ID NO: 2338)

5'-CUAAAAAGGAAGCUUCCAGACACGCUA-3' (SEQ ID NO: 6775)
3'-GAUUUUUCCUUCGAAGGUCUGUGCGAU-5' (SEQ ID NO: 1230)

βc-830 Target: 5'-CTAAAAAGGAAGCTTCCAGACACGCTA-3' (SEQ ID NO: 2339)

5'-UAAAAAGGAAGCUUCCAGACACGCUAU-3' (SEQ ID NO: 6776)
3'-AUUUUUCCUUCGAAGGUCUGUGCGAUA-5' (SEQ ID NO: 1231)

βc-831 Target: 5'-TAAAAAGGAAGCTTCCAGACACGCTAT-3' (SEQ ID NO: 2340)

5'-GUACCAUGCAGAAUACAAAUGAUGUAG-3' (SEQ ID NO: 6777)
3'-CAUGGUACGUCUUAUGUUUACUACAUC-5' (SEQ ID NO: 1232)

βc-893 Target: 5'-GTACCATGCAGAATACAAATGATGTAG-3' (SEQ ID NO: 2341)

5'-UACCAUGCAGAAUACAAAUGAUGUAGA-3' (SEQ ID NO: 6778)
3'-AUGGUACGUCUUAUGUUUACUACAUCU-5' (SEQ ID NO: 1233)

βc-894 Target: 5'-TACCATGCAGAATACAAATGATGTAGA-3' (SEQ ID NO: 2342)

5'-ACCAUGCAGAAUACAAAUGAUGUAGAA-3' (SEQ ID NO: 6779)
3'-UGGUACGUCUUAUGUUUACUACAUCUU-5' (SEQ ID NO: 1234)

βc-895 Target: 5'-ACCATGCAGAATACAAATGATGTAGAA-3' (SEQ ID NO: 2343)

5'-CCAUGCAGAAUACAAAUGAUGUAGAAA-3' (SEQ ID NO: 6780)
3'-GGUACGUCUUAUGUUUACUACAUCUUU-5' (SEQ ID NO: 1235)

βc-896 Target: 5'-CCATGCAGAATACAAATGATGTAGAAA-3' (SEQ ID NO: 2344)

5'-CAUGCAGAAUACAAAUGAUGUAGAAAC-3' (SEQ ID NO: 6781)
3'-GUACGUCUUAUGUUUACUACAUCUUUG-5' (SEQ ID NO: 1236)

βc-897 Target: 5'-CATGCAGAATACAAATGATGTAGAAAC-3' (SEQ ID NO: 2345)

5'-AUGCAGAAUACAAAUGAUGUAGAAACA-3' (SEQ ID NO: 6782)
3'-UACGUCUUAUGUUUACUACAUCUUUGU-5' (SEQ ID NO: 1237)

βc-898 Target: 5'-ATGCAGAATACAAATGATGTAGAAACA-3' (SEQ ID NO: 2346)

5'-UGCAGAAUACAAAUGAUGUAGAAACAG-3' (SEQ ID NO: 6783)
3'-ACGUCUUAUGUUUACUACAUCUUUGUC-5' (SEQ ID NO: 1238)

βc-899 Target: 5'-TGCAGAATACAAATGATGTAGAAACAG-3' (SEQ ID NO: 2347)

5'-GCAGAAUACAAAUGAUGUAGAAACAGC-3' (SEQ ID NO: 6784)
3'-CGUCUUAUGUUUACUACAUCUUUGUCG-5' (SEQ ID NO: 1239)

βc-900 Target: 5'-GCAGAATACAAATGATGTAGAAACAGC-3' (SEQ ID NO: 2348)

5'-UACUGGCCAUCUUUAAGUCUGGAGGCA-3' (SEQ ID NO: 6785)
3'-AUGACCGGUAGAAAUUCAGACCUCCGU-5' (SEQ ID NO: 1240)

βc-977 Target: 5'-TACTGGCCATCTTTAAGTCTGGAGGCA-3' (SEQ ID NO: 2349)

5'-ACUGGCCAUCUUUAAGUCUGGAGGCAU-3' (SEQ ID NO: 6786)
3'-UGACCGGUAGAAAUUCAGACCUCCGUA-5' (SEQ ID NO: 1241)

βc-978 Target: 5'-ACTGGCCATCTTTAAGTCTGGAGGC-3' (SEQ ID NO: 2350)

5'-AAGAAGGAGCUAAAAUGGCAGUGCGUU-3' (SEQ ID NO: 6787)
3'-UUCUUCCUCGAUUUUACCGUCACGCAA-5' (SEQ ID NO: 1242)

βc-1091 Target: 5'-AAGAAGGAGCTAAAATGGCAGTGCGTT-3' (SEQ ID NO: 2351)

5'-AGAAGGAGCUAAAAUGGCAGUGCGUUU-3' (SEQ ID NO: 6788)
3'-UCUUCCUCGAUUUUACCGUCACGCAAA-5' (SEQ ID NO: 1243)

βc-1092 Target: 5'-AGAAGGAGCTAAAATGGCAGTGCGTTT-3' (SEQ ID NO: 2352)

5'-GAAGGAGCUAAAAUGGCAGUGCGUUUA-3' (SEQ ID NO: 6789)
3'-CUUCCUCGAUUUUACCGUCACGCAAAU-5' (SEQ ID NO: 1244)

βc-1093 Target: 5'-GAAGGAGCTAAAATGGCAGTGCGTTTA-3' (SEQ ID NO: 2353)

5'-AAGGAGCUAAAAUGGCAGUGCGUUUAG-3' (SEQ ID NO: 6790)
3'-UUCCUCGAUUUUACCGUCACGCAAAUC-5' (SEQ ID NO: 1245)

βc-1094 Target: 5'-AAGGAGCTAAAATGGCAGTGCGTTTAG-3' (SEQ ID NO: 2354)

5'-AGGAGCUAAAAUGGCAGUGCGUUUAGC-3' (SEQ ID NO: 6791)
3'-UCCUCGAUUUUACCGUCACGCAAAUCG-5' (SEQ ID NO: 1246)

βc-1095 Target: 5'-AGGAGCTAAAATGGCAGTGCGTTTAGC-3' (SEQ ID NO: 2355)

5'-UACUGUGGACCACAAGCAGAGUGCUGA-3' (SEQ ID NO: 6792)
3'-AUGACACCUGGUGUUCGUCUCACGACU-5' (SEQ ID NO: 1247)

βc-1301 Target: 5'-TACTGTGGACCACAAGCAGAGTGCTGA-3' (SEQ ID NO: 2356)

5'-ACUGUGGACCACAAGCAGAGUGCUGAA-3' (SEQ ID NO: 6793)
3'-UGACACCUGGUGUUCGUCUCACGACUU-5' (SEQ ID NO: 1248)

βc-1302 Target: 5'-ACTGTGGACCACAAGCAGAGTGCTGAA-3' (SEQ ID NO: 2357)

5'-CUGUGGACCACAAGCAGAGUGCUGAAG-3' (SEQ ID NO: 6794)
3'-GACACCUGGUGUUCGUCUCACGACUUC-5' (SEQ ID NO: 1249)

βc-1303 Target: 5'-CTGTGGACCACAAGCAGAGTGCTGAAG-3' (SEQ ID NO: 2358)

5'-UGUGGACCACAAGCAGAGUGCUGAAGG-3' (SEQ ID NO: 6795)
3'-ACACCUGGUGUUCGUCUCACGACUUCC-5' (SEQ ID NO: 1250)

βc-1304 Target: 5'-TGTGGACCACAAGCAGAGTGCTGAAGG-3' (SEQ ID NO: 2359)

5'-GUGGACCACAAGCAGAGUGCUGAAGGU-3' (SEQ ID NO: 6796)
3'-CACCUGGUGUUCGUCUCACGACUUCCA-5' (SEQ ID NO: 1251)

βc-1305 Target: 5'-GTGGACCACAAGCAGAGTGCTGAAGGT-3' (SEQ ID NO: 2360)

5'-UGGACCACAAGCAGAGUGCUGAAGGUG-3' (SEQ ID NO: 6797)
3'-ACCUGGUGUUCGUCUCACGACUUCCAC-5' (SEQ ID NO: 1252)

βc-1306 Target: 5'-TGGACCACAAGCAGAGTGCTGAAGGTG-3' (SEQ ID NO: 2361)

5'-GGACCACAAGCAGAGUGCUGAAGGUGC-3' (SEQ ID NO: 6798)
3'-CCUGGUGUUCGUCUCACGACUUCCACG-5' (SEQ ID NO: 1253)

βc-1307 Target: 5'-GGACCACAAGCAGAGTGCTGAAGGTGC-3' (SEQ ID NO: 2362)

5'-GACCACAAGCAGAGUGCUGAAGGUGCU-3' (SEQ ID NO: 6799)
3'-CUGGUGUUCGUCUCACGACUUCCACGA-5' (SEQ ID NO: 1254)

βc-1308 Target: 5'-GACCACAAGCAGAGTGCTGAAGGTGCT-3' (SEQ ID NO: 2363)

5'-ACCACAAGCAGAGUGCUGAAGGUGCUA-3' (SEQ ID NO: 6800)
3'-UGGUGUUCGUCUCACGACUUCCACGAU-5' (SEQ ID NO: 1255)

βc-1309 Target: 5'-ACCACAAGCAGAGTGCTGAAGGTGCTA-3' (SEQ ID NO: 2364)

5'-CCACAAGCAGAGUGCUGAAGGUGCUAU-3' (SEQ ID NO: 6801)
3'-GGUGUUCGUCUCACGACUUCCACGAUA-5' (SEQ ID NO: 1256)

βc-1310 Target: 5'-CCACAAGCAGAGTGCTGAAGGTGCTAT-3' (SEQ ID NO: 2365)

5'-CACAAGCAGAGUGCUGAAGGUGCUAUC-3' (SEQ ID NO: 6802)
3'-GUGUUCGUCUCACGACUUCCACGAUAG-5' (SEQ ID NO: 1257)

βc-1311 Target: 5'-CACAAGCAGAGTGCTGAAGGTGCTATC-3' (SEQ ID NO: 2366)

5'-ACAAGCAGAGUGCUGAAGGUGCUAUCU-3' (SEQ ID NO: 6803)
3'-UGUUCGUCUCACGACUUCCACGAUAGA-5' (SEQ ID NO: 1258)

βc-1312 Target: 5'-ACAAGCAGAGTGCTGAAGGTGCTATCT-3' (SEQ ID NO: 2367)

5'-CAAGCAGAGUGCUGAAGGUGCUAUCUG-3' (SEQ ID NO: 6804)
3'-GUUCGUCUCACGACUUCCACGAUAGAC-5' (SEQ ID NO: 1259)

βc-1313 Target: 5'-CAAGCAGAGTGCTGAAGGTGCTATCTG-3' (SEQ ID NO: 2368)

5'-AAGCAGAGUGCUGAAGGUGCUAUCUGU-3' (SEQ ID NO: 6805)
3'-UUCGUCUCACGACUUCCACGAUAGACA-5' (SEQ ID NO: 1260)

βc-1314 Target: 5'-AAGCAGAGTGCTGAAGGTGCTATCTGT-3' (SEQ ID NO: 2369)

5'-AGAACUGUCUUUGGACUCUCAGGAAUC-3' (SEQ ID NO: 6806)
3'-UCUUGACAGAAACCUGAGAGUCCUUAG-5' (SEQ ID NO: 1261)

βc-1430 Target: 5'-AGAACTGTCTTTGGACTCTCAGGAATC-3' (SEQ ID NO: 2370)

5'-GAACUGUCUUUGGACUCUCAGGAAUCU-3' (SEQ ID NO: 6807)
3'-CUUGACAGAAACCUGAGAGUCCUUAGA-5' (SEQ ID NO: 1262)

βc-1431 Target: 5'-GAACTGTCTTTGGACTCTCAGGAATCT-3' (SEQ ID NO: 2371)

5'-CAGAUGAUAUAAAUGUGGUCACCUGUG-3' (SEQ ID NO: 6808)
3'-GUCUACUAUAUUUACACCAGUGGACAC-5' (SEQ ID NO: 1263)

βc-1526 Target: 5'-CAGATGATATAAATGTGGTCACCTGTG-3' (SEQ ID NO: 2372)

5'-AGAUGAUAUAAAUGUGGUCACCUGUGC-3' (SEQ ID NO: 6809)
3'-UCUACUAUAUUUACACCAGUGGACACG-5' (SEQ ID NO: 1264)

βc-1527 Target: 5'-AGATGATATAAATGTGGTCACCTGTGC-3' (SEQ ID NO: 2373)

5'-GAUGAUAUAAAUGUGGUCACCUGUGCA-3' (SEQ ID NO: 6810)
3'-CUACUAUAUUUACACCAGUGGACACGU-5' (SEQ ID NO: 1265)

βc-1528 Target: 5'-GATGATATAAATGTGGTCACCTGTGCA-3' (SEQ ID NO: 2374)

5'-AUGAUAUAAAUGUGGUCACCUGUGCAG-3' (SEQ ID NO: 6811)
3'-UACUAUAUUUACACCAGUGGACACGUC-5' (SEQ ID NO: 1266)

βc-1529 Target: 5'-ATGATATAAATGTGGTCACCTGTGCAG-3' (SEQ ID NO: 2375)

5'-UGAUAUAAAUGUGGUCACCUGUGCAGC-3' (SEQ ID NO: 6812)
3'-ACUAUAUUUACACCAGUGGACACGUCG-5' (SEQ ID NO: 1267)

βc-1530 Target: 5'-TGATATAAATGTGGTCACCTGTGCAGC-3' (SEQ ID NO: 2376)

5'-GAUAUAAAUGUGGUCACCUGUGCAGCU-3' (SEQ ID NO: 6813)
3'-CUAUAUUUACACCAGUGGACACGUCGA-5' (SEQ ID NO: 1268)

βc-1531 Target: 5'-GATATAAATGTGGTCACCTGTGCAGCT-3' (SEQ ID NO: 2377)

5'-AUAUAAAUGUGGUCACCUGUGCAGCUG-3' (SEQ ID NO: 6814)
3'-UAUAUUUACACCAGUGGACACGUCGAC-5' (SEQ ID NO: 1269)

βc-1532 Target: 5'-ATATAAATGTGGTCACCTGTGCAGCTG-3' (SEQ ID NO: 2378)

5'-UAUAAAUGUGGUCACCUGUGCAGCUGG-3' (SEQ ID NO: 6815)
3'-AUAUUUACACCAGUGGACACGUCGACC-5' (SEQ ID NO: 1270)

βc-1533 Target: 5'-TATAAATGTGGTCACCTGTGCAGCTGG-3' (SEQ ID NO: 2379)

5'-AUAAAUGUGGUCACCUGUGCAGCUGGA-3' (SEQ ID NO: 6816)
3'-UAUUUACACCAGUGGACACGUCGACCU-5' (SEQ ID NO: 1271)

βc-1534 Target: 5'-ATAAATGTGGTCACCTGTGCAGCTGGA-3' (SEQ ID NO: 2380)

5'-UAAAUGUGGUCACCUGUGCAGCUGGAA-3' (SEQ ID NO: 6817)
3'-AUUUACACCAGUGGACACGUCGACCUU-5' (SEQ ID NO: 1272)

βc-1535 Target: 5'-TAAATGTGGTCACCTGTGCAGCTGGAA-3' (SEQ ID NO: 2381)

5'-AAAUGUGGUCACCUGUGCAGCUGGAAU-3' (SEQ ID NO: 6818)
3'-UUUACACCAGUGGACACGUCGACCUUA-5' (SEQ ID NO: 1273)

βc-1536 Target: 5'-AAATGTGGTCACCTGTGCAGCTGGAAT-3' (SEQ ID NO: 2382)

5'-AAUGUGGUCACCUGUGCAGCUGGAAUU-3' (SEQ ID NO: 6819)
3'-UUACACCAGUGGACACGUCGACCUUAA-5' (SEQ ID NO: 1274)

βc-1537 Target: 5'-AATGTGGTCACCTGTGCAGCTGGAATT-3' (SEQ ID NO: 2383)

5'-AUGUGGUCACCUGUGCAGCUGGAAUUC-3' (SEQ ID NO: 6820)
3'-UACACCAGUGGACACGUCGACCUUAAG-5' (SEQ ID NO: 1275)

βc-1538 Target: 5'-ATGTGGTCACCTGTGCAGCTGGAATTC-3' (SEQ ID NO: 2384)

5'-UGUGGUCACCUGUGCAGCUGGAAUUCU-3' (SEQ ID NO: 6821)
3'-ACACCAGUGGACACGUCGACCUUAAGA-5' (SEQ ID NO: 1276)

βc-1539 Target: 5'-TGTGGTCACCTGTGCAGCTGGAATTCT-3' (SEQ ID NO: 2385)

5'-GUGGUCACCUGUGCAGCUGGAAUUCUU-3' (SEQ ID NO: 6822)
3'-CACCAGUGGACACGUCGACCUUAAGAA-5' (SEQ ID NO: 1277)

βc-1540 Target: 5'-GTGGTCACCTGTGCAGCTGGAATTCTT-3' (SEQ ID NO: 2386)

5'-UGGUCACCUGUGCAGCUGGAAUUCUUU-3' (SEQ ID NO: 6823)
3'-ACCAGUGGACACGUCGACCUUAAGAAA-5' (SEQ ID NO: 1278)

βc-1541 Target: 5'-TGGTCACCTGTGCAGCTGGAATTCTTT-3' (SEQ ID NO: 2387)

5'-GGUCACCUGUGCAGCUGGAAUUCUUUC-3' (SEQ ID NO: 6824)
3'-CCAGUGGACACGUCGACCUUAAGAAAG-5' (SEQ ID NO: 1279)

βc-1542 Target: 5'-GGTCACCTGTGCAGCTGGAATTCTTTC-3' (SEQ ID NO: 2388)

5'-GUCACCUGUGCAGCUGGAAUUCUUUCU-3' (SEQ ID NO: 6825)
3'-CAGUGGACACGUCGACCUUAAGAAAGA-5' (SEQ ID NO: 1280)

βc-1543 Target: 5'-GTCACCTGTGCAGCTGGAATTCTTTCT-3' (SEQ ID NO: 2389)

5'-UCACCUGUGCAGCUGGAAUUCUUUCUA-3' (SEQ ID NO: 6826)
3'-AGUGGACACGUCGACCUUAAGAAAGAU-5' (SEQ ID NO: 1281)

βc-1544 Target: 5'-TCACCTGTGCAGCTGGAATTCTTTCTA-3' (SEQ ID NO: 2390)

5'-CACCUGUGCAGCUGGAAUUCUUUCUAA-3' (SEQ ID NO: 6827)
3'-GUGGACACGUCGACCUUAAGAAAGAUU-5' (SEQ ID NO: 1282)

βc-1545 Target: 5'-CACCTGTGCAGCTGGAATTCTTTCTAA-3' (SEQ ID NO: 2391)

5'-UUUCUAACCUCACUUGCAAUAAUUAUA-3' (SEQ ID NO: 6828)
3'-AAAGAUUGGAGUGAACGUUAUUAAUAU-5' (SEQ ID NO: 1283)

βc-1565 Target: 5'-TTTCTAACCTCACTTGCAATAATTATA-3' (SEQ ID NO: 2392)

5'-UUCUAACCUCACUUGCAAUAAUUAUAA-3' (SEQ ID NO: 6829)
3'-AAGAUUGGAGUGAACGUUAUUAAUAUU-5' (SEQ ID NO: 1284)

βc-1566 Target: 5'-TTCTAACCTCACTTGCAATAATTATAA-3' (SEQ ID NO: 2393)

5'-UCUAACCUCACUUGCAAUAAUUAUAAG-3' (SEQ ID NO: 6830)
3'-AGAUUGGAGUGAACGUUAUUAAUAUUC-5' (SEQ ID NO: 1285)

βc-1567 Target: 5'-TCTAACCTCACTTGCAATAATTATAAG-3' (SEQ ID NO: 2394)

5'-CUAACCUCACUUGCAAUAAUUAUAAGA-3' (SEQ ID NO: 6831)
3'-GAUUGGAGUGAACGUUAUUAAUAUUCU-5' (SEQ ID NO: 1286)

βc-1568 Target: 5'-CTAACCTCACTTGCAATAATTATAAGA-3' (SEQ ID NO: 2395)

5'-UAACCUCACUUGCAAUAAUUAUAAGAA-3' (SEQ ID NO: 6832)
3'-AUUGGAGUGAACGUUAUUAAUAUUCUU-5' (SEQ ID NO: 1287)

βc-1569 Target: 5'-TAACCTCACTTGCAATAATTATAAGAA-3' (SEQ ID NO: 2396)

5'-GGGCUGGUGACAGGGAAGACAUCACUG-3' (SEQ ID NO: 6833)
3'-CCCGACCACUGUCCCUUCUGUAGUGAC-5' (SEQ ID NO: 1288)

βc-1652 Target: 5'-GGGCTGGTGACAGGGAAGACATCACTG-3' (SEQ ID NO: 2397)

5'-GGCUGGUGACAGGGAAGACAUCACUGA-3' (SEQ ID NO: 6834)
3'-CCGACCACUGUCCCUUCUGUAGUGACU-5' (SEQ ID NO: 1289)

βc-1653 Target: 5'-GGCTGGTGACAGGGAAGACATCACTGA-3' (SEQ ID NO: 2398)

5'-GCUGGUGACAGGGAAGACAUCACUGAG-3' (SEQ ID NO: 6835)
3'-CGACCACUGUCCCUUCUGUAGUGACUC-5' (SEQ ID NO: 1290)

βc-1654 Target: 5'-GCTGGTGACAGGGAAGACATCACTGAG-3' (SEQ ID NO: 2399)

5'-CUGGUGACAGGGAAGACAUCACUGAGC-3' (SEQ ID NO: 6836)
3'-GACCACUGUCCCUUCUGUAGUGACUCG-5' (SEQ ID NO: 1291)

βc-1655 Target: 5'-CTGGTGACAGGGAAGACATCACTGAGC-3' (SEQ ID NO: 2400)

5'-UGGUGACAGGGAAGACAUCACUGAGCC-3' (SEQ ID NO: 6837)
3'-ACCACUGUCCCUUCUGUAGUGACUCGG-5' (SEQ ID NO: 1292)

βc-1656 Target: 5'-TGGTGACAGGGAAGACATCACTGAGCC-3' (SEQ ID NO: 2401)

5'-GGUGACAGGGAAGACAUCACUGAGCCU-3' (SEQ ID NO: 6838)
3'-CCACUGUCCCUUCUGUAGUGACUCGGA-5' (SEQ ID NO: 1293)

βc-1657 Target: 5'-GGTGACAGGGAAGACATCACTGAGCCT-3' (SEQ ID NO: 2402)

5'-GUGACAGGGAAGACAUCACUGAGCCUG-3' (SEQ ID NO: 6839)
3'-CACUGUCCCUUCUGUAGUGACUCGGAC-5' (SEQ ID NO: 1294)

βc-1658 Target: 5'-GTGACAGGGAAGACATCACTGAGCCTG-3' (SEQ ID NO: 2403)

5'-UGACAGGGAAGACAUCACUGAGCCUGC-3' (SEQ ID NO: 6840)
3'-ACUGUCCCUUCUGUAGUGACUCGGACG-5' (SEQ ID NO: 1295)

βc-1659 Target: 5'-TGACAGGGAAGACATCACTGAGCCTGC-3' (SEQ ID NO: 2404)

5'-GACAGGGAAGACAUCACUGAGCCUGCC-3' (SEQ ID NO: 6841)
3'-CUGUCCCUUCUGUAGUGACUCGGACGG-5' (SEQ ID NO: 1296)

βc-1660 Target: 5'-GACAGGGAAGACATCACTGAGCCTGCC-3' (SEQ ID NO: 2405)

5'-ACAGGGAAGACAUCACUGAGCCUGCCA-3' (SEQ ID NO: 6842)
3'-UGUCCCUUCUGUAGUGACUCGGACGGU-5' (SEQ ID NO: 1297)

βc-1661 Target: 5'-ACAGGGAAGACATCACTGAGCCTGCCA-3' (SEQ ID NO: 2406)

5'-CAGGGAAGACAUCACUGAGCCUGCCAU-3' (SEQ ID NO: 6843)
3'-GUCCCUUCUGUAGUGACUCGGACGGUA-5' (SEQ ID NO: 1298)

βc-1662 Target: 5'-CAGGGAAGACATCACTGAGCCTGCC-3' (SEQ ID NO: 2407)

5'-AGGGAAGACAUCACUGAGCCUGCCAUC-3' (SEQ ID NO: 6844)
3'-UCCCUUCUGUAGUGACUCGGACGGUAG-5' (SEQ ID NO: 1299)

βc-1663 Target: 5'-AGGGAAGACATCACTGAGCCTGCCATC-3' (SEQ ID NO: 2408)

5'-GGGAAGACAUCACUGAGCCUGCCAUCU-3' (SEQ ID NO: 6845)
3'-CCCUUCUGUAGUGACUCGGACGGUAGA-5' (SEQ ID NO: 1300)

βc-1664 Target: 5'-GGGAAGACATCACTGAGCCTGCCATCT-3' (SEQ ID NO: 2409)

5'-GGAAGACAUCACUGAGCCUGCCAUCUG-3' (SEQ ID NO: 6846)
3'-CCUUCUGUAGUGACUCGGACGGUAGAC-5' (SEQ ID NO: 1301)

βc-1665 Target: 5'-GGAAGACATCACTGAGCCTGCCATCTG-3' (SEQ ID NO: 2410)

5'-GAAGACAUCACUGAGCCUGCCAUCUGU-3' (SEQ ID NO: 6847)
3'-CUUCUGUAGUGACUCGGACGGUAGACA-5' (SEQ ID NO: 1302)

βc-1666 Target: 5'-GAAGACATCACTGAGCCTGCCATCTGT-3' (SEQ ID NO: 2411)

5'-AAGACAUCACUGAGCCUGCCAUCUGUG-3' (SEQ ID NO: 6848)
3'-UUCUGUAGUGACUCGGACGGUAGACAC-5' (SEQ ID NO: 1303)

βc-1667 Target: 5'-AAGACATCACTGAGCCTGCCATCTGTG-3' (SEQ ID NO: 2412)

5'-AGACAUCACUGAGCCUGCCAUCUGUGC-3' (SEQ ID NO: 6849)
3'-UCUGUAGUGACUCGGACGGUAGACACG-5' (SEQ ID NO: 1304)

βc-1668 Target: 5'-AGACATCACTGAGCCTGCCATCTGTGC-3' (SEQ ID NO: 2413)

5'-GACAUCACUGAGCCUGCCAUCUGUGCU-3' (SEQ ID NO: 6850)
3'-CUGUAGUGACUCGGACGGUAGACACGA-5' (SEQ ID NO: 1305)

βc-1669 Target: 5'-GACATCACTGAGCCTGCCATCTGTGCT-3' (SEQ ID NO: 2414)

5'-ACAUCACUGAGCCUGCCAUCUGUGCUC-3' (SEQ ID NO: 6851)
3'-UGUAGUGACUCGGACGGUAGACACGAG-5' (SEQ ID NO: 1306)

βc-1670 Target: 5'-ACATCACTGAGCCTGCCATCTGTGCTC-3' (SEQ ID NO: 2415)

5'-CAUCACUGAGCCUGCCAUCUGUGCUCU-3' (SEQ ID NO: 6852)
3'-GUAGUGACUCGGACGGUAGACACGAGA-5' (SEQ ID NO: 1307)

βc-1671 Target: 5'-CATCACTGAGCCTGCCATCTGTGCTCT-3' (SEQ ID NO: 2416)

5'-AUCACUGAGCCUGCCAUCUGUGCUCUU-3' (SEQ ID NO: 6853)
3'-UAGUGACUCGGACGGUAGACACGAGAA-5' (SEQ ID NO: 1308)

βc-1672 Target: 5'-ATCACTGAGCCTGCCATCTGTGCTCTT-3' (SEQ ID NO: 2417)

5'-UCACUGAGCCUGCCAUCUGUGCUCUUC-3' (SEQ ID NO: 6854)
3'-AGUGACUCGGACGGUAGACACGAGAAG-5' (SEQ ID NO: 1309)

βc-1673 Target: 5'-TCACTGAGCCTGCCATCTGTGCTCTTC-3' (SEQ ID NO: 2418)

5'-CACUGAGCCUGCCAUCUGUGCUCUUCG-3' (SEQ ID NO: 6855)
3'-GUGACUCGGACGGUAGACACGAGAAGC-5' (SEQ ID NO: 1310)

βc-1674 Target: 5'-CACTGAGCCTGCCATCTGTGCTCTTCG-3' (SEQ ID NO: 2419)

5'-ACUGAGCCUGCCAUCUGUGCUCUUCGU-3' (SEQ ID NO: 6856)
3'-UGACUCGGACGGUAGACACGAGAAGCA-5' (SEQ ID NO: 1311)

βc-1675 Target: 5'-ACTGAGCCTGCCATCTGTGCTCTTCGT-3' (SEQ ID NO: 2420)

5'-CUGAGCCUGCCAUCUGUGCUCUUCGUC-3' (SEQ ID NO: 6857)
3'-GACUCGGACGGUAGACACGAGAAGCAG-5' (SEQ ID NO: 1312)

βc-1676 Target: 5'-CTGAGCCTGCCATCTGTGCTCTTCGTC-3' (SEQ ID NO: 2421)

5'-UGAGCCUGCCAUCUGUGCUCUUCGUCA-3' (SEQ ID NO: 6858)
3'-ACUCGGACGGUAGACACGAGAAGCAGU-5' (SEQ ID NO: 1313)

βc-1677 Target: 5'-TGAGCCTGCCATCTGTGCTCTTCGTCA-3' (SEQ ID NO: 2422)

5'-GAGCCUGCCAUCUGUGCUCUUCGUCAU-3' (SEQ ID NO: 6859)
3'-CUCGGACGGUAGACACGAGAAGCAGUA-5' (SEQ ID NO: 1314)

βc-1678 Target: 5'-GAGCCTGCCATCTGTGCTCTTCGTC-3' (SEQ ID NO: 2423)

5'-AGCCUGCCAUCUGUGCUCUUCGUCAUC-3' (SEQ ID NO: 6860)
3'-UCGGACGGUAGACACGAGAAGCAGUAG-5' (SEQ ID NO: 1315)

βc-1679 Target: 5'-AGCCTGCCATCTGTGCTCTTCGTCATC-3' (SEQ ID NO: 2424)

5'-GCCUGCCAUCUGUGCUCUUCGUCAUCU-3' (SEQ ID NO: 6861)
3'-CGGACGGUAGACACGAGAAGCAGUAGA-5' (SEQ ID NO: 1316)

βc-1680 Target: 5'-GCCTGCCATCTGTGCTCTTCGTCATCT-3' (SEQ ID NO: 2425)

5'-CCUGCCAUCUGUGCUCUUCGUCAUCUG-3' (SEQ ID NO: 6862)
3'-GGACGGUAGACACGAGAAGCAGUAGAC-5' (SEQ ID NO: 1317)

βc-1681 Target: 5'-CCTGCCATCTGTGCTCTTCGTCATCTG-3' (SEQ ID NO: 2426)

5'-CUGCCAUCUGUGCUCUUCGUCAUCUGA-3' (SEQ ID NO: 6863)
3'-GACGGUAGACACGAGAAGCAGUAGACU-5' (SEQ ID NO: 1318)

βc-1682 Target: 5'-CTGCCATCTGTGCTCTTCGTCATCTGA-3' (SEQ ID NO: 2427)

5'-UGCCAUCUGUGCUCUUCGUCAUCUGAC-3' (SEQ ID NO: 6864)
3'-ACGGUAGACACGAGAAGCAGUAGACUG-5' (SEQ ID NO: 1319)

βc-1683 Target: 5'-TGCCATCTGTGCTCTTCGTCATCTGAC-3' (SEQ ID NO: 2428)

5'-GCCAUCUGUGCUCUUCGUCAUCUGACC-3' (SEQ ID NO: 6865)
3'-CGGUAGACACGAGAAGCAGUAGACUGG-5' (SEQ ID NO: 1320)

βc-1684 Target: 5'-GCCATCTGTGCTCTTCGTCATCTGACC-3' (SEQ ID NO: 2429)

5'-CCAUCUGUGCUCUUCGUCAUCUGACCA-3' (SEQ ID NO: 6866)
3'-GGUAGACACGAGAAGCAGUAGACUGGU-5' (SEQ ID NO: 1321)

βc-1685 Target: 5'-CCATCTGTGCTCTTCGTCATCTGACCA-3' (SEQ ID NO: 2430)

5'-CAUCUGUGCUCUUCGUCAUCUGACCAG-3' (SEQ ID NO: 6867)
3'-GUAGACACGAGAAGCAGUAGACUGGUC-5' (SEQ ID NO: 1322)

βc-1686 Target: 5'-CATCTGTGCTCTTCGTCATCTGACCAG-3' (SEQ ID NO: 2431)

5'-AUCUGUGCUCUUCGUCAUCUGACCAGC-3' (SEQ ID NO: 6868)
3'-UAGACACGAGAAGCAGUAGACUGGUCG-5' (SEQ ID NO: 1323)

βc-1687 Target: 5'-ATCTGTGCTCTTCGTCATCTGACCAGC-3' (SEQ ID NO: 2432)

5'-UCUGUGCUCUUCGUCAUCUGACCAGCC-3' (SEQ ID NO: 6869)
3'-AGACACGAGAAGCAGUAGACUGGUCGG-5' (SEQ ID NO: 1324)

βc-1688 Target: 5'-TCTGTGCTCTTCGTCATCTGACCAGCC-3' (SEQ ID NO: 2433)

5'-CUGUGCUCUUCGUCAUCUGACCAGCCG-3' (SEQ ID NO: 6870)
3'-GACACGAGAAGCAGUAGACUGGUCGGC-5' (SEQ ID NO: 1325)

βc-1689 Target: 5'-CTGTGCTCTTCGTCATCTGACCAGCCG-3' (SEQ ID NO: 2434)

5'-UGUGCUCUUCGUCAUCUGACCAGCCGA-3' (SEQ ID NO: 6871)
3'-ACACGAGAAGCAGUAGACUGGUCGGCU-5' (SEQ ID NO: 1326)

βc-1690 Target: 5'-TGTGCTCTTCGTCATCTGACCAGCCGA-3' (SEQ ID NO: 2435)

5'-GUGCUCUUCGUCAUCUGACCAGCCGAC-3' (SEQ ID NO: 6872)
3'-CACGAGAAGCAGUAGACUGGUCGGCUG-5' (SEQ ID NO: 1327)

βc-1691 Target: 5'-GTGCTCTTCGTCATCTGACCAGCCGAC-3' (SEQ ID NO: 2436)

5'-UGCUCUUCGUCAUCUGACCAGCCGACA-3' (SEQ ID NO: 6873)
3'-ACGAGAAGCAGUAGACUGGUCGGCUGU-5' (SEQ ID NO: 1328)

βc-1692 Target: 5'-TGCTCTTCGTCATCTGACCAGCCGACA-3' (SEQ ID NO: 2437)

5'-GCUCUUCGUCAUCUGACCAGCCGACAC-3' (SEQ ID NO: 6874)
3'-CGAGAAGCAGUAGACUGGUCGGCUGUG-5' (SEQ ID NO: 1329)

βc-1693 Target: 5'-GCTCTTCGTCATCTGACCAGCCGACAC-3' (SEQ ID NO: 2438)

5'-CUCUUCGUCAUCUGACCAGCCGACACC-3' (SEQ ID NO: 6875)
3'-GAGAAGCAGUAGACUGGUCGGCUGUGG-5' (SEQ ID NO: 1330)

βc-1694 Target: 5'-CTCTTCGTCATCTGACCAGCCGACACC-3' (SEQ ID NO: 2439)

5'-UCUUCGUCAUCUGACCAGCCGACACCA-3' (SEQ ID NO: 6876)
3'-AGAAGCAGUAGACUGGUCGGCUGUGGU-5' (SEQ ID NO: 1331)

βc-1695 Target: 5'-TCTTCGTCATCTGACCAGCCGACACCA-3' (SEQ ID NO: 2440)

5'-UACACCCACCAUCCCACUGGCCUCUGA-3' (SEQ ID NO: 6877)
3'-AUGUGGGUGGUAGGGUGACCGGAGACU-5' (SEQ ID NO: 1332)

βc-1787 Target: 5'-TACACCCACCATCCCACTGGCCTCTGA-3' (SEQ ID NO: 2441)

5'-ACACCCACCAUCCCACUGGCCUCUGAU-3' (SEQ ID NO: 6878)
3'-UGUGGGUGGUAGGGUGACCGGAGACUA-5' (SEQ ID NO: 1333)

βc-1788 Target: 5'-ACACCCACCATCCCACTGGCCTCTGAT-3' (SEQ ID NO: 2442)

5'-CACCCACCAUCCCACUGGCCUCUGAUA-3' (SEQ ID NO: 6879)
3'-GUGGGUGGUAGGGUGACCGGAGACUAU-5' (SEQ ID NO: 1334)

βc-1789 Target: 5'-CACCCACCATCCCACTGGCCTCTGATA-3' (SEQ ID NO: 2443)

5'-ACCCACCAUCCCACUGGCCUCUGAUAA-3' (SEQ ID NO: 6880)
3'-UGGGUGGUAGGGUGACCGGAGACUAUU-5' (SEQ ID NO: 1335)

βc-1790 Target: 5'-ACCCACCATCCCACTGGCCTCTGATAA-3' (SEQ ID NO: 2444)

5'-CCCACCAUCCCACUGGCCUCUGAUAAA-3' (SEQ ID NO: 6881)
3'-GGGUGGUAGGGUGACCGGAGACUAUUU-5' (SEQ ID NO: 1336)

βc-1791 Target: 5'-CCCACCATCCCACTGGCCTCTGATAAA-3' (SEQ ID NO: 2445)

5'-CCACCAUCCCACUGGCCUCUGAUAAAG-3' (SEQ ID NO: 6882)
3'-GGUGGUAGGGUGACCGGAGACUAUUUC-5' (SEQ ID NO: 1337)

βc-1792 Target: 5'-CCACCATCCCACTGGCCTCTGATAAAG-3' (SEQ ID NO: 2446)

5'-CACCAUCCCACUGGCCUCUGAUAAAGG-3' (SEQ ID NO: 6883)
3'-GUGGUAGGGUGACCGGAGACUAUUUCC-5' (SEQ ID NO: 1338)

βc-1793 Target: 5'-CACCATCCCACTGGCCTCTGATAAAGG-3' (SEQ ID NO: 2447)

5'-ACCAUCCCACUGGCCUCUGAUAAAGGC-3' (SEQ ID NO: 6884)
3'-UGGUAGGGUGACCGGAGACUAUUUCCG-5' (SEQ ID NO: 1339)

βc-1794 Target: 5'-ACCATCCCACTGGCCTCTGATAAAGGC-3' (SEQ ID NO: 2448)

5'-CCAUCCCACUGGCCUCUGAUAAAGGCU-3' (SEQ ID NO: 6885)
3'-GGUAGGGUGACCGGAGACUAUUUCCGA-5' (SEQ ID NO: 1340)

βc-1795 Target: 5'-CCATCCCACTGGCCTCTGATAAAGGCT-3' (SEQ ID NO: 2449)

5'-CAUCCCACUGGCCUCUGAUAAAGGCUA-3' (SEQ ID NO: 6886)
3'-GUAGGGUGACCGGAGACUAUUUCCGAU-5' (SEQ ID NO: 1341)

βc-1796 Target: 5'-CATCCCACTGGCCTCTGATAAAGGCTA-3' (SEQ ID NO: 2450)

5'-AUCCCACUGGCCUCUGAUAAAGGCUAC-3' (SEQ ID NO: 6887)
3'-UAGGGUGACCGGAGACUAUUUCCGAUG-5' (SEQ ID NO: 1342)

βc-1797 Target: 5'-ATCCCACTGGCCTCTGATAAAGGCTAC-3' (SEQ ID NO: 2451)

5'-UCCCACUGGCCUCUGAUAAAGGCUACU-3' (SEQ ID NO: 6888)
3'-AGGGUGACCGGAGACUAUUUCCGAUGA-5' (SEQ ID NO: 1343)

βc-1798 Target: 5'-TCCCACTGGCCTCTGATAAAGGCTACT-3' (SEQ ID NO: 2452)

5'-CCCACUGGCCUCUGAUAAAGGCUACUG-3' (SEQ ID NO: 6889)
3'-GGGUGACCGGAGACUAUUUCCGAUGAC-5' (SEQ ID NO: 1344)

βc-1799 Target: 5'-CCCACTGGCCTCTGATAAAGGCTACTG-3' (SEQ ID NO: 2453)

5'-CCACUGGCCUCUGAUAAAGGCUACUGU-3' (SEQ ID NO: 6890)
3'-GGUGACCGGAGACUAUUUCCGAUGACA-5' (SEQ ID NO: 1345)

βc-1800 Target: 5'-CCACTGGCCTCTGATAAAGGCTACTGT-3' (SEQ ID NO: 2454)

5'-CUACUGUUGGAUUGAUUCGAAAUCUUG-3' (SEQ ID NO: 6891)
3'-GAUGACAACCUAACUAAGCUUUAGAAC-5' (SEQ ID NO: 1346)

βc-1820 Target: 5'-CTACTGTTGGATTGATTCGAAATCTTG-3' (SEQ ID NO: 2455)

5'-UACUGUUGGAUUGAUUCGAAAUCUUGC-3' (SEQ ID NO: 6892)
3'-AUGACAACCUAACUAAGCUUUAGAACG-5' (SEQ ID NO: 1347)

βc-1821 Target: 5'-TACTGTTGGATTGATTCGAAATCTTGC-3' (SEQ ID NO: 2456)

5'-UAAAUACCAUUCCAUUGUUUGUGCAGC-3' (SEQ ID NO: 6893)
3'-AUUUAUGGUAAGGUAACAAACACGUCG-5' (SEQ ID NO: 1348)

βc-2072 Target: 5'-TAAATACCATTCCATTGTTTGTGCAGC-3' (SEQ ID NO: 2457)

5'-AAAUACCAUUCCAUUGUUUGUGCAGCU-3' (SEQ ID NO: 6894)
3'-UUUAUGGUAAGGUAACAAACACGUCGA-5' (SEQ ID NO: 1349)

βc-2073 Target: 5'-AAATACCATTCCATTGTTTGTGCAGCT-3' (SEQ ID NO: 2458)

5'-AAUACCAUUCCAUUGUUUGUGCAGCUG-3' (SEQ ID NO: 6895)
3'-UUAUGGUAAGGUAACAAACACGUCGAC-5' (SEQ ID NO: 1350)

βc-2074 Target: 5'-AATACCATTCCATTGTTTGTGCAGCTG-3' (SEQ ID NO: 2459)

5'-AUACCAUUCCAUUGUUUGUGCAGCUGC-3' (SEQ ID NO: 6896)
3'-UAUGGUAAGGUAACAAACACGUCGACG-5' (SEQ ID NO: 1351)

βc-2075 Target: 5'-ATACCATTCCATTGTTTGTGCAGCTGC-3' (SEQ ID NO: 2460)

5'-UACCAUUCCAUUGUUUGUGCAGCUGCU-3' (SEQ ID NO: 6897)
3'-AUGGUAAGGUAACAAACACGUCGACGA-5' (SEQ ID NO: 1352)

βc-2076 Target: 5'-TACCATTCCATTGTTTGTGCAGCTGCT-3' (SEQ ID NO: 2461)

5'-ACCAUUCCAUUGUUUGUGCAGCUGCUU-3' (SEQ ID NO: 6898)
3'-UGGUAAGGUAACAAACACGUCGACGAA-5' (SEQ ID NO: 1353)

βc-2077 Target: 5'-ACCATTCCATTGTTTGTGCAGCTGCTT-3' (SEQ ID NO: 2462)

5'-GCUGCUUUAUUCUCCCAUUGAAAACAU-3' (SEQ ID NO: 6899)
3'-CGACGAAAUAAGAGGGUAACUUUUGUA-5' (SEQ ID NO: 1354)

βc-2097 Target: 5'-GCTGCTTTATTCTCCCATTGAAAAC-3' (SEQ ID NO: 2463)

5'-CUGCUUUAUUCUCCCAUUGAAAACAUC-3' (SEQ ID NO: 6900)
3'-GACGAAAUAAGAGGGUAACUUUUGUAG-5' (SEQ ID NO: 1355)

βc-2098 Target: 5'-CTGCTTTATTCTCCCATTGAAAACATC-3' (SEQ ID NO: 2464)

5'-UGCUUUAUUCUCCCAUUGAAAACAUCC-3' (SEQ ID NO: 6901)
3'-ACGAAAUAAGAGGGUAACUUUUGUAGG-5' (SEQ ID NO: 1356)

βc-2099 Target: 5'-TGCTTTATTCTCCCATTGAAAACATCC-3' (SEQ ID NO: 2465)

5'-GCUUUAUUCUCCCAUUGAAAACAUCCA-3' (SEQ ID NO: 6902)
3'-CGAAAUAAGAGGGUAACUUUUGUAGGU-5' (SEQ ID NO: 1357)

βc-2100 Target: 5'-GCTTTATTCTCCCATTGAAAACATCCA-3' (SEQ ID NO: 2466)

5'-GGGUCCUCUGUGAACUUGCUCAGGACA-3' (SEQ ID NO: 6903)
3'-CCCAGGAGACACUUGAACGAGUCCUGU-5' (SEQ ID NO: 1358)

βc-2141 Target: 5'-GGGTCCTCTGTGAACTTGCTCAGGACA-3' (SEQ ID NO: 2467)

5'-GGUCCUCUGUGAACUUGCUCAGGACAA-3' (SEQ ID NO: 6904)
3'-CCAGGAGACACUUGAACGAGUCCUGUU-5' (SEQ ID NO: 1359)

βc-2142 Target: 5'-GGTCCTCTGTGAACTTGCTCAGGACAA-3' (SEQ ID NO: 2468)

5'-GUCCUCUGUGAACUUGCUCAGGACAAG-3' (SEQ ID NO: 6905)
3'-CAGGAGACACUUGAACGAGUCCUGUUC-5' (SEQ ID NO: 1360)

βc-2143 Target: 5'-GTCCTCTGTGAACTTGCTCAGGACAAG-3' (SEQ ID NO: 2469)

5'-UCCUCUGUGAACUUGCUCAGGACAAGG-3' (SEQ ID NO: 6906)
3'-AGGAGACACUUGAACGAGUCCUGUUCC-5' (SEQ ID NO: 1361)

βc-2144 Target: 5'-TCCTCTGTGAACTTGCTCAGGACAAGG-3' (SEQ ID NO: 2470)

5'-CCUCUGUGAACUUGCUCAGGACAAGGA-3' (SEQ ID NO: 6907)
3'-GGAGACACUUGAACGAGUCCUGUUCCU-5' (SEQ ID NO: 1362)

βc-2145 Target: 5'-CCTCTGTGAACTTGCTCAGGACAAGGA-3' (SEQ ID NO: 2471)

5'-CUCUGUGAACUUGCUCAGGACAAGGAA-3' (SEQ ID NO: 6908)
3'-GAGACACUUGAACGAGUCCUGUUCCUU-5' (SEQ ID NO: 1363)

βc-2146 Target: 5'-CTCTGTGAACTTGCTCAGGACAAGGAA-3' (SEQ ID NO: 2472)

5'-UCUGUGAACUUGCUCAGGACAAGGAAG-3' (SEQ ID NO: 6909)
3'-AGACACUUGAACGAGUCCUGUUCCUUC-5' (SEQ ID NO: 1364)

βc-2147 Target: 5'-TCTGTGAACTTGCTCAGGACAAGGAAG-3' (SEQ ID NO: 2473)

5'-CUGUGAACUUGCUCAGGACAAGGAAGC-3' (SEQ ID NO: 6910)
3'-GACACUUGAACGAGUCCUGUUCCUUCG-5' (SEQ ID NO: 1365)

βc-2148 Target: 5'-CTGTGAACTTGCTCAGGACAAGGAAGC-3' (SEQ ID NO: 2474)

5'-UGUGAACUUGCUCAGGACAAGGAAGCU-3' (SEQ ID NO: 6911)
3'-ACACUUGAACGAGUCCUGUUCCUUCGA-5' (SEQ ID NO: 1366)

βc-2149 Target: 5'-TGTGAACTTGCTCAGGACAAGGAAGCT-3' (SEQ ID NO: 2475)

5'-GUGAACUUGCUCAGGACAAGGAAGCUG-3' (SEQ ID NO: 6912)
3'-CACUUGAACGAGUCCUGUUCCUUCGAC-5' (SEQ ID NO: 1367)

βc-2150 Target: 5'-GTGAACTTGCTCAGGACAAGGAAGCTG-3' (SEQ ID NO: 2476)

5'-UGAACUUGCUCAGGACAAGGAAGCUGC-3' (SEQ ID NO: 6913)
3'-ACUUGAACGAGUCCUGUUCCUUCGACG-5' (SEQ ID NO: 1368)

βc-2151 Target: 5'-TGAACTTGCTCAGGACAAGGAAGCTGC-3' (SEQ ID NO: 2477)

5'-CUAUUGAAGCUGAGGGAGCCACAGCUC-3' (SEQ ID NO: 6914)
3'-GAUAACUUCGACUCCCUCGGUGUCGAG-5' (SEQ ID NO: 1369)

βc-2183 Target: 5'-CTATTGAAGCTGAGGGAGCCACAGCTC-3' (SEQ ID NO: 2478)

5'-UAUUGAAGCUGAGGGAGCCACAGCUCC-3' (SEQ ID NO: 6915)
3'-AUAACUUCGACUCCCUCGGUGUCGAGG-5' (SEQ ID NO: 1370)

βc-2184 Target: 5'-TATTGAAGCTGAGGGAGCCACAGCTCC-3' (SEQ ID NO: 2479)

5'-AUUGAAGCUGAGGGAGCCACAGCUCCU-3' (SEQ ID NO: 6916)
3'-UAACUUCGACUCCCUCGGUGUCGAGGA-5' (SEQ ID NO: 1371)

βc-2185 Target: 5'-ATTGAAGCTGAGGGAGCCACAGCTCCT-3' (SEQ ID NO: 2480)

5'-UGUUCCGAAUGUCUGAGGACAAGCCAC-3' (SEQ ID NO: 6917)
3'-ACAAGGCUUACAGACUCCUGUUCGGUG-5' (SEQ ID NO: 1372)

βc-2270 Target: 5'-TGTTCCGAATGTCTGAGGACAAGCCAC-3' (SEQ ID NO: 2481)

5'-GUUCCGAAUGUCUGAGGACAAGCCACA-3' (SEQ ID NO: 6918)
3'-CAAGGCUUACAGACUCCUGUUCGGUGU-5' (SEQ ID NO: 1373)

βc-2271 Target: 5'-GTTCCGAATGTCTGAGGACAAGCCACA-3' (SEQ ID NO: 2482)

5'-UUCCGAAUGUCUGAGGACAAGCCACAA-3' (SEQ ID NO: 6919)
3'-AAGGCUUACAGACUCCUGUUCGGUGUU-5' (SEQ ID NO: 1374)

βc-2272 Target: 5'-TTCCGAATGTCTGAGGACAAGCCACAA-3' (SEQ ID NO: 2483)

5'-UCCGAAUGUCUGAGGACAAGCCACAAG-3' (SEQ ID NO: 6920)
3'-AGGCUUACAGACUCCUGUUCGGUGUUC-5' (SEQ ID NO: 1375)

βc-2273 Target: 5'-TCCGAATGTCTGAGGACAAGCCACAAG-3' (SEQ ID NO: 2484)

5'-CCGAAUGUCUGAGGACAAGCCACAAGA-3' (SEQ ID NO: 6921)
3'-GGCUUACAGACUCCUGUUCGGUGUUCU-5' (SEQ ID NO: 1376)

βc-2274 Target: 5'-CCGAATGTCTGAGGACAAGCCACAAGA-3' (SEQ ID NO: 2485)

5'-CGAAUGUCUGAGGACAAGCCACAAGAU-3' (SEQ ID NO: 6922)
3'-GCUUACAGACUCCUGUUCGGUGUUCUA-5' (SEQ ID NO: 1377)

βc-2275 Target: 5'-CGAATGTCTGAGGACAAGCCACAAGAT-3' (SEQ ID NO: 2486)

5'-GAAUGUCUGAGGACAAGCCACAAGAUU-3' (SEQ ID NO: 6923)
3'-CUUACAGACUCCUGUUCGGUGUUCUAA-5' (SEQ ID NO: 1378)

βc-2276 Target: 5'-GAATGTCTGAGGACAAGCCACAAGATT-3' (SEQ ID NO: 2487)

5'-AAUGUCUGAGGACAAGCCACAAGAUUA-3' (SEQ ID NO: 6924)
3'-UUACAGACUCCUGUUCGGUGUUCUAAU-5' (SEQ ID NO: 1379)

βc-2277 Target: 5'-AATGTCTGAGGACAAGCCACAAGATTA-3' (SEQ ID NO: 2488)

5'-GAACAGAGCCAAUGGCUUGGAAUGAGA-3' (SEQ ID NO: 6925)
3'-CUUGUCUCGGUUACCGAACCUUACUCU-5' (SEQ ID NO: 1380)

βc-2345 Target: 5'-GAACAGAGCCAATGGCTTGGAATGAGA-3' (SEQ ID NO: 2489)

5'-AACAGAGCCAAUGGCUUGGAAUGAGAC-3' (SEQ ID NO: 6926)
3'-UUGUCUCGGUUACCGAACCUUACUCUG-5' (SEQ ID NO: 1381)

βc-2346 Target: 5'-AACAGAGCCAATGGCTTGGAATGAGAC-3' (SEQ ID NO: 2490)

5'-ACAGAGCCAAUGGCUUGGAAUGAGACU-3' (SEQ ID NO: 6927)
3'-UGUCUCGGUUACCGAACCUUACUCUGA-5' (SEQ ID NO: 1382)

βc-2347 Target: 5'-ACAGAGCCAATGGCTTGGAATGAGACT-3' (SEQ ID NO: 2491)

5'-CAGAGCCAAUGGCUUGGAAUGAGACUG-3' (SEQ ID NO: 6928)
3'-GUCUCGGUUACCGAACCUUACUCUGAC-5' (SEQ ID NO: 1383)

βc-2348 Target: 5'-CAGAGCCAATGGCTTGGAATGAGACTG-3' (SEQ ID NO: 2492)

5'-AGAGCCAAUGGCUUGGAAUGAGACUGC-3' (SEQ ID NO: 6929)
3'-UCUCGGUUACCGAACCUUACUCUGACG-5' (SEQ ID NO: 1384)

βc-2349 Target: 5'-AGAGCCAATGGCTTGGAATGAGACTGC-3' (SEQ ID NO: 2493)

5'-GAGCCAAUGGCUUGGAAUGAGACUGCU-3' (SEQ ID NO: 6930)
3'-CUCGGUUACCGAACCUUACUCUGACGA-5' (SEQ ID NO: 1385)

βc-2350 Target: 5'-GAGCCAATGGCTTGGAATGAGACTGCT-3' (SEQ ID NO: 2494)

5'-AGCCAAUGGCUUGGAAUGAGACUGCUG-3' (SEQ ID NO: 6931)
3'-UCGGUUACCGAACCUUACUCUGACGAC-5' (SEQ ID NO: 1386)

βc-2351 Target: 5'-AGCCAATGGCTTGGAATGAGACTGCTG-3' (SEQ ID NO: 2495)

5'-GCCAAUGGCUUGGAAUGAGACUGCUGA-3' (SEQ ID NO: 6932)
3'-CGGUUACCGAACCUUACUCUGACGACU-5' (SEQ ID NO: 1387)

βc-2352 Target: 5'-GCCAATGGCTTGGAATGAGACTGCTGA-3' (SEQ ID NO: 2496)

5'-CCAAUGGCUUGGAAUGAGACUGCUGAU-3' (SEQ ID NO: 6933)
3'-GGUUACCGAACCUUACUCUGACGACUA-5' (SEQ ID NO: 1388)

βc-2353 Target: 5'-CCAATGGCTTGGAATGAGACTGCTGAT-3' (SEQ ID NO: 2497)

5'-CAAUGGCUUGGAAUGAGACUGCUGAUC-3' (SEQ ID NO: 6934)
3'-GUUACCGAACCUUACUCUGACGACUAG-5' (SEQ ID NO: 1389)

βc-2354 Target: 5'-CAATGGCTTGGAATGAGACTGCTGATC-3' (SEQ ID NO: 2498)

5'-AAUGGCUUGGAAUGAGACUGCUGAUCU-3' (SEQ ID NO: 6935)
3'-UUACCGAACCUUACUCUGACGACUAGA-5' (SEQ ID NO: 1390)

βc-2355 Target: 5'-AATGGCTTGGAATGAGACTGCTGATCT-3' (SEQ ID NO: 2499)

5'-CCCUUGGAUAUCGCCAGGAUGAUCCUA-3' (SEQ ID NO: 6936)
3'-GGGAACCUAUAGCGGUCCUACUAGGAU-5' (SEQ ID NO: 1391)

βc-2411 Target: 5'-CCCTTGGATATCGCCAGGATGATCCTA-3' (SEQ ID NO: 2500)

5'-CCUUGGAUAUCGCCAGGAUGAUCCUAG-3' (SEQ ID NO: 6937)
3'-GGAACCUAUAGCGGUCCUACUAGGAUC-5' (SEQ ID NO: 1392)

βc-2412 Target: 5'-CCTTGGATATCGCCAGGATGATCCTAG-3' (SEQ ID NO: 2501)

5'-CUUGGAUAUCGCCAGGAUGAUCCUAGC-3' (SEQ ID NO: 6938)
3'-GAACCUAUAGCGGUCCUACUAGGAUCG-5' (SEQ ID NO: 1393)

βc-2413 Target: 5'-CTTGGATATCGCCAGGATGATCCTAGC-3' (SEQ ID NO: 2502)

5'-UUGGAUAUCGCCAGGAUGAUCCUAGCU-3' (SEQ ID NO: 6939)
3'-AACCUAUAGCGGUCCUACUAGGAUCGA-5' (SEQ ID NO: 1394)

βc-2414 Target: 5'-TTGGATATCGCCAGGATGATCCTAGCT-3' (SEQ ID NO: 2503)

5'-UGGAUAUCGCCAGGAUGAUCCUAGCUA-3' (SEQ ID NO: 6940)
3'-ACCUAUAGCGGUCCUACUAGGAUCGAU-5' (SEQ ID NO: 1395)

βc-2415 Target: 5'-TGGATATCGCCAGGATGATCCTAGCTA-3' (SEQ ID NO: 2504)

5'-AUCGUUCUUUUCACUCUGGUGGAUAUG-3' (SEQ ID NO: 6941)
3'-UAGCAAGAAAAGUGAGACCACCUAUAC-5' (SEQ ID NO: 1396)

βc-2441 Target: 5'-ATCGTTCTTTTCACTCTGGTGGATATG-3' (SEQ ID NO: 2505)

5'-UCGUUCUUUUCACUCUGGUGGAUAUGG-3' (SEQ ID NO: 6942)
3'-AGCAAGAAAAGUGAGACCACCUAUACC-5' (SEQ ID NO: 1397)

βc-2442 Target: 5'-TCGTTCTTTTCACTCTGGTGGATATGG-3' (SEQ ID NO: 2506)

5'-CGUUCUUUUCACUCUGGUGGAUAUGGC-3' (SEQ ID NO: 6943)
3'-GCAAGAAAAGUGAGACCACCUAUACCG-5' (SEQ ID NO: 1398)

βc-2443 Target: 5'-CGTTCTTTTCACTCTGGTGGATATGGC-3' (SEQ ID NO: 2507)

5'-GUUCUUUUCACUCUGGUGGAUAUGGCC-3' (SEQ ID NO: 6944)
3'-CAAGAAAAGUGAGACCACCUAUACCGG-5' (SEQ ID NO: 1399)

βc-2444 Target: 5'-GTTCTTTTCACTCTGGTGGATATGGCC-3' (SEQ ID NO: 2508)

5'-UUCUUUUCACUCUGGUGGAUAUGGCCA-3' (SEQ ID NO: 6945)
3'-AAGAAAAGUGAGACCACCUAUACCGGU-5' (SEQ ID NO: 1400)

βc-2445 Target: 5'-TTCTTTTCACTCTGGTGGATATGGCCA-3' (SEQ ID NO: 2509)

5'-AACAUGAGAUGGGUGGCCACCACCCUG-3' (SEQ ID NO: 6946)
3'-UUGUACUCUACCCACCGGUGGUGGGAC-5' (SEQ ID NO: 1401)

βc-2501 Target: 5'-AACATGAGATGGGTGGCCACCACCCTG-3' (SEQ ID NO: 2510)

5'-ACAUGAGAUGGGUGGCCACCACCCUGG-3' (SEQ ID NO: 6947)
3'-UGUACUCUACCCACCGGUGGUGGGACC-5' (SEQ ID NO: 1402)

βc-2502 Target: 5'-ACATGAGATGGGTGGCCACCACCCTGG-3' (SEQ ID NO: 2511)

5'-CAUGAGAUGGGUGGCCACCACCCUGGU-3' (SEQ ID NO: 6948)
3'-GUACUCUACCCACCGGUGGUGGGACCA-5' (SEQ ID NO: 1403)

βc-2503 Target: 5'-CATGAGATGGGTGGCCACCACCCTGGT-3' (SEQ ID NO: 2512)

5'-AUGAGAUGGGUGGCCACCACCCUGGUG-3' (SEQ ID NO: 6949)
3'-UACUCUACCCACCGGUGGUGGGACCAC-5' (SEQ ID NO: 1404)

βc-2504 Target: 5'-ATGAGATGGGTGGCCACCACCCTGGTG-3' (SEQ ID NO: 2513)

5'-UGAGAUGGGUGGCCACCACCCUGGUGC-3' (SEQ ID NO: 6950)
3'-ACUCUACCCACCGGUGGUGGGACCACG-5' (SEQ ID NO: 1405)

βc-2505 Target: 5'-TGAGATGGGTGGCCACCACCCTGGTGC-3' (SEQ ID NO: 2514)

5'-GAGAUGGGUGGCCACCACCCUGGUGCU-3' (SEQ ID NO: 6951)
3'-CUCUACCCACCGGUGGUGGGACCACGA-5' (SEQ ID NO: 1406)

βc-2506 Target: 5'-GAGATGGGTGGCCACCACCCTGGTGCT-3' (SEQ ID NO: 2515)

5'-AGAUGGGUGGCCACCACCCUGGUGCUG-3' (SEQ ID NO: 6952)
3'-UCUACCCACCGGUGGUGGGACCACGAC-5' (SEQ ID NO: 1407)

βc-2507 Target: 5'-AGATGGGTGGCCACCACCCTGGTGCTG-3' (SEQ ID NO: 2516)

5'-GAUGGGUGGCCACCACCCUGGUGCUGA-3' (SEQ ID NO: 6953)
3'-CUACCCACCGGUGGUGGGACCACGACU-5' (SEQ ID NO: 1408)

βc-2508 Target: 5'-GATGGGTGGCCACCACCCTGGTGCTGA-3' (SEQ ID NO: 2517)

5'-AUGGGUGGCCACCACCCUGGUGCUGAC-3' (SEQ ID NO: 6954)
3'-UACCCACCGGUGGUGGGACCACGACUG-5' (SEQ ID NO: 1409)

βc-2509 Target: 5'-ATGGGTGGCCACCACCCTGGTGCTGAC-3' (SEQ ID NO: 2518)

5'-UGGGUGGCCACCACCCUGGUGCUGACU-3' (SEQ ID NO: 6955)
3'-ACCCACCGGUGGUGGGACCACGACUGA-5' (SEQ ID NO: 1410)

βc-2510 Target: 5'-TGGGTGGCCACCACCCTGGTGCTGACT-3' (SEQ ID NO: 2519)

5'-GGGUGGCCACCACCCUGGUGCUGACUA-3' (SEQ ID NO: 6956)
3'-CCCACCGGUGGUGGGACCACGACUGAU-5' (SEQ ID NO: 1411)

βc-2511 Target: 5'-GGGTGGCCACCACCCTGGTGCTGACTA-3' (SEQ ID NO: 2520)

5'-GGUGGCCACCACCCUGGUGCUGACUAU-3' (SEQ ID NO: 6957)
3'-CCACCGGUGGUGGGACCACGACUGAUA-5' (SEQ ID NO: 1412)

βc-2512 Target: 5'-GGTGGCCACCACCCTGGTGCTGACTAT-3' (SEQ ID NO: 2521)

5'-GUGGCCACCACCCUGGUGCUGACUAUC-3' (SEQ ID NO: 6958)
3'-CACCGGUGGUGGGACCACGACUGAUAG-5' (SEQ ID NO: 1413)

βc-2513 Target: 5'-GTGGCCACCACCCTGGTGCTGACTATC-3' (SEQ ID NO: 2522)

5'-UGGCCACCACCCUGGUGCUGACUAUCC-3' (SEQ ID NO: 6959)
3'-ACCGGUGGUGGGACCACGACUGAUAGG-5' (SEQ ID NO: 1414)

βc-2514 Target: 5'-TGGCCACCACCCTGGTGCTGACTATCC-3' (SEQ ID NO: 2523)

5'-GGCCACCACCCUGGUGCUGACUAUCCA-3' (SEQ ID NO: 6960)
3'-CCGGUGGUGGGACCACGACUGAUAGGU-5' (SEQ ID NO: 1415)

βc-2515 Target: 5'-GGCCACCACCCTGGTGCTGACTATCCA-3' (SEQ ID NO: 2524)

5'-GCCACCACCCUGGUGCUGACUAUCCAG-3' (SEQ ID NO: 6961)
3'-CGGUGGUGGGACCACGACUGAUAGGUC-5' (SEQ ID NO: 1416)

βc-2516 Target: 5'-GCCACCACCCTGGTGCTGACTATCCAG-3' (SEQ ID NO: 2525)

5'-CCACCACCCUGGUGCUGACUAUCCAGU-3' (SEQ ID NO: 6962)
3'-GGUGGUGGGACCACGACUGAUAGGUCA-5' (SEQ ID NO: 1417)

βc-2517 Target: 5'-CCACCACCCTGGTGCTGACTATCCAGT-3' (SEQ ID NO: 2526)

5'-CACCACCCUGGUGCUGACUAUCCAGUU-3' (SEQ ID NO: 6963)
3'-GUGGUGGGACCACGACUGAUAGGUCAA-5' (SEQ ID NO: 1418)

βc-2518 Target: 5'-CACCACCCTGGTGCTGACTATCCAGTT-3' (SEQ ID NO: 2527)

5'-ACCACCCUGGUGCUGACUAUCCAGUUG-3' (SEQ ID NO: 6964)
3'-UGGUGGGACCACGACUGAUAGGUCAAC-5' (SEQ ID NO: 1419)

βc-2519 Target: 5'-ACCACCCTGGTGCTGACTATCCAGTTG-3' (SEQ ID NO: 2528)

5'-CCACCCUGGUGCUGACUAUCCAGUUGA-3' (SEQ ID NO: 6965)
3'-GGUGGGACCACGACUGAUAGGUCAACU-5' (SEQ ID NO: 1420)

βc-2520 Target: 5'-CCACCCTGGTGCTGACTATCCAGTTGA-3' (SEQ ID NO: 2529)

5'-CACCCUGGUGCUGACUAUCCAGUUGAU-3' (SEQ ID NO: 6966)
3'-GUGGGACCACGACUGAUAGGUCAACUA-5' (SEQ ID NO: 1421)

βc-2521 Target: 5'-CACCCTGGTGCTGACTATCCAGTTGAT-3' (SEQ ID NO: 2530)

5'-ACCCUGGUGCUGACUAUCCAGUUGAUG-3' (SEQ ID NO: 6967)
3'-UGGGACCACGACUGAUAGGUCAACUAC-5' (SEQ ID NO: 1422)

βc-2522 Target: 5'-ACCCTGGTGCTGACTATCCAGTTGATG-3' (SEQ ID NO: 2531)

5'-CCCUGGUGCUGACUAUCCAGUUGAUGG-3' (SEQ ID NO: 6968)
3'-GGGACCACGACUGAUAGGUCAACUACC-5' (SEQ ID NO: 1423)

βc-2523 Target: 5'-CCCTGGTGCTGACTATCCAGTTGATGG-3' (SEQ ID NO: 2532)

5'-CCUGGUGCUGACUAUCCAGUUGAUGGG-3' (SEQ ID NO: 6969)
3'-GGACCACGACUGAUAGGUCAACUACCC-5' (SEQ ID NO: 1424)

βc-2524 Target: 5'-CCTGGTGCTGACTATCCAGTTGATGGG-3' (SEQ ID NO: 2533)

5'-CUGGUGCUGACUAUCCAGUUGAUGGGC-3' (SEQ ID NO: 6970)
3'-GACCACGACUGAUAGGUCAACUACCCG-5' (SEQ ID NO: 1425)

βc-2525 Target: 5'-CTGGTGCTGACTATCCAGTTGATGGGC-3' (SEQ ID NO: 2534)

5'-UGGUGCUGACUAUCCAGUUGAUGGGCU-3' (SEQ ID NO: 6971)
3'-ACCACGACUGAUAGGUCAACUACCCGA-5' (SEQ ID NO: 1426)

βc-2526 Target: 5'-TGGTGCTGACTATCCAGTTGATGGGCT-3' (SEQ ID NO: 2535)

5'-GGUGCUGACUAUCCAGUUGAUGGGCUG-3' (SEQ ID NO: 6972)
3'-CCACGACUGAUAGGUCAACUACCCGAC-5' (SEQ ID NO: 1427)

βc-2527 Target: 5'-GGTGCTGACTATCCAGTTGATGGGCTG-3' (SEQ ID NO: 2536)

5'-GUGCUGACUAUCCAGUUGAUGGGCUGC-3' (SEQ ID NO: 6973)
3'-CACGACUGAUAGGUCAACUACCCGACG-5' (SEQ ID NO: 1428)

βc-2528 Target: 5'-GTGCTGACTATCCAGTTGATGGGCTGC-3' (SEQ ID NO: 2537)

5'-UGCUGACUAUCCAGUUGAUGGGCUGCC-3' (SEQ ID NO: 6974)
3'-ACGACUGAUAGGUCAACUACCCGACGG-5' (SEQ ID NO: 1429)

βc-2529 Target: 5'-TGCTGACTATCCAGTTGATGGGCTGCC-3' (SEQ ID NO: 2538)

5'-GCUGACUAUCCAGUUGAUGGGCUGCCA-3' (SEQ ID NO: 6975)
3'-CGACUGAUAGGUCAACUACCCGACGGU-5' (SEQ ID NO: 1430)

βc-2530 Target: 5'-GCTGACTATCCAGTTGATGGGCTGCCA-3' (SEQ ID NO: 2539)

5'-CUGACUAUCCAGUUGAUGGGCUGCCAG-3' (SEQ ID NO: 6976)
3'-GACUGAUAGGUCAACUACCCGACGGUC-5' (SEQ ID NO: 1431)

βc-2531 Target: 5'-CTGACTATCCAGTTGATGGGCTGCCAG-3' (SEQ ID NO: 2540)

5'-UGACUAUCCAGUUGAUGGGCUGCCAGA-3' (SEQ ID NO: 6977)
3'-ACUGAUAGGUCAACUACCCGACGGUCU-5' (SEQ ID NO: 1432)

βc-2532 Target: 5'-TGACTATCCAGTTGATGGGCTGCCAGA-3' (SEQ ID NO: 2541)

5'-GACUAUCCAGUUGAUGGGCUGCCAGAU-3' (SEQ ID NO: 6978)
3'-CUGAUAGGUCAACUACCCGACGGUCUA-5' (SEQ ID NO: 1433)

βc-2533 Target: 5'-GACTATCCAGTTGATGGGCTGCCAGAT-3' (SEQ ID NO: 2542)

5'-ACUAUCCAGUUGAUGGGCUGCCAGAUC-3' (SEQ ID NO: 6979)
3'-UGAUAGGUCAACUACCCGACGGUCUAG-5' (SEQ ID NO: 1434)

βc-2534 Target: 5'-ACTATCCAGTTGATGGGCTGCCAGATC-3' (SEQ ID NO: 2543)

5'-CUAUCCAGUUGAUGGGCUGCCAGAUCU-3' (SEQ ID NO: 6980)
3'-GAUAGGUCAACUACCCGACGGUCUAGA-5' (SEQ ID NO: 1435)

βc-2535 Target: 5'-CTATCCAGTTGATGGGCTGCCAGATCT-3' (SEQ ID NO: 2544)

5'-AUGCCCAGGACCUCAUGGAUGGGCUGC-3' (SEQ ID NO: 6981)
3'-UACGGGUCCUGGAGUACCUACCCGACG-5' (SEQ ID NO: 1436)

βc-2567 Target: 5'-ATGCCCAGGACCTCATGGATGGGCTGC-3' (SEQ ID NO: 2545)

5'-UGCCCAGGACCUCAUGGAUGGGCUGCC-3' (SEQ ID NO: 6982)
3'-ACGGGUCCUGGAGUACCUACCCGACGG-5' (SEQ ID NO: 1437)

βc-2568 Target: 5'-TGCCCAGGACCTCATGGATGGGCTGCC-3' (SEQ ID NO: 2546)

5'-GCCCAGGACCUCAUGGAUGGGCUGCCU-3' (SEQ ID NO: 6983)
3'-CGGGUCCUGGAGUACCUACCCGACGGA-5' (SEQ ID NO: 1438)

βc-2569 Target: 5'-GCCCAGGACCTCATGGATGGGCTGCCT-3' (SEQ ID NO: 2547)

5'-ACAGCAAUCAGCUGGCCUGGUUUGAUA-3' (SEQ ID NO: 6984)
3'-UGUCGUUAGUCGACCGGACCAAACUAU-5' (SEQ ID NO: 1439)

βc-2603 Target: 5'-ACAGCAATCAGCTGGCCTGGTTTGATA-3' (SEQ ID NO: 2548)

5'-CAGCAAUCAGCUGGCCUGGUUUGAUAC-3' (SEQ ID NO: 6985)
3'-GUCGUUAGUCGACCGGACCAAACUAUG-5' (SEQ ID NO: 1440)

βc-2604 Target: 5'-CAGCAATCAGCTGGCCTGGTTTGATAC-3' (SEQ ID NO: 2549)

5'-AGCAAUCAGCUGGCCUGGUUUGAUACU-3' (SEQ ID NO: 6986)
3'-UCGUUAGUCGACCGGACCAAACUAUGA-5' (SEQ ID NO: 1441)

βc-2605 Target: 5'-AGCAATCAGCTGGCCTGGTTTGATACT-3' (SEQ ID NO: 2550)

5'-GCAAUCAGCUGGCCUGGUUUGAUACUG-3' (SEQ ID NO: 6987)
3'-CGUUAGUCGACCGGACCAAACUAUGAC-5' (SEQ ID NO: 1442)

βc-2606 Target: 5'-GCAATCAGCTGGCCTGGTTTGATACTG-3' (SEQ ID NO: 2551)

5'-CAAUCAGCUGGCCUGGUUUGAUACUGA-3' (SEQ ID NO: 6988)
3'-GUUAGUCGACCGGACCAAACUAUGACU-5' (SEQ ID NO: 1443)

βc-2607 Target: 5'-CAATCAGCTGGCCTGGTTTGATACTGA-3' (SEQ ID NO: 2552)

5'-AAUCAGCUGGCCUGGUUUGAUACUGAC-3' (SEQ ID NO: 6989)
3'-UUAGUCGACCGGACCAAACUAUGACUG-5' (SEQ ID NO: 1444)

βc-2608 Target: 5'-AATCAGCTGGCCTGGTTTGATACTGAC-3' (SEQ ID NO: 2553)

5'-AUCAGCUGGCCUGGUUUGAUACUGACC-3' (SEQ ID NO: 6990)
3'-UAGUCGACCGGACCAAACUAUGACUGG-5' (SEQ ID NO: 1445)

βc-2609 Target: 5'-ATCAGCTGGCCTGGTTTGATACTGACC-3' (SEQ ID NO: 2554)

5'-UCAGCUGGCCUGGUUUGAUACUGACCU-3' (SEQ ID NO: 6991)
3'-AGUCGACCGGACCAAACUAUGACUGGA-5' (SEQ ID NO: 1446)

βc-2610 Target: 5'-TCAGCTGGCCTGGTTTGATACTGACCT-3' (SEQ ID NO: 2555)

5'-CAGCUGGCCUGGUUUGAUACUGACCUG-3' (SEQ ID NO: 6992)
3'-GUCGACCGGACCAAACUAUGACUGGAC-5' (SEQ ID NO: 1447)

βc-2611 Target: 5'-CAGCTGGCCTGGTTTGATACTGACCTG-3' (SEQ ID NO: 2556)

5'-AGCUGGCCUGGUUUGAUACUGACCUGU-3' (SEQ ID NO: 6993)
3'-UCGACCGGACCAAACUAUGACUGGACA-5' (SEQ ID NO: 1448)

βc-2612 Target: 5'-AGCTGGCCTGGTTTGATACTGACCTGT-3' (SEQ ID NO: 2557)

5'-GCUGGCCUGGUUUGAUACUGACCUGUA-3' (SEQ ID NO: 6994)
3'-CGACCGGACCAAACUAUGACUGGACAU-5' (SEQ ID NO: 1449)

βc-2613 Target: 5'-GCTGGCCTGGTTTGATACTGACCTGTA-3' (SEQ ID NO: 2558)

5'-CUGGCCUGGUUUGAUACUGACCUGUAA-3' (SEQ ID NO: 6995)
3'-GACCGGACCAAACUAUGACUGGACAUU-5' (SEQ ID NO: 1450)

βc-2614 Target: 5'-CTGGCCTGGTTTGATACTGACCTGTAA-3' (SEQ ID NO: 2559)

5'-UGGCCUGGUUUGAUACUGACCUGUAAA-3' (SEQ ID NO: 6996)
3'-ACCGGACCAAACUAUGACUGGACAUUU-5' (SEQ ID NO: 1451)

βc-2615 Target: 5'-TGGCCTGGTTTGATACTGACCTGTAAA-3' (SEQ ID NO: 2560)

5'-GGCCUGGUUUGAUACUGACCUGUAAAU-3' (SEQ ID NO: 6997)
3'-CCGGACCAAACUAUGACUGGACAUUUA-5' (SEQ ID NO: 1452)

βc-2616 Target: 5'-GGCCTGGTTTGATACTGACCTGTAAAT-3' (SEQ ID NO: 2561)

5'-GCCUGGUUUGAUACUGACCUGUAAAUC-3' (SEQ ID NO: 6998)
3'-CGGACCAAACUAUGACUGGACAUUUAG-5' (SEQ ID NO: 1453)

βc-2617 Target: 5'-GCCTGGTTTGATACTGACCTGTAAATC-3' (SEQ ID NO: 2562)

5'-CCUGGUUUGAUACUGACCUGUAAAUCA-3' (SEQ ID NO: 6999)
3'-GGACCAAACUAUGACUGGACAUUUAGU-5' (SEQ ID NO: 1454)

βc-2618 Target: 5'-CCTGGTTTGATACTGACCTGTAAATCA-3' (SEQ ID NO: 2563)

5'-CUGGUUUGAUACUGACCUGUAAAUCAU-3' (SEQ ID NO: 7000)
3'-GACCAAACUAUGACUGGACAUUUAGUA-5' (SEQ ID NO: 1455)

βc-2619 Target: 5'-CTGGTTTGATACTGACCTGTAAATC-3' (SEQ ID NO: 2564)

5'-UGGUUUGAUACUGACCUGUAAAUCAUC-3' (SEQ ID NO: 7001)
3'-ACCAAACUAUGACUGGACAUUUAGUAG-5' (SEQ ID NO: 1456)

βc-2620 Target: 5'-TGGTTTGATACTGACCTGTAAATCATC-3' (SEQ ID NO: 2565)

5'-GGUUUGAUACUGACCUGUAAAUCAUCC-3' (SEQ ID NO: 7002)
3'-CCAAACUAUGACUGGACAUUUAGUAGG-5' (SEQ ID NO: 1457)

βc-2621 Target: 5'-GGTTTGATACTGACCTGTAAATCATCC-3' (SEQ ID NO: 2566)

5'-GUUUGAUACUGACCUGUAAAUCAUCCU-3' (SEQ ID NO: 7003)
3'-CAAACUAUGACUGGACAUUUAGUAGGA-5' (SEQ ID NO: 1458)

βc-2622 Target: 5'-GTTTGATACTGACCTGTAAATCATCCT-3' (SEQ ID NO: 2567)

5'-UUUGAUACUGACCUGUAAAUCAUCCUU-3' (SEQ ID NO: 7004)
3'-AAACUAUGACUGGACAUUUAGUAGGAA-5' (SEQ ID NO: 1459)

βc-2623 Target: 5'-TTTGATACTGACCTGTAAATCATCCTT-3' (SEQ ID NO: 2568)

5'-UUUUUUGCCACAGCUUUUGCAACUUAA-3' (SEQ ID NO: 7005)
3'-AAAAAACGGUGUCGAAAACGUUGAAUU-5' (SEQ ID NO: 1460)

βc-2869 Target: 5'-TTTTTTGCCACAGCTTTTGCAACTTAA-3' (SEQ ID NO: 2569)

5'-AAUGAGUAACAUUUGCUGUUUUAAACA-3' (SEQ ID NO: 7006)
3'-UUACUCAUUGUAAACGACAAAAUUUGU-5' (SEQ ID NO: 1461)

βc-2902 Target: 5'-AATGAGTAACATTTGCTGTTTTAAACA-3' (SEQ ID NO: 2570)

5'-UAAACAUUAAUAGCAGCCUUUCUCUCU-3' (SEQ ID NO: 7007)
3'-AUUUGUAAUUAUCGUCGGAAAGAGAGA-5' (SEQ ID NO: 1462)

βc-2923 Target: 5'-TAAACATTAATAGCAGCCTTTCTCTCT-3' (SEQ ID NO: 2571)

5'-AACAUUAAUAGCAGCCUUUCUCUCUUU-3' (SEQ ID NO: 7008)
3'-UUGUAAUUAUCGUCGGAAAGAGAGAAA-5' (SEQ ID NO: 1463)

βc-2925 Target: 5'-AACATTAATAGCAGCCTTTCTCTCTTT-3' (SEQ ID NO: 2572)

5'-CAUUAAUAGCAGCCUUUCUCUCUUUAU-3' (SEQ ID NO: 7009)
3'-GUAAUUAUCGUCGGAAAGAGAGAAAUA-5' (SEQ ID NO: 1464)

βc-2927 Target: 5'-CATTAATAGCAGCCTTTCTCTCTTTAT-3' (SEQ ID NO: 2573)

5'-UUAAUAGCAGCCUUUCUCUCUUUAUAC-3' (SEQ ID NO: 7010)
3'-AAUUAUCGUCGGAAAGAGAGAAAUAUG-5' (SEQ ID NO: 1465)

βc-2929 Target: 5'-TTAATAGCAGCCTTTCTCTCTTTATAC-3' (SEQ ID NO: 2574)

5'-UUGCAUUGUGAUUGGCCUGUAGAGUUG-3' (SEQ ID NO: 7011)
3'-AACGUAACACUAACCGGACAUCUCAAC-5' (SEQ ID NO: 1466)

βc-2973 Target: 5'-TTGCATTGTGATTGGCCTGTAGAGTTG-3' (SEQ ID NO: 2575)

5'-GCAUUGUGAUUGGCCUGUAGAGUUGCU-3' (SEQ ID NO: 7012)
3'-CGUAACACUAACCGGACAUCUCAACGA-5' (SEQ ID NO: 1467)

βc-2975 Target: 5'-GCATTGTGATTGGCCTGTAGAGTTGCT-3' (SEQ ID NO: 2576)

5'-AUUGUGAUUGGCCUGUAGAGUUGCUGA-3' (SEQ ID NO: 7013)
3'-UAACACUAACCGGACAUCUCAACGACU-5' (SEQ ID NO: 1468)

βc-2977 Target: 5'-ATTGTGATTGGCCTGTAGAGTTGCTGA-3' (SEQ ID NO: 2577)

5'-UGUGAUUGGCCUGUAGAGUUGCUGAGA-3' (SEQ ID NO: 7014)
3'-ACACUAACCGGACAUCUCAACGACUCU-5' (SEQ ID NO: 1469)

βc-2979 Target: 5'-TGTGATTGGCCTGTAGAGTTGCTGAGA-3' (SEQ ID NO: 2578)

5'-UGAUUGGCCUGUAGAGUUGCUGAGAGG-3' (SEQ ID NO: 7015)
3'-ACUAACCGGACAUCUCAACGACUCUCC-5' (SEQ ID NO: 1470)

βc-2981 Target: 5'-TGATTGGCCTGTAGAGTTGCTGAGAGG-3' (SEQ ID NO: 2579)

5'-AUUGGCCUGUAGAGUUGCUGAGAGGGC-3' (SEQ ID NO: 7016)
3'-UAACCGGACAUCUCAACGACUCUCCCG-5' (SEQ ID NO: 1471)

βc-2983 Target: 5'-ATTGGCCTGTAGAGTTGCTGAGAGGGC-3' (SEQ ID NO: 2580)

5'-UGGCCUGUAGAGUUGCUGAGAGGGCUC-3' (SEQ ID NO: 7017)
3'-ACCGGACAUCUCAACGACUCUCCCGAG-5' (SEQ ID NO: 1472)

βc-2985 Target: 5'-TGGCCTGTAGAGTTGCTGAGAGGGCTC-3' (SEQ ID NO: 2581)

5'-GCCUGUAGAGUUGCUGAGAGGGCUCGA-3' (SEQ ID NO: 7018)
3'-CGGACAUCUCAACGACUCUCCCGAGCU-5' (SEQ ID NO: 1473)

βc-2987 Target: 5'-GCCTGTAGAGTTGCTGAGAGGGCTCGA-3' (SEQ ID NO: 2582)

5'-CUGUAGAGUUGCUGAGAGGGCUCGAGG-3' (SEQ ID NO: 7019)
3'-GACAUCUCAACGACUCUCCCGAGCUCC-5' (SEQ ID NO: 1474)

βc-2989 Target: 5'-CTGTAGAGTTGCTGAGAGGGCTCGAGG-3' (SEQ ID NO: 2583)

5'-GGGUGGGCUGGUAUCUCAGAAAGUGCC-3' (SEQ ID NO: 7020)
3'-CCCACCCGACCAUAGAGUCUUUCACGG-5' (SEQ ID NO: 1475)

βc-3015 Target: 5'-GGGTGGGCTGGTATCTCAGAAAGTGCC-3' (SEQ ID NO: 2584)

5'-GUGGGCUGGUAUCUCAGAAAGUGCCUG-3' (SEQ ID NO: 7021)
3'-CACCCGACCAUAGAGUCUUUCACGGAC-5' (SEQ ID NO: 1476)

βc-3017 Target: 5'-GTGGGCTGGTATCTCAGAAAGTGCCTG-3' (SEQ ID NO: 2585)

5'-GGGCUGGUAUCUCAGAAAGUGCCUGAC-3' (SEQ ID NO: 7022)
3'-CCCGACCAUAGAGUCUUUCACGGACUG-5' (SEQ ID NO: 1477)

βc-3019 Target: 5'-GGGCTGGTATCTCAGAAAGTGCCTGAC-3' (SEQ ID NO: 2586)

5'-GCUGGUAUCUCAGAAAGUGCCUGACAC-3' (SEQ ID NO: 7023)
3'-CGACCAUAGAGUCUUUCACGGACUGUG-5' (SEQ ID NO: 1478)

βc-3021 Target: 5'-GCTGGTATCTCAGAAAGTGCCTGACAC-3' (SEQ ID NO: 2587)

5'-ACACUAACCAAGCUGAGUUUCCUAUGG-3' (SEQ ID NO: 7024)
3'-UGUGAUUGGUUCGACUCAAAGGAUACC-5' (SEQ ID NO: 1479)

βc-3046 Target: 5'-ACACTAACCAAGCTGAGTTTCCTATGG-3' (SEQ ID NO: 2588)

5'-ACUAACCAAGCUGAGUUUCCUAUGGGA-3' (SEQ ID NO: 7025)
3'-UGAUUGGUUCGACUCAAAGGAUACCCU-5' (SEQ ID NO: 1480)

βc-3048 Target: 5'-ACTAACCAAGCTGAGTTTCCTATGGGA-3' (SEQ ID NO: 2589)

5'-UAACCAAGCUGAGUUUCCUAUGGGAAC-3' (SEQ ID NO: 7026)
3'-AUUGGUUCGACUCAAAGGAUACCCUUG-5' (SEQ ID NO: 1481)

βc-3050 Target: 5'-TAACCAAGCTGAGTTTCCTATGGGAAC-3' (SEQ ID NO: 2590)

5'-ACCAAGCUGAGUUUCCUAUGGGAACAA-3' (SEQ ID NO: 7027)
3'-UGGUUCGACUCAAAGGAUACCCUUGUU-5' (SEQ ID NO: 1482)

βc-3052 Target: 5'-ACCAAGCTGAGTTTCCTATGGGAACAA-3' (SEQ ID NO: 2591)

5'-CAAGCUGAGUUUCCUAUGGGAACAAUU-3' (SEQ ID NO: 7028)
3'-GUUCGACUCAAAGGAUACCCUUGUUAA-5' (SEQ ID NO: 1483)

βc-3054 Target: 5'-CAAGCTGAGTTTCCTATGGGAACAATT-3' (SEQ ID NO: 2592)

5'-AGCUGAGUUUCCUAUGGGAACAAUUGA-3' (SEQ ID NO: 7029)
3'-UCGACUCAAAGGAUACCCUUGUUAACU-5' (SEQ ID NO: 1484)

βc-3056 Target: 5'-AGCTGAGTTTCCTATGGGAACAATTGA-3' (SEQ ID NO: 2593)

5'-AACUUUUUGUUCUGGUCCUUUUUGGUC-3' (SEQ ID NO: 7030)
3'-UUGAAAAACAAGACCAGGAAAAACCAG-5' (SEQ ID NO: 1485)

βc-3087 Target: 5'-AACTTTTTGTTCTGGTCCTTTTTGGTC-3' (SEQ ID NO: 2594)

5'-CUUUUUGUUCUGGUCCUUUUUGGUCGA-3' (SEQ ID NO: 7031)
3'-GAAAAACAAGACCAGGAAAAACCAGCU-5' (SEQ ID NO: 1486)

βc-3089 Target: 5'-CTTTTTGTTCTGGTCCTTTTTGGTCGA-3' (SEQ ID NO: 2595)

5'-UUUUGUUCUGGUCCUUUUUGGUCGAGG-3' (SEQ ID NO: 7032)
3'-AAAACAAGACCAGGAAAAACCAGCUCC-5' (SEQ ID NO: 1487)

βc-3091 Target: 5'-TTTTGTTCTGGTCCTTTTTGGTCGAGG-3' (SEQ ID NO: 2596)

5'-UUGUUCUGGUCCUUUUUGGUCGAGGAG-3' (SEQ ID NO: 7033)
3'-AACAAGACCAGGAAAAACCAGCUCCUC-5' (SEQ ID NO: 1488)

βc-3093 Target: 5'-TTGTTCTGGTCCTTTTTGGTCGAGGAG-3' (SEQ ID NO: 2597)

5'-GUUCUGGUCCUUUUUGGUCGAGGAGUA-3' (SEQ ID NO: 7034)
3'-CAAGACCAGGAAAAACCAGCUCCUCAU-5' (SEQ ID NO: 1489)

βc-3095 Target: 5'-GTTCTGGTCCTTTTTGGTCGAGGAGTA-3' (SEQ ID NO: 2598)

5'-UCUGGUCCUUUUUGGUCGAGGAGUAAC-3' (SEQ ID NO: 7035)
3'-AGACCAGGAAAAACCAGCUCCUCAUUG-5' (SEQ ID NO: 1490)

βc-3097 Target: 5'-TCTGGTCCTTTTTGGTCGAGGAGTAAC-3' (SEQ ID NO: 2599)

5'-UGGUCCUUUUUGGUCGAGGAGUAACAA-3' (SEQ ID NO: 7036)
3'-ACCAGGAAAAACCAGCUCCUCAUUGUU-5' (SEQ ID NO: 1491)

βc-3099 Target: 5'-TGGTCCTTTTTGGTCGAGGAGTAACAA-3' (SEQ ID NO: 2600)

5'-GUCCUUUUUGGUCGAGGAGUAACAAUA-3' (SEQ ID NO: 7037)
3'-CAGGAAAAACCAGCUCCUCAUUGUUAU-5' (SEQ ID NO: 1492)

βc-3101 Target: 5'-GTCCTTTTTGGTCGAGGAGTAACAATA-3' (SEQ ID NO: 2601)

5'-CCUUUUUGGUCGAGGAGUAACAAUACA-3' (SEQ ID NO: 7038)
3'-GGAAAAACCAGCUCCUCAUUGUUAUGU-5' (SEQ ID NO: 1493)

βc-3103 Target: 5'-CCTTTTTGGTCGAGGAGTAACAATACA-3' (SEQ ID NO: 2602)

5'-UUUUUGGUCGAGGAGUAACAAUACAAA-3' (SEQ ID NO: 7039)
3'-AAAAACCAGCUCCUCAUUGUUAUGUUU-5' (SEQ ID NO: 1494)

βc-3105 Target: 5'-TTTTTGGTCGAGGAGTAACAATACAAA-3' (SEQ ID NO: 2603)

5'-UUUGGUCGAGGAGUAACAAUACAAAUG-3' (SEQ ID NO: 7040)
3'-AAACCAGCUCCUCAUUGUUAUGUUUAC-5' (SEQ ID NO: 1495)

βc-3107 Target: 5'-TTTGGTCGAGGAGTAACAATACAAATG-3' (SEQ ID NO: 2604)

5'-UGGUCGAGGAGUAACAAUACAAAUGGA-3' (SEQ ID NO: 7041)
3'-ACCAGCUCCUCAUUGUUAUGUUUACCU-5' (SEQ ID NO: 1496)

βc-3109 Target: 5'-TGGTCGAGGAGTAACAATACAAATGGA-3' (SEQ ID NO: 2605)

5'-GUCGAGGAGUAACAAUACAAAUGGAUU-3' (SEQ ID NO: 7042)
3'-CAGCUCCUCAUUGUUAUGUUUACCUAA-5' (SEQ ID NO: 1497)

βc-3111 Target: 5'-GTCGAGGAGTAACAATACAAATGGATT-3' (SEQ ID NO: 2606)

5'-CGAGGAGUAACAAUACAAAUGGAUUUU-3' (SEQ ID NO: 7043)
3'-GCUCCUCAUUGUUAUGUUUACCUAAAA-5' (SEQ ID NO: 1498)

βc-3113 Target: 5'-CGAGGAGTAACAATACAAATGGATTTT-3' (SEQ ID NO: 2607)

5'-AGGAGUAACAAUACAAAUGGAUUUUGG-3' (SEQ ID NO: 7044)
3'-UCCUCAUUGUUAUGUUUACCUAAAACC-5' (SEQ ID NO: 1499)

βc-3115 Target: 5'-AGGAGTAACAATACAAATGGATTTTGG-3' (SEQ ID NO: 2608)

5'-UUUAUCAAACCCUAGCCUUGCUUGUUA-3' (SEQ ID NO: 7045)
3'-AAAUAGUUUGGGAUCGGAACGAACAAU-5' (SEQ ID NO: 1500)

βc-3191 Target: 5'-TTTATCAAACCCTAGCCTTGCTTGTTA-3' (SEQ ID NO: 2609)

5'-UAUCAAACCCUAGCCUUGCUUGUUAAA-3' (SEQ ID NO: 7046)
3'-AUAGUUUGGGAUCGGAACGAACAAUUU-5' (SEQ ID NO: 1501)

βc-3193 Target: 5'-TATCAAACCCTAGCCTTGCTTGTTAAA-3' (SEQ ID NO: 2610)

5'-UCAAACCCUAGCCUUGCUUGUUAAAUU-3' (SEQ ID NO: 7047)
3'-AGUUUGGGAUCGGAACGAACAAUUUAA-5' (SEQ ID NO: 1502)

βc-3195 Target: 5'-TCAAACCCTAGCCTTGCTTGTTAAATT-3' (SEQ ID NO: 2611)

5'-UUGAGUAAUGGUGUAGAACACUAAUUC-3' (SEQ ID NO: 7048)
3'-AACUCAUUACCACAUCUUGUGAUUAAG-5' (SEQ ID NO: 1503)

βc-3387 Target: 5'-TTGAGTAATGGTGTAGAACACTAATTC-3' (SEQ ID NO: 2612)

5'-GAGUAAUGGUGUAGAACACUAAUUCAU-3' (SEQ ID NO: 7049)
3'-CUCAUUACCACAUCUUGUGAUUAAGUA-5' (SEQ ID NO: 1504)

βc-3389 Target: 5'-GAGTAATGGTGTAGAACACTAATTC-3' (SEQ ID NO: 2613)

5'-GUAAUGGUGUAGAACACUAAUUCAUAA-3' (SEQ ID NO: 7050)
3'-CAUUACCACAUCUUGUGAUUAAGUAUU-5' (SEQ ID NO: 1505)

βc-3391 Target: 5'-GTAATGGTGTAGAACACTAATTCATAA-3' (SEQ ID NO: 2614)

5'-AAUGGUGUAGAACACUAAUUCAUAAUC-3' (SEQ ID NO: 7051)
3'-UUACCACAUCUUGUGAUUAAGUAUUAG-5' (SEQ ID NO: 1506)

βc-3393 Target: 5'-AATGGTGTAGAACACTAATTCATAATC-3' (SEQ ID NO: 2615)

5'-UGGUGUAGAACACUAAUUCAUAAUCAC-3' (SEQ ID NO: 7052)
3'-ACCACAUCUUGUGAUUAAGUAUUAGUG-5' (SEQ ID NO: 1507)

βc-3395 Target: 5'-TGGTGTAGAACACTAATTCATAATCAC-3' (SEQ ID NO: 2616)

5'-GUGUAGAACACUAAUUCAUAAUCACUC-3' (SEQ ID NO: 7053)
3'-CACAUCUUGUGAUUAAGUAUUAGUGAG-5' (SEQ ID NO: 1508)

βc-3397 Target: 5'-GTGTAGAACACTAATTCATAATCACTC-3' (SEQ ID NO: 2617)

5'-GUAGAACACUAAUUCAUAAUCACUCUA-3' (SEQ ID NO: 7054)
3'-CAUCUUGUGAUUAAGUAUUAGUGAGAU-5' (SEQ ID NO: 1509)

βc-3399 Target: 5'-GTAGAACACTAATTCATAATCACTCTA-3' (SEQ ID NO: 2618)

5'-AGAACACUAAUUCAUAAUCACUCUAAU-3' (SEQ ID NO: 7055)
3'-UCUUGUGAUUAAGUAUUAGUGAGAUUA-5' (SEQ ID NO: 1510)

βc-3401 Target: 5'-AGAACACTAATTCATAATCACTCTAAT-3' (SEQ ID NO: 2619)

5'-AAUUAGUUUCCUUUUUAAUAUGCUUAA-3' (SEQ ID NO: 7056)
3'-UUAAUCAAAGGAAAAAUUAUACGAAUU-5' (SEQ ID NO: 1511)

βc-3500 Target: 5'-AATTAGTTTCCTTTTTAATATGCTTAA-3' (SEQ ID NO: 2620)

5'-UUAGUUUCCUUUUUAAUAUGCUUAAAA-3' (SEQ ID NO: 7057)
3'-AAUCAAAGGAAAAAUUAUACGAAUUUU-5' (SEQ ID NO: 1512)

βc-3502 Target: 5'-TTAGTTTCCTTTTTAATATGCTTAAAA-3' (SEQ ID NO: 2621)

5'-AGUUUCCUUUUUAAUAUGCUUAAAAUA-3' (SEQ ID NO: 7058)
3'-UCAAAGGAAAAAUUAUACGAAUUUUAU-5' (SEQ ID NO: 1513)

βc-3504 Target: 5'-AGTTTCCTTTTTAATATGCTTAAAATA-3' (SEQ ID NO: 2622)

5'-UUUCCUUUUUAAUAUGCUUAAAAUAAG-3' (SEQ ID NO: 7059)
3'-AAAGGAAAAAUUAUACGAAUUUUAUUC-5' (SEQ ID NO: 1514)

βc-3506 Target: 5'-TTTCCTTTTTAATATGCTTAAAATAAG-3' (SEQ ID NO: 2623)

5'-UCCUUUUUAAUAUGCUUAAAAUAAGCA-3' (SEQ ID NO: 7060)
3'-AGGAAAAAUUAUACGAAUUUUAUUCGU-5' (SEQ ID NO: 1515)

βc-3508 Target: 5'-TCCTTTTTAATATGCTTAAAATAAGCA-3' (SEQ ID NO: 2624)

5'-CCUUUUUAAUAUGCUUAAAAUAAGCAG-3' (SEQ ID NO: 7061)
3'-GGAAAAAUUAUACGAAUUUUAUUCGUC-5' (SEQ ID NO: 1516)

βc-3509 Target: 5'-CCTTTTTAATATGCTTAAAATAAGCAG-3' (SEQ ID NO: 2625)

5'-CUUUUUAAUAUGCUUAAAAUAAGCAGG-3' (SEQ ID NO: 7062)
3'-GAAAAAUUAUACGAAUUUUAUUCGUCC-5' (SEQ ID NO: 1517)

βc-3510 Target: 5'-CTTTTTAATATGCTTAAAATAAGCAGG-3' (SEQ ID NO: 2626)

5'-UUUUAAUAUGCUUAAAAUAAGCAGGUG-3' (SEQ ID NO: 7063)
3'-AAAAUUAUACGAAUUUUAUUCGUCCAC-5' (SEQ ID NO: 1518)

βc-3512 Target: 5'-TTTTAATATGCTTAAAATAAGCAGGTG-3' (SEQ ID NO: 2627)

5'-UUAAUAUGCUUAAAAUAAGCAGGUGGA-3' (SEQ ID NO: 7064)
3'-AAUUAUACGAAUUUUAUUCGUCCACCU-5' (SEQ ID NO: 1519)

βc-3514 Target: 5'-TTAATATGCTTAAAATAAGCAGGTGGA-3' (SEQ ID NO: 2628)

5'-AAUAUGCUUAAAAUAAGCAGGUGGAUC-3' (SEQ ID NO: 7065)
3'-UUAUACGAAUUUUAUUCGUCCACCUAG-5' (SEQ ID NO: 1520)

βc-3516 Target: 5'-AATATGCTTAAAATAAGCAGGTGGATC-3' (SEQ ID NO: 2629)

5'-UAUGCUUAAAAUAAGCAGGUGGAUCUA-3' (SEQ ID NO: 7066)
3'-AUACGAAUUUUAUUCGUCCACCUAGAU-5' (SEQ ID NO: 1521)

βc-3518 Target: 5'-TATGCTTAAAATAAGCAGGTGGATCTA-3' (SEQ ID NO: 2630)

5'-UGCUUAAAAUAAGCAGGUGGAUCUAUU-3' (SEQ ID NO: 7067)
3'-ACGAAUUUUAUUCGUCCACCUAGAUAA-5' (SEQ ID NO: 1522)

βc-3520 Target: 5'-TGCTTAAAATAAGCAGGTGGATCTATT-3' (SEQ ID NO: 2631)

5'-CUUAAAAUAAGCAGGUGGAUCUAUUUC-3' (SEQ ID NO: 7068)
3'-GAAUUUUAUUCGUCCACCUAGAUAAAG-5' (SEQ ID NO: 1523)

βc-3522 Target: 5'-CTTAAAATAAGCAGGTGGATCTATTTC-3' (SEQ ID NO: 2632)

5'-UAAAAUAAGCAGGUGGAUCUAUUUCAU-3' (SEQ ID NO: 7069)
3'-AUUUUAUUCGUCCACCUAGAUAAAGUA-5' (SEQ ID NO: 1524)

βc-3524 Target: 5'-TAAAATAAGCAGGTGGATCTATTTC-3' (SEQ ID NO: 2633)

5'-AAAUAAGCAGGUGGAUCUAUUUCAUGU-3' (SEQ ID NO: 7070)
3'-UUUAUUCGUCCACCUAGAUAAAGUACA-5' (SEQ ID NO: 1525)

βc-3526 Target: 5'-AAATAAGCAGGTGGATCTATTTCATGT-3' (SEQ ID NO: 2634)

5'-AUAAGCAGGUGGAUCUAUUUCAUGUUU-3' (SEQ ID NO: 7071)
3'-UAUUCGUCCACCUAGAUAAAGUACAAA-5' (SEQ ID NO: 1526)

βc-3528 Target: 5'-ATAAGCAGGTGGATCTATTTCATGTTT-3' (SEQ ID NO: 2635)

5'-AAGCAGGUGGAUCUAUUUCAUGUUUUU-3' (SEQ ID NO: 7072)
3'-UUCGUCCACCUAGAUAAAGUACAAAAA-5' (SEQ ID NO: 1527)

βc-3530 Target: 5'-AAGCAGGTGGATCTATTTCATGTTTTT-3' (SEQ ID NO: 2636)

5'-GCAGGUGGAUCUAUUUCAUGUUUUUGA-3' (SEQ ID NO: 7073)
3'-CGUCCACCUAGAUAAAGUACAAAAACU-5' (SEQ ID NO: 1528)

βc-3532 Target: 5'-GCAGGTGGATCTATTTCATGTTTTTGA-3' (SEQ ID NO: 2637)

5'-AGGUGGAUCUAUUUCAUGUUUUUGAUC-3' (SEQ ID NO: 7074)
3'-UCCACCUAGAUAAAGUACAAAAACUAG-5' (SEQ ID NO: 1529)

βc-3534 Target: 5'-AGGTGGATCTATTTCATGTTTTTGATC-3' (SEQ ID NO: 2638)

5'-GUGGAUCUAUUUCAUGUUUUUGAUCAA-3' (SEQ ID NO: 7075)
3'-CACCUAGAUAAAGUACAAAAACUAGUU-5' (SEQ ID NO: 1530)

βc-3536 Target: 5'-GTGGATCTATTTCATGTTTTTGATCAA-3' (SEQ ID NO: 2639)

5'-GGAUCUAUUUCAUGUUUUUGAUCAAAA-3' (SEQ ID NO: 7076)
3'-CCUAGAUAAAGUACAAAAACUAGUUUU-5' (SEQ ID NO: 1531)

βc-3538 Target: 5'-GGATCTATTTCATGTTTTTGATCAAAA-3' (SEQ ID NO: 2640)

5'-GGGUAGGGUAAAUCAGUAAGAGGUGUU-3' (SEQ ID NO: 7077)
3'-CCCAUCCCAUUUAGUCAUUCUCCACAA-5' (SEQ ID NO: 1532)

βc-3583 Target: 5'-GGGTAGGGTAAATCAGTAAGAGGTGTT-3' (SEQ ID NO: 2641)

5'-GUAGGGUAAAUCAGUAAGAGGUGUUAU-3' (SEQ ID NO: 7078)
3'-CAUCCCAUUUAGUCAUUCUCCACAAUA-5' (SEQ ID NO: 1533)

βc-3585 Target: 5'-GTAGGGTAAATCAGTAAGAGGTGTTAT-3' (SEQ ID NO: 2642)

5'-AGGGUAAAUCAGUAAGAGGUGUUAUUU-3' (SEQ ID NO: 7079)
3'-UCCCAUUUAGUCAUUCUCCACAAUAAA-5' (SEQ ID NO: 1534)

βc-3587 Target: 5'-AGGGTAAATCAGTAAGAGGTGTTATTT-3' (SEQ ID NO: 2643)

5'-GGUAAAUCAGUAAGAGGUGUUAUUUGG-3' (SEQ ID NO: 7080)
3'-CCAUUUAGUCAUUCUCCACAAUAAACC-5' (SEQ ID NO: 1535)

βc-3589 Target: 5'-GGTAAATCAGTAAGAGGTGTTATTTGG-3' (SEQ ID NO: 2644)

5'-UAAAUCAGUAAGAGGUGUUAUUUGGAA-3' (SEQ ID NO: 7081)
3'-AUUUAGUCAUUCUCCACAAUAAACCUU-5' (SEQ ID NO: 1536)

βc-3591 Target: 5'-TAAATCAGTAAGAGGTGTTATTTGGAA-3' (SEQ ID NO: 2645)

5'-AAUCAGUAAGAGGUGUUAUUUGGAACC-3' (SEQ ID NO: 7082)
3'-UUAGUCAUUCUCCACAAUAAACCUUGG-5' (SEQ ID NO: 1537)

βc-3593 Target: 5'-AATCAGTAAGAGGTGTTATTTGGAACC-3' (SEQ ID NO: 2646)

5'-UUUACCAGUUGCCUUUUAUCCCAAAGU-3' (SEQ ID NO: 7083)
3'-AAAUGGUCAACGGAAAAUAGGGUUUCA-5' (SEQ ID NO: 1538)

βc-3633 Target: 5'-TTTACCAGTTGCCTTTTATCCCAAAGT-3' (SEQ ID NO: 2647)

5'-UACCAGUUGCCUUUUAUCCCAAAGUUG-3' (SEQ ID NO: 7084)
3'-AUGGUCAACGGAAAAUAGGGUUUCAAC-5' (SEQ ID NO: 1539)

βc-3635 Target: 5'-TACCAGTTGCCTTTTATCCCAAAGTTG-3' (SEQ ID NO: 2648)

5'-CCAGUUGCCUUUUAUCCCAAAGUUGUU-3' (SEQ ID NO: 7085)
3'-GGUCAACGGAAAAUAGGGUUUCAACAA-5' (SEQ ID NO: 1540)

βc-3637 Target: 5'-CCAGTTGCCTTTTATCCCAAAGTTGTT-3' (SEQ ID NO: 2649)

5'-AGUUGCCUUUUAUCCCAAAGUUGUUGU-3' (SEQ ID NO: 7086)
3'-UCAACGGAAAAUAGGGUUUCAACAACA-5' (SEQ ID NO: 1541)

βc-3639 Target: 5'-AGTTGCCTTTTATCCCAAAGTTGTTGT-3' (SEQ ID NO: 2650)

5'-UUGCCUUUUAUCCCAAAGUUGUUGUAA-3' (SEQ ID NO: 7087)
3'-AACGGAAAAUAGGGUUUCAACAACAUU-5' (SEQ ID NO: 1542)

βc-3641 Target: 5'-TTGCCTTTTATCCCAAAGTTGTTGTAA-3' (SEQ ID NO: 2651)

5'-GCCUUUUAUCCCAAAGUUGUUGUAACC-3' (SEQ ID NO: 7088)
3'-CGGAAAAUAGGGUUUCAACAACAUUGG-5' (SEQ ID NO: 1543)

βc-3643 Target: 5'-GCCTTTTATCCCAAAGTTGTTGTAACC-3' (SEQ ID NO: 2652)

5'-CUUUUAUCCCAAAGUUGUUGUAACCUG-3' (SEQ ID NO: 7089)
3'-GAAAAUAGGGUUUCAACAACAUUGGAC-5' (SEQ ID NO: 1544)

βc-3645 Target: 5'-CTTTTATCCCAAAGTTGTTGTAACCTG-3' (SEQ ID NO: 2653)

5'-UUUAUCCCAAAGUUGUUGUAACCUGCU-3' (SEQ ID NO: 7090)
3'-AAAUAGGGUUUCAACAACAUUGGACGA-5' (SEQ ID NO: 1545)

βc-3647 Target: 5'-TTTATCCCAAAGTTGTTGTAACCTGCT-3' (SEQ ID NO: 2654)

5'-UAUCCCAAAGUUGUUGUAACCUGCUGU-3' (SEQ ID NO: 7091)
3'-AUAGGGUUUCAACAACAUUGGACGACA-5' (SEQ ID NO: 1546)

βc-3649 Target: 5'-TATCCCAAAGTTGTTGTAACCTGCTGT-3' (SEQ ID NO: 2655)

5'-UCCCAAAGUUGUUGUAACCUGCUGUGA-3' (SEQ ID NO: 7092)
3'-AGGGUUUCAACAACAUUGGACGACACU-5' (SEQ ID NO: 1547)

βc-3651 Target: 5'-TCCCAAAGTTGTTGTAACCTGCTGTGA-3' (SEQ ID NO: 2656)

5'-CCAAAGUUGUUGUAACCUGCUGUGAUA-3' (SEQ ID NO: 7093)
3'-GGUUUCAACAACAUUGGACGACACUAU-5' (SEQ ID NO: 1548)

βc-3653 Target: 5'-CCAAAGTTGTTGTAACCTGCTGTGATA-3' (SEQ ID NO: 2657)

5'-AAAGUUGUUGUAACCUGCUGUGAUACG-3' (SEQ ID NO: 7094)
3'-UUUCAACAACAUUGGACGACACUAUGC-5' (SEQ ID NO: 1549)

βc-3655 Target: 5'-AAAGTTGTTGTAACCTGCTGTGATACG-3' (SEQ ID NO: 2658)

5'-AGUUGUUGUAACCUGCUGUGAUACGAU-3' (SEQ ID NO: 7095)
3'-UCAACAACAUUGGACGACACUAUGCUA-5' (SEQ ID NO: 1550)

βc-3657 Target: 5'-AGTTGTTGTAACCTGCTGTGATACGAT-3' (SEQ ID NO: 2659)

5'-UUGUUGUAACCUGCUGUGAUACGAUGC-3' (SEQ ID NO: 7096)
3'-AACAACAUUGGACGACACUAUGCUACG-5' (SEQ ID NO: 1551)

βc-3659 Target: 5'-TTGTTGTAACCTGCTGTGATACGATGC-3' (SEQ ID NO: 2660)

5'-AAAAAUGGUUCAGAAUUAAACUUUUAA-3' (SEQ ID NO: 7097)
3'-UUUUUACCAAGUCUUAAUUUGAAAAUU-5' (SEQ ID NO: 1552)

βc-3708 Target: 5'-AAAAATGGTTCAGAATTAAACTTTTAA-3' (SEQ ID NO: 2661)

5'-AAAUGGUUCAGAAUUAAACUUUUAAUU-3' (SEQ ID NO: 7098)
3'-UUUACCAAGUCUUAAUUUGAAAAUUAA-5' (SEQ ID NO: 1553)

βc-3710 Target: 5'-AAATGGTTCAGAATTAAACTTTTAATT-3' (SEQ ID NO: 2662)

5'-AUGGUUCAGAAUUAAACUUUUAAUUCA-3' (SEQ ID NO: 7099)
3'-UACCAAGUCUUAAUUUGAAAAUUAAGU-5' (SEQ ID NO: 1554)

βc-3712 Target: 5'-ATGGTTCAGAATTAAACTTTTAATTCA-3' (SEQ ID NO: 2663)

5'-GGUUCAGAAUUAAACUUUUAAUUCAUU-3' (SEQ ID NO: 7100)
3'-CCAAGUCUUAAUUUGAAAAUUAAGUAA-5' (SEQ ID NO: 1555)

βc-3714 Target: 5'-GGTTCAGAATTAAACTTTTAATTCATT-3' (SEQ ID NO: 2664)

5'-UUCAGAAUUAAACUUUUAAUUCAUUCG-3' (SEQ ID NO: 7101)
3'-AAGUCUUAAUUUGAAAAUUAAGUAAGC-5' (SEQ ID NO: 1556)

βc-3716 Target: 5'-TTCAGAATTAAACTTTTAATTCATTCG-3' (SEQ ID NO: 2665)

5'-CAGCAGCAGUCUUACUUGGAUUCUGGA-3' (SEQ ID NO: 7102)
3'-GUCGUCGUCAGAAUGAACCUAAGACCU-5' (SEQ ID NO: 1557)

βc-m314 Target: 5'-CAGCAGCAGTCTTACTTGGATTCTGGA-3' (SEQ ID NO: 2666)

5'-UUACUUGGAUUCUGGAAUCCAUUCUGG-3' (SEQ ID NO: 7103)
3'-AAUGAACCUAAGACCUUAGGUAAGACC-5' (SEQ ID NO: 1558)

βc-m325 Target: 5'-TTACTTGGATTCTGGAATCCATTCTGG-3' (SEQ ID NO: 2667)

5'-UUGACACCUCCCAAGUCCUUUAUGAAU-3' (SEQ ID NO: 7104)
3'-AACUGUGGAGGGUUCAGGAAAUACUUA-5' (SEQ ID NO: 1559)

βc-m408 Target: 5'-TTGACACCTCCCAAGTCCTTTATGAAT-3' (SEQ ID NO: 2668)

5'-CACGCAAGAGCAAGUAGCUGAUAUUGA-3' (SEQ ID NO: 7105)
3'-GUGCGUUCUCGUUCAUCGACUAUAACU-5' (SEQ ID NO: 1560)

βc-m460 Target: 5'-CACGCAAGAGCAAGTAGCTGATATTGA-3' (SEQ ID NO: 2669)

5'-UGCCAUGUUCCCUGAGACGCUAGAUGA-3' (SEQ ID NO: 7106)
3'-ACGGUACAAGGGACUCUGCGAUCUACU-5' (SEQ ID NO: 1561)

βc-m526 Target: 5'-TGCCATGTTCCCTGAGACGCTAGATGA-3' (SEQ ID NO: 2670)

5'-GUUGAAACAUGCAGUUGUCAAUUUGAU-3' (SEQ ID NO: 7107)
3'-CAACUUUGUACGUCAACAGUUAAACUA-5' (SEQ ID NO: 1562)

βc-m631 Target: 5'-GTTGAAACATGCAGTTGTCAATTTGAT-3' (SEQ ID NO: 2671)

5'-AACAUGCAGUUGUCAAUUUGAUUAACU-3' (SEQ ID NO: 7108)
3'-UUGUACGUCAACAGUUAAACUAAUUGA-5' (SEQ ID NO: 1563)

βc-m636 Target: 5'-AACATGCAGTTGTCAATTTGATTAACT-3' (SEQ ID NO: 2672)

5'-CAGUUGUCAAUUUGAUUAACUAUCAGG-3' (SEQ ID NO: 7109)
3'-GUCAACAGUUAAACUAAUUGAUAGUCC-5' (SEQ ID NO: 1564)

βc-m642 Target: 5'-CAGTTGTCAATTTGATTAACTATCAGG-3' (SEQ ID NO: 2673)

5'-AUGAGGACCAGGUGGUAGUUAAUAAAG-3' (SEQ ID NO: 7110)
3'-UACUCCUGGUCCACCAUCAAUUAUUUC-5' (SEQ ID NO: 1565)

βc-m723 Target: 5'-ATGAGGACCAGGTGGTAGTTAATAAAG-3' (SEQ ID NO: 2674)

5'-UGGGUCACCAGUGGAUUCUGUACUGUU-3' (SEQ ID NO: 7111)
3'-ACCCAGUGGUCACCUAAGACAUGACAA-5' (SEQ ID NO: 1566)

βc-m970 Target: 5'-TGGGTCACCAGTGGATTCTGTACTGTT-3' (SEQ ID NO: 2675)

5'-ACCAGUGGAUUCUGUACUGUUCUACGC-3' (SEQ ID NO: 7112)
3'-UGGUCACCUAAGACAUGACAAGAUGCG-5' (SEQ ID NO: 1567)

βc-m976 Target: 5'-ACCAGTGGATTCTGTACTGTTCTACGC-3' (SEQ ID NO: 2676)

5'-UGGAUUCUGUACUGUUCUACGCCAUCA-3' (SEQ ID NO: 7113)
3'-ACCUAAGACAUGACAAGAUGCGGUAGU-5' (SEQ ID NO: 1568)

βc-m981 Target: 5'-TGGATTCTGTACTGTTCTACGCCATCA-3' (SEQ ID NO: 2677)

5'-UGGUGGACUGCAGAAAAUGGUUGCUUU-3' (SEQ ID NO: 7114)
3'-ACCACCUGACGUCUUUUACCAACGAAA-5' (SEQ ID NO: 1569)

βc-m1066 Target: 5'-TGGTGGACTGCAGAAAATGGTTGCTTT-3' (SEQ ID NO: 2678)

5'-AACGUGAAAUUCUUGGCUAUUACAACA-3' (SEQ ID NO: 7115)
3'-UUGCACUUUAAGAACCGAUAAUGUUGU-5' (SEQ ID NO: 1570)

βc-m1106 Target: 5'-AACGTGAAATTCTTGGCTATTACAACA-3' (SEQ ID NO: 2679)

5'-CCCAAGUCAGCGACUUGUUCAAAACUG-3' (SEQ ID NO: 7116)
3'-GGGUUCAGUCGCUGAACAAGUUUUGAC-5' (SEQ ID NO: 1571)

βc-m1354 Target: 5'-CCCAAGTCAGCGACTTGTTCAAAACTG-3' (SEQ ID NO: 2680)

5'-GCGACUUGUUCAAAACUGUCUUUGGAC-3' (SEQ ID NO: 7117)
3'-CGCUGAACAAGUUUUGACAGAAACCUG-5' (SEQ ID NO: 1572)

βc-m1363 Target: 5'-GCGACTTGTTCAAAACTGTCTTTGGAC-3' (SEQ ID NO: 2681)

5'-CAAAACUGUCUUUGGACUCUCAGAAAC-3' (SEQ ID NO: 7118)
3'-GUUUUGACAGAAACCUGAGAGUCUUUG-5' (SEQ ID NO: 1573)

βc-m1373 Target: 5'-CAAAACTGTCTTTGGACTCTCAGAAAC-3' (SEQ ID NO: 2682)

5'-CUCUCUAACCUCACUUGCAAUAAUUAC-3' (SEQ ID NO: 7119)
3'-GAGAGAUUGGAGUGAACGUUAUUAAUG-5' (SEQ ID NO: 1574)

βc-m1508 Target: 5'-CTCTCTAACCTCACTTGCAATAATTAC-3' (SEQ ID NO: 2683)

5'-ACCUCACUUGCAAUAAUUACAAAAACA-3' (SEQ ID NO: 7120)
3'-UGGAGUGAACGUUAUUAAUGUUUUUGU-5' (SEQ ID NO: 1575)

βc-m1515 Target: 5'-ACCTCACTTGCAATAATTACAAAAACA-3' (SEQ ID NO: 2684)

5'-CAGAAUGCCGUUCGCCUUCAUUAUGGA-3' (SEQ ID NO: 7121)
3'-GUCUUACGGCAAGCGGAAGUAAUACCU-5' (SEQ ID NO: 1576)

βc-m1682 Target: 5'-CAGAATGCCGTTCGCCTTCATTATGGA-3' (SEQ ID NO: 2685)

5'-UCGCCUUCAUUAUGGACUGCCUGUUGU-3' (SEQ ID NO: 7122)
3'-AGCGGAAGUAAUACCUGACGGACAACA-5' (SEQ ID NO: 1577)

βc-m1693 Target: 5'-TCGCCTTCATTATGGACTGCCTGTTGT-3' (SEQ ID NO: 2686)

5'-UUCAUUAUGGACUGCCUGUUGUGGUUA-3' (SEQ ID NO: 7123)
3'-AAGUAAUACCUGACGGACAACACCAAU-5' (SEQ ID NO: 1578)

βc-m1698 Target: 5'-TTCATTATGGACTGCCTGTTGTGGTTA-3' (SEQ ID NO: 2687)

5'-UGGACUGCCUGUUGUGGUUAAACUCCU-3' (SEQ ID NO: 7124)
3'-ACCUGACGGACAACACCAAUUUGAGGA-5' (SEQ ID NO: 1579)

βc-m1705 Target: 5'-TGGACTGCCTGTTGTGGTTAAACTCCT-3' (SEQ ID NO: 2688)

5'-GCAACUGUUGGAUUGAUUCGAAACCUU-3' (SEQ ID NO: 7125)
3'-CGUUGACAACCUAACUAAGCUUUGGAA-5' (SEQ ID NO: 1580)

βc-m1763 Target: 5'-GCAACTGTTGGATTGATTCGAAACCTT-3' (SEQ ID NO: 2689)

5'-CCGAGGACUCAAUACCAUUCCAUUGUU-3' (SEQ ID NO: 7126)
3'-GGCUCCUGAGUUAUGGUAAGGUAACAA-5' (SEQ ID NO: 1581)

βc-m2008 Target: 5'-CCGAGGACTCAATACCATTCCATTGTT-3' (SEQ ID NO: 2690)

5'-CUGAGGACAAGCCACAGGAUUACAAGA-3' (SEQ ID NO: 7127)
3'-GACUCCUGUUCGGUGUCCUAAUGUUCU-5' (SEQ ID NO: 1582)

βc-m2226 Target: 5'-CTGAGGACAAGCCACAGGATTACAAGA-3' (SEQ ID NO: 2691)

5'-GGAUGGACCCUAUGAUGGAGCAUGAGA-3' (SEQ ID NO: 7128)
3'-CCUACCUGGGAUACUACCUCGUACUCU-5' (SEQ ID NO: 1583)

βc-m2427 Target: 5'-GGATGGACCCTATGATGGAGCATGAGA-3' (SEQ ID NO: 2692)

5'-UUGAUACUGACCUGUAAAUCGUCCUUU-3' (SEQ ID NO: 7129)
3'-AACUAUGACUGGACAUUUAGCAGGAAA-5' (SEQ ID NO: 1584)

βc-m2568 Target: 5'-TTGATACTGACCTGTAAATCGTCCTTT-3' (SEQ ID NO: 2693)

5'-AGCCAGUGUGGGUGAAUACUUUACUCU-3' (SEQ ID NO: 7130)
3'-UCGGUCACACCCACUUAUGAAAUGAGA-5' (SEQ ID NO: 1585)

βc-m2614 Target: 5'-AGCCAGTGTGGGTGAATACTTTACTCT-3' (SEQ ID NO: 2694)

5'-UGCCACAGCUUUUGCAGCGUUAUACUC-3' (SEQ ID NO: 7131)
3'-ACGGUGUCGAAAACGUCGCAAUAUGAG-5' (SEQ ID NO: 1586)

βc-m2770 Target: 5'-TGCCACAGCTTTTGCAGCGTTATACTC-3' (SEQ ID NO: 2695)

5'-GCUUUUGCAGCGUUAUACUCAGAUGAG-3' (SEQ ID NO: 7132)
3'-CGAAAACGUCGCAAUAUGAGUCUACUC-5' (SEQ ID NO: 1587)

βc-m2777 Target: 5'-GCTTTTGCAGCGTTATACTCAGATGAG-3' (SEQ ID NO: 2696)

5'-CAGCGUUAUACUCAGAUGAGUAACAUU-3' (SEQ ID NO: 7133)
3'-GUCGCAAUAUGAGUCUACUCAUUGUAA-5' (SEQ ID NO: 1588)

βc-m2784 Target: 5'-CAGCGTTATACTCAGATGAGTAACATT-3' (SEQ ID NO: 2697)

5'-ACAUUUGCUGUUUUCAACAUUAAUAGC-3' (SEQ ID NO: 7134)
3'-UGUAAACGACAAAAGUUGUAAUUAUCG-5' (SEQ ID NO: 1589)

βc-m2806 Target: 5'-ACATTTGCTGTTTTCAACATTAATAGC-3' (SEQ ID NO: 2698)

5'-AGCUGUAGUGUCUGAACGUGCAUUGUG-3' (SEQ ID NO: 7135)
3'-UCGACAUCACAGACUUGCACGUAACAC-5' (SEQ ID NO: 1590)

βc-m2850 Target: 5'-AGCTGTAGTGTCTGAACGTGCATTGTG-3' (SEQ ID NO: 2699)

5'-GGGAACAGUCGAAGUACGCUUUUUGUU-3' (SEQ ID NO: 7136)
3'-CCCUUGUCAGCUUCAUGCGAAAAACAA-5' (SEQ ID NO: 1591)

βc-m2965 Target: 5'-GGGAACAGTCGAAGTACGCTTTTTGTT-3' (SEQ ID NO: 2700)

5'-CAGUCGAAGUACGCUUUUUGUUCUGGU-3' (SEQ ID NO: 7137)
3'-GUCAGCUUCAUGCGAAAAACAAGACCA-5' (SEQ ID NO: 1592)

βc-m2970 Target: 5'-CAGTCGAAGTACGCTTTTTGTTCTGGT-3' (SEQ ID NO: 2701)

5'-AAGUACGCUUUUUGUUCUGGUCCUUUU-3' (SEQ ID NO: 7138)
3'-UUCAUGCGAAAAACAAGACCAGGAAAA-5' (SEQ ID NO: 1593)

βc-m2976 Target: 5'-AAGTACGCTTTTTGTTCTGGTCCTTTT-3' (SEQ ID NO: 2702)

5'-ACCCUAGCCUUGCUUGUUCUUUGUUUU-3' (SEQ ID NO: 7139)
3'-UGGGAUCGGAACGAACAAGAAACAAAA-5' (SEQ ID NO: 1594)

βc-m3092 Target: 5'-ACCCTAGCCTTGCTTGTTCTTTGTTTT-3' (SEQ ID NO: 2703)

5'-AGCCUUGCUUGUUCUUUGUUUUAAUAU-3' (SEQ ID NO: 7140)
3'-UCGGAACGAACAAGAAACAAAAUUAUA-5' (SEQ ID NO: 1595)

βc-m3097 Target: 5'-AGCCTTGCTTGTTCTTTGTTTTAATAT-3' (SEQ ID NO: 2704)

5'-UGAACCUGCUACAGCAAUUUCUGAUUU-3' (SEQ ID NO: 7141)
3'-ACUUGGACGAUGUCGUUAAAGACUAAA-5' (SEQ ID NO: 1596)

βc-m3198 Target: 5'-TGAACCTGCTACAGCAATTTCTGATTT-3' (SEQ ID NO: 2705)

5'-UACAGCAAUUUCUGAUUUCUAAGAACC-3' (SEQ ID NO: 7142)
3'-AUGUCGUUAAAGACUAAAGAUUCUUGG-5' (SEQ ID NO: 1597)

βc-m3207 Target: 5'-TACAGCAATTTCTGATTTCTAAGAACC-3' (SEQ ID NO: 2706)

5'-CAGUAAGAGGUGUUAUUUGAGCCUUGU-3' (SEQ ID NO: 7143)
3'-GUCAUUCUCCACAAUAAACUCGGAACA-5' (SEQ ID NO: 1598)

βc-m3433 Target: 5'-CAGTAAGAGGTGTTATTTGAGCCTTGT-3' (SEQ ID NO: 2707)

5'-GAGGUGUUAUUUGAGCCUUGUUUUGGA-3' (SEQ ID NO: 7144)
3'-CUCCACAAUAAACUCGGAACAAAACCU-5' (SEQ ID NO: 1599)

βc-m3439 Target: 5'-GAGGTGTTATTTGAGCCTTGTTTTGGA-3' (SEQ ID NO: 2708)

5'-GUUAUUUGAGCCUUGUUUUGGACAGUA-3' (SEQ ID NO: 7145)
3'-CAAUAAACUCGGAACAAAACCUGUCAU-5' (SEQ ID NO: 1600)

βc-m3444 Target: 5'-GTTATTTGAGCCTTGTTTTGGACAGTA-3' (SEQ ID NO: 2709)

5'-UUGAGCCUUGUUUUGGACAGUAUACCA-3' (SEQ ID NO: 7146)
3'-AACUCGGAACAAAACCUGUCAUAUGGU-5' (SEQ ID NO: 1601)

βc-m3449 Target: 5'-TTGAGCCTTGTTTTGGACAGTATACCA-3' (SEQ ID NO: 2710)

5'-UUCAACAGAUGCGGUUAUAGAAAUGGU-3' (SEQ ID NO: 7147)
3'-AAGUUGUCUACGCCAAUAUCUUUACCA-5' (SEQ ID NO: 1602)

βc-m3522 Target: 5'-TTCAACAGATGCGGTTATAGAAATGGT-3' (SEQ ID NO: 2711)

5'-CGGUUAUAGAAAUGGUUCAGAAUUAAA-3' (SEQ ID NO: 7148)
3'-GCCAAUAUCUUUACCAAGUCUUAAUUU-5' (SEQ ID NO: 1603)

βc-m3533 Target: 5'-CGGTTATAGAAATGGTTCAGAATTAAA-3' (SEQ ID NO: 2712)

5'-AUAGAAAUGGUUCAGAAUUAAACUUUU-3' (SEQ ID NO: 7149)
3'-UAUCUUUACCAAGUCUUAAUUUGAAAA-5' (SEQ ID NO: 1604)

βc-m3538 Target: 5'-ATAGAAATGGTTCAGAATTAAACTTTT-3' (SEQ ID NO: 2713)

Table 9: Additional Selected Anti-β-catenin DsiRNAs, 25/27mer Duplexes

5'-UGUAUGGUAUACUUCAAAUACCCtc-3' (SEQ ID NO: 496)
3'-CAACAUACCAUAUGAAGUUUAUGGGAG-5' (SEQ ID NO: 1605)

βc-244 Target: 5'-GTTGTATGGTATACTTCAAATACCCTC-3' (SEQ ID NO: 2714)

5'-AAACAGUUGUAUGGUAUACUUCAaa-3' (SEQ ID NO: 497)
3'-GUUUUGUCAACAUACCAUAUGAAGUUU-5' (SEQ ID NO: 1606)

βc-251 Target: 5'-CAAAACAGTTGTATGGTATACTTCAAA-3' (SEQ ID NO: 2715)

5'-AAAACAGUUGUAUGGUAUACUUCaa-3' (SEQ ID NO: 498)
3'-AGUUUUGUCAACAUACCAUAUGAAGUU-5' (SEQ ID NO: 1607)

βc-252 Target: 5'-TCAAAACAGTTGTATGGTATACTTCAA-3' (SEQ ID NO: 2716)

5'-UCAAAACAGUUGUAUGGUAUACUtc-3' (SEQ ID NO: 499)

3'-AAAGUUUUGUCAACAUACCAUAUGAAG-5' (SEQ ID NO: 1608)

βc-254 Target: 5'-TTTCAAAACAGTTGTATGGTATACTTC-3' (SEQ ID NO: 2717)

5'-UUCAAAACAGUUGUAUGGUAUACtt-3' (SEQ ID NO: 500)
3'-AAAAGUUUUGUCAACAUACCAUAUGAA-5' (SEQ ID NO: 1609)

βc-255 Target: 5'-TTTTCAAAACAGTTGTATGGTATACTT-3' (SEQ ID NO: 2718)

5'-UUUCAAAACAGUUGUAUGGUAUAct-3' (SEQ ID NO: 501)
3'-UAAAAGUUUUGUCAACAUACCAUAUGA-5' (SEQ ID NO: 1610)

βc-256 Target: 5'-ATTTTCAAAACAGTTGTATGGTATACT-3' (SEQ ID NO: 2719)

5'-GUCCACGCUGGAUUUUCAAAACAgt-3' (SEQ ID NO: 502)
3'-AACAGGUGCGACCUAAAAGUUUUGUCA-5' (SEQ ID NO: 1611)

βc-269 Target: 5'-TTGTCCACGCTGGATTTTCAAAACAGT-3' (SEQ ID NO: 2720)

5'-UGUCCACGCUGGAUUUUCAAAACag-3' (SEQ ID NO: 503)
3'-UAACAGGUGCGACCUAAAAGUUUUGUC-5' (SEQ ID NO: 1612)

βc-270 Target: 5'-ATTGTCCACGCTGGATTTTCAAAACAG-3' (SEQ ID NO: 2721)

5'-AUCAAAUCAGCUUGAGUAGCCAUtg-3' (SEQ ID NO: 504)
3'-GGUAGUUUAGUCGAACUCAUCGGUAAC-5' (SEQ ID NO: 1613)

βc-293 Target: 5'-CCATCAAATCAGCTTGAGTAGCCATTG-3' (SEQ ID NO: 2722)

5'-UCCAACUCCAUCAAAUCAGCUUGag-3' (SEQ ID NO: 505)
3'-ACAGGUUGAGGUAGUUUAGUCGAACUC-5' (SEQ ID NO: 1614)

βc-302 Target: 5'-TGTCCAACTCCATCAAATCAGCTTGAG-3' (SEQ ID NO: 2723)

5'-UCCUCAGGAUUGCCUUUACCACUca-3' (SEQ ID NO: 506)
3'-GAAGGAGUCCUAACGGAAAUGGUGAGU-5' (SEQ ID NO: 1615)

βc-431 Target: 5'-CTTCCTCAGGATTGCCTTTACCACTCA-3' (SEQ ID NO: 2724)

5'-UUCCUCAGGAUUGCCUUUACCACtc-3' (SEQ ID NO: 507)
3'-AGAAGGAGUCCUAACGGAAAUGGUGAG-5' (SEQ ID NO: 1616)

βc-432 Target: 5'-TCTTCCTCAGGATTGCCTTTACCACTC-3' (SEQ ID NO: 2725)

5'-UCAAUAUCAGCUACUUGUUCUUGag-3' (SEQ ID NO: 508)
3'-GUAGUUAUAGUCGAUGAACAAGAACUC-5' (SEQ ID NO: 1617)

βc-518 Target: 5'-CATCAATATCAGCTACTTGTTCTTGAG-3' (SEQ ID NO: 2726)

5'-AUCAAUAUCAGCUACUUGUUCUUga-3' (SEQ ID NO: 509)
3'-GGUAGUUAUAGUCGAUGAACAAGAACU-5' (SEQ ID NO: 1618)

βc-519 Target: 5'-CCATCAATATCAGCTACTTGTTCTTGA-3' (SEQ ID NO: 2727)

5'-UGUCCAUCAAUAUCAGCUACUUGtt-3' (SEQ ID NO: 510)
3'-UGACAGGUAGUUAUAGUCGAUGAACAA-5' (SEQ ID NO: 1619)

βc-524 Target: 5'-ACTGTCCATCAATATCAGCTACTTGTT-3' (SEQ ID NO: 2728)

5'-UGCAUACUGUCCAUCAAUAUCAGct-3' (SEQ ID NO: 511)
3'-UAACGUAUGACAGGUAGUUAUAGUCGA-5' (SEQ ID NO: 1620)

βc-531 Target: 5'-ATTGCATACTGTCCATCAATATCAGCT-3' (SEQ ID NO: 2729)

5'-AGUCAUUGCAUACUGUCCAUCAAta-3' (SEQ ID NO: 512)

3'-GCUCAGUAACGUAUGACAGGUAGUUAU-5' (SEQ ID NO: 1621)

βc-537 Target: 5'-CGAGTCATTGCATACTGTCCATCAATA-3' (SEQ ID NO: 2730)

5'-UCAUCUAAUGUCUCAGGGAACAUag-3' (SEQ ID NO: 513)
3'-GGAGUAGAUUACAGAGUCCCUUGUAUC-5' (SEQ ID NO: 1622)

βc-584 Target: 5'-CCTCATCTAATGTCTCAGGGAACATAG-3' (SEQ ID NO: 2731)

5'-ACAACUGCAUGUUUCAGCAUCUGtg-3' (SEQ ID NO: 514)
3'-AAUGUUGACGUACAAAGUCGUAGACAC-5' (SEQ ID NO: 1623)

βc-680 Target: 5'-TTACAACTGCATGTTTCAGCATCTGTG-3' (SEQ ID NO: 2732)

5'-UUACAACUGCAUGUUUCAGCAUCtg-3' (SEQ ID NO: 515)
3'-CAAAUGUUGACGUACAAAGUCGUAGAC-5' (SEQ ID NO: 1624)

βc-682 Target: 5'-GTTTACAACTGCATGTTTCAGCATCTG-3' (SEQ ID NO: 2733)

5'-UUAAUCAAGUUUACAACUGCAUGtt-3' (SEQ ID NO: 516)
3'-UCAAUUAGUUCAAAUGUUGACGUACAA-5' (SEQ ID NO: 1625)

βc-692 Target: 5'-AGTTAATCAAGTTTACAACTGCATGTT-3' (SEQ ID NO: 2734)

5'-UGAUAGUUAAUCAAGUUUACAACtg-3' (SEQ ID NO: 517)
3'-GAACUAUCAAUUAGUUCAAAUGUUGAC-5' (SEQ ID NO: 1626)

βc-698 Target: 5'-CTTGATAGTTAATCAAGTTTACAACTG-3' (SEQ ID NO: 2735)

5'-GCAUCAUCUUGAUAGUUAAUCAAgt-3' (SEQ ID NO: 518)
3'-GACGUAGUAGAACUAUCAAUUAGUUCA-5' (SEQ ID NO: 1627)

βc-707 Target: 5'-CTGCATCATCTTGATAGTTAATCAAGT-3' (SEQ ID NO: 2736)

5'-UGCAUCAUCUUGAUAGUUAAUCAag-3' (SEQ ID NO: 519)
3'-AGACGUAGUAGAACUAUCAAUUAGUUC-5' (SEQ ID NO: 1628)

βc-708 Target: 5'-TCTGCATCATCTTGATAGTTAATCAAG-3' (SEQ ID NO: 2737)

5'-GGUCCUCGUCAUUUAGCAGUUUUgt-3' (SEQ ID NO: 520)
3'-GACCAGGAGCAGUAAAUCGUCAAAACA-5' (SEQ ID NO: 1629)

βc-763 Target: 5'-CTGGTCCTCGTCATTTAGCAGTTTTGT-3' (SEQ ID NO: 2738)

5'-UAACUGCAGCCUUAUUAACCACCac-3' (SEQ ID NO: 521)
3'-GUAUUGACGUCGGAAUAAUUGGUGGUG-5' (SEQ ID NO: 1630)

βc-790 Target: 5'-CATAACTGCAGCCTTATTAACCACCAC-3' (SEQ ID NO: 2739)

5'-AUAACUGCAGCCUUAUUAACCACca-3' (SEQ ID NO: 522)
3'-GGUAUUGACGUCGGAAUAAUUGGUGGU-5' (SEQ ID NO: 1631)

βc-791 Target: 5'-CCATAACTGCAGCCTTATTAACCACCA-3' (SEQ ID NO: 2740)

5'-ACCAUAACUGCAGCCUUAUUAACca-3' (SEQ ID NO: 523)
3'-CCUGGUAUUGACGUCGGAAUAAUUGGU-5' (SEQ ID NO: 1632)

βc-794 Target: 5'-GGACCATAACTGCAGCCTTATTAACCA-3' (SEQ ID NO: 2741)

5'-UUUUUAGAAAGCUGAUGGACCAUaa-3' (SEQ ID NO: 524)
3'-GGAAAAAUCUUUCGACUACCUGGUAUU-5' (SEQ ID NO: 1633)

βc-812 Target: 5'-CCTTTTTAGAAAGCTGATGGACCATAA-3' (SEQ ID NO: 2742)

5'-GGUACGUACAAUAGCAGACACCAtc-3' (SEQ ID NO: 525)

3'-UACCAUGCAUGUUAUCGUCUGUGGUAG-5' (SEQ ID NO: 1634)

βc-873 Target: 5'-ATGGTACGTACAATAGCAGACACCATC-3' (SEQ ID NO: 2743)

5'-UCAUUUGUAUUCUGCAUGGUACGta-3' (SEQ ID NO: 526)
3'-GUAGUAAACAUAAGACGUACCAUGCAU-5' (SEQ ID NO: 1635)

βc-890 Target: 5'-CATCATTTGTATTCTGCATGGTACGTA-3' (SEQ ID NO: 2744)

5'-GUUUCUACAUCAUUUGUAUUCUGca-3' (SEQ ID NO: 527)
3'-GACAAAGAUGUAGUAAACAUAAGACGU-5' (SEQ ID NO: 1636)

βc-899 Target: 5'-CTGTTTCTACATCATTTGTATTCTGCA-3' (SEQ ID NO: 2745)

5'-UGUUUCUACAUCAUUUGUAUUCUgc-3' (SEQ ID NO: 528)
3'-CGACAAAGAUGUAGUAAACAUAAGACG-5' (SEQ ID NO: 1637)

βc-900 Target: 5'-GCTGTTTCTACATCATTTGTATTCTGC-3' (SEQ ID NO: 2746)

5'-ACAACGAGCUGUUUCUACAUCAUtt-3' (SEQ ID NO: 529)
3'-CAUGUUGCUCGACAAAGAUGUAGUAAA-5' (SEQ ID NO: 1638)

βc-909 Target: 5'-GTACAACGAGCTGTTTCTACATCATTT-3' (SEQ ID NO: 2747)

5'-GUACAACGAGCUGUUUCUACAUCat-3' (SEQ ID NO: 530)
3'-GCCAUGUUGCUCGACAAAGAUGUAGUA-5' (SEQ ID NO: 1639)

βc-911 Target: 5'-CGGTACAACGAGCTGTTTCTACATC-3' (SEQ ID NO: 2748)

5'-GGUACAACGAGCUGUUUCUACAUca-3' (SEQ ID NO: 531)
3'-CGCCAUGUUGCUCGACAAAGAUGUAGU-5' (SEQ ID NO: 1640)

βc-912 Target: 5'-GCGGTACAACGAGCTGTTTCTACATCA-3' (SEQ ID NO: 2749)

5'-AUAAAACAACACAGAAUCCACUGgt-3' (SEQ ID NO: 532)
3'-CGUAUUUUGUUGUGUCUUAGGUGACCA-5' (SEQ ID NO: 1641)

βc-1032 Target: 5'-GCATAAAACAACACAGAATCCACTGGT-3' (SEQ ID NO: 2750)

5'-GCAUAAAACAACACAGAAUCCACtg-3' (SEQ ID NO: 533)
3'-ACCGUAUUUUGUUGUGUCUUAGGUGAC-5' (SEQ ID NO: 1642)

βc-1034 Target: 5'-TGGCATAAAACAACACAGAATCCACTG-3' (SEQ ID NO: 2751)

5'-GGCAUAAAACAACACAGAAUCCAct-3' (SEQ ID NO: 534)
3'-UACCGUAUUUUGUUGUGUCUUAGGUGA-5' (SEQ ID NO: 1643)

βc-1035 Target: 5'-ATGGCATAAAACAACACAGAATCCACT-3' (SEQ ID NO: 2752)

5'-GCUCCUUCUUGAUGUAAUAAAAGgt-3' (SEQ ID NO: 535)
3'-AUCGAGGAAGAACUACAUUAUUUUCCA-5' (SEQ ID NO: 1644)

βc-1076 Target: 5'-TAGCTCCTTCTTGATGTAATAAAAGGT-3' (SEQ ID NO: 2753)

5'-AGCUCCUUCUUGAUGUAAUAAAAgg-3' (SEQ ID NO: 536)
3'-AAUCGAGGAAGAACUACAUUAUUUUCC-5' (SEQ ID NO: 1645)

βc-1077 Target: 5'-TTAGCTCCTTCTTGATGTAATAAAAGG-3' (SEQ ID NO: 2754)

5'-UAACAUUUGUUUUGUUGAGCAAGgc-3' (SEQ ID NO: 537)
3'-AAAUUGUAAACAAAACAACUCGUUCCG-5' (SEQ ID NO: 1646)

βc-1144 Target: 5'-TTTAACATTTGTTTTGTTGAGCAAGGC-3' (SEQ ID NO: 2755)

5'-GCCAAGAAUUUAACAUUUGUUUUgt-3' (SEQ ID NO: 538)

3'-AUCGGUUCUUAAAUUGUAAACAAAACA-5' (SEQ ID NO: 1647)

βc-1154 Target: 5'-TAGCCAAGAATTTAACATTTGTTTTGT-3' (SEQ ID NO: 2756)

5'-UAAUAGCCAAGAAUUUAACAUUUgt-3' (SEQ ID NO: 539)
3'-GCAUUAUCGGUUCUUAAAUUGUAAACA-5' (SEQ ID NO: 1648)

βc-1159 Target: 5'-CGTAATAGCCAAGAATTTAACATTTGT-3' (SEQ ID NO: 2757)

5'-GUAAUAGCCAAGAAUUUAACAUUtg-3' (SEQ ID NO: 540)
3'-AGCAUUAUCGGUUCUUAAAUUGUAAAC-5' (SEQ ID NO: 1649)

βc-1160 Target: 5'-TCGTAATAGCCAAGAATTTAACATTTG-3' (SEQ ID NO: 2758)

5'-AGCUAAAAUUUGAAGGCAGUCUGtc-3' (SEQ ID NO: 541)
3'-AUUCGAUUUUAAACUUCCGUCAGACAG-5' (SEQ ID NO: 1650)

βc-1185 Target: 5'-TAAGCTAAAATTTGAAGGCAGTCTGTC-3' (SEQ ID NO: 2759)

5'-GGUCCUCAUUAUAUUUACUAAAGct-3' (SEQ ID NO: 542)
3'-AUCCAGGAGUAAUAUAAAUGAUUUCGA-5' (SEQ ID NO: 1651)

βc-1260 Target: 5'-TAGGTCCTCATTATATTTACTAAAGCT-3' (SEQ ID NO: 2760)

5'-GUAUAGGUCCUCAUUAUAUUUACta-3' (SEQ ID NO: 543)
3'-UUCAUAUCCAGGAGUAAUAUAAAUGAU-5' (SEQ ID NO: 1652)

βc-1265 Target: 5'-AAGTATAGGTCCTCATTATATTTACTA-3' (SEQ ID NO: 2761)

5'-AGUAUAGGUCCUCAUUAUAUUUAct-3' (SEQ ID NO: 544)
3'-AUUCAUAUCCAGGAGUAAUAUAAAUGA-5' (SEQ ID NO: 1653)

βc-1266 Target: 5'-TAAGTATAGGTCCTCATTATATTTACT-3' (SEQ ID NO: 2762)

5'-UUUUCGUAAGUAUAGGUCCUCAUta-3' (SEQ ID NO: 545)
3'-CAAAAAGCAUUCAUAUCCAGGAGUAAU-5' (SEQ ID NO: 1654)

βc-1274 Target: 5'-GTTTTTCGTAAGTATAGGTCCTCATTA-3' (SEQ ID NO: 2763)

5'-UUUUUCGUAAGUAUAGGUCCUCAtt-3' (SEQ ID NO: 546)
3'-UCAAAAAGCAUUCAUAUCCAGGAGUAA-5' (SEQ ID NO: 1655)

βc-1275 Target: 5'-AGTTTTTCGTAAGTATAGGTCCTCATT-3' (SEQ ID NO: 2764)

5'-GUUUUUCGUAAGUAUAGGUCCUCat-3' (SEQ ID NO: 547)
3'-AUCAAAAAGCAUUCAUAUCCAGGAGUA-5' (SEQ ID NO: 1656)

βc-1276 Target: 5'-TAGTTTTTCGTAAGTATAGGTCCTC-3' (SEQ ID NO: 2765)

5'-AGUUUUUCGUAAGUAUAGGUCCUca-3' (SEQ ID NO: 548)
3'-CAUCAAAAAGCAUUCAUAUCCAGGAGU-5' (SEQ ID NO: 1657)

βc-1277 Target: 5'-GTAGTTTTTCGTAAGTATAGGTCCTCA-3' (SEQ ID NO: 2766)

5'-GGUCCACAGUAGUUUUUCGUAAGta-3' (SEQ ID NO: 549)
3'-CACCAGGUGUCAUCAAAAAGCAUUCAU-5' (SEQ ID NO: 1658)

βc-1287 Target: 5'-GTGGTCCACAGTAGTTTTTCGTAAGTA-3' (SEQ ID NO: 2767)

5'-UACAAUAGCCGGCUUAUUACUAGag-3' (SEQ ID NO: 550)
3'-AGAUGUUAUCGGCCGAAUAAUGAUCUC-5' (SEQ ID NO: 1659)

βc-1344 Target: 5'-TCTACAATAGCCGGCTTATTACTAGAG-3' (SEQ ID NO: 2768)

5'-UCUACAAUAGCCGGCUUAUUACUag-3' (SEQ ID NO: 551)

3'-GAAGAUGUUAUCGGCCGAAUAAUGAUC-5' (SEQ ID NO: 1660)

βc-1346 Target: 5'-CTTCTACAATAGCCGGCTTATTACTAG-3' (SEQ ID NO: 2769)

5'-UCCUAAAGCUUGCAUUCCACCAGct-3' (SEQ ID NO: 552)
3'-UCAGGAUUUCGAACGUAAGGUGGUCGA-5' (SEQ ID NO: 1661)

βc-1371 Target: 5'-AGTCCTAAAGCTTGCATTCCACCAGCT-3' (SEQ ID NO: 2770)

5'-GUCCUAAAGCUUGCAUUCCACCAgc-3' (SEQ ID NO: 553)
3'-UUCAGGAUUUCGAACGUAAGGUGGUCG-5' (SEQ ID NO: 1662)

βc-1372 Target: 5'-AAGTCCTAAAGCTTGCATTCCACCAGC-3' (SEQ ID NO: 2771)

5'-AGUCCUAAAGCUUGCAUUCCACCag-3' (SEQ ID NO: 554)
3'-CUUCAGGAUUUCGAACGUAAGGUGGUC-5' (SEQ ID NO: 1663)

βc-1373 Target: 5'-GAAGTCCTAAAGCTTGCATTCCACCAG-3' (SEQ ID NO: 2772)

5'-GUUCUGAACAAGACGUUGACUUGga-3' (SEQ ID NO: 555)
3'-GUCAAGACUUGUUCUGCAACUGAACCU-5' (SEQ ID NO: 1664)

βc-1410 Target: 5'-CAGTTCTGAACAAGACGTTGACTTGGA-3' (SEQ ID NO: 2773)

5'-AGUUCUGAACAAGACGUUGACUUgg-3' (SEQ ID NO: 556)
3'-UGUCAAGACUUGUUCUGCAACUGAACC-5' (SEQ ID NO: 1665)

βc-1411 Target: 5'-ACAGTTCTGAACAAGACGTTGACTTGG-3' (SEQ ID NO: 2774)

5'-GUCCAAAGACAGUUCUGAACAAGac-3' (SEQ ID NO: 557)
3'-CUCAGGUUUCUGUCAAGACUUGUUCUG-5' (SEQ ID NO: 1666)

βc-1421 Target: 5'-GAGTCCAAAGACAGTTCTGAACAAGAC-3' (SEQ ID NO: 2775)

5'-UUCCUGUUUAGUUGCAGCAUCUGaa-3' (SEQ ID NO: 558)
3'-GGAAGGACAAAUCAACGUCGUAGACUU-5' (SEQ ID NO: 1667)

βc-1458 Target: 5'-CCTTCCTGTTTAGTTGCAGCATCTGAA-3' (SEQ ID NO: 2776)

5'-ACAUUUAUAUCAUCUGAACCCAGaa-3' (SEQ ID NO: 559)
3'-GGUGUAAAUAUAGUAGACUUGGGUCUU-5' (SEQ ID NO: 1668)

βc-1517 Target: 5'-CCACATTTATATCATCTGAACCCAGAA-3' (SEQ ID NO: 2777)

5'-ACCACAUUUAUAUCAUCUGAACCca-3' (SEQ ID NO: 560)
3'-ACUGGUGUAAAUAUAGUAGACUUGGGU-5' (SEQ ID NO: 1669)

βc-1520 Target: 5'-TGACCACATTTATATCATCTGAACCCA-3' (SEQ ID NO: 2778)

5'-GCACAGGUGACCACAUUUAUAUCat-3' (SEQ ID NO: 561)
3'-GACGUGUCCACUGGUGUAAAUAUAGUA-5' (SEQ ID NO: 1670)

βc-1529 Target: 5'-CTGCACAGGTGACCACATTTATATC-3' (SEQ ID NO: 2779)

5'-UGCACAGGUGACCACAUUUAUAUca-3' (SEQ ID NO: 562)
3'-CGACGUGUCCACUGGUGUAAAUAUAGU-5' (SEQ ID NO: 1671)

βc-1530 Target: 5'-GCTGCACAGGTGACCACATTTATATCA-3' (SEQ ID NO: 2780)

5'-UGCAAGUGAGGUUAGAAAGAAUUcc-3' (SEQ ID NO: 563)
3'-UAACGUUCACUCCAAUCUUUCUUAAGG-5' (SEQ ID NO: 1672)

βc-1558 Target: 5'-ATTGCAAGTGAGGTTAGAAAGAATTCC-3' (SEQ ID NO: 2781)

5'-AUAAUUAUUGCAAGUGAGGUUAGaa-3' (SEQ ID NO: 564)

3'-AAUAUUAAUAACGUUCACUCCAAUCUU-5' (SEQ ID NO: 1673)

βc-1566 Target: 5'-TTATAATTATTGCAAGTGAGGTTAGAA-3' (SEQ ID NO: 2782)

5'-UCAUCUUGUUCUUAUAAUUAUUGca-3' (SEQ ID NO: 565)
3'-GUAGUAGAACAAGAAUAUUAAUAACGU-5' (SEQ ID NO: 1674)

βc-1579 Target: 5'-CATCATCTTGTTCTTATAATTATTGCA-3' (SEQ ID NO: 2783)

5'-AUCAUCUUGUUCUUAUAAUUAUUgc-3' (SEQ ID NO: 566)
3'-GGUAGUAGAACAAGAAUAUUAAUAACG-5' (SEQ ID NO: 1675)

βc-1580 Target: 5'-CCATCATCTTGTTCTTATAATTATTGC-3' (SEQ ID NO: 2784)

5'-ACCAUCAUCUUGUUCUUAUAAUUat-3' (SEQ ID NO: 567)
3'-UCUGGUAGUAGAACAAGAAUAUUAAUA-5' (SEQ ID NO: 1676)

βc-1583 Target: 5'-AGACCATCATCTTGTTCTTATAATTAT-3' (SEQ ID NO: 2785)

5'-AGACCAUCAUCUUGUUCUUAUAAtt-3' (SEQ ID NO: 568)
3'-CGUCUGGUAGUAGAACAAGAAUAUUAA-5' (SEQ ID NO: 1677)

βc-1585 Target: 5'-GCAGACCATCATCTTGTTCTTATAATT-3' (SEQ ID NO: 2786)

5'-AAUCCAACAGUAGCCUUUAUCAGag-3' (SEQ ID NO: 569)
3'-AGUUAGGUUGUCAUCGGAAAUAGUCUC-5' (SEQ ID NO: 1678)

βc-1808 Target: 5'-TCAATCCAACAGTAGCCTTTATCAGAG-3' (SEQ ID NO: 2787)

5'-GAAUCAAUCCAACAGUAGCCUUUat-3' (SEQ ID NO: 570)
3'-AGCUUAGUUAGGUUGUCAUCGGAAAUA-5' (SEQ ID NO: 1679)

βc-1813 Target: 5'-TCGAATCAATCCAACAGTAGCCTTTAT-3' (SEQ ID NO: 2788)

5'-UCCACAAAUUGCUGCUGUGUCCCac-3' (SEQ ID NO: 571)
3'-GGAGGUGUUUAACGACGACACAGGGUG-5' (SEQ ID NO: 1680)

βc-1955 Target: 5'-CCTCCACAAATTGCTGCTGTGTCCCAC-3' (SEQ ID NO: 2789)

5'-ACAACCUUCAACUAUUUCUUCCAtg-3' (SEQ ID NO: 572)
3'-CAUGUUGGAAGUUGAUAAAGAAGGUAC-5' (SEQ ID NO: 1681)

βc-1989 Target: 5'-GTACAACCTTCAACTATTTCTTCCATG-3' (SEQ ID NO: 2790)

5'-UACAACCUUCAACUAUUUCUUCCat-3' (SEQ ID NO: 573)
3'-CCAUGUUGGAAGUUGAUAAAGAAGGUA-5' (SEQ ID NO: 1682)

βc-1990 Target: 5'-GGTACAACCTTCAACTATTTCTTCC-3' (SEQ ID NO: 2791)

5'-GUACAACCUUCAACUAUUUCUUCca-3' (SEQ ID NO: 574)
3'-GCCAUGUUGGAAGUUGAUAAAGAAGGU-5' (SEQ ID NO: 1683)

βc-1991 Target: 5'-CGGTACAACCTTCAACTATTTCTTCCA-3' (SEQ ID NO: 2792)

5'-GGUACAACCUUCAACUAUUUCUUcc-3' (SEQ ID NO: 575)
3'-GGCCAUGUUGGAAGUUGAUAAAGAAGG-5' (SEQ ID NO: 1684)

βc-1992 Target: 5'-CCGGTACAACCTTCAACTATTTCTTCC-3' (SEQ ID NO: 2793)

5'-GCUCCGGUACAACCUUCAACUAUtt-3' (SEQ ID NO: 576)
3'-CCCGAGGCCAUGUUGGAAGUUGAUAAA-5' (SEQ ID NO: 1685)

βc-1997 Target: 5'-GGGCTCCGGTACAACCTTCAACTATTT-3' (SEQ ID NO: 2794)

5'-ACAAUUCGGUUGUGAACAUCCCGag-3' (SEQ ID NO: 577)

3'-AUUGUUAAGCCAACACUUGUAGGGCUC-5' (SEQ ID NO: 1686)

βc-2036 Target: 5'-TAACAATTCGGTTGTGAACATCCCGAG-3' (SEQ ID NO: 2795)

5'-AACAAUUCGGUUGUGAACAUCCCga-3' (SEQ ID NO: 578)
3'-UAUUGUUAAGCCAACACUUGUAGGGCU-5' (SEQ ID NO: 1687)

βc-2037 Target: 5'-ATAACAATTCGGTTGTGAACATCCCGA-3' (SEQ ID NO: 2796)

5'-UAACAAUUCGGUUGUGAACAUCCcg-3' (SEQ ID NO: 579)
3'-CUAUUGUUAAGCCAACACUUGUAGGGC-5' (SEQ ID NO: 1688)

βc-2038 Target: 5'-GATAACAATTCGGTTGTGAACATCCCG-3' (SEQ ID NO: 2797)

5'-AUAACAAUUCGGUUGUGAACAUCcc-3' (SEQ ID NO: 580)
3'-ACUAUUGUUAAGCCAACACUUGUAGGG-5' (SEQ ID NO: 1689)

βc-2039 Target: 5'-TGATAACAATTCGGTTGTGAACATCCC-3' (SEQ ID NO: 2798)

5'-GAUAACAAUUCGGUUGUGAACAUcc-3' (SEQ ID NO: 581)
3'-GACUAUUGUUAAGCCAACACUUGUAGG-5' (SEQ ID NO: 1690)

βc-2040 Target: 5'-CTGATAACAATTCGGTTGTGAACATCC-3' (SEQ ID NO: 2799)

5'-UGAUAACAAUUCGGUUGUGAACAtc-3' (SEQ ID NO: 582)
3'-AGACUAUUGUUAAGCCAACACUUGUAG-5' (SEQ ID NO: 1691)

βc-2041 Target: 5'-TCTGATAACAATTCGGTTGTGAACATC-3' (SEQ ID NO: 2800)

5'-AUUUAGUCCUCUGAUAACAAUUCgg-3' (SEQ ID NO: 583)
3'-CAUAAAUCAGGAGACUAUUGUUAAGCC-5' (SEQ ID NO: 1692)

βc-2052 Target: 5'-GTATTTAGTCCTCTGATAACAATTCGG-3' (SEQ ID NO: 2801)

5'-UAUUUAGUCCUCUGAUAACAAUUcg-3' (SEQ ID NO: 584)
3'-CCAUAAAUCAGGAGACUAUUGUUAAGC-5' (SEQ ID NO: 1693)

βc-2053 Target: 5'-GGTATTTAGTCCTCTGATAACAATTCG-3' (SEQ ID NO: 2802)

5'-GUAUUUAGUCCUCUGAUAACAAUtc-3' (SEQ ID NO: 585)
3'-ACCAUAAAUCAGGAGACUAUUGUUAAG-5' (SEQ ID NO: 1694)

βc-2054 Target: 5'-TGGTATTTAGTCCTCTGATAACAATTC-3' (SEQ ID NO: 2803)

5'-GGUAUUUAGUCCUCUGAUAACAAtt-3' (SEQ ID NO: 586)
3'-UACCAUAAAUCAGGAGACUAUUGUUAA-5' (SEQ ID NO: 1695)

βc-2055 Target: 5'-ATGGTATTTAGTCCTCTGATAACAATT-3' (SEQ ID NO: 2804)

5'-ACAAUGGAAUGGUAUUUAGUCCUct-3' (SEQ ID NO: 587)
3'-UUUGUUACCUUACCAUAAAUCAGGAGA-5' (SEQ ID NO: 1696)

βc-2065 Target: 5'-AAACAATGGAATGGTATTTAGTCCTCT-3' (SEQ ID NO: 2805)

5'-ACAAACAAUGGAAUGGUAUUUAGtc-3' (SEQ ID NO: 588)
3'-CGUGUUUGUUACCUUACCAUAAAUCAG-5' (SEQ ID NO: 1697)

βc-2069 Target: 5'-GCACAAACAATGGAATGGTATTTAGTC-3' (SEQ ID NO: 2806)

5'-GCACAAACAAUGGAAUGGUAUUUag-3' (SEQ ID NO: 589)
3'-GACGUGUUUGUUACCUUACCAUAAAUC-5' (SEQ ID NO: 1698)

βc-2071 Target: 5'-CTGCACAAACAATGGAATGGTATTTAG-3' (SEQ ID NO: 2807)

5'-UGCACAAACAAUGGAAUGGUAUUta-3' (SEQ ID NO: 590)

3'-CGACGUGUUUGUUACCUUACCAUAAAU-5' (SEQ ID NO: 1699)

βc-2072 Target: 5'-GCTGCACAAACAATGGAATGGTATTTA-3' (SEQ ID NO: 2808)

5'-GCUACUCUUUGGAUGUUUUCAAUgg-3' (SEQ ID NO: 591)
3'-GUCGAUGAGAAACCUACAAAAGUUACC-5' (SEQ ID NO: 1700)

βc-2111 Target: 5'-CAGCTACTCTTTGGATGTTTTCAATGG-3' (SEQ ID NO: 2809)

5'-AGCUACUCUUUGGAUGUUUUCAAtg-3' (SEQ ID NO: 592)
3'-CGUCGAUGAGAAACCUACAAAAGUUAC-5' (SEQ ID NO: 1701)

βc-2112 Target: 5'-GCAGCTACTCTTTGGATGTTTTCAATG-3' (SEQ ID NO: 2810)

5'-GCUUCAAUAGCUUCUGCAGCUUCct-3' (SEQ ID NO: 593)
3'-GUCGAAGUUAUCGAAGACGUCGAAGGA-5' (SEQ ID NO: 1702)

βc-2168 Target: 5'-CAGCTTCAATAGCTTCTGCAGCTTCCT-3' (SEQ ID NO: 2811)

5'-UCCCUCAGCUUCAAUAGCUUCUGca-3' (SEQ ID NO: 594)
3'-CGAGGGAGUCGAAGUUAUCGAAGACGU-5' (SEQ ID NO: 1703)

βc-2175 Target: 5'-GCTCCCTCAGCTTCAATAGCTTCTGCA-3' (SEQ ID NO: 2812)

5'-GCUCCCUCAGCUUCAAUAGCUUCtg-3' (SEQ ID NO: 595)
3'-ACCGAGGGAGUCGAAGUUAUCGAAGAC-5' (SEQ ID NO: 1704)

βc-2177 Target: 5'-TGGCTCCCTCAGCTTCAATAGCTTCTG-3' (SEQ ID NO: 2813)

5'-AUUCCUAGAGUGAAGUAACUCUGtc-3' (SEQ ID NO: 596)
3'-AGUAAGGAUCUCACUUCAUUGAGACAG-5' (SEQ ID NO: 1705)

βc-2214 Target: 5'-TCATTCCTAGAGTGAAGTAACTCTGTC-3' (SEQ ID NO: 2814)

5'-UCAUUCCUAGAGUGAAGUAACUCtg-3' (SEQ ID NO: 597)
3'-GAAGUAAGGAUCUCACUUCAUUGAGAC-5' (SEQ ID NO: 1706)

βc-2216 Target: 5'-CTTCATTCCTAGAGTGAAGTAACTCTG-3' (SEQ ID NO: 2815)

5'-UUCAUUCCUAGAGUGAAGUAACUct-3' (SEQ ID NO: 598)
3'-GGAAGUAAGGAUCUCACUUCAUUGAGA-5' (SEQ ID NO: 1707)

βc-2217 Target: 5'-CCTTCATTCCTAGAGTGAAGTAACTCT-3' (SEQ ID NO: 2816)

5'-UCCUCAGACAUUCGGAACAAAACag-3' (SEQ ID NO: 599)
3'-ACAGGAGUCUGUAAGCCUUGUUUUGUC-5' (SEQ ID NO: 1708)

βc-2264 Target: 5'-TGTCCTCAGACATTCGGAACAAAACAG-3' (SEQ ID NO: 2817)

5'-UGUCCUCAGACAUUCGGAACAAAac-3' (SEQ ID NO: 600)
3'-GAACAGGAGUCUGUAAGCCUUGUUUUG-5' (SEQ ID NO: 1709)

βc-2266 Target: 5'-CTTGTCCTCAGACATTCGGAACAAAAC-3' (SEQ ID NO: 2818)

5'-GUUUCUUGUAAUCUUGUGGCUUGtc-3' (SEQ ID NO: 601)
3'-GGCAAAGAACAUUAGAACACCGAACAG-5' (SEQ ID NO: 1710)

βc-2287 Target: 5'-CCGTTTCTTGTAATCTTGTGGCTTGTC-3' (SEQ ID NO: 2819)

5'-UGAAAGCCGUUUCUUGUAAUCUUgt-3' (SEQ ID NO: 602)
3'-UGACUUUCGGCAAAGAACAUUAGAACA-5' (SEQ ID NO: 1711)

βc-2295 Target: 5'-ACTGAAAGCCGTTTCTTGTAATCTTGT-3' (SEQ ID NO: 2820)

5'-GCUCAACUGAAAGCCGUUUCUUGta-3' (SEQ ID NO: 603)

3'-GUCGAGUUGACUUUCGGCAAAGAACAU-5' (SEQ ID NO: 1712)

βc-2302 Target: 5'-CAGCTCAACTGAAAGCCGTTTCTTGTA-3' (SEQ ID NO: 2821)

5'-AGUCCAAGAUCAGCAGUCUCAUUcc-3' (SEQ ID NO: 604)
3'-GUUCAGGUUCUAGUCGUCAGAGUAAGG-5' (SEQ ID NO: 1713)

βc-2363 Target: 5'-CAAGTCCAAGATCAGCAGTCTCATTCC-3' (SEQ ID NO: 2822)

5'-ACCAAUAUCAAGUCCAAGAUCAGca-3' (SEQ ID NO: 605)
3'-CGUGGUUAUAGUUCAGGUUCUAGUCGU-5' (SEQ ID NO: 1714)

βc-2373 Target: 5'-GCACCAATATCAAGTCCAAGATCAGCA-3' (SEQ ID NO: 2823)

5'-AGAACGAUAGCUAGGAUCAUCCUgg-3' (SEQ ID NO: 606)
3'-UUUCUUGCUAUCGAUCCUAGUAGGACC-5' (SEQ ID NO: 1715)

βc-2424 Target: 5'-AAAGAACGATAGCTAGGATCATCCTGG-3' (SEQ ID NO: 2824)

5'-UAUCCACCAGAGUGAAAAGAACGat-3' (SEQ ID NO: 607)
3'-GUAUAGGUGGUCUCACUUUUCUUGCUA-5' (SEQ ID NO: 1716)

βc-2441 Target: 5'-CATATCCACCAGAGTGAAAAGAACGAT-3' (SEQ ID NO: 2825)

5'-AUUUACAGGUCAGUAUCAAACCAgg-3' (SEQ ID NO: 608)
3'-ACUAAAUGUCCAGUCAUAGUUUGGUCC-5' (SEQ ID NO: 1717)

βc-2618 Target: 5'-TGATTTACAGGTCAGTATCAAACCAGG-3' (SEQ ID NO: 2826)

5'-GAUUUACAGGUCAGUAUCAAACCag-3' (SEQ ID NO: 609)
3'-UACUAAAUGUCCAGUCAUAGUUUGGUC-5' (SEQ ID NO: 1718)

βc-2619 Target: 5'-ATGATTTACAGGTCAGTATCAAACCAG-3' (SEQ ID NO: 2827)

5'-UGAUUUACAGGUCAGUAUCAAACca-3' (SEQ ID NO: 610)
3'-CUACUAAAUGUCCAGUCAUAGUUUGGU-5' (SEQ ID NO: 1719)

βc-2620 Target: 5'-GATGATTTACAGGTCAGTATCAAACCA-3' (SEQ ID NO: 2828)

5'-UCUUACCUAAAGGAUGAUUUACAgg-3' (SEQ ID NO: 611)
3'-GAAGAAUGGAUUUCCUACUAAAUGUCC-5' (SEQ ID NO: 1720)

βc-2634 Target: 5'-CTTCTTACCTAAAGGATGATTTACAGG-3' (SEQ ID NO: 2829)

5'-UUCUUACCUAAAGGAUGAUUUACag-3' (SEQ ID NO: 612)
3'-UGAAGAAUGGAUUUCCUACUAAAUGUC-5' (SEQ ID NO: 1721)

βc-2635 Target: 5'-ACTTCTTACCTAAAGGATGATTTACAG-3' (SEQ ID NO: 2830)

5'-ACUUCUUACCUAAAGGAUGAUUUac-3' (SEQ ID NO: 613)
3'-UUUGAAGAAUGGAUUUCCUACUAAAUG-5' (SEQ ID NO: 1722)

βc-2637 Target: 5'-AAACTTCTTACCTAAAGGATGATTTAC-3' (SEQ ID NO: 2831)

5'-UUUUUAAAACUUCUUACCUAAAGga-3' (SEQ ID NO: 614)
3'-CGAAAAAUUUUGAAGAAUGGAUUUCCU-5' (SEQ ID NO: 1723)

βc-2645 Target: 5'-GCTTTTTAAAACTTCTTACCTAAAGGA-3' (SEQ ID NO: 2832)

5'-GCUUUUUAAAACUUCUUACCUAAag-3' (SEQ ID NO: 615)
3'-ACCGAAAAAUUUUGAAGAAUGGAUUUC-5' (SEQ ID NO: 1724)

βc-2647 Target: 5'-TGGCTTTTTAAAACTTCTTACCTAAAG-3' (SEQ ID NO: 2833)

5'-AAACUGGCUUUUUAAAACUUCUUac-3' (SEQ ID NO: 616)

3'-GGUUUGACCGAAAAAUUUUGAAGAAUG-5' (SEQ ID NO: 1725)

βc-2653 Target: 5'-CCAAACTGGCTTTTTAAAACTTCTTAC-3' (SEQ ID NO: 2834)

5'-ACCCAAACUGGCUUUUUAAAACUtc-3' (SEQ ID NO: 617)
3'-AAUGGGUUUGACCGAAAAAUUUUGAAG-5' (SEQ ID NO: 1726)

βc-2657 Target: 5'-TTACCCAAACTGGCTTTTTAAAACTTC-3' (SEQ ID NO: 2835)

5'-UACCCAAACUGGCUUUUUAAAACtt-3' (SEQ ID NO: 618)
3'-AAAUGGGUUUGACCGAAAAAUUUUGAA-5' (SEQ ID NO: 1727)

βc-2658 Target: 5'-TTTACCCAAACTGGCTTTTTAAAACTT-3' (SEQ ID NO: 2836)

5'-UUACCCAAACUGGCUUUUUAAAAct-3' (SEQ ID NO: 619)
3'-AAAAUGGGUUUGACCGAAAAAUUUUGA-5' (SEQ ID NO: 1728)

βc-2659 Target: 5'-TTTTACCCAAACTGGCTTTTTAAAACT-3' (SEQ ID NO: 2837)

5'-UUUACCCAAACUGGCUUUUUAAAac-3' (SEQ ID NO: 620)
3'-UAAAAUGGGUUUGACCGAAAAAUUUUG-5' (SEQ ID NO: 1729)

βc-2660 Target: 5'-ATTTTACCCAAACTGGCTTTTTAAAAC-3' (SEQ ID NO: 2838)

5'-AACCAAGUCUUUCUGAAGUUCUGta-3' (SEQ ID NO: 621)
3'-GGUUGGUUCAGAAAGACUUCAAGACAU-5' (SEQ ID NO: 1730)

βc-2701 Target: 5'-CCAACCAAGTCTTTCTGAAGTTCTGTA-3' (SEQ ID NO: 2839)

5'-ACCCUACCAACCAAGUCUUUCUGaa-3' (SEQ ID NO: 622)
3'-GGUGGGAUGGUUGGUUCAGAAAGACUU-5' (SEQ ID NO: 1731)

βc-2709 Target: 5'-CCACCCTACCAACCAAGTCTTTCTGAA-3' (SEQ ID NO: 2840)

5'-UUACAAAUAGCCUAAACCACUCCca-3' (SEQ ID NO: 623)
3'-UAAAUGUUUAUCGGAUUUGGUGAGGGU-5' (SEQ ID NO: 1732)

βc-2733 Target: 5'-ATTTACAAATAGCCTAAACCACTCCCA-3' (SEQ ID NO: 2841)

5'-UUUACAAAUAGCCUAAACCACUCcc-3' (SEQ ID NO: 624)
3'-CUAAAUGUUUAUCGGAUUUGGUGAGGG-5' (SEQ ID NO: 1733)

βc-2734 Target: 5'-GATTTACAAATAGCCTAAACCACTCCC-3' (SEQ ID NO: 2842)

5'-AUUUACAAAUAGCCUAAACCACUcc-3' (SEQ ID NO: 625)
3'-UCUAAAUGUUUAUCGGAUUUGGUGAGG-5' (SEQ ID NO: 1734)

βc-2735 Target: 5'-AGATTTACAAATAGCCTAAACCACTCC-3' (SEQ ID NO: 2843)

5'-GAUUUACAAAUAGCCUAAACCACtc-3' (SEQ ID NO: 626)
3'-GUCUAAAUGUUUAUCGGAUUUGGUGAG-5' (SEQ ID NO: 1735)

βc-2736 Target: 5'-CAGATTTACAAATAGCCTAAACCACTC-3' (SEQ ID NO: 2844)

5'-UUUUUGUGGCAGAUUUACAAAUAgc-3' (SEQ ID NO: 627)
3'-ACAAAAACACCGUCUAAAUGUUUAUCG-5' (SEQ ID NO: 1736)

βc-2747 Target: 5'-TGTTTTTGTGGCAGATTTACAAATAGC-3' (SEQ ID NO: 2845)

5'-GUUUUUGUGGCAGAUUUACAAAUag-3' (SEQ ID NO: 628)
3'-GACAAAAACACCGUCUAAAUGUUUAUC-5' (SEQ ID NO: 1737)

βc-2748 Target: 5'-CTGTTTTTGTGGCAGATTTACAAATAG-3' (SEQ ID NO: 2846)

5'-UGUUUUUGUGGCAGAUUUACAAAta-3' (SEQ ID NO: 629)

3'-GGACAAAAACACCGUCUAAAUGUUUAU-5' (SEQ ID NO: 1738)

βc-2749 Target: 5'-CCTGTTTTTGTGGCAGATTTACAAATA-3' (SEQ ID NO: 2847)

5'-AUACCUGUUUUUGUGGCAGAUUUac-3' (SEQ ID NO: 630)
3'-UAUAUGGACAAAAACACCGUCUAAAUG-5' (SEQ ID NO: 1739)

βc-2754 Target: 5'-ATATACCTGTTTTTGTGGCAGATTTAC-3' (SEQ ID NO: 2848)

5'-UUCAAAGUAUAUACCUGUUUUUGtg-3' (SEQ ID NO: 631)
3'-GAAAGUUUCAUAUAUGGACAAAAACAC-5' (SEQ ID NO: 1740)

βc-2764 Target: 5'-CTTTCAAAGTATATACCTGTTTTTGTG-3' (SEQ ID NO: 2849)

5'-UCUCCUUUCAAAGUAUAUACCUGtt-3' (SEQ ID NO: 632)
3'-GUAGAGGAAAGUUUCAUAUAUGGACAA-5' (SEQ ID NO: 1741)

βc-2770 Target: 5'-CATCTCCTTTCAAAGTATATACCTGTT-3' (SEQ ID NO: 2850)

5'-AUCUCCUUUCAAAGUAUAUACCUgt-3' (SEQ ID NO: 633)
3'-UGUAGAGGAAAGUUUCAUAUAUGGACA-5' (SEQ ID NO: 1742)

βc-2771 Target: 5'-ACATCTCCTTTCAAAGTATATACCTGT-3' (SEQ ID NO: 2851)

5'-ACAUCUCCUUUCAAAGUAUAUACct-3' (SEQ ID NO: 634)
3'-UCUGUAGAGGAAAGUUUCAUAUAUGGA-5' (SEQ ID NO: 1743)

βc-2773 Target: 5'-AGACATCTCCTTTCAAAGTATATACCT-3' (SEQ ID NO: 2852)

5'-GACAUCUCCUUUCAAAGUAUAUAcc-3' (SEQ ID NO: 635)
3'-UUCUGUAGAGGAAAGUUUCAUAUAUGG-5' (SEQ ID NO: 1744)

βc-2774 Target: 5'-AAGACATCTCCTTTCAAAGTATATACC-3' (SEQ ID NO: 2853)

5'-AGACAUCUCCUUUCAAAGUAUAUac-3' (SEQ ID NO: 636)
3'-GUUCUGUAGAGGAAAGUUUCAUAUAUG-5' (SEQ ID NO: 1745)

βc-2775 Target: 5'-CAAGACATCTCCTTTCAAAGTATATAC-3' (SEQ ID NO: 2854)

5'-UUCCAAGACAUCUCCUUUCAAAGta-3' (SEQ ID NO: 637)
3'-ACAAGGUUCUGUAGAGGAAAGUUUCAU-5' (SEQ ID NO: 1746)

βc-2780 Target: 5'-TGTTCCAAGACATCTCCTTTCAAAGTA-3' (SEQ ID NO: 2855)

5'-UUCCAAUGUUCCAAGACAUCUCCtt-3' (SEQ ID NO: 638)
3'-GUAAGGUUACAAGGUUCUGUAGAGGAA-5' (SEQ ID NO: 1747)

βc-2788 Target: 5'-CATTCCAATGTTCCAAGACATCTCCTT-3' (SEQ ID NO: 2856)

5'-AUUCCAAUGUUCCAAGACAUCUCct-3' (SEQ ID NO: 639)
3'-UGUAAGGUUACAAGGUUCUGUAGAGGA-5' (SEQ ID NO: 1748)

βc-2789 Target: 5'-ACATTCCAATGTTCCAAGACATCTCCT-3' (SEQ ID NO: 2857)

5'-ACAUUCCAAUGUUCCAAGACAUCtc-3' (SEQ ID NO: 640)
3'-CUUGUAAGGUUACAAGGUUCUGUAGAG-5' (SEQ ID NO: 1749)

βc-2791 Target: 5'-GAACATTCCAATGTTCCAAGACATCTC-3' (SEQ ID NO: 2858)

5'-AGAAAUCUGAGAACAUUCCAAUGtt-3' (SEQ ID NO: 641)
3'-GGUCUUUAGACUCUUGUAAGGUUACAA-5' (SEQ ID NO: 1750)

βc-2803 Target: 5'-CCAGAAATCTGAGAACATTCCAATGTT-3' (SEQ ID NO: 2859)

5'-AACCAGAAAUCUGAGAACAUUCCaa-3' (SEQ ID NO: 642)

3'-UGUUGGUCUUUAGACUCUUGUAAGGUU-5' (SEQ ID NO: 1751)

βc-2807 Target: 5'-ACAACCAGAAATCTGAGAACATTCCAA-3' (SEQ ID NO: 2860)

5'-ACAACCAGAAAUCUGAGAACAUUcc-3' (SEQ ID NO: 643)
3'-AUUGUUGGUCUUUAGACUCUUGUAAGG-5' (SEQ ID NO: 1752)

βc-2809 Target: 5'-TAACAACCAGAAATCTGAGAACATTCC-3' (SEQ ID NO: 2861)

5'-AACAACCAGAAAUCUGAGAACAUtc-3' (SEQ ID NO: 644)
3'-UAUUGUUGGUCUUUAGACUCUUGUAAG-5' (SEQ ID NO: 1753)

βc-2810 Target: 5'-ATAACAACCAGAAATCTGAGAACATTC-3' (SEQ ID NO: 2862)

5'-UAACAACCAGAAAUCUGAGAACAtt-3' (SEQ ID NO: 645)
3'-GUAUUGUUGGUCUUUAGACUCUUGUAA-5' (SEQ ID NO: 1754)

βc-2811 Target: 5'-CATAACAACCAGAAATCTGAGAACATT-3' (SEQ ID NO: 2863)

5'-AUCACAUAACAACCAGAAAUCUGag-3' (SEQ ID NO: 646)
3'-ACUAGUGUAUUGUUGGUCUUUAGACUC-5' (SEQ ID NO: 1755)

βc-2817 Target: 5'-TGATCACATAACAACCAGAAATCTGAG-3' (SEQ ID NO: 2864)

5'-GAUCACAUAACAACCAGAAAUCUga-3' (SEQ ID NO: 647)
3'-UACUAGUGUAUUGUUGGUCUUUAGACU-5' (SEQ ID NO: 1756)

βc-2818 Target: 5'-ATGATCACATAACAACCAGAAATCTGA-3' (SEQ ID NO: 2865)

5'-ACACAUGAUCACAUAACAACCAGaa-3' (SEQ ID NO: 648)
3'-GGUGUGUACUAGUGUAUUGUUGGUCUU-5' (SEQ ID NO: 1757)

βc-2824 Target: 5'-CCACACATGATCACATAACAACCAGAA-3' (SEQ ID NO: 2866)

5'-UCCACACAUGAUCACAUAACAACca-3' (SEQ ID NO: 649)
3'-GAAGGUGUGUACUAGUGUAUUGUUGGU-5' (SEQ ID NO: 1758)

βc-2827 Target: 5'-CTTCCACACATGATCACATAACAACCA-3' (SEQ ID NO: 2867)

5'-UAACUUCCACACAUGAUCACAUAac-3' (SEQ ID NO: 650)
3'-UUAUUGAAGGUGUGUACUAGUGUAUUG-5' (SEQ ID NO: 1759)

βc-2832 Target: 5'-AATAACTTCCACACATGATCACATAAC-3' (SEQ ID NO: 2868)

5'-AUAACUUCCACACAUGAUCACAUaa-3' (SEQ ID NO: 651)
3'-AUUAUUGAAGGUGUGUACUAGUGUAUU-5' (SEQ ID NO: 1760)

βc-2833 Target: 5'-TAATAACTTCCACACATGATCACATAA-3' (SEQ ID NO: 2869)

5'-AAUAACUUCCACACAUGAUCACAta-3' (SEQ ID NO: 652)
3'-AAUUAUUGAAGGUGUGUACUAGUGUAU-5' (SEQ ID NO: 1761)

βc-2834 Target: 5'-TTAATAACTTCCACACATGATCACATA-3' (SEQ ID NO: 2870)

5'-UAAUAACUUCCACACAUGAUCACat-3' (SEQ ID NO: 653)
3'-CAAUUAUUGAAGGUGUGUACUAGUGUA-5' (SEQ ID NO: 1762)

βc-2835 Target: 5'-GTTAATAACTTCCACACATGATCAC-3' (SEQ ID NO: 2871)

5'-UUAAAGUUAAUAACUUCCACACAtg-3' (SEQ ID NO: 654)
3'-GUAAUUUCAAUUAUUGAAGGUGUGUAC-5' (SEQ ID NO: 1763)

βc-2842 Target: 5'-CATTAAAGTTAATAACTTCCACACATG-3' (SEQ ID NO: 2872)

5'-AUUAAAGUUAAUAACUUCCACACat-3' (SEQ ID NO: 655)

3'-UGUAAUUUCAAUUAUUGAAGGUGUGUA-5' (SEQ ID NO: 1764)

βc-2843 Target: 5'-ACATTAAAGTTAATAACTTCCACAC-3' (SEQ ID NO: 2873)

5'-ACAUUAAAGUUAAUAACUUCCACac-3' (SEQ ID NO: 656)
3'-UUUGUAAUUUCAAUUAUUGAAGGUGUG-5' (SEQ ID NO: 1765)

βc-2845 Target: 5'-AAACATTAAAGTTAATAACTTCCACAC-3' (SEQ ID NO: 2874)

5'-AACAUUAAAGUUAAUAACUUCCACa-3' (SEQ ID NO: 657)
3'-UUUUGUAAUUUCAAUUAUUGAAGGUGU-5' (SEQ ID NO: 1766)

βc-2846 Target: 5'-AAAACATTAAAGTTAATAACTTCCACA-3' (SEQ ID NO: 2875)

5'-AAACAUUAAAGUUAAUAACUUCCac-3' (SEQ ID NO: 658)
3'-UUUUUGUAAUUUCAAUUAUUGAAGGUG-5' (SEQ ID NO: 1767)

βc-2847 Target: 5'-AAAAACATTAAAGTTAATAACTTCCAC-3' (SEQ ID NO: 2876)

5'-AAAACAUUAAAGUUAAUAACUUCca-3' (SEQ ID NO: 659)
3'-UUUUUUGUAAUUUCAAUUAUUGAAGGU-5' (SEQ ID NO: 1768)

βc-2848 Target: 5'-AAAAAACATTAAAGTTAATAACTTCCA-3' (SEQ ID NO: 2877)

5'-AAAAACAUUAAAGUUAAUAACUUcc-3' (SEQ ID NO: 660)
3'-GUUUUUUGUAAUUUCAAUUAUUGAAGG-5' (SEQ ID NO: 1769)

βc-2849 Target: 5'-CAAAAAACATTAAAGTTAATAACTTCC-3' (SEQ ID NO: 2878)

5'-AAAAAACAUUAAAGUUAAUAACUtc-3' (SEQ ID NO: 661)
3'-CGUUUUUUGUAAUUUCAAUUAUUGAAG-5' (SEQ ID NO: 1770)

βc-2850 Target: 5'-GCAAAAAACATTAAAGTTAATAACTTC-3' (SEQ ID NO: 2879)

5'-GCAAAAAACAUUAAAGUUAAUAAct-3' (SEQ ID NO: 662)
3'-ACCGUUUUUUGUAAUUUCAAUUAUUGA-5' (SEQ ID NO: 1771)

βc-2852 Target: 5'-TGGCAAAAAACATTAAAGTTAATAACT-3' (SEQ ID NO: 2880)

5'-GGCAAAAAACAUUAAAGUUAAUAac-3' (SEQ ID NO: 663)
3'-CACCGUUUUUUGUAAUUUCAAUUAUUG-5' (SEQ ID NO: 1772)

βc-2853 Target: 5'-GTGGCAAAAAACATTAAAGTTAATAAC-3' (SEQ ID NO: 2881)

5'-GCAAAAGCUGUGGCAAAAAACAUta-3' (SEQ ID NO: 664)
3'-AACGUUUUCGACACCGUUUUUUGUAAU-5' (SEQ ID NO: 1773)

βc-2864 Target: 5'-TTGCAAAAGCTGTGGCAAAAAACATTA-3' (SEQ ID NO: 2882)

5'-UGCAAAAGCUGUGGCAAAAAACAtt-3' (SEQ ID NO: 665)
3'-CAACGUUUUCGACACCGUUUUUUGUAA-5' (SEQ ID NO: 1774)

βc-2865 Target: 5'-GTTGCAAAAGCTGTGGCAAAAAACATT-3' (SEQ ID NO: 2883)

5'-UCAUUUGAGUAUUAAGUUGCAAAag-3' (SEQ ID NO: 666)
3'-UGAGUAAACUCAUAAUUCAACGUUUUC-5' (SEQ ID NO: 1775)

βc-2882 Target: 5'-ACTCATTTGAGTATTAAGTTGCAAAAG-3' (SEQ ID NO: 2884)

5'-AAAACAGCAAAUGUUACUCAUUUga-3' (SEQ ID NO: 667)
3'-AAUUUUGUCGUUUACAAUGAGUAAACU-5' (SEQ ID NO: 1776)

βc-2899 Target: 5'-TTAAAACAGCAAATGTTACTCATTTGA-3' (SEQ ID NO: 2885)

5'-UAAAACAGCAAAUGUUACUCAUUtg-3' (SEQ ID NO: 668)

3'-AAAUUUUGUCGUUUACAAUGAGUAAAC-5' (SEQ ID NO: 1777)

βc-2900 Target: 5'-TTTAAAACAGCAAATGTTACTCATTTG-3' (SEQ ID NO: 2886)

5'-UUAAAACAGCAAAUGUUACUCAUtt-3' (SEQ ID NO: 669)
3'-CAAAUUUUGUCGUUUACAAUGAGUAAA-5' (SEQ ID NO: 1778)

βc-2901 Target: 5'-GTTTAAAACAGCAAATGTTACTCATTT-3' (SEQ ID NO: 2887)

5'-UUUAAAACAGCAAAUGUUACUCAtt-3' (SEQ ID NO: 670)
3'-ACAAAUUUUGUCGUUUACAAUGAGUAA-5' (SEQ ID NO: 1779)

βc-2902 Target: 5'-TGTTTAAAACAGCAAATGTTACTCATT-3' (SEQ ID NO: 2888)

5'-GUUUAAAACAGCAAAUGUUACUCat-3' (SEQ ID NO: 671)
3'-UACAAAUUUUGUCGUUUACAAUGAGUA-5' (SEQ ID NO: 1780)

βc-2903 Target: 5'-ATGTTTAAAACAGCAAATGTTACTC-3' (SEQ ID NO: 2889)

5'-UGUUUAAAACAGCAAAUGUUACUca-3' (SEQ ID NO: 672)
3'-UUACAAAUUUUGUCGUUUACAAUGAGU-5' (SEQ ID NO: 1781)

βc-2904 Target: 5'-AATGTTTAAAACAGCAAATGTTACTCA-3' (SEQ ID NO: 2890)

5'-AUUAAUGUUUAAAACAGCAAAUGtt-3' (SEQ ID NO: 673)
3'-GAUAAUUACAAAUUUUGUCGUUUACAA-5' (SEQ ID NO: 1782)

βc-2909 Target: 5'-CTATTAATGTTTAAAACAGCAAATGTT-3' (SEQ ID NO: 2891)

5'-AGAAAGGCUGCUAUUAAUGUUUAaa-3' (SEQ ID NO: 674)
3'-UCUCUUUCCGACGAUAAUUACAAAUUU-5' (SEQ ID NO: 1783)

βc-2921 Target: 5'-AGAGAAAGGCTGCTATTAATGTTTAAA-3' (SEQ ID NO: 2892)

5'-AGUUCAGACAAUACAGCUGUAUAaa-3' (SEQ ID NO: 675)
3'-GUUCAAGUCUGUUAUGUCGACAUAUUU-5' (SEQ ID NO: 1784)

βc-2949 Target: 5'-CAAGTTCAGACAATACAGCTGTATAAA-3' (SEQ ID NO: 2893)

5'-ACAAUGCAAGUUCAGACAAUACAgc-3' (SEQ ID NO: 676)
3'-AGUGUUACGUUCAAGUCUGUUAUGUCG-5' (SEQ ID NO: 1785)

βc-2957 Target: 5'-TCACAATGCAAGTTCAGACAATACAGC-3' (SEQ ID NO: 2894)

5'-UCACAAUGCAAGUUCAGACAAUAca-3' (SEQ ID NO: 677)
3'-UUAGUGUUACGUUCAAGUCUGUUAUGU-5' (SEQ ID NO: 1786)

βc-2959 Target: 5'-AATCACAATGCAAGTTCAGACAATACA-3' (SEQ ID NO: 2895)

5'-AAUCACAAUGCAAGUUCAGACAAta-3' (SEQ ID NO: 678)
3'-GGUUAGUGUUACGUUCAAGUCUGUUAU-5' (SEQ ID NO: 1787)

βc-2961 Target: 5'-CCAATCACAATGCAAGTTCAGACAATA-3' (SEQ ID NO: 2896)

5'-GGCCAAUCACAAUGCAAGUUCAGac-3' (SEQ ID NO: 679)
3'-GUCCGGUUAGUGUUACGUUCAAGUCUG-5' (SEQ ID NO: 1788)

βc-2965 Target: 5'-CAGGCCAATCACAATGCAAGTTCAGAC-3' (SEQ ID NO: 2897)

5'-GUUCCCAUAGGAAACUCAGCUUGgt-3' (SEQ ID NO: 680)
3'-AACAAGGGUAUCCUUUGAGUCGAACCA-5' (SEQ ID NO: 1789)

βc-3052 Target: 5'-TTGTTCCCATAGGAAACTCAGCTTGGT-3' (SEQ ID NO: 2898)

5'-UCAAUUGUUCCCAUAGGAAACUCag-3' (SEQ ID NO: 681)

3'-GAAGUUAACAAGGGUAUCCUUUGAGUC-5' (SEQ ID NO: 1790)

βc-3058 Target: 5'-CTTCAATTGTTCCCATAGGAAACTCAG-3' (SEQ ID NO: 2899)

5'-UUCAAUUGUUCCCAUAGGAAACUca-3' (SEQ ID NO: 682)
3'-UGAAGUUAACAAGGGUAUCCUUUGAGU-5' (SEQ ID NO: 1791)

βc-3059 Target: 5'-ACTTCAATTGTTCCCATAGGAAACTCA-3' (SEQ ID NO: 2900)

5'-GUUUACUUCAAUUGUUCCCAUAGga-3' (SEQ ID NO: 683)
3'-UUCAAAUGAAGUUAACAAGGGUAUCCU-5' (SEQ ID NO: 1792)

βc-3065 Target: 5'-AAGTTTACTTCAATTGTTCCCATAGGA-3' (SEQ ID NO: 2901)

5'-AGUUUACUUCAAUUGUUCCCAUAgg-3' (SEQ ID NO: 684)
3'-UUUCAAAUGAAGUUAACAAGGGUAUCC-5' (SEQ ID NO: 1793)

βc-3066 Target: 5'-AAAGTTTACTTCAATTGTTCCCATAGG-3' (SEQ ID NO: 2902)

5'-AAAAAGUUUACUUCAAUUGUUCCca-3' (SEQ ID NO: 685)
3'-UGUUUUUCAAAUGAAGUUAACAAGGGU-5' (SEQ ID NO: 1794)

βc-3070 Target: 5'-ACAAAAAGTTTACTTCAATTGTTCCCA-3' (SEQ ID NO: 2903)

5'-GAACAAAAAGUUUACUUCAAUUGtt-3' (SEQ ID NO: 686)
3'-GUCUUGUUUUUCAAAUGAAGUUAACAA-5' (SEQ ID NO: 1795)

βc-3074 Target: 5'-CAGAACAAAAAGTTTACTTCAATTGTT-3' (SEQ ID NO: 2904)

5'-GACCAGAACAAAAAGUUUACUUCaa-3' (SEQ ID NO: 687)
3'-UCCUGGUCUUGUUUUUCAAAUGAAGUU-5' (SEQ ID NO: 1796)

βc-3079 Target: 5'-AGGACCAGAACAAAAAGTTTACTTCAA-3' (SEQ ID NO: 2905)

5'-GGACCAGAACAAAAAGUUUACUUca-3' (SEQ ID NO: 688)
3'-UUCCUGGUCUUGUUUUUCAAAUGAAGU-5' (SEQ ID NO: 1797)

βc-3080 Target: 5'-AAGGACCAGAACAAAAAGTTTACTTCA-3' (SEQ ID NO: 2906)

5'-ACCAAAAAGGACCAGAACAAAAAgt-3' (SEQ ID NO: 689)
3'-GCUGGUUUUUCCUGGUCUUGUUUUUCA-5' (SEQ ID NO: 1798)

βc-3088 Target: 5'-CGACCAAAAAGGACCAGAACAAAAAGT-3' (SEQ ID NO: 2907)

5'-GACCAAAAAGGACCAGAACAAAAag-3' (SEQ ID NO: 690)
3'-AGCUGGUUUUUCCUGGUCUUGUUUUUC-5' (SEQ ID NO: 1799)

βc-3089 Target: 5'-TCGACCAAAAAGGACCAGAACAAAAAG-3' (SEQ ID NO: 2908)

5'-ACUCCUCGACCAAAAAGGACCAGaa-3' (SEQ ID NO: 691)
3'-AAUGAGGAGCUGGUUUUUCCUGGUCUU-5' (SEQ ID NO: 1800)

βc-3096 Target: 5'-TTACTCCTCGACCAAAAAGGACCAGAA-3' (SEQ ID NO: 2909)

5'-UCCAUUUGUAUUGUUACUCCUCGac-3' (SEQ ID NO: 692)
3'-UUAGGUAAACAUAACAAUGAGGAGCUG-5' (SEQ ID NO: 1801)

βc-3111 Target: 5'-AATCCATTTGTATTGTTACTCCTCGAC-3' (SEQ ID NO: 2910)

5'-AUCCAUUUGUAUUGUUACUCCUCga-3' (SEQ ID NO: 693)
3'-UUUAGGUAAACAUAACAAUGAGGAGCU-5' (SEQ ID NO: 1802)

βc-3112 Target: 5'-AAATCCATTTGTATTGTTACTCCTCGA-3' (SEQ ID NO: 2911)

5'-AAUCCAUUUGUAUUGUUACUCCUcg-3' (SEQ ID NO: 694)

3'-UUUUAGGUAAACAUAACAAUGAGGAGC-5' (SEQ ID NO: 1803)

βc-3113 Target: 5'-AAAATCCATTTGTATTGTTACTCCTCG-3' (SEQ ID NO: 2912)

5'-AAAUCCAUUUGUAUUGUUACUCCtc-3' (SEQ ID NO: 695)
3'-GUUUUAGGUAAACAUAACAAUGAGGAG-5' (SEQ ID NO: 1804)

βc-3114 Target: 5'-CAAAATCCATTTGTATTGTTACTCCTC-3' (SEQ ID NO: 2913)

5'-AAAAUCCAUUUGUAUUGUUACUCCt-3' (SEQ ID NO: 696)
3'-GGUUUUAGGUAAACAUAACAAUGAGGA-5' (SEQ ID NO: 1805)

βc-3115 Target: 5'-CCAAAATCCATTTGTATTGTTACTCCT-3' (SEQ ID NO: 2914)

5'-ACUCCCAAAAUCCAUUUGUAUUGtt-3' (SEQ ID NO: 697)
3'-AGUGAGGGUUUUAGGUAAACAUAACAA-5' (SEQ ID NO: 1806)

βc-3121 Target: 5'-TCACTCCCAAAATCCATTTGTATTGTT-3' (SEQ ID NO: 2915)

5'-UUCACUUCUUGAGUCACUCCCAAaa-3' (SEQ ID NO: 698)
3'-AGAAGUGAAGAACUCAGUGAGGGUUUU-5' (SEQ ID NO: 1807)

βc-3136 Target: 5'-TCTTCACTTCTTGAGTCACTCCCAAAA-3' (SEQ ID NO: 2916)

5'-UCUUCACUUCUUGAGUCACUCCCaa-3' (SEQ ID NO: 699)
3'-UAAGAAGUGAAGAACUCAGUGAGGGUU-5' (SEQ ID NO: 1808)

βc-3138 Target: 5'-ATTCTTCACTTCTTGAGTCACTCCCAA-3' (SEQ ID NO: 2917)

5'-UUCUUCACUUCUUGAGUCACUCCca-3' (SEQ ID NO: 700)
3'-GUAAGAAGUGAAGAACUCAGUGAGGGU-5' (SEQ ID NO: 1809)

βc-3139 Target: 5'-CATTCTTCACTTCTTGAGTCACTCCCA-3' (SEQ ID NO: 2918)

5'-AUUCUUCACUUCUUGAGUCACUCcc-3' (SEQ ID NO: 701)
3'-CGUAAGAAGUGAAGAACUCAGUGAGGG-5' (SEQ ID NO: 1810)

βc-3140 Target: 5'-GCATTCTTCACTTCTTGAGTCACTCCC-3' (SEQ ID NO: 2919)

5'-GCAUUCUUCACUUCUUGAGUCACtc-3' (SEQ ID NO: 702)
3'-CACGUAAGAAGUGAAGAACUCAGUGAG-5' (SEQ ID NO: 1811)

βc-3142 Target: 5'-GTGCATTCTTCACTTCTTGAGTCACTC-3' (SEQ ID NO: 2920)

5'-AUUCUUGUGCAUUCUUCACUUCUtg-3' (SEQ ID NO: 703)
3'-GGUAAGAACACGUAAGAAGUGAAGAAC-5' (SEQ ID NO: 1812)

βc-3150 Target: 5'-CCATTCTTGTGCATTCTTCACTTCTTG-3' (SEQ ID NO: 2921)

5'-UCCAUUCUUGUGCAUUCUUCACUtc-3' (SEQ ID NO: 704)
3'-CUAGGUAAGAACACGUAAGAAGUGAAG-5' (SEQ ID NO: 1813)

βc-3153 Target: 5'-GATCCATTCTTGTGCATTCTTCACTTC-3' (SEQ ID NO: 2922)

5'-AUCCAUUCUUGUGCAUUCUUCACtt-3' (SEQ ID NO: 705)
3'-ACUAGGUAAGAACACGUAAGAAGUGAA-5' (SEQ ID NO: 1814)

βc-3154 Target: 5'-TGATCCATTCTTGTGCATTCTTCACTT-3' (SEQ ID NO: 2923)

5'-GAUCCAUUCUUGUGCAUUCUUCAct-3' (SEQ ID NO: 706)
3'-CACUAGGUAAGAACACGUAAGAAGUGA-5' (SEQ ID NO: 1815)

βc-3155 Target: 5'-GTGATCCATTCTTGTGCATTCTTCACT-3' (SEQ ID NO: 2924)

5'-AAUUCCAUCUUGUGAUCCAUUCUtg-3' (SEQ ID NO: 707)

3'-AUUUAAGGUAGAACACUAGGUAAGAAC-5' (SEQ ID NO: 1816)

βc-3168 Target: 5'-TAAATTCCATCTTGTGATCCATTCTTG-3' (SEQ ID NO: 2925)

5'-UAAAUUCCAUCUUGUGAUCCAUUct-3' (SEQ ID NO: 708)
3'-CUAUUUAAGGUAGAACACUAGGUAAGA-5' (SEQ ID NO: 1817)

βc-3170 Target: 5'-GATAAATTCCATCTTGTGATCCATTCT-3' (SEQ ID NO: 2926)

5'-AUAAAUUCCAUCUUGUGAUCCAUtc-3' (SEQ ID NO: 709)
3'-ACUAUUUAAGGUAGAACACUAGGUAAG-5' (SEQ ID NO: 1818)

βc-3171 Target: 5'-TGATAAATTCCATCTTGTGATCCATTC-3' (SEQ ID NO: 2927)

5'-GAUAAAUUCCAUCUUGUGAUCCAtt-3' (SEQ ID NO: 710)
3'-AACUAUUUAAGGUAGAACACUAGGUAA-5' (SEQ ID NO: 1819)

βc-3172 Target: 5'-TTGATAAATTCCATCTTGTGATCCATT-3' (SEQ ID NO: 2928)

5'-UGAUAAAUUCCAUCUUGUGAUCCat-3' (SEQ ID NO: 711)
3'-AAACUAUUUAAGGUAGAACACUAGGUA-5' (SEQ ID NO: 1820)

βc-3173 Target: 5'-TTTGATAAATTCCATCTTGTGATCC-3' (SEQ ID NO: 2929)

5'-GGCUAGGGUUUGAUAAAUUCCAUct-3' (SEQ ID NO: 712)
3'-UUCCGAUCCCAAACUAUUUAAGGUAGA-5' (SEQ ID NO: 1821)

βc-3183 Target: 5'-AAGGCTAGGGTTTGATAAATTCCATCT-3' (SEQ ID NO: 2930)

5'-AAAAAUUUAACAAGCAAGGCUAGgg-3' (SEQ ID NO: 713)
3'-UUUUUUUAAAUUGUUCGUUCCGAUCCC-5' (SEQ ID NO: 1822)

βc-3200 Target: 5'-AAAAAAATTTAACAAGCAAGGCTAGGG-3' (SEQ ID NO: 2931)

5'-AAAAAAAAAAAAAAAUUUAACAAGca-3' (SEQ ID NO: 714)
3'-UUUUUUUUUUUUUUUUAAAUUGUUCGU-5' (SEQ ID NO: 1823)

βc-3209 Target: 5'-AAAAAAAAAAAAAAAATTTAACAAGCA-3' (SEQ ID NO: 2932)

5'-AAAAAAAAAAAAAAAUUUAACAAgc-3' (SEQ ID NO: 715)
3'-UUUUUUUUUUUUUUUUUAAAUUGUUCG-5' (SEQ ID NO: 1824)

βc-3210 Target: 5'-AAAAAAAAAAAAAAAAATTTAACAAGC-3' (SEQ ID NO: 2933)

5'-AAAAAAAAAAAAAAAAUUUAACAag-3' (SEQ ID NO: 716)
3'-UUUUUUUUUUUUUUUUUUAAAUUGUUC-5' (SEQ ID NO: 1825)

βc-3211 Target: 5'-AAAAAAAAAAAAAAAAAATTTAACAAG-3' (SEQ ID NO: 2934)

5'-AAAAAAAAAAAAAAAAAUUUAACaa-3' (SEQ ID NO: 717)
3'-UUUUUUUUUUUUUUUUUUUAAAUUGUU-5' (SEQ ID NO: 1826)

βc-3212 Target: 5'-AAAAAAAAAAAAAAAAAATTTAACAA-3' (SEQ ID NO: 2935)

5'-AAAAAAAAAAAAAAAAAAUUUAAca-3' (SEQ ID NO: 718)
3'-AUUUUUUUUUUUUUUUUUUUAAAUUGU-5' (SEQ ID NO: 1827)

βc-3213 Target: 5'-TAAAAAAAAAAAAAAAAAATTTAACA-3' (SEQ ID NO: 2936)

5'-AAAAAAAAAAAAAAAAAAUUUAac-3' (SEQ ID NO: 719)
3'-AAUUUUUUUUUUUUUUUUUUUAAAUUG-5' (SEQ ID NO: 1828)

βc-3214 Target: 5'-TTAAAAAAAAAAAAAAAAAATTTAAC-3' (SEQ ID NO: 2937)

5'-UAAAAAAAAAAAAAAAAAAUUUaa-3' (SEQ ID NO: 720)

3'-GAAUUUUUUUUUUUUUUUUUUUAAAUU-5' (SEQ ID NO: 1829)

βc-3215 Target: 5'-CTTAAAAAAAAAAAAAAAAAAATTTAA-3' (SEQ ID NO: 2938)

5'-UUAAAAAAAAAAAAAAAAAAAUUta-3' (SEQ ID NO: 721)
3'-AGAAUUUUUUUUUUUUUUUUUUUAAAU-5' (SEQ ID NO: 1830)

βc-3216 Target: 5'-TCTTAAAAAAAAAAAAAAAAAAATTTA-3' (SEQ ID NO: 2939)

5'-UCUUAAAAAAAAAAAAAAAAAAAAtt-3' (SEQ ID NO: 722)
3'-UAAGAAUUUUUUUUUUUUUUUUUUUAA-5' (SEQ ID NO: 1831)

βc-3218 Target: 5'-ATTCTTAAAAAAAAAAAAAAAAAAATT-3' (SEQ ID NO: 2940)

5'-UUCUUAAAAAAAAAAAAAAAAAAAAat-3' (SEQ ID NO: 723)
3'-AUAAGAAUUUUUUUUUUUUUUUUUUUA-5' (SEQ ID NO: 1832)

βc-3219 Target: 5'-TATTCTTAAAAAAAAAAAAAAAAAAAT-3' (SEQ ID NO: 2941)

5'-AUUCUUAAAAAAAAAAAAAAAAAAAaa-3' (SEQ ID NO: 724)
3'-UAUAAGAAUUUUUUUUUUUUUUUUUUU-5' (SEQ ID NO: 1833)

βc-3220 Target: 5'-ATATTCTTAAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2942)

5'-UAUUCUUAAAAAAAAAAAAAAAAAAaa-3' (SEQ ID NO: 725)
3'-CUAUAAGAAUUUUUUUUUUUUUUUUUU-5' (SEQ ID NO: 1834)

βc-3221 Target: 5'-GATATTCTTAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2943)

5'-AUAUUCUUAAAAAAAAAAAAAAAAAaa-3' (SEQ ID NO: 726)
3'-UCUAUAAGAAUUUUUUUUUUUUUUUUU-5' (SEQ ID NO: 1835)

βc-3222 Target: 5'-AGATATTCTTAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2944)

5'-GAUAUUCUUAAAAAAAAAAAAAAAAaa-3' (SEQ ID NO: 727)
3'-GUCUAUAAGAAUUUUUUUUUUUUUUUU-5' (SEQ ID NO: 1836)

βc-3223 Target: 5'-CAGATATTCTTAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2945)

5'-AGAUAUUCUUAAAAAAAAAAAAAAAaa-3' (SEQ ID NO: 728)
3'-UGUCUAUAAGAAUUUUUUUUUUUUUUU-5' (SEQ ID NO: 1837)

βc-3224 Target: 5'-ACAGATATTCTTAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2946)

5'-UUACAGAUAUUCUUAAAAAAAAAAaa-3' (SEQ ID NO: 729)
3'-GUAAUGUCUAUAAGAAUUUUUUUUUU-5' (SEQ ID NO: 1838)

βc-3228 Target: 5'-CATTACAGATATTCTTAAAAAAAAAAA-3' (SEQ ID NO: 2947)

5'-AUUACAGAUAUUCUUAAAAAAAAAaa-3' (SEQ ID NO: 730)
3'-GGUAAUGUCUAUAAGAAUUUUUUUUU-5' (SEQ ID NO: 1839)

βc-3229 Target: 5'-CCATTACAGATATTCTTAAAAAAAAAA-3' (SEQ ID NO: 2948)

5'-UACCAUUACAGAUAUUCUUAAAAaa-3' (SEQ ID NO: 731)
3'-UCAUGGUAAUGUCUAUAAGAAUUUUU-5' (SEQ ID NO: 1840)

βc-3233 Target: 5'-AGTACCATTACAGATATTCTTAAAAAA-3' (SEQ ID NO: 2949)

5'-GUACCAUUACAGAUAUUCUUAAAAaa-3' (SEQ ID NO: 732)
3'-GUCAUGGUAAUGUCUAUAAGAAUUUUU-5' (SEQ ID NO: 1841)

βc-3234 Target: 5'-CAGTACCATTACAGATATTCTTAAAAA-3' (SEQ ID NO: 2950)

5'-AGUACCAUUACAGAUAUUCUUAAaa-3' (SEQ ID NO: 733)

3'-AGUCAUGGUAAUGUCUAUAAGAAUUUU-5' (SEQ ID NO: 1842)

βc-3235 Target: 5'-TCAGTACCATTACAGATATTCTTAAAA-3' (SEQ ID NO: 2951)

5'-AGUCAGUACCAUUACAGAUAUUCtt-3' (SEQ ID NO: 734)
3'-UUUCAGUCAUGGUAAUGUCUAUAAGAA-5' (SEQ ID NO: 1843)

βc-3239 Target: 5'-AAAGTCAGTACCATTACAGATATTCTT-3' (SEQ ID NO: 2952)

5'-UACUUCAAAGCAAGCAAAGUCAGta-3' (SEQ ID NO: 735)
3'-CGAUGAAGUUUCGUUCGUUUCAGUCAU-5' (SEQ ID NO: 1844)

βc-3256 Target: 5'-GCTACTTCAAAGCAAGCAAAGTCAGTA-3' (SEQ ID NO: 2953)

5'-AAAAAGAGCUACUUCAAAGCAAGca-3' (SEQ ID NO: 736)
3'-UUUUUUUCUCGAUGAAGUUUCGUUCGU-5' (SEQ ID NO: 1845)

βc-3265 Target: 5'-AAAAAAAGAGCTACTTCAAAGCAAGCA-3' (SEQ ID NO: 2954)

5'-AAAAAAAAAAGAGCUACUUCAAAgc-3' (SEQ ID NO: 737)
3'-UUUUUUUUUUUUCUCGAUGAAGUUUCG-5' (SEQ ID NO: 1846)

βc-3270 Target: 5'-AAAAAAAAAAAAGAGCTACTTCAAAGC-3' (SEQ ID NO: 2955)

5'-AAAAAAAAAAAGAGCUACUUCAAag-3' (SEQ ID NO: 738)
3'-UUUUUUUUUUUUUCUCGAUGAAGUUUC-5' (SEQ ID NO: 1847)

βc-3271 Target: 5'-AAAAAAAAAAAAAGAGCTACTTCAAAG-3' (SEQ ID NO: 2956)

5'-AAAAAAAAAAAAAGAGCUACUUCaa-3' (SEQ ID NO: 739)
3'-UUUUUUUUUUUUUUUCUCGAUGAAGUU-5' (SEQ ID NO: 1848)

βc-3273 Target: 5'-AAAAAAAAAAAAAAAGAGCTACTTCAA-3' (SEQ ID NO: 2957)

5'-AAAAAAAAAAAAAAGAGCUACUUca-3' (SEQ ID NO: 740)
3'-UUUUUUUUUUUUUUUUCUCGAUGAAGU-5' (SEQ ID NO: 1849)

βc-3274 Target: 5'-AAAAAAAAAAAAAAAAGAGCTACTTCA-3' (SEQ ID NO: 2958)

5'-AAAAAAAAAAAAAAAGAGCUACUtc-3' (SEQ ID NO: 741)
3'-UUUUUUUUUUUUUUUUUCUCGAUGAAG-5' (SEQ ID NO: 1850)

βc-3275 Target: 5'-AAAAAAAAAAAAAAAAAGAGCTACTTC-3' (SEQ ID NO: 2959)

5'-AAAAAAAAAAAAAAAAGAGCUACtt-3' (SEQ ID NO: 742)
3'-UUUUUUUUUUUUUUUUUUCUCGAUGAA-5' (SEQ ID NO: 1851)

βc-3276 Target: 5'-AAAAAAAAAAAAAAAAAAGAGCTACTT-3' (SEQ ID NO: 2960)

5'-AAAAAAAAAAAAAAAAAAAAAGag-3' (SEQ ID NO: 743)
3'-UUUUUUUUUUUUUUUUUUUUUUUCUC-5' (SEQ ID NO: 1852)

βc-3282 Target: 5'-AAAAAAAAAAAAAAAAAAAAAAAAGAG-3' (SEQ ID NO: 2961)

5'-AAAAAAAAAAAAAAAAAAAAAAAga-3' (SEQ ID NO: 744)
3'-UUUUUUUUUUUUUUUUUUUUUUUUCU-5' (SEQ ID NO: 1853)

βc-3283 Target: 5'-AAAAAAAAAAAAAAAAAAAAAAAAGA-3' (SEQ ID NO: 2962)

5'-AAAAAAAAAAAAAAAAAAAAAAAag-3' (SEQ ID NO: 745)
3'-GUUUUUUUUUUUUUUUUUUUUUUUC-5' (SEQ ID NO: 1854)

βc-3284 Target: 5'-CAAAAAAAAAAAAAAAAAAAAAAAAG-3' (SEQ ID NO: 2963)

5'-AAAAAAAAAAAAAAAAAAAAAAAaa-3' (SEQ ID NO: 746)

3'-CGUUUUUUUUUUUUUUUUUUUUUUUU-5' (SEQ ID NO: 1855)

βc-3285 Target: 5'-GCAAAAAAAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2964)

5'-GCAAAAAAAAAAAAAAAAAAAAaa-3' (SEQ ID NO: 747)
3'-GACGUUUUUUUUUUUUUUUUUUUU-5' (SEQ ID NO: 1856)

βc-3287 Target: 5'-CTGCAAAAAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2965)

5'-UGCAAAAAAAAAAAAAAAAAAAAaa-3' (SEQ ID NO: 748)
3'-UGACGUUUUUUUUUUUUUUUUUUUU-5' (SEQ ID NO: 1857)

βc-3288 Target: 5'-ACTGCAAAAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2966)

5'-UUACUGCAAAAAAAAAAAAAAAAAaa-3' (SEQ ID NO: 749)
3'-UCAAUGACGUUUUUUUUUUUUUUUUU-5' (SEQ ID NO: 1858)

βc-3292 Target: 5'-AGTTACTGCAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2967)

5'-GUUACUGCAAAAAAAAAAAAAAAAaa-3' (SEQ ID NO: 750)
3'-GUCAAUGACGUUUUUUUUUUUUUUUU-5' (SEQ ID NO: 1859)

βc-3293 Target: 5'-CAGTTACTGCAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2968)

5'-AGUUACUGCAAAAAAAAAAAAAAAaa-3' (SEQ ID NO: 751)
3'-UGUCAAUGACGUUUUUUUUUUUUUUU-5' (SEQ ID NO: 1860)

βc-3294 Target: 5'-ACAGTTACTGCAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2969)

5'-AAACAGUUACUGCAAAAAAAAAAaa-3' (SEQ ID NO: 752)
3'-UUUUUGUCAAUGACGUUUUUUUUUU-5' (SEQ ID NO: 1861)

βc-3298 Target: 5'-AAAAACAGTTACTGCAAAAAAAAAAA-3' (SEQ ID NO: 2970)

5'-AAAACAGUUACUGCAAAAAAAAAAaa-3' (SEQ ID NO: 753)
3'-UUUUUUGUCAAUGACGUUUUUUUUUU-5' (SEQ ID NO: 1862)

βc-3299 Target: 5'-AAAAAACAGTTACTGCAAAAAAAAAA-3' (SEQ ID NO: 2971)

5'-AAAAACAGUUACUGCAAAAAAAAAa-3' (SEQ ID NO: 754)
3'-AUUUUUUGUCAAUGACGUUUUUUUUU-5' (SEQ ID NO: 1863)

βc-3300 Target: 5'-TAAAAAACAGTTACTGCAAAAAAAAA-3' (SEQ ID NO: 2972)

5'-UAAAAAACAGUUACUGCAAAAAAa-3' (SEQ ID NO: 755)
3'-GAAUUUUUUGUCAAUGACGUUUUUUU-5' (SEQ ID NO: 1864)

βc-3302 Target: 5'-CTTAAAAAACAGTTACTGCAAAAAAAA-3' (SEQ ID NO: 2973)

5'-UUAAAAAACAGUUACUGCAAAAAa-3' (SEQ ID NO: 756)
3'-UGAAUUUUUUGUCAAUGACGUUUUUU-5' (SEQ ID NO: 1865)

βc-3303 Target: 5'-ACTTAAAAAACAGTTACTGCAAAAAAA-3' (SEQ ID NO: 2974)

5'-ACUUAAAAAACAGUUACUGCAAAaa-3' (SEQ ID NO: 757)
3'-UCUGAAUUUUUUGUCAAUGACGUUUUU-5' (SEQ ID NO: 1866)

βc-3305 Target: 5'-AGACTTAAAAAACAGTTACTGCAAAAA-3' (SEQ ID NO: 2975)

5'-ACUACGAGAGACUUAAAAAACAGtt-3' (SEQ ID NO: 758)
3'-UGUGAUGCUCUCUGAAUUUUUUGUCAA-5' (SEQ ID NO: 1867)

βc-3315 Target: 5'-ACACTACGAGAGACTTAAAAAACAGTT-3' (SEQ ID NO: 2976)

5'-ACACUACGAGAGACUUAAAAAACag-3' (SEQ ID NO: 759)

3'-AUUGUGAUGCUCUCUGAAUUUUUUGUC-5' (SEQ ID NO: 1868)

βc-3317 Target: 5'-TAACACTACGAGAGACTTAAAAAACAG-3' (SEQ ID NO: 2977)

5'-AACACUACGAGAGACUUAAAAAAca-3' (SEQ ID NO: 760)
3'-AAUUGUGAUGCUCUCUGAAUUUUUUGU-5' (SEQ ID NO: 1869)

βc-3318 Target: 5'-TTAACACTACGAGAGACTTAAAAAACA-3' (SEQ ID NO: 2978)

5'-UUAACACUACGAGAGACUUAAAAaa-3' (SEQ ID NO: 761)
3'-UGAAUUGUGAUGCUCUCUGAAUUUUUU-5' (SEQ ID NO: 1870)

βc-3320 Target: 5'-ACTTAACACTACGAGAGACTTAAAAAA-3' (SEQ ID NO: 2979)

5'-AACUUAACACUACGAGAGACUUAaa-3' (SEQ ID NO: 762)
3'-UAUUGAAUUGUGAUGCUCUCUGAAUUU-5' (SEQ ID NO: 1871)

βc-3323 Target: 5'-ATAACTTAACACTACGAGAGACTTAAA-3' (SEQ ID NO: 2980)

5'-UAACUUAACACUACGAGAGACUUaa-3' (SEQ ID NO: 763)
3'-AUAUUGAAUUGUGAUGCUCUCUGAAUU-5' (SEQ ID NO: 1872)

βc-3324 Target: 5'-TATAACTTAACACTACGAGAGACTTAA-3' (SEQ ID NO: 2981)

5'-AUUCACUAUAACUUAACACUACGag-3' (SEQ ID NO: 764)
3'-CAUAAGUGAUAUUGAAUUGUGAUGCUC-5' (SEQ ID NO: 1873)

βc-3332 Target: 5'-GTATTCACTATAACTTAACACTACGAG-3' (SEQ ID NO: 2982)

5'-UAUUCACUAUAACUUAACACUACga-3' (SEQ ID NO: 765)
3'-UCAUAAGUGAUAUUGAAUUGUGAUGCU-5' (SEQ ID NO: 1874)

βc-3333 Target: 5'-AGTATTCACTATAACTTAACACTACGA-3' (SEQ ID NO: 2983)

5'-GUAUUCACUAUAACUUAACACUAcg-3' (SEQ ID NO: 766)
3'-GUCAUAAGUGAUAUUGAAUUGUGAUGC-5' (SEQ ID NO: 1875)

βc-3334 Target: 5'-CAGTATTCACTATAACTTAACACTACG-3' (SEQ ID NO: 2984)

5'-AGUAUUCACUAUAACUUAACACUac-3' (SEQ ID NO: 767)
3'-CGUCAUAAGUGAUAUUGAAUUGUGAUG-5' (SEQ ID NO: 1876)

βc-3335 Target: 5'-GCAGTATTCACTATAACTTAACACTAC-3' (SEQ ID NO: 2985)

5'-AAAUUGCUGUAGCAGUAUUCACUat-3' (SEQ ID NO: 768)
3'-UCUUUAACGACAUCGUCAUAAGUGAUA-5' (SEQ ID NO: 1877)

βc-3348 Target: 5'-AGAAATTGCTGTAGCAGTATTCACTAT-3' (SEQ ID NO: 2986)

5'-GAAAUUGCUGUAGCAGUAUUCACta-3' (SEQ ID NO: 769)
3'-AUCUUUAACGACAUCGUCAUAAGUGAU-5' (SEQ ID NO: 1878)

βc-3349 Target: 5'-TAGAAATTGCTGTAGCAGTATTCACTA-3' (SEQ ID NO: 2987)

5'-AGAAAUUGCUGUAGCAGUAUUCAct-3' (SEQ ID NO: 770)
3'-AAUCUUUAACGACAUCGUCAUAAGUGA-5' (SEQ ID NO: 1879)

βc-3350 Target: 5'-TTAGAAATTGCTGTAGCAGTATTCACT-3' (SEQ ID NO: 2988)

5'-UCAAUUCUUAAAAAUUAGAAAUUgc-3' (SEQ ID NO: 771)
3'-UGAGUUAAGAAUUUUUAAUCUUUAACG-5' (SEQ ID NO: 1880)

βc-3366 Target: 5'-ACTCAATTCTTAAAAATTAGAAATTGC-3' (SEQ ID NO: 2989)

5'-AUUACUCAAUUCUUAAAAAUUAGaa-3' (SEQ ID NO: 772)

3'-GGUAAUGAGUUAAGAAUUUUUAAUCUU-5' (SEQ ID NO: 1881)

βc-3371 Target: 5'-CCATTACTCAATTCTTAAAAATTAGAA-3' (SEQ ID NO: 2990)

5'-ACCAUUACUCAAUUCUUAAAAAUta-3' (SEQ ID NO: 773)
3'-UGUGGUAAUGAGUUAAGAAUUUUUAAU-5' (SEQ ID NO: 1882)

βc-3374 Target: 5'-ACACCATTACTCAATTCTTAAAAATTA-3' (SEQ ID NO: 2991)

5'-ACACCAUUACUCAAUUCUUAAAAat-3' (SEQ ID NO: 774)
3'-GAUGUGGUAAUGAGUUAAGAAUUUUUA-5' (SEQ ID NO: 1883)

βc-3376 Target: 5'-CTACACCATTACTCAATTCTTAAAAAT-3' (SEQ ID NO: 2992)

5'-UACACCAUUACUCAAUUCUUAAAaa-3' (SEQ ID NO: 775)
3'-AGAUGUGGUAAUGAGUUAAGAAUUUUU-5' (SEQ ID NO: 1884)

βc-3377 Target: 5'-TCTACACCATTACTCAATTCTTAAAAA-3' (SEQ ID NO: 2993)

5'-UCUACACCAUUACUCAAUUCUUAaa-3' (SEQ ID NO: 776)
3'-CAAGAUGUGGUAAUGAGUUAAGAAUUU-5' (SEQ ID NO: 1885)

βc-3379 Target: 5'-GTTCTACACCATTACTCAATTCTTAAA-3' (SEQ ID NO: 2994)

5'-GUUCUACACCAUUACUCAAUUCUta-3' (SEQ ID NO: 777)
3'-CACAAGAUGUGGUAAUGAGUUAAGAAU-5' (SEQ ID NO: 1886)

βc-3381 Target: 5'-GTGTTCTACACCATTACTCAATTCTTA-3' (SEQ ID NO: 2995)

5'-GAAUUAGUGUUCUACACCAUUACtc-3' (SEQ ID NO: 778)
3'-UACUUAAUCACAAGAUGUGGUAAUGAG-5' (SEQ ID NO: 1887)

βc-3389 Target: 5'-ATGAATTAGTGTTCTACACCATTACTC-3' (SEQ ID NO: 2996)

5'-AUUAUGAAUUAGUGUUCUACACCat-3' (SEQ ID NO: 779)
3'-ACUAAUACUUAAUCACAAGAUGUGGUA-5' (SEQ ID NO: 1888)

βc-3394 Target: 5'-TGATTATGAATTAGTGTTCTACACC-3' (SEQ ID NO: 2997)

5'-GAUUAUGAAUUAGUGUUCUACACca-3' (SEQ ID NO: 780)
3'-CACUAAUACUUAAUCACAAGAUGUGGU-5' (SEQ ID NO: 1889)

βc-3395 Target: 5'-GTGATTATGAATTAGTGTTCTACACCA-3' (SEQ ID NO: 2998)

5'-UGAUUAUGAAUUAGUGUUCUACAcc-3' (SEQ ID NO: 781)
3'-UCACUAAUACUUAAUCACAAGAUGUGG-5' (SEQ ID NO: 1890)

βc-3396 Target: 5'-AGTGATTATGAATTAGTGTTCTACACC-3' (SEQ ID NO: 2999)

5'-UAAUUAGAGUGAUUAUGAAUUAGtg-3' (SEQ ID NO: 782)
3'-UAAUUAAUCUCACUAAUACUUAAUCAC-5' (SEQ ID NO: 1891)

βc-3405 Target: 5'-ATTAATTAGAGTGATTATGAATTAGTG-3' (SEQ ID NO: 3000)

5'-UUAAUUAGAGUGAUUAUGAAUUAgt-3' (SEQ ID NO: 783)
3'-UUAAUUAAUCUCACUAAUACUUAAUCA-5' (SEQ ID NO: 1892)

βc-3406 Target: 5'-AATTAATTAGAGTGATTATGAATTAGT-3' (SEQ ID NO: 3001)

5'-AUUAAUUAGAGUGAUUAUGAAUUag-3' (SEQ ID NO: 784)
3'-GUUAAUUAAUCUCACUAAUACUUAAUC-5' (SEQ ID NO: 1893)

βc-3407 Target: 5'-CAATTAATTAGAGTGATTATGAATTAG-3' (SEQ ID NO: 3002)

5'-UACAAUUAAUUAGAGUGAUUAUGaa-3' (SEQ ID NO: 785)

3'-UAAUGUUAAUUAAUCUCACUAAUACUU-5' (SEQ ID NO: 1894)

βc-3411 Target: 5'-ATTACAATTAATTAGAGTGATTATGAA-3' (SEQ ID NO: 3003)

5'-UUACAAUUAAUUAGAGUGAUUAUga-3' (SEQ ID NO: 786)
3'-CUAAUGUUAAUUAAUCUCACUAAUACU-5' (SEQ ID NO: 1895)

βc-3412 Target: 5'-GATTACAATTAATTAGAGTGATTATGA-3' (SEQ ID NO: 3004)

5'-AUUACAAUUAAUUAGAGUGAUUAtg-3' (SEQ ID NO: 787)
3'-UCUAAUGUUAAUUAAUCUCACUAAUAC-5' (SEQ ID NO: 1896)

βc-3413 Target: 5'-AGATTACAATTAATTAGAGTGATTATG-3' (SEQ ID NO: 3005)

5'-UUAUUCAGAUUACAAUUAAUUAGag-3' (SEQ ID NO: 788)
3'-GAAAUAAGUCUAAUGUUAAUUAAUCUC-5' (SEQ ID NO: 1897)

βc-3421 Target: 5'-CTTTATTCAGATTACAATTAATTAGAG-3' (SEQ ID NO: 3006)

5'-UUUAUUCAGAUUACAAUUAAUUAga-3' (SEQ ID NO: 789)
3'-UGAAAUAAGUCUAAUGUUAAUUAAUCU-5' (SEQ ID NO: 1898)

βc-3422 Target: 5'-ACTTTATTCAGATTACAATTAATTAGA-3' (SEQ ID NO: 3007)

5'-ACACUUUAUUCAGAUUACAAUUAat-3' (SEQ ID NO: 790)
3'-AAUGUGAAAUAAGUCUAAUGUUAAUUA-5' (SEQ ID NO: 1899)

βc-3426 Target: 5'-TTACACTTTATTCAGATTACAATTAAT-3' (SEQ ID NO: 3008)

5'-UACACUUUAUUCAGAUUACAAUUaa-3' (SEQ ID NO: 791)
3'-CAAUGUGAAAUAAGUCUAAUGUUAAUU-5' (SEQ ID NO: 1900)

βc-3427 Target: 5'-GTTACACTTTATTCAGATTACAATTAA-3' (SEQ ID NO: 3009)

5'-UUACACUUUAUUCAGAUUACAAUta-3' (SEQ ID NO: 792)
3'-ACAAUGUGAAAUAAGUCUAAUGUUAAU-5' (SEQ ID NO: 1901)

βc-3428 Target: 5'-TGTTACACTTTATTCAGATTACAATTA-3' (SEQ ID NO: 3010)

5'-GUUACACUUUAUUCAGAUUACAAtt-3' (SEQ ID NO: 793)
3'-AACAAUGUGAAAUAAGUCUAAUGUUAA-5' (SEQ ID NO: 1902)

βc-3429 Target: 5'-TTGTTACACTTTATTCAGATTACAATT-3' (SEQ ID NO: 3011)

5'-UGUUACACUUUAUUCAGAUUACAat-3' (SEQ ID NO: 794)
3'-UAACAAUGUGAAAUAAGUCUAAUGUUA-5' (SEQ ID NO: 1903)

βc-3430 Target: 5'-ATTGTTACACTTTATTCAGATTACAAT-3' (SEQ ID NO: 3012)

5'-ACACAAUUGUUACACUUUAUUCAga-3' (SEQ ID NO: 795)
3'-GAUGUGUUAACAAUGUGAAAUAAGUCU-5' (SEQ ID NO: 1904)

βc-3437 Target: 5'-CTACACAATTGTTACACTTTATTCAGA-3' (SEQ ID NO: 3013)

5'-GGCUACACAAUUGUUACACUUUAtt-3' (SEQ ID NO: 796)
3'-UUCCGAUGUGUUAACAAUGUGAAAUAA-5' (SEQ ID NO: 1905)

βc-3441 Target: 5'-AAGGCTACACAATTGTTACACTTTATT-3' (SEQ ID NO: 3014)

5'-AAAAAGGCUACACAAUUGUUACAct-3' (SEQ ID NO: 797)
3'-UGUUUUUCCGAUGUGUUAACAAUGUGA-5' (SEQ ID NO: 1906)

βc-3446 Target: 5'-ACAAAAAGGCTACACAATTGTTACACT-3' (SEQ ID NO: 3015)

5'-UUAUACAAAAAGGCUACACAAUUgt-3' (SEQ ID NO: 798)

3'-AAAAUAUGUUUUUCCGAUGUGUUAACA-5' (SEQ ID NO: 1907)

βc-3452 Target: 5'-TTTTATACAAAAAGGCTACACAATTGT-3' (SEQ ID NO: 3016)

5'-UUUAUACAAAAAGGCUACACAAUtg-3' (SEQ ID NO: 799)
3'-UAAAAUAUGUUUUUCCGAUGUGUUAAC-5' (SEQ ID NO: 1908)

βc-3453 Target: 5'-ATTTTATACAAAAAGGCTACACAATTG-3' (SEQ ID NO: 3017)

5'-AUUUUAUACAAAAAGGCUACACAat-3' (SEQ ID NO: 800)
3'-GAUAAAAUAUGUUUUUCCGAUGUGUUA-5' (SEQ ID NO: 1909)

βc-3455 Target: 5'-CTATTTTATACAAAAAGGCTACACAAT-3' (SEQ ID NO: 3018)

5'-UAUUUUAUACAAAAAGGCUACACaa-3' (SEQ ID NO: 801)
3'-AGAUAAAAUAUGUUUUUCCGAUGUGUU-5' (SEQ ID NO: 1910)

βc-3456 Target: 5'-TCTATTTTATACAAAAAGGCTACACAA-3' (SEQ ID NO: 3019)

5'-UCUAUUUUAUACAAAAAGGCUACac-3' (SEQ ID NO: 802)
3'-ACAGAUAAAAUAUGUUUUUCCGAUGUG-5' (SEQ ID NO: 1911)

βc-3458 Target: 5'-TGTCTATTTTATACAAAAAGGCTACAC-3' (SEQ ID NO: 3020)

5'-UAUUUGUCUAUUUUAUACAAAAAgg-3' (SEQ ID NO: 803)
3'-AGAUAAACAGAUAAAAUAUGUUUUUCC-5' (SEQ ID NO: 1912)

βc-3464 Target: 5'-TCTATTTGTCTATTTTATACAAAAAGG-3' (SEQ ID NO: 3021)

5'-UCUAUUUGUCUAUUUUAUACAAAaa-3' (SEQ ID NO: 804)
3'-AAAGAUAAACAGAUAAAAUAUGUUUUU-5' (SEQ ID NO: 1913)

βc-3466 Target: 5'-TTTCTATTTGTCTATTTTATACAAAAA-3' (SEQ ID NO: 3022)

5'-UUCUAUUUGUCUAUUUUAUACAAaa-3' (SEQ ID NO: 805)
3'-AAAAGAUAAACAGAUAAAAUAUGUUUU-5' (SEQ ID NO: 1914)

βc-3467 Target: 5'-TTTTCTATTTGTCTATTTTATACAAAA-3' (SEQ ID NO: 3023)

5'-UUUCUAUUUGUCUAUUUUAUACAaa-3' (SEQ ID NO: 806)
3'-UAAAAGAUAAACAGAUAAAAUAUGUUU-5' (SEQ ID NO: 1915)

βc-3468 Target: 5'-ATTTTCTATTTGTCTATTTTATACAAA-3' (SEQ ID NO: 3024)

5'-UUUUCUAUUUGUCUAUUUUAUACaa-3' (SEQ ID NO: 807)
3'-GUAAAAGAUAAACAGAUAAAAUAUGUU-5' (SEQ ID NO: 1916)

βc-3469 Target: 5'-CATTTTCTATTTGTCTATTTTATACAA-3' (SEQ ID NO: 3025)

5'-AUUUUCUAUUUGUCUAUUUUAUAca-3' (SEQ ID NO: 808)
3'-GGUAAAAGAUAAACAGAUAAAAUAUGU-5' (SEQ ID NO: 1917)

βc-3470 Target: 5'-CCATTTTCTATTTGTCTATTTTATACA-3' (SEQ ID NO: 3026)

5'-ACCAUUUUCUAUUUGUCUAUUUUat-3' (SEQ ID NO: 809)
3'-CCUGGUAAAAGAUAAACAGAUAAAAUA-5' (SEQ ID NO: 1918)

βc-3473 Target: 5'-GGACCATTTTCTATTTGTCTATTTTAT-3' (SEQ ID NO: 3027)

5'-GACCAUUUUCUAUUUGUCUAUUUta-3' (SEQ ID NO: 810)
3'-ACCUGGUAAAAGAUAAACAGAUAAAAU-5' (SEQ ID NO: 1919)

βc-3474 Target: 5'-TGGACCATTTTCTATTTGTCTATTTTA-3' (SEQ ID NO: 3028)

5'-GGACCAUUUUCUAUUUGUCUAUUtt-3' (SEQ ID NO: 811)

3'-AACCUGGUAAAAGAUAAACAGAUAAAA-5' (SEQ ID NO: 1920)

βc-3475 Target: 5'-TTGGACCATTTTCTATTTGTCTATTTT-3' (SEQ ID NO: 3029)

5'-ACUAAUUGGACCAUUUUCUAUUUgt-3' (SEQ ID NO: 812)
3'-UUUGAUUAACCUGGUAAAAGAUAAACA-5' (SEQ ID NO: 1921)

βc-3482 Target: 5'-AAACTAATTGGACCATTTTCTATTTGT-3' (SEQ ID NO: 3030)

5'-AACUAAUUGGACCAUUUUCUAUUtg-3' (SEQ ID NO: 813)
3'-CUUUGAUUAACCUGGUAAAAGAUAAAC-5' (SEQ ID NO: 1922)

βc-3483 Target: 5'-GAAACTAATTGGACCATTTTCTATTTG-3' (SEQ ID NO: 3031)

5'-AAACUAAUUGGACCAUUUUCUAUtt-3' (SEQ ID NO: 814)
3'-CCUUUGAUUAACCUGGUAAAAGAUAAA-5' (SEQ ID NO: 1923)

βc-3484 Target: 5'-GGAAACTAATTGGACCATTTTCTATTT-3' (SEQ ID NO: 3032)

5'-GAAACUAAUUGGACCAUUUUCUAtt-3' (SEQ ID NO: 815)
3'-UCCUUUGAUUAACCUGGUAAAAGAUAA-5' (SEQ ID NO: 1924)

βc-3485 Target: 5'-AGGAAACTAATTGGACCATTTTCTATT-3' (SEQ ID NO: 3033)

5'-AAAAAGGAAACUAAUUGGACCAUtt-3' (SEQ ID NO: 816)
3'-AAUUUUUCCUUUGAUUAACCUGGUAAA-5' (SEQ ID NO: 1925)

βc-3491 Target: 5'-TTAAAAAGGAAACTAATTGGACCATTT-3' (SEQ ID NO: 3034)

5'-UAAAAAGGAAACUAAUUGGACCAtt-3' (SEQ ID NO: 817)
3'-UAAUUUUUCCUUUGAUUAACCUGGUAA-5' (SEQ ID NO: 1926)

βc-3492 Target: 5'-ATTAAAAAGGAAACTAATTGGACCATT-3' (SEQ ID NO: 3035)

5'-GCAUAUUAAAAAGGAAACUAAUUgg-3' (SEQ ID NO: 818)
3'-UUCGUAUAAUUUUUCCUUUGAUUAACC-5' (SEQ ID NO: 1927)

βc-3498 Target: 5'-AAGCATATTAAAAAGGAAACTAATTGG-3' (SEQ ID NO: 3036)

5'-AGCAUAUUAAAAAGGAAACUAAUtg-3' (SEQ ID NO: 819)
3'-AUUCGUAUAAUUUUUCCUUUGAUUAAC-5' (SEQ ID NO: 1928)

βc-3499 Target: 5'-TAAGCATATTAAAAAGGAAACTAATTG-3' (SEQ ID NO: 3037)

5'-UUUAAGCAUAUUAAAAAGGAAACta-3' (SEQ ID NO: 820)
3'-UAAAAUUCGUAUAAUUUUUCCUUUGAU-5' (SEQ ID NO: 1929)

βc-3503 Target: 5'-ATTTTAAGCATATTAAAAAGGAAACTA-3' (SEQ ID NO: 3038)

5'-GCUUAUUUUAAGCAUAUUAAAAAgg-3' (SEQ ID NO: 821)
3'-GACGAAUAAAAUUCGUAUAAUUUUUCC-5' (SEQ ID NO: 1930)

βc-3509 Target: 5'-CTGCTTATTTTAAGCATATTAAAAAGG-3' (SEQ ID NO: 3039)

5'-UGCUUAUUUUAAGCAUAUUAAAAag-3' (SEQ ID NO: 822)
3'-GGACGAAUAAAAUUCGUAUAAUUUUUC-5' (SEQ ID NO: 1931)

βc-3510 Target: 5'-CCTGCTTATTTTAAGCATATTAAAAAG-3' (SEQ ID NO: 3040)

5'-UCCACCUGCUUAUUUUAAGCAUAtt-3' (SEQ ID NO: 823)
3'-CUAGGUGGACGAAUAAAAUUCGUAUAA-5' (SEQ ID NO: 1932)

βc-3516 Target: 5'-GATCCACCTGCTTATTTTAAGCATATT-3' (SEQ ID NO: 3041)

5'-AAAACAUGAAAUAGAUCCACCUGct-3' (SEQ ID NO: 824)

3'-GUUUUUGUACUUUAUCUAGGUGGACGA-5' (SEQ ID NO: 1933)

βc-3531 Target: 5'-CAAAAACATGAAATAGATCCACCTGCT-3' (SEQ ID NO: 3042)

5'-AAAAACAUGAAAUAGAUCCACCUgc-3' (SEQ ID NO: 825)
3'-AGUUUUUGUACUUUAUCUAGGUGGACG-5' (SEQ ID NO: 1934)

βc-3532 Target: 5'-TCAAAAACATGAAATAGATCCACCTGC-3' (SEQ ID NO: 3043)

5'-UCAAAAACAUGAAAUAGAUCCACct-3' (SEQ ID NO: 826)
3'-CUAGUUUUUGUACUUUAUCUAGGUGGA-5' (SEQ ID NO: 1935)

βc-3534 Target: 5'-GATCAAAAACATGAAATAGATCCACCT-3' (SEQ ID NO: 3044)

5'-AUCAAAAACAUGAAAUAGAUCCAcc-3' (SEQ ID NO: 827)
3'-ACUAGUUUUUGUACUUUAUCUAGGUGG-5' (SEQ ID NO: 1936)

βc-3535 Target: 5'-TGATCAAAAACATGAAATAGATCCACC-3' (SEQ ID NO: 3045)

5'-GAUCAAAAACAUGAAAUAGAUCCac-3' (SEQ ID NO: 828)
3'-AACUAGUUUUUGUACUUUAUCUAGGUG-5' (SEQ ID NO: 1937)

βc-3536 Target: 5'-TTGATCAAAAACATGAAATAGATCCAC-3' (SEQ ID NO: 3046)

5'-UUUUUGAUCAAAAACAUGAAAUAga-3' (SEQ ID NO: 829)
3'-UCAAAAACUAGUUUUUGUACUUUAUCU-5' (SEQ ID NO: 1938)

βc-3541 Target: 5'-AGTTTTTGATCAAAAACATGAAATAGA-3' (SEQ ID NO: 3047)

5'-AAAUAGUUUUUGAUCAAAAACAUga-3' (SEQ ID NO: 830)
3'-GGUUUAUCAAAAACUAGUUUUUGUACU-5' (SEQ ID NO: 1939)

βc-3547 Target: 5'-CCAAATAGTTTTTGATCAAAAACATGA-3' (SEQ ID NO: 3048)

5'-UCCCAAAUAGUUUUUGAUCAAAAac-3' (SEQ ID NO: 831)
3'-AUAGGGUUUAUCAAAAACUAGUUUUUG-5' (SEQ ID NO: 1940)

βc-3551 Target: 5'-TATCCCAAATAGTTTTTGATCAAAAAC-3' (SEQ ID NO: 3049)

5'-AUCCCAAAUAGUUUUUGAUCAAAaa-3' (SEQ ID NO: 832)
3'-UAUAGGGUUUAUCAAAAACUAGUUUUU-5' (SEQ ID NO: 1941)

βc-3552 Target: 5'-ATATCCCAAATAGTTTTTGATCAAAAA-3' (SEQ ID NO: 3050)

5'-UAUCCCAAAUAGUUUUUGAUCAAaa-3' (SEQ ID NO: 833)
3'-GUAUAGGGUUUAUCAAAAACUAGUUUU-5' (SEQ ID NO: 1942)

βc-3553 Target: 5'-CATATCCCAAATAGTTTTTGATCAAAA-3' (SEQ ID NO: 3051)

5'-AUAUCCCAAAUAGUUUUUGAUCAaa-3' (SEQ ID NO: 834)
3'-UGUAUAGGGUUUAUCAAAAACUAGUUU-5' (SEQ ID NO: 1943)

βc-3554 Target: 5'-ACATATCCCAAATAGTTTTTGATCAAA-3' (SEQ ID NO: 3052)

5'-AUACAUAUCCCAAAUAGUUUUUGat-3' (SEQ ID NO: 835)
3'-GGUAUGUAUAGGGUUUAUCAAAAACUA-5' (SEQ ID NO: 1944)

βc-3558 Target: 5'-CCATACATATCCCAAATAGTTTTTGAT-3' (SEQ ID NO: 3053)

5'-ACCCUACCCAUACAUAUCCCAAAta-3' (SEQ ID NO: 836)
3'-AAUGGGAUGGGUAUGUAUAGGGUUUAU-5' (SEQ ID NO: 1945)

βc-3567 Target: 5'-TTACCCTACCCATACATATCCCAAATA-3' (SEQ ID NO: 3054)

5'-UACCCUACCCAUACAUAUCCCAAat-3' (SEQ ID NO: 837)

3'-AAAUGGGAUGGGUAUGUAUAGGGUUUA-5' (SEQ ID NO: 1946)

βc-3568 Target: 5'-TTTACCCTACCCATACATATCCCAAAT-3' (SEQ ID NO: 3055)

5'-UUACCCUACCCAUACAUAUCCCAaa-3' (SEQ ID NO: 838)
3'-UAAAUGGGAUGGGUAUGUAUAGGGUUU-5' (SEQ ID NO: 1947)

βc-3569 Target: 5'-ATTTACCCTACCCATACATATCCCAAA-3' (SEQ ID NO: 3056)

5'-ACCUCUUACUGAUUUACCCUACCca-3' (SEQ ID NO: 839)
3'-UGUGGAGAAUGACUAAAUGGGAUGGGU-5' (SEQ ID NO: 1948)

βc-3582 Target: 5'-ACACCTCTTACTGATTTACCCTACCCA-3' (SEQ ID NO: 3057)

5'-ACACCUCUUACUGAUUUACCCUAcc-3' (SEQ ID NO: 840)
3'-AUUGUGGAGAAUGACUAAAUGGGAUGG-5' (SEQ ID NO: 1949)

βc-3584 Target: 5'-TAACACCTCTTACTGATTTACCCTACC-3' (SEQ ID NO: 3058)

5'-AACACCUCUUACUGAUUUACCCUac-3' (SEQ ID NO: 841)
3'-UAUUGUGGAGAAUGACUAAAUGGGAUG-5' (SEQ ID NO: 1950)

βc-3585 Target: 5'-ATAACACCTCTTACTGATTTACCCTAC-3' (SEQ ID NO: 3059)

5'-UAACACCUCUUACUGAUUUACCCta-3' (SEQ ID NO: 842)
3'-UUAUUGUGGAGAAUGACUAAAUGGGAU-5' (SEQ ID NO: 1951)

βc-3586 Target: 5'-AATAACACCTCTTACTGATTTACCCTA-3' (SEQ ID NO: 3060)

5'-AUAACACCUCUUACUGAUUUACCct-3' (SEQ ID NO: 843)
3'-UUUAUUGUGGAGAAUGACUAAAUGGGA-5' (SEQ ID NO: 1952)

βc-3587 Target: 5'-AAATAACACCTCTTACTGATTTACCCT-3' (SEQ ID NO: 3061)

5'-AAUAACACCUCUUACUGAUUUACcc-3' (SEQ ID NO: 844)
3'-GUUUAUUGUGGAGAAUGACUAAAUGGG-5' (SEQ ID NO: 1953)

βc-3588 Target: 5'-CAAATAACACCTCTTACTGATTTACCC-3' (SEQ ID NO: 3062)

5'-GUUCCAAAUAACACCUCUUACUGat-3' (SEQ ID NO: 845)
3'-UCCAAGGUUUAUUGUGGAGAAUGACUA-5' (SEQ ID NO: 1954)

βc-3594 Target: 5'-AGGTTCCAAATAACACCTCTTACTGAT-3' (SEQ ID NO: 3063)

5'-AACAAGGUUCCAAAUAACACCUCtt-3' (SEQ ID NO: 846)
3'-UUUUGUUCCAAGGUUUAUUGUGGAGAA-5' (SEQ ID NO: 1955)

βc-3600 Target: 5'-AAAACAAGGTTCCAAATAACACCTCTT-3' (SEQ ID NO: 3064)

5'-AAACAAGGUUCCAAAUAACACCUct-3' (SEQ ID NO: 847)
3'-GUUUUGUUCCAAGGUUUAUUGUGGAGA-5' (SEQ ID NO: 1956)

βc-3601 Target: 5'-CAAAACAAGGTTCCAAATAACACCTCT-3' (SEQ ID NO: 3065)

5'-AAAACAAGGUUCCAAAUAACACCtc-3' (SEQ ID NO: 848)
3'-GGUUUUGUUCCAAGGUUUAUUGUGGAG-5' (SEQ ID NO: 1957)

βc-3602 Target: 5'-CCAAAACAAGGTTCCAAATAACACCTC-3' (SEQ ID NO: 3066)

5'-UGUCCAAAACAAGGUUCCAAAUAac-3' (SEQ ID NO: 849)
3'-UGACAGGUUUUGUUCCAAGGUUUAUUG-5' (SEQ ID NO: 1958)

βc-3607 Target: 5'-ACTGTCCAAAACAAGGTTCCAAATAAC-3' (SEQ ID NO: 3067)

5'-AAACUGUCCAAAACAAGGUUCCAaa-3' (SEQ ID NO: 850)

3'-CAUUUGACAGGUUUUGUUCCAAGGUUU-5' (SEQ ID NO: 1959)

βc-3611 Target: 5'-GTAAACTGTCCAAAACAAGGTTCCAAA-3' (SEQ ID NO: 3068)

5'-UAAACUGUCCAAAACAAGGUUCCaa-3' (SEQ ID NO: 851)
3'-CCAUUUGACAGGUUUUGUUCCAAGGUU-5' (SEQ ID NO: 1960)

βc-3612 Target: 5'-GGTAAACTGTCCAAAACAAGGTTCCAA-3' (SEQ ID NO: 3069)

5'-GCAACUGGUAAACUGUCCAAAACaa-3' (SEQ ID NO: 852)
3'-UCCGUUGACCAUUUGACAGGUUUUGUU-5' (SEQ ID NO: 1961)

βc-3620 Target: 5'-AGGCAACTGGTAAACTGTCCAAAACAA-3' (SEQ ID NO: 3070)

5'-GAUAAAAGGCAACUGGUAAACUGtc-3' (SEQ ID NO: 853)
3'-CCCUAUUUUCCGUUGACCAUUUGACAG-5' (SEQ ID NO: 1962)

βc-3628 Target: 5'-GGGATAAAAGGCAACTGGTAAACTGTC-3' (SEQ ID NO: 3071)

5'-GGAUAAAAGGCAACUGGUAAACUgt-3' (SEQ ID NO: 854)
3'-ACCCUAUUUUCCGUUGACCAUUUGACA-5' (SEQ ID NO: 1963)

βc-3629 Target: 5'-TGGGATAAAAGGCAACTGGTAAACTGT-3' (SEQ ID NO: 3072)

5'-AACUUUGGGAUAAAAGGCAACUGgt-3' (SEQ ID NO: 855)
3'-UGUUGAAACCCUAUUUUCCGUUGACCA-5' (SEQ ID NO: 1964)

βc-3636 Target: 5'-ACAACTTTGGGATAAAAGGCAACTGGT-3' (SEQ ID NO: 3073)

5'-ACAACUUUGGGAUAAAAGGCAACtg-3' (SEQ ID NO: 856)
3'-GUUGUUGAAACCCUAUUUUCCGUUGAC-5' (SEQ ID NO: 1965)

βc-3638 Target: 5'-CAACAACTTTGGGATAAAAGGCAACTG-3' (SEQ ID NO: 3074)

5'-UUACAACAACUUUGGGAUAAAAGgc-3' (SEQ ID NO: 857)
3'-CCAAUGUUGUUGAAACCCUAUUUUCCG-5' (SEQ ID NO: 1966)

βc-3643 Target: 5'-GGTTACAACAACTTTGGGATAAAAGGC-3' (SEQ ID NO: 3075)

5'-GUUACAACAACUUUGGGAUAAAAgg-3' (SEQ ID NO: 858)
3'-UCCAAUGUUGUUGAAACCCUAUUUUCC-5' (SEQ ID NO: 1967)

βc-3644 Target: 5'-AGGTTACAACAACTTTGGGATAAAAGG-3' (SEQ ID NO: 3076)

5'-GGUUACAACAACUUUGGGAUAAAag-3' (SEQ ID NO: 859)
3'-GUCCAAUGUUGUUGAAACCCUAUUUUC-5' (SEQ ID NO: 1968)

βc-3645 Target: 5'-CAGGTTACAACAACTTTGGGATAAAAG-3' (SEQ ID NO: 3077)

5'-UCACAGCAGGUUACAACAACUUUgg-3' (SEQ ID NO: 860)
3'-AUAGUGUCGUCCAAUGUUGUUGAAACC-5' (SEQ ID NO: 1969)

βc-3653 Target: 5'-TATCACAGCAGGTTACAACAACTTTGG-3' (SEQ ID NO: 3078)

5'-AUCACAGCAGGUUACAACAACUUtg-3' (SEQ ID NO: 861)
3'-CAUAGUGUCGUCCAAUGUUGUUGAAAC-5' (SEQ ID NO: 1970)

βc-3654 Target: 5'-GTATCACAGCAGGTTACAACAACTTTG-3' (SEQ ID NO: 3079)

5'-GUAUCACAGCAGGUUACAACAACtt-3' (SEQ ID NO: 862)
3'-AGCAUAGUGUCGUCCAAUGUUGUUGAA-5' (SEQ ID NO: 1971)

βc-3656 Target: 5'-TCGTATCACAGCAGGTTACAACAACTT-3' (SEQ ID NO: 3080)

5'-UCUCUUGAAGCAUCGUAUCACAGca-3' (SEQ ID NO: 863)

3'-AAAGAGAACUUCGUAGCAUAGUGUCGU-5' (SEQ ID NO: 1972)

βc-3670 Target: 5'-TTTCTCTTGAAGCATCGTATCACAGCA-3' (SEQ ID NO: 3081)

5'-UUCUCUUGAAGCAUCGUAUCACAgc-3' (SEQ ID NO: 864)
3'-AAAAGAGAACUUCGUAGCAUAGUGUCG-5' (SEQ ID NO: 1973)

βc-3671 Target: 5'-TTTTCTCTTGAAGCATCGTATCACAGC-3' (SEQ ID NO: 3082)

5'-UUUUCUCUUGAAGCAUCGUAUCAca-3' (SEQ ID NO: 865)
3'-GUAAAAGAGAACUUCGUAGCAUAGUGU-5' (SEQ ID NO: 1974)

βc-3673 Target: 5'-CATTTTCTCTTGAAGCATCGTATCACA-3' (SEQ ID NO: 3083)

5'-UUUUAUAACCGCAUUUUCUCUUGaa-3' (SEQ ID NO: 866)
3'-AAAAAAUAUUGGCGUAAAAGAGAACUU-5' (SEQ ID NO: 1975)

βc-3686 Target: 5'-TTTTTTATAACCGCATTTTCTCTTGAA-3' (SEQ ID NO: 3084)

5'-UUUUUAUAACCGCAUUUUCUCUUga-3' (SEQ ID NO: 867)
3'-UAAAAAAUAUUGGCGUAAAAGAGAACU-5' (SEQ ID NO: 1976)

βc-3687 Target: 5'-ATTTTTTATAACCGCATTTTCTCTTGA-3' (SEQ ID NO: 3085)

5'-UUUUUUAUAACCGCAUUUUCUCUtg-3' (SEQ ID NO: 868)
3'-GUAAAAAAUAUUGGCGUAAAAGAGAAC-5' (SEQ ID NO: 1977)

βc-3688 Target: 5'-CATTTTTTATAACCGCATTTTCTCTTG-3' (SEQ ID NO: 3086)

5'-AUUUUUUAUAACCGCAUUUUCUCtt-3' (SEQ ID NO: 869)
3'-GGUAAAAAAUAUUGGCGUAAAAGAGAA-5' (SEQ ID NO: 1978)

βc-3689 Target: 5'-CCATTTTTTATAACCGCATTTTCTCTT-3' (SEQ ID NO: 3087)

5'-GAACCAUUUUUUUAUAACCGCAUUtt-3' (SEQ ID NO: 870)
3'-GACUUGGUAAAAAAUAUUGGCGUAAAA-5' (SEQ ID NO: 1979)

βc-3694 Target: 5'-CTGAACCATTTTTTATAACCGCATTTT-3' (SEQ ID NO: 3088)

5'-AUUCUGAACCAUUUUUUAUAACCgc-3' (SEQ ID NO: 871)
3'-AUUAAGACUUGGUAAAAAAUAUUGGCG-5' (SEQ ID NO: 1980)

βc-3699 Target: 5'-TAATTCTGAACCATTTTTTATAACCGC-3' (SEQ ID NO: 3089)

5'-AAUUCUGAACCAUUUUUUAUAACcg-3' (SEQ ID NO: 872)
3'-AAUUAAGACUUGGUAAAAAAUAUUGGC-5' (SEQ ID NO: 1981)

βc-3700 Target: 5'-TTAATTCTGAACCATTTTTTATAACCG-3' (SEQ ID NO: 3090)

5'-UAAUUCUGAACCAUUUUUUAUAAcc-3' (SEQ ID NO: 873)
3'-AAAUUAAGACUUGGUAAAAAAUAUUGG-5' (SEQ ID NO: 1982)

βc-3701 Target: 5'-TTTAATTCTGAACCATTTTTTATAACC-3' (SEQ ID NO: 3091)

5'-UUAAUUCUGAACCAUUUUUUAUAac-3' (SEQ ID NO: 874)
3'-CAAAUUAAGACUUGGUAAAAAAUAUUG-5' (SEQ ID NO: 1983)

βc-3702 Target: 5'-GTTTAATTCTGAACCATTTTTTATAAC-3' (SEQ ID NO: 3092)

5'-UUUAAUUCUGAACCAUUUUUUAUaa-3' (SEQ ID NO: 875)
3'-UCAAAUUAAGACUUGGUAAAAAAUAUU-5' (SEQ ID NO: 1984)

βc-3703 Target: 5'-AGTTTAATTCTGAACCATTTTTTATAA-3' (SEQ ID NO: 3093)

5'-GUUUAAUUCUGAACCAUUUUUUAta-3' (SEQ ID NO: 876)

3'-UUCAAAUUAAGACUUGGUAAAAAAUAU-5' (SEQ ID NO: 1985)

βc-3704 Target: 5'-AAGTTTAATTCTGAACCATTTTTTATA-3' (SEQ ID NO: 3094)

5'-UAAAAGUUUAAUUCUGAACCAUUtt-3' (SEQ ID NO: 877)
3'-UAAUUUUCAAAUUAAGACUUGGUAAAA-5' (SEQ ID NO: 1986)

βc-3709 Target: 5'-ATTAAAAGTTTAATTCTGAACCATTTT-3' (SEQ ID NO: 3095)

5'-UUAAAAGUUUAAUUCUGAACCAUtt-3' (SEQ ID NO: 878)
3'-UUAAUUUUCAAAUUAAGACUUGGUAAA-5' (SEQ ID NO: 1987)

βc-3710 Target: 5'-AATTAAAAGTTTAATTCTGAACCATTT-3' (SEQ ID NO: 3096)

5'-AAUUAAAAGUUUAAUUCUGAACCat-3' (SEQ ID NO: 879)
3'-ACUUAAUUUUCAAAUUAAGACUUGGUA-5' (SEQ ID NO: 1988)

βc-3712 Target: 5'-TGAATTAAAAGTTTAATTCTGAACC-3' (SEQ ID NO: 3097)

5'-AUACAGCUAAAGGAUGAUUUACAgg-3' (SEQ ID NO: 880)
3'-GUUAUGUCGAUUUCCUACUAAAUGUCC-5' (SEQ ID NO: 1989)

βc-2634t2 Target: 5'-CAATACAGCTAAAGGATGATTTACAGG-3' (SEQ ID NO: 3098)

5'-AAUACAGCUAAAGGAUGAUUUACag-3' (SEQ ID NO: 881)
3'-UGUUAUGUCGAUUUCCUACUAAAUGUC-5' (SEQ ID NO: 1990)

βc-2635t2 Target: 5'-ACAATACAGCTAAAGGATGATTTACAG-3' (SEQ ID NO: 3099)

5'-ACAAUACAGCUAAAGGAUGAUUUac-3' (SEQ ID NO: 882)
3'-UCUGUUAUGUCGAUUUCCUACUAAAUG-5' (SEQ ID NO: 1991)

βc-2637t2 Target: 5'-AGACAATACAGCTAAAGGATGATTTAC-3' (SEQ ID NO: 3100)

5'-UACUCCUAAAGGAUGAUUUACAGgt-3' (SEQ ID NO: 883)
3'-CAAUGAGGAUUUCCUACUAAAUGUCCA-5' (SEQ ID NO: 1992)

βc-2633t3 Target: 5'-GTTACTCCTAAAGGATGATTTACAGGT-3' (SEQ ID NO: 3101)

5'-UUACUCCUAAAGGAUGAUUUACAgg-3' (SEQ ID NO: 884)
3'-ACAAUGAGGAUUUCCUACUAAAUGUCC-5' (SEQ ID NO: 1993)

βc-2634t3 Target: 5'-TGTTACTCCTAAAGGATGATTTACAGG-3' (SEQ ID NO: 3102)

5'-GUUACUCCUAAAGGAUGAUUUACag-3' (SEQ ID NO: 885)
3'-AACAAUGAGGAUUUCCUACUAAAUGUC-5' (SEQ ID NO: 1994)

βc-2635t3 Target: 5'-TTGTTACTCCTAAAGGATGATTTACAG-3' (SEQ ID NO: 3103)

5'-UGUUACUCCUAAAGGAUGAUUUAca-3' (SEQ ID NO: 886)
3'-UAACAAUGAGGAUUUCCUACUAAAUGU-5' (SEQ ID NO: 1995)

βc-2636t3 Target: 5'-ATTGTTACTCCTAAAGGATGATTTACA-3' (SEQ ID NO: 3104)

5'-AUUCCAGAAUCCAAGUAAGACUGct-3' (SEQ ID NO: 887)
3'-CCUAAGGUCUUAGGUUCAUUCUGACGA-5' (SEQ ID NO: 1996)

βc-m318 Target: 5'-GGATTCCAGAATCCAAGTAAGACTGCT-3' (SEQ ID NO: 3105)

5'-UGCUCCCAUUCAUAAAGGACUUGgg-3' (SEQ ID NO: 888)
3'-GAACGAGGGUAAGUAUUUCCUGAACCC-5' (SEQ ID NO: 1997)

βc-m417 Target: 5'-CTTGCTCCCATTCATAAAGGACTTGGG-3' (SEQ ID NO: 3106)

5'-UCAAUAUCAGCUACUUGCUCUUGcg-3' (SEQ ID NO: 889)

3'-GCAGUUAUAGUCGAUGAACGAGAACGC-5' (SEQ ID NO: 1998)

βc-m462 Target: 5'-CGTCAATATCAGCTACTTGCTCTTGCG-3' (SEQ ID NO: 3107)

5'-GUCAAUAUCAGCUACUUGCUCUUgc-3' (SEQ ID NO: 890)
3'-GGCAGUUAUAGUCGAUGAACGAGAACG-5' (SEQ ID NO: 1999)

βc-m463 Target: 5'-CCGTCAATATCAGCTACTTGCTCTTGC-3' (SEQ ID NO: 3108)

5'-UGCCCGUCAAUAUCAGCUACUUGct-3' (SEQ ID NO: 891)
3'-UGACGGGCAGUUAUAGUCGAUGAACGA-5' (SEQ ID NO: 2000)

βc-m468 Target: 5'-ACTGCCCGTCAATATCAGCTACTTGCT-3' (SEQ ID NO: 3109)

5'-UUUCAACAUCUGUGAUGGUUCAGcc-3' (SEQ ID NO: 892)
3'-ACAAAGUUGUAGACACUACCAAGUCGG-5' (SEQ ID NO: 2001)

βc-m613 Target: 5'-TGTTTCAACATCTGTGATGGTTCAGCC-3' (SEQ ID NO: 3110)

5'-GUUUCAACAUCUGUGAUGGUUCAgc-3' (SEQ ID NO: 893)
3'-UACAAAGUUGUAGACACUACCAAGUCG-5' (SEQ ID NO: 2002)

βc-m614 Target: 5'-ATGTTTCAACATCTGTGATGGTTCAGC-3' (SEQ ID NO: 3111)

5'-ACAACUGCAUGUUUCAACAUCUGtg-3' (SEQ ID NO: 894)
3'-ACUGUUGACGUACAAAGUUGUAGACAC-5' (SEQ ID NO: 2003)

βc-m624 Target: 5'-TGACAACTGCATGTTTCAACATCTGTG-3' (SEQ ID NO: 3112)

5'-UGACAACUGCAUGUUUCAACAUCtg-3' (SEQ ID NO: 895)
3'-UAACUGUUGACGUACAAAGUUGUAGAC-5' (SEQ ID NO: 2004)

βc-m626 Target: 5'-ATTGACAACTGCATGTTTCAACATCTG-3' (SEQ ID NO: 3113)

5'-AAAUUGACAACUGCAUGUUUCAAca-3' (SEQ ID NO: 896)
3'-AGUUUAACUGUUGACGUACAAAGUUGU-5' (SEQ ID NO: 2005)

βc-m630 Target: 5'-TCAAATTGACAACTGCATGTTTCAACA-3' (SEQ ID NO: 3114)

5'-UUAAUCAAAUUGACAACUGCAUGtt-3' (SEQ ID NO: 897)
3'-UCAAUUAGUUUAACUGUUGACGUACAA-5' (SEQ ID NO: 2006)

βc-m636 Target: 5'-AGTTAATCAAATTGACAACTGCATGTT-3' (SEQ ID NO: 3115)

5'-UGAUAGUUAAUCAAAUUGACAACtg-3' (SEQ ID NO: 898)
3'-GGACUAUCAAUUAGUUUAACUGUUGAC-5' (SEQ ID NO: 2007)

βc-m642 Target: 5'-CCTGATAGTTAATCAAATTGACAACTG-3' (SEQ ID NO: 3116)

5'-UCAUCCUGAUAGUUAAUCAAAUUga-3' (SEQ ID NO: 899)
3'-GCAGUAGGACUAUCAAUUAGUUUAACU-5' (SEQ ID NO: 2008)

βc-m648 Target: 5'-CGTCATCCTGATAGTTAATCAAATTGA-3' (SEQ ID NO: 3117)

5'-GUCAUCCUGAUAGUUAAUCAAAUtg-3' (SEQ ID NO: 900)
3'-CGCAGUAGGACUAUCAAUUAGUUUAAC-5' (SEQ ID NO: 2009)

βc-m649 Target: 5'-GCGTCATCCTGATAGTTAATCAAATTG-3' (SEQ ID NO: 3118)

5'-UCAUCGUUUAGCAGUUUUGUCAGct-3' (SEQ ID NO: 901)
3'-GGAGUAGCAAAUCGUCAAAACAGUCGA-5' (SEQ ID NO: 2010)

βc-m702 Target: 5'-CCTCATCGTTTAGCAGTTTTGTCAGCT-3' (SEQ ID NO: 3119)

5'-GGUCCUCAUCGUUUAGCAGUUUUgt-3' (SEQ ID NO: 902)

3'-GACCAGGAGUAGCAAAUCGUCAAAACA-5' (SEQ ID NO: 2011)

βc-m707 Target: 5'-CTGGTCCTCATCGTTTAGCAGTTTTGT-3' (SEQ ID NO: 3120)

5'-UAACAGCAGCUUUAUUAACUACCac-3' (SEQ ID NO: 903)
3'-GUAUUGUCGUCGAAAUAAUUGAUGGUG-5' (SEQ ID NO: 2012)

βc-m734 Target: 5'-CATAACAGCAGCTTTATTAACTACCAC-3' (SEQ ID NO: 3121)

5'-AUAACAGCAGCUUUAUUAACUACCa-3' (SEQ ID NO: 904)
3'-GGUAUUGUCGUCGAAAUAAUUGAUGGU-5' (SEQ ID NO: 2013)

βc-m735 Target: 5'-CCATAACAGCAGCTTTATTAACTACCA-3' (SEQ ID NO: 3122)

5'-ACCAUAACAGCAGCUUUAUUAACta-3' (SEQ ID NO: 905)
3'-CCUGGUAUUGUCGUCGAAAUAAUUGAU-5' (SEQ ID NO: 2014)

βc-m738 Target: 5'-GGACCATAACAGCAGCTTTATTAACTA-3' (SEQ ID NO: 3123)

5'-GACCAUAACAGCAGCUUUAUUAAct-3' (SEQ ID NO: 906)
3'-ACCUGGUAUUGUCGUCGAAAUAAUUGA-5' (SEQ ID NO: 2015)

βc-m739 Target: 5'-TGGACCATAACAGCAGCTTTATTAACT-3' (SEQ ID NO: 3124)

5'-GUCUCUACAUCAUUUGUAUUCUGca-3' (SEQ ID NO: 907)
3'-GACAGAGAUGUAGUAAACAUAAGACGU-5' (SEQ ID NO: 2016)

βc-m843 Target: 5'-CTGTCTCTACATCATTTGTATTCTGCA-3' (SEQ ID NO: 3125)

5'-UGUCUCUACAUCAUUUGUAUUCUgc-3' (SEQ ID NO: 908)
3'-CGACAGAGAUGUAGUAAACAUAAGACG-5' (SEQ ID NO: 2017)

βc-m844 Target: 5'-GCTGTCTCTACATCATTTGTATTCTGC-3' (SEQ ID NO: 3126)

5'-AACCAUUUUCUGCAGUCCACCAGct-3' (SEQ ID NO: 909)
3'-CGUUGGUAAAAGACGUCAGGUGGUCGA-5' (SEQ ID NO: 2018)

βc-m1063 Target: 5'-GCAACCATTTTCTGCAGTCCACCAGCT-3' (SEQ ID NO: 3127)

5'-GCAACCAUUUUCUGCAGUCCACCag-3' (SEQ ID NO: 910)
3'-UUCGUUGGUAAAAGACGUCAGGUGGUC-5' (SEQ ID NO: 2019)

βc-m1065 Target: 5'-AAGCAACCATTTTCTGCAGTCCACCAG-3' (SEQ ID NO: 3128)

5'-GUUUUGUUGAGCAAAGCAACCAUtt-3' (SEQ ID NO: 911)
3'-AACAAAACAACUCGUUUCGUUGGUAAA-5' (SEQ ID NO: 2020)

βc-m1080 Target: 5'-TTGTTTTGTTGAGCAAAGCAACCATTT-3' (SEQ ID NO: 3129)

5'-UGUUUUGUUGAGCAAAGCAACCAtt-3' (SEQ ID NO: 912)
3'-AAACAAAACAACUCGUUUCGUUGGUAA-5' (SEQ ID NO: 2021)

βc-m1081 Target: 5'-TTTGTTTTGTTGAGCAAAGCAACCATT-3' (SEQ ID NO: 3130)

5'-GCCAAGAAUUUCACGUUUGUUUUgt-3' (SEQ ID NO: 913)
3'-AUCGGUUCUUAAAGUGCAAACAAAACA-5' (SEQ ID NO: 2022)

βc-m1098 Target: 5'-TAGCCAAGAATTTCACGTTTGTTTTGT-3' (SEQ ID NO: 3131)

5'-UGAUUGCCAUAAGCUAAGAUCUGaa-3' (SEQ ID NO: 914)
3'-GAACUAACGGUAUUCGAUUCUAGACUU-5' (SEQ ID NO: 2023)

βc-m1140 Target: 5'-CTTGATTGCCATAAGCTAAGATCTGAA-3' (SEQ ID NO: 3132)

5'-UCUCUUGAUUGCCAUAAGCUAAGat-3' (SEQ ID NO: 915)

3'-CGAGAGAACUAACGGUAUUCGAUUCUA-5' (SEQ ID NO: 2024)

βc-m1145 Target: 5'-GCTCTCTTGATTGCCATAAGCTAAGAT-3' (SEQ ID NO: 3133)

5'-UCUCAUAAGUGUAGGUCCUCAUUat-3' (SEQ ID NO: 916)
3'-GAAGAGUAUUCACAUCCAGGAGUAAUA-5' (SEQ ID NO: 2025)

βc-m1217 Target: 5'-CTTCTCATAAGTGTAGGTCCTCATTAT-3' (SEQ ID NO: 3134)

5'-UUCUCAUAAGUGUAGGUCCUCAUta-3' (SEQ ID NO: 917)
3'-CGAAGAGUAUUCACAUCCAGGAGUAAU-5' (SEQ ID NO: 2026)

βc-m1218 Target: 5'-GCTTCTCATAAGTGTAGGTCCTCATTA-3' (SEQ ID NO: 3135)

5'-GCUUCUCAUAAGUGUAGGUCCUCat-3' (SEQ ID NO: 918)
3'-UUCGAAGAGUAUUCACAUCCAGGAGUA-5' (SEQ ID NO: 2027)

βc-m1220 Target: 5'-AAGCTTCTCATAAGTGTAGGTCCTC-3' (SEQ ID NO: 3136)

5'-AGCUUCUCAUAAGUGUAGGUCCUca-3' (SEQ ID NO: 919)
3'-CUUCGAAGAGUAUUCACAUCCAGGAGU-5' (SEQ ID NO: 2028)

βc-m1221 Target: 5'-GAAGCTTCTCATAAGTGTAGGTCCTCA-3' (SEQ ID NO: 3137)

5'-GUCCAAAGACAGUUUUGAACAAGtc-3' (SEQ ID NO: 920)
3'-CUCAGGUUUCUGUCAAAACUUGUUCAG-5' (SEQ ID NO: 2029)

βc-m1365 Target: 5'-GAGTCCAAAGACAGTTTTGAACAAGTC-3' (SEQ ID NO: 3138)

5'-AGUCCAAAGACAGUUUUGAACAAgt-3' (SEQ ID NO: 921)
3'-UCUCAGGUUUCUGUCAAAACUUGUUCA-5' (SEQ ID NO: 2030)

βc-m1366 Target: 5'-AGAGTCCAAAGACAGTTTTGAACAAGT-3' (SEQ ID NO: 3139)

5'-ACAUUUAUAUCAUCGGAACCCAGaa-3' (SEQ ID NO: 922)
3'-GGUGUAAAUAUAGUAGCCUUGGGUCUU-5' (SEQ ID NO: 2031)

βc-m1461 Target: 5'-CCACATTTATATCATCGGAACCCAGAA-3' (SEQ ID NO: 3140)

5'-ACCACAUUUAUAUCAUCGGAACCca-3' (SEQ ID NO: 923)
3'-ACUGGUGUAAAUAUAGUAGCCUUGGGU-5' (SEQ ID NO: 2032)

βc-m1464 Target: 5'-TGACCACATTTATATCATCGGAACCCA-3' (SEQ ID NO: 3141)

5'-GCACAGGUGACCACAUUUAUAUCat-3' (SEQ ID NO: 924)
3'-GACGUGUCCACUGGUGUAAAUAUAGUA-5' (SEQ ID NO: 2033)

βc-m1473 Target: 5'-CTGCACAGGTGACCACATTTATATC-3' (SEQ ID NO: 3142)

5'-UGCACAGGUGACCACAUUUAUAUca-3' (SEQ ID NO: 925)
3'-CGACGUGUCCACUGGUGUAAAUAUAGU-5' (SEQ ID NO: 2034)

βc-m1474 Target: 5'-GCTGCACAGGTGACCACATTTATATCA-3' (SEQ ID NO: 3143)

5'-GUAAUUAUUGCAAGUGAGGUUAGag-3' (SEQ ID NO: 926)
3'-AACAUUAAUAACGUUCACUCCAAUCUC-5' (SEQ ID NO: 2035)

βc-m1510 Target: 5'-TTGTAATTATTGCAAGTGAGGTTAGAG-3' (SEQ ID NO: 3144)

5'-UCAUCUUGUUUUUGUAAUUAUUGca-3' (SEQ ID NO: 927)
3'-GUAGUAGAACAAAAACAUUAAUAACGU-5' (SEQ ID NO: 2036)

βc-m1523 Target: 5'-CATCATCTTGTTTTTGTAATTATTGCA-3' (SEQ ID NO: 3145)

5'-AUCAUCUUGUUUUUGUAAUUAUUgc-3' (SEQ ID NO: 928)

3'-GGUAGUAGAACAAAAACAUUAAUAACG-5' (SEQ ID NO: 2037)

βc-m1524 Target: 5'-CCATCATCTTGTTTTTGTAATTATTGC-3' (SEQ ID NO: 3146)

5'-ACCAUCAUCUUGUUUUUGUAAUUat-3' (SEQ ID NO: 929)
3'-UGUGGUAGUAGAACAAAAACAUUAAUA-5' (SEQ ID NO: 2038)

βc-m1527 Target: 5'-ACACCATCATCTTGTTTTTGTAATTAT-3' (SEQ ID NO: 3147)

5'-GGCACACCAUCAUCUUGUUUUUGta-3' (SEQ ID NO: 930)
3'-AACCGUGUGGUAGUAGAACAAAAACAU-5' (SEQ ID NO: 2039)

βc-m1532 Target: 5'-TTGGCACACCATCATCTTGTTTTTGTA-3' (SEQ ID NO: 3148)

5'-AAUCCAACAGUUGCCUUUAUCAGag-3' (SEQ ID NO: 931)
3'-AGUUAGGUUGUCAACGGAAAUAGUCUC-5' (SEQ ID NO: 2040)

βc-m1752 Target: 5'-TCAATCCAACAGTTGCCTTTATCAGAG-3' (SEQ ID NO: 3149)

5'-GAAUCAAUCCAACAGUUGCCUUUat-3' (SEQ ID NO: 932)
3'-AGCUUAGUUAGGUUGUCAACGGAAAUA-5' (SEQ ID NO: 2041)

βc-m1757 Target: 5'-TCGAATCAATCCAACAGTTGCCTTTAT-3' (SEQ ID NO: 3150)

5'-UGAACUAGUCGUGGAAUAGCACCct-3' (SEQ ID NO: 933)
3'-CGACUUGAUCAGCACCUUAUCGUGGGA-5' (SEQ ID NO: 2042)

βc-m1827 Target: 5'-GCTGAACTAGTCGTGGAATAGCACCCT-3' (SEQ ID NO: 3151)

5'-UACACCCUUCUACUAUCUCCUCCat-3' (SEQ ID NO: 934)
3'-UCAUGUGGGAAGAUGAUAGAGGAGGUA-5' (SEQ ID NO: 2043)

βc-m1934 Target: 5'-AGTACACCCTTCTACTATCTCCTCC-3' (SEQ ID NO: 3152)

5'-GUACACCCUUCUACUAUCUCCUCca-3' (SEQ ID NO: 935)
3'-GUCAUGUGGGAAGAUGAUAGAGGAGGU-5' (SEQ ID NO: 2044)

βc-m1935 Target: 5'-CAGTACACCCTTCTACTATCTCCTCCA-3' (SEQ ID NO: 3153)

5'-AGUACACCCUUCUACUAUCUCCUcc-3' (SEQ ID NO: 936)
3'-GGUCAUGUGGGAAGAUGAUAGAGGAGG-5' (SEQ ID NO: 2045)

βc-m1936 Target: 5'-CCAGTACACCCTTCTACTATCTCCTCC-3' (SEQ ID NO: 3154)

5'-GCUCCAGUACACCCUUCUACUAUct-3' (SEQ ID NO: 937)
3'-CUCGAGGUCAUGUGGGAAGAUGAUAGA-5' (SEQ ID NO: 2046)

βc-m1941 Target: 5'-GAGCTCCAGTACACCCTTCTACTATCT-3' (SEQ ID NO: 3155)

5'-ACAAUGGAAUGGUAUUGAGUCCUcg-3' (SEQ ID NO: 938)
3'-UUUGUUACCUUACCAUAACUCAGGAGC-5' (SEQ ID NO: 2047)

βc-m2009 Target: 5'-AAACAATGGAATGGTATTGAGTCCTCG-3' (SEQ ID NO: 3156)

5'-GCACAAACAAUGGAAUGGUAUUGag-3' (SEQ ID NO: 939)
3'-GACGUGUUUGUUACCUUACCAUAACUC-5' (SEQ ID NO: 2048)

βc-m2015 Target: 5'-CTGCACAAACAATGGAATGGTATTGAG-3' (SEQ ID NO: 3157)

5'-UGCACAAACAAUGGAAUGGUAUUga-3' (SEQ ID NO: 940)
3'-UGACGUGUUUGUUACCUUACCAUAACU-5' (SEQ ID NO: 2049)

βc-m2016 Target: 5'-ACTGCACAAACAATGGAATGGTATTGA-3' (SEQ ID NO: 3158)

5'-GCAACUGCACAAACAAUGGAAUGgt-3' (SEQ ID NO: 941)

3'-UUCGUUGACGUGUUUGUUACCUUACCA-5' (SEQ ID NO: 2050)

βc-m2021 Target: 5'-AAGCAACTGCACAAACAATGGAATGGT-3' (SEQ ID NO: 3159)

5'-GAAUAAAGCAACUGCACAAACAAtg-3' (SEQ ID NO: 942)
3'-CUCUUAUUUCGUUGACGUGUUUGUUAC-5' (SEQ ID NO: 2051)

βc-m2028 Target: 5'-GAGAATAAAGCAACTGCACAAACAATG-3' (SEQ ID NO: 3160)

5'-UCAAUGGGAGAAUAAAGCAACUGca-3' (SEQ ID NO: 943)
3'-AAAGUUACCCUCUUAUUUCGUUGACGU-5' (SEQ ID NO: 2052)

βc-m2037 Target: 5'-TTTCAATGGGAGAATAAAGCAACTGCA-3' (SEQ ID NO: 3161)

5'-UUCAAUGGGAGAAUAAAGCAACUgc-3' (SEQ ID NO: 944)
3'-AAAAGUUACCCUCUUAUUUCGUUGACG-5' (SEQ ID NO: 2053)

βc-m2038 Target: 5'-TTTTCAATGGGAGAATAAAGCAACTGC-3' (SEQ ID NO: 3162)

5'-UUUCAAUGGGAGAAUAAAGCAACtg-3' (SEQ ID NO: 945)
3'-UAAAAGUUACCCUCUUAUUUCGUUGAC-5' (SEQ ID NO: 2054)

βc-m2039 Target: 5'-ATTTTCAATGGGAGAATAAAGCAACTG-3' (SEQ ID NO: 3163)

5'-AUAUUUUCAAUGGGAGAAUAAAGca-3' (SEQ ID NO: 946)
3'-CCUAUAAAAGUUACCCUCUUAUUUCGU-5' (SEQ ID NO: 2055)

βc-m2043 Target: 5'-GGATATTTTCAATGGGAGAATAAAGCA-3' (SEQ ID NO: 3164)

5'-GAUAUUUUCAAUGGGAGAAUAAAgc-3' (SEQ ID NO: 947)
3'-ACCUAUAAAAGUUACCCUCUUAUUUCG-5' (SEQ ID NO: 2056)

βc-m2044 Target: 5'-TGGATATTTTCAATGGGAGAATAAAGC-3' (SEQ ID NO: 3165)

5'-GGAUAUUUUCAAUGGGAGAAUAAag-3' (SEQ ID NO: 948)
3'-AACCUAUAAAAGUUACCCUCUUAUUUC-5' (SEQ ID NO: 2057)

βc-m2045 Target: 5'-TTGGATATTTTCAATGGGAGAATAAAG-3' (SEQ ID NO: 3166)

5'-GCUACUCUUUGGAUAUUUUCAAUgg-3' (SEQ ID NO: 949)
3'-GUCGAUGAGAAACCUAUAAAAGUUACC-5' (SEQ ID NO: 2058)

βc-m2055 Target: 5'-CAGCTACTCTTTGGATATTTTCAATGG-3' (SEQ ID NO: 3167)

5'-AGCUACUCUUUGGAUAUUUUCAAtg-3' (SEQ ID NO: 950)
3'-CGUCGAUGAGAAACCUAUAAAAGUUAC-5' (SEQ ID NO: 2059)

βc-m2056 Target: 5'-GCAGCTACTCTTTGGATATTTTCAATG-3' (SEQ ID NO: 3168)

5'-GCUUCUUGUAAUCCUGUGGCUUGtc-3' (SEQ ID NO: 951)
3'-GGCGAAGAACAUUAGGACACCGAACAG-5' (SEQ ID NO: 2060)

βc-m2231 Target: 5'-CCGCTTCTTGTAATCCTGTGGCTTGTC-3' (SEQ ID NO: 3169)

5'-AGUCCAAGAUCUGCAGUCUCAUUcc-3' (SEQ ID NO: 952)
3'-GGUCAGGUUCUAGACGUCAGAGUAAGG-5' (SEQ ID NO: 2061)

βc-m2307 Target: 5'-CCAGTCCAAGATCTGCAGTCTCATTCC-3' (SEQ ID NO: 3170)

5'-UAUCCACCAGAGUGAAAAGAACGgt-3' (SEQ ID NO: 953)
3'-GCAUAGGUGGUCUCACUUUUCUUGCCA-5' (SEQ ID NO: 2062)

βc-m2385 Target: 5'-CGTATCCACCAGAGTGAAAAGAACGGT-3' (SEQ ID NO: 3171)

5'-GGCCAGCUGAUUGCUAUCACCUGgg-3' (SEQ ID NO: 954)

3'-GUCCGGUCGACUAACGAUAGUGGACCC-5' (SEQ ID NO: 2063)

βc-m2539 Target: 5'-CAGGCCAGCTGATTGCTATCACCTGGG-3' (SEQ ID NO: 3172)

5'-AUUUACAGGUCAGUAUCAAACCAgg-3' (SEQ ID NO: 955)
3'-GCUAAAUGUCCAGUCAUAGUUUGGUCC-5' (SEQ ID NO: 2064)

βc-m2562 Target: 5'-CGATTTACAGGTCAGTATCAAACCAGG-3' (SEQ ID NO: 3173)

5'-GAUUUACAGGUCAGUAUCAAACCag-3' (SEQ ID NO: 956)
3'-UGCUAAAUGUCCAGUCAUAGUUUGGUC-5' (SEQ ID NO: 2065)

βc-m2563 Target: 5'-ACGATTTACAGGTCAGTATCAAACCAG-3' (SEQ ID NO: 3174)

5'-UCUUACCUAAAGGACGAUUUACAgg-3' (SEQ ID NO: 957)
3'-AAAGAAUGGAUUUCCUGCUAAAUGUCC-5' (SEQ ID NO: 2066)

βc-m2578 Target: 5'-TTTCTTACCTAAAGGACGATTTACAGG-3' (SEQ ID NO: 3175)

5'-UUUCUUACCUAAAGGACGAUUUAca-3' (SEQ ID NO: 958)
3'-CGAAAGAAUGGAUUUCCUGCUAAAUGU-5' (SEQ ID NO: 2067)

βc-m2580 Target: 5'-GCTTTCTTACCTAAAGGACGATTTACA-3' (SEQ ID NO: 3176)

5'-UUUAUAAGCUUUCUUACCUAAAGga-3' (SEQ ID NO: 959)
3'-GAAAAUAUUCGAAAGAAUGGAUUUCCU-5' (SEQ ID NO: 2068)

βc-m2589 Target: 5'-CTTTTATAAGCTTTCTTACCTAAAGGA-3' (SEQ ID NO: 3177)

5'-UUUUAUAAGCUUUCUUACCUAAAgg-3' (SEQ ID NO: 960)
3'-CGAAAAUAUUCGAAAGAAUGGAUUUCC-5' (SEQ ID NO: 2069)

βc-m2590 Target: 5'-GCTTTTATAAGCTTTCTTACCTAAAGG-3' (SEQ ID NO: 3178)

5'-GGCUUUUAUAAGCUUUCUUACCUaa-3' (SEQ ID NO: 961)
3'-GACCGAAAAUAUUCGAAAGAAUGGAUU-5' (SEQ ID NO: 2070)

βc-m2593 Target: 5'-CTGGCTTTTATAAGCTTTCTTACCTAA-3' (SEQ ID NO: 3179)

5'-ACACUGGCUUUUAUAAGCUUUCUta-3' (SEQ ID NO: 962)
3'-GGUGUGACCGAAAAUAUUCGAAAGAAU-5' (SEQ ID NO: 2071)

βc-m2598 Target: 5'-CCACACTGGCTTTTATAAGCTTTCTTA-3' (SEQ ID NO: 3180)

5'-UCACCCACACUGGCUUUUAUAAGct-3' (SEQ ID NO: 963)
3'-UAAGUGGGUGUGACCGAAAAUAUUCGA-5' (SEQ ID NO: 2072)

βc-m2604 Target: 5'-ATTCACCCACACTGGCTTTTATAAGCT-3' (SEQ ID NO: 3181)

5'-UACCAAGUCUUUCUGGAGUUCUGca-3' (SEQ ID NO: 964)
3'-GGAUGGUUCAGAAAGACCUCAAGACGU-5' (SEQ ID NO: 2073)

βc-m2644 Target: 5'-CCTACCAAGTCTTTCTGGAGTTCTGCA-3' (SEQ ID NO: 3182)

5'-UUACAAACAGGCCUAAAACCAUUcc-3' (SEQ ID NO: 965)
3'-UAAAUGUUUGUCCGGAUUUUGGUAAGG-5' (SEQ ID NO: 2074)

βc-m2674 Target: 5'-ATTTACAAACAGGCCTAAAACCATTCC-3' (SEQ ID NO: 3183)

5'-UUUACAAACAGGCCUAAAACCAUtc-3' (SEQ ID NO: 966)
3'-CUAAAUGUUUGUCCGGAUUUUGGUAAG-5' (SEQ ID NO: 2075)

βc-m2675 Target: 5'-GATTTACAAACAGGCCTAAAACCATTC-3' (SEQ ID NO: 3184)

5'-AUUUACAAACAGGCCUAAAACCAtt-3' (SEQ ID NO: 967)

3'-UCUAAAUGUUUGUCCGGAUUUUGGUAA-5' (SEQ ID NO: 2076)

βc-m2676 Target: 5'-AGATTTACAAACAGGCCTAAAACCATT-3' (SEQ ID NO: 3185)

5'-UCUCCUUCCAAGGUAUGUAUCUGtt-3' (SEQ ID NO: 968)
3'-GUAGAGGAAGGUUCCAUACAUAGACAA-5' (SEQ ID NO: 2077)

βc-m2710 Target: 5'-CATCTCCTTCCAAGGTATGTATCTGTT-3' (SEQ ID NO: 3186)

5'-AUCUCCUUCCAAGGUAUGUAUCUgt-3' (SEQ ID NO: 969)
3'-UGUAGAGGAAGGUUCCAUACAUAGACA-5' (SEQ ID NO: 2078)

βc-m2711 Target: 5'-ACATCTCCTTCCAAGGTATGTATCTGT-3' (SEQ ID NO: 3187)

5'-UUCCACACAUGAACAUCUCCUUCca-3' (SEQ ID NO: 970)
3'-UGAAGGUGUGUACUUGUAGAGGAAGGU-5' (SEQ ID NO: 2079)

βc-m2725 Target: 5'-ACTTCCACACATGAACATCTCCTTCCA-3' (SEQ ID NO: 3188)

5'-AACUUCCACACAUGAACAUCUCCtt-3' (SEQ ID NO: 971)
3'-CUUUGAAGGUGUGUACUUGUAGAGGAA-5' (SEQ ID NO: 2080)

βc-m2728 Target: 5'-GAAACTTCCACACATGAACATCTCCTT-3' (SEQ ID NO: 3189)

5'-AAACUUCCACACAUGAACAUCUCct-3' (SEQ ID NO: 972)
3'-UCUUUGAAGGUGUGUACUUGUAGAGGA-5' (SEQ ID NO: 2081)

βc-m2729 Target: 5'-AGAAACTTCCACACATGAACATCTCCT-3' (SEQ ID NO: 3190)

5'-GAAACUUCCACACAUGAACAUCUcc-3' (SEQ ID NO: 973)
3'-CUCUUUGAAGGUGUGUACUUGUAGAGG-5' (SEQ ID NO: 2082)

βc-m2730 Target: 5'-GAGAAACTTCCACACATGAACATCTCC-3' (SEQ ID NO: 3191)

5'-AGAAACUUCCACACAUGAACAUCtc-3' (SEQ ID NO: 974)
3'-ACUCUUUGAAGGUGUGUACUUGUAGAG-5' (SEQ ID NO: 2083)

βc-m2731 Target: 5'-TGAGAAACTTCCACACATGAACATCTC-3' (SEQ ID NO: 3192)

5'-UCAACGUGAGAAACUUCCACACAtg-3' (SEQ ID NO: 975)
3'-GUAGUUGCACUCUUUGAAGGUGUGUAC-5' (SEQ ID NO: 2084)

βc-m2739 Target: 5'-CATCAACGTGAGAAACTTCCACACATG-3' (SEQ ID NO: 3193)

5'-ACAUCAACGUGAGAAACUUCCACac-3' (SEQ ID NO: 976)
3'-UUUGUAGUUGCACUCUUUGAAGGUGUG-5' (SEQ ID NO: 2085)

βc-m2742 Target: 5'-AAACATCAACGTGAGAAACTTCCACAC-3' (SEQ ID NO: 3194)

5'-AACAUCAACGUGAGAAACUUCCAca-3' (SEQ ID NO: 977)
3'-UUUUGUAGUUGCACUCUUUGAAGGUGU-5' (SEQ ID NO: 2086)

βc-m2743 Target: 5'-AAAACATCAACGTGAGAAACTTCCACA-3' (SEQ ID NO: 3195)

5'-AAACAUCAACGUGAGAAACUUCCac-3' (SEQ ID NO: 978)
3'-UUUUUGUAGUUGCACUCUUUGAAGGUG-5' (SEQ ID NO: 2087)

βc-m2744 Target: 5'-AAAAACATCAACGTGAGAAACTTCCAC-3' (SEQ ID NO: 3196)

5'-AAAACAUCAACGUGAGAAACUUCca-3' (SEQ ID NO: 979)
3'-GUUUUUGUAGUUGCACUCUUUGAAGGU-5' (SEQ ID NO: 2088)

βc-m2745 Target: 5'-CAAAAACATCAACGTGAGAAACTTCCA-3' (SEQ ID NO: 3197)

5'-AAAAACAUCAACGUGAGAAACUUcc-3' (SEQ ID NO: 980)

3'-CGUUUUUGUAGUUGCACUCUUUGAAGG-5' (SEQ ID NO: 2089)

βc-m2746 Target: 5'-GCAAAAACATCAACGTGAGAAACTTCC-3' (SEQ ID NO: 3198)

5'-GCAAAAACAUCAACGUGAGAAACtt-3' (SEQ ID NO: 981)
3'-ACCGUUUUUGUAGUUGCACUCUUUGAA-5' (SEQ ID NO: 2090)

βc-m2748 Target: 5'-TGGCAAAAACATCAACGTGAGAAACTT-3' (SEQ ID NO: 3199)

5'-GCAAAAGCUGUGGCAAAAACAUCaa-3' (SEQ ID NO: 982)
3'-GACGUUUUCGACACCGUUUUUGUAGUU-5' (SEQ ID NO: 2091)

βc-m2760 Target: 5'-CTGCAAAAGCTGTGGCAAAAACATCAA-3' (SEQ ID NO: 3200)

5'-UGCAAAAGCUGUGGCAAAAACAUca-3' (SEQ ID NO: 983)
3'-CGACGUUUUCGACACCGUUUUUGUAGU-5' (SEQ ID NO: 2092)

βc-m2761 Target: 5'-GCTGCAAAAGCTGTGGCAAAAACATCA-3' (SEQ ID NO: 3201)

5'-UCAUCUGAGUAUAACGCUGCAAAag-3' (SEQ ID NO: 984)
3'-UGAGUAGACUCAUAUUGCGACGUUUUC-5' (SEQ ID NO: 2093)

βc-m2778 Target: 5'-ACTCATCTGAGTATAACGCTGCAAAAG-3' (SEQ ID NO: 3202)

5'-AAAACAGCAAAUGUUACUCAUCUga-3' (SEQ ID NO: 985)
3'-ACUUUUGUCGUUUACAAUGAGUAGACU-5' (SEQ ID NO: 2094)

βc-m2795 Target: 5'-TGAAAACAGCAAATGTTACTCATCTGA-3' (SEQ ID NO: 3203)

5'-GAAAACAGCAAAUGUUACUCAUCtg-3' (SEQ ID NO: 986)
3'-AACUUUUGUCGUUUACAAUGAGUAGAC-5' (SEQ ID NO: 2095)

βc-m2796 Target: 5'-TTGAAAACAGCAAATGTTACTCATCTG-3' (SEQ ID NO: 3204)

5'-UGAAAACAGCAAAUGUUACUCAUct-3' (SEQ ID NO: 987)
3'-CAACUUUUGUCGUUUACAAUGAGUAGA-5' (SEQ ID NO: 2096)

βc-m2797 Target: 5'-GTTGAAAACAGCAAATGTTACTCATCT-3' (SEQ ID NO: 3205)

5'-AUUAAUGUUGAAAACAGCAAAUGtt-3' (SEQ ID NO: 988)
3'-GAUAAUUACAACUUUUGUCGUUUACAA-5' (SEQ ID NO: 2097)

βc-m2805 Target: 5'-CTATTAATGTTGAAAACAGCAAATGTT-3' (SEQ ID NO: 3206)

5'-ACUACAGCUGUAUAGAGAGAAAGgc-3' (SEQ ID NO: 989)
3'-UGUGAUGUCGACAUAUCUCUCUUUCCG-5' (SEQ ID NO: 2098)

βc-m2834 Target: 5'-ACACTACAGCTGTATAGAGAGAAAGGC-3' (SEQ ID NO: 3207)

5'-GGCCAAUCACAAUGCACGUUCAGac-3' (SEQ ID NO: 990)
3'-GUCCGGUUAGUGUUACGUGCAAGUCUG-5' (SEQ ID NO: 2099)

βc-m2859 Target: 5'-CAGGCCAATCACAATGCACGTTCAGAC-3' (SEQ ID NO: 3208)

5'-GUUCCCAUAGGAAACUCAGCUUGgt-3' (SEQ ID NO: 991)
3'-GACAAGGGUAUCCUUUGAGUCGAACCA-5' (SEQ ID NO: 2100)

βc-m2946 Target: 5'-CTGTTCCCATAGGAAACTCAGCTTGGT-3' (SEQ ID NO: 3209)

5'-GAACAAAAAGCGUACUUCGACUGtt-3' (SEQ ID NO: 992)
3'-GUCUUGUUUUUCGCAUGAAGCUGACAA-5' (SEQ ID NO: 2101)

βc-m2968 Target: 5'-CAGAACAAAAAGCGTACTTCGACTGTT-3' (SEQ ID NO: 3210)

5'-GGACCAGAACAAAAAGCGUACUUcg-3' (SEQ ID NO: 993)

3'-UUCCUGGUCUUGUUUUUCGCAUGAAGC-5' (SEQ ID NO: 2102)

βc-m2974 Target: 5'-AAGGACCAGAACAAAAAGCGTACTTCG-3' (SEQ ID NO: 3211)

5'-ACCAAAAAGGACCAGAACAAAAAgc-3' (SEQ ID NO: 994)
3'-GCUGGUUUUUCCUGGUCUUGUUUUUCG-5' (SEQ ID NO: 2103)

βc-m2982 Target: 5'-CGACCAAAAAGGACCAGAACAAAAAGC-3' (SEQ ID NO: 3212)

5'-GACCAAAAAGGACCAGAACAAAAag-3' (SEQ ID NO: 995)
3'-AGCUGGUUUUUCCUGGUCUUGUUUUUC-5' (SEQ ID NO: 2104)

βc-m2983 Target: 5'-TCGACCAAAAAGGACCAGAACAAAAAG-3' (SEQ ID NO: 3213)

5'-ACUCCUCGACCAAAAAGGACCAGaa-3' (SEQ ID NO: 996)
3'-AAUGAGGAGCUGGUUUUUCCUGGUCUU-5' (SEQ ID NO: 2105)

βc-m2990 Target: 5'-TTACTCCTCGACCAAAAAGGACCAGAA-3' (SEQ ID NO: 3214)

5'-UCCAUUUGUAUUGUUACUCCUCGac-3' (SEQ ID NO: 997)
3'-UUAGGUAAACAUAACAAUGAGGAGCUG-5' (SEQ ID NO: 2106)

βc-m3005 Target: 5'-AATCCATTTGTATTGTTACTCCTCGAC-3' (SEQ ID NO: 3215)

5'-AUCCAUUUGUAUUGUUACUCCUCga-3' (SEQ ID NO: 998)
3'-UUUAGGUAAACAUAACAAUGAGGAGCU-5' (SEQ ID NO: 2107)

βc-m3006 Target: 5'-AAATCCATTTGTATTGTTACTCCTCGA-3' (SEQ ID NO: 3216)

5'-AAUCCAUUUGUAUUGUUACUCCUcg-3' (SEQ ID NO: 999)
3'-GUUUAGGUAAACAUAACAAUGAGGAGC-5' (SEQ ID NO: 2108)

βc-m3007 Target: 5'-CAAATCCATTTGTATTGTTACTCCTCG-3' (SEQ ID NO: 3217)

5'-AAAUCCAUUUGUAUUGUUACUCCtc-3' (SEQ ID NO: 1000)
3'-GGUUUAGGUAAACAUAACAAUGAGGAG-5' (SEQ ID NO: 2109)

βc-m3008 Target: 5'-CCAAATCCATTTGTATTGTTACTCCTC-3' (SEQ ID NO: 3218)

5'-ACUCCCCAAAUCCAUUUGUAUUGtt-3' (SEQ ID NO: 1001)
3'-AGUGAGGGGUUUAGGUAAACAUAACAA-5' (SEQ ID NO: 2110)

βc-m3015 Target: 5'-TCACTCCCCAAATCCATTTGTATTGTT-3' (SEQ ID NO: 3219)

5'-UCCAUUCGUGUGCAUUCUUCACUgc-3' (SEQ ID NO: 1002)
3'-CUAGGUAAGCACACGUAAGAAGUGACG-5' (SEQ ID NO: 2111)

βc-m3047 Target: 5'-GATCCATTCGTGTGCATTCTTCACTGC-3' (SEQ ID NO: 3220)

5'-AUCCAUUCGUGUGCAUUCUUCACtg-3' (SEQ ID NO: 1003)
3'-ACUAGGUAAGCACACGUAAGAAGUGAC-5' (SEQ ID NO: 2112)

βc-m3048 Target: 5'-TGATCCATTCGTGTGCATTCTTCACTG-3' (SEQ ID NO: 3221)

5'-GAUCCAUUCGUGUGCAUUCUUCAct-3' (SEQ ID NO: 1004)
3'-CACUAGGUAAGCACACGUAAGAAGUGA-5' (SEQ ID NO: 2113)

βc-m3049 Target: 5'-GTGATCCATTCGTGTGCATTCTTCACT-3' (SEQ ID NO: 3222)

5'-AAACAAAGAACAAGCAAGGCUAGgg-3' (SEQ ID NO: 1005)
3'-AUUUUGUUUCUUGUUCGUUCCGAUCCC-5' (SEQ ID NO: 2114)

βc-m3093 Target: 5'-TAAAACAAAGAACAAGCAAGGCTAGGG-3' (SEQ ID NO: 3223)

5'-ACCACUACAGAUAUUAAAACAAAga-3' (SEQ ID NO: 1006)

3'-CGUGGUGAUGUCUAUAAUUUUGUUUCU-5' (SEQ ID NO: 2115)

βc-m3109 Target: 5'-GCACCACTACAGATATTAAAACAAAGA-3' (SEQ ID NO: 3224)

5'-GCACCACUACAGAUAUUAAAACAaa-3' (SEQ ID NO: 1007)
3'-GUCGUGGUGAUGUCUAUAAUUUUGUUU-5' (SEQ ID NO: 2116)

βc-m3111 Target: 5'-CAGCACCACTACAGATATTAAAACAAA-3' (SEQ ID NO: 3225)

5'-AGCACCACUACAGAUAUUAAAACaa-3' (SEQ ID NO: 1008)
3'-AGUCGUGGUGAUGUCUAUAAUUUUGUU-5' (SEQ ID NO: 2117)

βc-m3112 Target: 5'-TCAGCACCACTACAGATATTAAAACAA-3' (SEQ ID NO: 3226)

5'-AAAAUAAAAGCAAGCAAAGUCAGca-3' (SEQ ID NO: 1009)
3'-UUUUUUAUUUUCGUUCGUUUCAGUCGU-5' (SEQ ID NO: 2118)

βc-m3133 Target: 5'-AAAAAATAAAAGCAAGCAAAGTCAGCA-3' (SEQ ID NO: 3227)

5'-GCAAAAAAUAAAAGCAAGCAAAGtc-3' (SEQ ID NO: 1010)
3'-GACGUUUUUUAUUUUCGUUCGUUUCAG-5' (SEQ ID NO: 2119)

βc-m3137 Target: 5'-CTGCAAAAAATAAAAGCAAGCAAAGTC-3' (SEQ ID NO: 3228)

5'-UUACUGCAAAAAAUAAAAGCAAGca-3' (SEQ ID NO: 1011)
3'-UCAAUGACGUUUUUUAUUUUCGUUCGU-5' (SEQ ID NO: 2120)

βc-m3142 Target: 5'-AGTTACTGCAAAAAATAAAAGCAAGCA-3' (SEQ ID NO: 3229)

5'-UAACAGUUACUGCAAAAAAUAAAag-3' (SEQ ID NO: 1012)
3'-UGAUUGUCAAUGACGUUUUUUAUUUUC-5' (SEQ ID NO: 2121)

βc-m3148 Target: 5'-ACTAACAGTTACTGCAAAAAATAAAAG-3' (SEQ ID NO: 3230)

5'-ACUAACAGUUACUGCAAAAAAUAaa-3' (SEQ ID NO: 1013)
3'-UUUGAUUGUCAAUGACGUUUUUUAUUU-5' (SEQ ID NO: 2122)

βc-m3150 Target: 5'-AAACTAACAGTTACTGCAAAAAATAAA-3' (SEQ ID NO: 3231)

5'-AAACUAACAGUUACUGCAAAAAAta-3' (SEQ ID NO: 1014)
3'-UUUUUGAUUGUCAAUGACGUUUUUUAU-5' (SEQ ID NO: 2123)

βc-m3152 Target: 5'-AAAAACTAACAGTTACTGCAAAAAATA-3' (SEQ ID NO: 3232)

5'-AAAACUAACAGUUACUGCAAAAAat-3' (SEQ ID NO: 1015)
3'-AUUUUUGAUUGUCAAUGACGUUUUUUA-5' (SEQ ID NO: 2124)

βc-m3153 Target: 5'-TAAAAACTAACAGTTACTGCAAAAAAT-3' (SEQ ID NO: 3233)

5'-UAAAAACUAACAGUUACUGCAAAaa-3' (SEQ ID NO: 1016)
3'-GAAUUUUUGAUUGUCAAUGACGUUUUU-5' (SEQ ID NO: 2125)

βc-m3155 Target: 5'-CTTAAAAACTAACAGTTACTGCAAAAA-3' (SEQ ID NO: 3234)

5'-UACUUAAAAACUAACAGUUACUGca-3' (SEQ ID NO: 1017)
3'-UGAUGAAUUUUUGAUUGUCAAUGACGU-5' (SEQ ID NO: 2126)

βc-m3159 Target: 5'-ACTACTTAAAAACTAACAGTTACTGCA-3' (SEQ ID NO: 3235)

5'-ACUACUUAAAAACUAACAGUUACtg-3' (SEQ ID NO: 1018)
3'-UGUGAUGAAUUUUUGAUUGUCAAUGAC-5' (SEQ ID NO: 2127)

βc-m3161 Target: 5'-ACACTACTTAAAAACTAACAGTTACTG-3' (SEQ ID NO: 3236)

5'-UAACACUACUUAAAAACUAACAGtt-3' (SEQ ID NO: 1019)

3'-GUAUUGUGAUGAAUUUUUGAUUGUCAA-5' (SEQ ID NO: 2128)

βc-m3165 Target: 5'-CATAACACTACTTAAAAACTAACAGTT-3' (SEQ ID NO: 3237)

5'-AUAACACUACUUAAAAACUAACAgt-3' (SEQ ID NO: 1020)
3'-UGUAUUGUGAUGAAUUUUUGAUUGUCA-5' (SEQ ID NO: 2129)

βc-m3166 Target: 5'-ACATAACACTACTTAAAAACTAACAGT-3' (SEQ ID NO: 3238)

5'-ACAUAACACUACUUAAAAACUAAca-3' (SEQ ID NO: 1021)
3'-CUUGUAUUGUGAUGAAUUUUUGAUUGU-5' (SEQ ID NO: 2130)

βc-m3168 Target: 5'-GAACATAACACTACTTAAAAACTAACA-3' (SEQ ID NO: 3239)

5'-AACAUAACACUACUUAAAAACUAac-3' (SEQ ID NO: 1022)
3'-UCUUGUAUUGUGAUGAAUUUUUGAUUG-5' (SEQ ID NO: 2131)

βc-m3169 Target: 5'-AGAACATAACACTACTTAAAAACTAAC-3' (SEQ ID NO: 3240)

5'-GAACAUAACACUACUUAAAAACUaa-3' (SEQ ID NO: 1023)
3'-AUCUUGUAUUGUGAUGAAUUUUUGAUU-5' (SEQ ID NO: 2132)

βc-m3170 Target: 5'-TAGAACATAACACTACTTAAAAACTAA-3' (SEQ ID NO: 3241)

5'-AGAACAUAACACUACUUAAAAACta-3' (SEQ ID NO: 1024)
3'-GAUCUUGUAUUGUGAUGAAUUUUUGAU-5' (SEQ ID NO: 2133)

βc-m3171 Target: 5'-CTAGAACATAACACTACTTAAAAACTA-3' (SEQ ID NO: 3242)

5'-UCACUAGAACAUAACACUACUUAaa-3' (SEQ ID NO: 1025)
3'-CAAGUGAUCUUGUAUUGUGAUGAAUUU-5' (SEQ ID NO: 2134)

βc-m3176 Target: 5'-GTTCACTAGAACATAACACTACTTAAA-3' (SEQ ID NO: 3243)

5'-GUUCACUAGAACAUAACACUACUta-3' (SEQ ID NO: 1026)
3'-UCCAAGUGAUCUUGUAUUGUGAUGAAU-5' (SEQ ID NO: 2135)

βc-m3178 Target: 5'-AGGTTCACTAGAACATAACACTACTTA-3' (SEQ ID NO: 3244)

5'-GGUUCACUAGAACAUAACACUACtt-3' (SEQ ID NO: 1027)
3'-GUCCAAGUGAUCUUGUAUUGUGAUGAA-5' (SEQ ID NO: 2136)

βc-m3179 Target: 5'-CAGGTTCACTAGAACATAACACTACTT-3' (SEQ ID NO: 3245)

5'-AUUACUCGGUUCUUAGAAAUCAGaa-3' (SEQ ID NO: 1028)
3'-GGUAAUGAGCCAAGAAUCUUUAGUCUU-5' (SEQ ID NO: 2137)

βc-m3216 Target: 5'-CCATTACTCGGTTCTTAGAAATCAGAA-3' (SEQ ID NO: 3246)

5'-ACCAUUACUCGGUUCUUAGAAAUca-3' (SEQ ID NO: 1029)
3'-UGUGGUAAUGAGCCAAGAAUCUUUAGU-5' (SEQ ID NO: 2138)

βc-m3219 Target: 5'-ACACCATTACTCGGTTCTTAGAAATCA-3' (SEQ ID NO: 3247)

5'-UCUACACCAUUACUCGGUUCUUAga-3' (SEQ ID NO: 1030)
3'-CAAGAUGUGGUAAUGAGCCAAGAAUCU-5' (SEQ ID NO: 2139)

βc-m3224 Target: 5'-GTTCTACACCATTACTCGGTTCTTAGA-3' (SEQ ID NO: 3248)

5'-GAAUUAGUGUUCUACACCAUUACtc-3' (SEQ ID NO: 1031)
3'-UACUUAAUCACAAGAUGUGGUAAUGAG-5' (SEQ ID NO: 2140)

βc-m3234 Target: 5'-ATGAATTAGTGTTCTACACCATTACTC-3' (SEQ ID NO: 3249)

5'-AUUAUGAAUUAGUGUUCUACACCat-3' (SEQ ID NO: 1032)

3'-ACUAAUACUUAAUCACAAGAUGUGGUA-5' (SEQ ID NO: 2141)

βc-m3239 Target: 5'-TGATTATGAATTAGTGTTCTACACC-3' (SEQ ID NO: 3250)

5'-GAUUAUGAAUUAGUGUUCUACACca-3' (SEQ ID NO: 1033)
3'-CACUAAUACUUAAUCACAAGAUGUGGU-5' (SEQ ID NO: 2142)

βc-m3240 Target: 5'-GTGATTATGAATTAGTGTTCTACACCA-3' (SEQ ID NO: 3251)

5'-UGAUUAUGAAUUAGUGUUCUACAcc-3' (SEQ ID NO: 1034)
3'-GCACUAAUACUUAAUCACAAGAUGUGG-5' (SEQ ID NO: 2143)

βc-m3241 Target: 5'-CGTGATTATGAATTAGTGTTCTACACC-3' (SEQ ID NO: 3252)

5'-ACAAUUAGCGUGAUUAUGAAUUAgt-3' (SEQ ID NO: 1035)
3'-AAUGUUAAUCGCACUAAUACUUAAUCA-5' (SEQ ID NO: 2144)

βc-m3251 Target: 5'-TTACAATTAGCGTGATTATGAATTAGT-3' (SEQ ID NO: 3253)

5'-UACAAUUAGCGUGAUUAUGAAUUag-3' (SEQ ID NO: 1036)
3'-UAAUGUUAAUCGCACUAAUACUUAAUC-5' (SEQ ID NO: 2145)

βc-m3252 Target: 5'-ATTACAATTAGCGTGATTATGAATTAG-3' (SEQ ID NO: 3254)

5'-AGAUUACAAUUAGCGUGAUUAUGaa-3' (SEQ ID NO: 1037)
3'-GGUCUAAUGUUAAUCGCACUAAUACUU-5' (SEQ ID NO: 2146)

βc-m3256 Target: 5'-CCAGATTACAATTAGCGTGATTATGAA-3' (SEQ ID NO: 3255)

5'-UACACGUCUCCAGAUUACAAUUAgc-3' (SEQ ID NO: 1038)
3'-CAAUGUGCAGAGGUCUAAUGUUAAUCG-5' (SEQ ID NO: 2147)

βc-m3267 Target: 5'-GTTACACGTCTCCAGATTACAATTAGC-3' (SEQ ID NO: 3256)

5'-GUUACACGUCUCCAGAUUACAAUta-3' (SEQ ID NO: 1039)
3'-UACAAUGUGCAGAGGUCUAAUGUUAAU-5' (SEQ ID NO: 2148)

βc-m3269 Target: 5'-ATGTTACACGTCTCCAGATTACAATTA-3' (SEQ ID NO: 3257)

5'-UACACAAUGUUACACGUCUCCAGat-3' (SEQ ID NO: 1040)
3'-CGAUGUGUUACAAUGUGCAGAGGUCUA-5' (SEQ ID NO: 2149)

βc-m3277 Target: 5'-GCTACACAATGTTACACGTCTCCAGAT-3' (SEQ ID NO: 3258)

5'-GCUACACAAUGUUACACGUCUCCag-3' (SEQ ID NO: 1041)
3'-UCCGAUGUGUUACAAUGUGCAGAGGUC-5' (SEQ ID NO: 2150)

βc-m3279 Target: 5'-AGGCTACACAATGTTACACGTCTCCAG-3' (SEQ ID NO: 3259)

5'-ACAAAAGGCUACACAAUGUUACAcg-3' (SEQ ID NO: 1042)
3'-UAUGUUUUCCGAUGUGUUACAAUGUGC-5' (SEQ ID NO: 2151)

βc-m3286 Target: 5'-ATACAAAAGGCTACACAATGTTACACG-3' (SEQ ID NO: 3260)

5'-UACAAAAGGCUACACAAUGUUACac-3' (SEQ ID NO: 1043)
3'-AUAUGUUUUCCGAUGUGUUACAAUGUG-5' (SEQ ID NO: 2152)

βc-m3287 Target: 5'-TATACAAAAGGCTACACAATGTTACAC-3' (SEQ ID NO: 3261)

5'-UUUAUACAAAAGGCUACACAAUGtt-3' (SEQ ID NO: 1044)
3'-AUAAAUAUGUUUUCCGAUGUGUUACAA-5' (SEQ ID NO: 2153)

βc-m3291 Target: 5'-TATTTATACAAAAGGCTACACAATGTT-3' (SEQ ID NO: 3262)

5'-AUUUAUACAAAAGGCUACACAAUgt-3' (SEQ ID NO: 1045)

3'-GAUAAAUAUGUUUUCCGAUGUGUUACA-5' (SEQ ID NO: 2154)

βc-m3292 Target: 5'-CTATTTATACAAAAGGCTACACAATGT-3' (SEQ ID NO: 3263)

5'-UCUAUUUAUACAAAAGGCUACACaa-3' (SEQ ID NO: 1046)
3'-ACAGAUAAAUAUGUUUUCCGAUGUGUU-5' (SEQ ID NO: 2155)

βc-m3295 Target: 5'-TGTCTATTTATACAAAAGGCTACACAA-3' (SEQ ID NO: 3264)

5'-GUCUAUUUAUACAAAAGGCUACAca-3' (SEQ ID NO: 1047)
3'-GACAGAUAAAUAUGUUUUCCGAUGUGU-5' (SEQ ID NO: 2156)

βc-m3296 Target: 5'-CTGTCTATTTATACAAAAGGCTACACA-3' (SEQ ID NO: 3265)

5'-UGUCUAUUUAUACAAAAGGCUACac-3' (SEQ ID NO: 1048)
3'-AGACAGAUAAAUAUGUUUUCCGAUGUG-5' (SEQ ID NO: 2157)

βc-m3297 Target: 5'-TCTGTCTATTTATACAAAAGGCTACAC-3' (SEQ ID NO: 3266)

5'-UCUAUCUGUCUAUUUAUACAAAAgg-3' (SEQ ID NO: 1049)
3'-AAAGAUAGACAGAUAAAUAUGUUUUCC-5' (SEQ ID NO: 2158)

βc-m3303 Target: 5'-TTTCTATCTGTCTATTTATACAAAAGG-3' (SEQ ID NO: 3267)

5'-UUCUAUCUGUCUAUUUAUACAAAag-3' (SEQ ID NO: 1050)
3'-UAAAGAUAGACAGAUAAAUAUGUUUUC-5' (SEQ ID NO: 2159)

βc-m3304 Target: 5'-ATTTCTATCTGTCTATTTATACAAAAG-3' (SEQ ID NO: 3268)

5'-UUUCUAUCUGUCUAUUUAUACAAaa-3' (SEQ ID NO: 1051)
3'-GUAAAGAUAGACAGAUAAAUAUGUUUU-5' (SEQ ID NO: 2160)

βc-m3305 Target: 5'-CATTTCTATCTGTCTATTTATACAAAA-3' (SEQ ID NO: 3269)

5'-AUUUCUAUCUGUCUAUUUAUACAaa-3' (SEQ ID NO: 1052)
3'-GGUAAAGAUAGACAGAUAAAUAUGUUU-5' (SEQ ID NO: 2161)

βc-m3306 Target: 5'-CCATTTCTATCTGTCTATTTATACAAA-3' (SEQ ID NO: 3270)

5'-GACCAUUUCUAUCUGUCUAUUUAta-3' (SEQ ID NO: 1053)
3'-GCCUGGUAAAGAUAGACAGAUAAAUAU-5' (SEQ ID NO: 2162)

βc-m3310 Target: 5'-CGGACCATTTCTATCTGTCTATTTATA-3' (SEQ ID NO: 3271)

5'-GGACCAUUUCUAUCUGUCUAUUUat-3' (SEQ ID NO: 1054)
3'-AGCCUGGUAAAGAUAGACAGAUAAAUA-5' (SEQ ID NO: 2163)

βc-m3311 Target: 5'-TCGGACCATTTCTATCTGTCTATTTAT-3' (SEQ ID NO: 3272)

5'-ACUAAUCGGACCAUUUCUAUCUGtc-3' (SEQ ID NO: 1055)
3'-UUUGAUUAGCCUGGUAAAGAUAGACAG-5' (SEQ ID NO: 2164)

βc-m3318 Target: 5'-AAACTAATCGGACCATTTCTATCTGTC-3' (SEQ ID NO: 3273)

5'-AACUAAUCGGACCAUUUCUAUCUgt-3' (SEQ ID NO: 1056)
3'-CUUUGAUUAGCCUGGUAAAGAUAGACA-5' (SEQ ID NO: 2165)

βc-m3319 Target: 5'-GAAACTAATCGGACCATTTCTATCTGT-3' (SEQ ID NO: 3274)

5'-AAACUAAUCGGACCAUUUCUAUCtg-3' (SEQ ID NO: 1057)
3'-CCUUUGAUUAGCCUGGUAAAGAUAGAC-5' (SEQ ID NO: 2166)

βc-m3320 Target: 5'-GGAAACTAATCGGACCATTTCTATCTG-3' (SEQ ID NO: 3275)

5'-GAAACUAAUCGGACCAUUUCUAUct-3' (SEQ ID NO: 1058)

3'-UCCUUUGAUUAGCCUGGUAAAGAUAGA-5' (SEQ ID NO: 2167)

βc-m3321 Target: 5'-AGGAAACTAATCGGACCATTTCTATCT-3' (SEQ ID NO: 3276)

5'-UAAAAAGGAAACUAAUCGGACCAtt-3' (SEQ ID NO: 1059)
3'-UAAUUUUUCCUUUGAUUAGCCUGGUAA-5' (SEQ ID NO: 2168)

βc-m3328 Target: 5'-ATTAAAAAGGAAACTAATCGGACCATT-3' (SEQ ID NO: 3277)

5'-GCAUAUUAAAAAGGAAACUAAUCgg-3' (SEQ ID NO: 1060)
3'-UUCGUAUAAUUUUUCCUUUGAUUAGCC-5' (SEQ ID NO: 2169)

βc-m3334 Target: 5'-AAGCATATTAAAAAGGAAACTAATCGG-3' (SEQ ID NO: 3278)

5'-AGCAUAUUAAAAAGGAAACUAAUcg-3' (SEQ ID NO: 1061)
3'-AUUCGUAUAAUUUUUCCUUUGAUUAGC-5' (SEQ ID NO: 2170)

βc-m3335 Target: 5'-TAAGCATATTAAAAAGGAAACTAATCG-3' (SEQ ID NO: 3279)

5'-UUUAAGCAUAUUAAAAAGGAAACta-3' (SEQ ID NO: 1062)
3'-UAAAAUUCGUAUAAUUUUUCCUUUGAU-5' (SEQ ID NO: 2171)

βc-m3339 Target: 5'-ATTTTAAGCATATTAAAAAGGAAACTA-3' (SEQ ID NO: 3280)

5'-GCUUAUUUUAAGCAUAUUAAAAAgg-3' (SEQ ID NO: 1063)
3'-GACGAAUAAAAUUCGUAUAAUUUUUCC-5' (SEQ ID NO: 2172)

βc-m3345 Target: 5'-CTGCTTATTTTAAGCATATTAAAAAGG-3' (SEQ ID NO: 3281)

5'-UGCUUAUUUUAAGCAUAUUAAAAag-3' (SEQ ID NO: 1064)
3'-GGACGAAUAAAAUUCGUAUAAUUUUUC-5' (SEQ ID NO: 2173)

βc-m3346 Target: 5'-CCTGCTTATTTTAAGCATATTAAAAAG-3' (SEQ ID NO: 3282)

5'-UCCACCUGCUUAUUUUAAGCAUAtt-3' (SEQ ID NO: 1065)
3'-CUAGGUGGACGAAUAAAAUUCGUAUAA-5' (SEQ ID NO: 2174)

βc-m3352 Target: 5'-GATCCACCTGCTTATTTTAAGCATATT-3' (SEQ ID NO: 3283)

5'-AAAACAUGAAAUAGAUCCACCUGct-3' (SEQ ID NO: 1066)
3'-GUUUUUGUACUUUAUCUAGGUGGACGA-5' (SEQ ID NO: 2175)

βc-m3367 Target: 5'-CAAAAACATGAAATAGATCCACCTGCT-3' (SEQ ID NO: 3284)

5'-AAAAACAUGAAAUAGAUCCACCUgc-3' (SEQ ID NO: 1067)
3'-AGUUUUUGUACUUUAUCUAGGUGGACG-5' (SEQ ID NO: 2176)

βc-m3368 Target: 5'-TCAAAAACATGAAATAGATCCACCTGC-3' (SEQ ID NO: 3285)

5'-UCAAAAACAUGAAAUAGAUCCACct-3' (SEQ ID NO: 1068)
3'-CAAGUUUUUGUACUUUAUCUAGGUGGA-5' (SEQ ID NO: 2177)

βc-m3370 Target: 5'-GTTCAAAAACATGAAATAGATCCACCT-3' (SEQ ID NO: 3286)

5'-UUCAAAAACAUGAAAUAGAUCCAcc-3' (SEQ ID NO: 1069)
3'-ACAAGUUUUUGUACUUUAUCUAGGUGG-5' (SEQ ID NO: 2178)

βc-m3371 Target: 5'-TGTTCAAAAACATGAAATAGATCCACC-3' (SEQ ID NO: 3287)

5'-GUUCAAAAACAUGAAAUAGAUCCac-3' (SEQ ID NO: 1070)
3'-AACAAGUUUUUGUACUUUAUCUAGGUG-5' (SEQ ID NO: 2179)

βc-m3372 Target: 5'-TTGTTCAAAAACATGAAATAGATCCAC-3' (SEQ ID NO: 3288)

5'-UUUUUGUUCAAAAACAUGAAAUAga-3' (SEQ ID NO: 1071)

3'-UCAAAAACAAGUUUUUGUACUUUAUCU-5' (SEQ ID NO: 2180)

βc-m3377 Target: 5'-AGTTTTTGTTCAAAAACATGAAATAGA-3' (SEQ ID NO: 3289)

5'-AUAAAGUUUUUGUUCAAAAACAUga-3' (SEQ ID NO: 1072)
3'-GCUAUUUCAAAAACAAGUUUUUGUACU-5' (SEQ ID NO: 2181)

βc-m3383 Target: 5'-CGATAAAGTTTTTGTTCAAAAACATGA-3' (SEQ ID NO: 3290)

5'-UCCCCGAUAAAGUUUUUGUUCAAaa-3' (SEQ ID NO: 1073)
3'-AUAGGGGCUAUUUCAAAAACAAGUUUU-5' (SEQ ID NO: 2182)

βc-m3389 Target: 5'-TATCCCCGATAAAGTTTTTGTTCAAAA-3' (SEQ ID NO: 3291)

5'-AUCCCCGAUAAAGUUUUUGUUCAaa-3' (SEQ ID NO: 1074)
3'-CAUAGGGGCUAUUUCAAAAACAAGUUU-5' (SEQ ID NO: 2183)

βc-m3390 Target: 5'-GTATCCCCGATAAAGTTTTTGTTCAAA-3' (SEQ ID NO: 3292)

5'-ACCUCUUACUGAUUUACCCUACCgc-3' (SEQ ID NO: 1075)
3'-UGUGGAGAAUGACUAAAUGGGAUGGCG-5' (SEQ ID NO: 2184)

βc-m3419 Target: 5'-ACACCTCTTACTGATTTACCCTACCGC-3' (SEQ ID NO: 3293)

5'-ACACCUCUUACUGAUUUACCCUAcc-3' (SEQ ID NO: 1076)
3'-AUUGUGGAGAAUGACUAAAUGGGAUGG-5' (SEQ ID NO: 2185)

βc-m3421 Target: 5'-TAACACCTCTTACTGATTTACCCTACC-3' (SEQ ID NO: 3294)

5'-AACACCUCUUACUGAUUUACCCUac-3' (SEQ ID NO: 1077)
3'-UAUUGUGGAGAAUGACUAAAUGGGAUG-5' (SEQ ID NO: 2186)

βc-m3422 Target: 5'-ATAACACCTCTTACTGATTTACCCTAC-3' (SEQ ID NO: 3295)

5'-UAACACCUCUUACUGAUUUACCCta-3' (SEQ ID NO: 1078)
3'-UUAUUGUGGAGAAUGACUAAAUGGGAU-5' (SEQ ID NO: 2187)

βc-m3423 Target: 5'-AATAACACCTCTTACTGATTTACCCTA-3' (SEQ ID NO: 3296)

5'-AUAACACCUCUUACUGAUUUACCct-3' (SEQ ID NO: 1079)
3'-UUUAUUGUGGAGAAUGACUAAAUGGGA-5' (SEQ ID NO: 2188)

βc-m3424 Target: 5'-AAATAACACCTCTTACTGATTTACCCT-3' (SEQ ID NO: 3297)

5'-AAUAACACCUCUUACUGAUUUACcc-3' (SEQ ID NO: 1080)
3'-GUUUAUUGUGGAGAAUGACUAAAUGGG-5' (SEQ ID NO: 2189)

βc-m3425 Target: 5'-CAAATAACACCTCTTACTGATTTACCC-3' (SEQ ID NO: 3298)

5'-GGCUCAAAUAACACCUCUUACUGat-3' (SEQ ID NO: 1081)
3'-UUCCGAGUUUAUUGUGGAGAAUGACUA-5' (SEQ ID NO: 2190)

βc-m3431 Target: 5'-AAGGCTCAAATAACACCTCTTACTGAT-3' (SEQ ID NO: 3299)

5'-AACAAGGCUCAAAUAACACCUCUta-3' (SEQ ID NO: 1082)
3'-UUUUGUUCCGAGUUUAUUGUGGAGAAU-5' (SEQ ID NO: 2191)

βc-m3436 Target: 5'-AAAACAAGGCTCAAATAACACCTCTTA-3' (SEQ ID NO: 3300)

5'-AAACAAGGCUCAAAUAACACCUCtt-3' (SEQ ID NO: 1083)
3'-GUUUUGUUCCGAGUUUAUUGUGGAGAA-5' (SEQ ID NO: 2192)

βc-m3437 Target: 5'-CAAAACAAGGCTCAAATAACACCTCTT-3' (SEQ ID NO: 3301)

5'-AAAACAAGGCUCAAAUAACACCUct-3' (SEQ ID NO: 1084)

3'-GGUUUUGUUCCGAGUUUAUUGUGGAGA-5' (SEQ ID NO: 2193)

βc-m3438 Target: 5'-CCAAAACAAGGCTCAAATAACACCTCT-3' (SEQ ID NO: 3302)

5'-UCCAAAACAAGGCUCAAAUAACAcc-3' (SEQ ID NO: 1085)
3'-ACAGGUUUUGUUCCGAGUUUAUUGUGG-5' (SEQ ID NO: 2194)

βc-m3441 Target: 5'-TGTCCAAAACAAGGCTCAAATAACACC-3' (SEQ ID NO: 3303)

5'-UGUCCAAAACAAGGCUCAAAUAAca-3' (SEQ ID NO: 1086)
3'-UGACAGGUUUUGUUCCGAGUUUAUUGU-5' (SEQ ID NO: 2195)

βc-m3443 Target: 5'-ACTGTCCAAAACAAGGCTCAAATAACA-3' (SEQ ID NO: 3304)

5'-UAUACUGUCCAAAACAAGGCUCAaa-3' (SEQ ID NO: 1087)
3'-CCAUAUGACAGGUUUUGUUCCGAGUUU-5' (SEQ ID NO: 2196)

βc-m3448 Target: 5'-GGTATACTGTCCAAAACAAGGCTCAAA-3' (SEQ ID NO: 3305)

5'-GCAACUGGUAUACUGUCCAAAACaa-3' (SEQ ID NO: 1088)
3'-UCCGUUGACCAUAUGACAGGUUUUGUU-5' (SEQ ID NO: 2197)

βc-m3456 Target: 5'-AGGCAACTGGTATACTGTCCAAAACAA-3' (SEQ ID NO: 3306)

5'-GAUAAAAGGCAACUGGUAUACUGtc-3' (SEQ ID NO: 1089)
3'-CCCUAUUUUCCGUUGACCAUAUGACAG-5' (SEQ ID NO: 2198)

βc-m3464 Target: 5'-GGGATAAAAGGCAACTGGTATACTGTC-3' (SEQ ID NO: 3307)

5'-GGAUAAAAGGCAACUGGUAUACUgt-3' (SEQ ID NO: 1090)
3'-ACCCUAUUUUCCGUUGACCAUAUGACA-5' (SEQ ID NO: 2199)

βc-m3465 Target: 5'-TGGGATAAAAGGCAACTGGTATACTGT-3' (SEQ ID NO: 3308)

5'-AACUUUGGGAUAAAAGGCAACUGgt-3' (SEQ ID NO: 1091)
3'-UGUUGAAACCCUAUUUUCCGUUGACCA-5' (SEQ ID NO: 2200)

βc-m3472 Target: 5'-ACAACTTTGGGATAAAAGGCAACTGGT-3' (SEQ ID NO: 3309)

5'-ACAACUUUGGGAUAAAAGGCAACtg-3' (SEQ ID NO: 1092)
3'-GUUGUUGAAACCCUAUUUUCCGUUGAC-5' (SEQ ID NO: 2201)

βc-m3474 Target: 5'-CAACAACTTTGGGATAAAAGGCAACTG-3' (SEQ ID NO: 3310)

5'-UUACAACAACUUUGGGAUAAAAGgc-3' (SEQ ID NO: 1093)
3'-CCAAUGUUGUUGAAACCCUAUUUUCCG-5' (SEQ ID NO: 2202)

βc-m3479 Target: 5'-GGTTACAACAACTTTGGGATAAAAGGC-3' (SEQ ID NO: 3311)

5'-GUUACAACAACUUUGGGAUAAAAgg-3' (SEQ ID NO: 1094)
3'-UCCAAUGUUGUUGAAACCCUAUUUUCC-5' (SEQ ID NO: 2203)

βc-m3480 Target: 5'-AGGTTACAACAACTTTGGGATAAAAGG-3' (SEQ ID NO: 3312)

5'-GGUUACAACAACUUUGGGAUAAAag-3' (SEQ ID NO: 1095)
3'-GUCCAAUGUUGUUGAAACCCUAUUUUC-5' (SEQ ID NO: 2204)

βc-m3481 Target: 5'-CAGGTTACAACAACTTTGGGATAAAAG-3' (SEQ ID NO: 3313)

5'-UCACAGCAGGUUACAACAACUUUgg-3' (SEQ ID NO: 1096)
3'-AUAGUGUCGUCCAAUGUUGUUGAAACC-5' (SEQ ID NO: 2205)

βc-m3489 Target: 5'-TATCACAGCAGGTTACAACAACTTTGG-3' (SEQ ID NO: 3314)

5'-AUCACAGCAGGUUACAACAACUUtg-3' (SEQ ID NO: 1097)

3'-CAUAGUGUCGUCCAAUGUUGUUGAAAC-5' (SEQ ID NO: 2206)

βc-m3490 Target: 5'-GTATCACAGCAGGTTACAACAACTTTG-3' (SEQ ID NO: 3315)

5'-GUAUCACAGCAGGUUACAACAACtt-3' (SEQ ID NO: 1098)
3'-AACAUAGUGUCGUCCAAUGUUGUUGAA-5' (SEQ ID NO: 2207)

βc-m3492 Target: 5'-TTGTATCACAGCAGGTTACAACAACTT-3' (SEQ ID NO: 3316)

5'-GCAUCUGUUGAAGCAUUGUAUCAca-3' (SEQ ID NO: 1099)
3'-GGCGUAGACAACUUCGUAACAUAGUGU-5' (SEQ ID NO: 2208)

βc-m3509 Target: 5'-CCGCATCTGTTGAAGCATTGTATCACA-3' (SEQ ID NO: 3317)

5'-UGAACCAUUUCUAUAACCGCAUCtg-3' (SEQ ID NO: 1100)
3'-AGACUUGGUAAAGAUAUUGGCGUAGAC-5' (SEQ ID NO: 2209)

βc-m3527 Target: 5'-TCTGAACCATTTCTATAACCGCATCTG-3' (SEQ ID NO: 3318)

5'-AUUCUGAACCAUUUCUAUAACCGca-3' (SEQ ID NO: 1101)
3'-AUUAAGACUUGGUAAAGAUAUUGGCGU-5' (SEQ ID NO: 2210)

βc-m3531 Target: 5'-TAATTCTGAACCATTTCTATAACCGCA-3' (SEQ ID NO: 3319)

5'-UAAUUCUGAACCAUUUCUAUAACcg-3' (SEQ ID NO: 1102)
3'-AAAUUAAGACUUGGUAAAGAUAUUGGC-5' (SEQ ID NO: 2211)

βc-m3533 Target: 5'-TTTAATTCTGAACCATTTCTATAACCG-3' (SEQ ID NO: 3320)

5'-UUAAUUCUGAACCAUUUCUAUAAcc-3' (SEQ ID NO: 1103)
3'-CAAAUUAAGACUUGGUAAAGAUAUUGG-5' (SEQ ID NO: 2212)

βc-m3534 Target: 5'-GTTTAATTCTGAACCATTTCTATAACC-3' (SEQ ID NO: 3321)

5'-UUUAAUUCUGAACCAUUUCUAUAac-3' (SEQ ID NO: 1104)
3'-UCAAAUUAAGACUUGGUAAAGAUAUUG-5' (SEQ ID NO: 2213)

βc-m3535 Target: 5'-AGTTTAATTCTGAACCATTTCTATAAC-3' (SEQ ID NO: 3322)

5'-GUUUAAUUCUGAACCAUUUCUAUaa-3' (SEQ ID NO: 1105)
3'-UUCAAAUUAAGACUUGGUAAAGAUAUU-5' (SEQ ID NO: 2214)

βc-m3536 Target: 5'-AAGTTTAATTCTGAACCATTTCTATAA-3' (SEQ ID NO: 3323)

5'-UAAAAGUUUAAUUCUGAACCAUUtc-3' (SEQ ID NO: 1106)
3'-UAAUUUUCAAAUUAAGACUUGGUAAAG-5' (SEQ ID NO: 2215)

βc-m3541 Target: 5'-ATTAAAAGTTTAATTCTGAACCATTTC-3' (SEQ ID NO: 3324)

5'-UUAAAAGUUUAAUUCUGAACCAUtt-3' (SEQ ID NO: 1107)
3'-UUAAUUUUCAAAUUAAGACUUGGUAAA-5' (SEQ ID NO: 2216)

βc-m3542 Target: 5'-AATTAAAAGTTTAATTCTGAACCATTT-3' (SEQ ID NO: 3325)

5'-AAUUAAAAGUUUAAUUCUGAACCat-3' (SEQ ID NO: 1108)
3'-ACUUAAUUUUCAAAUUAAGACUUGGUA-5' (SEQ ID NO: 2217)

βc-m3544 Target: 5'-TGAATTAAAAGTTTAATTCTGAACC-3' (SEQ ID NO: 3326)

5'-UGAAUGAAUUAAAAGUUUAAUUCtg-3' (SEQ ID NO: 1109)
3'-AAACUUACUUAAUUUUCAAAUUAAGAC-5' (SEQ ID NO: 2218)

βc-m3550 Target: 5'-TTTGAATGAATTAAAAGTTTAATTCTG-3' (SEQ ID NO: 3327)

5'-UUUUUGAAUGAAUUAAAAGUUUAat-3' (SEQ ID NO: 1110)

3'-AAAAAAACUUACUUAAUUUUCAAAUUA-5' (SEQ ID NO: 2219)

βc-m3554 Target: 5'-TTTTTTTGAATGAATTAAAAGTTTAAT-3' (SEQ ID NO: 3328)

5'-UUUUUUUUUGAAUGAAUUAAAAGtt-3' (SEQ ID NO: 1111)
3'-AAAAAAAAAAACUUACUUAAUUUUCAA-5' (SEQ ID NO: 2220)

βc-m3558 Target: 5'-TTTTTTTTTTTGAATGAATTAAAAGTT-3' (SEQ ID NO: 3329)

5'-UUUUUUUUUUGAAUGAAUUAAAAgt-3' (SEQ ID NO: 1112)
3'-AAAAAAAAAAAACUUACUUAAUUUUCA-5' (SEQ ID NO: 2221)

βc-m3559 Target: 5'-TTTTTTTTTTTTGAATGAATTAAAAGT-3' (SEQ ID NO: 3330)

5'-UUUUUUUUUUUGAAUGAAUUAAAag-3' (SEQ ID NO: 1113)
3'-AAAAAAAAAAAAACUUACUUAAUUUUC-5' (SEQ ID NO: 2222)

βc-m3560 Target: 5'-TTTTTTTTTTTTTGAATGAATTAAAAG-3' (SEQ ID NO: 3331)

5'-UUUUUUUUUUUUGAAUGAAUUAAaa-3' (SEQ ID NO: 1114)
3'-AAAAAAAAAAAAAACUUACUUAAUUUU-5' (SEQ ID NO: 2223)

βc-m3561 Target: 5'-TTTTTTTTTTTTTTGAATGAATTAAAA-3' (SEQ ID NO: 3332)

5'-UUUUUUUUUUUUUGAAUGAAUUAaa-3' (SEQ ID NO: 1115)
3'-AAAAAAAAAAAAAAACUUACUUAAUUU-5' (SEQ ID NO: 2224)

βc-m3562 Target: 5'-TTTTTTTTTTTTTTTGAATGAATTAAA-3' (SEQ ID NO: 3333)

5'-UUUUUUUUUUUUUUGAAUGAAUUaa-3' (SEQ ID NO: 1116)
3'-AAAAAAAAAAAAAAAACUUACUUAAUU-5' (SEQ ID NO: 2225)

βc-m3563 Target: 5'-TTTTTTTTTTTTTTTGAATGAATTAA-3' (SEQ ID NO: 3334)

Projected 21 nucleotide target sequences for each DsiRNA of Table 9 above and of Tables 11-13 below are presented in Table 10.

Table 10: 21 Nucleotide Target Sequences of Additional Selected DsiRNAs

βc-244 21 nt Target: 5'-GTTGTATGGTATACTTCAAAT-3' (SEQ ID NO: 4932)
βc-251 21 nt Target: 5'-CAAAACAGTTGTATGGTATAC-3' (SEQ ID NO: 4933)
βc-252 21 nt Target: 5'-TCAAAACAGTTGTATGGTATA-3' (SEQ ID NO: 4934)
βc-254 21 nt Target: 5'-TTTCAAAACAGTTGTATGGTA-3' (SEQ ID NO: 4935)
βc-255 21 nt Target: 5'-TTTTCAAAACAGTTGTATGGT-3' (SEQ ID NO: 4936)
βc-256 21 nt Target: 5'-ATTTTCAAAACAGTTGTATGG-3' (SEQ ID NO: 4937)
βc-269 21 nt Target: 5'-TTGTCCACGCTGGATTTTCAA-3' (SEQ ID NO: 4938)
βc-270 21 nt Target: 5'-ATTGTCCACGCTGGATTTTCA-3' (SEQ ID NO: 4939)
βc-293 21 nt Target: 5'-CCATCAAATCAGCTTGAGTAG-3' (SEQ ID NO: 4940)
βc-302 21 nt Target: 5'-TGTCCAACTCCATCAAATCAG-3' (SEQ ID NO: 4941)
βc-431 21 nt Target: 5'-CTTCCTCAGGATTGCCTTTAC-3' (SEQ ID NO: 4942)
βc-432 21 nt Target: 5'-TCTTCCTCAGGATTGCCTTTA-3' (SEQ ID NO: 4943)
βc-518 21 nt Target: 5'-CATCAATATCAGCTACTTGTT-3' (SEQ ID NO: 4944)
βc-519 21 nt Target: 5'-CCATCAATATCAGCTACTTGT-3' (SEQ ID NO: 4945)
βc-524 21 nt Target: 5'-ACTGTCCATCAATATCAGCTA-3' (SEQ ID NO: 4946)
βc-531 21 nt Target: 5'-ATTGCATACTGTCCATCAATA-3' (SEQ ID NO: 4947)
βc-537 21 nt Target: 5'-CGAGTCATTGCATACTGTCCA-3' (SEQ ID NO: 4948)
βc-584 21 nt Target: 5'-CCTCATCTAATGTCTCAGGGA-3' (SEQ ID NO: 4949)
βc-680 21 nt Target: 5'-TTACAACTGCATGTTTCAGCA-3' (SEQ ID NO: 4950)

βc-682 21 nt Target: 5'-GTTTACAACTGCATGTTTCAG-3' (SEQ ID NO: 4951)
βc-692 21 nt Target: 5'-AGTTAATCAAGTTTACAACTG-3' (SEQ ID NO: 4952)
βc-698 21 nt Target: 5'-CTTGATAGTTAATCAAGTTTA-3' (SEQ ID NO: 4953)
βc-707 21 nt Target: 5'-CTGCATCATCTTGATAGTTAA-3' (SEQ ID NO: 4954)
βc-708 21 nt Target: 5'-TCTGCATCATCTTGATAGTTA-3' (SEQ ID NO: 4955)
βc-763 21 nt Target: 5'-CTGGTCCTCGTCATTTAGCAG-3' (SEQ ID NO: 4956)
βc-790 21 nt Target: 5'-CATAACTGCAGCCTTATTAAC-3' (SEQ ID NO: 4957)
βc-791 21 nt Target: 5'-CCATAACTGCAGCCTTATTAA-3' (SEQ ID NO: 4958)
βc-794 21 nt Target: 5'-GGACCATAACTGCAGCCTTAT-3' (SEQ ID NO: 4959)
βc-812 21 nt Target: 5'-CCTTTTTAGAAAGCTGATGGA-3' (SEQ ID NO: 4960)
βc-873 21 nt Target: 5'-ATGGTACGTACAATAGCAGAC-3' (SEQ ID NO: 4961)
βc-890 21 nt Target: 5'-CATCATTTGTATTCTGCATGG-3' (SEQ ID NO: 4962)
βc-899 21 nt Target: 5'-CTGTTTCTACATCATTTGTAT-3' (SEQ ID NO: 4963)
βc-900 21 nt Target: 5'-GCTGTTTCTACATCATTTGTA-3' (SEQ ID NO: 4964)
βc-909 21 nt Target: 5'-GTACAACGAGCTGTTTCTACA-3' (SEQ ID NO: 4965)
βc-911 21 nt Target: 5'-CGGTACAACGAGCTGTTTCTA-3' (SEQ ID NO: 4966)
βc-912 21 nt Target: 5'-GCGGTACAACGAGCTGTTTCT-3' (SEQ ID NO: 4967)
βc-1032 21 nt Target: 5'-GCATAAAACAACACAGAATCC-3' (SEQ ID NO: 4968)
βc-1034 21 nt Target: 5'-TGGCATAAAACAACACAGAAT-3' (SEQ ID NO: 4969)
βc-1035 21 nt Target: 5'-ATGGCATAAAACAACACAGAA-3' (SEQ ID NO: 4970)
βc-1076 21 nt Target: 5'-TAGCTCCTTCTTGATGTAATA-3' (SEQ ID NO: 4971)
βc-1077 21 nt Target: 5'-TTAGCTCCTTCTTGATGTAAT-3' (SEQ ID NO: 4972)
βc-1144 21 nt Target: 5'-TTTAACATTTGTTTTGTTGAG-3' (SEQ ID NO: 4973)
βc-1154 21 nt Target: 5'-TAGCCAAGAATTTAACATTTG-3' (SEQ ID NO: 4974)
βc-1159 21 nt Target: 5'-CGTAATAGCCAAGAATTTAAC-3' (SEQ ID NO: 4975)
βc-1160 21 nt Target: 5'-TCGTAATAGCCAAGAATTTAA-3' (SEQ ID NO: 4976)
βc-1185 21 nt Target: 5'-TAAGCTAAAATTTGAAGGCAG-3' (SEQ ID NO: 4977)
βc-1260 21 nt Target: 5'-TAGGTCCTCATTATATTTACT-3' (SEQ ID NO: 4978)
βc-1265 21 nt Target: 5'-AAGTATAGGTCCTCATTATAT-3' (SEQ ID NO: 4979)
βc-1266 21 nt Target: 5'-TAAGTATAGGTCCTCATTATA-3' (SEQ ID NO: 4980)
βc-1274 21 nt Target: 5'-GTTTTTCGTAAGTATAGGTCC-3' (SEQ ID NO: 4981)
βc-1275 21 nt Target: 5'-AGTTTTTCGTAAGTATAGGTC-3' (SEQ ID NO: 4982)
βc-1276 21 nt Target: 5'-TAGTTTTTCGTAAGTATAGGT-3' (SEQ ID NO: 4983)
βc-1277 21 nt Target: 5'-GTAGTTTTTCGTAAGTATAGG-3' (SEQ ID NO: 4984)
βc-1287 21 nt Target: 5'-GTGGTCCACAGTAGTTTTTCG-3' (SEQ ID NO: 4985)
βc-1344 21 nt Target: 5'-TCTACAATAGCCGGCTTATTA-3' (SEQ ID NO: 4986)
βc-1346 21 nt Target: 5'-CTTCTACAATAGCCGGCTTAT-3' (SEQ ID NO: 4987)
βc-1371 21 nt Target: 5'-AGTCCTAAAGCTTGCATTCCA-3' (SEQ ID NO: 4988)
βc-1372 21 nt Target: 5'-AAGTCCTAAAGCTTGCATTCC-3' (SEQ ID NO: 4989)
βc-1373 21 nt Target: 5'-GAAGTCCTAAAGCTTGCATTC-3' (SEQ ID NO: 4990)
βc-1410 21 nt Target: 5'-CAGTTCTGAACAAGACGTTGA-3' (SEQ ID NO: 4991)
βc-1411 21 nt Target: 5'-ACAGTTCTGAACAAGACGTTG-3' (SEQ ID NO: 4992)
βc-1421 21 nt Target: 5'-GAGTCCAAAGACAGTTCTGAA-3' (SEQ ID NO: 4993)
βc-1458 21 nt Target: 5'-CCTTCCTGTTTAGTTGCAGCA-3' (SEQ ID NO: 4994)
βc-1517 21 nt Target: 5'-CCACATTTATATCATCTGAAC-3' (SEQ ID NO: 4995)
βc-1520 21 nt Target: 5'-TGACCACATTTATATCATCTG-3' (SEQ ID NO: 4996)
βc-1529 21 nt Target: 5'-CTGCACAGGTGACCACATTTA-3' (SEQ ID NO: 4997)
βc-1530 21 nt Target: 5'-GCTGCACAGGTGACCACATTT-3' (SEQ ID NO: 4998)
βc-1558 21 nt Target: 5'-ATTGCAAGTGAGGTTAGAAAG-3' (SEQ ID NO: 4999)
βc-1566 21 nt Target: 5'-TTATAATTATTGCAAGTGAGG-3' (SEQ ID NO: 5000)
βc-1579 21 nt Target: 5'-CATCATCTTGTTCTTATAATT-3' (SEQ ID NO: 5001)
βc-1580 21 nt Target: 5'-CCATCATCTTGTTCTTATAAT-3' (SEQ ID NO: 5002)
βc-1583 21 nt Target: 5'-AGACCATCATCTTGTTCTTAT-3' (SEQ ID NO: 5003)

βc-1585 21 nt Target: 5'-GCAGACCATCATCTTGTTCTT-3' (SEQ ID NO: 5004)
βc-1808 21 nt Target: 5'-TCAATCCAACAGTAGCCTTTA-3' (SEQ ID NO: 5005)
βc-1813 21 nt Target: 5'-TCGAATCAATCCAACAGTAGC-3' (SEQ ID NO: 5006)
βc-1955 21 nt Target: 5'-CCTCCACAAATTGCTGCTGTG-3' (SEQ ID NO: 5007)
βc-1989 21 nt Target: 5'-GTACAACCTTCAACTATTTCT-3' (SEQ ID NO: 5008)
βc-1990 21 nt Target: 5'-GGTACAACCTTCAACTATTTC-3' (SEQ ID NO: 5009)
βc-1991 21 nt Target: 5'-CGGTACAACCTTCAACTATTT-3' (SEQ ID NO: 5010)
βc-1992 21 nt Target: 5'-CCGGTACAACCTTCAACTATT-3' (SEQ ID NO: 5011)
βc-1997 21 nt Target: 5'-GGGCTCCGGTACAACCTTCAA-3' (SEQ ID NO: 5012)
βc-2036 21 nt Target: 5'-TAACAATTCGGTTGTGAACAT-3' (SEQ ID NO: 5013)
βc-2037 21 nt Target: 5'-ATAACAATTCGGTTGTGAACA-3' (SEQ ID NO: 5014)
βc-2038 21 nt Target: 5'-GATAACAATTCGGTTGTGAAC-3' (SEQ ID NO: 5015)
βc-2039 21 nt Target: 5'-TGATAACAATTCGGTTGTGAA-3' (SEQ ID NO: 5016)
βc-2040 21 nt Target: 5'-CTGATAACAATTCGGTTGTGA-3' (SEQ ID NO: 5017)
βc-2041 21 nt Target: 5'-TCTGATAACAATTCGGTTGTG-3' (SEQ ID NO: 5018)
βc-2052 21 nt Target: 5'-GTATTTAGTCCTCTGATAACA-3' (SEQ ID NO: 5019)
βc-2053 21 nt Target: 5'-GGTATTTAGTCCTCTGATAAC-3' (SEQ ID NO: 5020)
βc-2054 21 nt Target: 5'-TGGTATTTAGTCCTCTGATAA-3' (SEQ ID NO: 5021)
βc-2055 21 nt Target: 5'-ATGGTATTTAGTCCTCTGATA-3' (SEQ ID NO: 5022)
βc-2065 21 nt Target: 5'-AAACAATGGAATGGTATTTAG-3' (SEQ ID NO: 5023)
βc-2069 21 nt Target: 5'-GCACAAACAATGGAATGGTAT-3' (SEQ ID NO: 5024)
βc-2071 21 nt Target: 5'-CTGCACAAACAATGGAATGGT-3' (SEQ ID NO: 5025)
βc-2072 21 nt Target: 5'-GCTGCACAAACAATGGAATGG-3' (SEQ ID NO: 5026)
βc-2111 21 nt Target: 5'-CAGCTACTCTTTGGATGTTTT-3' (SEQ ID NO: 5027)
βc-2112 21 nt Target: 5'-GCAGCTACTCTTTGGATGTTT-3' (SEQ ID NO: 5028)
βc-2168 21 nt Target: 5'-CAGCTTCAATAGCTTCTGCAG-3' (SEQ ID NO: 5029)
βc-2175 21 nt Target: 5'-GCTCCCTCAGCTTCAATAGCT-3' (SEQ ID NO: 5030)
βc-2177 21 nt Target: 5'-TGGCTCCCTCAGCTTCAATAG-3' (SEQ ID NO: 5031)
βc-2214 21 nt Target: 5'-TCATTCCTAGAGTGAAGTAAC-3' (SEQ ID NO: 5032)
βc-2216 21 nt Target: 5'-CTTCATTCCTAGAGTGAAGTA-3' (SEQ ID NO: 5033)
βc-2217 21 nt Target: 5'-CCTTCATTCCTAGAGTGAAGT-3' (SEQ ID NO: 5034)
βc-2264 21 nt Target: 5'-TGTCCTCAGACATTCGGAACA-3' (SEQ ID NO: 5035)
βc-2266 21 nt Target: 5'-CTTGTCCTCAGACATTCGGAA-3' (SEQ ID NO: 5036)
βc-2287 21 nt Target: 5'-CCGTTTCTTGTAATCTTGTGG-3' (SEQ ID NO: 5037)
βc-2295 21 nt Target: 5'-ACTGAAAGCCGTTTCTTGTAA-3' (SEQ ID NO: 5038)
βc-2302 21 nt Target: 5'-CAGCTCAACTGAAAGCCGTTT-3' (SEQ ID NO: 5039)
βc-2363 21 nt Target: 5'-CAAGTCCAAGATCAGCAGTCT-3' (SEQ ID NO: 5040)
βc-2373 21 nt Target: 5'-GCACCAATATCAAGTCCAAGA-3' (SEQ ID NO: 5041)
βc-2424 21 nt Target: 5'-AAAGAACGATAGCTAGGATCA-3' (SEQ ID NO: 5042)
βc-2441 21 nt Target: 5'-CATATCCACCAGAGTGAAAAG-3' (SEQ ID NO: 5043)
βc-2618 21 nt Target: 5'-TGATTTACAGGTCAGTATCAA-3' (SEQ ID NO: 5044)
βc-2619 21 nt Target: 5'-ATGATTTACAGGTCAGTATCA-3' (SEQ ID NO: 5045)
βc-2620 21 nt Target: 5'-GATGATTTACAGGTCAGTATC-3' (SEQ ID NO: 5046)
βc-2634 21 nt Target: 5'-CTTCTTACCTAAAGGATGATT-3' (SEQ ID NO: 5047)
βc-2635 21 nt Target: 5'-ACTTCTTACCTAAAGGATGAT-3' (SEQ ID NO: 5048)
βc-2637 21 nt Target: 5'-AAACTTCTTACCTAAAGGATG-3' (SEQ ID NO: 5049)
βc-2645 21 nt Target: 5'-GCTTTTTAAAACTTCTTACCT-3' (SEQ ID NO: 5050)
βc-2647 21 nt Target: 5'-TGGCTTTTTAAAACTTCTTAC-3' (SEQ ID NO: 5051)
βc-2653 21 nt Target: 5'-CCAAACTGGCTTTTTAAAACT-3' (SEQ ID NO: 5052)
βc-2657 21 nt Target: 5'-TTACCCAAACTGGCTTTTTAA-3' (SEQ ID NO: 5053)
βc-2658 21 nt Target: 5'-TTTACCCAAACTGGCTTTTTA-3' (SEQ ID NO: 5054)
βc-2659 21 nt Target: 5'-TTTTACCCAAACTGGCTTTTT-3' (SEQ ID NO: 5055)
βc-2660 21 nt Target: 5'-ATTTTACCCAAACTGGCTTTT-3' (SEQ ID NO: 5056)

βc-2701 21 nt Target: 5'-CCAACCAAGTCTTTCTGAAGT-3' (SEQ ID NO: 5057)
βc-2709 21 nt Target: 5'-CCACCCTACCAACCAAGTCTT-3' (SEQ ID NO: 5058)
βc-2733 21 nt Target: 5'-ATTTACAAATAGCCTAAACCA-3' (SEQ ID NO: 5059)
βc-2734 21 nt Target: 5'-GATTTACAAATAGCCTAAACC-3' (SEQ ID NO: 5060)
βc-2735 21 nt Target: 5'-AGATTTACAAATAGCCTAAAC-3' (SEQ ID NO: 5061)
βc-2736 21 nt Target: 5'-CAGATTTACAAATAGCCTAAA-3' (SEQ ID NO: 5062)
βc-2747 21 nt Target: 5'-TGTTTTTGTGGCAGATTTACA-3' (SEQ ID NO: 5063)
βc-2748 21 nt Target: 5'-CTGTTTTTGTGGCAGATTTAC-3' (SEQ ID NO: 5064)
βc-2749 21 nt Target: 5'-CCTGTTTTTGTGGCAGATTTA-3' (SEQ ID NO: 5065)
βc-2754 21 nt Target: 5'-ATATACCTGTTTTTGTGGCAG-3' (SEQ ID NO: 5066)
βc-2764 21 nt Target: 5'-CTTTCAAAGTATATACCTGTT-3' (SEQ ID NO: 5067)
βc-2770 21 nt Target: 5'-CATCTCCTTTCAAAGTATATA-3' (SEQ ID NO: 5068)
βc-2771 21 nt Target: 5'-ACATCTCCTTTCAAAGTATAT-3' (SEQ ID NO: 5069)
βc-2773 21 nt Target: 5'-AGACATCTCCTTTCAAAGTAT-3' (SEQ ID NO: 5070)
βc-2774 21 nt Target: 5'-AAGACATCTCCTTTCAAAGTA-3' (SEQ ID NO: 5071)
βc-2775 21 nt Target: 5'-CAAGACATCTCCTTTCAAAGT-3' (SEQ ID NO: 5072)
βc-2780 21 nt Target: 5'-TGTTCCAAGACATCTCCTTTC-3' (SEQ ID NO: 5073)
βc-2788 21 nt Target: 5'-CATTCCAATGTTCCAAGACAT-3' (SEQ ID NO: 5074)
βc-2789 21 nt Target: 5'-ACATTCCAATGTTCCAAGACA-3' (SEQ ID NO: 5075)
βc-2791 21 nt Target: 5'-GAACATTCCAATGTTCCAAGA-3' (SEQ ID NO: 5076)
βc-2803 21 nt Target: 5'-CCAGAAATCTGAGAACATTCC-3' (SEQ ID NO: 5077)
βc-2807 21 nt Target: 5'-ACAACCAGAAATCTGAGAACA-3' (SEQ ID NO: 5078)
βc-2809 21 nt Target: 5'-TAACAACCAGAAATCTGAGAA-3' (SEQ ID NO: 5079)
βc-2810 21 nt Target: 5'-ATAACAACCAGAAATCTGAGA-3' (SEQ ID NO: 5080)
βc-2811 21 nt Target: 5'-CATAACAACCAGAAATCTGAG-3' (SEQ ID NO: 5081)
βc-2817 21 nt Target: 5'-TGATCACATAACAACCAGAAA-3' (SEQ ID NO: 5082)
βc-2818 21 nt Target: 5'-ATGATCACATAACAACCAGAA-3' (SEQ ID NO: 5083)
βc-2824 21 nt Target: 5'-CCACACATGATCACATAACAA-3' (SEQ ID NO: 5084)
βc-2827 21 nt Target: 5'-CTTCCACACATGATCACATAA-3' (SEQ ID NO: 5085)
βc-2832 21 nt Target: 5'-AATAACTTCCACACATGATCA-3' (SEQ ID NO: 5086)
βc-2833 21 nt Target: 5'-TAATAACTTCCACACATGATC-3' (SEQ ID NO: 5087)
βc-2834 21 nt Target: 5'-TTAATAACTTCCACACATGAT-3' (SEQ ID NO: 5088)
βc-2835 21 nt Target: 5'-GTTAATAACTTCCACACATGA-3' (SEQ ID NO: 5089)
βc-2842 21 nt Target: 5'-CATTAAAGTTAATAACTTCCA-3' (SEQ ID NO: 5090)
βc-2843 21 nt Target: 5'-ACATTAAAGTTAATAACTTCC-3' (SEQ ID NO: 5091)
βc-2845 21 nt Target: 5'-AAACATTAAAGTTAATAACTT-3' (SEQ ID NO: 5092)
βc-2846 21 nt Target: 5'-AAAACATTAAAGTTAATAACT-3' (SEQ ID NO: 5093)
βc-2847 21 nt Target: 5'-AAAAACATTAAAGTTAATAAC-3' (SEQ ID NO: 5094)
βc-2848 21 nt Target: 5'-AAAAAACATTAAAGTTAATAA-3' (SEQ ID NO: 5095)
βc-2849 21 nt Target: 5'-CAAAAAACATTAAAGTTAATA-3' (SEQ ID NO: 5096)
βc-2850 21 nt Target: 5'-GCAAAAAACATTAAAGTTAAT-3' (SEQ ID NO: 5097)
βc-2852 21 nt Target: 5'-TGGCAAAAAACATTAAAGTTA-3' (SEQ ID NO: 5098)
βc-2853 21 nt Target: 5'-GTGGCAAAAAACATTAAAGTT-3' (SEQ ID NO: 5099)
βc-2864 21 nt Target: 5'-TTGCAAAAGCTGTGGCAAAAA-3' (SEQ ID NO: 5100)
βc-2865 21 nt Target: 5'-GTTGCAAAAGCTGTGGCAAAA-3' (SEQ ID NO: 5101)
βc-2882 21 nt Target: 5'-ACTCATTTGAGTATTAAGTTG-3' (SEQ ID NO: 5102)
βc-2899 21 nt Target: 5'-TTAAAACAGCAAATGTTACTC-3' (SEQ ID NO: 5103)
βc-2900 21 nt Target: 5'-TTTAAAACAGCAAATGTTACT-3' (SEQ ID NO: 5104)
βc-2901 21 nt Target: 5'-GTTTAAAACAGCAAATGTTAC-3' (SEQ ID NO: 5105)
βc-2902 21 nt Target: 5'-TGTTTAAAACAGCAAATGTTA-3' (SEQ ID NO: 5106)
βc-2903 21 nt Target: 5'-ATGTTTAAAACAGCAAATGTT-3' (SEQ ID NO: 5107)
βc-2904 21 nt Target: 5'-AATGTTTAAAACAGCAAATGT-3' (SEQ ID NO: 5108)
βc-2909 21 nt Target: 5'-CTATTAATGTTTAAAACAGCA-3' (SEQ ID NO: 5109)

βc-2921 21 nt Target: 5'-AGAGAAAGGCTGCTATTAATG-3' (SEQ ID NO: 5110)
βc-2949 21 nt Target: 5'-CAAGTTCAGACAATACAGCTG-3' (SEQ ID NO: 5111)
βc-2957 21 nt Target: 5'-TCACAATGCAAGTTCAGACAA-3' (SEQ ID NO: 5112)
βc-2959 21 nt Target: 5'-AATCACAATGCAAGTTCAGAC-3' (SEQ ID NO: 5113)
βc-2961 21 nt Target: 5'-CCAATCACAATGCAAGTTCAG-3' (SEQ ID NO: 5114)
βc-2965 21 nt Target: 5'-CAGGCCAATCACAATGCAAGT-3' (SEQ ID NO: 5115)
βc-3052 21 nt Target: 5'-TTGTTCCCATAGGAAACTCAG-3' (SEQ ID NO: 5116)
βc-3058 21 nt Target: 5'-CTTCAATTGTTCCCATAGGAA-3' (SEQ ID NO: 5117)
βc-3059 21 nt Target: 5'-ACTTCAATTGTTCCCATAGGA-3' (SEQ ID NO: 5118)
βc-3065 21 nt Target: 5'-AAGTTTACTTCAATTGTTCCC-3' (SEQ ID NO: 5119)
βc-3066 21 nt Target: 5'-AAAGTTTACTTCAATTGTTCC-3' (SEQ ID NO: 5120)
βc-3070 21 nt Target: 5'-ACAAAAAGTTTACTTCAATTG-3' (SEQ ID NO: 5121)
βc-3074 21 nt Target: 5'-CAGAACAAAAAGTTTACTTCA-3' (SEQ ID NO: 5122)
βc-3079 21 nt Target: 5'-AGGACCAGAACAAAAAGTTTA-3' (SEQ ID NO: 5123)
βc-3080 21 nt Target: 5'-AAGGACCAGAACAAAAAGTTT-3' (SEQ ID NO: 5124)
βc-3088 21 nt Target: 5'-CGACCAAAAAGGACCAGAACA-3' (SEQ ID NO: 5125)
βc-3089 21 nt Target: 5'-TCGACCAAAAAGGACCAGAAC-3' (SEQ ID NO: 5126)
βc-3096 21 nt Target: 5'-TTACTCCTCGACCAAAAAGGA-3' (SEQ ID NO: 5127)
βc-3111 21 nt Target: 5'-AATCCATTTGTATTGTTACTC-3' (SEQ ID NO: 5128)
βc-3112 21 nt Target: 5'-AAATCCATTTGTATTGTTACT-3' (SEQ ID NO: 5129)
βc-3113 21 nt Target: 5'-AAAATCCATTTGTATTGTTAC-3' (SEQ ID NO: 5130)
βc-3114 21 nt Target: 5'-CAAAATCCATTTGTATTGTTA-3' (SEQ ID NO: 5131)
βc-3115 21 nt Target: 5'-CCAAAATCCATTTGTATTGTT-3' (SEQ ID NO: 5132)
βc-3121 21 nt Target: 5'-TCACTCCCAAAATCCATTTGT-3' (SEQ ID NO: 5133)
βc-3136 21 nt Target: 5'-TCTTCACTTCTTGAGTCACTC-3' (SEQ ID NO: 5134)
βc-3138 21 nt Target: 5'-ATTCTTCACTTCTTGAGTCAC-3' (SEQ ID NO: 5135)
βc-3139 21 nt Target: 5'-CATTCTTCACTTCTTGAGTCA-3' (SEQ ID NO: 5136)
βc-3140 21 nt Target: 5'-GCATTCTTCACTTCTTGAGTC-3' (SEQ ID NO: 5137)
βc-3142 21 nt Target: 5'-GTGCATTCTTCACTTCTTGAG-3' (SEQ ID NO: 5138)
βc-3150 21 nt Target: 5'-CCATTCTTGTGCATTCTTCAC-3' (SEQ ID NO: 5139)
βc-3153 21 nt Target: 5'-GATCCATTCTTGTGCATTCTT-3' (SEQ ID NO: 5140)
βc-3154 21 nt Target: 5'-TGATCCATTCTTGTGCATTCT-3' (SEQ ID NO: 5141)
βc-3155 21 nt Target: 5'-GTGATCCATTCTTGTGCATTC-3' (SEQ ID NO: 5142)
βc-3168 21 nt Target: 5'-TAAATTCCATCTTGTGATCCA-3' (SEQ ID NO: 5143)
βc-3170 21 nt Target: 5'-GATAAATTCCATCTTGTGATC-3' (SEQ ID NO: 5144)
βc-3171 21 nt Target: 5'-TGATAAATTCCATCTTGTGAT-3' (SEQ ID NO: 5145)
βc-3172 21 nt Target: 5'-TTGATAAATTCCATCTTGTGA-3' (SEQ ID NO: 5146)
βc-3173 21 nt Target: 5'-TTTGATAAATTCCATCTTGTG-3' (SEQ ID NO: 5147)
βc-3183 21 nt Target: 5'-AAGGCTAGGGTTTGATAAATT-3' (SEQ ID NO: 5148)
βc-3200 21 nt Target: 5'-AAAAAAATTTAACAAGCAAGG-3' (SEQ ID NO: 5149)
βc-3209 21 nt Target: 5'-AAAAAAAAAAAAAAAATTTAA-3' (SEQ ID NO: 5150)
βc-3210 21 nt Target: 5'-AAAAAAAAAAAAAAAATTTA-3' (SEQ ID NO: 5151)
βc-3211 21 nt Target: 5'-AAAAAAAAAAAAAAAATTT-3' (SEQ ID NO: 5152)
βc-3212 21 nt Target: 5'-AAAAAAAAAAAAAAAATT-3' (SEQ ID NO: 5153)
βc-3213 21 nt Target: 5'-TAAAAAAAAAAAAAAAAAAT-3' (SEQ ID NO: 5154)
βc-3214 21 nt Target: 5'-TTAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 5155)
βc-3215 21 nt Target: 5'-CTTAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 5156)
βc-3216 21 nt Target: 5'-TCTTAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 5157)
βc-3218 21 nt Target: 5'-ATTCTTAAAAAAAAAAAAAA-3' (SEQ ID NO: 5158)
βc-3219 21 nt Target: 5'-TATTCTTAAAAAAAAAAAAA-3' (SEQ ID NO: 5159)
βc-3220 21 nt Target: 5'-ATATTCTTAAAAAAAAAAAA-3' (SEQ ID NO: 5160)
βc-3221 21 nt Target: 5'-GATATTCTTAAAAAAAAAAA-3' (SEQ ID NO: 5161)
βc-3222 21 nt Target: 5'-AGATATTCTTAAAAAAAAAA-3' (SEQ ID NO: 5162)

βc-3223 21 nt Target: 5'-CAGATATTCTTAAAAAAAAA-3' (SEQ ID NO: 5163)
βc-3224 21 nt Target: 5'-ACAGATATTCTTAAAAAAAAA-3' (SEQ ID NO: 5164)
βc-3228 21 nt Target: 5'-CATTACAGATATTCTTAAAAA-3' (SEQ ID NO: 5165)
βc-3229 21 nt Target: 5'-CCATTACAGATATTCTTAAAA-3' (SEQ ID NO: 5166)
βc-3233 21 nt Target: 5'-AGTACCATTACAGATATTCTT-3' (SEQ ID NO: 5167)
βc-3234 21 nt Target: 5'-CAGTACCATTACAGATATTCT-3' (SEQ ID NO: 5168)
βc-3235 21 nt Target: 5'-TCAGTACCATTACAGATATTC-3' (SEQ ID NO: 5169)
βc-3239 21 nt Target: 5'-AAAGTCAGTACCATTACAGAT-3' (SEQ ID NO: 5170)
βc-3256 21 nt Target: 5'-GCTACTTCAAAGCAAGCAAAG-3' (SEQ ID NO: 5171)
βc-3265 21 nt Target: 5'-AAAAAAAGAGCTACTTCAAAG-3' (SEQ ID NO: 5172)
βc-3270 21 nt Target: 5'-AAAAAAAAAAAAGAGCTACTT-3' (SEQ ID NO: 5173)
βc-3271 21 nt Target: 5'-AAAAAAAAAAAAAGAGCTACT-3' (SEQ ID NO: 5174)
βc-3273 21 nt Target: 5'-AAAAAAAAAAAAAAAAGAGCTA-3' (SEQ ID NO: 5175)
βc-3274 21 nt Target: 5'-AAAAAAAAAAAAAAAAAGAGCT-3' (SEQ ID NO: 5176)
βc-3275 21 nt Target: 5'-AAAAAAAAAAAAAAAAAAGAGC-3' (SEQ ID NO: 5177)
βc-3276 21 nt Target: 5'-AAAAAAAAAAAAAAAAAAAGAG-3' (SEQ ID NO: 5178)
βc-3282 21 nt Target: 5'-AAAAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 5179)
βc-3283 21 nt Target: 5'-AAAAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 5180)
βc-3284 21 nt Target: 5'-CAAAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 5181)
βc-3285 21 nt Target: 5'-GCAAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 5182)
βc-3287 21 nt Target: 5'-CTGCAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 5183)
βc-3288 21 nt Target: 5'-ACTGCAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 5184)
βc-3292 21 nt Target: 5'-AGTTACTGCAAAAAAAAAAAA-3' (SEQ ID NO: 5185)
βc-3293 21 nt Target: 5'-CAGTTACTGCAAAAAAAAAAA-3' (SEQ ID NO: 5186)
βc-3294 21 nt Target: 5'-ACAGTTACTGCAAAAAAAAAA-3' (SEQ ID NO: 5187)
βc-3298 21 nt Target: 5'-AAAAACAGTTACTGCAAAAAA-3' (SEQ ID NO: 5188)
βc-3299 21 nt Target: 5'-AAAAAACAGTTACTGCAAAAA-3' (SEQ ID NO: 5189)
βc-3300 21 nt Target: 5'-TAAAAAACAGTTACTGCAAAA-3' (SEQ ID NO: 5190)
βc-3302 21 nt Target: 5'-CTTAAAAAACAGTTACTGCAA-3' (SEQ ID NO: 5191)
βc-3303 21 nt Target: 5'-ACTTAAAAAACAGTTACTGCA-3' (SEQ ID NO: 5192)
βc-3305 21 nt Target: 5'-AGACTTAAAAAACAGTTACTG-3' (SEQ ID NO: 5193)
βc-3315 21 nt Target: 5'-ACACTACGAGAGACTTAAAAA-3' (SEQ ID NO: 5194)
βc-3317 21 nt Target: 5'-TAACACTACGAGAGACTTAAA-3' (SEQ ID NO: 5195)
βc-3318 21 nt Target: 5'-TTAACACTACGAGAGACTTAA-3' (SEQ ID NO: 5196)
βc-3320 21 nt Target: 5'-ACTTAACACTACGAGAGACTT-3' (SEQ ID NO: 5197)
βc-3323 21 nt Target: 5'-ATAACTTAACACTACGAGAGA-3' (SEQ ID NO: 5198)
βc-3324 21 nt Target: 5'-TATAACTTAACACTACGAGAG-3' (SEQ ID NO: 5199)
βc-3332 21 nt Target: 5'-GTATTCACTATAACTTAACAC-3' (SEQ ID NO: 5200)
βc-3333 21 nt Target: 5'-AGTATTCACTATAACTTAACA-3' (SEQ ID NO: 5201)
βc-3334 21 nt Target: 5'-CAGTATTCACTATAACTTAAC-3' (SEQ ID NO: 5202)
βc-3335 21 nt Target: 5'-GCAGTATTCACTATAACTTAA-3' (SEQ ID NO: 5203)
βc-3348 21 nt Target: 5'-AGAAATTGCTGTAGCAGTATT-3' (SEQ ID NO: 5204)
βc-3349 21 nt Target: 5'-TAGAAATTGCTGTAGCAGTAT-3' (SEQ ID NO: 5205)
βc-3350 21 nt Target: 5'-TTAGAAATTGCTGTAGCAGTA-3' (SEQ ID NO: 5206)
βc-3366 21 nt Target: 5'-ACTCAATTCTTAAAAATTAGA-3' (SEQ ID NO: 5207)
βc-3371 21 nt Target: 5'-CCATTACTCAATTCTTAAAAA-3' (SEQ ID NO: 5208)
βc-3374 21 nt Target: 5'-ACACCATTACTCAATTCTTAA-3' (SEQ ID NO: 5209)
βc-3376 21 nt Target: 5'-CTACACCATTACTCAATTCTT-3' (SEQ ID NO: 5210)
βc-3377 21 nt Target: 5'-TCTACACCATTACTCAATTCT-3' (SEQ ID NO: 5211)
βc-3379 21 nt Target: 5'-GTTCTACACCATTACTCAATT-3' (SEQ ID NO: 5212)
βc-3381 21 nt Target: 5'-GTGTTCTACACCATTACTCAA-3' (SEQ ID NO: 5213)
βc-3389 21 nt Target: 5'-ATGAATTAGTGTTCTACACCA-3' (SEQ ID NO: 5214)
βc-3394 21 nt Target: 5'-TGATTATGAATTAGTGTTCTA-3' (SEQ ID NO: 5215)

βc-3395 21 nt Target: 5'-GTGATTATGAATTAGTGTTCT-3' (SEQ ID NO: 5216)
βc-3396 21 nt Target: 5'-AGTGATTATGAATTAGTGTTC-3' (SEQ ID NO: 5217)
βc-3405 21 nt Target: 5'-ATTAATTAGAGTGATTATGAA-3' (SEQ ID NO: 5218)
βc-3406 21 nt Target: 5'-AATTAATTAGAGTGATTATGA-3' (SEQ ID NO: 5219)
βc-3407 21 nt Target: 5'-CAATTAATTAGAGTGATTATG-3' (SEQ ID NO: 5220)
βc-3411 21 nt Target: 5'-ATTACAATTAATTAGAGTGAT-3' (SEQ ID NO: 5221)
βc-3412 21 nt Target: 5'-GATTACAATTAATTAGAGTGA-3' (SEQ ID NO: 5222)
βc-3413 21 nt Target: 5'-AGATTACAATTAATTAGAGTG-3' (SEQ ID NO: 5223)
βc-3421 21 nt Target: 5'-CTTTATTCAGATTACAATTAA-3' (SEQ ID NO: 5224)
βc-3422 21 nt Target: 5'-ACTTTATTCAGATTACAATTA-3' (SEQ ID NO: 5225)
βc-3426 21 nt Target: 5'-TTACACTTTATTCAGATTACA-3' (SEQ ID NO: 5226)
βc-3427 21 nt Target: 5'-GTTACACTTTATTCAGATTAC-3' (SEQ ID NO: 5227)
βc-3428 21 nt Target: 5'-TGTTACACTTTATTCAGATTA-3' (SEQ ID NO: 5228)
βc-3429 21 nt Target: 5'-TTGTTACACTTTATTCAGATT-3' (SEQ ID NO: 5229)
βc-3430 21 nt Target: 5'-ATTGTTACACTTTATTCAGAT-3' (SEQ ID NO: 5230)
βc-3437 21 nt Target: 5'-CTACACAATTGTTACACTTTA-3' (SEQ ID NO: 5231)
βc-3441 21 nt Target: 5'-AAGGCTACACAATTGTTACAC-3' (SEQ ID NO: 5232)
βc-3446 21 nt Target: 5'-ACAAAAAGGCTACACAATTGT-3' (SEQ ID NO: 5233)
βc-3452 21 nt Target: 5'-TTTTATACAAAAAGGCTACAC-3' (SEQ ID NO: 5234)
βc-3453 21 nt Target: 5'-ATTTTATACAAAAAGGCTACA-3' (SEQ ID NO: 5235)
βc-3455 21 nt Target: 5'-CTATTTTATACAAAAAGGCTA-3' (SEQ ID NO: 5236)
βc-3456 21 nt Target: 5'-TCTATTTTATACAAAAAGGCT-3' (SEQ ID NO: 5237)
βc-3458 21 nt Target: 5'-TGTCTATTTTATACAAAAAGG-3' (SEQ ID NO: 5238)
βc-3464 21 nt Target: 5'-TCTATTTGTCTATTTTATACA-3' (SEQ ID NO: 5239)
βc-3466 21 nt Target: 5'-TTTCTATTTGTCTATTTTATA-3' (SEQ ID NO: 5240)
βc-3467 21 nt Target: 5'-TTTTCTATTTGTCTATTTTAT-3' (SEQ ID NO: 5241)
βc-3468 21 nt Target: 5'-ATTTTCTATTTGTCTATTTTA-3' (SEQ ID NO: 5242)
βc-3469 21 nt Target: 5'-CATTTTCTATTTGTCTATTTT-3' (SEQ ID NO: 5243)
βc-3470 21 nt Target: 5'-CCATTTTCTATTTGTCTATTT-3' (SEQ ID NO: 5244)
βc-3473 21 nt Target: 5'-GGACCATTTTCTATTTGTCTA-3' (SEQ ID NO: 5245)
βc-3474 21 nt Target: 5'-TGGACCATTTTCTATTTGTCT-3' (SEQ ID NO: 5246)
βc-3475 21 nt Target: 5'-TTGGACCATTTTCTATTTGTC-3' (SEQ ID NO: 5247)
βc-3482 21 nt Target: 5'-AAACTAATTGGACCATTTTCT-3' (SEQ ID NO: 5248)
βc-3483 21 nt Target: 5'-GAAACTAATTGGACCATTTTC-3' (SEQ ID NO: 5249)
βc-3484 21 nt Target: 5'-GGAAACTAATTGGACCATTTT-3' (SEQ ID NO: 5250)
βc-3485 21 nt Target: 5'-AGGAAACTAATTGGACCATTT-3' (SEQ ID NO: 5251)
βc-3491 21 nt Target: 5'-TTAAAAAGGAAACTAATTGGA-3' (SEQ ID NO: 5252)
βc-3492 21 nt Target: 5'-ATTAAAAAGGAAACTAATTGG-3' (SEQ ID NO: 5253)
βc-3498 21 nt Target: 5'-AAGCATATTAAAAAGGAAACT-3' (SEQ ID NO: 5254)
βc-3499 21 nt Target: 5'-TAAGCATATTAAAAAGGAAAC-3' (SEQ ID NO: 5255)
βc-3503 21 nt Target: 5'-ATTTTAAGCATATTAAAAAGG-3' (SEQ ID NO: 5256)
βc-3509 21 nt Target: 5'-CTGCTTATTTTAAGCATATTA-3' (SEQ ID NO: 5257)
βc-3510 21 nt Target: 5'-CCTGCTTATTTTAAGCATATT-3' (SEQ ID NO: 5258)
βc-3516 21 nt Target: 5'-GATCCACCTGCTTATTTTAAG-3' (SEQ ID NO: 5259)
βc-3531 21 nt Target: 5'-CAAAAACATGAAATAGATCCA-3' (SEQ ID NO: 5260)
βc-3532 21 nt Target: 5'-TCAAAAACATGAAATAGATCC-3' (SEQ ID NO: 5261)
βc-3534 21 nt Target: 5'-GATCAAAAACATGAAATAGAT-3' (SEQ ID NO: 5262)
βc-3535 21 nt Target: 5'-TGATCAAAAACATGAAATAGA-3' (SEQ ID NO: 5263)
βc-3536 21 nt Target: 5'-TTGATCAAAAACATGAAATAG-3' (SEQ ID NO: 5264)
βc-3541 21 nt Target: 5'-AGTTTTTGATCAAAAACATGA-3' (SEQ ID NO: 5265)
βc-3547 21 nt Target: 5'-CCAAATAGTTTTTGATCAAAA-3' (SEQ ID NO: 5266)
βc-3551 21 nt Target: 5'-TATCCCAAATAGTTTTTGATC-3' (SEQ ID NO: 5267)
βc-3552 21 nt Target: 5'-ATATCCCAAATAGTTTTTGAT-3' (SEQ ID NO: 5268)

βc-3553 21 nt Target: 5'-CATATCCCAAATAGTTTTTGA-3' (SEQ ID NO: 5269)
βc-3554 21 nt Target: 5'-ACATATCCCAAATAGTTTTTG-3' (SEQ ID NO: 5270)
βc-3558 21 nt Target: 5'-CCATACATATCCCAAATAGTT-3' (SEQ ID NO: 5271)
βc-3567 21 nt Target: 5'-TTACCCTACCCATACATATCC-3' (SEQ ID NO: 5272)
βc-3568 21 nt Target: 5'-TTTACCCTACCCATACATATC-3' (SEQ ID NO: 5273)
βc-3569 21 nt Target: 5'-ATTTACCCTACCCATACATAT-3' (SEQ ID NO: 5274)
βc-3582 21 nt Target: 5'-ACACCTCTTACTGATTTACCC-3' (SEQ ID NO: 5275)
βc-3584 21 nt Target: 5'-TAACACCTCTTACTGATTTAC-3' (SEQ ID NO: 5276)
βc-3585 21 nt Target: 5'-ATAACACCTCTTACTGATTTA-3' (SEQ ID NO: 5277)
βc-3586 21 nt Target: 5'-AATAACACCTCTTACTGATTT-3' (SEQ ID NO: 5278)
βc-3587 21 nt Target: 5'-AAATAACACCTCTTACTGATT-3' (SEQ ID NO: 5279)
βc-3588 21 nt Target: 5'-CAAATAACACCTCTTACTGAT-3' (SEQ ID NO: 5280)
βc-3594 21 nt Target: 5'-AGGTTCCAAATAACACCTCTT-3' (SEQ ID NO: 5281)
βc-3600 21 nt Target: 5'-AAAACAAGGTTCCAAATAACA-3' (SEQ ID NO: 5282)
βc-3601 21 nt Target: 5'-CAAAACAAGGTTCCAAATAAC-3' (SEQ ID NO: 5283)
βc-3602 21 nt Target: 5'-CCAAAACAAGGTTCCAAATAA-3' (SEQ ID NO: 5284)
βc-3607 21 nt Target: 5'-ACTGTCCAAAACAAGGTTCCA-3' (SEQ ID NO: 5285)
βc-3611 21 nt Target: 5'-GTAAACTGTCCAAAACAAGGT-3' (SEQ ID NO: 5286)
βc-3612 21 nt Target: 5'-GGTAAACTGTCCAAAACAAGG-3' (SEQ ID NO: 5287)
βc-3620 21 nt Target: 5'-AGGCAACTGGTAAACTGTCCA-3' (SEQ ID NO: 5288)
βc-3628 21 nt Target: 5'-GGGATAAAAGGCAACTGGTAA-3' (SEQ ID NO: 5289)
βc-3629 21 nt Target: 5'-TGGGATAAAAGGCAACTGGTA-3' (SEQ ID NO: 5290)
βc-3636 21 nt Target: 5'-ACAACTTTGGGATAAAAGGCA-3' (SEQ ID NO: 5291)
βc-3638 21 nt Target: 5'-CAACAACTTTGGGATAAAAGG-3' (SEQ ID NO: 5292)
βc-3643 21 nt Target: 5'-GGTTACAACAACTTTGGGATA-3' (SEQ ID NO: 5293)
βc-3644 21 nt Target: 5'-AGGTTACAACAACTTTGGGAT-3' (SEQ ID NO: 5294)
βc-3645 21 nt Target: 5'-CAGGTTACAACAACTTTGGGA-3' (SEQ ID NO: 5295)
βc-3653 21 nt Target: 5'-TATCACAGCAGGTTACAACAA-3' (SEQ ID NO: 5296)
βc-3654 21 nt Target: 5'-GTATCACAGCAGGTTACAACA-3' (SEQ ID NO: 5297)
βc-3656 21 nt Target: 5'-TCGTATCACAGCAGGTTACAA-3' (SEQ ID NO: 5298)
βc-3670 21 nt Target: 5'-TTTCTCTTGAAGCATCGTATC-3' (SEQ ID NO: 5299)
βc-3671 21 nt Target: 5'-TTTTCTCTTGAAGCATCGTAT-3' (SEQ ID NO: 5300)
βc-3673 21 nt Target: 5'-CATTTTCTCTTGAAGCATCGT-3' (SEQ ID NO: 5301)
βc-3686 21 nt Target: 5'-TTTTTTATAACCGCATTTTCT-3' (SEQ ID NO: 5302)
βc-3687 21 nt Target: 5'-ATTTTTTATAACCGCATTTTC-3' (SEQ ID NO: 5303)
βc-3688 21 nt Target: 5'-CATTTTTTATAACCGCATTTT-3' (SEQ ID NO: 5304)
βc-3689 21 nt Target: 5'-CCATTTTTTATAACCGCATTT-3' (SEQ ID NO: 5305)
βc-3694 21 nt Target: 5'-CTGAACCATTTTTTATAACCG-3' (SEQ ID NO: 5306)
βc-3699 21 nt Target: 5'-TAATTCTGAACCATTTTTTAT-3' (SEQ ID NO: 5307)
βc-3700 21 nt Target: 5'-TTAATTCTGAACCATTTTTTA-3' (SEQ ID NO: 5308)
βc-3701 21 nt Target: 5'-TTTAATTCTGAACCATTTTTT-3' (SEQ ID NO: 5309)
βc-3702 21 nt Target: 5'-GTTTAATTCTGAACCATTTTT-3' (SEQ ID NO: 5310)
βc-3703 21 nt Target: 5'-AGTTTAATTCTGAACCATTTT-3' (SEQ ID NO: 5311)
βc-3704 21 nt Target: 5'-AAGTTTAATTCTGAACCATTT-3' (SEQ ID NO: 5312)
βc-3709 21 nt Target: 5'-ATTAAAAGTTTAATTCTGAAC-3' (SEQ ID NO: 5313)
βc-3710 21 nt Target: 5'-AATTAAAAGTTTAATTCTGAA-3' (SEQ ID NO: 5314)
βc-3712 21 nt Target: 5'-TGAATTAAAAGTTTAATTCTG-3' (SEQ ID NO: 5315)
βc-2634t2 21 nt Target: 5'-CAATACAGCTAAAGGATGATT-3' (SEQ ID NO: 5316)
βc-2635t2 21 nt Target: 5'-ACAATACAGCTAAAGGATGAT-3' (SEQ ID NO: 5317)
βc-2637t2 21 nt Target: 5'-AGACAATACAGCTAAAGGATG-3' (SEQ ID NO: 5318)
βc-2633t3 21 nt Target: 5'-GTTACTCCTAAAGGATGATTT-3' (SEQ ID NO: 5319)
βc-2634t3 21 nt Target: 5'-TGTTACTCCTAAAGGATGATT-3' (SEQ ID NO: 5320)
βc-2635t3 21 nt Target: 5'-TTGTTACTCCTAAAGGATGAT-3' (SEQ ID NO: 5321)

βc-2636t3 21 nt Target: 5'-ATTGTTACTCCTAAAGGATGA-3' (SEQ ID NO: 5322)
βc-m318 21 nt Target: 5'-GGATTCCAGAATCCAAGTAAG-3' (SEQ ID NO: 5323)
βc-m417 21 nt Target: 5'-CTTGCTCCCATTCATAAAGGA-3' (SEQ ID NO: 5324)
βc-m462 21 nt Target: 5'-CGTCAATATCAGCTACTTGCT-3' (SEQ ID NO: 5325)
βc-m463 21 nt Target: 5'-CCGTCAATATCAGCTACTTGC-3' (SEQ ID NO: 5326)
βc-m468 21 nt Target: 5'-ACTGCCCGTCAATATCAGCTA-3' (SEQ ID NO: 5327)
βc-m613 21 nt Target: 5'-TGTTTCAACATCTGTGATGGT-3' (SEQ ID NO: 5328)
βc-m614 21 nt Target: 5'-ATGTTTCAACATCTGTGATGG-3' (SEQ ID NO: 5329)
βc-m624 21 nt Target: 5'-TGACAACTGCATGTTTCAACA-3' (SEQ ID NO: 5330)
βc-m626 21 nt Target: 5'-ATTGACAACTGCATGTTTCAA-3' (SEQ ID NO: 5331)
βc-m630 21 nt Target: 5'-TCAAATTGACAACTGCATGTT-3' (SEQ ID NO: 5332)
βc-m636 21 nt Target: 5'-AGTTAATCAAATTGACAACTG-3' (SEQ ID NO: 5333)
βc-m642 21 nt Target: 5'-CCTGATAGTTAATCAAATTGA-3' (SEQ ID NO: 5334)
βc-m648 21 nt Target: 5'-CGTCATCCTGATAGTTAATCA-3' (SEQ ID NO: 5335)
βc-m649 21 nt Target: 5'-GCGTCATCCTGATAGTTAATC-3' (SEQ ID NO: 5336)
βc-m702 21 nt Target: 5'-CCTCATCGTTTAGCAGTTTTG-3' (SEQ ID NO: 5337)
βc-m707 21 nt Target: 5'-CTGGTCCTCATCGTTTAGCAG-3' (SEQ ID NO: 5338)
βc-m734 21 nt Target: 5'-CATAACAGCAGCTTTATTAAC-3' (SEQ ID NO: 5339)
βc-m735 21 nt Target: 5'-CCATAACAGCAGCTTTATTAA-3' (SEQ ID NO: 5340)
βc-m738 21 nt Target: 5'-GGACCATAACAGCAGCTTTAT-3' (SEQ ID NO: 5341)
βc-m739 21 nt Target: 5'-TGGACCATAACAGCAGCTTTA-3' (SEQ ID NO: 5342)
βc-m843 21 nt Target: 5'-CTGTCTCTACATCATTTGTAT-3' (SEQ ID NO: 5343)
βc-m844 21 nt Target: 5'-GCTGTCTCTACATCATTTGTA-3' (SEQ ID NO: 5344)
βc-m1063 21 nt Target: 5'-GCAACCATTTTCTGCAGTCCA-3' (SEQ ID NO: 5345)
βc-m1065 21 nt Target: 5'-AAGCAACCATTTTCTGCAGTC-3' (SEQ ID NO: 5346)
βc-m1080 21 nt Target: 5'-TTGTTTTGTTGAGCAAAGCAA-3' (SEQ ID NO: 5347)
βc-m1081 21 nt Target: 5'-TTTGTTTTGTTGAGCAAAGCA-3' (SEQ ID NO: 5348)
βc-m1098 21 nt Target: 5'-TAGCCAAGAATTTCACGTTTG-3' (SEQ ID NO: 5349)
βc-m1140 21 nt Target: 5'-CTTGATTGCCATAAGCTAAGA-3' (SEQ ID NO: 5350)
βc-m1145 21 nt Target: 5'-GCTCTCTTGATTGCCATAAGC-3' (SEQ ID NO: 5351)
βc-m1217 21 nt Target: 5'-CTTCTCATAAGTGTAGGTCCT-3' (SEQ ID NO: 5352)
βc-m1218 21 nt Target: 5'-GCTTCTCATAAGTGTAGGTCC-3' (SEQ ID NO: 5353)
βc-m1220 21 nt Target: 5'-AAGCTTCTCATAAGTGTAGGT-3' (SEQ ID NO: 5354)
βc-m1221 21 nt Target: 5'-GAAGCTTCTCATAAGTGTAGG-3' (SEQ ID NO: 5355)
βc-m1365 21 nt Target: 5'-GAGTCCAAAGACAGTTTTGAA-3' (SEQ ID NO: 5356)
βc-m1366 21 nt Target: 5'-AGAGTCCAAAGACAGTTTTGA-3' (SEQ ID NO: 5357)
βc-m1461 21 nt Target: 5'-CCACATTTATATCATCGGAAC-3' (SEQ ID NO: 5358)
βc-m1464 21 nt Target: 5'-TGACCACATTTATATCATCGG-3' (SEQ ID NO: 5359)
βc-m1473 21 nt Target: 5'-CTGCACAGGTGACCACATTTA-3' (SEQ ID NO: 5360)
βc-m1474 21 nt Target: 5'-GCTGCACAGGTGACCACATTT-3' (SEQ ID NO: 5361)
βc-m1510 21 nt Target: 5'-TTGTAATTATTGCAAGTGAGG-3' (SEQ ID NO: 5362)
βc-m1523 21 nt Target: 5'-CATCATCTTGTTTTTGTAATT-3' (SEQ ID NO: 5363)
βc-m1524 21 nt Target: 5'-CCATCATCTTGTTTTTGTAAT-3' (SEQ ID NO: 5364)
βc-m1527 21 nt Target: 5'-ACACCATCATCTTGTTTTTGT-3' (SEQ ID NO: 5365)
βc-m1532 21 nt Target: 5'-TTGGCACACCATCATCTTGTT-3' (SEQ ID NO: 5366)
βc-m1752 21 nt Target: 5'-TCAATCCAACAGTTGCCTTTA-3' (SEQ ID NO: 5367)
βc-m1757 21 nt Target: 5'-TCGAATCAATCCAACAGTTGC-3' (SEQ ID NO: 5368)
βc-m1827 21 nt Target: 5'-GCTGAACTAGTCGTGGAATAG-3' (SEQ ID NO: 5369)
βc-m1934 21 nt Target: 5'-AGTACACCCTTCTACTATCTC-3' (SEQ ID NO: 5370)
βc-m1935 21 nt Target: 5'-CAGTACACCCTTCTACTATCT-3' (SEQ ID NO: 5371)
βc-m1936 21 nt Target: 5'-CCAGTACACCCTTCTACTATC-3' (SEQ ID NO: 5372)
βc-m1941 21 nt Target: 5'-GAGCTCCAGTACACCCTTCTA-3' (SEQ ID NO: 5373)
βc-m2009 21 nt Target: 5'-AAACAATGGAATGGTATTGAG-3' (SEQ ID NO: 5374)

βc-m2015 21 nt Target: 5'-CTGCACAAACAATGGAATGGT-3' (SEQ ID NO: 5375)
βc-m2016 21 nt Target: 5'-ACTGCACAAACAATGGAATGG-3' (SEQ ID NO: 5376)
βc-m2021 21 nt Target: 5'-AAGCAACTGCACAAACAATGG-3' (SEQ ID NO: 5377)
βc-m2028 21 nt Target: 5'-GAGAATAAAGCAACTGCACAA-3' (SEQ ID NO: 5378)
βc-m2037 21 nt Target: 5'-TTTCAATGGGAGAATAAAGCA-3' (SEQ ID NO: 5379)
βc-m2038 21 nt Target: 5'-TTTTCAATGGGAGAATAAAGC-3' (SEQ ID NO: 5380)
βc-m2039 21 nt Target: 5'-ATTTTCAATGGGAGAATAAAG-3' (SEQ ID NO: 5381)
βc-m2043 21 nt Target: 5'-GGATATTTTCAATGGGAGAAT-3' (SEQ ID NO: 5382)
βc-m2044 21 nt Target: 5'-TGGATATTTTCAATGGGAGAA-3' (SEQ ID NO: 5383)
βc-m2045 21 nt Target: 5'-TTGGATATTTTCAATGGGAGA-3' (SEQ ID NO: 5384)
βc-m2055 21 nt Target: 5'-CAGCTACTCTTTGGATATTTT-3' (SEQ ID NO: 5385)
βc-m2056 21 nt Target: 5'-GCAGCTACTCTTTGGATATTT-3' (SEQ ID NO: 5386)
βc-m2231 21 nt Target: 5'-CCGCTTCTTGTAATCCTGTGG-3' (SEQ ID NO: 5387)
βc-m2307 21 nt Target: 5'-CCAGTCCAAGATCTGCAGTCT-3' (SEQ ID NO: 5388)
βc-m2385 21 nt Target: 5'-CGTATCCACCAGAGTGAAAAG-3' (SEQ ID NO: 5389)
βc-m2539 21 nt Target: 5'-CAGGCCAGCTGATTGCTATCA-3' (SEQ ID NO: 5390)
βc-m2562 21 nt Target: 5'-CGATTTACAGGTCAGTATCAA-3' (SEQ ID NO: 5391)
βc-m2563 21 nt Target: 5'-ACGATTTACAGGTCAGTATCA-3' (SEQ ID NO: 5392)
βc-m2578 21 nt Target: 5'-TTTCTTACCTAAAGGACGATT-3' (SEQ ID NO: 5393)
βc-m2580 21 nt Target: 5'-GCTTTCTTACCTAAAGGACGA-3' (SEQ ID NO: 5394)
βc-m2589 21 nt Target: 5'-CTTTTATAAGCTTTCTTACCT-3' (SEQ ID NO: 5395)
βc-m2590 21 nt Target: 5'-GCTTTTATAAGCTTTCTTACC-3' (SEQ ID NO: 5396)
βc-m2593 21 nt Target: 5'-CTGGCTTTTATAAGCTTTCTT-3' (SEQ ID NO: 5397)
βc-m2598 21 nt Target: 5'-CCACACTGGCTTTTATAAGCT-3' (SEQ ID NO: 5398)
βc-m2604 21 nt Target: 5'-ATTCACCCACACTGGCTTTTA-3' (SEQ ID NO: 5399)
βc-m2644 21 nt Target: 5'-CCTACCAAGTCTTTCTGGAGT-3' (SEQ ID NO: 5400)
βc-m2674 21 nt Target: 5'-ATTTACAAACAGGCCTAAAAC-3' (SEQ ID NO: 5401)
βc-m2675 21 nt Target: 5'-GATTTACAAACAGGCCTAAAA-3' (SEQ ID NO: 5402)
βc-m2676 21 nt Target: 5'-AGATTTACAAACAGGCCTAAA-3' (SEQ ID NO: 5403)
βc-m2710 21 nt Target: 5'-CATCTCCTTCCAAGGTATGTA-3' (SEQ ID NO: 5404)
βc-m2711 21 nt Target: 5'-ACATCTCCTTCCAAGGTATGT-3' (SEQ ID NO: 5405)
βc-m2725 21 nt Target: 5'-ACTTCCACACATGAACATCTC-3' (SEQ ID NO: 5406)
βc-m2728 21 nt Target: 5'-GAAACTTCCACACATGAACAT-3' (SEQ ID NO: 5407)
βc-m2729 21 nt Target: 5'-AGAAACTTCCACACATGAACA-3' (SEQ ID NO: 5408)
βc-m2730 21 nt Target: 5'-GAGAAACTTCCACACATGAAC-3' (SEQ ID NO: 5409)
βc-m2731 21 nt Target: 5'-TGAGAAACTTCCACACATGAA-3' (SEQ ID NO: 5410)
βc-m2739 21 nt Target: 5'-CATCAACGTGAGAAACTTCCA-3' (SEQ ID NO: 5411)
βc-m2742 21 nt Target: 5'-AAACATCAACGTGAGAAACTT-3' (SEQ ID NO: 5412)
βc-m2743 21 nt Target: 5'-AAAACATCAACGTGAGAAACT-3' (SEQ ID NO: 5413)
βc-m2744 21 nt Target: 5'-AAAAACATCAACGTGAGAAAC-3' (SEQ ID NO: 5414)
βc-m2745 21 nt Target: 5'-CAAAAACATCAACGTGAGAAA-3' (SEQ ID NO: 5415)
βc-m2746 21 nt Target: 5'-GCAAAAACATCAACGTGAGAA-3' (SEQ ID NO: 5416)
βc-m2748 21 nt Target: 5'-TGGCAAAAACATCAACGTGAG-3' (SEQ ID NO: 5417)
βc-m2760 21 nt Target: 5'-CTGCAAAAGCTGTGGCAAAAA-3' (SEQ ID NO: 5418)
βc-m2761 21 nt Target: 5'-GCTGCAAAAGCTGTGGCAAAA-3' (SEQ ID NO: 5419)
βc-m2778 21 nt Target: 5'-ACTCATCTGAGTATAACGCTG-3' (SEQ ID NO: 5420)
βc-m2795 21 nt Target: 5'-TGAAAACAGCAAATGTTACTC-3' (SEQ ID NO: 5421)
βc-m2796 21 nt Target: 5'-TTGAAAACAGCAAATGTTACT-3' (SEQ ID NO: 5422)
βc-m2797 21 nt Target: 5'-GTTGAAAACAGCAAATGTTAC-3' (SEQ ID NO: 5423)
βc-m2805 21 nt Target: 5'-CTATTAATGTTGAAAACAGCA-3' (SEQ ID NO: 5424)
βc-m2834 21 nt Target: 5'-ACACTACAGCTGTATAGAGAG-3' (SEQ ID NO: 5425)
βc-m2859 21 nt Target: 5'-CAGGCCAATCACAATGCACGT-3' (SEQ ID NO: 5426)
βc-m2946 21 nt Target: 5'-CTGTTCCCATAGGAAACTCAG-3' (SEQ ID NO: 5427)

βc-m2968 21 nt Target: 5'-CAGAACAAAAAGCGTACTTCG-3' (SEQ ID NO: 5428)
βc-m2974 21 nt Target: 5'-AAGGACCAGAACAAAAAGCGT-3' (SEQ ID NO: 5429)
βc-m2982 21 nt Target: 5'-CGACCAAAAAGGACCAGAACA-3' (SEQ ID NO: 5430)
βc-m2983 21 nt Target: 5'-TCGACCAAAAAGGACCAGAAC-3' (SEQ ID NO: 5431)
βc-m2990 21 nt Target: 5'-TTACTCCTCGACCAAAAAGGA-3' (SEQ ID NO: 5432)
βc-m3005 21 nt Target: 5'-AATCCATTTGTATTGTTACTC-3' (SEQ ID NO: 5433)
βc-m3006 21 nt Target: 5'-AAATCCATTTGTATTGTTACT-3' (SEQ ID NO: 5434)
βc-m3007 21 nt Target: 5'-CAAATCCATTTGTATTGTTAC-3' (SEQ ID NO: 5435)
βc-m3008 21 nt Target: 5'-CCAAATCCATTTGTATTGTTA-3' (SEQ ID NO: 5436)
βc-m3015 21 nt Target: 5'-TCACTCCCCAAATCCATTTGT-3' (SEQ ID NO: 5437)
βc-m3047 21 nt Target: 5'-GATCCATTCGTGTGCATTCTT-3' (SEQ ID NO: 5438)
βc-m3048 21 nt Target: 5'-TGATCCATTCGTGTGCATTCT-3' (SEQ ID NO: 5439)
βc-m3049 21 nt Target: 5'-GTGATCCATTCGTGTGCATTC-3' (SEQ ID NO: 5440)
βc-m3093 21 nt Target: 5'-TAAAACAAAGAACAAGCAAGG-3' (SEQ ID NO: 5441)
βc-m3109 21 nt Target: 5'-GCACCACTACAGATATTAAAA-3' (SEQ ID NO: 5442)
βc-m3111 21 nt Target: 5'-CAGCACCACTACAGATATTAA-3' (SEQ ID NO: 5443)
βc-m3112 21 nt Target: 5'-TCAGCACCACTACAGATATTA-3' (SEQ ID NO: 5444)
βc-m3133 21 nt Target: 5'-AAAAAATAAAAGCAAGCAAAG-3' (SEQ ID NO: 5445)
βc-m3137 21 nt Target: 5'-CTGCAAAAAATAAAAGCAAGC-3' (SEQ ID NO: 5446)
βc-m3142 21 nt Target: 5'-AGTTACTGCAAAAAATAAAAG-3' (SEQ ID NO: 5447)
βc-m3148 21 nt Target: 5'-ACTAACAGTTACTGCAAAAAA-3' (SEQ ID NO: 5448)
βc-m3150 21 nt Target: 5'-AAACTAACAGTTACTGCAAAA-3' (SEQ ID NO: 5449)
βc-m3152 21 nt Target: 5'-AAAAACTAACAGTTACTGCAA-3' (SEQ ID NO: 5450)
βc-m3153 21 nt Target: 5'-TAAAAACTAACAGTTACTGCA-3' (SEQ ID NO: 5451)
βc-m3155 21 nt Target: 5'-CTTAAAAACTAACAGTTACTG-3' (SEQ ID NO: 5452)
βc-m3159 21 nt Target: 5'-ACTACTTAAAAACTAACAGTT-3' (SEQ ID NO: 5453)
βc-m3161 21 nt Target: 5'-ACACTACTTAAAAACTAACAG-3' (SEQ ID NO: 5454)
βc-m3165 21 nt Target: 5'-CATAACACTACTTAAAAACTA-3' (SEQ ID NO: 5455)
βc-m3166 21 nt Target: 5'-ACATAACACTACTTAAAAACT-3' (SEQ ID NO: 5456)
βc-m3168 21 nt Target: 5'-GAACATAACACTACTTAAAAA-3' (SEQ ID NO: 5457)
βc-m3169 21 nt Target: 5'-AGAACATAACACTACTTAAAA-3' (SEQ ID NO: 5458)
βc-m3170 21 nt Target: 5'-TAGAACATAACACTACTTAAA-3' (SEQ ID NO: 5459)
βc-m3171 21 nt Target: 5'-CTAGAACATAACACTACTTAA-3' (SEQ ID NO: 5460)
βc-m3176 21 nt Target: 5'-GTTCACTAGAACATAACACTA-3' (SEQ ID NO: 5461)
βc-m3178 21 nt Target: 5'-AGGTTCACTAGAACATAACAC-3' (SEQ ID NO: 5462)
βc-m3179 21 nt Target: 5'-CAGGTTCACTAGAACATAACA-3' (SEQ ID NO: 5463)
βc-m3216 21 nt Target: 5'-CCATTACTCGGTTCTTAGAAA-3' (SEQ ID NO: 5464)
βc-m3219 21 nt Target: 5'-ACACCATTACTCGGTTCTTAG-3' (SEQ ID NO: 5465)
βc-m3224 21 nt Target: 5'-GTTCTACACCATTACTCGGTT-3' (SEQ ID NO: 5466)
βc-m3234 21 nt Target: 5'-ATGAATTAGTGTTCTACACCA-3' (SEQ ID NO: 5467)
βc-m3239 21 nt Target: 5'-TGATTATGAATTAGTGTTCTA-3' (SEQ ID NO: 5468)
βc-m3240 21 nt Target: 5'-GTGATTATGAATTAGTGTTCT-3' (SEQ ID NO: 5469)
βc-m3241 21 nt Target: 5'-CGTGATTATGAATTAGTGTTC-3' (SEQ ID NO: 5470)
βc-m3251 21 nt Target: 5'-TTACAATTAGCGTGATTATGA-3' (SEQ ID NO: 5471)
βc-m3252 21 nt Target: 5'-ATTACAATTAGCGTGATTATG-3' (SEQ ID NO: 5472)
βc-m3256 21 nt Target: 5'-CCAGATTACAATTAGCGTGAT-3' (SEQ ID NO: 5473)
βc-m3267 21 nt Target: 5'-GTTACACGTCTCCAGATTACA-3' (SEQ ID NO: 5474)
βc-m3269 21 nt Target: 5'-ATGTTACACGTCTCCAGATTA-3' (SEQ ID NO: 5475)
βc-m3277 21 nt Target: 5'-GCTACACAATGTTACACGTCT-3' (SEQ ID NO: 5476)
βc-m3279 21 nt Target: 5'-AGGCTACACAATGTTACACGT-3' (SEQ ID NO: 5477)
βc-m3286 21 nt Target: 5'-ATACAAAAGGCTACACAATGT-3' (SEQ ID NO: 5478)
βc-m3287 21 nt Target: 5'-TATACAAAAGGCTACACAATG-3' (SEQ ID NO: 5479)
βc-m3291 21 nt Target: 5'-TATTTATACAAAAGGCTACAC-3' (SEQ ID NO: 5480)

βc-m3292 21 nt Target: 5'-CTATTTATACAAAAGGCTACA-3' (SEQ ID NO: 5481)
βc-m3295 21 nt Target: 5'-TGTCTATTTATACAAAAGGCT-3' (SEQ ID NO: 5482)
βc-m3296 21 nt Target: 5'-CTGTCTATTTATACAAAAGGC-3' (SEQ ID NO: 5483)
βc-m3297 21 nt Target: 5'-TCTGTCTATTTATACAAAAGG-3' (SEQ ID NO: 5484)
βc-m3303 21 nt Target: 5'-TTTCTATCTGTCTATTTATAC-3' (SEQ ID NO: 5485)
βc-m3304 21 nt Target: 5'-ATTTCTATCTGTCTATTTATA-3' (SEQ ID NO: 5486)
βc-m3305 21 nt Target: 5'-CATTTCTATCTGTCTATTTAT-3' (SEQ ID NO: 5487)
βc-m3306 21 nt Target: 5'-CCATTTCTATCTGTCTATTTA-3' (SEQ ID NO: 5488)
βc-m3310 21 nt Target: 5'-CGGACCATTTCTATCTGTCTA-3' (SEQ ID NO: 5489)
βc-m3311 21 nt Target: 5'-TCGGACCATTTCTATCTGTCT-3' (SEQ ID NO: 5490)
βc-m3318 21 nt Target: 5'-AAACTAATCGGACCATTTCTA-3' (SEQ ID NO: 5491)
βc-m3319 21 nt Target: 5'-GAAACTAATCGGACCATTTCT-3' (SEQ ID NO: 5492)
βc-m3320 21 nt Target: 5'-GGAAACTAATCGGACCATTTC-3' (SEQ ID NO: 5493)
βc-m3321 21 nt Target: 5'-AGGAAACTAATCGGACCATTT-3' (SEQ ID NO: 5494)
βc-m3328 21 nt Target: 5'-ATTAAAAAGGAAACTAATCGG-3' (SEQ ID NO: 5495)
βc-m3334 21 nt Target: 5'-AAGCATATTAAAAAGGAAACT-3' (SEQ ID NO: 5496)
βc-m3335 21 nt Target: 5'-TAAGCATATTAAAAAGGAAAC-3' (SEQ ID NO: 5497)
βc-m3339 21 nt Target: 5'-ATTTTAAGCATATTAAAAAGG-3' (SEQ ID NO: 5498)
βc-m3345 21 nt Target: 5'-CTGCTTATTTTAAGCATATTA-3' (SEQ ID NO: 5499)
βc-m3346 21 nt Target: 5'-CCTGCTTATTTTAAGCATATT-3' (SEQ ID NO: 5500)
βc-m3352 21 nt Target: 5'-GATCCACCTGCTTATTTTAAG-3' (SEQ ID NO: 5501)
βc-m3367 21 nt Target: 5'-CAAAAACATGAAATAGATCCA-3' (SEQ ID NO: 5502)
βc-m3368 21 nt Target: 5'-TCAAAAACATGAAATAGATCC-3' (SEQ ID NO: 5503)
βc-m3370 21 nt Target: 5'-GTTCAAAAACATGAAATAGAT-3' (SEQ ID NO: 5504)
βc-m3371 21 nt Target: 5'-TGTTCAAAAACATGAAATAGA-3' (SEQ ID NO: 5505)
βc-m3372 21 nt Target: 5'-TTGTTCAAAAACATGAAATAG-3' (SEQ ID NO: 5506)
βc-m3377 21 nt Target: 5'-AGTTTTTGTTCAAAAACATGA-3' (SEQ ID NO: 5507)
βc-m3383 21 nt Target: 5'-CGATAAAGTTTTTGTTCAAAA-3' (SEQ ID NO: 5508)
βc-m3389 21 nt Target: 5'-TATCCCCGATAAAGTTTTTGT-3' (SEQ ID NO: 5509)
βc-m3390 21 nt Target: 5'-GTATCCCCGATAAAGTTTTTG-3' (SEQ ID NO: 5510)
βc-m3419 21 nt Target: 5'-ACACCTCTTACTGATTTACCC-3' (SEQ ID NO: 5511)
βc-m3421 21 nt Target: 5'-TAACACCTCTTACTGATTTAC-3' (SEQ ID NO: 5512)
βc-m3422 21 nt Target: 5'-ATAACACCTCTTACTGATTTA-3' (SEQ ID NO: 5513)
βc-m3423 21 nt Target: 5'-AATAACACCTCTTACTGATTT-3' (SEQ ID NO: 5514)
βc-m3424 21 nt Target: 5'-AAATAACACCTCTTACTGATT-3' (SEQ ID NO: 5515)
βc-m3425 21 nt Target: 5'-CAAATAACACCTCTTACTGAT-3' (SEQ ID NO: 5516)
βc-m3431 21 nt Target: 5'-AAGGCTCAAATAACACCTCTT-3' (SEQ ID NO: 5517)
βc-m3436 21 nt Target: 5'-AAAACAAGGCTCAAATAACAC-3' (SEQ ID NO: 5518)
βc-m3437 21 nt Target: 5'-CAAAACAAGGCTCAAATAACA-3' (SEQ ID NO: 5519)
βc-m3438 21 nt Target: 5'-CCAAAACAAGGCTCAAATAAC-3' (SEQ ID NO: 5520)
βc-m3441 21 nt Target: 5'-TGTCCAAAACAAGGCTCAAAT-3' (SEQ ID NO: 5521)
βc-m3443 21 nt Target: 5'-ACTGTCCAAAACAAGGCTCAA-3' (SEQ ID NO: 5522)
βc-m3448 21 nt Target: 5'-GGTATACTGTCCAAAACAAGG-3' (SEQ ID NO: 5523)
βc-m3456 21 nt Target: 5'-AGGCAACTGGTATACTGTCCA-3' (SEQ ID NO: 5524)
βc-m3464 21 nt Target: 5'-GGGATAAAAGGCAACTGGTAT-3' (SEQ ID NO: 5525)
βc-m3465 21 nt Target: 5'-TGGGATAAAAGGCAACTGGTA-3' (SEQ ID NO: 5526)
βc-m3472 21 nt Target: 5'-ACAACTTTGGGATAAAAGGCA-3' (SEQ ID NO: 5527)
βc-m3474 21 nt Target: 5'-CAACAACTTTGGGATAAAAGG-3' (SEQ ID NO: 5528)
βc-m3479 21 nt Target: 5'-GGTTACAACAACTTTGGGATA-3' (SEQ ID NO: 5529)
βc-m3480 21 nt Target: 5'-AGGTTACAACAACTTTGGGAT-3' (SEQ ID NO: 5530)
βc-m3481 21 nt Target: 5'-CAGGTTACAACAACTTTGGGA-3' (SEQ ID NO: 5531)
βc-m3489 21 nt Target: 5'-TATCACAGCAGGTTACAACAA-3' (SEQ ID NO: 5532)
βc-m3490 21 nt Target: 5'-GTATCACAGCAGGTTACAACA-3' (SEQ ID NO: 5533)

βc-m3492 21 nt Target: 5'-TTGTATCACAGCAGGTTACAA-3' (SEQ ID NO: 5534)
βc-m3509 21 nt Target: 5'-CCGCATCTGTTGAAGCATTGT-3' (SEQ ID NO: 5535)
βc-m3527 21 nt Target: 5'-TCTGAACCATTTCTATAACCG-3' (SEQ ID NO: 5536)
βc-m3531 21 nt Target: 5'-TAATTCTGAACCATTTCTATA-3' (SEQ ID NO: 5537)
βc-m3533 21 nt Target: 5'-TTTAATTCTGAACCATTTCTA-3' (SEQ ID NO: 5538)
βc-m3534 21 nt Target: 5'-GTTTAATTCTGAACCATTTCT-3' (SEQ ID NO: 5539)
βc-m3535 21 nt Target: 5'-AGTTTAATTCTGAACCATTTC-3' (SEQ ID NO: 5540)
βc-m3536 21 nt Target: 5'-AAGTTTAATTCTGAACCATTT-3' (SEQ ID NO: 5541)
βc-m3541 21 nt Target: 5'-ATTAAAAGTTTAATTCTGAAC-3' (SEQ ID NO: 5542)
βc-m3542 21 nt Target: 5'-AATTAAAAGTTTAATTCTGAA-3' (SEQ ID NO: 5543)
βc-m3544 21 nt Target: 5'-TGAATTAAAAGTTTAATTCTG-3' (SEQ ID NO: 5544)
βc-m3550 21 nt Target: 5'-TTTGAATGAATTAAAAGTTTA-3' (SEQ ID NO: 5545)
βc-m3554 21 nt Target: 5'-TTTTTTTGAATGAATTAAAAG-3' (SEQ ID NO: 5546)
βc-m3558 21 nt Target: 5'-TTTTTTTTTTTGAATGAATTA-3' (SEQ ID NO: 5547)
βc-m3559 21 nt Target: 5'-TTTTTTTTTTTTGAATGAATT-3' (SEQ ID NO: 5548)
βc-m3560 21 nt Target: 5'-TTTTTTTTTTTTTGAATGAAT-3' (SEQ ID NO: 5549)
βc-m3561 21 nt Target: 5'-TTTTTTTTTTTTTTGAATGAA-3' (SEQ ID NO: 5550)
βc-m3562 21 nt Target: 5'-TTTTTTTTTTTTTTTGAATGA-3' (SEQ ID NO: 5551)
βc-m3563 21 nt Target: 5'-TTTTTTTTTTTTTTTTGAATG-3' (SEQ ID NO: 5552)

Table 11: Additional Selected Anti-β-catenin DsiRNAs, 25/27mer Duplexes, Unmodified

5'-UGUAUGGUAUACUUCAAAUACCCUC-3' (SEQ ID NO: 3823)
3'-CAACAUACCAUAUGAAGUUUAUGGGAG-5' (SEQ ID NO: 1605)

βc-244 Target: 5'-GTTGTATGGTATACTTCAAATACCCTC-3' (SEQ ID NO: 2714)

5'-AAACAGUUGUAUGGUAUACUUCAAA-3' (SEQ ID NO: 3824)
3'-GUUUUGUCAACAUACCAUAUGAAGUUU-5' (SEQ ID NO: 1606)

βc-251 Target: 5'-CAAAACAGTTGTATGGTATACTTCAAA-3' (SEQ ID NO: 2715)

5'-AAAACAGUUGUAUGGUAUACUUCAA-3' (SEQ ID NO: 3825)
3'-AGUUUUGUCAACAUACCAUAUGAAGUU-5' (SEQ ID NO: 1607)

βc-252 Target: 5'-TCAAAACAGTTGTATGGTATACTTCAA-3' (SEQ ID NO: 2716)

5'-UCAAAACAGUUGUAUGGUAUACUUC-3' (SEQ ID NO: 3826)
3'-AAAGUUUUGUCAACAUACCAUAUGAAG-5' (SEQ ID NO: 1608)

βc-254 Target: 5'-TTTCAAAACAGTTGTATGGTATACTTC-3' (SEQ ID NO: 2717)

5'-UUCAAAACAGUUGUAUGGUAUACUU-3' (SEQ ID NO: 3827)
3'-AAAAGUUUUGUCAACAUACCAUAUGAA-5' (SEQ ID NO: 1609)

βc-255 Target: 5'-TTTTCAAAACAGTTGTATGGTATACTT-3' (SEQ ID NO: 2718)

5'-UUUCAAAACAGUUGUAUGGUAUACU-3' (SEQ ID NO: 3828)
3'-UAAAAGUUUUGUCAACAUACCAUAUGA-5' (SEQ ID NO: 1610)

βc-256 Target: 5'-ATTTTCAAAACAGTTGTATGGTATACT-3' (SEQ ID NO: 2719)

5'-GUCCACGCUGGAUUUUCAAAACAGU-3' (SEQ ID NO: 3829)
3'-AACAGGUGCGACCUAAAAGUUUUGUCA-5' (SEQ ID NO: 1611)

βc-269 Target: 5'-TTGTCCACGCTGGATTTTCAAAACAGT-3' (SEQ ID NO: 2720)

5'-UGUCCACGCUGGAUUUUCAAAACAG-3' (SEQ ID NO: 3830)

3'-UAACAGGUGCGACCUAAAAGUUUUGUC-5' (SEQ ID NO: 1612)

βc-270 Target: 5'-ATTGTCCACGCTGGATTTTCAAAACAG-3' (SEQ ID NO: 2721)

5'-AUCAAAAUCAGCUUGAGUAGCCAUUG-3' (SEQ ID NO: 3831)
3'-GGUAGUUUAGUCGAACUCAUCGGUAAC-5' (SEQ ID NO: 1613)

βc-293 Target: 5'-CCATCAAATCAGCTTGAGTAGCCATTG-3' (SEQ ID NO: 2722)

5'-UCCAACUCCAUCAAAUCAGCUUGAG-3' (SEQ ID NO: 3832)
3'-ACAGGUUGAGGUAGUUUAGUCGAACUC-5' (SEQ ID NO: 1614)

βc-302 Target: 5'-TGTCCAACTCCATCAAATCAGCTTGAG-3' (SEQ ID NO: 2723)

5'-UCCUCAGGAUUGCCUUUACCACUCA-3' (SEQ ID NO: 3833)
3'-GAAGGAGUCCUAACGGAAAUGGUGAGU-5' (SEQ ID NO: 1615)

βc-431 Target: 5'-CTTCCTCAGGATTGCCTTTACCACTCA-3' (SEQ ID NO: 2724)

5'-UUCCUCAGGAUUGCCUUUACCACUC-3' (SEQ ID NO: 3834)
3'-AGAAGGAGUCCUAACGGAAAUGGUGAG-5' (SEQ ID NO: 1616)

βc-432 Target: 5'-TCTTCCTCAGGATTGCCTTTACCACTC-3' (SEQ ID NO: 2725)

5'-UCAAUAUCAGCUACUUGUUCUUGAG-3' (SEQ ID NO: 3835)
3'-GUAGUUAUAGUCGAUGAACAAGAACUC-5' (SEQ ID NO: 1617)

βc-518 Target: 5'-CATCAATATCAGCTACTTGTTCTTGAG-3' (SEQ ID NO: 2726)

5'-AUCAAUAUCAGCUACUUGUUCUUGA-3' (SEQ ID NO: 3836)
3'-GGUAGUUAUAGUCGAUGAACAAGAACU-5' (SEQ ID NO: 1618)

βc-519 Target: 5'-CCATCAATATCAGCTACTTGTTCTTGA-3' (SEQ ID NO: 2727)

5'-UGUCCAUCAAUAUCAGCUACUUGUU-3' (SEQ ID NO: 3837)
3'-UGACAGGUAGUUAUAGUCGAUGAACAA-5' (SEQ ID NO: 1619)

βc-524 Target: 5'-ACTGTCCATCAATATCAGCTACTTGTT-3' (SEQ ID NO: 2728)

5'-UGCAUACUGUCCAUCAAUAUCAGCU-3' (SEQ ID NO: 3838)
3'-UAACGUAUGACAGGUAGUUAUAGUCGA-5' (SEQ ID NO: 1620)

βc-531 Target: 5'-ATTGCATACTGTCCATCAATATCAGCT-3' (SEQ ID NO: 2729)

5'-AGUCAUUGCAUACUGUCCAUCAAUA-3' (SEQ ID NO: 3839)
3'-GCUCAGUAACGUAUGACAGGUAGUUAU-5' (SEQ ID NO: 1621)

βc-537 Target: 5'-CGAGTCATTGCATACTGTCCATCAATA-3' (SEQ ID NO: 2730)

5'-UCAUCUAAUGUCUCAGGGAACAUAG-3' (SEQ ID NO: 3840)
3'-GGAGUAGAUUACAGAGUCCCUUGUAUC-5' (SEQ ID NO: 1622)

βc-584 Target: 5'-CCTCATCTAATGTCTCAGGGAACATAG-3' (SEQ ID NO: 2731)

5'-ACAACUGCAUGUUUCAGCAUCUGUG-3' (SEQ ID NO: 3841)
3'-AAUGUUGACGUACAAAGUCGUAGACAC-5' (SEQ ID NO: 1623)

βc-680 Target: 5'-TTACAACTGCATGTTTCAGCATCTGTG-3' (SEQ ID NO: 2732)

5'-UUACAACUGCAUGUUUCAGCAUCUG-3' (SEQ ID NO: 3842)
3'-CAAAUGUUGACGUACAAAGUCGUAGAC-5' (SEQ ID NO: 1624)

βc-682 Target: 5'-GTTTACAACTGCATGTTTCAGCATCTG-3' (SEQ ID NO: 2733)

5'-UUAAUCAAGUUUACAACUGCAUGUU-3' (SEQ ID NO: 3843)

3'-UCAAUUAGUUCAAAUGUUGACGUACAA-5' (SEQ ID NO: 1625)

βc-692 Target: 5'-AGTTAATCAAGTTTACAACTGCATGTT-3' (SEQ ID NO: 2734)

5'-UGAUAGUUAAUCAAGUUUACAACUG-3' (SEQ ID NO: 3844)
3'-GAACUAUCAAUUAGUUCAAAUGUUGAC-5' (SEQ ID NO: 1626)

βc-698 Target: 5'-CTTGATAGTTAATCAAGTTTACAACTG-3' (SEQ ID NO: 2735)

5'-GCAUCAUCUUGAUAGUUAAUCAAGU-3' (SEQ ID NO: 3845)
3'-GACGUAGUAGAACUAUCAAUUAGUUCA-5' (SEQ ID NO: 1627)

βc-707 Target: 5'-CTGCATCATCTTGATAGTTAATCAAGT-3' (SEQ ID NO: 2736)

5'-UGCAUCAUCUUGAUAGUUAAUCAAG-3' (SEQ ID NO: 3846)
3'-AGACGUAGUAGAACUAUCAAUUAGUUC-5' (SEQ ID NO: 1628)

βc-708 Target: 5'-TCTGCATCATCTTGATAGTTAATCAAG-3' (SEQ ID NO: 2737)

5'-GGUCCUCGUCAUUUAGCAGUUUUGU-3' (SEQ ID NO: 3847)
3'-GACCAGGAGCAGUAAAUCGUCAAAACA-5' (SEQ ID NO: 1629)

βc-763 Target: 5'-CTGGTCCTCGTCATTTAGCAGTTTTGT-3' (SEQ ID NO: 2738)

5'-UAACUGCAGCCUUAUUAACCACCAC-3' (SEQ ID NO: 3848)
3'-GUAUUGACGUCGGAAUAAUUGGUGGUG-5' (SEQ ID NO: 1630)

βc-790 Target: 5'-CATAACTGCAGCCTTATTAACCACCAC-3' (SEQ ID NO: 2739)

5'-AUAACUGCAGCCUUAUUAACCACCA-3' (SEQ ID NO: 3849)
3'-GGUAUUGACGUCGGAAUAAUUGGUGGU-5' (SEQ ID NO: 1631)

βc-791 Target: 5'-CCATAACTGCAGCCTTATTAACCACCA-3' (SEQ ID NO: 2740)

5'-ACCAUAACUGCAGCCUUAUUAACCA-3' (SEQ ID NO: 3850)
3'-CCUGGUAUUGACGUCGGAAUAAUUGGU-5' (SEQ ID NO: 1632)

βc-794 Target: 5'-GGACCATAACTGCAGCCTTATTAACCA-3' (SEQ ID NO: 2741)

5'-UUUUUAGAAAGCUGAUGGACCAUAA-3' (SEQ ID NO: 3851)
3'-GGAAAAAUCUUUCGACUACCUGGUAUU-5' (SEQ ID NO: 1633)

βc-812 Target: 5'-CCTTTTTAGAAAGCTGATGGACCATAA-3' (SEQ ID NO: 2742)

5'-GGUACGUACAAUAGCAGACACCAUC-3' (SEQ ID NO: 3852)
3'-UACCAUGCAUGUUAUCGUCUGUGGUAG-5' (SEQ ID NO: 1634)

βc-873 Target: 5'-ATGGTACGTACAATAGCAGACACCATC-3' (SEQ ID NO: 2743)

5'-UCAUUUGUAUUCUGCAUGGUACGUA-3' (SEQ ID NO: 3853)
3'-GUAGUAAACAUAAGACGUACCAUGCAU-5' (SEQ ID NO: 1635)

βc-890 Target: 5'-CATCATTTGTATTCTGCATGGTACGTA-3' (SEQ ID NO: 2744)

5'-GUUUCUACAUCAUUUGUAUUCUGCA-3' (SEQ ID NO: 3854)
3'-GACAAAGAUGUAGUAAACAUAAGACGU-5' (SEQ ID NO: 1636)

βc-899 Target: 5'-CTGTTTCTACATCATTTGTATTCTGCA-3' (SEQ ID NO: 2745)

5'-UGUUUCUACAUCAUUUGUAUUCUGC-3' (SEQ ID NO: 3855)
3'-CGACAAAGAUGUAGUAAACAUAAGACG-5' (SEQ ID NO: 1637)

βc-900 Target: 5'-GCTGTTTCTACATCATTTGTATTCTGC-3' (SEQ ID NO: 2746)

5'-ACAACGAGCUGUUUCUACAUCAUUU-3' (SEQ ID NO: 3856)

3'-CAUGUUGCUCGACAAAGAUGUAGUAAA-5' (SEQ ID NO: 1638)

βc-909 Target: 5'-GTACAACGAGCTGTTTCTACATCATTT-3' (SEQ ID NO: 2747)

5'-GUACAACGAGCUGUUUCUACAUCAU-3' (SEQ ID NO: 3857)
3'-GCCAUGUUGCUCGACAAAGAUGUAGUA-5' (SEQ ID NO: 1639)

βc-911 Target: 5'-CGGTACAACGAGCTGTTTCTACATC-3' (SEQ ID NO: 2748)

5'-GGUACAACGAGCUGUUUCUACAUCA-3' (SEQ ID NO: 3858)
3'-CGCCAUGUUGCUCGACAAAGAUGUAGU-5' (SEQ ID NO: 1640)

βc-912 Target: 5'-GCGGTACAACGAGCTGTTTCTACATCA-3' (SEQ ID NO: 2749)

5'-AUAAAACAACACAGAAUCCACUGGU-3' (SEQ ID NO: 3859)
3'-CGUAUUUUGUUGUGUCUUAGGUGACCA-5' (SEQ ID NO: 1641)

βc-1032 Target: 5'-GCATAAAACAACACAGAATCCACTGGT-3' (SEQ ID NO: 2750)

5'-GCAUAAAACAACACAGAAUCCACUG-3' (SEQ ID NO: 3860)
3'-ACCGUAUUUUGUUGUGUCUUAGGUGAC-5' (SEQ ID NO: 1642)

βc-1034 Target: 5'-TGGCATAAAACAACACAGAATCCACTG-3' (SEQ ID NO: 2751)

5'-GGCAUAAAACAACACAGAAUCCACU-3' (SEQ ID NO: 3861)
3'-UACCGUAUUUUGUUGUGUCUUAGGUGA-5' (SEQ ID NO: 1643)

βc-1035 Target: 5'-ATGGCATAAAACAACACAGAATCCACT-3' (SEQ ID NO: 2752)

5'-GCUCCUUCUUGAUGUAAUAAAAGGU-3' (SEQ ID NO: 3862)
3'-AUCGAGGAAGAACUACAUUAUUUUCCA-5' (SEQ ID NO: 1644)

βc-1076 Target: 5'-TAGCTCCTTCTTGATGTAATAAAAGGT-3' (SEQ ID NO: 2753)

5'-AGCUCCUUCUUGAUGUAAUAAAAGG-3' (SEQ ID NO: 3863)
3'-AAUCGAGGAAGAACUACAUUAUUUUCC-5' (SEQ ID NO: 1645)

βc-1077 Target: 5'-TTAGCTCCTTCTTGATGTAATAAAAGG-3' (SEQ ID NO: 2754)

5'-UAACAUUUGUUUUGUUGAGCAAGGC-3' (SEQ ID NO: 3864)
3'-AAAUUGUAAACAAAACAACUCGUUCCG-5' (SEQ ID NO: 1646)

βc-1144 Target: 5'-TTTAACATTTGTTTTGTTGAGCAAGGC-3' (SEQ ID NO: 2755)

5'-GCCAAGAAUUUAACAUUUGUUUUGU-3' (SEQ ID NO: 3865)
3'-AUCGGUUCUUAAAUUGUAAACAAAACA-5' (SEQ ID NO: 1647)

βc-1154 Target: 5'-TAGCCAAGAATTTAACATTTGTTTTGT-3' (SEQ ID NO: 2756)

5'-UAAUAGCCAAGAAUUUAACAUUUGU-3' (SEQ ID NO: 3866)
3'-GCAUUAUCGGUUCUUAAAUUGUAAACA-5' (SEQ ID NO: 1648)

βc-1159 Target: 5'-CGTAATAGCCAAGAATTTAACATTTGT-3' (SEQ ID NO: 2757)

5'-GUAAUAGCCAAGAAUUUAACAUUUG-3' (SEQ ID NO: 3867)
3'-AGCAUUAUCGGUUCUUAAAUUGUAAAC-5' (SEQ ID NO: 1649)

βc-1160 Target: 5'-TCGTAATAGCCAAGAATTTAACATTTG-3' (SEQ ID NO: 2758)

5'-AGCUAAAAUUUGAAGGCAGUCUGUC-3' (SEQ ID NO: 3868)
3'-AUUCGAUUUUAAACUUCCGUCAGACAG-5' (SEQ ID NO: 1650)

βc-1185 Target: 5'-TAAGCTAAAATTTGAAGGCAGTCTGTC-3' (SEQ ID NO: 2759)

5'-GGUCCUCAUUAUAUUUACUAAAGCU-3' (SEQ ID NO: 3869)

3'-AUCCAGGAGUAAUAUAAAUGAUUUCGA-5' (SEQ ID NO: 1651)

βc-1260 Target: 5'-TAGGTCCTCATTATATTTACTAAAGCT-3' (SEQ ID NO: 2760)

5'-GUAUAGGUCCUCAUUAUAUUUACUA-3' (SEQ ID NO: 3870)
3'-UUCAUAUCCAGGAGUAAUAUAAAUGAU-5' (SEQ ID NO: 1652)

βc-1265 Target: 5'-AAGTATAGGTCCTCATTATATTTACTA-3' (SEQ ID NO: 2761)

5'-AGUAUAGGUCCUCAUUAUAUUUACU-3' (SEQ ID NO: 3871)
3'-AUUCAUAUCCAGGAGUAAUAUAAAUGA-5' (SEQ ID NO: 1653)

βc-1266 Target: 5'-TAAGTATAGGTCCTCATTATATTTACT-3' (SEQ ID NO: 2762)

5'-UUUUCGUAAGUAUAGGUCCUCAUUA-3' (SEQ ID NO: 3872)
3'-CAAAAAGCAUUCAUAUCCAGGAGUAAU-5' (SEQ ID NO: 1654)

βc-1274 Target: 5'-GTTTTTCGTAAGTATAGGTCCTCATTA-3' (SEQ ID NO: 2763)

5'-UUUUUCGUAAGUAUAGGUCCUCAUU-3' (SEQ ID NO: 3873)
3'-UCAAAAAGCAUUCAUAUCCAGGAGUAA-5' (SEQ ID NO: 1655)

βc-1275 Target: 5'-AGTTTTTCGTAAGTATAGGTCCTCATT-3' (SEQ ID NO: 2764)

5'-GUUUUUCGUAAGUAUAGGUCCUCAU-3' (SEQ ID NO: 3874)
3'-AUCAAAAAGCAUUCAUAUCCAGGAGUA-5' (SEQ ID NO: 1656)

βc-1276 Target: 5'-TAGTTTTTCGTAAGTATAGGTCCTC-3' (SEQ ID NO: 2765)

5'-AGUUUUUCGUAAGUAUAGGUCCUCA-3' (SEQ ID NO: 3875)
3'-CAUCAAAAAGCAUUCAUAUCCAGGAGU-5' (SEQ ID NO: 1657)

βc-1277 Target: 5'-GTAGTTTTTCGTAAGTATAGGTCCTCA-3' (SEQ ID NO: 2766)

5'-GGUCCACAGUAGUUUUUCGUAAGUA-3' (SEQ ID NO: 3876)
3'-CACCAGGUGUCAUCAAAAAGCAUUCAU-5' (SEQ ID NO: 1658)

βc-1287 Target: 5'-GTGGTCCACAGTAGTTTTTCGTAAGTA-3' (SEQ ID NO: 2767)

5'-UACAAUAGCCGGCUUAUUACUAGAG-3' (SEQ ID NO: 3877)
3'-AGAUGUUAUCGGCCGAAUAAUGAUCUC-5' (SEQ ID NO: 1659)

βc-1344 Target: 5'-TCTACAATAGCCGGCTTATTACTAGAG-3' (SEQ ID NO: 2768)

5'-UCUACAAUAGCCGGCUUAUUACUAG-3' (SEQ ID NO: 3878)
3'-GAAGAUGUUAUCGGCCGAAUAAUGAUC-5' (SEQ ID NO: 1660)

βc-1346 Target: 5'-CTTCTACAATAGCCGGCTTATTACTAG-3' (SEQ ID NO: 2769)

5'-UCCUAAAGCUUGCAUUCCACCAGCU-3' (SEQ ID NO: 3879)
3'-UCAGGAUUUCGAACGUAAGGUGGUCGA-5' (SEQ ID NO: 1661)

βc-1371 Target: 5'-AGTCCTAAAGCTTGCATTCCACCAGCT-3' (SEQ ID NO: 2770)

5'-GUCCUAAAGCUUGCAUUCCACCAGC-3' (SEQ ID NO: 3880)
3'-UUCAGGAUUUCGAACGUAAGGUGGUCG-5' (SEQ ID NO: 1662)

βc-1372 Target: 5'-AAGTCCTAAAGCTTGCATTCCACCAGC-3' (SEQ ID NO: 2771)

5'-AGUCCUAAAGCUUGCAUUCCACCAG-3' (SEQ ID NO: 3881)
3'-CUUCAGGAUUUCGAACGUAAGGUGGUC-5' (SEQ ID NO: 1663)

βc-1373 Target: 5'-GAAGTCCTAAAGCTTGCATTCCACCAG-3' (SEQ ID NO: 2772)

5'-GUUCUGAACAAGACGUUGACUUGGA-3' (SEQ ID NO: 3882)

3'-GUCAAGACUUGUUCUGCAACUGAACCU-5' (SEQ ID NO: 1664)

βc-1410 Target: 5'-CAGTTCTGAACAAGACGTTGACTTGGA-3' (SEQ ID NO: 2773)

5'-AGUUCUGAACAAGACGUUGACUUGG-3' (SEQ ID NO: 3883)
3'-UGUCAAGACUUGUUCUGCAACUGAACC-5' (SEQ ID NO: 1665)

βc-1411 Target: 5'-ACAGTTCTGAACAAGACGTTGACTTGG-3' (SEQ ID NO: 2774)

5'-GUCCAAAGACAGUUCUGAACAAGAC-3' (SEQ ID NO: 3884)
3'-CUCAGGUUUCUGUCAAGACUUGUUCUG-5' (SEQ ID NO: 1666)

βc-1421 Target: 5'-GAGTCCAAAGACAGTTCTGAACAAGAC-3' (SEQ ID NO: 2775)

5'-UUCCUGUUUAGUUGCAGCAUCUGAA-3' (SEQ ID NO: 3885)
3'-GGAAGGACAAAUCAACGUCGUAGACUU-5' (SEQ ID NO: 1667)

βc-1458 Target: 5'-CCTTCCTGTTTAGTTGCAGCATCTGAA-3' (SEQ ID NO: 2776)

5'-ACAUUUAUAUCAUCUGAACCCAGAA-3' (SEQ ID NO: 3886)
3'-GGUGUAAAUAUAGUAGACUUGGGUCUU-5' (SEQ ID NO: 1668)

βc-1517 Target: 5'-CCACATTTATATCATCTGAACCCAGAA-3' (SEQ ID NO: 2777)

5'-ACCACAUUUAUAUCAUCUGAACCCA-3' (SEQ ID NO: 3887)
3'-ACUGGUGUAAAUAUAGUAGACUUGGGU-5' (SEQ ID NO: 1669)

βc-1520 Target: 5'-TGACCACATTTATATCATCTGAACCCA-3' (SEQ ID NO: 2778)

5'-GCACAGGUGACCACAUUUAUAUCAU-3' (SEQ ID NO: 3888)
3'-GACGUGUCCACUGGUGUAAAUAUAGUA-5' (SEQ ID NO: 1670)

βc-1529 Target: 5'-CTGCACAGGTGACCACATTTATATC-3' (SEQ ID NO: 2779)

5'-UGCACAGGUGACCACAUUUAUAUCA-3' (SEQ ID NO: 3889)
3'-CGACGUGUCCACUGGUGUAAAUAUAGU-5' (SEQ ID NO: 1671)

βc-1530 Target: 5'-GCTGCACAGGTGACCACATTTATATCA-3' (SEQ ID NO: 2780)

5'-UGCAAGUGAGGUUAGAAAGAAUUCC-3' (SEQ ID NO: 3890)
3'-UAACGUUCACUCCAAUCUUUCUUAAGG-5' (SEQ ID NO: 1672)

βc-1558 Target: 5'-ATTGCAAGTGAGGTTAGAAAGAATTCC-3' (SEQ ID NO: 2781)

5'-AUAAUUAUUGCAAGUGAGGUUAGAA-3' (SEQ ID NO: 3891)
3'-AAUAUUAAUAACGUUCACUCCAAUCUU-5' (SEQ ID NO: 1673)

βc-1566 Target: 5'-TTATAATTATTGCAAGTGAGGTTAGAA-3' (SEQ ID NO: 2782)

5'-UCAUCUUGUUCUUAUAAUUAUUGCA-3' (SEQ ID NO: 3892)
3'-GUAGUAGAACAAGAAUAUUAAUAACGU-5' (SEQ ID NO: 1674)

βc-1579 Target: 5'-CATCATCTTGTTCTTATAATTATTGCA-3' (SEQ ID NO: 2783)

5'-AUCAUCUUGUUCUUAUAAUUAUUGC-3' (SEQ ID NO: 3893)
3'-GGUAGUAGAACAAGAAUAUUAAUAACG-5' (SEQ ID NO: 1675)

βc-1580 Target: 5'-CCATCATCTTGTTCTTATAATTATTGC-3' (SEQ ID NO: 2784)

5'-ACCAUCAUCUUGUUCUUAUAAUUAU-3' (SEQ ID NO: 3894)
3'-UCUGGUAGUAGAACAAGAAUAUUAAUA-5' (SEQ ID NO: 1676)

βc-1583 Target: 5'-AGACCATCATCTTGTTCTTATAATTAT-3' (SEQ ID NO: 2785)

5'-AGACCAUCAUCUUGUUCUUAUAAUU-3' (SEQ ID NO: 3895)

3'-CGUCUGGUAGUAGAACAAGAAUAUUAA-5' (SEQ ID NO: 1677)

βc-1585 Target: 5'-GCAGACCATCATCTTGTTCTTATAATT-3' (SEQ ID NO: 2786)

5'-AAUCCAACAGUAGCCUUUAUCAGAG-3' (SEQ ID NO: 3896)
3'-AGUUAGGUUGUCAUCGGAAAUAGUCUC-5' (SEQ ID NO: 1678)

βc-1808 Target: 5'-TCAATCCAACAGTAGCCTTTATCAGAG-3' (SEQ ID NO: 2787)

5'-GAAUCAAUCCAACAGUAGCCUUUAU-3' (SEQ ID NO: 3897)
3'-AGCUUAGUUAGGUUGUCAUCGGAAAUA-5' (SEQ ID NO: 1679)

βc-1813 Target: 5'-TCGAATCAATCCAACAGTAGCCTTTAT-3' (SEQ ID NO: 2788)

5'-UCCACAAAUUGCUGCUGUGUCCCAC-3' (SEQ ID NO: 3898)
3'-GGAGGUGUUUAACGACGACACAGGGUG-5' (SEQ ID NO: 1680)

βc-1955 Target: 5'-CCTCCACAAATTGCTGCTGTGTCCCAC-3' (SEQ ID NO: 2789)

5'-ACAACCUUCAACUAUUUCUUCCAUG-3' (SEQ ID NO: 3899)
3'-CAUGUUGGAAGUUGAUAAAGAAGGUAC-5' (SEQ ID NO: 1681)

βc-1989 Target: 5'-GTACAACCTTCAACTATTTCTTCCATG-3' (SEQ ID NO: 2790)

5'-UACAACCUUCAACUAUUUCUUCCAU-3' (SEQ ID NO: 3900)
3'-CCAUGUUGGAAGUUGAUAAAGAAGGUA-5' (SEQ ID NO: 1682)

βc-1990 Target: 5'-GGTACAACCTTCAACTATTTCTTCC-3' (SEQ ID NO: 2791)

5'-GUACAACCUUCAACUAUUUCUUCCA-3' (SEQ ID NO: 3901)
3'-GCCAUGUUGGAAGUUGAUAAAGAAGGU-5' (SEQ ID NO: 1683)

βc-1991 Target: 5'-CGGTACAACCTTCAACTATTTCTTCCA-3' (SEQ ID NO: 2792)

5'-GGUACAACCUUCAACUAUUUCUUCC-3' (SEQ ID NO: 3902)
3'-GGCCAUGUUGGAAGUUGAUAAAGAAGG-5' (SEQ ID NO: 1684)

βc-1992 Target: 5'-CCGGTACAACCTTCAACTATTTCTTCC-3' (SEQ ID NO: 2793)

5'-GCUCCGGUACAACCUUCAACUAUUU-3' (SEQ ID NO: 3903)
3'-CCCGAGGCCAUGUUGGAAGUUGAUAAA-5' (SEQ ID NO: 1685)

βc-1997 Target: 5'-GGGCTCCGGTACAACCTTCAACTATTT-3' (SEQ ID NO: 2794)

5'-ACAAUUCGGUUGUGAACAUCCCGAG-3' (SEQ ID NO: 3904)
3'-AUUGUUAAGCCAACACUUGUAGGGCUC-5' (SEQ ID NO: 1686)

βc-2036 Target: 5'-TAACAATTCGGTTGTGAACATCCCGAG-3' (SEQ ID NO: 2795)

5'-AACAAUUCGGUUGUGAACAUCCCGA-3' (SEQ ID NO: 3905)
3'-UAUUGUUAAGCCAACACUUGUAGGGCU-5' (SEQ ID NO: 1687)

βc-2037 Target: 5'-ATAACAATTCGGTTGTGAACATCCCGA-3' (SEQ ID NO: 2796)

5'-UAACAAUUCGGUUGUGAACAUCCCG-3' (SEQ ID NO: 3906)
3'-CUAUUGUUAAGCCAACACUUGUAGGGC-5' (SEQ ID NO: 1688)

βc-2038 Target: 5'-GATAACAATTCGGTTGTGAACATCCCG-3' (SEQ ID NO: 2797)

5'-AUAACAAUUCGGUUGUGAACAUCCC-3' (SEQ ID NO: 3907)
3'-ACUAUUGUUAAGCCAACACUUGUAGGG-5' (SEQ ID NO: 1689)

βc-2039 Target: 5'-TGATAACAATTCGGTTGTGAACATCCC-3' (SEQ ID NO: 2798)

5'-GAUAACAAUUCGGUUGUGAACAUCC-3' (SEQ ID NO: 3908)

3'-GACUAUUGUUAAGCCAACACUUGUAGG-5' (SEQ ID NO: 1690)

βc-2040 Target: 5'-CTGATAACAATTCGGTTGTGAACATCC-3' (SEQ ID NO: 2799)

5'-UGAUAACAAUUCGGUUGUGAACAUC-3' (SEQ ID NO: 3909)
3'-AGACUAUUGUUAAGCCAACACUUGUAG-5' (SEQ ID NO: 1691)

βc-2041 Target: 5'-TCTGATAACAATTCGGTTGTGAACATC-3' (SEQ ID NO: 2800)

5'-AUUUAGUCCUCUGAUAACAAUUCGG-3' (SEQ ID NO: 3910)
3'-CAUAAAUCAGGAGACUAUUGUUAAGCC-5' (SEQ ID NO: 1692)

βc-2052 Target: 5'-GTATTTAGTCCTCTGATAACAATTCGG-3' (SEQ ID NO: 2801)

5'-UAUUUAGUCCUCUGAUAACAAUUCG-3' (SEQ ID NO: 3911)
3'-CCAUAAAUCAGGAGACUAUUGUUAAGC-5' (SEQ ID NO: 1693)

βc-2053 Target: 5'-GGTATTTAGTCCTCTGATAACAATTCG-3' (SEQ ID NO: 2802)

5'-GUAUUUAGUCCUCUGAUAACAAUUC-3' (SEQ ID NO: 3912)
3'-ACCAUAAAUCAGGAGACUAUUGUUAAG-5' (SEQ ID NO: 1694)

βc-2054 Target: 5'-TGGTATTTAGTCCTCTGATAACAATTC-3' (SEQ ID NO: 2803)

5'-GGUAUUUAGUCCUCUGAUAACAAUU-3' (SEQ ID NO: 3913)
3'-UACCAUAAAUCAGGAGACUAUUGUUAA-5' (SEQ ID NO: 1695)

βc-2055 Target: 5'-ATGGTATTTAGTCCTCTGATAACAATT-3' (SEQ ID NO: 2804)

5'-ACAAUGGAAUGGUAUUUAGUCCUCU-3' (SEQ ID NO: 3914)
3'-UUUGUUACCUUACCAUAAAUCAGGAGA-5' (SEQ ID NO: 1696)

βc-2065 Target: 5'-AAACAATGGAATGGTATTTAGTCCTCT-3' (SEQ ID NO: 2805)

5'-ACAAACAAUGGAAUGGUAUUUAGUC-3' (SEQ ID NO: 3915)
3'-CGUGUUUGUUACCUUACCAUAAAUCAG-5' (SEQ ID NO: 1697)

βc-2069 Target: 5'-GCACAAACAATGGAATGGTATTTAGTC-3' (SEQ ID NO: 2806)

5'-GCACAAACAAUGGAAUGGUAUUUAG-3' (SEQ ID NO: 3916)
3'-GACGUGUUUGUUACCUUACCAUAAAUC-5' (SEQ ID NO: 1698)

βc-2071 Target: 5'-CTGCACAAACAATGGAATGGTATTTAG-3' (SEQ ID NO: 2807)

5'-UGCACAAACAAUGGAAUGGUAUUUA-3' (SEQ ID NO: 3917)
3'-CGACGUGUUUGUUACCUUACCAUAAAU-5' (SEQ ID NO: 1699)

βc-2072 Target: 5'-GCTGCACAAACAATGGAATGGTATTTA-3' (SEQ ID NO: 2808)

5'-GCUACUCUUUGGAUGUUUUCAAUGG-3' (SEQ ID NO: 3918)
3'-GUCGAUGAGAAACCUACAAAAGUUACC-5' (SEQ ID NO: 1700)

βc-2111 Target: 5'-CAGCTACTCTTTGGATGTTTTCAATGG-3' (SEQ ID NO: 2809)

5'-AGCUACUCUUUGGAUGUUUUCAAUG-3' (SEQ ID NO: 3919)
3'-CGUCGAUGAGAAACCUACAAAAGUUAC-5' (SEQ ID NO: 1701)

βc-2112 Target: 5'-GCAGCTACTCTTTGGATGTTTTCAATG-3' (SEQ ID NO: 2810)

5'-GCUUCAAUAGCUUCUGCAGCUUCCU-3' (SEQ ID NO: 3920)
3'-GUCGAAGUUAUCGAAGACGUCGAAGGA-5' (SEQ ID NO: 1702)

βc-2168 Target: 5'-CAGCTTCAATAGCTTCTGCAGCTTCCT-3' (SEQ ID NO: 2811)

5'-UCCCUCAGCUUCAAUAGCUUCUGCA-3' (SEQ ID NO: 3921)

3'-CGAGGGAGUCGAAGUUAUCGAAGACGU-5' (SEQ ID NO: 1703)

βc-2175 Target: 5'-GCTCCCTCAGCTTCAATAGCTTCTGCA-3' (SEQ ID NO: 2812)

5'-GCUCCCUCAGCUUCAAUAGCUUCUG-3' (SEQ ID NO: 3922)
3'-ACCGAGGGAGUCGAAGUUAUCGAAGAC-5' (SEQ ID NO: 1704)

βc-2177 Target: 5'-TGGCTCCCTCAGCTTCAATAGCTTCTG-3' (SEQ ID NO: 2813)

5'-AUUCCUAGAGUGAAGUAACUCUGUC-3' (SEQ ID NO: 3923)
3'-AGUAAGGAUCUCACUUCAUUGAGACAG-5' (SEQ ID NO: 1705)

βc-2214 Target: 5'-TCATTCCTAGAGTGAAGTAACTCTGTC-3' (SEQ ID NO: 2814)

5'-UCAUUCCUAGAGUGAAGUAACUCUG-3' (SEQ ID NO: 3924)
3'-GAAGUAAGGAUCUCACUUCAUUGAGAC-5' (SEQ ID NO: 1706)

βc-2216 Target: 5'-CTTCATTCCTAGAGTGAAGTAACTCTG-3' (SEQ ID NO: 2815)

5'-UUCAUUCCUAGAGUGAAGUAACUCU-3' (SEQ ID NO: 3925)
3'-GGAAGUAAGGAUCUCACUUCAUUGAGA-5' (SEQ ID NO: 1707)

βc-2217 Target: 5'-CCTTCATTCCTAGAGTGAAGTAACTCT-3' (SEQ ID NO: 2816)

5'-UCCUCAGACAUUCGGAACAAAACAG-3' (SEQ ID NO: 3926)
3'-ACAGGAGUCUGUAAGCCUUGUUUUGUC-5' (SEQ ID NO: 1708)

βc-2264 Target: 5'-TGTCCTCAGACATTCGGAACAAAACAG-3' (SEQ ID NO: 2817)

5'-UGUCCUCAGACAUUCGGAACAAAAC-3' (SEQ ID NO: 3927)
3'-GAACAGGAGUCUGUAAGCCUUGUUUUG-5' (SEQ ID NO: 1709)

βc-2266 Target: 5'-CTTGTCCTCAGACATTCGGAACAAAAC-3' (SEQ ID NO: 2818)

5'-GUUUCUUGUAAUCUUGUGGCUUGUC-3' (SEQ ID NO: 3928)
3'-GGCAAAGAACAUUAGAACACCGAACAG-5' (SEQ ID NO: 1710)

βc-2287 Target: 5'-CCGTTTCTTGTAATCTTGTGGCTTGTC-3' (SEQ ID NO: 2819)

5'-UGAAAGCCGUUUCUUGUAAUCUUGU-3' (SEQ ID NO: 3929)
3'-UGACUUUCGGCAAAGAACAUUAGAACA-5' (SEQ ID NO: 1711)

βc-2295 Target: 5'-ACTGAAAGCCGTTTCTTGTAATCTTGT-3' (SEQ ID NO: 2820)

5'-GCUCAACUGAAAGCCGUUUCUUGUA-3' (SEQ ID NO: 3930)
3'-GUCGAGUUGACUUUCGGCAAAGAACAU-5' (SEQ ID NO: 1712)

βc-2302 Target: 5'-CAGCTCAACTGAAAGCCGTTTCTTGTA-3' (SEQ ID NO: 2821)

5'-AGUCCAAGAUCAGCAGUCUCAUUCC-3' (SEQ ID NO: 3931)
3'-GUUCAGGUUCUAGUCGUCAGAGUAAGG-5' (SEQ ID NO: 1713)

βc-2363 Target: 5'-CAAGTCCAAGATCAGCAGTCTCATTCC-3' (SEQ ID NO: 2822)

5'-ACCAAUAUCAAGUCCAAGAUCAGCA-3' (SEQ ID NO: 3932)
3'-CGUGGUUAUAGUUCAGGUUCUAGUCGU-5' (SEQ ID NO: 1714)

βc-2373 Target: 5'-GCACCAATATCAAGTCCAAGATCAGCA-3' (SEQ ID NO: 2823)

5'-AGAACGAUAGCUAGGAUCAUCCUGG-3' (SEQ ID NO: 3933)
3'-UUUCUUGCUAUCGAUCCUAGUAGGACC-5' (SEQ ID NO: 1715)

βc-2424 Target: 5'-AAAGAACGATAGCTAGGATCATCCTGG-3' (SEQ ID NO: 2824)

5'-UAUCCACCAGAGUGAAAAGAACGAU-3' (SEQ ID NO: 3934)

3'-GUAUAGGUGGUCUCACUUUUCUUGCUA-5' (SEQ ID NO: 1716)

βc-2441 Target: 5'-CATATCCACCAGAGTGAAAAGAACGAT-3' (SEQ ID NO: 2825)

5'-AUUUACAGGUCAGUAUCAAACCAGG-3' (SEQ ID NO: 3935)
3'-ACUAAAUGUCCAGUCAUAGUUUGGUCC-5' (SEQ ID NO: 1717)

βc-2618 Target: 5'-TGATTTACAGGTCAGTATCAAACCAGG-3' (SEQ ID NO: 2826)

5'-GAUUUACAGGUCAGUAUCAAACCAG-3' (SEQ ID NO: 3936)
3'-UACUAAAUGUCCAGUCAUAGUUUGGUC-5' (SEQ ID NO: 1718)

βc-2619 Target: 5'-ATGATTTACAGGTCAGTATCAAACCAG-3' (SEQ ID NO: 2827)

5'-UGAUUUACAGGUCAGUAUCAAACCA-3' (SEQ ID NO: 3937)
3'-CUACUAAAUGUCCAGUCAUAGUUUGGU-5' (SEQ ID NO: 1719)

βc-2620 Target: 5'-GATGATTTACAGGTCAGTATCAAACCA-3' (SEQ ID NO: 2828)

5'-UCUUACCUAAAGGAUGAUUUACAGG-3' (SEQ ID NO: 3938)
3'-GAAGAAUGGAUUUCCUACUAAAUGUCC-5' (SEQ ID NO: 1720)

βc-2634 Target: 5'-CTTCTTACCTAAAGGATGATTTACAGG-3' (SEQ ID NO: 2829)

5'-UUCUUACCUAAAGGAUGAUUUACAG-3' (SEQ ID NO: 3939)
3'-UGAAGAAUGGAUUUCCUACUAAAUGUC-5' (SEQ ID NO: 1721)

βc-2635 Target: 5'-ACTTCTTACCTAAAGGATGATTTACAG-3' (SEQ ID NO: 2830)

5'-ACUUCUUACCUAAAGGAUGAUUUAC-3' (SEQ ID NO: 3940)
3'-UUUGAAGAAUGGAUUUCCUACUAAAUG-5' (SEQ ID NO: 1722)

βc-2637 Target: 5'-AAACTTCTTACCTAAAGGATGATTTAC-3' (SEQ ID NO: 2831)

5'-UUUUUAAAACUUCUUACCUAAAGGA-3' (SEQ ID NO: 3941)
3'-CGAAAAAUUUUGAAGAAUGGAUUUCCU-5' (SEQ ID NO: 1723)

βc-2645 Target: 5'-GCTTTTTAAAACTTCTTACCTAAAGGA-3' (SEQ ID NO: 2832)

5'-GCUUUUUAAAACUUCUUACCUAAAG-3' (SEQ ID NO: 3942)
3'-ACCGAAAAAUUUUGAAGAAUGGAUUUC-5' (SEQ ID NO: 1724)

βc-2647 Target: 5'-TGGCTTTTTAAAACTTCTTACCTAAAG-3' (SEQ ID NO: 2833)

5'-AAACUGGCUUUUUAAAACUUCUUAC-3' (SEQ ID NO: 3943)
3'-GGUUUGACCGAAAAAUUUUGAAGAAUG-5' (SEQ ID NO: 1725)

βc-2653 Target: 5'-CCAAACTGGCTTTTTAAAACTTCTTAC-3' (SEQ ID NO: 2834)

5'-ACCCAAACUGGCUUUUUAAAACUUC-3' (SEQ ID NO: 3944)
3'-AAUGGGUUUGACCGAAAAAUUUUGAAG-5' (SEQ ID NO: 1726)

βc-2657 Target: 5'-TTACCCAAACTGGCTTTTTAAAACTTC-3' (SEQ ID NO: 2835)

5'-UACCCAAACUGGCUUUUUAAAACUU-3' (SEQ ID NO: 3945)
3'-AAAUGGGUUUGACCGAAAAAUUUUGAA-5' (SEQ ID NO: 1727)

βc-2658 Target: 5'-TTTACCCAAACTGGCTTTTTAAAACTT-3' (SEQ ID NO: 2836)

5'-UUACCCAAACUGGCUUUUUAAAACU-3' (SEQ ID NO: 3946)
3'-AAAAUGGGUUUGACCGAAAAAUUUUGA-5' (SEQ ID NO: 1728)

βc-2659 Target: 5'-TTTTACCCAAACTGGCTTTTTAAAACT-3' (SEQ ID NO: 2837)

5'-UUUACCCAAACUGGCUUUUUAAAAC-3' (SEQ ID NO: 3947)

3'-UAAAAUGGGUUUGACCGAAAAAUUUUG-5' (SEQ ID NO: 1729)

βc-2660 Target: 5'-ATTTTACCCAAACTGGCTTTTTAAAAC-3' (SEQ ID NO: 2838)

5'-AACCAAGUCUUUCUGAAGUUCUGUA-3' (SEQ ID NO: 3948)
3'-GGUUGGUUCAGAAAGACUUCAAGACAU-5' (SEQ ID NO: 1730)

βc-2701 Target: 5'-CCAACCAAGTCTTTCTGAAGTTCTGTA-3' (SEQ ID NO: 2839)

5'-ACCCUACCAACCAAGUCUUUCUGAA-3' (SEQ ID NO: 3949)
3'-GGUGGGAUGGUUGGUUCAGAAAGACUU-5' (SEQ ID NO: 1731)

βc-2709 Target: 5'-CCACCCTACCAACCAAGTCTTTCTGAA-3' (SEQ ID NO: 2840)

5'-UUACAAAUAGCCUAAACCACUCCCA-3' (SEQ ID NO: 3950)
3'-UAAAUGUUUAUCGGAUUUGGUGAGGGU-5' (SEQ ID NO: 1732)

βc-2733 Target: 5'-ATTTACAAATAGCCTAAACCACTCCCA-3' (SEQ ID NO: 2841)

5'-UUUACAAAUAGCCUAAACCACUCCC-3' (SEQ ID NO: 3951)
3'-CUAAAUGUUUAUCGGAUUUGGUGAGGG-5' (SEQ ID NO: 1733)

βc-2734 Target: 5'-GATTTACAAATAGCCTAAACCACTCCC-3' (SEQ ID NO: 2842)

5'-AUUUACAAAUAGCCUAAACCACUCC-3' (SEQ ID NO: 3952)
3'-UCUAAAUGUUUAUCGGAUUUGGUGAGG-5' (SEQ ID NO: 1734)

βc-2735 Target: 5'-AGATTTACAAATAGCCTAAACCACTCC-3' (SEQ ID NO: 2843)

5'-GAUUUACAAAUAGCCUAAACCACUC-3' (SEQ ID NO: 3953)
3'-GUCUAAAUGUUUAUCGGAUUUGGUGAG-5' (SEQ ID NO: 1735)

βc-2736 Target: 5'-CAGATTTACAAATAGCCTAAACCACTC-3' (SEQ ID NO: 2844)

5'-UUUUUGUGGCAGAUUUACAAAUAGC-3' (SEQ ID NO: 3954)
3'-ACAAAAACACCGUCUAAAUGUUUAUCG-5' (SEQ ID NO: 1736)

βc-2747 Target: 5'-TGTTTTTGTGGCAGATTTACAAATAGC-3' (SEQ ID NO: 2845)

5'-GUUUUUGUGGCAGAUUUACAAAUAG-3' (SEQ ID NO: 3955)
3'-GACAAAAACACCGUCUAAAUGUUUAUC-5' (SEQ ID NO: 1737)

βc-2748 Target: 5'-CTGTTTTTGTGGCAGATTTACAAATAG-3' (SEQ ID NO: 2846)

5'-UGUUUUUGUGGCAGAUUUACAAAUA-3' (SEQ ID NO: 3956)
3'-GGACAAAAACACCGUCUAAAUGUUUAU-5' (SEQ ID NO: 1738)

βc-2749 Target: 5'-CCTGTTTTTGTGGCAGATTTACAAATA-3' (SEQ ID NO: 2847)

5'-AUACCUGUUUUUGUGGCAGAUUUAC-3' (SEQ ID NO: 3957)
3'-UAUAUGGACAAAAACACCGUCUAAAUG-5' (SEQ ID NO: 1739)

βc-2754 Target: 5'-ATATACCTGTTTTTGTGGCAGATTTAC-3' (SEQ ID NO: 2848)

5'-UUCAAAGUAUAUACCUGUUUUUGUG-3' (SEQ ID NO: 3958)
3'-GAAAGUUUCAUAUAUGGACAAAAACAC-5' (SEQ ID NO: 1740)

βc-2764 Target: 5'-CTTTCAAAGTATATACCTGTTTTTGTG-3' (SEQ ID NO: 2849)

5'-UCUCCUUUCAAAGUAUAUACCUGUU-3' (SEQ ID NO: 3959)
3'-GUAGAGGAAAGUUUCAUAUAUGGACAA-5' (SEQ ID NO: 1741)

βc-2770 Target: 5'-CATCTCCTTTCAAAGTATATACCTGTT-3' (SEQ ID NO: 2850)

5'-AUCUCCUUUCAAAGUAUAUACCUGU-3' (SEQ ID NO: 3960)

3'-UGUAGAGGAAAGUUUCAUAUAUGGACA-5' (SEQ ID NO: 1742)

βc-2771 Target: 5'-ACATCTCCTTTCAAAGTATATACCTGT-3' (SEQ ID NO: 2851)

5'-ACAUCUCCUUUCAAAGUAUAUACCU-3' (SEQ ID NO: 3961)
3'-UCUGUAGAGGAAAGUUUCAUAUAUGGA-5' (SEQ ID NO: 1743)

βc-2773 Target: 5'-AGACATCTCCTTTCAAAGTATATACCT-3' (SEQ ID NO: 2852)

5'-GACAUCUCCUUUCAAAGUAUAUACC-3' (SEQ ID NO: 3962)
3'-UUCUGUAGAGGAAAGUUUCAUAUAUGG-5' (SEQ ID NO: 1744)

βc-2774 Target: 5'-AAGACATCTCCTTTCAAAGTATATACC-3' (SEQ ID NO: 2853)

5'-AGACAUCUCCUUUCAAAGUAUAUAC-3' (SEQ ID NO: 3963)
3'-GUUCUGUAGAGGAAAGUUUCAUAUAUG-5' (SEQ ID NO: 1745)

βc-2775 Target: 5'-CAAGACATCTCCTTTCAAAGTATATAC-3' (SEQ ID NO: 2854)

5'-UUCCAAGACAUCUCCUUUCAAAGUA-3' (SEQ ID NO: 3964)
3'-ACAAGGUUCUGUAGAGGAAAGUUUCAU-5' (SEQ ID NO: 1746)

βc-2780 Target: 5'-TGTTCCAAGACATCTCCTTTCAAAGTA-3' (SEQ ID NO: 2855)

5'-UUCCAAUGUUCCAAGACAUCUCCUU-3' (SEQ ID NO: 3965)
3'-GUAAGGUUACAAGGUUCUGUAGAGGAA-5' (SEQ ID NO: 1747)

βc-2788 Target: 5'-CATTCCAATGTTCCAAGACATCTCCTT-3' (SEQ ID NO: 2856)

5'-AUUCCAAUGUUCCAAGACAUCUCCU-3' (SEQ ID NO: 3966)
3'-UGUAAGGUUACAAGGUUCUGUAGAGGA-5' (SEQ ID NO: 1748)

βc-2789 Target: 5'-ACATTCCAATGTTCCAAGACATCTCCT-3' (SEQ ID NO: 2857)

5'-ACAUUCCAAUGUUCCAAGACAUCUC-3' (SEQ ID NO: 3967)
3'-CUUGUAAGGUUACAAGGUUCUGUAGAG-5' (SEQ ID NO: 1749)

βc-2791 Target: 5'-GAACATTCCAATGTTCCAAGACATCTC-3' (SEQ ID NO: 2858)

5'-AGAAAUCUGAGAACAUUCCAAUGUU-3' (SEQ ID NO: 3968)
3'-GGUCUUUAGACUCUUGUAAGGUUACAA-5' (SEQ ID NO: 1750)

βc-2803 Target: 5'-CCAGAAATCTGAGAACATTCCAATGTT-3' (SEQ ID NO: 2859)

5'-AACCAGAAAUCUGAGAACAUUCCAA-3' (SEQ ID NO: 3969)
3'-UGUUGGUCUUUAGACUCUUGUAAGGUU-5' (SEQ ID NO: 1751)

βc-2807 Target: 5'-ACAACCAGAAATCTGAGAACATTCCAA-3' (SEQ ID NO: 2860)

5'-ACAACCAGAAAUCUGAGAACAUUCC-3' (SEQ ID NO: 3970)
3'-AUUGUUGGUCUUUAGACUCUUGUAAGG-5' (SEQ ID NO: 1752)

βc-2809 Target: 5'-TAACAACCAGAAATCTGAGAACATTCC-3' (SEQ ID NO: 2861)

5'-AACAACCAGAAAUCUGAGAACAUUC-3' (SEQ ID NO: 3971)
3'-UAUUGUUGGUCUUUAGACUCUUGUAAG-5' (SEQ ID NO: 1753)

βc-2810 Target: 5'-ATAACAACCAGAAATCTGAGAACATTC-3' (SEQ ID NO: 2862)

5'-UAACAACCAGAAAUCUGAGAACAUU-3' (SEQ ID NO: 3972)
3'-GUAUUGUUGGUCUUUAGACUCUUGUAA-5' (SEQ ID NO: 1754)

βc-2811 Target: 5'-CATAACAACCAGAAATCTGAGAACATT-3' (SEQ ID NO: 2863)

5'-AUCACAUAACAACCAGAAAUCUGAG-3' (SEQ ID NO: 3973)

3'-ACUAGUGUAUUGUUGGUCUUUAGACUC-5' (SEQ ID NO: 1755)

βc-2817 Target: 5'-TGATCACATAACAACCAGAAATCTGAG-3' (SEQ ID NO: 2864)

5'-GAUCACAUAACAACCAGAAAUCUGA-3' (SEQ ID NO: 3974)
3'-UACUAGUGUAUUGUUGGUCUUUAGACU-5' (SEQ ID NO: 1756)

βc-2818 Target: 5'-ATGATCACATAACAACCAGAAATCTGA-3' (SEQ ID NO: 2865)

5'-ACACAUGAUCACAUAACAACCAGAA-3' (SEQ ID NO: 3975)
3'-GGUGUGUACUAGUGUAUUGUUGGUCUU-5' (SEQ ID NO: 1757)

βc-2824 Target: 5'-CCACACATGATCACATAACAACCAGAA-3' (SEQ ID NO: 2866)

5'-UCCACACAUGAUCACAUAACAACCA-3' (SEQ ID NO: 3976)
3'-GAAGGUGUGUACUAGUGUAUUGUUGGU-5' (SEQ ID NO: 1758)

βc-2827 Target: 5'-CTTCCACACATGATCACATAACAACCA-3' (SEQ ID NO: 2867)

5'-UAACUUCCACACAUGAUCACAUAAC-3' (SEQ ID NO: 3977)
3'-UUAUUGAAGGUGUGUACUAGUGUAUUG-5' (SEQ ID NO: 1759)

βc-2832 Target: 5'-AATAACTTCCACACATGATCACATAAC-3' (SEQ ID NO: 2868)

5'-AUAACUUCCACACAUGAUCACAUAA-3' (SEQ ID NO: 3978)
3'-AUUAUUGAAGGUGUGUACUAGUGUAUU-5' (SEQ ID NO: 1760)

βc-2833 Target: 5'-TAATAACTTCCACACATGATCACATAA-3' (SEQ ID NO: 2869)

5'-AAUAACUUCCACACAUGAUCACAUA-3' (SEQ ID NO: 3979)
3'-AAUUAUUGAAGGUGUGUACUAGUGUAU-5' (SEQ ID NO: 1761)

βc-2834 Target: 5'-TTAATAACTTCCACACATGATCACATA-3' (SEQ ID NO: 2870)

5'-UAAUAACUUCCACACAUGAUCACAU-3' (SEQ ID NO: 3980)
3'-CAAUUAUUGAAGGUGUGUACUAGUGUA-5' (SEQ ID NO: 1762)

βc-2835 Target: 5'-GTTAATAACTTCCACACATGATCAC-3' (SEQ ID NO: 2871)

5'-UUAAAGUUAAUAACUUCCACACAUG-3' (SEQ ID NO: 3981)
3'-GUAAUUUCAAUUAUUGAAGGUGUGUAC-5' (SEQ ID NO: 1763)

βc-2842 Target: 5'-CATTAAAGTTAATAACTTCCACACATG-3' (SEQ ID NO: 2872)

5'-AUUAAAGUUAAUAACUUCCACACAU-3' (SEQ ID NO: 3982)
3'-UGUAAUUUCAAUUAUUGAAGGUGUGUA-5' (SEQ ID NO: 1764)

βc-2843 Target: 5'-ACATTAAAGTTAATAACTTCCACAC-3' (SEQ ID NO: 2873)

5'-ACAUUAAAGUUAAUAACUUCCACAC-3' (SEQ ID NO: 3983)
3'-UUUGUAAUUUCAAUUAUUGAAGGUGUG-5' (SEQ ID NO: 1765)

βc-2845 Target: 5'-AAACATTAAAGTTAATAACTTCCACAC-3' (SEQ ID NO: 2874)

5'-AACAUUAAAGUUAAUAACUUCCACA-3' (SEQ ID NO: 3984)
3'-UUUUGUAAUUUCAAUUAUUGAAGGUGU-5' (SEQ ID NO: 1766)

βc-2846 Target: 5'-AAAACATTAAAGTTAATAACTTCCACA-3' (SEQ ID NO: 2875)

5'-AAACAUUAAAGUUAAUAACUUCCAC-3' (SEQ ID NO: 3985)
3'-UUUUUGUAAUUUCAAUUAUUGAAGGUG-5' (SEQ ID NO: 1767)

βc-2847 Target: 5'-AAAAACATTAAAGTTAATAACTTCCAC-3' (SEQ ID NO: 2876)

5'-AAAACAUUAAAGUUAAUAACUUCCA-3' (SEQ ID NO: 3986)

3'-UUUUUUGUAAUUUCAAUUAUUGAAGGU-5' (SEQ ID NO: 1768)

βc-2848 Target: 5'-AAAAAACATTAAAGTTAATAACTTCCA-3' (SEQ ID NO: 2877)

5'-AAAAACAUUAAAGUUAAUAACUUCC-3' (SEQ ID NO: 3987)
3'-GUUUUUUGUAAUUUCAAUUAUUGAAGG-5' (SEQ ID NO: 1769)

βc-2849 Target: 5'-CAAAAAACATTAAAGTTAATAACTTCC-3' (SEQ ID NO: 2878)

5'-AAAAAACAUUAAAGUUAAUAACUUC-3' (SEQ ID NO: 3988)
3'-CGUUUUUUGUAAUUUCAAUUAUUGAAG-5' (SEQ ID NO: 1770)

βc-2850 Target: 5'-GCAAAAAACATTAAAGTTAATAACTTC-3' (SEQ ID NO: 2879)

5'-GCAAAAAACAUUAAAGUUAAUAACU-3' (SEQ ID NO: 3989)
3'-ACCGUUUUUUGUAAUUUCAAUUAUUGA-5' (SEQ ID NO: 1771)

βc-2852 Target: 5'-TGGCAAAAAACATTAAAGTTAATAACT-3' (SEQ ID NO: 2880)

5'-GGCAAAAAACAUUAAAGUUAAUAAC-3' (SEQ ID NO: 3990)
3'-CACCGUUUUUUGUAAUUUCAAUUAUUG-5' (SEQ ID NO: 1772)

βc-2853 Target: 5'-GTGGCAAAAAACATTAAAGTTAATAAC-3' (SEQ ID NO: 2881)

5'-GCAAAAGCUGUGGCAAAAAACAUUA-3' (SEQ ID NO: 3991)
3'-AACGUUUUCGACACCGUUUUUUGUAAU-5' (SEQ ID NO: 1773)

βc-2864 Target: 5'-TTGCAAAAGCTGTGGCAAAAAACATTA-3' (SEQ ID NO: 2882)

5'-UGCAAAAGCUGUGGCAAAAAACAUU-3' (SEQ ID NO: 3992)
3'-CAACGUUUUCGACACCGUUUUUUGUAA-5' (SEQ ID NO: 1774)

βc-2865 Target: 5'-GTTGCAAAAGCTGTGGCAAAAAACATT-3' (SEQ ID NO: 2883)

5'-UCAUUUGAGUAUUAAGUUGCAAAAG-3' (SEQ ID NO: 3993)
3'-UGAGUAAACUCAUAAUUCAACGUUUUC-5' (SEQ ID NO: 1775)

βc-2882 Target: 5'-ACTCATTTGAGTATTAAGTTGCAAAAG-3' (SEQ ID NO: 2884)

5'-AAAACAGCAAAUGUUACUCAUUUGA-3' (SEQ ID NO: 3994)
3'-AAUUUUGUCGUUUACAAUGAGUAAACU-5' (SEQ ID NO: 1776)

βc-2899 Target: 5'-TTAAAACAGCAAATGTTACTCATTTGA-3' (SEQ ID NO: 2885)

5'-UAAAACAGCAAAUGUUACUCAUUUG-3' (SEQ ID NO: 3995)
3'-AAAUUUUGUCGUUUACAAUGAGUAAAC-5' (SEQ ID NO: 1777)

βc-2900 Target: 5'-TTTAAAACAGCAAATGTTACTCATTTG-3' (SEQ ID NO: 2886)

5'-UUAAAACAGCAAAUGUUACUCAUUU-3' (SEQ ID NO: 3996)
3'-CAAAUUUUGUCGUUUACAAUGAGUAAA-5' (SEQ ID NO: 1778)

βc-2901 Target: 5'-GTTTAAAACAGCAAATGTTACTCATTT-3' (SEQ ID NO: 2887)

5'-UUUAAAACAGCAAAUGUUACUCAUU-3' (SEQ ID NO: 3997)
3'-ACAAAUUUUGUCGUUUACAAUGAGUAA-5' (SEQ ID NO: 1779)

βc-2902 Target: 5'-TGTTTAAAACAGCAAATGTTACTCATT-3' (SEQ ID NO: 2888)

5'-GUUUAAAACAGCAAAUGUUACUCAU-3' (SEQ ID NO: 3998)
3'-UACAAAUUUUGUCGUUUACAAUGAGUA-5' (SEQ ID NO: 1780)

βc-2903 Target: 5'-ATGTTTAAAACAGCAAATGTTACTC-3' (SEQ ID NO: 2889)

5'-UGUUUAAAACAGCAAAUGUUACUCA-3' (SEQ ID NO: 3999)

3'-UUACAAAUUUUGUCGUUUACAAUGAGU-5' (SEQ ID NO: 1781)

βc-2904 Target: 5'-AATGTTTAAAACAGCAAATGTTACTCA-3' (SEQ ID NO: 2890)

5'-AUUAAUGUUUAAAACAGCAAAUGUU-3' (SEQ ID NO: 4000)
3'-GAUAAUUACAAAUUUUGUCGUUUACAA-5' (SEQ ID NO: 1782)

βc-2909 Target: 5'-CTATTAATGTTTAAAACAGCAAATGTT-3' (SEQ ID NO: 2891)

5'-AGAAAGGCUGCUAUUAAUGUUUAAA-3' (SEQ ID NO: 4001)
3'-UCUCUUUCCGACGAUAAUUACAAAUUU-5' (SEQ ID NO: 1783)

βc-2921 Target: 5'-AGAGAAAGGCTGCTATTAATGTTTAAA-3' (SEQ ID NO: 2892)

5'-AGUUCAGACAAUACAGCUGUAUAAA-3' (SEQ ID NO: 4002)
3'-GUUCAAGUCUGUUAUGUCGACAUAUUU-5' (SEQ ID NO: 1784)

βc-2949 Target: 5'-CAAGTTCAGACAATACAGCTGTATAAA-3' (SEQ ID NO: 2893)

5'-ACAAUGCAAGUUCAGACAAUACAGC-3' (SEQ ID NO: 4003)
3'-AGUGUUACGUUCAAGUCUGUUAUGUCG-5' (SEQ ID NO: 1785)

βc-2957 Target: 5'-TCACAATGCAAGTTCAGACAATACAGC-3' (SEQ ID NO: 2894)

5'-UCACAAUGCAAGUUCAGACAAUACA-3' (SEQ ID NO: 4004)
3'-UUAGUGUUACGUUCAAGUCUGUUAUGU-5' (SEQ ID NO: 1786)

βc-2959 Target: 5'-AATCACAATGCAAGTTCAGACAATACA-3' (SEQ ID NO: 2895)

5'-AAUCACAAUGCAAGUUCAGACAAUA-3' (SEQ ID NO: 4005)
3'-GGUUAGUGUUACGUUCAAGUCUGUUAU-5' (SEQ ID NO: 1787)

βc-2961 Target: 5'-CCAATCACAATGCAAGTTCAGACAATA-3' (SEQ ID NO: 2896)

5'-GGCCAAUCACAAUGCAAGUUCAGAC-3' (SEQ ID NO: 4006)
3'-GUCCGGUUAGUGUUACGUUCAAGUCUG-5' (SEQ ID NO: 1788)

βc-2965 Target: 5'-CAGGCCAATCACAATGCAAGTTCAGAC-3' (SEQ ID NO: 2897)

5'-GUUCCCAUAGGAAACUCAGCUUGGU-3' (SEQ ID NO: 4007)
3'-AACAAGGGUAUCCUUUGAGUCGAACCA-5' (SEQ ID NO: 1789)

βc-3052 Target: 5'-TTGTTCCCATAGGAAACTCAGCTTGGT-3' (SEQ ID NO: 2898)

5'-UCAAUUGUUCCCAUAGGAAACUCAG-3' (SEQ ID NO: 4008)
3'-GAAGUUAACAAGGGUAUCCUUUGAGUC-5' (SEQ ID NO: 1790)

βc-3058 Target: 5'-CTTCAATTGTTCCCATAGGAAACTCAG-3' (SEQ ID NO: 2899)

5'-UUCAAUUGUUCCCAUAGGAAACUCA-3' (SEQ ID NO: 4009)
3'-UGAAGUUAACAAGGGUAUCCUUUGAGU-5' (SEQ ID NO: 1791)

βc-3059 Target: 5'-ACTTCAATTGTTCCCATAGGAAACTCA-3' (SEQ ID NO: 2900)

5'-GUUUACUUCAAUUGUUCCCAUAGGA-3' (SEQ ID NO: 4010)
3'-UUCAAAUGAAGUUAACAAGGGUAUCCU-5' (SEQ ID NO: 1792)

βc-3065 Target: 5'-AAGTTTACTTCAATTGTTCCCATAGGA-3' (SEQ ID NO: 2901)

5'-AGUUUACUUCAAUUGUUCCCAUAGG-3' (SEQ ID NO: 4011)
3'-UUUCAAAUGAAGUUAACAAGGGUAUCC-5' (SEQ ID NO: 1793)

βc-3066 Target: 5'-AAAGTTTACTTCAATTGTTCCCATAGG-3' (SEQ ID NO: 2902)

5'-AAAAAGUUUACUUCAAUUGUUCCCA-3' (SEQ ID NO: 4012)

3'-UGUUUUUCAAAUGAAGUUAACAAGGGU-5' (SEQ ID NO: 1794)

βc-3070 Target: 5'-ACAAAAAGTTTACTTCAATTGTTCCCA-3' (SEQ ID NO: 2903)

5'-GAACAAAAAGUUUACUUCAAUUGUU-3' (SEQ ID NO: 4013)
3'-GUCUUGUUUUUCAAAUGAAGUUAACAA-5' (SEQ ID NO: 1795)

βc-3074 Target: 5'-CAGAACAAAAAGTTTACTTCAATTGTT-3' (SEQ ID NO: 2904)

5'-GACCAGAACAAAAAGUUUACUUCAA-3' (SEQ ID NO: 4014)
3'-UCCUGGUCUUGUUUUUCAAAUGAAGUU-5' (SEQ ID NO: 1796)

βc-3079 Target: 5'-AGGACCAGAACAAAAAGTTTACTTCAA-3' (SEQ ID NO: 2905)

5'-GGACCAGAACAAAAAGUUUACUUCA-3' (SEQ ID NO: 4015)
3'-UUCCUGGUCUUGUUUUUCAAAUGAAGU-5' (SEQ ID NO: 1797)

βc-3080 Target: 5'-AAGGACCAGAACAAAAAGTTTACTTCA-3' (SEQ ID NO: 2906)

5'-ACCAAAAAGGACCAGAACAAAAAGU-3' (SEQ ID NO: 4016)
3'-GCUGGUUUUUCCUGGUCUUGUUUUUCA-5' (SEQ ID NO: 1798)

βc-3088 Target: 5'-CGACCAAAAAGGACCAGAACAAAAAGT-3' (SEQ ID NO: 2907)

5'-GACCAAAAAGGACCAGAACAAAAAG-3' (SEQ ID NO: 4017)
3'-AGCUGGUUUUUCCUGGUCUUGUUUUUC-5' (SEQ ID NO: 1799)

βc-3089 Target: 5'-TCGACCAAAAAGGACCAGAACAAAAAG-3' (SEQ ID NO: 2908)

5'-ACUCCUCGACCAAAAAGGACCAGAA-3' (SEQ ID NO: 4018)
3'-AAUGAGGAGCUGGUUUUUCCUGGUCUU-5' (SEQ ID NO: 1800)

βc-3096 Target: 5'-TTACTCCTCGACCAAAAAGGACCAGAA-3' (SEQ ID NO: 2909)

5'-UCCAUUUGUAUUGUUACUCCUCGAC-3' (SEQ ID NO: 4019)
3'-UUAGGUAAACAUAACAAUGAGGAGCUG-5' (SEQ ID NO: 1801)

βc-3111 Target: 5'-AATCCATTTGTATTGTTACTCCTCGAC-3' (SEQ ID NO: 2910)

5'-AUCCAUUUGUAUUGUUACUCCUCGA-3' (SEQ ID NO: 4020)
3'-UUUAGGUAAACAUAACAAUGAGGAGCU-5' (SEQ ID NO: 1802)

βc-3112 Target: 5'-AAATCCATTTGTATTGTTACTCCTCGA-3' (SEQ ID NO: 2911)

5'-AAUCCAUUUGUAUUGUUACUCCUCG-3' (SEQ ID NO: 4021)
3'-UUUUAGGUAAACAUAACAAUGAGGAGC-5' (SEQ ID NO: 1803)

βc-3113 Target: 5'-AAAATCCATTTGTATTGTTACTCCTCG-3' (SEQ ID NO: 2912)

5'-AAAUCCAUUUGUAUUGUUACUCCUC-3' (SEQ ID NO: 4022)
3'-GUUUUAGGUAAACAUAACAAUGAGGAG-5' (SEQ ID NO: 1804)

βc-3114 Target: 5'-CAAAATCCATTTGTATTGTTACTCCTC-3' (SEQ ID NO: 2913)

5'-AAAAUCCAUUUGUAUUGUUACUCCU-3' (SEQ ID NO: 4023)
3'-GGUUUUAGGUAAACAUAACAAUGAGGA-5' (SEQ ID NO: 1805)

βc-3115 Target: 5'-CCAAAATCCATTTGTATTGTTACTCCT-3' (SEQ ID NO: 2914)

5'-ACUCCCAAAAUCCAUUUGUAUUGUU-3' (SEQ ID NO: 4024)
3'-AGUGAGGGUUUUAGGUAAACAUAACAA-5' (SEQ ID NO: 1806)

βc-3121 Target: 5'-TCACTCCCAAAATCCATTTGTATTGTT-3' (SEQ ID NO: 2915)

5'-UUCACUUCUUGAGUCACUCCCAAAA-3' (SEQ ID NO: 4025)

3'-AGAAGUGAAGAACUCAGUGAGGGUUUU-5' (SEQ ID NO: 1807)

βc-3136 Target: 5'-TCTTCACTTCTTGAGTCACTCCCAAAA-3' (SEQ ID NO: 2916)

5'-UCUUCACUUCUUGAGUCACUCCCAA-3' (SEQ ID NO: 4026)
3'-UAAGAAGUGAAGAACUCAGUGAGGGUU-5' (SEQ ID NO: 1808)

βc-3138 Target: 5'-ATTCTTCACTTCTTGAGTCACTCCCAA-3' (SEQ ID NO: 2917)

5'-UUCUUCACUUCUUGAGUCACUCCCA-3' (SEQ ID NO: 4027)
3'-GUAAGAAGUGAAGAACUCAGUGAGGGU-5' (SEQ ID NO: 1809)

βc-3139 Target: 5'-CATTCTTCACTTCTTGAGTCACTCCCA-3' (SEQ ID NO: 2918)

5'-AUUCUUCACUUCUUGAGUCACUCCC-3' (SEQ ID NO: 4028)
3'-CGUAAGAAGUGAAGAACUCAGUGAGGG-5' (SEQ ID NO: 1810)

βc-3140 Target: 5'-GCATTCTTCACTTCTTGAGTCACTCCC-3' (SEQ ID NO: 2919)

5'-GCAUUCUUCACUUCUUGAGUCACUC-3' (SEQ ID NO: 4029)
3'-CACGUAAGAAGUGAAGAACUCAGUGAG-5' (SEQ ID NO: 1811)

βc-3142 Target: 5'-GTGCATTCTTCACTTCTTGAGTCACTC-3' (SEQ ID NO: 2920)

5'-AUUCUUGUGCAUUCUUCACUUCUUG-3' (SEQ ID NO: 4030)
3'-GGUAAGAACACGUAAGAAGUGAAGAAC-5' (SEQ ID NO: 1812)

βc-3150 Target: 5'-CCATTCTTGTGCATTCTTCACTTCTTG-3' (SEQ ID NO: 2921)

5'-UCCAUUCUUGUGCAUUCUUCACUUC-3' (SEQ ID NO: 4031)
3'-CUAGGUAAGAACACGUAAGAAGUGAAG-5' (SEQ ID NO: 1813)

βc-3153 Target: 5'-GATCCATTCTTGTGCATTCTTCACTTC-3' (SEQ ID NO: 2922)

5'-AUCCAUUCUUGUGCAUUCUUCACUU-3' (SEQ ID NO: 4032)
3'-ACUAGGUAAGAACACGUAAGAAGUGAA-5' (SEQ ID NO: 1814)

βc-3154 Target: 5'-TGATCCATTCTTGTGCATTCTTCACTT-3' (SEQ ID NO: 2923)

5'-GAUCCAUUCUUGUGCAUUCUUCACU-3' (SEQ ID NO: 4033)
3'-CACUAGGUAAGAACACGUAAGAAGUGA-5' (SEQ ID NO: 1815)

βc-3155 Target: 5'-GTGATCCATTCTTGTGCATTCTTCACT-3' (SEQ ID NO: 2924)

5'-AAUUCCAUCUUGUGAUCCAUUCUUG-3' (SEQ ID NO: 4034)
3'-AUUUAAGGUAGAACACUAGGUAAGAAC-5' (SEQ ID NO: 1816)

βc-3168 Target: 5'-TAAATTCCATCTTGTGATCCATTCTTG-3' (SEQ ID NO: 2925)

5'-UAAAUUCCAUCUUGUGAUCCAUUCU-3' (SEQ ID NO: 4035)
3'-CUAUUUAAGGUAGAACACUAGGUAAGA-5' (SEQ ID NO: 1817)

βc-3170 Target: 5'-GATAAATTCCATCTTGTGATCCATTCT-3' (SEQ ID NO: 2926)

5'-AUAAAUUCCAUCUUGUGAUCCAUUC-3' (SEQ ID NO: 4036)
3'-ACUAUUUAAGGUAGAACACUAGGUAAG-5' (SEQ ID NO: 1818)

βc-3171 Target: 5'-TGATAAATTCCATCTTGTGATCCATTC-3' (SEQ ID NO: 2927)

5'-GAUAAAUUCCAUCUUGUGAUCCAUU-3' (SEQ ID NO: 4037)
3'-AACUAUUUAAGGUAGAACACUAGGUAA-5' (SEQ ID NO: 1819)

βc-3172 Target: 5'-TTGATAAATTCCATCTTGTGATCCATT-3' (SEQ ID NO: 2928)

5'-UGAUAAAUUCCAUCUUGUGAUCCAU-3' (SEQ ID NO: 4038)

3'-AAACUAUUUAAGGUAGAACACUAGGUA-5' (SEQ ID NO: 1820)

βc-3173 Target: 5'-TTTGATAAATTCCATCTTGTGATCC-3' (SEQ ID NO: 2929)

5'-GGCUAGGGUUUGAUAAAUUCCAUCU-3' (SEQ ID NO: 4039)
3'-UUCCGAUCCCAAACUAUUUAAGGUAGA-5' (SEQ ID NO: 1821)

βc-3183 Target: 5'-AAGGCTAGGGTTTGATAAATTCCATCT-3' (SEQ ID NO: 2930)

5'-AAAAAUUUAACAAGCAAGGCUAGGG-3' (SEQ ID NO: 4040)
3'-UUUUUUUAAAUUGUUCGUUCCGAUCCC-5' (SEQ ID NO: 1822)

βc-3200 Target: 5'-AAAAAAATTTAACAAGCAAGGCTAGGG-3' (SEQ ID NO: 2931)

5'-AAAAAAAAAAAAAAUUUAACAAGCA-3' (SEQ ID NO: 4041)
3'-UUUUUUUUUUUUUUUUAAAUUGUUCGU-5' (SEQ ID NO: 1823)

βc-3209 Target: 5'-AAAAAAAAAAAAAAAATTTAACAAGCA-3' (SEQ ID NO: 2932)

5'-AAAAAAAAAAAAAAAUUUAACAAGC-3' (SEQ ID NO: 4042)
3'-UUUUUUUUUUUUUUUUAAAUUGUUCG-5' (SEQ ID NO: 1824)

βc-3210 Target: 5'-AAAAAAAAAAAAAAAAATTTAACAAGC-3' (SEQ ID NO: 2933)

5'-AAAAAAAAAAAAAAAUUUAACAAG-3' (SEQ ID NO: 4043)
3'-UUUUUUUUUUUUUUUUAAAUUGUUC-5' (SEQ ID NO: 1825)

βc-3211 Target: 5'-AAAAAAAAAAAAAAAAATTTAACAAG-3' (SEQ ID NO: 2934)

5'-AAAAAAAAAAAAAAAAUUUAACAA-3' (SEQ ID NO: 4044)
3'-UUUUUUUUUUUUUUUUAAAUUGUU-5' (SEQ ID NO: 1826)

βc-3212 Target: 5'-AAAAAAAAAAAAAAAAAATTTAACAA-3' (SEQ ID NO: 2935)

5'-AAAAAAAAAAAAAAAAAUUUAACA-3' (SEQ ID NO: 4045)
3'-AUUUUUUUUUUUUUUUUAAAUUGU-5' (SEQ ID NO: 1827)

βc-3213 Target: 5'-TAAAAAAAAAAAAAAAAATTTAACA-3' (SEQ ID NO: 2936)

5'-AAAAAAAAAAAAAAAAAUUUAAC-3' (SEQ ID NO: 4046)
3'-AAUUUUUUUUUUUUUUUUAAAUUG-5' (SEQ ID NO: 1828)

βc-3214 Target: 5'-TTAAAAAAAAAAAAAAAAATTTAAC-3' (SEQ ID NO: 2937)

5'-UAAAAAAAAAAAAAAAAAUUUAA-3' (SEQ ID NO: 4047)
3'-GAAUUUUUUUUUUUUUUUUAAAUU-5' (SEQ ID NO: 1829)

βc-3215 Target: 5'-CTTAAAAAAAAAAAAAAAAATTTAA-3' (SEQ ID NO: 2938)

5'-UUAAAAAAAAAAAAAAAAAUUUA-3' (SEQ ID NO: 4048)
3'-AGAAUUUUUUUUUUUUUUUUAAAU-5' (SEQ ID NO: 1830)

βc-3216 Target: 5'-TCTTAAAAAAAAAAAAAAAAATTTA-3' (SEQ ID NO: 2939)

5'-UCUUAAAAAAAAAAAAAAAAAUU-3' (SEQ ID NO: 4049)
3'-UAAGAAUUUUUUUUUUUUUUUUAA-5' (SEQ ID NO: 1831)

βc-3218 Target: 5'-ATTCTTAAAAAAAAAAAAAAAATT-3' (SEQ ID NO: 2940)

5'-UUCUUAAAAAAAAAAAAAAAAAU-3' (SEQ ID NO: 4050)
3'-AUAAGAAUUUUUUUUUUUUUUUA-5' (SEQ ID NO: 1832)

βc-3219 Target: 5'-TATTCTTAAAAAAAAAAAAAAAAT-3' (SEQ ID NO: 2941)

5'-AUUCUUAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 4051)

3'-UAUAAGAAUUUUUUUUUUUUUUUUUU-5' (SEQ ID NO: 1833)

βc-3220 Target: 5'-ATATTCTTAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2942)

5'-UAUUCUUAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 4052)
3'-CUAUAAGAAUUUUUUUUUUUUUUUUU-5' (SEQ ID NO: 1834)

βc-3221 Target: 5'-GATATTCTTAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2943)

5'-AUAUUCUUAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 4053)
3'-UCUAUAAGAAUUUUUUUUUUUUUUUUU-5' (SEQ ID NO: 1835)

βc-3222 Target: 5'-AGATATTCTTAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2944)

5'-GAUAUUCUUAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 4054)
3'-GUCUAUAAGAAUUUUUUUUUUUUUUUU-5' (SEQ ID NO: 1836)

βc-3223 Target: 5'-CAGATATTCTTAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2945)

5'-AGAUAUUCUUAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 4055)
3'-UGUCUAUAAGAAUUUUUUUUUUUUUUU-5' (SEQ ID NO: 1837)

βc-3224 Target: 5'-ACAGATATTCTTAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2946)

5'-UUACAGAUAUUCUUAAAAAAAAAAAA-3' (SEQ ID NO: 4056)
3'-GUAAUGUCUAUAAGAAUUUUUUUUUUU-5' (SEQ ID NO: 1838)

βc-3228 Target: 5'-CATTACAGATATTCTTAAAAAAAAAAA-3' (SEQ ID NO: 2947)

5'-AUUACAGAUAUUCUUAAAAAAAAAAA-3' (SEQ ID NO: 4057)
3'-GGUAAUGUCUAUAAGAAUUUUUUUUUU-5' (SEQ ID NO: 1839)

βc-3229 Target: 5'-CCATTACAGATATTCTTAAAAAAAAAA-3' (SEQ ID NO: 2948)

5'-UACCAUUACAGAUAUUCUUAAAAAA-3' (SEQ ID NO: 4058)
3'-UCAUGGUAAUGUCUAUAAGAAUUUUUU-5' (SEQ ID NO: 1840)

βc-3233 Target: 5'-AGTACCATTACAGATATTCTTAAAAAA-3' (SEQ ID NO: 2949)

5'-GUACCAUUACAGAUAUUCUUAAAAA-3' (SEQ ID NO: 4059)
3'-GUCAUGGUAAUGUCUAUAAGAAUUUUU-5' (SEQ ID NO: 1841)

βc-3234 Target: 5'-CAGTACCATTACAGATATTCTTAAAAA-3' (SEQ ID NO: 2950)

5'-AGUACCAUUACAGAUAUUCUUAAAA-3' (SEQ ID NO: 4060)
3'-AGUCAUGGUAAUGUCUAUAAGAAUUUU-5' (SEQ ID NO: 1842)

βc-3235 Target: 5'-TCAGTACCATTACAGATATTCTTAAAA-3' (SEQ ID NO: 2951)

5'-AGUCAGUACCAUUACAGAUAUUCUU-3' (SEQ ID NO: 4061)
3'-UUUCAGUCAUGGUAAUGUCUAUAAGAA-5' (SEQ ID NO: 1843)

βc-3239 Target: 5'-AAAGTCAGTACCATTACAGATATTCTT-3' (SEQ ID NO: 2952)

5'-UACUUCAAAGCAAGCAAAGUCAGUA-3' (SEQ ID NO: 4062)
3'-CGAUGAAGUUUCGUUCGUUUCAGUCAU-5' (SEQ ID NO: 1844)

βc-3256 Target: 5'-GCTACTTCAAAGCAAGCAAAGTCAGTA-3' (SEQ ID NO: 2953)

5'-AAAAAGAGCUACUUCAAAGCAAGCA-3' (SEQ ID NO: 4063)
3'-UUUUUUUCUCGAUGAAGUUUCGUUCGU-5' (SEQ ID NO: 1845)

βc-3265 Target: 5'-AAAAAAAGAGCTACTTCAAAGCAAGCA-3' (SEQ ID NO: 2954)

5'-AAAAAAAAAAGAGCUACUUCAAAGC-3' (SEQ ID NO: 4064)

3'-UUUUUUUUUUUUCUCGAUGAAGUUUCG-5' (SEQ ID NO: 1846)

βc-3270 Target: 5'-AAAAAAAAAAAAGAGCTACTTCAAAGC-3' (SEQ ID NO: 2955)

5'-AAAAAAAAAAAGAGCUACUUCAAAG-3' (SEQ ID NO: 4065)
3'-UUUUUUUUUUUUUCUCGAUGAAGUUUC-5' (SEQ ID NO: 1847)

βc-3271 Target: 5'-AAAAAAAAAAAAAGAGCTACTTCAAAG-3' (SEQ ID NO: 2956)

5'-AAAAAAAAAAAAAGAGCUACUUCAA-3' (SEQ ID NO: 4066)
3'-UUUUUUUUUUUUUUUCUCGAUGAAGUU-5' (SEQ ID NO: 1848)

βc-3273 Target: 5'-AAAAAAAAAAAAAAAGAGCTACTTCAA-3' (SEQ ID NO: 2957)

5'-AAAAAAAAAAAAAAAGAGCUACUUCA-3' (SEQ ID NO: 4067)
3'-UUUUUUUUUUUUUUUUCUCGAUGAAGU-5' (SEQ ID NO: 1849)

βc-3274 Target: 5'-AAAAAAAAAAAAAAAAAGAGCTACTTCA-3' (SEQ ID NO: 2958)

5'-AAAAAAAAAAAAAAAAGAGCUACUUC-3' (SEQ ID NO: 4068)
3'-UUUUUUUUUUUUUUUUUCUCGAUGAAG-5' (SEQ ID NO: 1850)

βc-3275 Target: 5'-AAAAAAAAAAAAAAAAAAGAGCTACTTC-3' (SEQ ID NO: 2959)

5'-AAAAAAAAAAAAAAAAAGAGCUACUU-3' (SEQ ID NO: 4069)
3'-UUUUUUUUUUUUUUUUUUCUCGAUGAA-5' (SEQ ID NO: 1851)

βc-3276 Target: 5'-AAAAAAAAAAAAAAAAAAAGAGCTACTT-3' (SEQ ID NO: 2960)

5'-AAAAAAAAAAAAAAAAAAAAAAGAG-3' (SEQ ID NO: 4070)
3'-UUUUUUUUUUUUUUUUUUUUUUUUUCUC-5' (SEQ ID NO: 1852)

βc-3282 Target: 5'-AAAAAAAAAAAAAAAAAAAAAAAAAGAG-3' (SEQ ID NO: 2961)

5'-AAAAAAAAAAAAAAAAAAAAAAAAGA-3' (SEQ ID NO: 4071)
3'-UUUUUUUUUUUUUUUUUUUUUUUUUCU-5' (SEQ ID NO: 1853)

βc-3283 Target: 5'-AAAAAAAAAAAAAAAAAAAAAAAAAGA-3' (SEQ ID NO: 2962)

5'-AAAAAAAAAAAAAAAAAAAAAAAAAG-3' (SEQ ID NO: 4072)
3'-GUUUUUUUUUUUUUUUUUUUUUUUUUC-5' (SEQ ID NO: 1854)

βc-3284 Target: 5'-CAAAAAAAAAAAAAAAAAAAAAAAAAG-3' (SEQ ID NO: 2963)

5'-AAAAAAAAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 4073)
3'-CGUUUUUUUUUUUUUUUUUUUUUUUUU-5' (SEQ ID NO: 1855)

βc-3285 Target: 5'-GCAAAAAAAAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2964)

5'-GCAAAAAAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 4074)
3'-GACGUUUUUUUUUUUUUUUUUUUUU-5' (SEQ ID NO: 1856)

βc-3287 Target: 5'-CTGCAAAAAAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2965)

5'-UGCAAAAAAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 4075)
3'-UGACGUUUUUUUUUUUUUUUUUUUUU-5' (SEQ ID NO: 1857)

βc-3288 Target: 5'-ACTGCAAAAAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2966)

5'-UUACUGCAAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 4076)
3'-UCAAUGACGUUUUUUUUUUUUUUUUU-5' (SEQ ID NO: 1858)

βc-3292 Target: 5'-AGTTACTGCAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2967)

5'-GUUACUGCAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 4077)

3'-GUCAAUGACGUUUUUUUUUUUUUUUU-5' (SEQ ID NO: 1859)

βc-3293 Target: 5'-CAGTTACTGCAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2968)

5'-AGUUACUGCAAAAAAAAAAAAAAA-3' (SEQ ID NO: 4078)
3'-UGUCAAUGACGUUUUUUUUUUUUUUU-5' (SEQ ID NO: 1860)

βc-3294 Target: 5'-ACAGTTACTGCAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2969)

5'-AAACAGUUACUGCAAAAAAAAAAAA-3' (SEQ ID NO: 4079)
3'-UUUUUGUCAAUGACGUUUUUUUUUUUU-5' (SEQ ID NO: 1861)

βc-3298 Target: 5'-AAAAACAGTTACTGCAAAAAAAAAAAA-3' (SEQ ID NO: 2970)

5'-AAAACAGUUACUGCAAAAAAAAAAAA-3' (SEQ ID NO: 4080)
3'-UUUUUUGUCAAUGACGUUUUUUUUUUU-5' (SEQ ID NO: 1862)

βc-3299 Target: 5'-AAAAAACAGTTACTGCAAAAAAAAAAA-3' (SEQ ID NO: 2971)

5'-AAAAACAGUUACUGCAAAAAAAAAA-3' (SEQ ID NO: 4081)
3'-AUUUUUUGUCAAUGACGUUUUUUUUUU-5' (SEQ ID NO: 1863)

βc-3300 Target: 5'-TAAAAAACAGTTACTGCAAAAAAAAAA-3' (SEQ ID NO: 2972)

5'-UAAAAAACAGUUACUGCAAAAAAAA-3' (SEQ ID NO: 4082)
3'-GAAUUUUUUGUCAAUGACGUUUUUUU-5' (SEQ ID NO: 1864)

βc-3302 Target: 5'-CTTAAAAAACAGTTACTGCAAAAAAAA-3' (SEQ ID NO: 2973)

5'-UUAAAAAACAGUUACUGCAAAAAAA-3' (SEQ ID NO: 4083)
3'-UGAAUUUUUUGUCAAUGACGUUUUUUU-5' (SEQ ID NO: 1865)

βc-3303 Target: 5'-ACTTAAAAAACAGTTACTGCAAAAAAA-3' (SEQ ID NO: 2974)

5'-ACUUAAAAAACAGUUACUGCAAAAA-3' (SEQ ID NO: 4084)
3'-UCUGAAUUUUUUGUCAAUGACGUUUUU-5' (SEQ ID NO: 1866)

βc-3305 Target: 5'-AGACTTAAAAAACAGTTACTGCAAAAA-3' (SEQ ID NO: 2975)

5'-ACUACGAGAGACUUAAAAAACAGUU-3' (SEQ ID NO: 4085)
3'-UGUGAUGCUCUCUGAAUUUUUUGUCAA-5' (SEQ ID NO: 1867)

βc-3315 Target: 5'-ACACTACGAGAGACTTAAAAAACAGTT-3' (SEQ ID NO: 2976)

5'-ACACUACGAGAGACUUAAAAAACAG-3' (SEQ ID NO: 4086)
3'-AUUGUGAUGCUCUCUGAAUUUUUUGUC-5' (SEQ ID NO: 1868)

βc-3317 Target: 5'-TAACACTACGAGAGACTTAAAAAACAG-3' (SEQ ID NO: 2977)

5'-AACACUACGAGAGACUUAAAAAACA-3' (SEQ ID NO: 4087)
3'-AAUUGUGAUGCUCUCUGAAUUUUUUGU-5' (SEQ ID NO: 1869)

βc-3318 Target: 5'-TTAACACTACGAGAGACTTAAAAAACA-3' (SEQ ID NO: 2978)

5'-UUAACACUACGAGAGACUUAAAAAA-3' (SEQ ID NO: 4088)
3'-UGAAUUGUGAUGCUCUCUGAAUUUUUU-5' (SEQ ID NO: 1870)

βc-3320 Target: 5'-ACTTAACACTACGAGAGACTTAAAAAA-3' (SEQ ID NO: 2979)

5'-AACUUAACACUACGAGAGACUUAAA-3' (SEQ ID NO: 4089)
3'-UAUUGAAUUGUGAUGCUCUCUGAAUUU-5' (SEQ ID NO: 1871)

βc-3323 Target: 5'-ATAACTTAACACTACGAGAGACTTAAA-3' (SEQ ID NO: 2980)

5'-UAACUUAACACUACGAGAGACUUAA-3' (SEQ ID NO: 4090)

3'-AUAUUGAAUUGUGAUGCUCUCUGAAUU-5' (SEQ ID NO: 1872)

βc-3324 Target: 5'-TATAACTTAACACTACGAGAGACTTAA-3' (SEQ ID NO: 2981)

5'-AUUCACUAUAACUUAACACUACGAG-3' (SEQ ID NO: 4091)
3'-CAUAAGUGAUAUUGAAUUGUGAUGCUC-5' (SEQ ID NO: 1873)

βc-3332 Target: 5'-GTATTCACTATAACTTAACACTACGAG-3' (SEQ ID NO: 2982)

5'-UAUUCACUAUAACUUAACACUACGA-3' (SEQ ID NO: 4092)
3'-UCAUAAGUGAUAUUGAAUUGUGAUGCU-5' (SEQ ID NO: 1874)

βc-3333 Target: 5'-AGTATTCACTATAACTTAACACTACGA-3' (SEQ ID NO: 2983)

5'-GUAUUCACUAUAACUUAACACUACG-3' (SEQ ID NO: 4093)
3'-GUCAUAAGUGAUAUUGAAUUGUGAUGC-5' (SEQ ID NO: 1875)

βc-3334 Target: 5'-CAGTATTCACTATAACTTAACACTACG-3' (SEQ ID NO: 2984)

5'-AGUAUUCACUAUAACUUAACACUAC-3' (SEQ ID NO: 4094)
3'-CGUCAUAAGUGAUAUUGAAUUGUGAUG-5' (SEQ ID NO: 1876)

βc-3335 Target: 5'-GCAGTATTCACTATAACTTAACACTAC-3' (SEQ ID NO: 2985)

5'-AAAUUGCUGUAGCAGUAUUCACUAU-3' (SEQ ID NO: 4095)
3'-UCUUUAACGACAUCGUCAUAAGUGAUA-5' (SEQ ID NO: 1877)

βc-3348 Target: 5'-AGAAATTGCTGTAGCAGTATTCACTAT-3' (SEQ ID NO: 2986)

5'-GAAAUUGCUGUAGCAGUAUUCACUA-3' (SEQ ID NO: 4096)
3'-AUCUUUAACGACAUCGUCAUAAGUGAU-5' (SEQ ID NO: 1878)

βc-3349 Target: 5'-TAGAAATTGCTGTAGCAGTATTCACTA-3' (SEQ ID NO: 2987)

5'-AGAAAUUGCUGUAGCAGUAUUCACU-3' (SEQ ID NO: 4097)
3'-AAUCUUUAACGACAUCGUCAUAAGUGA-5' (SEQ ID NO: 1879)

βc-3350 Target: 5'-TTAGAAATTGCTGTAGCAGTATTCACT-3' (SEQ ID NO: 2988)

5'-UCAAUUCUUAAAAAUUAGAAAUUGC-3' (SEQ ID NO: 4098)
3'-UGAGUUAAGAAUUUUUAAUCUUUAACG-5' (SEQ ID NO: 1880)

βc-3366 Target: 5'-ACTCAATTCTTAAAAATTAGAAATTGC-3' (SEQ ID NO: 2989)

5'-AUUACUCAAUUCUUAAAAAUUAGAA-3' (SEQ ID NO: 4099)
3'-GGUAAUGAGUUAAGAAUUUUUAAUCUU-5' (SEQ ID NO: 1881)

βc-3371 Target: 5'-CCATTACTCAATTCTTAAAAATTAGAA-3' (SEQ ID NO: 2990)

5'-ACCAUUACUCAAUUCUUAAAAAUUA-3' (SEQ ID NO: 4100)
3'-UGUGGUAAUGAGUUAAGAAUUUUUAAU-5' (SEQ ID NO: 1882)

βc-3374 Target: 5'-ACACCATTACTCAATTCTTAAAAATTA-3' (SEQ ID NO: 2991)

5'-ACACCAUUACUCAAUUCUUAAAAAU-3' (SEQ ID NO: 4101)
3'-GAUGUGGUAAUGAGUUAAGAAUUUUUA-5' (SEQ ID NO: 1883)

βc-3376 Target: 5'-CTACACCATTACTCAATTCTTAAAAAT-3' (SEQ ID NO: 2992)

5'-UACACCAUUACUCAAUUCUUAAAAA-3' (SEQ ID NO: 4102)
3'-AGAUGUGGUAAUGAGUUAAGAAUUUUU-5' (SEQ ID NO: 1884)

βc-3377 Target: 5'-TCTACACCATTACTCAATTCTTAAAAA-3' (SEQ ID NO: 2993)

5'-UCUACACCAUUACUCAAUUCUUAAA-3' (SEQ ID NO: 4103)

3'-CAAGAUGUGGUAAUGAGUUAAGAAUUU-5' (SEQ ID NO: 1885)

βc-3379 Target: 5'-GTTCTACACCATTACTCAATTCTTAAA-3' (SEQ ID NO: 2994)

5'-GUUCUACACCAUUACUCAAUUCUUA-3' (SEQ ID NO: 4104)
3'-CACAAGAUGUGGUAAUGAGUUAAGAAU-5' (SEQ ID NO: 1886)

βc-3381 Target: 5'-GTGTTCTACACCATTACTCAATTCTTA-3' (SEQ ID NO: 2995)

5'-GAAUUAGUGUUCUACACCAUUACUC-3' (SEQ ID NO: 4105)
3'-UACUUAAUCACAAGAUGUGGUAAUGAG-5' (SEQ ID NO: 1887)

βc-3389 Target: 5'-ATGAATTAGTGTTCTACACCATTACTC-3' (SEQ ID NO: 2996)

5'-AUUAUGAAUUAGUGUUCUACACCAU-3' (SEQ ID NO: 4106)
3'-ACUAAUACUUAAUCACAAGAUGUGGUA-5' (SEQ ID NO: 1888)

βc-3394 Target: 5'-TGATTATGAATTAGTGTTCTACACC-3' (SEQ ID NO: 2997)

5'-GAUUAUGAAUUAGUGUUCUACACCA-3' (SEQ ID NO: 4107)
3'-CACUAAUACUUAAUCACAAGAUGUGGU-5' (SEQ ID NO: 1889)

βc-3395 Target: 5'-GTGATTATGAATTAGTGTTCTACACCA-3' (SEQ ID NO: 2998)

5'-UGAUUAUGAAUUAGUGUUCUACACC-3' (SEQ ID NO: 4108)
3'-UCACUAAUACUUAAUCACAAGAUGUGG-5' (SEQ ID NO: 1890)

βc-3396 Target: 5'-AGTGATTATGAATTAGTGTTCTACACC-3' (SEQ ID NO: 2999)

5'-UAAUUAGAGUGAUUAUGAAUUAGUG-3' (SEQ ID NO: 4109)
3'-UAAUUAAUCUCACUAAUACUUAAUCAC-5' (SEQ ID NO: 1891)

βc-3405 Target: 5'-ATTAATTAGAGTGATTATGAATTAGTG-3' (SEQ ID NO: 3000)

5'-UUAAUUAGAGUGAUUAUGAAUUAGU-3' (SEQ ID NO: 4110)
3'-UUAAUUAAUCUCACUAAUACUUAAUCA-5' (SEQ ID NO: 1892)

βc-3406 Target: 5'-AATTAATTAGAGTGATTATGAATTAGT-3' (SEQ ID NO: 3001)

5'-AUUAAUUAGAGUGAUUAUGAAUUAG-3' (SEQ ID NO: 4111)
3'-GUUAAUUAAUCUCACUAAUACUUAAUC-5' (SEQ ID NO: 1893)

βc-3407 Target: 5'-CAATTAATTAGAGTGATTATGAATTAG-3' (SEQ ID NO: 3002)

5'-UACAAUUAAUUAGAGUGAUUAUGAA-3' (SEQ ID NO: 4112)
3'-UAAUGUUAAUUAAUCUCACUAAUACUU-5' (SEQ ID NO: 1894)

βc-3411 Target: 5'-ATTACAATTAATTAGAGTGATTATGAA-3' (SEQ ID NO: 3003)

5'-UUACAAUUAAUUAGAGUGAUUAUGA-3' (SEQ ID NO: 4113)
3'-CUAAUGUUAAUUAAUCUCACUAAUACU-5' (SEQ ID NO: 1895)

βc-3412 Target: 5'-GATTACAATTAATTAGAGTGATTATGA-3' (SEQ ID NO: 3004)

5'-AUUACAAUUAAUUAGAGUGAUUAUG-3' (SEQ ID NO: 4114)
3'-UCUAAUGUUAAUUAAUCUCACUAAUAC-5' (SEQ ID NO: 1896)

βc-3413 Target: 5'-AGATTACAATTAATTAGAGTGATTATG-3' (SEQ ID NO: 3005)

5'-UUAUUCAGAUUACAAUUAAUUAGAG-3' (SEQ ID NO: 4115)
3'-GAAAUAAGUCUAAUGUUAAUUAAUCUC-5' (SEQ ID NO: 1897)

βc-3421 Target: 5'-CTTTATTCAGATTACAATTAATTAGAG-3' (SEQ ID NO: 3006)

5'-UUUAUUCAGAUUACAAUUAAUUAGA-3' (SEQ ID NO: 4116)

3'-UGAAAUAAGUCUAAUGUUAAUUAAUCU-5' (SEQ ID NO: 1898)

βc-3422 Target: 5'-ACTTTATTCAGATTACAATTAATTAGA-3' (SEQ ID NO: 3007)

5'-ACACUUUAUUCAGAUUACAAUUAAU-3' (SEQ ID NO: 4117)
3'-AAUGUGAAAUAAGUCUAAUGUUAAUUA-5' (SEQ ID NO: 1899)

βc-3426 Target: 5'-TTACACTTTATTCAGATTACAATTAAT-3' (SEQ ID NO: 3008)

5'-UACACUUUAUUCAGAUUACAAUUAA-3' (SEQ ID NO: 4118)
3'-CAAUGUGAAAUAAGUCUAAUGUUAAUU-5' (SEQ ID NO: 1900)

βc-3427 Target: 5'-GTTACACTTTATTCAGATTACAATTAA-3' (SEQ ID NO: 3009)

5'-UUACACUUUAUUCAGAUUACAAUUA-3' (SEQ ID NO: 4119)
3'-ACAAUGUGAAAUAAGUCUAAUGUUAAU-5' (SEQ ID NO: 1901)

βc-3428 Target: 5'-TGTTACACTTTATTCAGATTACAATTA-3' (SEQ ID NO: 3010)

5'-GUUACACUUUAUUCAGAUUACAAUU-3' (SEQ ID NO: 4120)
3'-AACAAUGUGAAAUAAGUCUAAUGUUAA-5' (SEQ ID NO: 1902)

βc-3429 Target: 5'-TTGTTACACTTTATTCAGATTACAATT-3' (SEQ ID NO: 3011)

5'-UGUUACACUUUAUUCAGAUUACAAU-3' (SEQ ID NO: 4121)
3'-UAACAAUGUGAAAUAAGUCUAAUGUUA-5' (SEQ ID NO: 1903)

βc-3430 Target: 5'-ATTGTTACACTTTATTCAGATTACAAT-3' (SEQ ID NO: 3012)

5'-ACACAAUUGUUACACUUUAUUCAGA-3' (SEQ ID NO: 4122)
3'-GAUGUGUUAACAAUGUGAAAUAAGUCU-5' (SEQ ID NO: 1904)

βc-3437 Target: 5'-CTACACAATTGTTACACTTTATTCAGA-3' (SEQ ID NO: 3013)

5'-GGCUACACAAUUGUUACACUUUAUU-3' (SEQ ID NO: 4123)
3'-UUCCGAUGUGUUAACAAUGUGAAAUAA-5' (SEQ ID NO: 1905)

βc-3441 Target: 5'-AAGGCTACACAATTGTTACACTTTATT-3' (SEQ ID NO: 3014)

5'-AAAAAGGCUACACAAUUGUUACACU-3' (SEQ ID NO: 4124)
3'-UGUUUUUCCGAUGUGUUAACAAUGUGA-5' (SEQ ID NO: 1906)

βc-3446 Target: 5'-ACAAAAAGGCTACACAATTGTTACACT-3' (SEQ ID NO: 3015)

5'-UUAUACAAAAAGGCUACACAAUUGU-3' (SEQ ID NO: 4125)
3'-AAAAUAUGUUUUUCCGAUGUGUUAACA-5' (SEQ ID NO: 1907)

βc-3452 Target: 5'-TTTTATACAAAAAGGCTACACAATTGT-3' (SEQ ID NO: 3016)

5'-UUUAUACAAAAAGGCUACACAAUUG-3' (SEQ ID NO: 4126)
3'-UAAAAUAUGUUUUUCCGAUGUGUUAAC-5' (SEQ ID NO: 1908)

βc-3453 Target: 5'-ATTTTATACAAAAAGGCTACACAATTG-3' (SEQ ID NO: 3017)

5'-AUUUUAUACAAAAAGGCUACACAAU-3' (SEQ ID NO: 4127)
3'-GAUAAAAUAUGUUUUUCCGAUGUGUUA-5' (SEQ ID NO: 1909)

βc-3455 Target: 5'-CTATTTTATACAAAAAGGCTACACAAT-3' (SEQ ID NO: 3018)

5'-UAUUUUAUACAAAAAGGCUACACAA-3' (SEQ ID NO: 4128)
3'-AGAUAAAAUAUGUUUUUCCGAUGUGUU-5' (SEQ ID NO: 1910)

βc-3456 Target: 5'-TCTATTTTATACAAAAAGGCTACACAA-3' (SEQ ID NO: 3019)

5'-UCUAUUUUAUACAAAAAGGCUACAC-3' (SEQ ID NO: 4129)

3'-ACAGAUAAAAUAUGUUUUUCCGAUGUG-5' (SEQ ID NO: 1911)

βc-3458 Target: 5'-TGTCTATTTTATACAAAAAGGCTACAC-3' (SEQ ID NO: 3020)

5'-UAUUUGUCUAUUUUAUACAAAAAGG-3' (SEQ ID NO: 4130)
3'-AGAUAAACAGAUAAAAUAUGUUUUUCC-5' (SEQ ID NO: 1912)

βc-3464 Target: 5'-TCTATTTGTCTATTTTATACAAAAAGG-3' (SEQ ID NO: 3021)

5'-UCUAUUUGUCUAUUUUAUACAAAAA-3' (SEQ ID NO: 4131)
3'-AAAGAUAAACAGAUAAAAUAUGUUUUU-5' (SEQ ID NO: 1913)

βc-3466 Target: 5'-TTTCTATTTGTCTATTTTATACAAAAA-3' (SEQ ID NO: 3022)

5'-UUCUAUUUGUCUAUUUUAUACAAAA-3' (SEQ ID NO: 4132)
3'-AAAAGAUAAACAGAUAAAAUAUGUUUU-5' (SEQ ID NO: 1914)

βc-3467 Target: 5'-TTTTCTATTTGTCTATTTTATACAAAA-3' (SEQ ID NO: 3023)

5'-UUUCUAUUUGUCUAUUUUAUACAAA-3' (SEQ ID NO: 4133)
3'-UAAAAGAUAAACAGAUAAAAUAUGUUU-5' (SEQ ID NO: 1915)

βc-3468 Target: 5'-ATTTTCTATTTGTCTATTTTATACAAA-3' (SEQ ID NO: 3024)

5'-UUUUCUAUUUGUCUAUUUUAUACAA-3' (SEQ ID NO: 4134)
3'-GUAAAAGAUAAACAGAUAAAAUAUGUU-5' (SEQ ID NO: 1916)

βc-3469 Target: 5'-CATTTTCTATTTGTCTATTTTATACAA-3' (SEQ ID NO: 3025)

5'-AUUUUCUAUUUGUCUAUUUUAUACA-3' (SEQ ID NO: 4135)
3'-GGUAAAAGAUAAACAGAUAAAAUAUGU-5' (SEQ ID NO: 1917)

βc-3470 Target: 5'-CCATTTTCTATTTGTCTATTTTATACA-3' (SEQ ID NO: 3026)

5'-ACCAUUUUCUAUUUGUCUAUUUUAU-3' (SEQ ID NO: 4136)
3'-CCUGGUAAAAGAUAAACAGAUAAAAUA-5' (SEQ ID NO: 1918)

βc-3473 Target: 5'-GGACCATTTTCTATTTGTCTATTTTAT-3' (SEQ ID NO: 3027)

5'-GACCAUUUUCUAUUUGUCUAUUUUA-3' (SEQ ID NO: 4137)
3'-ACCUGGUAAAAGAUAAACAGAUAAAAU-5' (SEQ ID NO: 1919)

βc-3474 Target: 5'-TGGACCATTTTCTATTTGTCTATTTTA-3' (SEQ ID NO: 3028)

5'-GGACCAUUUUCUAUUUGUCUAUUUU-3' (SEQ ID NO: 4138)
3'-AACCUGGUAAAAGAUAAACAGAUAAAA-5' (SEQ ID NO: 1920)

βc-3475 Target: 5'-TTGGACCATTTTCTATTTGTCTATTTT-3' (SEQ ID NO: 3029)

5'-ACUAAUUGGACCAUUUUCUAUUUGU-3' (SEQ ID NO: 4139)
3'-UUUGAUUAACCUGGUAAAAGAUAAACA-5' (SEQ ID NO: 1921)

βc-3482 Target: 5'-AAACTAATTGGACCATTTTCTATTTGT-3' (SEQ ID NO: 3030)

5'-AACUAAUUGGACCAUUUUCUAUUUG-3' (SEQ ID NO: 4140)
3'-CUUUGAUUAACCUGGUAAAAGAUAAAC-5' (SEQ ID NO: 1922)

βc-3483 Target: 5'-GAAACTAATTGGACCATTTTCTATTTG-3' (SEQ ID NO: 3031)

5'-AAACUAAUUGGACCAUUUUCUAUUU-3' (SEQ ID NO: 4141)
3'-CCUUUGAUUAACCUGGUAAAAGAUAAA-5' (SEQ ID NO: 1923)

βc-3484 Target: 5'-GGAAACTAATTGGACCATTTTCTATTT-3' (SEQ ID NO: 3032)

5'-GAAACUAAUUGGACCAUUUUCUAUU-3' (SEQ ID NO: 4142)

3'-UCCUUUGAUUAACCUGGUAAAAGAUAA-5' (SEQ ID NO: 1924)

βc-3485 Target: 5'-AGGAAACTAATTGGACCATTTTCTATT-3' (SEQ ID NO: 3033)

5'-AAAAAGGAAACUAAUUGGACCAUUU-3' (SEQ ID NO: 4143)
3'-AAUUUUUCCUUUGAUUAACCUGGUAAA-5' (SEQ ID NO: 1925)

βc-3491 Target: 5'-TTAAAAAGGAAACTAATTGGACCATTT-3' (SEQ ID NO: 3034)

5'-UAAAAAGGAAACUAAUUGGACCAUU-3' (SEQ ID NO: 4144)
3'-UAAUUUUUCCUUUGAUUAACCUGGUAA-5' (SEQ ID NO: 1926)

βc-3492 Target: 5'-ATTAAAAAGGAAACTAATTGGACCATT-3' (SEQ ID NO: 3035)

5'-GCAUAUUAAAAAGGAAACUAAUUGG-3' (SEQ ID NO: 4145)
3'-UUCGUAUAAUUUUUCCUUUGAUUAACC-5' (SEQ ID NO: 1927)

βc-3498 Target: 5'-AAGCATATTAAAAAGGAAACTAATTGG-3' (SEQ ID NO: 3036)

5'-AGCAUAUUAAAAAGGAAACUAAUUG-3' (SEQ ID NO: 4146)
3'-AUUCGUAUAAUUUUUCCUUUGAUUAAC-5' (SEQ ID NO: 1928)

βc-3499 Target: 5'-TAAGCATATTAAAAAGGAAACTAATTG-3' (SEQ ID NO: 3037)

5'-UUUAAGCAUAUUAAAAAGGAAACUA-3' (SEQ ID NO: 4147)
3'-UAAAAUUCGUAUAAUUUUUCCUUUGAU-5' (SEQ ID NO: 1929)

βc-3503 Target: 5'-ATTTTAAGCATATTAAAAAGGAAACTA-3' (SEQ ID NO: 3038)

5'-GCUUAUUUUAAGCAUAUUAAAAAGG-3' (SEQ ID NO: 4148)
3'-GACGAAUAAAAUUCGUAUAAUUUUUCC-5' (SEQ ID NO: 1930)

βc-3509 Target: 5'-CTGCTTATTTTAAGCATATTAAAAAGG-3' (SEQ ID NO: 3039)

5'-UGCUUAUUUUAAGCAUAUUAAAAAG-3' (SEQ ID NO: 4149)
3'-GGACGAAUAAAAUUCGUAUAAUUUUUC-5' (SEQ ID NO: 1931)

βc-3510 Target: 5'-CCTGCTTATTTTAAGCATATTAAAAAG-3' (SEQ ID NO: 3040)

5'-UCCACCUGCUUAUUUUAAGCAUAUU-3' (SEQ ID NO: 4150)
3'-CUAGGUGGACGAAUAAAAUUCGUAUAA-5' (SEQ ID NO: 1932)

βc-3516 Target: 5'-GATCCACCTGCTTATTTTAAGCATATT-3' (SEQ ID NO: 3041)

5'-AAAACAUGAAAUAGAUCCACCUGCU-3' (SEQ ID NO: 4151)
3'-GUUUUUGUACUUUAUCUAGGUGGACGA-5' (SEQ ID NO: 1933)

βc-3531 Target: 5'-CAAAAACATGAAATAGATCCACCTGCT-3' (SEQ ID NO: 3042)

5'-AAAAACAUGAAAUAGAUCCACCUGC-3' (SEQ ID NO: 4152)
3'-AGUUUUUGUACUUUAUCUAGGUGGACG-5' (SEQ ID NO: 1934)

βc-3532 Target: 5'-TCAAAAACATGAAATAGATCCACCTGC-3' (SEQ ID NO: 3043)

5'-UCAAAAACAUGAAAUAGAUCCACCU-3' (SEQ ID NO: 4153)
3'-CUAGUUUUUGUACUUUAUCUAGGUGGA-5' (SEQ ID NO: 1935)

βc-3534 Target: 5'-GATCAAAAACATGAAATAGATCCACCT-3' (SEQ ID NO: 3044)

5'-AUCAAAAACAUGAAAUAGAUCCACC-3' (SEQ ID NO: 4154)
3'-ACUAGUUUUUGUACUUUAUCUAGGUGG-5' (SEQ ID NO: 1936)

βc-3535 Target: 5'-TGATCAAAAACATGAAATAGATCCACC-3' (SEQ ID NO: 3045)

5'-GAUCAAAAACAUGAAAUAGAUCCAC-3' (SEQ ID NO: 4155)

3'-AACUAGUUUUUGUACUUUAUCUAGGUG-5' (SEQ ID NO: 1937)

βc-3536 Target: 5'-TTGATCAAAAACATGAAATAGATCCAC-3' (SEQ ID NO: 3046)

5'-UUUUUGAUCAAAAACAUGAAAUAGA-3' (SEQ ID NO: 4156)
3'-UCAAAAACUAGUUUUUGUACUUUAUCU-5' (SEQ ID NO: 1938)

βc-3541 Target: 5'-AGTTTTTGATCAAAAACATGAAATAGA-3' (SEQ ID NO: 3047)

5'-AAAUAGUUUUUGAUCAAAAACAUGA-3' (SEQ ID NO: 4157)
3'-GGUUUAUCAAAAACUAGUUUUUGUACU-5' (SEQ ID NO: 1939)

βc-3547 Target: 5'-CCAAATAGTTTTTGATCAAAAACATGA-3' (SEQ ID NO: 3048)

5'-UCCCAAAUAGUUUUUGAUCAAAAAC-3' (SEQ ID NO: 4158)
3'-AUAGGGUUUAUCAAAAACUAGUUUUUG-5' (SEQ ID NO: 1940)

βc-3551 Target: 5'-TATCCCAAATAGTTTTTGATCAAAAAC-3' (SEQ ID NO: 3049)

5'-AUCCCAAAUAGUUUUUGAUCAAAAA-3' (SEQ ID NO: 4159)
3'-UAUAGGGUUUAUCAAAAACUAGUUUUU-5' (SEQ ID NO: 1941)

βc-3552 Target: 5'-ATATCCCAAATAGTTTTTGATCAAAAA-3' (SEQ ID NO: 3050)

5'-UAUCCCAAAUAGUUUUUGAUCAAAA-3' (SEQ ID NO: 4160)
3'-GUAUAGGGUUUAUCAAAAACUAGUUUU-5' (SEQ ID NO: 1942)

βc-3553 Target: 5'-CATATCCCAAATAGTTTTTGATCAAAA-3' (SEQ ID NO: 3051)

5'-AUAUCCCAAAUAGUUUUUGAUCAAA-3' (SEQ ID NO: 4161)
3'-UGUAUAGGGUUUAUCAAAAACUAGUUU-5' (SEQ ID NO: 1943)

βc-3554 Target: 5'-ACATATCCCAAATAGTTTTTGATCAAA-3' (SEQ ID NO: 3052)

5'-AUACAUAUCCCAAAUAGUUUUUGAU-3' (SEQ ID NO: 4162)
3'-GGUAUGUAUAGGGUUUAUCAAAAACUA-5' (SEQ ID NO: 1944)

βc-3558 Target: 5'-CCATACATATCCCAAATAGTTTTTGAT-3' (SEQ ID NO: 3053)

5'-ACCCUACCCAUACAUAUCCCAAAUA-3' (SEQ ID NO: 4163)
3'-AAUGGGAUGGGUAUGUAUAGGGUUUAU-5' (SEQ ID NO: 1945)

βc-3567 Target: 5'-TTACCCTACCCATACATATCCCAAATA-3' (SEQ ID NO: 3054)

5'-UACCCUACCCAUACAUAUCCCAAAU-3' (SEQ ID NO: 4164)
3'-AAAUGGGAUGGGUAUGUAUAGGGUUUA-5' (SEQ ID NO: 1946)

βc-3568 Target: 5'-TTTACCCTACCCATACATATCCCAAAT-3' (SEQ ID NO: 3055)

5'-UUACCCUACCCAUACAUAUCCCAAA-3' (SEQ ID NO: 4165)
3'-UAAAUGGGAUGGGUAUGUAUAGGGUUU-5' (SEQ ID NO: 1947)

βc-3569 Target: 5'-ATTTACCCTACCCATACATATCCCAAA-3' (SEQ ID NO: 3056)

5'-ACCUCUUACUGAUUUACCCUACCCA-3' (SEQ ID NO: 4166)
3'-UGUGGAGAAUGACUAAAUGGGAUGGGU-5' (SEQ ID NO: 1948)

βc-3582 Target: 5'-ACACCTCTTACTGATTTACCCTACCCA-3' (SEQ ID NO: 3057)

5'-ACACCUCUUACUGAUUUACCCUACC-3' (SEQ ID NO: 4167)
3'-AUUGUGGAGAAUGACUAAAUGGGAUGG-5' (SEQ ID NO: 1949)

βc-3584 Target: 5'-TAACACCTCTTACTGATTTACCCTACC-3' (SEQ ID NO: 3058)

5'-AACACCUCUUACUGAUUUACCCUAC-3' (SEQ ID NO: 4168)

3'-UAUUGUGGAGAAUGACUAAAUGGGAUG-5' (SEQ ID NO: 1950)

βc-3585 Target: 5'-ATAACACCTCTTACTGATTTACCCTAC-3' (SEQ ID NO: 3059)

5'-UAACACCUCUUACUGAUUUACCCUA-3' (SEQ ID NO: 4169)
3'-UUAUUGUGGAGAAUGACUAAAUGGGAU-5' (SEQ ID NO: 1951)

βc-3586 Target: 5'-AATAACACCTCTTACTGATTTACCCTA-3' (SEQ ID NO: 3060)

5'-AUAACACCUCUUACUGAUUUACCCU-3' (SEQ ID NO: 4170)
3'-UUUAUUGUGGAGAAUGACUAAAUGGGA-5' (SEQ ID NO: 1952)

βc-3587 Target: 5'-AAATAACACCTCTTACTGATTTACCCT-3' (SEQ ID NO: 3061)

5'-AAUAACACCUCUUACUGAUUUACCC-3' (SEQ ID NO: 4171)
3'-GUUUAUUGUGGAGAAUGACUAAAUGGG-5' (SEQ ID NO: 1953)

βc-3588 Target: 5'-CAAATAACACCTCTTACTGATTTACCC-3' (SEQ ID NO: 3062)

5'-GUUCCAAAUAACACCUCUUACUGAU-3' (SEQ ID NO: 4172)
3'-UCCAAGGUUUAUUGUGGAGAAUGACUA-5' (SEQ ID NO: 1954)

βc-3594 Target: 5'-AGGTTCCAAATAACACCTCTTACTGAT-3' (SEQ ID NO: 3063)

5'-AACAAGGUUCCAAAUAACACCUCUU-3' (SEQ ID NO: 4173)
3'-UUUUGUUCCAAGGUUUAUUGUGGAGAA-5' (SEQ ID NO: 1955)

βc-3600 Target: 5'-AAAACAAGGTTCCAAATAACACCTCTT-3' (SEQ ID NO: 3064)

5'-AAACAAGGUUCCAAAUAACACCUCU-3' (SEQ ID NO: 4174)
3'-GUUUUGUUCCAAGGUUUAUUGUGGAGA-5' (SEQ ID NO: 1956)

βc-3601 Target: 5'-CAAAACAAGGTTCCAAATAACACCTCT-3' (SEQ ID NO: 3065)

5'-AAAACAAGGUUCCAAAUAACACCUC-3' (SEQ ID NO: 4175)
3'-GGUUUUGUUCCAAGGUUUAUUGUGGAG-5' (SEQ ID NO: 1957)

βc-3602 Target: 5'-CCAAAACAAGGTTCCAAATAACACCTC-3' (SEQ ID NO: 3066)

5'-UGUCCAAAACAAGGUUCCAAAUAAC-3' (SEQ ID NO: 4176)
3'-UGACAGGUUUUGUUCCAAGGUUUAUUG-5' (SEQ ID NO: 1958)

βc-3607 Target: 5'-ACTGTCCAAAACAAGGTTCCAAATAAC-3' (SEQ ID NO: 3067)

5'-AAACUGUCCAAAACAAGGUUCCAAA-3' (SEQ ID NO: 4177)
3'-CAUUUGACAGGUUUUGUUCCAAGGUUU-5' (SEQ ID NO: 1959)

βc-3611 Target: 5'-GTAAACTGTCCAAAACAAGGTTCCAAA-3' (SEQ ID NO: 3068)

5'-UAAACUGUCCAAAACAAGGUUCCAA-3' (SEQ ID NO: 4178)
3'-CCAUUUGACAGGUUUUGUUCCAAGGUU-5' (SEQ ID NO: 1960)

βc-3612 Target: 5'-GGTAAACTGTCCAAAACAAGGTTCCAA-3' (SEQ ID NO: 3069)

5'-GCAACUGGUAAACUGUCCAAAACAA-3' (SEQ ID NO: 4179)
3'-UCCGUUGACCAUUUGACAGGUUUUGUU-5' (SEQ ID NO: 1961)

βc-3620 Target: 5'-AGGCAACTGGTAAACTGTCCAAAACAA-3' (SEQ ID NO: 3070)

5'-GAUAAAAGGCAACUGGUAAACUGUC-3' (SEQ ID NO: 4180)
3'-CCCUAUUUUCCGUUGACCAUUUGACAG-5' (SEQ ID NO: 1962)

βc-3628 Target: 5'-GGGATAAAAGGCAACTGGTAAACTGTC-3' (SEQ ID NO: 3071)

5'-GGAUAAAAGGCAACUGGUAAACUGU-3' (SEQ ID NO: 4181)

3'-ACCCUAUUUUCCGUUGACCAUUUGACA-5' (SEQ ID NO: 1963)

βc-3629 Target: 5'-TGGGATAAAAGGCAACTGGTAAACTGT-3' (SEQ ID NO: 3072)

5'-AACUUUGGGAUAAAAGGCAACUGGU-3' (SEQ ID NO: 4182)
3'-UGUUGAAACCCUAUUUUCCGUUGACCA-5' (SEQ ID NO: 1964)

βc-3636 Target: 5'-ACAACTTTGGGATAAAAGGCAACTGGT-3' (SEQ ID NO: 3073)

5'-ACAACUUUGGGAUAAAAGGCAACUG-3' (SEQ ID NO: 4183)
3'-GUUGUUGAAACCCUAUUUUCCGUUGAC-5' (SEQ ID NO: 1965)

βc-3638 Target: 5'-CAACAACTTTGGGATAAAAGGCAACTG-3' (SEQ ID NO: 3074)

5'-UUACAACAACUUUGGGAUAAAAGGC-3' (SEQ ID NO: 4184)
3'-CCAAUGUUGUUGAAACCCUAUUUUCCG-5' (SEQ ID NO: 1966)

βc-3643 Target: 5'-GGTTACAACAACTTTGGGATAAAAGGC-3' (SEQ ID NO: 3075)

5'-GUUACAACAACUUUGGGAUAAAAGG-3' (SEQ ID NO: 4185)
3'-UCCAAUGUUGUUGAAACCCUAUUUUCC-5' (SEQ ID NO: 1967)

βc-3644 Target: 5'-AGGTTACAACAACTTTGGGATAAAAGG-3' (SEQ ID NO: 3076)

5'-GGUUACAACAACUUUGGGAUAAAAG-3' (SEQ ID NO: 4186)
3'-GUCCAAUGUUGUUGAAACCCUAUUUUC-5' (SEQ ID NO: 1968)

βc-3645 Target: 5'-CAGGTTACAACAACTTTGGGATAAAAG-3' (SEQ ID NO: 3077)

5'-UCACAGCAGGUUACAACAACUUUGG-3' (SEQ ID NO: 4187)
3'-AUAGUGUCGUCCAAUGUUGUUGAAACC-5' (SEQ ID NO: 1969)

βc-3653 Target: 5'-TATCACAGCAGGTTACAACAACTTTGG-3' (SEQ ID NO: 3078)

5'-AUCACAGCAGGUUACAACAACUUUG-3' (SEQ ID NO: 4188)
3'-CAUAGUGUCGUCCAAUGUUGUUGAAAC-5' (SEQ ID NO: 1970)

βc-3654 Target: 5'-GTATCACAGCAGGTTACAACAACTTTG-3' (SEQ ID NO: 3079)

5'-GUAUCACAGCAGGUUACAACAACUU-3' (SEQ ID NO: 4189)
3'-AGCAUAGUGUCGUCCAAUGUUGUUGAA-5' (SEQ ID NO: 1971)

βc-3656 Target: 5'-TCGTATCACAGCAGGTTACAACAACTT-3' (SEQ ID NO: 3080)

5'-UCUCUUGAAGCAUCGUAUCACAGCA-3' (SEQ ID NO: 4190)
3'-AAAGAGAACUUCGUAGCAUAGUGUCGU-5' (SEQ ID NO: 1972)

βc-3670 Target: 5'-TTTCTCTTGAAGCATCGTATCACAGCA-3' (SEQ ID NO: 3081)

5'-UUCUCUUGAAGCAUCGUAUCACAGC-3' (SEQ ID NO: 4191)
3'-AAAAGAGAACUUCGUAGCAUAGUGUCG-5' (SEQ ID NO: 1973)

βc-3671 Target: 5'-TTTTCTCTTGAAGCATCGTATCACAGC-3' (SEQ ID NO: 3082)

5'-UUUUCUCUUGAAGCAUCGUAUCACA-3' (SEQ ID NO: 4192)
3'-GUAAAAGAGAACUUCGUAGCAUAGUGU-5' (SEQ ID NO: 1974)

βc-3673 Target: 5'-CATTTTCTCTTGAAGCATCGTATCACA-3' (SEQ ID NO: 3083)

5'-UUUUAUAACCGCAUUUUCUCUUGAA-3' (SEQ ID NO: 4193)
3'-AAAAAAUAUUGGCGUAAAAGAGAACUU-5' (SEQ ID NO: 1975)

βc-3686 Target: 5'-TTTTTTATAACCGCATTTTCTCTTGAA-3' (SEQ ID NO: 3084)

5'-UUUUUAUAACCGCAUUUUCUCUUGA-3' (SEQ ID NO: 4194)

3'-UAAAAAAUAUUGGCGUAAAAGAGAACU-5' (SEQ ID NO: 1976)

βc-3687 Target: 5'-ATTTTTTATAACCGCATTTTCTCTTGA-3' (SEQ ID NO: 3085)

5'-UUUUUUAUAACCGCAUUUUCUCUUG-3' (SEQ ID NO: 4195)
3'-GUAAAAAAUAUUGGCGUAAAAGAGAAC-5' (SEQ ID NO: 1977)

βc-3688 Target: 5'-CATTTTTTATAACCGCATTTTCTCTTG-3' (SEQ ID NO: 3086)

5'-AUUUUUUAUAACCGCAUUUUCUCUU-3' (SEQ ID NO: 4196)
3'-GGUAAAAAAUAUUGGCGUAAAAGAGAA-5' (SEQ ID NO: 1978)

βc-3689 Target: 5'-CCATTTTTTATAACCGCATTTTCTCTT-3' (SEQ ID NO: 3087)

5'-GAACCAUUUUUUUAUAACCGCAUUUU-3' (SEQ ID NO: 4197)
3'-GACUUGGUAAAAAAAUAUUGGCGUAAAA-5' (SEQ ID NO: 1979)

βc-3694 Target: 5'-CTGAACCATTTTTTATAACCGCATTTT-3' (SEQ ID NO: 3088)

5'-AUUCUGAACCAUUUUUUUAUAACCGC-3' (SEQ ID NO: 4198)
3'-AUUAAGACUUGGUAAAAAAAUAUUGGCG-5' (SEQ ID NO: 1980)

βc-3699 Target: 5'-TAATTCTGAACCATTTTTTATAACCGC-3' (SEQ ID NO: 3089)

5'-AAUUCUGAACCAUUUUUUUAUAACCG-3' (SEQ ID NO: 4199)
3'-AAUUAAGACUUGGUAAAAAAAUAUUGGC-5' (SEQ ID NO: 1981)

βc-3700 Target: 5'-TTAATTCTGAACCATTTTTTATAACCG-3' (SEQ ID NO: 3090)

5'-UAAUUCUGAACCAUUUUUUUAUAACC-3' (SEQ ID NO: 4200)
3'-AAAUUAAGACUUGGUAAAAAAAUAUUGG-5' (SEQ ID NO: 1982)

βc-3701 Target: 5'-TTTAATTCTGAACCATTTTTTATAACC-3' (SEQ ID NO: 3091)

5'-UUAAUUCUGAACCAUUUUUUUAUAAC-3' (SEQ ID NO: 4201)
3'-CAAAUUAAGACUUGGUAAAAAAAUAUUG-5' (SEQ ID NO: 1983)

βc-3702 Target: 5'-GTTTAATTCTGAACCATTTTTTATAAC-3' (SEQ ID NO: 3092)

5'-UUUAAUUCUGAACCAUUUUUUUAUAA-3' (SEQ ID NO: 4202)
3'-UCAAAUUAAGACUUGGUAAAAAAAUAUU-5' (SEQ ID NO: 1984)

βc-3703 Target: 5'-AGTTTAATTCTGAACCATTTTTTATAA-3' (SEQ ID NO: 3093)

5'-GUUUAAUUCUGAACCAUUUUUUUAUA-3' (SEQ ID NO: 4203)
3'-UUCAAAUUAAGACUUGGUAAAAAAAUAU-5' (SEQ ID NO: 1985)

βc-3704 Target: 5'-AAGTTTAATTCTGAACCATTTTTTATA-3' (SEQ ID NO: 3094)

5'-UAAAAGUUUAAUUCUGAACCAUUUU-3' (SEQ ID NO: 4204)
3'-UAAUUUUCAAAUUAAGACUUGGUAAAA-5' (SEQ ID NO: 1986)

βc-3709 Target: 5'-ATTAAAAGTTTAATTCTGAACCATTTT-3' (SEQ ID NO: 3095)

5'-UUAAAAGUUUAAUUCUGAACCAUUU-3' (SEQ ID NO: 4205)
3'-UUAAUUUUCAAAUUAAGACUUGGUAAA-5' (SEQ ID NO: 1987)

βc-3710 Target: 5'-AATTAAAAGTTTAATTCTGAACCATTT-3' (SEQ ID NO: 3096)

5'-AAUUAAAAGUUUAAUUCUGAACCAU-3' (SEQ ID NO: 4206)
3'-ACUUAAUUUUCAAAUUAAGACUUGGUA-5' (SEQ ID NO: 1988)

βc-3712 Target: 5'-TGAATTAAAAGTTTAATTCTGAACC-3' (SEQ ID NO: 3097)

5'-AUACAGCUAAAGGAUGAUUUACAGG-3' (SEQ ID NO: 4207)

3'-GUUAUGUCGAUUUCCUACUAAAUGUCC-5' (SEQ ID NO: 1989)

βc-2634t2 Target: 5'-CAATACAGCTAAAGGATGATTTACAGG-3' (SEQ ID NO: 3098)

5'-AAUACAGCUAAAGGAUGAUUUACAG-3' (SEQ ID NO: 4208)
3'-UGUUAUGUCGAUUUCCUACUAAAUGUC-5' (SEQ ID NO: 1990)

βc-2635t2 Target: 5'-ACAATACAGCTAAAGGATGATTTACAG-3' (SEQ ID NO: 3099)

5'-ACAAUACAGCUAAAGGAUGAUUUAC-3' (SEQ ID NO: 4209)
3'-UCUGUUAUGUCGAUUUCCUACUAAAUG-5' (SEQ ID NO: 1991)

βc-2637t2 Target: 5'-AGACAATACAGCTAAAGGATGATTTAC-3' (SEQ ID NO: 3100)

5'-UACUCCUAAAGGAUGAUUUACAGGU-3' (SEQ ID NO: 4210)
3'-CAAUGAGGAUUUCCUACUAAAUGUCCA-5' (SEQ ID NO: 1992)

βc-2633t3 Target: 5'-GTTACTCCTAAAGGATGATTTACAGGT-3' (SEQ ID NO: 3101)

5'-UUACUCCUAAAGGAUGAUUUACAGG-3' (SEQ ID NO: 4211)
3'-ACAAUGAGGAUUUCCUACUAAAUGUCC-5' (SEQ ID NO: 1993)

βc-2634t3 Target: 5'-TGTTACTCCTAAAGGATGATTTACAGG-3' (SEQ ID NO: 3102)

5'-GUUACUCCUAAAGGAUGAUUUACAG-3' (SEQ ID NO: 4212)
3'-AACAAUGAGGAUUUCCUACUAAAUGUC-5' (SEQ ID NO: 1994)

βc-2635t3 Target: 5'-TTGTTACTCCTAAAGGATGATTTACAG-3' (SEQ ID NO: 3103)

5'-UGUUACUCCUAAAGGAUGAUUUACA-3' (SEQ ID NO: 4213)
3'-UAACAAUGAGGAUUUCCUACUAAAUGU-5' (SEQ ID NO: 1995)

βc-2636t3 Target: 5'-ATTGTTACTCCTAAAGGATGATTTACA-3' (SEQ ID NO: 3104)

5'-AUUCCAGAAUCCAAGUAAGACUGCU-3' (SEQ ID NO: 4214)
3'-CCUAAGGUCUUAGGUUCAUUCUGACGA-5' (SEQ ID NO: 1996)

βc-m318 Target: 5'-GGATTCCAGAATCCAAGTAAGACTGCT-3' (SEQ ID NO: 3105)

5'-UGCUCCCAUUCAUAAAGGACUUGGG-3' (SEQ ID NO: 4215)
3'-GAACGAGGGUAAGUAUUUCCUGAACCC-5' (SEQ ID NO: 1997)

βc-m417 Target: 5'-CTTGCTCCCATTCATAAAGGACTTGGG-3' (SEQ ID NO: 3106)

5'-UCAAUAUCAGCUACUUGCUCUUGCG-3' (SEQ ID NO: 4216)
3'-GCAGUUAUAGUCGAUGAACGAGAACGC-5' (SEQ ID NO: 1998)

βc-m462 Target: 5'-CGTCAATATCAGCTACTTGCTCTTGCG-3' (SEQ ID NO: 3107)

5'-GUCAAUAUCAGCUACUUGCUCUUGC-3' (SEQ ID NO: 4217)
3'-GGCAGUUAUAGUCGAUGAACGAGAACG-5' (SEQ ID NO: 1999)

βc-m463 Target: 5'-CCGTCAATATCAGCTACTTGCTCTTGC-3' (SEQ ID NO: 3108)

5'-UGCCCGUCAAUAUCAGCUACUUGCU-3' (SEQ ID NO: 4218)
3'-UGACGGGCAGUUAUAGUCGAUGAACGA-5' (SEQ ID NO: 2000)

βc-m468 Target: 5'-ACTGCCCGTCAATATCAGCTACTTGCT-3' (SEQ ID NO: 3109)

5'-UUUCAACAUCUGUGAUGGUUCAGCC-3' (SEQ ID NO: 4219)
3'-ACAAAGUUGUAGACACUACCAAGUCGG-5' (SEQ ID NO: 2001)

βc-m613 Target: 5'-TGTTTCAACATCTGTGATGGTTCAGCC-3' (SEQ ID NO: 3110)

5'-GUUUCAACAUCUGUGAUGGUUCAGC-3' (SEQ ID NO: 4220)

3'-UACAAAGUUGUAGACACUACCAAGUCG-5' (SEQ ID NO: 2002)

βc-m614 Target: 5'-ATGTTTCAACATCTGTGATGGTTCAGC-3' (SEQ ID NO: 3111)

5'-ACAACUGCAUGUUUCAACAUCUGUG-3' (SEQ ID NO: 4221)
3'-ACUGUUGACGUACAAAGUUGUAGACAC-5' (SEQ ID NO: 2003)

βc-m624 Target: 5'-TGACAACTGCATGTTTCAACATCTGTG-3' (SEQ ID NO: 3112)

5'-UGACAACUGCAUGUUUCAACAUCUG-3' (SEQ ID NO: 4222)
3'-UAACUGUUGACGUACAAAGUUGUAGAC-5' (SEQ ID NO: 2004)

βc-m626 Target: 5'-ATTGACAACTGCATGTTTCAACATCTG-3' (SEQ ID NO: 3113)

5'-AAAUUGACAACUGCAUGUUUCAACA-3' (SEQ ID NO: 4223)
3'-AGUUUAACUGUUGACGUACAAAGUUGU-5' (SEQ ID NO: 2005)

βc-m630 Target: 5'-TCAAATTGACAACTGCATGTTTCAACA-3' (SEQ ID NO: 3114)

5'-UUAAUCAAAUUGACAACUGCAUGUU-3' (SEQ ID NO: 4224)
3'-UCAAUUAGUUUAACUGUUGACGUACAA-5' (SEQ ID NO: 2006)

βc-m636 Target: 5'-AGTTAATCAAATTGACAACTGCATGTT-3' (SEQ ID NO: 3115)

5'-UGAUAGUUAAUCAAAUUGACAACUG-3' (SEQ ID NO: 4225)
3'-GGACUAUCAAUUAGUUUAACUGUUGAC-5' (SEQ ID NO: 2007)

βc-m642 Target: 5'-CCTGATAGTTAATCAAATTGACAACTG-3' (SEQ ID NO: 3116)

5'-UCAUCCUGAUAGUUAAUCAAAUUGA-3' (SEQ ID NO: 4226)
3'-GCAGUAGGACUAUCAAUUAGUUUAACU-5' (SEQ ID NO: 2008)

βc-m648 Target: 5'-CGTCATCCTGATAGTTAATCAAATTGA-3' (SEQ ID NO: 3117)

5'-GUCAUCCUGAUAGUUAAUCAAAUUG-3' (SEQ ID NO: 4227)
3'-CGCAGUAGGACUAUCAAUUAGUUUAAC-5' (SEQ ID NO: 2009)

βc-m649 Target: 5'-GCGTCATCCTGATAGTTAATCAAATTG-3' (SEQ ID NO: 3118)

5'-UCAUCGUUUAGCAGUUUUGUCAGCU-3' (SEQ ID NO: 4228)
3'-GGAGUAGCAAAUCGUCAAAACAGUCGA-5' (SEQ ID NO: 2010)

βc-m702 Target: 5'-CCTCATCGTTTAGCAGTTTTGTCAGCT-3' (SEQ ID NO: 3119)

5'-GGUCCUCAUCGUUUAGCAGUUUUGU-3' (SEQ ID NO: 4229)
3'-GACCAGGAGUAGCAAAUCGUCAAAACA-5' (SEQ ID NO: 2011)

βc-m707 Target: 5'-CTGGTCCTCATCGTTTAGCAGTTTTGT-3' (SEQ ID NO: 3120)

5'-UAACAGCAGCUUUAUUAACUACCAC-3' (SEQ ID NO: 4230)
3'-GUAUUGUCGUCGAAAUAAUUGAUGGUG-5' (SEQ ID NO: 2012)

βc-m734 Target: 5'-CATAACAGCAGCTTTATTAACTACCAC-3' (SEQ ID NO: 3121)

5'-AUAACAGCAGCUUUAUUAACUACCA-3' (SEQ ID NO: 4231)
3'-GGUAUUGUCGUCGAAAUAAUUGAUGGU-5' (SEQ ID NO: 2013)

βc-m735 Target: 5'-CCATAACAGCAGCTTTATTAACTACCA-3' (SEQ ID NO: 3122)

5'-ACCAUAACAGCAGCUUUAUUAACUA-3' (SEQ ID NO: 4232)
3'-CCUGGUAUUGUCGUCGAAAUAAUUGAU-5' (SEQ ID NO: 2014)

βc-m738 Target: 5'-GGACCATAACAGCAGCTTTATTAACTA-3' (SEQ ID NO: 3123)

5'-GACCAUAACAGCAGCUUUAUUAACU-3' (SEQ ID NO: 4233)

3'-ACCUGGUAUUGUCGUCGAAAUAAUUGA-5' (SEQ ID NO: 2015)

βc-m739 Target: 5'-TGGACCATAACAGCAGCTTTATTAACT-3' (SEQ ID NO: 3124)

5'-GUCUCUACAUCAUUUGUAUUCUGCA-3' (SEQ ID NO: 4234)
3'-GACAGAGAUGUAGUAAACAUAAGACGU-5' (SEQ ID NO: 2016)

βc-m843 Target: 5'-CTGTCTCTACATCATTTGTATTCTGCA-3' (SEQ ID NO: 3125)

5'-UGUCUCUACAUCAUUUGUAUUCUGC-3' (SEQ ID NO: 4235)
3'-CGACAGAGAUGUAGUAAACAUAAGACG-5' (SEQ ID NO: 2017)

βc-m844 Target: 5'-GCTGTCTCTACATCATTTGTATTCTGC-3' (SEQ ID NO: 3126)

5'-AACCAUUUUCUGCAGUCCACCAGCU-3' (SEQ ID NO: 4236)
3'-CGUUGGUAAAAGACGUCAGGUGGUCGA-5' (SEQ ID NO: 2018)

βc-m1063 Target: 5'-GCAACCATTTTCTGCAGTCCACCAGCT-3' (SEQ ID NO: 3127)

5'-GCAACCAUUUUCUGCAGUCCACCAG-3' (SEQ ID NO: 4237)
3'-UUCGUUGGUAAAAGACGUCAGGUGGUC-5' (SEQ ID NO: 2019)

βc-m1065 Target: 5'-AAGCAACCATTTTCTGCAGTCCACCAG-3' (SEQ ID NO: 3128)

5'-GUUUUGUUGAGCAAAGCAACCAUUU-3' (SEQ ID NO: 4238)
3'-AACAAAACAACUCGUUUCGUUGGUAAA-5' (SEQ ID NO: 2020)

βc-m1080 Target: 5'-TTGTTTTGTTGAGCAAAGCAACCATTT-3' (SEQ ID NO: 3129)

5'-UGUUUUGUUGAGCAAAGCAACCAUU-3' (SEQ ID NO: 4239)
3'-AAACAAAACAACUCGUUUCGUUGGUAA-5' (SEQ ID NO: 2021)

βc-m1081 Target: 5'-TTTGTTTTGTTGAGCAAAGCAACCATT-3' (SEQ ID NO: 3130)

5'-GCCAAGAAUUUCACGUUUGUUUUGU-3' (SEQ ID NO: 4240)
3'-AUCGGUUCUUAAAGUGCAAACAAAACA-5' (SEQ ID NO: 2022)

βc-m1098 Target: 5'-TAGCCAAGAATTTCACGTTTGTTTTGT-3' (SEQ ID NO: 3131)

5'-UGAUUGCCAUAAGCUAAGAUCUGAA-3' (SEQ ID NO: 4241)
3'-GAACUAACGGUAUUCGAUUCUAGACUU-5' (SEQ ID NO: 2023)

βc-m1140 Target: 5'-CTTGATTGCCATAAGCTAAGATCTGAA-3' (SEQ ID NO: 3132)

5'-UCUCUUGAUUGCCAUAAGCUAAGAU-3' (SEQ ID NO: 4242)
3'-CGAGAGAACUAACGGUAUUCGAUUCUA-5' (SEQ ID NO: 2024)

βc-m1145 Target: 5'-GCTCTCTTGATTGCCATAAGCTAAGAT-3' (SEQ ID NO: 3133)

5'-UCUCAUAAGUGUAGGUCCUCAUUAU-3' (SEQ ID NO: 4243)
3'-GAAGAGUAUUCACAUCCAGGAGUAAUA-5' (SEQ ID NO: 2025)

βc-m1217 Target: 5'-CTTCTCATAAGTGTAGGTCCTCATTAT-3' (SEQ ID NO: 3134)

5'-UUCUCAUAAGUGUAGGUCCUCAUUA-3' (SEQ ID NO: 4244)
3'-CGAAGAGUAUUCACAUCCAGGAGUAAU-5' (SEQ ID NO: 2026)

βc-m1218 Target: 5'-GCTTCTCATAAGTGTAGGTCCTCATTA-3' (SEQ ID NO: 3135)

5'-GCUUCUCAUAAGUGUAGGUCCUCAU-3' (SEQ ID NO: 4245)
3'-UUCGAAGAGUAUUCACAUCCAGGAGUA-5' (SEQ ID NO: 2027)

βc-m1220 Target: 5'-AAGCTTCTCATAAGTGTAGGTCCTC-3' (SEQ ID NO: 3136)

5'-AGCUUCUCAUAAGUGUAGGUCCUCA-3' (SEQ ID NO: 4246)

3'-CUUCGAAGAGUAUUCACAUCCAGGAGU-5' (SEQ ID NO: 2028)

βc-m1221 Target: 5'-GAAGCTTCTCATAAGTGTAGGTCCTCA-3' (SEQ ID NO: 3137)

5'-GUCCAAAGACAGUUUUGAACAAGUC-3' (SEQ ID NO: 4247)
3'-CUCAGGUUUCUGUCAAAACUUGUUCAG-5' (SEQ ID NO: 2029)

βc-m1365 Target: 5'-GAGTCCAAAGACAGTTTTGAACAAGTC-3' (SEQ ID NO: 3138)

5'-AGUCCAAAGACAGUUUUGAACAAGU-3' (SEQ ID NO: 4248)
3'-UCUCAGGUUUCUGUCAAAACUUGUUCA-5' (SEQ ID NO: 2030)

βc-m1366 Target: 5'-AGAGTCCAAAGACAGTTTTGAACAAGT-3' (SEQ ID NO: 3139)

5'-ACAUUUAUAUCAUCGGAACCCAGAA-3' (SEQ ID NO: 4249)
3'-GGUGUAAAUAUAGUAGCCUUGGGUCUU-5' (SEQ ID NO: 2031)

βc-m1461 Target: 5'-CCACATTTATATCATCGGAACCCAGAA-3' (SEQ ID NO: 3140)

5'-ACCACAUUUAUAUCAUCGGAACCCA-3' (SEQ ID NO: 4250)
3'-ACUGGUGUAAAUAUAGUAGCCUUGGGU-5' (SEQ ID NO: 2032)

βc-m1464 Target: 5'-TGACCACATTTATATCATCGGAACCCA-3' (SEQ ID NO: 3141)

5'-GCACAGGUGACCACAUUUAUAUCAU-3' (SEQ ID NO: 4251)
3'-GACGUGUCCACUGGUGUAAAUAUAGUA-5' (SEQ ID NO: 2033)

βc-m1473 Target: 5'-CTGCACAGGTGACCACATTTATATC-3' (SEQ ID NO: 3142)

5'-UGCACAGGUGACCACAUUUAUAUCA-3' (SEQ ID NO: 4252)
3'-CGACGUGUCCACUGGUGUAAAUAUAGU-5' (SEQ ID NO: 2034)

βc-m1474 Target: 5'-GCTGCACAGGTGACCACATTTATATCA-3' (SEQ ID NO: 3143)

5'-GUAAUUAUUGCAAGUGAGGUUAGAG-3' (SEQ ID NO: 4253)
3'-AACAUUAAUAACGUUCACUCCAAUCUC-5' (SEQ ID NO: 2035)

βc-m1510 Target: 5'-TTGTAATTATTGCAAGTGAGGTTAGAG-3' (SEQ ID NO: 3144)

5'-UCAUCUUGUUUUUGUAAUUAUUGCA-3' (SEQ ID NO: 4254)
3'-GUAGUAGAACAAAAACAUUAAUAACGU-5' (SEQ ID NO: 2036)

βc-m1523 Target: 5'-CATCATCTTGTTTTTGTAATTATTGCA-3' (SEQ ID NO: 3145)

5'-AUCAUCUUGUUUUUGUAAUUAUUGC-3' (SEQ ID NO: 4255)
3'-GGUAGUAGAACAAAAACAUUAAUAACG-5' (SEQ ID NO: 2037)

βc-m1524 Target: 5'-CCATCATCTTGTTTTTGTAATTATTGC-3' (SEQ ID NO: 3146)

5'-ACCAUCAUCUUGUUUUUGUAAUUAU-3' (SEQ ID NO: 4256)
3'-UGUGGUAGUAGAACAAAAACAUUAAUA-5' (SEQ ID NO: 2038)

βc-m1527 Target: 5'-ACACCATCATCTTGTTTTTGTAATTAT-3' (SEQ ID NO: 3147)

5'-GGCACACCAUCAUCUUGUUUUUGUA-3' (SEQ ID NO: 4257)
3'-AACCGUGUGGUAGUAGAACAAAAACAU-5' (SEQ ID NO: 2039)

βc-m1532 Target: 5'-TTGGCACACCATCATCTTGTTTTTGTA-3' (SEQ ID NO: 3148)

5'-AAUCCAACAGUUGCCUUUAUCAGAG-3' (SEQ ID NO: 4258)
3'-AGUUAGGUUGUCAACGGAAAUAGUCUC-5' (SEQ ID NO: 2040)

βc-m1752 Target: 5'-TCAATCCAACAGTTGCCTTTATCAGAG-3' (SEQ ID NO: 3149)

5'-GAAUCAAUCCAACAGUUGCCUUUAU-3' (SEQ ID NO: 4259)

3'-AGCUUAGUUAGGUUGUCAACGGAAAUA-5' (SEQ ID NO: 2041)

βc-m1757 Target: 5'-TCGAATCAATCCAACAGTTGCCTTTAT-3' (SEQ ID NO: 3150)

5'-UGAACUAGUCGUGGAAUAGCACCCU-3' (SEQ ID NO: 4260)
3'-CGACUUGAUCAGCACCUUAUCGUGGGA-5' (SEQ ID NO: 2042)

βc-m1827 Target: 5'-GCTGAACTAGTCGTGGAATAGCACCCT-3' (SEQ ID NO: 3151)

5'-UACACCCUUCUACUAUCUCCUCCAU-3' (SEQ ID NO: 4261)
3'-UCAUGUGGGAAGAUGAUAGAGGAGGUA-5' (SEQ ID NO: 2043)

βc-m1934 Target: 5'-AGTACACCCTTCTACTATCTCCTCC-3' (SEQ ID NO: 3152)

5'-GUACACCCUUCUACUAUCUCCUCCA-3' (SEQ ID NO: 4262)
3'-GUCAUGUGGGAAGAUGAUAGAGGAGGU-5' (SEQ ID NO: 2044)

βc-m1935 Target: 5'-CAGTACACCCTTCTACTATCTCCTCCA-3' (SEQ ID NO: 3153)

5'-AGUACACCCUUCUACUAUCUCCUCC-3' (SEQ ID NO: 4263)
3'-GGUCAUGUGGGAAGAUGAUAGAGGAGG-5' (SEQ ID NO: 2045)

βc-m1936 Target: 5'-CCAGTACACCCTTCTACTATCTCCTCC-3' (SEQ ID NO: 3154)

5'-GCUCCAGUACACCCUUCUACUAUCU-3' (SEQ ID NO: 4264)
3'-CUCGAGGUCAUGUGGGAAGAUGAUAGA-5' (SEQ ID NO: 2046)

βc-m1941 Target: 5'-GAGCTCCAGTACACCCTTCTACTATCT-3' (SEQ ID NO: 3155)

5'-ACAAUGGAAUGGUAUUGAGUCCUCG-3' (SEQ ID NO: 4265)
3'-UUUGUUACCUUACCAUAACUCAGGAGC-5' (SEQ ID NO: 2047)

βc-m2009 Target: 5'-AAACAATGGAATGGTATTGAGTCCTCG-3' (SEQ ID NO: 3156)

5'-GCACAAACAAUGGAAUGGUAUUGAG-3' (SEQ ID NO: 4266)
3'-GACGUGUUUGUUACCUUACCAUAACUC-5' (SEQ ID NO: 2048)

βc-m2015 Target: 5'-CTGCACAAACAATGGAATGGTATTGAG-3' (SEQ ID NO: 3157)

5'-UGCACAAACAAUGGAAUGGUAUUGA-3' (SEQ ID NO: 4267)
3'-UGACGUGUUUGUUACCUUACCAUAACU-5' (SEQ ID NO: 2049)

βc-m2016 Target: 5'-ACTGCACAAACAATGGAATGGTATTGA-3' (SEQ ID NO: 3158)

5'-GCAACUGCACAAACAAUGGAAUGGU-3' (SEQ ID NO: 4268)
3'-UUCGUUGACGUGUUUGUUACCUUACCA-5' (SEQ ID NO: 2050)

βc-m2021 Target: 5'-AAGCAACTGCACAAACAATGGAATGGT-3' (SEQ ID NO: 3159)

5'-GAAUAAAGCAACUGCACAAACAAUG-3' (SEQ ID NO: 4269)
3'-CUCUUAUUUCGUUGACGUGUUUGUUAC-5' (SEQ ID NO: 2051)

βc-m2028 Target: 5'-GAGAATAAAGCAACTGCACAAACAATG-3' (SEQ ID NO: 3160)

5'-UCAAUGGGAGAAUAAAGCAACUGCA-3' (SEQ ID NO: 4270)
3'-AAAGUUACCCUCUUAUUUCGUUGACGU-5' (SEQ ID NO: 2052)

βc-m2037 Target: 5'-TTTCAATGGGAGAATAAAGCAACTGCA-3' (SEQ ID NO: 3161)

5'-UUCAAUGGGAGAAUAAAGCAACUGC-3' (SEQ ID NO: 4271)
3'-AAAAGUUACCCUCUUAUUUCGUUGACG-5' (SEQ ID NO: 2053)

βc-m2038 Target: 5'-TTTTCAATGGGAGAATAAAGCAACTGC-3' (SEQ ID NO: 3162)

5'-UUUCAAUGGGAGAAUAAAGCAACUG-3' (SEQ ID NO: 4272)

3'-UAAAAGUUACCCUCUUAUUUCGUUGAC-5' (SEQ ID NO: 2054)

βc-m2039 Target: 5'-ATTTTCAATGGGAGAATAAAGCAACTG-3' (SEQ ID NO: 3163)

5'-AUAUUUUCAAUGGGAGAAUAAAGCA-3' (SEQ ID NO: 4273)
3'-CCUAUAAAAGUUACCCUCUUAUUUCGU-5' (SEQ ID NO: 2055)

βc-m2043 Target: 5'-GGATATTTTCAATGGGAGAATAAAGCA-3' (SEQ ID NO: 3164)

5'-GAUAUUUUCAAUGGGAGAAUAAAGC-3' (SEQ ID NO: 4274)
3'-ACCUAUAAAAGUUACCCUCUUAUUUCG-5' (SEQ ID NO: 2056)

βc-m2044 Target: 5'-TGGATATTTTCAATGGGAGAATAAAGC-3' (SEQ ID NO: 3165)

5'-GGAUAUUUUCAAUGGGAGAAUAAAG-3' (SEQ ID NO: 4275)
3'-AACCUAUAAAAGUUACCCUCUUAUUUC-5' (SEQ ID NO: 2057)

βc-m2045 Target: 5'-TTGGATATTTTCAATGGGAGAATAAAG-3' (SEQ ID NO: 3166)

5'-GCUACUCUUUGGAUAUUUUCAAUGG-3' (SEQ ID NO: 4276)
3'-GUCGAUGAGAAACCUAUAAAAGUUACC-5' (SEQ ID NO: 2058)

βc-m2055 Target: 5'-CAGCTACTCTTTGGATATTTTCAATGG-3' (SEQ ID NO: 3167)

5'-AGCUACUCUUUGGAUAUUUUCAAUG-3' (SEQ ID NO: 4277)
3'-CGUCGAUGAGAAACCUAUAAAAGUUAC-5' (SEQ ID NO: 2059)

βc-m2056 Target: 5'-GCAGCTACTCTTTGGATATTTTCAATG-3' (SEQ ID NO: 3168)

5'-GCUUCUUGUAAUCCUGUGGCUUGUC-3' (SEQ ID NO: 4278)
3'-GGCGAAGAACAUUAGGACACCGAACAG-5' (SEQ ID NO: 2060)

βc-m2231 Target: 5'-CCGCTTCTTGTAATCCTGTGGCTTGTC-3' (SEQ ID NO: 3169)

5'-AGUCCAAGAUCUGCAGUCUCAUUCC-3' (SEQ ID NO: 4279)
3'-GGUCAGGUUCUAGACGUCAGAGUAAGG-5' (SEQ ID NO: 2061)

βc-m2307 Target: 5'-CCAGTCCAAGATCTGCAGTCTCATTCC-3' (SEQ ID NO: 3170)

5'-UAUCCACCAGAGUGAAAAGAACGGU-3' (SEQ ID NO: 4280)
3'-GCAUAGGUGGUCUCACUUUUCUUGCCA-5' (SEQ ID NO: 2062)

βc-m2385 Target: 5'-CGTATCCACCAGAGTGAAAAGAACGGT-3' (SEQ ID NO: 3171)

5'-GGCCAGCUGAUUGCUAUCACCUGGG-3' (SEQ ID NO: 4281)
3'-GUCCGGUCGACUAACGAUAGUGGACCC-5' (SEQ ID NO: 2063)

βc-m2539 Target: 5'-CAGGCCAGCTGATTGCTATCACCTGGG-3' (SEQ ID NO: 3172)

5'-AUUUACAGGUCAGUAUCAAACCAGG-3' (SEQ ID NO: 4282)
3'-GCUAAAUGUCCAGUCAUAGUUUGGUCC-5' (SEQ ID NO: 2064)

βc-m2562 Target: 5'-CGATTTACAGGTCAGTATCAAACCAGG-3' (SEQ ID NO: 3173)

5'-GAUUUACAGGUCAGUAUCAAACCAG-3' (SEQ ID NO: 4283)
3'-UGCUAAAUGUCCAGUCAUAGUUUGGUC-5' (SEQ ID NO: 2065)

βc-m2563 Target: 5'-ACGATTTACAGGTCAGTATCAAACCAG-3' (SEQ ID NO: 3174)

5'-UCUUACCUAAAGGACGAUUUACAGG-3' (SEQ ID NO: 4284)
3'-AAAGAAUGGAUUUCCUGCUAAAUGUCC-5' (SEQ ID NO: 2066)

βc-m2578 Target: 5'-TTTCTTACCTAAAGGACGATTTACAGG-3' (SEQ ID NO: 3175)

5'-UUUCUUACCUAAAGGACGAUUUACA-3' (SEQ ID NO: 4285)

3'-CGAAAGAAUGGAUUUCCUGCUAAAUGU-5' (SEQ ID NO: 2067)

βc-m2580 Target: 5'-GCTTTCTTACCTAAAGGACGATTTACA-3' (SEQ ID NO: 3176)

5'-UUUAUAAGCUUUCUUACCUAAAGGA-3' (SEQ ID NO: 4286)
3'-GAAAAUAUUCGAAAGAAUGGAUUUCCU-5' (SEQ ID NO: 2068)

βc-m2589 Target: 5'-CTTTTATAAGCTTTCTTACCTAAAGGA-3' (SEQ ID NO: 3177)

5'-UUUUAUAAGCUUUCUUACCUAAAGG-3' (SEQ ID NO: 4287)
3'-CGAAAAUAUUCGAAAGAAUGGAUUUCC-5' (SEQ ID NO: 2069)

βc-m2590 Target: 5'-GCTTTTATAAGCTTTCTTACCTAAAGG-3' (SEQ ID NO: 3178)

5'-GGCUUUUAUAAGCUUUCUUACCUAA-3' (SEQ ID NO: 4288)
3'-GACCGAAAAUAUUCGAAAGAAUGGAUU-5' (SEQ ID NO: 2070)

βc-m2593 Target: 5'-CTGGCTTTTATAAGCTTTCTTACCTAA-3' (SEQ ID NO: 3179)

5'-ACACUGGCUUUUAUAAGCUUUCUUA-3' (SEQ ID NO: 4289)
3'-GGUGUGACCGAAAAUAUUCGAAAGAAU-5' (SEQ ID NO: 2071)

βc-m2598 Target: 5'-CCACACTGGCTTTTATAAGCTTTCTTA-3' (SEQ ID NO: 3180)

5'-UCACCCACACUGGCUUUUAUAAGCU-3' (SEQ ID NO: 4290)
3'-UAAGUGGGUGUGACCGAAAAUAUUCGA-5' (SEQ ID NO: 2072)

βc-m2604 Target: 5'-ATTCACCCACACTGGCTTTTATAAGCT-3' (SEQ ID NO: 3181)

5'-UACCAAGUCUUUCUGGAGUUCUGCA-3' (SEQ ID NO: 4291)
3'-GGAUGGUUCAGAAAGACCUCAAGACGU-5' (SEQ ID NO: 2073)

βc-m2644 Target: 5'-CCTACCAAGTCTTTCTGGAGTTCTGCA-3' (SEQ ID NO: 3182)

5'-UUACAAACAGGCCUAAAACCAUUCC-3' (SEQ ID NO: 4292)
3'-UAAAUGUUUGUCCGGAUUUUGGUAAGG-5' (SEQ ID NO: 2074)

βc-m2674 Target: 5'-ATTTACAAACAGGCCTAAAACCATTCC-3' (SEQ ID NO: 3183)

5'-UUUACAAACAGGCCUAAAACCAUUC-3' (SEQ ID NO: 4293)
3'-CUAAAUGUUUGUCCGGAUUUUGGUAAG-5' (SEQ ID NO: 2075)

βc-m2675 Target: 5'-GATTTACAAACAGGCCTAAAACCATTC-3' (SEQ ID NO: 3184)

5'-AUUUACAAACAGGCCUAAAACCAUU-3' (SEQ ID NO: 4294)
3'-UCUAAAUGUUUGUCCGGAUUUUGGUAA-5' (SEQ ID NO: 2076)

βc-m2676 Target: 5'-AGATTTACAAACAGGCCTAAAACCATT-3' (SEQ ID NO: 3185)

5'-UCUCCUUCCAAGGUAUGUAUCUGUU-3' (SEQ ID NO: 4295)
3'-GUAGAGGAAGGUUCCAUACAUAGACAA-5' (SEQ ID NO: 2077)

βc-m2710 Target: 5'-CATCTCCTTCCAAGGTATGTATCTGTT-3' (SEQ ID NO: 3186)

5'-AUCUCCUUCCAAGGUAUGUAUCUGU-3' (SEQ ID NO: 4296)
3'-UGUAGAGGAAGGUUCCAUACAUAGACA-5' (SEQ ID NO: 2078)

βc-m2711 Target: 5'-ACATCTCCTTCCAAGGTATGTATCTGT-3' (SEQ ID NO: 3187)

5'-UUCCACACAUGAACAUCUCCUUCCA-3' (SEQ ID NO: 4297)
3'-UGAAGGUGUGUACUUGUAGAGGAAGGU-5' (SEQ ID NO: 2079)

βc-m2725 Target: 5'-ACTTCCACACATGAACATCTCCTTCCA-3' (SEQ ID NO: 3188)

5'-AACUUCCACACAUGAACAUCUCCUU-3' (SEQ ID NO: 4298)

3'-CUUUGAAGGUGUGUACUUGUAGAGGAA-5' (SEQ ID NO: 2080)

βc-m2728 Target: 5'-GAAACTTCCACACATGAACATCTCCTT-3' (SEQ ID NO: 3189)

5'-AAACUUCCACACAUGAACAUCUCCU-3' (SEQ ID NO: 4299)
3'-UCUUUGAAGGUGUGUACUUGUAGAGGA-5' (SEQ ID NO: 2081)

βc-m2729 Target: 5'-AGAAACTTCCACACATGAACATCTCCT-3' (SEQ ID NO: 3190)

5'-GAAACUUCCACACAUGAACAUCUCC-3' (SEQ ID NO: 4300)
3'-CUCUUUGAAGGUGUGUACUUGUAGAGG-5' (SEQ ID NO: 2082)

βc-m2730 Target: 5'-GAGAAACTTCCACACATGAACATCTCC-3' (SEQ ID NO: 3191)

5'-AGAAACUUCCACACAUGAACAUCUC-3' (SEQ ID NO: 4301)
3'-ACUCUUUGAAGGUGUGUACUUGUAGAG-5' (SEQ ID NO: 2083)

βc-m2731 Target: 5'-TGAGAAACTTCCACACATGAACATCTC-3' (SEQ ID NO: 3192)

5'-UCAACGUGAGAAACUUCCACACAUG-3' (SEQ ID NO: 4302)
3'-GUAGUUGCACUCUUUGAAGGUGUGUAC-5' (SEQ ID NO: 2084)

βc-m2739 Target: 5'-CATCAACGTGAGAAACTTCCACACATG-3' (SEQ ID NO: 3193)

5'-ACAUCAACGUGAGAAACUUCCACAC-3' (SEQ ID NO: 4303)
3'-UUUGUAGUUGCACUCUUUGAAGGUGUG-5' (SEQ ID NO: 2085)

βc-m2742 Target: 5'-AAACATCAACGTGAGAAACTTCCACAC-3' (SEQ ID NO: 3194)

5'-AACAUCAACGUGAGAAACUUCCACA-3' (SEQ ID NO: 4304)
3'-UUUUGUAGUUGCACUCUUUGAAGGUGU-5' (SEQ ID NO: 2086)

βc-m2743 Target: 5'-AAAACATCAACGTGAGAAACTTCCACA-3' (SEQ ID NO: 3195)

5'-AAACAUCAACGUGAGAAACUUCCAC-3' (SEQ ID NO: 4305)
3'-UUUUUGUAGUUGCACUCUUUGAAGGUG-5' (SEQ ID NO: 2087)

βc-m2744 Target: 5'-AAAAACATCAACGTGAGAAACTTCCAC-3' (SEQ ID NO: 3196)

5'-AAAACAUCAACGUGAGAAACUUCCA-3' (SEQ ID NO: 4306)
3'-GUUUUUGUAGUUGCACUCUUUGAAGGU-5' (SEQ ID NO: 2088)

βc-m2745 Target: 5'-CAAAAACATCAACGTGAGAAACTTCCA-3' (SEQ ID NO: 3197)

5'-AAAAACAUCAACGUGAGAAACUUCC-3' (SEQ ID NO: 4307)
3'-CGUUUUUGUAGUUGCACUCUUUGAAGG-5' (SEQ ID NO: 2089)

βc-m2746 Target: 5'-GCAAAAACATCAACGTGAGAAACTTCC-3' (SEQ ID NO: 3198)

5'-GCAAAAACAUCAACGUGAGAAACUU-3' (SEQ ID NO: 4308)
3'-ACCGUUUUUGUAGUUGCACUCUUUGAA-5' (SEQ ID NO: 2090)

βc-m2748 Target: 5'-TGGCAAAAACATCAACGTGAGAAACTT-3' (SEQ ID NO: 3199)

5'-GCAAAAGCUGUGGCAAAAACAUCAA-3' (SEQ ID NO: 4309)
3'-GACGUUUUCGACACCGUUUUUGUAGUU-5' (SEQ ID NO: 2091)

βc-m2760 Target: 5'-CTGCAAAAGCTGTGGCAAAAACATCAA-3' (SEQ ID NO: 3200)

5'-UGCAAAAGCUGUGGCAAAAACAUCA-3' (SEQ ID NO: 4310)
3'-CGACGUUUUCGACACCGUUUUUGUAGU-5' (SEQ ID NO: 2092)

βc-m2761 Target: 5'-GCTGCAAAAGCTGTGGCAAAAACATCA-3' (SEQ ID NO: 3201)

5'-UCAUCUGAGUAUAACGCUGCAAAAG-3' (SEQ ID NO: 4311)

3'-UGAGUAGACUCAUAUUGCGACGUUUUC-5' (SEQ ID NO: 2093)

βc-m2778 Target: 5'-ACTCATCTGAGTATAACGCTGCAAAAG-3' (SEQ ID NO: 3202)

5'-AAAACAGCAAAUGUUACUCAUCUGA-3' (SEQ ID NO: 4312)
3'-ACUUUUGUCGUUUACAAUGAGUAGACU-5' (SEQ ID NO: 2094)

βc-m2795 Target: 5'-TGAAAACAGCAAATGTTACTCATCTGA-3' (SEQ ID NO: 3203)

5'-GAAAACAGCAAAUGUUACUCAUCUG-3' (SEQ ID NO: 4313)
3'-AACUUUUGUCGUUUACAAUGAGUAGAC-5' (SEQ ID NO: 2095)

βc-m2796 Target: 5'-TTGAAAACAGCAAATGTTACTCATCTG-3' (SEQ ID NO: 3204)

5'-UGAAAACAGCAAAUGUUACUCAUCU-3' (SEQ ID NO: 4314)
3'-CAACUUUUGUCGUUUACAAUGAGUAGA-5' (SEQ ID NO: 2096)

βc-m2797 Target: 5'-GTTGAAAACAGCAAATGTTACTCATCT-3' (SEQ ID NO: 3205)

5'-AUUAAUGUUGAAAACAGCAAAUGUU-3' (SEQ ID NO: 4315)
3'-GAUAAUUACAACUUUUGUCGUUUACAA-5' (SEQ ID NO: 2097)

βc-m2805 Target: 5'-CTATTAATGTTGAAAACAGCAAATGTT-3' (SEQ ID NO: 3206)

5'-ACUACAGCUGUAUAGAGAGAAAGGC-3' (SEQ ID NO: 4316)
3'-UGUGAUGUCGACAUAUCUCUCUUUCCG-5' (SEQ ID NO: 2098)

βc-m2834 Target: 5'-ACACTACAGCTGTATAGAGAGAAAGGC-3' (SEQ ID NO: 3207)

5'-GGCCAAUCACAAUGCACGUUCAGAC-3' (SEQ ID NO: 4317)
3'-GUCCGGUUAGUGUUACGUGCAAGUCUG-5' (SEQ ID NO: 2099)

βc-m2859 Target: 5'-CAGGCCAATCACAATGCACGTTCAGAC-3' (SEQ ID NO: 3208)

5'-GUUCCCAUAGGAAACUCAGCUUGGU-3' (SEQ ID NO: 4318)
3'-GACAAGGGUAUCCUUUGAGUCGAACCA-5' (SEQ ID NO: 2100)

βc-m2946 Target: 5'-CTGTTCCCATAGGAAACTCAGCTTGGT-3' (SEQ ID NO: 3209)

5'-GAACAAAAAGCGUACUUCGACUGUU-3' (SEQ ID NO: 4319)
3'-GUCUUGUUUUUCGCAUGAAGCUGACAA-5' (SEQ ID NO: 2101)

βc-m2968 Target: 5'-CAGAACAAAAAGCGTACTTCGACTGTT-3' (SEQ ID NO: 3210)

5'-GGACCAGAACAAAAAGCGUACUUCG-3' (SEQ ID NO: 4320)
3'-UUCCUGGUCUUGUUUUUCGCAUGAAGC-5' (SEQ ID NO: 2102)

βc-m2974 Target: 5'-AAGGACCAGAACAAAAAGCGTACTTCG-3' (SEQ ID NO: 3211)

5'-ACCAAAAAGGACCAGAACAAAAAGC-3' (SEQ ID NO: 4321)
3'-GCUGGUUUUUCCUGGUCUUGUUUUUCG-5' (SEQ ID NO: 2103)

βc-m2982 Target: 5'-CGACCAAAAAGGACCAGAACAAAAAGC-3' (SEQ ID NO: 3212)

5'-GACCAAAAAGGACCAGAACAAAAAG-3' (SEQ ID NO: 4322)
3'-AGCUGGUUUUUCCUGGUCUUGUUUUUC-5' (SEQ ID NO: 2104)

βc-m2983 Target: 5'-TCGACCAAAAAGGACCAGAACAAAAAG-3' (SEQ ID NO: 3213)

5'-ACUCCUCGACCAAAAAGGACCAGAA-3' (SEQ ID NO: 4323)
3'-AAUGAGGAGCUGGUUUUUCCUGGUCUU-5' (SEQ ID NO: 2105)

βc-m2990 Target: 5'-TTACTCCTCGACCAAAAAGGACCAGAA-3' (SEQ ID NO: 3214)

5'-UCCAUUUGUAUUGUUACUCCUCGAC-3' (SEQ ID NO: 4324)

3'-UUAGGUAAACAUAACAAUGAGGAGCUG-5' (SEQ ID NO: 2106)

βc-m3005 Target: 5'-AATCCATTTGTATTGTTACTCCTCGAC-3' (SEQ ID NO: 3215)

5'-AUCCAUUUGUAUUGUUACUCCUCGA-3' (SEQ ID NO: 4325)
3'-UUUAGGUAAACAUAACAAUGAGGAGCU-5' (SEQ ID NO: 2107)

βc-m3006 Target: 5'-AAATCCATTTGTATTGTTACTCCTCGA-3' (SEQ ID NO: 3216)

5'-AAUCCAUUUGUAUUGUUACUCCUCG-3' (SEQ ID NO: 4326)
3'-GUUUAGGUAAACAUAACAAUGAGGAGC-5' (SEQ ID NO: 2108)

βc-m3007 Target: 5'-CAAATCCATTTGTATTGTTACTCCTCG-3' (SEQ ID NO: 3217)

5'-AAAUCCAUUUGUAUUGUUACUCCUC-3' (SEQ ID NO: 4327)
3'-GGUUUAGGUAAACAUAACAAUGAGGAG-5' (SEQ ID NO: 2109)

βc-m3008 Target: 5'-CCAAATCCATTTGTATTGTTACTCCTC-3' (SEQ ID NO: 3218)

5'-ACUCCCCAAAUCCAUUUGUAUUGUU-3' (SEQ ID NO: 4328)
3'-AGUGAGGGGUUUAGGUAAACAUAACAA-5' (SEQ ID NO: 2110)

βc-m3015 Target: 5'-TCACTCCCCAAATCCATTTGTATTGTT-3' (SEQ ID NO: 3219)

5'-UCCAUUCGUGUGCAUUCUUCACUGC-3' (SEQ ID NO: 4329)
3'-CUAGGUAAGCACACGUAAGAAGUGACG-5' (SEQ ID NO: 2111)

βc-m3047 Target: 5'-GATCCATTCGTGTGCATTCTTCACTGC-3' (SEQ ID NO: 3220)

5'-AUCCAUUCGUGUGCAUUCUUCACUG-3' (SEQ ID NO: 4330)
3'-ACUAGGUAAGCACACGUAAGAAGUGAC-5' (SEQ ID NO: 2112)

βc-m3048 Target: 5'-TGATCCATTCGTGTGCATTCTTCACTG-3' (SEQ ID NO: 3221)

5'-GAUCCAUUCGUGUGCAUUCUUCACU-3' (SEQ ID NO: 4331)
3'-CACUAGGUAAGCACACGUAAGAAGUGA-5' (SEQ ID NO: 2113)

βc-m3049 Target: 5'-GTGATCCATTCGTGTGCATTCTTCACT-3' (SEQ ID NO: 3222)

5'-AAACAAAGAACAAGCAAGGCUAGGG-3' (SEQ ID NO: 4332)
3'-AUUUUGUUUCUUGUUCGUUCCGAUCCC-5' (SEQ ID NO: 2114)

βc-m3093 Target: 5'-TAAAACAAAGAACAAGCAAGGCTAGGG-3' (SEQ ID NO: 3223)

5'-ACCACUACAGAUAUUAAAACAAAGA-3' (SEQ ID NO: 4333)
3'-CGUGGUGAUGUCUAUAAUUUUGUUUCU-5' (SEQ ID NO: 2115)

βc-m3109 Target: 5'-GCACCACTACAGATATTAAAACAAAGA-3' (SEQ ID NO: 3224)

5'-GCACCACUACAGAUAUUAAAACAAA-3' (SEQ ID NO: 4334)
3'-GUCGUGGUGAUGUCUAUAAUUUUGUUU-5' (SEQ ID NO: 2116)

βc-m3111 Target: 5'-CAGCACCACTACAGATATTAAAACAAA-3' (SEQ ID NO: 3225)

5'-AGCACCACUACAGAUAUUAAAACAA-3' (SEQ ID NO: 4335)
3'-AGUCGUGGUGAUGUCUAUAAUUUUGUU-5' (SEQ ID NO: 2117)

βc-m3112 Target: 5'-TCAGCACCACTACAGATATTAAAACAA-3' (SEQ ID NO: 3226)

5'-AAAAUAAAAGCAAGCAAAGUCAGCA-3' (SEQ ID NO: 4336)
3'-UUUUUUAUUUUCGUUCGUUUCAGUCGU-5' (SEQ ID NO: 2118)

βc-m3133 Target: 5'-AAAAAATAAAAGCAAGCAAAGTCAGCA-3' (SEQ ID NO: 3227)

5'-GCAAAAAAUAAAAGCAAGCAAAGUC-3' (SEQ ID NO: 4337)

3'-GACGUUUUUUAUUUUCGUUCGUUUCAG-5' (SEQ ID NO: 2119)

βc-m3137 Target: 5'-CTGCAAAAAATAAAAGCAAGCAAAGTC-3' (SEQ ID NO: 3228)

5'-UUACUGCAAAAAAUAAAAGCAAGCA-3' (SEQ ID NO: 4338)
3'-UCAAUGACGUUUUUUAUUUUCGUUCGU-5' (SEQ ID NO: 2120)

βc-m3142 Target: 5'-AGTTACTGCAAAAAATAAAAGCAAGCA-3' (SEQ ID NO: 3229)

5'-UAACAGUUACUGCAAAAAAUAAAAG-3' (SEQ ID NO: 4339)
3'-UGAUUGUCAAUGACGUUUUUUAUUUUC-5' (SEQ ID NO: 2121)

βc-m3148 Target: 5'-ACTAACAGTTACTGCAAAAAATAAAAG-3' (SEQ ID NO: 3230)

5'-ACUAACAGUUACUGCAAAAAAUAAA-3' (SEQ ID NO: 4340)
3'-UUUGAUUGUCAAUGACGUUUUUUAUUU-5' (SEQ ID NO: 2122)

βc-m3150 Target: 5'-AAACTAACAGTTACTGCAAAAAATAAA-3' (SEQ ID NO: 3231)

5'-AAACUAACAGUUACUGCAAAAAAUA-3' (SEQ ID NO: 4341)
3'-UUUUUGAUUGUCAAUGACGUUUUUUAU-5' (SEQ ID NO: 2123)

βc-m3152 Target: 5'-AAAAACTAACAGTTACTGCAAAAAATA-3' (SEQ ID NO: 3232)

5'-AAAACUAACAGUUACUGCAAAAAAU-3' (SEQ ID NO: 4342)
3'-AUUUUUGAUUGUCAAUGACGUUUUUUA-5' (SEQ ID NO: 2124)

βc-m3153 Target: 5'-TAAAAACTAACAGTTACTGCAAAAAAT-3' (SEQ ID NO: 3233)

5'-UAAAAACUAACAGUUACUGCAAAAA-3' (SEQ ID NO: 4343)
3'-GAAUUUUUGAUUGUCAAUGACGUUUUU-5' (SEQ ID NO: 2125)

βc-m3155 Target: 5'-CTTAAAAACTAACAGTTACTGCAAAAA-3' (SEQ ID NO: 3234)

5'-UACUUAAAAACUAACAGUUACUGCA-3' (SEQ ID NO: 4344)
3'-UGAUGAAUUUUUGAUUGUCAAUGACGU-5' (SEQ ID NO: 2126)

βc-m3159 Target: 5'-ACTACTTAAAAACTAACAGTTACTGCA-3' (SEQ ID NO: 3235)

5'-ACUACUUAAAAACUAACAGUUACUG-3' (SEQ ID NO: 4345)
3'-UGUGAUGAAUUUUUGAUUGUCAAUGAC-5' (SEQ ID NO: 2127)

βc-m3161 Target: 5'-ACACTACTTAAAAACTAACAGTTACTG-3' (SEQ ID NO: 3236)

5'-UAACACUACUUAAAAACUAACAGUU-3' (SEQ ID NO: 4346)
3'-GUAUUGUGAUGAAUUUUUGAUUGUCAA-5' (SEQ ID NO: 2128)

βc-m3165 Target: 5'-CATAACACTACTTAAAAACTAACAGTT-3' (SEQ ID NO: 3237)

5'-AUAACACUACUUAAAAACUAACAGU-3' (SEQ ID NO: 4347)
3'-UGUAUUGUGAUGAAUUUUUGAUUGUCA-5' (SEQ ID NO: 2129)

βc-m3166 Target: 5'-ACATAACACTACTTAAAAACTAACAGT-3' (SEQ ID NO: 3238)

5'-ACAUAACACUACUUAAAAACUAACA-3' (SEQ ID NO: 4348)
3'-CUUGUAUUGUGAUGAAUUUUUGAUUGU-5' (SEQ ID NO: 2130)

βc-m3168 Target: 5'-GAACATAACACTACTTAAAAACTAACA-3' (SEQ ID NO: 3239)

5'-AACAUAACACUACUUAAAAACUAAC-3' (SEQ ID NO: 4349)
3'-UCUUGUAUUGUGAUGAAUUUUUGAUUG-5' (SEQ ID NO: 2131)

βc-m3169 Target: 5'-AGAACATAACACTACTTAAAAACTAAC-3' (SEQ ID NO: 3240)

5'-GAACAUAACACUACUUAAAAACUAA-3' (SEQ ID NO: 4350)

3'-AUCUUGUAUUGUGAUGAAUUUUUGAUU-5' (SEQ ID NO: 2132)

βc-m3170 Target: 5'-TAGAACATAACACTACTTAAAAACTAA-3' (SEQ ID NO: 3241)

5'-AGAACAUAACACUACUUAAAAACUA-3' (SEQ ID NO: 4351)
3'-GAUCUUGUAUUGUGAUGAAUUUUUGAU-5' (SEQ ID NO: 2133)

βc-m3171 Target: 5'-CTAGAACATAACACTACTTAAAAACTA-3' (SEQ ID NO: 3242)

5'-UCACUAGAACAUAACACUACUUAAA-3' (SEQ ID NO: 4352)
3'-CAAGUGAUCUUGUAUUGUGAUGAAUUU-5' (SEQ ID NO: 2134)

βc-m3176 Target: 5'-GTTCACTAGAACATAACACTACTTAAA-3' (SEQ ID NO: 3243)

5'-GUUCACUAGAACAUAACACUACUUA-3' (SEQ ID NO: 4353)
3'-UCCAAGUGAUCUUGUAUUGUGAUGAAU-5' (SEQ ID NO: 2135)

βc-m3178 Target: 5'-AGGTTCACTAGAACATAACACTACTTA-3' (SEQ ID NO: 3244)

5'-GGUUCACUAGAACAUAACACUACUU-3' (SEQ ID NO: 4354)
3'-GUCCAAGUGAUCUUGUAUUGUGAUGAA-5' (SEQ ID NO: 2136)

βc-m3179 Target: 5'-CAGGTTCACTAGAACATAACACTACTT-3' (SEQ ID NO: 3245)

5'-AUUACUCGGUUCUUAGAAAUCAGAA-3' (SEQ ID NO: 4355)
3'-GGUAAUGAGCCAAGAAUCUUUAGUCUU-5' (SEQ ID NO: 2137)

βc-m3216 Target: 5'-CCATTACTCGGTTCTTAGAAATCAGAA-3' (SEQ ID NO: 3246)

5'-ACCAUUACUCGGUUCUUAGAAAUCA-3' (SEQ ID NO: 4356)
3'-UGUGGUAAUGAGCCAAGAAUCUUUAGU-5' (SEQ ID NO: 2138)

βc-m3219 Target: 5'-ACACCATTACTCGGTTCTTAGAAATCA-3' (SEQ ID NO: 3247)

5'-UCUACACCAUUACUCGGUUCUUAGA-3' (SEQ ID NO: 4357)
3'-CAAGAUGUGGUAAUGAGCCAAGAAUCU-5' (SEQ ID NO: 2139)

βc-m3224 Target: 5'-GTTCTACACCATTACTCGGTTCTTAGA-3' (SEQ ID NO: 3248)

5'-GAAUUAGUGUUCUACACCAUUACUC-3' (SEQ ID NO: 4358)
3'-UACUUAAUCACAAGAUGUGGUAAUGAG-5' (SEQ ID NO: 2140)

βc-m3234 Target: 5'-ATGAATTAGTGTTCTACACCATTACTC-3' (SEQ ID NO: 3249)

5'-AUUAUGAAUUAGUGUUCUACACCAU-3' (SEQ ID NO: 4359)
3'-ACUAAUACUUAAUCACAAGAUGUGGUA-5' (SEQ ID NO: 2141)

βc-m3239 Target: 5'-TGATTATGAATTAGTGTTCTACACC-3' (SEQ ID NO: 3250)

5'-GAUUAUGAAUUAGUGUUCUACACCA-3' (SEQ ID NO: 4360)
3'-CACUAAUACUUAAUCACAAGAUGUGGU-5' (SEQ ID NO: 2142)

βc-m3240 Target: 5'-GTGATTATGAATTAGTGTTCTACACCA-3' (SEQ ID NO: 3251)

5'-UGAUUAUGAAUUAGUGUUCUACACC-3' (SEQ ID NO: 4361)
3'-GCACUAAUACUUAAUCACAAGAUGUGG-5' (SEQ ID NO: 2143)

βc-m3241 Target: 5'-CGTGATTATGAATTAGTGTTCTACACC-3' (SEQ ID NO: 3252)

5'-ACAAUUAGCGUGAUUAUGAAUUAGU-3' (SEQ ID NO: 4362)
3'-AAUGUUAAUCGCACUAAUACUUAAUCA-5' (SEQ ID NO: 2144)

βc-m3251 Target: 5'-TTACAATTAGCGTGATTATGAATTAGT-3' (SEQ ID NO: 3253)

5'-UACAAUUAGCGUGAUUAUGAAUUAG-3' (SEQ ID NO: 4363)

3'-UAAUGUUAAUCGCACUAAUACUUAAUC-5' (SEQ ID NO: 2145)

βc-m3252 Target: 5'-ATTACAATTAGCGTGATTATGAATTAG-3' (SEQ ID NO: 3254)

5'-AGAUUACAAUUAGCGUGAUUAUGAA-3' (SEQ ID NO: 4364)
3'-GGUCUAAUGUUAAUCGCACUAAUACUU-5' (SEQ ID NO: 2146)

βc-m3256 Target: 5'-CCAGATTACAATTAGCGTGATTATGAA-3' (SEQ ID NO: 3255)

5'-UACACGUCUCCAGAUUACAAUUAGC-3' (SEQ ID NO: 4365)
3'-CAAUGUGCAGAGGUCUAAUGUUAAUCG-5' (SEQ ID NO: 2147)

βc-m3267 Target: 5'-GTTACACGTCTCCAGATTACAATTAGC-3' (SEQ ID NO: 3256)

5'-GUUACACGUCUCCAGAUUACAAUUA-3' (SEQ ID NO: 4366)
3'-UACAAUGUGCAGAGGUCUAAUGUUAAU-5' (SEQ ID NO: 2148)

βc-m3269 Target: 5'-ATGTTACACGTCTCCAGATTACAATTA-3' (SEQ ID NO: 3257)

5'-UACACAAUGUUACACGUCUCCAGAU-3' (SEQ ID NO: 4367)
3'-CGAUGUGUUACAAUGUGCAGAGGUCUA-5' (SEQ ID NO: 2149)

βc-m3277 Target: 5'-GCTACACAATGTTACACGTCTCCAGAT-3' (SEQ ID NO: 3258)

5'-GCUACACAAUGUUACACGUCUCCAG-3' (SEQ ID NO: 4368)
3'-UCCGAUGUGUUACAAUGUGCAGAGGUC-5' (SEQ ID NO: 2150)

βc-m3279 Target: 5'-AGGCTACACAATGTTACACGTCTCCAG-3' (SEQ ID NO: 3259)

5'-ACAAAAGGCUACACAAUGUUACACG-3' (SEQ ID NO: 4369)
3'-UAUGUUUUCCGAUGUGUUACAAUGUGC-5' (SEQ ID NO: 2151)

βc-m3286 Target: 5'-ATACAAAAGGCTACACAATGTTACACG-3' (SEQ ID NO: 3260)

5'-UACAAAAGGCUACACAAUGUUACAC-3' (SEQ ID NO: 4370)
3'-AUAUGUUUUCCGAUGUGUUACAAUGUG-5' (SEQ ID NO: 2152)

βc-m3287 Target: 5'-TATACAAAAGGCTACACAATGTTACAC-3' (SEQ ID NO: 3261)

5'-UUUAUACAAAAGGCUACACAAUGUU-3' (SEQ ID NO: 4371)
3'-AUAAAUAUGUUUUCCGAUGUGUUACAA-5' (SEQ ID NO: 2153)

βc-m3291 Target: 5'-TATTTATACAAAAGGCTACACAATGTT-3' (SEQ ID NO: 3262)

5'-AUUUAUACAAAAGGCUACACAAUGU-3' (SEQ ID NO: 4372)
3'-GAUAAAUAUGUUUUCCGAUGUGUUACA-5' (SEQ ID NO: 2154)

βc-m3292 Target: 5'-CTATTTATACAAAAGGCTACACAATGT-3' (SEQ ID NO: 3263)

5'-UCUAUUUAUACAAAAGGCUACACAA-3' (SEQ ID NO: 4373)
3'-ACAGAUAAAUAUGUUUUCCGAUGUGUU-5' (SEQ ID NO: 2155)

βc-m3295 Target: 5'-TGTCTATTTATACAAAAGGCTACACAA-3' (SEQ ID NO: 3264)

5'-GUCUAUUUAUACAAAAGGCUACACA-3' (SEQ ID NO: 4374)
3'-GACAGAUAAAUAUGUUUUCCGAUGUGU-5' (SEQ ID NO: 2156)

βc-m3296 Target: 5'-CTGTCTATTTATACAAAAGGCTACACA-3' (SEQ ID NO: 3265)

5'-UGUCUAUUUAUACAAAAGGCUACAC-3' (SEQ ID NO: 4375)
3'-AGACAGAUAAAUAUGUUUUCCGAUGUG-5' (SEQ ID NO: 2157)

βc-m3297 Target: 5'-TCTGTCTATTTATACAAAAGGCTACAC-3' (SEQ ID NO: 3266)

5'-UCUAUCUGUCUAUUUAUACAAAAGG-3' (SEQ ID NO: 4376)

3'-AAAGAUAGACAGAUAAAUAUGUUUUCC-5' (SEQ ID NO: 2158)

βc-m3303 Target: 5'-TTTCTATCTGTCTATTTATACAAAAGG-3' (SEQ ID NO: 3267)

5'-UUCUAUCUGUCUAUUUAUACAAAAG-3' (SEQ ID NO: 4377)
3'-UAAAGAUAGACAGAUAAAUAUGUUUUC-5' (SEQ ID NO: 2159)

βc-m3304 Target: 5'-ATTTCTATCTGTCTATTTATACAAAAG-3' (SEQ ID NO: 3268)

5'-UUUCUAUCUGUCUAUUUAUACAAAA-3' (SEQ ID NO: 4378)
3'-GUAAAGAUAGACAGAUAAAUAUGUUUU-5' (SEQ ID NO: 2160)

βc-m3305 Target: 5'-CATTTCTATCTGTCTATTTATACAAAA-3' (SEQ ID NO: 3269)

5'-AUUUCUAUCUGUCUAUUUAUACAAA-3' (SEQ ID NO: 4379)
3'-GGUAAAGAUAGACAGAUAAAUAUGUUU-5' (SEQ ID NO: 2161)

βc-m3306 Target: 5'-CCATTTCTATCTGTCTATTTATACAAA-3' (SEQ ID NO: 3270)

5'-GACCAUUUCUAUCUGUCUAUUUAUA-3' (SEQ ID NO: 4380)
3'-GCCUGGUAAAGAUAGACAGAUAAAUAU-5' (SEQ ID NO: 2162)

βc-m3310 Target: 5'-CGGACCATTTCTATCTGTCTATTTATA-3' (SEQ ID NO: 3271)

5'-GGACCAUUUCUAUCUGUCUAUUUAU-3' (SEQ ID NO: 4381)
3'-AGCCUGGUAAAGAUAGACAGAUAAAUA-5' (SEQ ID NO: 2163)

βc-m3311 Target: 5'-TCGGACCATTTCTATCTGTCTATTTAT-3' (SEQ ID NO: 3272)

5'-ACUAAUCGGACCAUUUCUAUCUGUC-3' (SEQ ID NO: 4382)
3'-UUUGAUUAGCCUGGUAAAGAUAGACAG-5' (SEQ ID NO: 2164)

βc-m3318 Target: 5'-AAACTAATCGGACCATTTCTATCTGTC-3' (SEQ ID NO: 3273)

5'-AACUAAUCGGACCAUUUCUAUCUGU-3' (SEQ ID NO: 4383)
3'-CUUUGAUUAGCCUGGUAAAGAUAGACA-5' (SEQ ID NO: 2165)

βc-m3319 Target: 5'-GAAACTAATCGGACCATTTCTATCTGT-3' (SEQ ID NO: 3274)

5'-AAACUAAUCGGACCAUUUCUAUCUG-3' (SEQ ID NO: 4384)
3'-CCUUUGAUUAGCCUGGUAAAGAUAGAC-5' (SEQ ID NO: 2166)

βc-m3320 Target: 5'-GGAAACTAATCGGACCATTTCTATCTG-3' (SEQ ID NO: 3275)

5'-GAAACUAAUCGGACCAUUUCUAUCU-3' (SEQ ID NO: 4385)
3'-UCCUUUGAUUAGCCUGGUAAAGAUAGA-5' (SEQ ID NO: 2167)

βc-m3321 Target: 5'-AGGAAACTAATCGGACCATTTCTATCT-3' (SEQ ID NO: 3276)

5'-UAAAAAGGAAACUAAUCGGACCAUU-3' (SEQ ID NO: 4386)
3'-UAAUUUUUCCUUUGAUUAGCCUGGUAA-5' (SEQ ID NO: 2168)

βc-m3328 Target: 5'-ATTAAAAAGGAAACTAATCGGACCATT-3' (SEQ ID NO: 3277)

5'-GCAUAUUAAAAAGGAAACUAAUCGG-3' (SEQ ID NO: 4387)
3'-UUCGUAUAAUUUUUCCUUUGAUUAGCC-5' (SEQ ID NO: 2169)

βc-m3334 Target: 5'-AAGCATATTAAAAAGGAAACTAATCGG-3' (SEQ ID NO: 3278)

5'-AGCAUAUUAAAAAGGAAACUAAUCG-3' (SEQ ID NO: 4388)
3'-AUUCGUAUAAUUUUUCCUUUGAUUAGC-5' (SEQ ID NO: 2170)

βc-m3335 Target: 5'-TAAGCATATTAAAAAGGAAACTAATCG-3' (SEQ ID NO: 3279)

5'-UUUAAGCAUAUUAAAAAGGAAACUA-3' (SEQ ID NO: 4389)

3'-UAAAAUUCGUAUAAUUUUUCCUUUGAU-5' (SEQ ID NO: 2171)

βc-m3339 Target: 5'-ATTTTAAGCATATTAAAAAGGAAACTA-3' (SEQ ID NO: 3280)

5'-GCUUAUUUUAAGCAUAUUAAAAAGG-3' (SEQ ID NO: 4390)
3'-GACGAAUAAAAUUCGUAUAAUUUUUCC-5' (SEQ ID NO: 2172)

βc-m3345 Target: 5'-CTGCTTATTTTAAGCATATTAAAAAGG-3' (SEQ ID NO: 3281)

5'-UGCUUAUUUUAAGCAUAUUAAAAAG-3' (SEQ ID NO: 4391)
3'-GGACGAAUAAAAUUCGUAUAAUUUUUC-5' (SEQ ID NO: 2173)

βc-m3346 Target: 5'-CCTGCTTATTTTAAGCATATTAAAAAG-3' (SEQ ID NO: 3282)

5'-UCCACCUGCUUAUUUUAAGCAUAUU-3' (SEQ ID NO: 4392)
3'-CUAGGUGGACGAAUAAAAUUCGUAUAA-5' (SEQ ID NO: 2174)

βc-m3352 Target: 5'-GATCCACCTGCTTATTTTAAGCATATT-3' (SEQ ID NO: 3283)

5'-AAAACAUGAAAUAGAUCCACCUGCU-3' (SEQ ID NO: 4393)
3'-GUUUUUGUACUUUAUCUAGGUGGACGA-5' (SEQ ID NO: 2175)

βc-m3367 Target: 5'-CAAAAACATGAAATAGATCCACCTGCT-3' (SEQ ID NO: 3284)

5'-AAAAACAUGAAAUAGAUCCACCUGC-3' (SEQ ID NO: 4394)
3'-AGUUUUUGUACUUUAUCUAGGUGGACG-5' (SEQ ID NO: 2176)

βc-m3368 Target: 5'-TCAAAAACATGAAATAGATCCACCTGC-3' (SEQ ID NO: 3285)

5'-UCAAAAACAUGAAAUAGAUCCACCU-3' (SEQ ID NO: 4395)
3'-CAAGUUUUUGUACUUUAUCUAGGUGGA-5' (SEQ ID NO: 2177)

βc-m3370 Target: 5'-GTTCAAAAACATGAAATAGATCCACCT-3' (SEQ ID NO: 3286)

5'-UUCAAAAACAUGAAAUAGAUCCACC-3' (SEQ ID NO: 4396)
3'-ACAAGUUUUUGUACUUUAUCUAGGUGG-5' (SEQ ID NO: 2178)

βc-m3371 Target: 5'-TGTTCAAAAACATGAAATAGATCCACC-3' (SEQ ID NO: 3287)

5'-GUUCAAAAACAUGAAAUAGAUCCAC-3' (SEQ ID NO: 4397)
3'-AACAAGUUUUUGUACUUUAUCUAGGUG-5' (SEQ ID NO: 2179)

βc-m3372 Target: 5'-TTGTTCAAAAACATGAAATAGATCCAC-3' (SEQ ID NO: 3288)

5'-UUUUUGUUCAAAAACAUGAAAUAGA-3' (SEQ ID NO: 4398)
3'-UCAAAAACAAGUUUUUGUACUUUAUCU-5' (SEQ ID NO: 2180)

βc-m3377 Target: 5'-AGTTTTTGTTCAAAAACATGAAATAGA-3' (SEQ ID NO: 3289)

5'-AUAAAGUUUUUGUUCAAAAACAUGA-3' (SEQ ID NO: 4399)
3'-GCUAUUUCAAAAACAAGUUUUUGUACU-5' (SEQ ID NO: 2181)

βc-m3383 Target: 5'-CGATAAAGTTTTTGTTCAAAAACATGA-3' (SEQ ID NO: 3290)

5'-UCCCCGAUAAAGUUUUUGUUCAAAA-3' (SEQ ID NO: 4400)
3'-AUAGGGGCUAUUUCAAAAACAAGUUUU-5' (SEQ ID NO: 2182)

βc-m3389 Target: 5'-TATCCCCGATAAAGTTTTTGTTCAAAA-3' (SEQ ID NO: 3291)

5'-AUCCCCGAUAAAGUUUUUGUUCAAA-3' (SEQ ID NO: 4401)
3'-CAUAGGGGCUAUUUCAAAAACAAGUUU-5' (SEQ ID NO: 2183)

βc-m3390 Target: 5'-GTATCCCCGATAAAGTTTTTGTTCAAA-3' (SEQ ID NO: 3292)

5'-ACCUCUUACUGAUUUACCCUACCGC-3' (SEQ ID NO: 4402)

3'-UGUGGAGAAUGACUAAAUGGGAUGGCG-5' (SEQ ID NO: 2184)

βc-m3419 Target: 5'-ACACCTCTTACTGATTTACCCTACCGC-3' (SEQ ID NO: 3293)

5'-ACACCUCUUACUGAUUUACCCUACC-3' (SEQ ID NO: 4403)
3'-AUUGUGGAGAAUGACUAAAUGGGAUGG-5' (SEQ ID NO: 2185)

βc-m3421 Target: 5'-TAACACCTCTTACTGATTTACCCTACC-3' (SEQ ID NO: 3294)

5'-AACACCUCUUACUGAUUUACCCUAC-3' (SEQ ID NO: 4404)
3'-UAUUGUGGAGAAUGACUAAAUGGGAUG-5' (SEQ ID NO: 2186)

βc-m3422 Target: 5'-ATAACACCTCTTACTGATTTACCCTAC-3' (SEQ ID NO: 3295)

5'-UAACACCUCUUACUGAUUUACCCUA-3' (SEQ ID NO: 4405)
3'-UUAUUGUGGAGAAUGACUAAAUGGGAU-5' (SEQ ID NO: 2187)

βc-m3423 Target: 5'-AATAACACCTCTTACTGATTTACCCTA-3' (SEQ ID NO: 3296)

5'-AUAACACCUCUUACUGAUUUACCCU-3' (SEQ ID NO: 4406)
3'-UUUAUUGUGGAGAAUGACUAAAUGGGA-5' (SEQ ID NO: 2188)

βc-m3424 Target: 5'-AAATAACACCTCTTACTGATTTACCCT-3' (SEQ ID NO: 3297)

5'-AAUAACACCUCUUACUGAUUUACCC-3' (SEQ ID NO: 4407)
3'-GUUUAUUGUGGAGAAUGACUAAAUGGG-5' (SEQ ID NO: 2189)

βc-m3425 Target: 5'-CAAATAACACCTCTTACTGATTTACCC-3' (SEQ ID NO: 3298)

5'-GGCUCAAAUAACACCUCUUACUGAU-3' (SEQ ID NO: 4408)
3'-UUCCGAGUUUAUUGUGGAGAAUGACUA-5' (SEQ ID NO: 2190)

βc-m3431 Target: 5'-AAGGCTCAAATAACACCTCTTACTGAT-3' (SEQ ID NO: 3299)

5'-AACAAGGCUCAAAUAACACCUCUUA-3' (SEQ ID NO: 4409)
3'-UUUUGUUCCGAGUUUAUUGUGGAGAAU-5' (SEQ ID NO: 2191)

βc-m3436 Target: 5'-AAAACAAGGCTCAAATAACACCTCTTA-3' (SEQ ID NO: 3300)

5'-AAACAAGGCUCAAAUAACACCUCUU-3' (SEQ ID NO: 4410)
3'-GUUUUGUUCCGAGUUUAUUGUGGAGAA-5' (SEQ ID NO: 2192)

βc-m3437 Target: 5'-CAAAACAAGGCTCAAATAACACCTCTT-3' (SEQ ID NO: 3301)

5'-AAAACAAGGCUCAAAUAACACCUCU-3' (SEQ ID NO: 4411)
3'-GGUUUUGUUCCGAGUUUAUUGUGGAGA-5' (SEQ ID NO: 2193)

βc-m3438 Target: 5'-CCAAAACAAGGCTCAAATAACACCTCT-3' (SEQ ID NO: 3302)

5'-UCCAAAACAAGGCUCAAAUAACACC-3' (SEQ ID NO: 4412)
3'-ACAGGUUUUGUUCCGAGUUUAUUGUGG-5' (SEQ ID NO: 2194)

βc-m3441 Target: 5'-TGTCCAAAACAAGGCTCAAATAACACC-3' (SEQ ID NO: 3303)

5'-UGUCCAAAACAAGGCUCAAAUAACA-3' (SEQ ID NO: 4413)
3'-UGACAGGUUUUGUUCCGAGUUUAUUGU-5' (SEQ ID NO: 2195)

βc-m3443 Target: 5'-ACTGTCCAAAACAAGGCTCAAATAACA-3' (SEQ ID NO: 3304)

5'-UAUACUGUCCAAAACAAGGCUCAAA-3' (SEQ ID NO: 4414)
3'-CCAUAUGACAGGUUUUGUUCCGAGUUU-5' (SEQ ID NO: 2196)

βc-m3448 Target: 5'-GGTATACTGTCCAAAACAAGGCTCAAA-3' (SEQ ID NO: 3305)

5'-GCAACUGGUAUACUGUCCAAAACAA-3' (SEQ ID NO: 4415)

3'-UCCGUUGACCAUAUGACAGGUUUUGUU-5' (SEQ ID NO: 2197)

βc-m3456 Target: 5'-AGGCAACTGGTATACTGTCCAAAACAA-3' (SEQ ID NO: 3306)

5'-GAUAAAAGGCAACUGGUAUACUGUC-3' (SEQ ID NO: 4416)
3'-CCCUAUUUUCCGUUGACCAUAUGACAG-5' (SEQ ID NO: 2198)

βc-m3464 Target: 5'-GGGATAAAAGGCAACTGGTATACTGTC-3' (SEQ ID NO: 3307)

5'-GGAUAAAAGGCAACUGGUAUACUGU-3' (SEQ ID NO: 4417)
3'-ACCCUAUUUUCCGUUGACCAUAUGACA-5' (SEQ ID NO: 2199)

βc-m3465 Target: 5'-TGGGATAAAAGGCAACTGGTATACTGT-3' (SEQ ID NO: 3308)

5'-AACUUUGGGAUAAAAGGCAACUGGU-3' (SEQ ID NO: 4418)
3'-UGUUGAAACCCUAUUUUCCGUUGACCA-5' (SEQ ID NO: 2200)

βc-m3472 Target: 5'-ACAACTTTGGGATAAAAGGCAACTGGT-3' (SEQ ID NO: 3309)

5'-ACAACUUUGGGAUAAAAGGCAACUG-3' (SEQ ID NO: 4419)
3'-GUUGUUGAAACCCUAUUUUCCGUUGAC-5' (SEQ ID NO: 2201)

βc-m3474 Target: 5'-CAACAACTTTGGGATAAAAGGCAACTG-3' (SEQ ID NO: 3310)

5'-UUACAACAACUUUGGGAUAAAAGGC-3' (SEQ ID NO: 4420)
3'-CCAAUGUUGUUGAAACCCUAUUUUCCG-5' (SEQ ID NO: 2202)

βc-m3479 Target: 5'-GGTTACAACAACTTTGGGATAAAAGGC-3' (SEQ ID NO: 3311)

5'-GUUACAACAACUUUGGGAUAAAAGG-3' (SEQ ID NO: 4421)
3'-UCCAAUGUUGUUGAAACCCUAUUUUCC-5' (SEQ ID NO: 2203)

βc-m3480 Target: 5'-AGGTTACAACAACTTTGGGATAAAAGG-3' (SEQ ID NO: 3312)

5'-GGUUACAACAACUUUGGGAUAAAAG-3' (SEQ ID NO: 4422)
3'-GUCCAAUGUUGUUGAAACCCUAUUUUC-5' (SEQ ID NO: 2204)

βc-m3481 Target: 5'-CAGGTTACAACAACTTTGGGATAAAAG-3' (SEQ ID NO: 3313)

5'-UCACAGCAGGUUACAACAACUUUGG-3' (SEQ ID NO: 4423)
3'-AUAGUGUCGUCCAAUGUUGUUGAAACC-5' (SEQ ID NO: 2205)

βc-m3489 Target: 5'-TATCACAGCAGGTTACAACAACTTTGG-3' (SEQ ID NO: 3314)

5'-AUCACAGCAGGUUACAACAACUUUG-3' (SEQ ID NO: 4424)
3'-CAUAGUGUCGUCCAAUGUUGUUGAAAC-5' (SEQ ID NO: 2206)

βc-m3490 Target: 5'-GTATCACAGCAGGTTACAACAACTTTG-3' (SEQ ID NO: 3315)

5'-GUAUCACAGCAGGUUACAACAACUU-3' (SEQ ID NO: 4425)
3'-AACAUAGUGUCGUCCAAUGUUGUUGAA-5' (SEQ ID NO: 2207)

βc-m3492 Target: 5'-TTGTATCACAGCAGGTTACAACAACTT-3' (SEQ ID NO: 3316)

5'-GCAUCUGUUGAAGCAUUGUAUCACA-3' (SEQ ID NO: 4426)
3'-GGCGUAGACAACUUCGUAACAUAGUGU-5' (SEQ ID NO: 2208)

βc-m3509 Target: 5'-CCGCATCTGTTGAAGCATTGTATCACA-3' (SEQ ID NO: 3317)

5'-UGAACCAUUUCUAUAACCGCAUCUG-3' (SEQ ID NO: 4427)
3'-AGACUUGGUAAAGAUAUUGGCGUAGAC-5' (SEQ ID NO: 2209)

βc-m3527 Target: 5'-TCTGAACCATTTCTATAACCGCATCTG-3' (SEQ ID NO: 3318)

5'-AUUCUGAACCAUUUCUAUAACCGCA-3' (SEQ ID NO: 4428)

3'-AUUAAGACUUGGUAAAGAUAUUGGCGU-5' (SEQ ID NO: 2210)

βc-m3531 Target: 5'-TAATTCTGAACCATTTCTATAACCGCA-3' (SEQ ID NO: 3319)

5'-UAAUUCUGAACCAUUUCUAUAACCG-3' (SEQ ID NO: 4429)
3'-AAAUUAAGACUUGGUAAAGAUAUUGGC-5' (SEQ ID NO: 2211)

βc-m3533 Target: 5'-TTTAATTCTGAACCATTTCTATAACCG-3' (SEQ ID NO: 3320)

5'-UUAAUUCUGAACCAUUUCUAUAACC-3' (SEQ ID NO: 4430)
3'-CAAAUUAAGACUUGGUAAAGAUAUUGG-5' (SEQ ID NO: 2212)

βc-m3534 Target: 5'-GTTTAATTCTGAACCATTTCTATAACC-3' (SEQ ID NO: 3321)

5'-UUUAAUUCUGAACCAUUUCUAUAAC-3' (SEQ ID NO: 4431)
3'-UCAAAUUAAGACUUGGUAAAGAUAUUG-5' (SEQ ID NO: 2213)

βc-m3535 Target: 5'-AGTTTAATTCTGAACCATTTCTATAAC-3' (SEQ ID NO: 3322)

5'-GUUUAAUUCUGAACCAUUUCUAUAA-3' (SEQ ID NO: 4432)
3'-UUCAAAUUAAGACUUGGUAAAGAUAUU-5' (SEQ ID NO: 2214)

βc-m3536 Target: 5'-AAGTTTAATTCTGAACCATTTCTATAA-3' (SEQ ID NO: 3323)

5'-UAAAAGUUUAAUUCUGAACCAUUUC-3' (SEQ ID NO: 4433)
3'-UAAUUUUCAAAUUAAGACUUGGUAAAG-5' (SEQ ID NO: 2215)

βc-m3541 Target: 5'-ATTAAAAGTTTAATTCTGAACCATTTC-3' (SEQ ID NO: 3324)

5'-UUAAAAGUUUAAUUCUGAACCAUUU-3' (SEQ ID NO: 4434)
3'-UUAAUUUUCAAAUUAAGACUUGGUAAA-5' (SEQ ID NO: 2216)

βc-m3542 Target: 5'-AATTAAAAGTTTAATTCTGAACCATTT-3' (SEQ ID NO: 3325)

5'-AAUUAAAAGUUUAAUUCUGAACCAU-3' (SEQ ID NO: 4435)
3'-ACUUAAUUUUCAAAUUAAGACUUGGUA-5' (SEQ ID NO: 2217)

βc-m3544 Target: 5'-TGAATTAAAAGTTTAATTCTGAACC-3' (SEQ ID NO: 3326)

5'-UGAAUGAAUUAAAAGUUUAAUUCUG-3' (SEQ ID NO: 4436)
3'-AAACUUACUUAAUUUUCAAAUUAAGAC-5' (SEQ ID NO: 2218)

βc-m3550 Target: 5'-TTTGAATGAATTAAAAGTTTAATTCTG-3' (SEQ ID NO: 3327)

5'-UUUUUGAAUGAAUUAAAAGUUUAAU-3' (SEQ ID NO: 4437)
3'-AAAAAAACUUACUUAAUUUUCAAAUUA-5' (SEQ ID NO: 2219)

βc-m3554 Target: 5'-TTTTTTTGAATGAATTAAAAGTTTAAT-3' (SEQ ID NO: 3328)

5'-UUUUUUUUUGAAUGAAUUAAAAGUU-3' (SEQ ID NO: 4438)
3'-AAAAAAAAAAACUUACUUAAUUUUCAA-5' (SEQ ID NO: 2220)

βc-m3558 Target: 5'-TTTTTTTTTTTGAATGAATTAAAAGTT-3' (SEQ ID NO: 3329)

5'-UUUUUUUUUUGAAUGAAUUAAAAGU-3' (SEQ ID NO: 4439)
3'-AAAAAAAAAAAACUUACUUAAUUUUCA-5' (SEQ ID NO: 2221)

βc-m3559 Target: 5'-TTTTTTTTTTTTGAATGAATTAAAAGT-3' (SEQ ID NO: 3330)

5'-UUUUUUUUUUUGAAUGAAUUAAAAG-3' (SEQ ID NO: 4440)
3'-AAAAAAAAAAAAACUUACUUAAUUUUC-5' (SEQ ID NO: 2222)

βc-m3560 Target: 5'-TTTTTTTTTTTTTGAATGAATTAAAAG-3' (SEQ ID NO: 3331)

5'-UUUUUUUUUUUUGAAUGAAUUAAAA-3' (SEQ ID NO: 4441)

3'-AAAAAAAAAAAAAACUUACUUAAUUUU-5' (SEQ ID NO: 2223)

βc-m3561 Target: 5'-TTTTTTTTTTTTTTGAATGAATTAAAA-3' (SEQ ID NO: 3332)

5'-UUUUUUUUUUUUUGAAUGAAUUAAA-3' (SEQ ID NO: 4442)
3'-AAAAAAAAAAAAAAACUUACUUAAUUU-5' (SEQ ID NO: 2224)

βc-m3562 Target: 5'-TTTTTTTTTTTTTTTGAATGAATTAAA-3' (SEQ ID NO: 3333)

5'-UUUUUUUUUUUUUUGAAUGAAUUAA-3' (SEQ ID NO: 4443)
3'-AAAAAAAAAAAAAAAACUUACUUAAUU-5' (SEQ ID NO: 2225)

βc-m3563 Target: 5'-TTTTTTTTTTTTTTTGAATGAATTAA-3' (SEQ ID NO: 3334)

Table 12: Additional Selected Anti-β-catenin DsiRNAs, Blunt/Frayed Duplexes

5'-GUUGUAUGGUAUACUUCAAAUACCC$^{CA-3'}$ (SEQ ID NO: 6041)
3'-CAACAUACCAUAUGAAGUUUAUGGG$_{AG-5'}$ (SEQ ID NO: 1605)

βc-244 Target: 5'-GTTGTATGGTATACTTCAAATACCCTC-3' (SEQ ID NO: 2714)

5'-CAAAACAGUUGUAUGGUAUACUUCA$^{CC-3'}$ (SEQ ID NO: 6042)
3'-GUUUUGUCAACAUACCAUAUGAAGU$_{UU-5'}$ (SEQ ID NO: 1606)

βc-251 Target: 5'-CAAAACAGTTGTATGGTATACTTCAAA-3' (SEQ ID NO: 2715)

5'-UCAAAACAGUUGUAUGGUAUACUUC$^{CC-3'}$ (SEQ ID NO: 6043)
3'-AGUUUUGUCAACAUACCAUAUGAAG$_{UU-5'}$ (SEQ ID NO: 1607)

βc-252 Target: 5'-TCAAAACAGTTGTATGGTATACTTCAA-3' (SEQ ID NO: 2716)

5'-UUUCAAAACAGUUGUAUGGUAUACU$^{CA-3'}$ (SEQ ID NO: 6044)
3'-AAAGUUUUGUCAACAUACCAUAUGA$_{AG-5'}$ (SEQ ID NO: 1608)

βc-254 Target: 5'-TTTCAAAACAGTTGTATGGTATACTTC-3' (SEQ ID NO: 2717)

5'-UUUUCAAAACAGUUGUAUGGUAUAC$^{CC-3'}$ (SEQ ID NO: 6045)
3'-AAAAGUUUUGUCAACAUACCAUAUG$_{AA-5'}$ (SEQ ID NO: 1609)

βc-255 Target: 5'-TTTTCAAAACAGTTGTATGGTATACTT-3' (SEQ ID NO: 2718)

5'-AUUUUCAAAACAGUUGUAUGGUAUA$^{AC-3'}$ (SEQ ID NO: 6046)
3'-UAAAAGUUUUGUCAACAUACCAUAU$_{GA-5'}$ (SEQ ID NO: 1610)

βc-256 Target: 5'-ATTTTCAAAACAGTTGTATGGTATACT-3' (SEQ ID NO: 2719)

5'-UUGUCCACGCUGGAUUUUCAAAACA$^{AC-3'}$ (SEQ ID NO: 6047)
3'-AACAGGUGCGACCUAAAAGUUUUGU$_{CA-5'}$ (SEQ ID NO: 1611)

βc-269 Target: 5'-TTGTCCACGCTGGATTTTCAAAACAGT-3' (SEQ ID NO: 2720)

5'-AUUGUCCACGCUGGAUUUUCAAAAC$^{CA-3'}$ (SEQ ID NO: 6048)
3'-UAACAGGUGCGACCUAAAAGUUUUG$_{UC-5'}$ (SEQ ID NO: 1612)

βc-270 Target: 5'-ATTGTCCACGCTGGATTTTCAAAACAG-3' (SEQ ID NO: 2721)

5'-CCAUCAAAUCAGCUUGAGUAGCCAU$^{CA-3'}$ (SEQ ID NO: 6049)
3'-GGUAGUUUAGUCGAACUCAUCGGUA$_{AC-5'}$ (SEQ ID NO: 1613)

βc-293 Target: 5'-CCATCAAATCAGCTTGAGTAGCCATTG-3' (SEQ ID NO: 2722)

5'-UGUCCAACUCCAUCAAAUCAGCUUG$^{CA-3'}$ (SEQ ID NO: 6050)
3'-ACAGGUUGAGGUAGUUUAGUCGAAC$_{UC-5'}$ (SEQ ID NO: 1614)

βc-302 Target: 5'-TGTCCAACTCCATCAAATCAGCTTGAG-3' (SEQ ID NO: 2723)

5'-CUUCCUCAGGAUUGCCUUUACCACU$^{AC-3'}$ (SEQ ID NO: 6051)
3'-GAAGGAGUCCUAACGGAAAUGGUGA$_{GU-5'}$ (SEQ ID NO: 1615)

βc-431 Target: 5'-CTTCCTCAGGATTGCCTTTACCACTCA-3' (SEQ ID NO: 2724)

5'-UCUUCCUCAGGAUUGCCUUUACCAC$^{CA-3'}$ (SEQ ID NO: 6052)
3'-AGAAGGAGUCCUAACGGAAAUGGUG$_{AG-5'}$ (SEQ ID NO: 1616)

βc-432 Target: 5'-TCTTCCTCAGGATTGCCTTTACCACTC-3' (SEQ ID NO: 2725)

5'-CAUCAAUAUCAGCUACUUGUUCUUG$^{CA-3'}$ (SEQ ID NO: 6053)
3'-GUAGUUAUAGUCGAUGAACAAGAAC$_{UC-5'}$ (SEQ ID NO: 1617)

βc-518 Target: 5'-CATCAATATCAGCTACTTGTTCTTGAG-3' (SEQ ID NO: 2726)

5'-CCAUCAAUAUCAGCUACUUGUUCUU$^{AC-3'}$ (SEQ ID NO: 6054)
3'-GGUAGUUAUAGUCGAUGAACAAGAA$_{CU-5'}$ (SEQ ID NO: 1618)

βc-519 Target: 5'-CCATCAATATCAGCTACTTGTTCTTGA-3' (SEQ ID NO: 2727)

5'-ACUGUCCAUCAAUAUCAGCUACUUG$^{CC-3'}$ (SEQ ID NO: 6055)
3'-UGACAGGUAGUUAUAGUCGAUGAAC$_{AA-5'}$ (SEQ ID NO: 1619)

βc-524 Target: 5'-ACTGTCCATCAATATCAGCTACTTGTT-3' (SEQ ID NO: 2728)

5'-AUUGCAUACUGUCCAUCAAUAUCAG$^{AC-3'}$ (SEQ ID NO: 6056)
3'-UAACGUAUGACAGGUAGUUAUAGUC$_{GA-5'}$ (SEQ ID NO: 1620)

βc-531 Target: 5'-ATTGCATACTGTCCATCAATATCAGCT-3' (SEQ ID NO: 2729)

5'-CGAGUCAUUGCAUACUGUCCAUCAA$^{CC-3'}$ (SEQ ID NO: 6057)
3'-GCUCAGUAACGUAUGACAGGUAGUU$_{AU-5'}$ (SEQ ID NO: 1621)

βc-537 Target: 5'-CGAGTCATTGCATACTGTCCATCAATA-3' (SEQ ID NO: 2730)

5'-CCUCAUCUAAUGUCUCAGGGAACAU$^{CA-3'}$ (SEQ ID NO: 6058)
3'-GGAGUAGAUUACAGAGUCCCUUGUA$_{UC-5'}$ (SEQ ID NO: 1622)

βc-584 Target: 5'-CCTCATCTAATGTCTCAGGGAACATAG-3' (SEQ ID NO: 2731)

5'-UUACAACUGCAUGUUUCAGCAUCUG$^{CA-3'}$ (SEQ ID NO: 6059)
3'-AAUGUUGACGUACAAAGUCGUAGAC$_{AC-5'}$ (SEQ ID NO: 1623)

βc-680 Target: 5'-TTACAACTGCATGTTTCAGCATCTGTG-3' (SEQ ID NO: 2732)

5'-GUUUACAACUGCAUGUUUCAGCAUC$^{CA-3'}$ (SEQ ID NO: 6060)
3'-CAAAUGUUGACGUACAAAGUCGUAG$_{AC-5'}$ (SEQ ID NO: 1624)

βc-682 Target: 5'-GTTTACAACTGCATGTTTCAGCATCTG-3' (SEQ ID NO: 2733)

5'-AGUUAAUCAAGUUUACAACUGCAUG$^{CC-3'}$ (SEQ ID NO: 6061)
3'-UCAAUUAGUUCAAAUGUUGACGUAC$_{AA-5'}$ (SEQ ID NO: 1625)

βc-692 Target: 5'-AGTTAATCAAGTTTACAACTGCATGTT-3' (SEQ ID NO: 2734)

5'-CUUGAUAGUUAAUCAAGUUUACAAC$^{CA-3'}$ (SEQ ID NO: 6062)
3'-GAACUAUCAAUUAGUUCAAAUGUUG$_{AC-5'}$ (SEQ ID NO: 1626)

βc-698 Target: 5'-CTTGATAGTTAATCAAGTTTACAACTG-3' (SEQ ID NO: 2735)

5'-CUGCAUCAUCUUGAUAGUUAAUCAA$^{AC-3'}$ (SEQ ID NO: 6063)
3'-GACGUAGUAGAACUAUCAAUUAGUU$_{CA-5'}$ (SEQ ID NO: 1627)

βc-707 Target: 5'-CTGCATCATCTTGATAGTTAATCAAGT-3' (SEQ ID NO: 2736)

5'-UCUGCAUCAUCUUGAUAGUUAAUCA$^{CA-3'}$ (SEQ ID NO: 6064)
3'-AGACGUAGUAGAACUAUCAAUUAGU$_{UC-5'}$ (SEQ ID NO: 1628)

βc-708 Target: 5'-TCTGCATCATCTTGATAGTTAATCAAG-3' (SEQ ID NO: 2737)

5'-CUGGUCCUCGUCAUUUAGCAGUUUU$^{AC-3'}$ (SEQ ID NO: 6065)
3'-GACCAGGAGCAGUAAAUCGUCAAAA$_{CA-5'}$ (SEQ ID NO: 1629)

βc-763 Target: 5'-CTGGTCCTCGTCATTTAGCAGTTTTGT-3' (SEQ ID NO: 2738)

5'-CAUAACUGCAGCCUUAUUAACCACC$^{CA-3'}$ (SEQ ID NO: 6066)
3'-GUAUUGACGUCGGAAUAAUUGGUGG$_{UG-5'}$ (SEQ ID NO: 1630)

βc-790 Target: 5'-CATAACTGCAGCCTTATTAACCACCAC-3' (SEQ ID NO: 2739)

5'-CCAUAACUGCAGCCUUAUUAACCAC$^{AC-3'}$ (SEQ ID NO: 6067)
3'-GGUAUUGACGUCGGAAUAAUUGGUG$_{GU-5'}$ (SEQ ID NO: 1631)

βc-791 Target: 5'-CCATAACTGCAGCCTTATTAACCACCA-3' (SEQ ID NO: 2740)

5'-GGACCAUAACUGCAGCCUUAUUAAC$^{AC-3'}$ (SEQ ID NO: 6068)
3'-CCUGGUAUUGACGUCGGAAUAAUUG$_{GU-5'}$ (SEQ ID NO: 1632)

βc-794 Target: 5'-GGACCATAACTGCAGCCTTATTAACCA-3' (SEQ ID NO: 2741)

5'-CCUUUUUAGAAAGCUGAUGGACCAU$^{CC-3'}$ (SEQ ID NO: 6069)
3'-GGAAAAAUCUUUCGACUACCUGGUA$_{UU-5'}$ (SEQ ID NO: 1633)

βc-812 Target: 5'-CCTTTTTAGAAAGCTGATGGACCATAA-3' (SEQ ID NO: 2742)

5'-AUGGUACGUACAAUAGCAGACACCA$^{CA-3'}$ (SEQ ID NO: 6070)

3'-UACCAUGCAUGUUAUCGUCUGUGGU$_{A_{G-5'}}$ (SEQ ID NO: 1634)

βc-873 Target: 5'-ATGGTACGTACAATAGCAGACACCATC-3' (SEQ ID NO: 2743)

5'-CAUCAUUUGUAUUCUGCAUGGUACG$^{C_{C-3'}}$ (SEQ ID NO: 6071)
3'-GUAGUAAACAUAAGACGUACCAUGC$_{A_{U-5'}}$ (SEQ ID NO: 1635)

βc-890 Target: 5'-CATCATTTGTATTCTGCATGGTACGTA-3' (SEQ ID NO: 2744)

5'-CUGUUUCUACAUCAUUUGUAUUCUG$^{A_{C-3'}}$ (SEQ ID NO: 6072)
3'-GACAAAGAUGUAGUAAACAUAAGAC$_{G_{U-5'}}$ (SEQ ID NO: 1636)

βc-899 Target: 5'-CTGTTTCTACATCATTTGTATTCTGCA-3' (SEQ ID NO: 2745)

5'-GCUGUUUCUACAUCAUUUGUAUUCU$^{A_{A-3'}}$ (SEQ ID NO: 6073)
3'-CGACAAAGAUGUAGUAAACAUAAGA$_{C_{G-5'}}$ (SEQ ID NO: 1637)

βc-900 Target: 5'-GCTGTTTCTACATCATTTGTATTCTGC-3' (SEQ ID NO: 2746)

5'-GUACAACGAGCUGUUUCUACAUCAU$^{C_{C-3'}}$ (SEQ ID NO: 6074)
3'-CAUGUUGCUCGACAAAGAUGUAGUA$_{A_{A-5'}}$ (SEQ ID NO: 1638)

βc-909 Target: 5'-GTACAACGAGCTGTTTCTACATCATTT-3' (SEQ ID NO: 2747)

5'-CGGUACAACGAGCUGUUUCUACAUC$^{C_{C-3'}}$ (SEQ ID NO: 6075)
3'-GCCAUGUUGCUCGACAAAGAUGUAG$_{U_{A-5'}}$ (SEQ ID NO: 1639)

βc-911 Target: 5'-CGGTACAACGAGCTGTTTCTACATC-3' (SEQ ID NO: 2748)

5'-GCGGUACAACGAGCUGUUUCUACAU$^{A_{C-3'}}$ (SEQ ID NO: 6076)
3'-CGCCAUGUUGCUCGACAAAGAUGUA$_{G_{U-5'}}$ (SEQ ID NO: 1640)

βc-912 Target: 5'-GCGGTACAACGAGCTGTTTCTACATCA-3' (SEQ ID NO: 2749)

5'-GCAUAAAACAACACAGAAUCCACUG$^{A_{C-3'}}$ (SEQ ID NO: 6077)
3'-CGUAUUUUGUUGUGUCUUAGGUGAC$_{C_{A-5'}}$ (SEQ ID NO: 1641)

βc-1032 Target: 5'-GCATAAAACAACACAGAATCCACTGGT-3' (SEQ ID NO: 2750)

5'-UGGCAUAAAACAACACAGAAUCCAC$^{C_{A-3'}}$ (SEQ ID NO: 6078)
3'-ACCGUAUUUUGUUGUGUCUUAGGUG$_{A_{C-5'}}$ (SEQ ID NO: 1642)

βc-1034 Target: 5'-TGGCATAAAACAACACAGAATCCACTG-3' (SEQ ID NO: 2751)

5'-AUGGCAUAAAACAACACAGAAUCCA$^{A_{C-3'}}$ (SEQ ID NO: 6079)
3'-UACCGUAUUUUGUUGUGUCUUAGGU$_{G_{A-5'}}$ (SEQ ID NO: 1643)

βc-1035 Target: 5'-ATGGCATAAAACAACACAGAATCCACT-3' (SEQ ID NO: 2752)

5'-UAGCUCCUUCUUGAUGUAAUAAAAG$^{A_{C-3'}}$ (SEQ ID NO: 6080)
3'-AUCGAGGAAGAACUACAUUAUUUUC$_{C_{A-5'}}$ (SEQ ID NO: 1644)

βc-1076 Target: 5'-TAGCTCCTTCTTGATGTAATAAAAGGT-3' (SEQ ID NO: 2753)

5'-UUAGCUCCUUCUUGAUGUAAUAAAA$^{AA-3'}$ (SEQ ID NO: 6081)
3'-AAUCGAGGAAGAACUACAUUAUUUU$_{CC-5'}$ (SEQ ID NO: 1645)

βc-1077 Target: 5'-TTAGCTCCTTCTTGATGTAATAAAAGG-3' (SEQ ID NO: 2754)

5'-UUUAACAUUUGUUUUGUUGAGCAAG$^{AA-3'}$ (SEQ ID NO: 6082)
3'-AAAUUGUAAACAAAACAACUCGUUC$_{CG-5'}$ (SEQ ID NO: 1646)

βc-1144 Target: 5'-TTTAACATTTGTTTTGTTGAGCAAGGC-3' (SEQ ID NO: 2755)

5'-UAGCCAAGAAUUUAACAUUUGUUUU$^{AC-3'}$ (SEQ ID NO: 6083)
3'-AUCGGUUCUUAAAUUGUAAACAAAA$_{CA-5'}$ (SEQ ID NO: 1647)

βc-1154 Target: 5'-TAGCCAAGAATTTAACATTTGTTTTGT-3' (SEQ ID NO: 2756)

5'-CGUAAUAGCCAAGAAUUUAACAUUU$^{AC-3'}$ (SEQ ID NO: 6084)
3'-GCAUUAUCGGUUCUUAAAUUGUAAA$_{CA-5'}$ (SEQ ID NO: 1648)

βc-1159 Target: 5'-CGTAATAGCCAAGAATTTAACATTTGT-3' (SEQ ID NO: 2757)

5'-UCGUAAUAGCCAAGAAUUUAACAUU$^{CA-3'}$ (SEQ ID NO: 6085)
3'-AGCAUUAUCGGUUCUUAAAUUGUAA$_{AC-5'}$ (SEQ ID NO: 1649)

βc-1160 Target: 5'-TCGTAATAGCCAAGAATTTAACATTTG-3' (SEQ ID NO: 2758)

5'-UAAGCUAAAAUUUGAAGGCAGUCUG$^{CA-3'}$ (SEQ ID NO: 6086)
3'-AUUCGAUUUUAAACUUCCGUCAGAC$_{AG-5'}$ (SEQ ID NO: 1650)

βc-1185 Target: 5'-TAAGCTAAAATTTGAAGGCAGTCTGTC-3' (SEQ ID NO: 2759)

5'-UAGGUCCUCAUUAUAUUUACUAAAG$^{AC-3'}$ (SEQ ID NO: 6087)
3'-AUCCAGGAGUAAUAUAAAUGAUUUC$_{GA-5'}$ (SEQ ID NO: 1651)

βc-1260 Target: 5'-TAGGTCCTCATTATATTTACTAAAGCT-3' (SEQ ID NO: 2760)

5'-AAGUAUAGGUCCUCAUUAUAUUUAC$^{CC-3'}$ (SEQ ID NO: 6088)
3'-UUCAUAUCCAGGAGUAAUAUAAAUG$_{AU-5'}$ (SEQ ID NO: 1652)

βc-1265 Target: 5'-AAGTATAGGTCCTCATTATATTTACTA-3' (SEQ ID NO: 2761)

5'-UAAGUAUAGGUCCUCAUUAUAUUUA$^{AC-3'}$ (SEQ ID NO: 6089)
3'-AUUCAUAUCCAGGAGUAAUAUAAAU$_{GA-5'}$ (SEQ ID NO: 1653)

βc-1266 Target: 5'-TAAGTATAGGTCCTCATTATATTTACT-3' (SEQ ID NO: 2762)

5'-GUUUUUCGUAAGUAUAGGUCCUCAU$^{CC-3'}$ (SEQ ID NO: 6090)
3'-CAAAAAGCAUUCAUAUCCAGGAGUA$_{AU-5'}$ (SEQ ID NO: 1654)

βc-1274 Target: 5'-GTTTTTCGTAAGTATAGGTCCTCATTA-3' (SEQ ID NO: 2763)

5'-AGUUUUUCGUAAGUAUAGGUCCUCA$^{CC-3'}$ (SEQ ID NO: 6091)
3'-UCAAAAAGCAUUCAUAUCCAGGAGU$_{AA-5'}$ (SEQ ID NO: 1655)

βc-1275 Target: 5'-AGTTTTTCGTAAGTATAGGTCCTCATT-3' (SEQ ID NO: 2764)

5'-UAGUUUUUCGUAAGUAUAGGUCCUC^{C}C-3' (SEQ ID NO: 6092)
3'-AUCAAAAAGCAUUCAUAUCCAGGAG$_{U}$$_{A-5'}$ (SEQ ID NO: 1656)

βc-1276 Target: 5'-TAGTTTTTCGTAAGTATAGGTCCTC-3' (SEQ ID NO: 2765)

5'-GUAGUUUUUCGUAAGUAUAGGUCCU^{A}C-3' (SEQ ID NO: 6093)
3'-CAUCAAAAAGCAUUCAUAUCCAGGA$_{G}$$_{U-5'}$ (SEQ ID NO: 1657)

βc-1277 Target: 5'-GTAGTTTTTCGTAAGTATAGGTCCTCA-3' (SEQ ID NO: 2766)

5'-GUGGUCCACAGUAGUUUUUCGUAAG^{C}C-3' (SEQ ID NO: 6094)
3'-CACCAGGUGUCAUCAAAAAGCAUUC$_{A}$$_{U-5'}$ (SEQ ID NO: 1658)

βc-1287 Target: 5'-GTGGTCCACAGTAGTTTTTCGTAAGTA-3' (SEQ ID NO: 2767)

5'-UCUACAAUAGCCGGCUUAUUACUAG^{C}A-3' (SEQ ID NO: 6095)
3'-AGAUGUUAUCGGCCGAAUAAUGAUC$_{U}$$_{C-5'}$ (SEQ ID NO: 1659)

βc-1344 Target: 5'-TCTACAATAGCCGGCTTATTACTAGAG-3' (SEQ ID NO: 2768)

5'-CUUCUACAAUAGCCGGCUUAUUACU^{C}A-3' (SEQ ID NO: 6096)
3'-GAAGAUGUUAUCGGCCGAAUAAUGA$_{U}$$_{C-5'}$ (SEQ ID NO: 1660)

βc-1346 Target: 5'-CTTCTACAATAGCCGGCTTATTACTAG-3' (SEQ ID NO: 2769)

5'-AGUCCUAAAGCUUGCAUUCCACCAG^{A}C-3' (SEQ ID NO: 6097)
3'-UCAGGAUUUCGAACGUAAGGUGGUC$_{G}$$_{A-5'}$ (SEQ ID NO: 1661)

βc-1371 Target: 5'-AGTCCTAAAGCTTGCATTCCACCAGCT-3' (SEQ ID NO: 2770)

5'-AAGUCCUAAAGCUUGCAUUCCACCA^{A}A-3' (SEQ ID NO: 6098)
3'-UUCAGGAUUUCGAACGUAAGGUGGU$_{C}$$_{G-5'}$ (SEQ ID NO: 1662)

βc-1372 Target: 5'-AAGTCCTAAAGCTTGCATTCCACCAGC-3' (SEQ ID NO: 2771)

5'-GAAGUCCUAAAGCUUGCAUUCCACC^{C}A-3' (SEQ ID NO: 6099)
3'-CUUCAGGAUUUCGAACGUAAGGUGG$_{U}$$_{C-5'}$ (SEQ ID NO: 1663)

βc-1373 Target: 5'-GAAGTCCTAAAGCTTGCATTCCACCAG-3' (SEQ ID NO: 2772)

5'-CAGUUCUGAACAAGACGUUGACUUG^{A}C-3' (SEQ ID NO: 6100)
3'-GUCAAGACUUGUUCUGCAACUGAAC$_{C}$$_{U-5'}$ (SEQ ID NO: 1664)

βc-1410 Target: 5'-CAGTTCTGAACAAGACGTTGACTTGGA-3' (SEQ ID NO: 2773)

5'-ACAGUUCUGAACAAGACGUUGACUU^{A}A-3' (SEQ ID NO: 6101)
3'-UGUCAAGACUUGUUCUGCAACUGAA$_{C}$$_{C-5'}$ (SEQ ID NO: 1665)

βc-1411 Target: 5'-ACAGTTCTGAACAAGACGTTGACTTGG-3' (SEQ ID NO: 2774)

5'-GAGUCCAAAGACAGUUCUGAACAAG^{C}A-3' (SEQ ID NO: 6102)

3'-CUCAGGUUUCUGUCAAGACUUGUUC$_{U_{G-5'}}$ (SEQ ID NO: 1666)

βc-1421 Target: 5'-GAGTCCAAAGACAGTTCTGAACAAGAC-3' (SEQ ID NO: 2775)

5'-CCUUCCUGUUUAGUUGCAGCAUCUG^{C}C-3' (SEQ ID NO: 6103)
3'-GGAAGGACAAAUCAACGUCGUAGAC$_{U_{U-5'}}$ (SEQ ID NO: 1667)

βc-1458 Target: 5'-CCTTCCTGTTTAGTTGCAGCATCTGAA-3' (SEQ ID NO: 2776)

5'-CCACAUUUAUAUCAUCUGAACCCAG^{C}C-3' (SEQ ID NO: 6104)
3'-GGUGUAAAUAUAGUAGACUUGGGUC$_{U_{U-5'}}$ (SEQ ID NO: 1668)

βc-1517 Target: 5'-CCACATTTATATCATCTGAACCCAGAA-3' (SEQ ID NO: 2777)

5'-UGACCACAUUUAUAUCAUCUGAACC^{A}C-3' (SEQ ID NO: 6105)
3'-ACUGGUGUAAAUAUAGUAGACUUGG$_{G_{U-5'}}$ (SEQ ID NO: 1669)

βc-1520 Target: 5'-TGACCACATTTATATCATCTGAACCCA-3' (SEQ ID NO: 2778)

5'-CUGCACAGGUGACCACAUUUAUAUC^{C}C-3' (SEQ ID NO: 6106)
3'-GACGUGUCCACUGGUGUAAAUAUAG$_{U_{A-5'}}$ (SEQ ID NO: 1670)

βc-1529 Target: 5'-CTGCACAGGTGACCACATTTATATC-3' (SEQ ID NO: 2779)

5'-GCUGCACAGGUGACCACAUUUAUAU^{A}C-3' (SEQ ID NO: 6107)
3'-CGACGUGUCCACUGGUGUAAAUAUA$_{G_{U-5'}}$ (SEQ ID NO: 1671)

βc-1530 Target: 5'-GCTGCACAGGTGACCACATTTATATCA-3' (SEQ ID NO: 2780)

5'-AUUGCAAGUGAGGUUAGAAAGAAUU^{A}A-3' (SEQ ID NO: 6108)
3'-UAACGUUCACUCCAAUCUUUCUUAA$_{G_{G-5'}}$ (SEQ ID NO: 1672)

βc-1558 Target: 5'-ATTGCAAGTGAGGTTAGAAAGAATTCC-3' (SEQ ID NO: 2781)

5'-UUAUAAUUAUUGCAAGUGAGGUUAG^{C}C-3' (SEQ ID NO: 6109)
3'-AAUAUUAAUAACGUUCACUCCAAUC$_{U_{U-5'}}$ (SEQ ID NO: 1673)

βc-1566 Target: 5'-TTATAATTATTGCAAGTGAGGTTAGAA-3' (SEQ ID NO: 2782)

5'-CAUCAUCUUGUUCUUAUAAUUAUUG^{A}C-3' (SEQ ID NO: 6110)
3'-GUAGUAGAACAAGAAUAUUAAUAAC$_{G_{U-5'}}$ (SEQ ID NO: 1674)

βc-1579 Target: 5'-CATCATCTTGTTCTTATAATTATTGCA-3' (SEQ ID NO: 2783)

5'-CCAUCAUCUUGUUCUUAUAAUUAUU^{A}A-3' (SEQ ID NO: 6111)
3'-GGUAGUAGAACAAGAAUAUUAAUAA$_{C_{G-5'}}$ (SEQ ID NO: 1675)

βc-1580 Target: 5'-CCATCATCTTGTTCTTATAATTATTGC-3' (SEQ ID NO: 2784)

5'-AGACCAUCAUCUUGUUCUUAUAAUU^{C}C-3' (SEQ ID NO: 6112)
3'-UCUGGUAGUAGAACAAGAAUAUUAA$_{U_{A-5'}}$ (SEQ ID NO: 1676)

βc-1583 Target: 5'-AGACCATCATCTTGTTCTTATAATTAT-3' (SEQ ID NO: 2785)

5'-GCAGACCAUCAUCUUGUUCUUAUAA^{C}C-3' (SEQ ID NO: 6113)
3'-CGUCUGGUAGUAGAACAAGAAUAUU$_{A}A_{-5}$' (SEQ ID NO: 1677)

βc-1585 Target: 5'-GCAGACCATCATCTTGTTCTTATAATT-3' (SEQ ID NO: 2786)

5'-UCAAUCCAACAGUAGCCUUUAUCAG^{C}A-3' (SEQ ID NO: 6114)
3'-AGUUAGGUUGUCAUCGGAAAUAGUC$_{U}C_{-5}$' (SEQ ID NO: 1678)

βc-1808 Target: 5'-TCAATCCAACAGTAGCCTTTATCAGAG-3' (SEQ ID NO: 2787)

5'-UCGAAUCAAUCCAACAGUAGCCUUU^{C}C-3' (SEQ ID NO: 6115)
3'-AGCUUAGUUAGGUUGUCAUCGGAAA$_{U}A_{-5}$' (SEQ ID NO: 1679)

βc-1813 Target: 5'-TCGAATCAATCCAACAGTAGCCTTTAT-3' (SEQ ID NO: 2788)

5'-CCUCCACAAAUUGCUGCUGUGUCCC^{C}A-3' (SEQ ID NO: 6116)
3'-GGAGGUGUUUAACGACGACACAGGG$_{U}G_{-5}$' (SEQ ID NO: 1680)

βc-1955 Target: 5'-CCTCCACAAATTGCTGCTGTGTCCCAC-3' (SEQ ID NO: 2789)

5'-GUACAACCUUCAACUAUUUCUUCCA^{C}A-3' (SEQ ID NO: 6117)
3'-CAUGUUGGAAGUUGAUAAAGAAGGU$_{A}C_{-5}$' (SEQ ID NO: 1681)

βc-1989 Target: 5'-GTACAACCTTCAACTATTTCTTCCATG-3' (SEQ ID NO: 2790)

5'-GGUACAACCUUCAACUAUUUCUUCC^{C}C-3' (SEQ ID NO: 6118)
3'-CCAUGUUGGAAGUUGAUAAAGAAGG$_{U}A_{-5}$' (SEQ ID NO: 1682)

βc-1990 Target: 5'-GGTACAACCTTCAACTATTTCTTCC-3' (SEQ ID NO: 2791)

5'-CGGUACAACCUUCAACUAUUUCUUC^{A}C-3' (SEQ ID NO: 6119)
3'-GCCAUGUUGGAAGUUGAUAAAGAAG$_{G}U_{-5}$' (SEQ ID NO: 1683)

βc-1991 Target: 5'-CGGTACAACCTTCAACTATTTCTTCCA-3' (SEQ ID NO: 2792)

5'-CCGGUACAACCUUCAACUAUUUCUU^{A}A-3' (SEQ ID NO: 6120)
3'-GGCCAUGUUGGAAGUUGAUAAAGAA$_{G}G_{-5}$' (SEQ ID NO: 1684)

βc-1992 Target: 5'-CCGGTACAACCTTCAACTATTTCTTCC-3' (SEQ ID NO: 2793)

5'-GGGCUCCGGUACAACCUUCAACUAU^{C}C-3' (SEQ ID NO: 6121)
3'-CCCGAGGCCAUGUUGGAAGUUGAUA$_{A}A_{-5}$' (SEQ ID NO: 1685)

βc-1997 Target: 5'-GGGCTCCGGTACAACCTTCAACTATTT-3' (SEQ ID NO: 2794)

5'-UAACAAUUCGGUUGUGAACAUCCCG^{C}A-3' (SEQ ID NO: 6122)
3'-AUUGUUAAGCCAACACUUGUAGGGC$_{U}C_{-5}$' (SEQ ID NO: 1686)

βc-2036 Target: 5'-TAACAATTCGGTTGTGAACATCCCGAG-3' (SEQ ID NO: 2795)

5'-AUAACAAUUCGGUUGUGAACAUCCC^{A}C-3' (SEQ ID NO: 6123)
3'-UAUUGUUAAGCCAACACUUGUAGGG$_{C}U_{-5}$' (SEQ ID NO: 1687)

βc-2037 Target: 5'-ATAACAATTCGGTTGTGAACATCCCGA-3' (SEQ ID NO: 2796)

5'-GAUAACAAUUCGGUUGUGAACAUCC^{A}$^{A-3'}$ (SEQ ID NO: 6124)
3'-CUAUUGUUAAGCCAACACUUGUAGG$_{G}$$_{C-5'}$ (SEQ ID NO: 1688)

βc-2038 Target: 5'-GATAACAATTCGGTTGTGAACATCCCG-3' (SEQ ID NO: 2797)

5'-UGAUAACAAUUCGGUUGUGAACAUC^{A}$^{A-3'}$ (SEQ ID NO: 6125)
3'-ACUAUUGUUAAGCCAACACUUGUAG$_{G}$$_{G-5'}$ (SEQ ID NO: 1689)

βc-2039 Target: 5'-TGATAACAATTCGGTTGTGAACATCCC-3' (SEQ ID NO: 2798)

5'-CUGAUAACAAUUCGGUUGUGAACAU^{A}$^{A-3'}$ (SEQ ID NO: 6126)
3'-GACUAUUGUUAAGCCAACACUUGUA$_{G}$$_{G-5'}$ (SEQ ID NO: 1690)

βc-2040 Target: 5'-CTGATAACAATTCGGTTGTGAACATCC-3' (SEQ ID NO: 2799)

5'-UCUGAUAACAAUUCGGUUGUGAACA^{C}$^{A-3'}$ (SEQ ID NO: 6127)
3'-AGACUAUUGUUAAGCCAACACUUGU$_{A}$$_{G-5'}$ (SEQ ID NO: 1691)

βc-2041 Target: 5'-TCTGATAACAATTCGGTTGTGAACATC-3' (SEQ ID NO: 2800)

5'-GUAUUUAGUCCUCUGAUAACAAUUC^{A}$^{A-3'}$ (SEQ ID NO: 6128)
3'-CAUAAAUCAGGAGACUAUUGUUAAG$_{C}$$_{C-5'}$ (SEQ ID NO: 1692)

βc-2052 Target: 5'-GTATTTAGTCCTCTGATAACAATTCGG-3' (SEQ ID NO: 2801)

5'-GGUAUUUAGUCCUCUGAUAACAAUU^{A}$^{A-3'}$ (SEQ ID NO: 6129)
3'-CCAUAAAUCAGGAGACUAUUGUUAA$_{G}$$_{C-5'}$ (SEQ ID NO: 1693)

βc-2053 Target: 5'-GGTATTTAGTCCTCTGATAACAATTCG-3' (SEQ ID NO: 2802)

5'-UGGUAUUUAGUCCUCUGAUAACAAU^{C}$^{A-3'}$ (SEQ ID NO: 6130)
3'-ACCAUAAAUCAGGAGACUAUUGUUA$_{A}$$_{G-5'}$ (SEQ ID NO: 1694)

βc-2054 Target: 5'-TGGTATTTAGTCCTCTGATAACAATTC-3' (SEQ ID NO: 2803)

5'-AUGGUAUUUAGUCCUCUGAUAACAA^{C}$^{C-3'}$ (SEQ ID NO: 6131)
3'-UACCAUAAAUCAGGAGACUAUUGUU$_{A}$$_{A-5'}$ (SEQ ID NO: 1695)

βc-2055 Target: 5'-ATGGTATTTAGTCCTCTGATAACAATT-3' (SEQ ID NO: 2804)

5'-AAACAAUGGAAUGGUAUUUAGUCCU^{A}$^{C-3'}$ (SEQ ID NO: 6132)
3'-UUUGUUACCUUACCAUAAAUCAGGA$_{G}$$_{A-5'}$ (SEQ ID NO: 1696)

βc-2065 Target: 5'-AAACAATGGAATGGTATTTAGTCCTCT-3' (SEQ ID NO: 2805)

5'-GCACAAACAAUGGAAUGGUAUUUAG^{C}$^{A-3'}$ (SEQ ID NO: 6133)
3'-CGUGUUUGUUACCUUACCAUAAAUC$_{A}$$_{G-5'}$ (SEQ ID NO: 1697)

βc-2069 Target: 5'-GCACAAACAATGGAATGGTATTTAGTC-3' (SEQ ID NO: 2806)

5'-CUGCACAAACAAUGGAAUGGUAUUU^{C}$^{A-3'}$ (SEQ ID NO: 6134)

3'-GACGUGUUUGUUACCUUACCAUAAA$_{U_{C-5'}}$ (SEQ ID NO: 1698)

βc-2071 Target: 5'-CTGCACAAACAATGGAATGGTATTTAG-3' (SEQ ID NO: 2807)

5'-GCUGCACAAACAAUGGAAUGGUAUU$^{C^{C-3'}}$ (SEQ ID NO: 6135)
3'-CGACGUGUUUGUUACCUUACCAUAA$_{A_{U-5'}}$ (SEQ ID NO: 1699)

βc-2072 Target: 5'-GCTGCACAAACAATGGAATGGTATTTA-3' (SEQ ID NO: 2808)

5'-CAGCUACUCUUUGGAUGUUUUCAAU$^{A^{A-3'}}$ (SEQ ID NO: 6136)
3'-GUCGAUGAGAAACCUACAAAAGUUA$_{C_{C-5'}}$ (SEQ ID NO: 1700)

βc-2111 Target: 5'-CAGCTACTCTTTGGATGTTTTCAATGG-3' (SEQ ID NO: 2809)

5'-GCAGCUACUCUUUGGAUGUUUUCAA$^{C^{A-3'}}$ (SEQ ID NO: 6137)
3'-CGUCGAUGAGAAACCUACAAAAGUU$_{A_{C-5'}}$ (SEQ ID NO: 1701)

βc-2112 Target: 5'-GCAGCTACTCTTTGGATGTTTTCAATG-3' (SEQ ID NO: 2810)

5'-CAGCUUCAAUAGCUUCUGCAGCUUC$^{A^{C-3'}}$ (SEQ ID NO: 6138)
3'-GUCGAAGUUAUCGAAGACGUCGAAG$_{G_{A-5'}}$ (SEQ ID NO: 1702)

βc-2168 Target: 5'-CAGCTTCAATAGCTTCTGCAGCTTCCT-3' (SEQ ID NO: 2811)

5'-GCUCCCUCAGCUUCAAUAGCUUCUG$^{A^{C-3'}}$ (SEQ ID NO: 6139)
3'-CGAGGGAGUCGAAGUUAUCGAAGAC$_{G_{U-5'}}$ (SEQ ID NO: 1703)

βc-2175 Target: 5'-GCTCCCTCAGCTTCAATAGCTTCTGCA-3' (SEQ ID NO: 2812)

5'-UGGCUCCCUCAGCUUCAAUAGCUUC$^{C^{A-3'}}$ (SEQ ID NO: 6140)
3'-ACCGAGGGAGUCGAAGUUAUCGAAG$_{A_{C-5'}}$ (SEQ ID NO: 1704)

βc-2177 Target: 5'-TGGCTCCCTCAGCTTCAATAGCTTCTG-3' (SEQ ID NO: 2813)

5'-UCAUUCCUAGAGUGAAGUAACUCUG$^{C^{A-3'}}$ (SEQ ID NO: 6141)
3'-AGUAAGGAUCUCACUUCAUUGAGAC$_{A_{G-5'}}$ (SEQ ID NO: 1705)

βc-2214 Target: 5'-TCATTCCTAGAGTGAAGTAACTCTGTC-3' (SEQ ID NO: 2814)

5'-CUUCAUUCCUAGAGUGAAGUAACUC$^{C^{A-3'}}$ (SEQ ID NO: 6142)
3'-GAAGUAAGGAUCUCACUUCAUUGAG$_{A_{C-5'}}$ (SEQ ID NO: 1706)

βc-2216 Target: 5'-CTTCATTCCTAGAGTGAAGTAACTCTG-3' (SEQ ID NO: 2815)

5'-CCUUCAUUCCUAGAGUGAAGUAACU$^{A^{C-3'}}$ (SEQ ID NO: 6143)
3'-GGAAGUAAGGAUCUCACUUCAUUGA$_{G_{A-5'}}$ (SEQ ID NO: 1707)

βc-2217 Target: 5'-CCTTCATTCCTAGAGTGAAGTAACTCT-3' (SEQ ID NO: 2816)

5'-UGUCCUCAGACAUUCGGAACAAAAC$^{C^{A-3'}}$ (SEQ ID NO: 6144)
3'-ACAGGAGUCUGUAAGCCUUGUUUUG$_{U_{C-5'}}$ (SEQ ID NO: 1708)

βc-2264 Target: 5'-TGTCCTCAGACATTCGGAACAAAACAG-3' (SEQ ID NO: 2817)

5'-CUUGUCCUCAGACAUUCGGAACAAA$^{CA-3'}$ (SEQ ID NO: 6145)
3'-GAACAGGAGUCUGUAAGCCUUGUUU$_{UG-5'}$ (SEQ ID NO: 1709)

βc-2266 Target: 5'-CTTGTCCTCAGACATTCGGAACAAAAC-3' (SEQ ID NO: 2818)

5'-CCGUUUCUUGUAAUCUUGUGGCUUG$^{CA-3'}$ (SEQ ID NO: 6146)
3'-GGCAAAGAACAUUAGAACACCGAAC$_{AG-5'}$ (SEQ ID NO: 1710)

βc-2287 Target: 5'-CCGTTTCTTGTAATCTTGTGGCTTGTC-3' (SEQ ID NO: 2819)

5'-ACUGAAAGCCGUUUCUUGUAAUCUU$^{AC-3'}$ (SEQ ID NO: 6147)
3'-UGACUUUCGGCAAAGAACAUUAGAA$_{CA-5'}$ (SEQ ID NO: 1711)

βc-2295 Target: 5'-ACTGAAAGCCGTTTCTTGTAATCTTGT-3' (SEQ ID NO: 2820)

5'-CAGCUCAACUGAAAGCCGUUUCUUG$^{CC-3'}$ (SEQ ID NO: 6148)
3'-GUCGAGUUGACUUUCGGCAAAGAAC$_{AU-5'}$ (SEQ ID NO: 1712)

βc-2302 Target: 5'-CAGCTCAACTGAAAGCCGTTTCTTGTA-3' (SEQ ID NO: 2821)

5'-CAAGUCCAAGAUCAGCAGUCUCAUU$^{AA-3'}$ (SEQ ID NO: 6149)
3'-GUUCAGGUUCUAGUCGUCAGAGUAA$_{GG-5'}$ (SEQ ID NO: 1713)

βc-2363 Target: 5'-CAAGTCCAAGATCAGCAGTCTCATTCC-3' (SEQ ID NO: 2822)

5'-GCACCAAUAUCAAGUCCAAGAUCAG$^{AC-3'}$ (SEQ ID NO: 6150)
3'-CGUGGUUAUAGUUCAGGUUCUAGUC$_{GU-5'}$ (SEQ ID NO: 1714)

βc-2373 Target: 5'-GCACCAATATCAAGTCCAAGATCAGCA-3' (SEQ ID NO: 2823)

5'-AAAGAACGAUAGCUAGGAUCAUCCU$^{AA-3'}$ (SEQ ID NO: 6151)
3'-UUUCUUGCUAUCGAUCCUAGUAGGA$_{CC-5'}$ (SEQ ID NO: 1715)

βc-2424 Target: 5'-AAAGAACGATAGCTAGGATCATCCTGG-3' (SEQ ID NO: 2824)

5'-CAUAUCCACCAGAGUGAAAAGAACG$^{CC-3'}$ (SEQ ID NO: 6152)
3'-GUAUAGGUGGUCUCACUUUUCUUGC$_{UA-5'}$ (SEQ ID NO: 1716)

βc-2441 Target: 5'-CATATCCACCAGAGTGAAAAGAACGAT-3' (SEQ ID NO: 2825)

5'-UGAUUUACAGGUCAGUAUCAAACCA$^{AA-3'}$ (SEQ ID NO: 6153)
3'-ACUAAAUGUCCAGUCAUAGUUUGGU$_{CC-5'}$ (SEQ ID NO: 1717)

βc-2618 Target: 5'-TGATTTACAGGTCAGTATCAAACCAGG-3' (SEQ ID NO: 2826)

5'-AUGAUUUACAGGUCAGUAUCAAACC$^{CA-3'}$ (SEQ ID NO: 6154)
3'-UACUAAAUGUCCAGUCAUAGUUUGG$_{UC-5'}$ (SEQ ID NO: 1718)

βc-2619 Target: 5'-ATGATTTACAGGTCAGTATCAAACCAG-3' (SEQ ID NO: 2827)

5'-GAUGAUUUACAGGUCAGUAUCAAAC$^{AC-3'}$ (SEQ ID NO: 6155)
3'-CUACUAAAUGUCCAGUCAUAGUUUG$_{GU-5'}$ (SEQ ID NO: 1719)

βc-2620 Target: 5'-GATGATTTACAGGTCAGTATCAAACCA-3' (SEQ ID NO: 2828)

5'-CUUCUUACCUAAAGGAUGAUUUACA$^{AA-3'}$ (SEQ ID NO: 6156)
3'-GAAGAAUGGAUUUCCUACUAAAUGU$_{CC-5'}$ (SEQ ID NO: 1720)

βc-2634 Target: 5'-CTTCTTACCTAAAGGATGATTTACAGG-3' (SEQ ID NO: 2829)

5'-ACUUCUUACCUAAAGGAUGAUUUAC$^{CA-3'}$ (SEQ ID NO: 6157)
3'-UGAAGAAUGGAUUUCCUACUAAAUG$_{UC-5'}$ (SEQ ID NO: 1721)

βc-2635 Target: 5'-ACTTCTTACCTAAAGGATGATTTACAG-3' (SEQ ID NO: 2830)

5'-AAACUUCUUACCUAAAGGAUGAUUU$^{CA-3'}$ (SEQ ID NO: 6158)
3'-UUUGAAGAAUGGAUUUCCUACUAAA$_{UG-5'}$ (SEQ ID NO: 1722)

βc-2637 Target: 5'-AAACTTCTTACCTAAAGGATGATTTAC-3' (SEQ ID NO: 2831)

5'-GCUUUUUAAAACUUCUUACCUAAAG$^{AC-3'}$ (SEQ ID NO: 6159)
3'-CGAAAAAUUUUGAAGAAUGGAUUUC$_{CU-5'}$ (SEQ ID NO: 1723)

βc-2645 Target: 5'-GCTTTTTAAAACTTCTTACCTAAAGGA-3' (SEQ ID NO: 2832)

5'-UGGCUUUUUAAAACUUCUUACCUAA$^{CA-3'}$ (SEQ ID NO: 6160)
3'-ACCGAAAAAUUUUGAAGAAUGGAUU$_{UC-5'}$ (SEQ ID NO: 1724)

βc-2647 Target: 5'-TGGCTTTTTAAAACTTCTTACCTAAAG-3' (SEQ ID NO: 2833)

5'-CCAAACUGGCUUUUUAAAACUUCUU$^{CA-3'}$ (SEQ ID NO: 6161)
3'-GGUUUGACCGAAAAAUUUUGAAGAA$_{UG-5'}$ (SEQ ID NO: 1725)

βc-2653 Target: 5'-CCAAACTGGCTTTTTAAAACTTCTTAC-3' (SEQ ID NO: 2834)

5'-UUACCCAAACUGGCUUUUUAAAACU$^{CA-3'}$ (SEQ ID NO: 6162)
3'-AAUGGGUUUGACCGAAAAAUUUUGA$_{AG-5'}$ (SEQ ID NO: 1726)

βc-2657 Target: 5'-TTACCCAAACTGGCTTTTTAAAACTTC-3' (SEQ ID NO: 2835)

5'-UUUACCCAAACUGGCUUUUUAAAAC$^{CC-3'}$ (SEQ ID NO: 6163)
3'-AAAUGGGUUUGACCGAAAAAUUUUG$_{AA-5'}$ (SEQ ID NO: 1727)

βc-2658 Target: 5'-TTTACCCAAACTGGCTTTTTAAAACTT-3' (SEQ ID NO: 2836)

5'-UUUUACCCAAACUGGCUUUUUAAAA$^{AC-3'}$ (SEQ ID NO: 6164)
3'-AAAAUGGGUUUGACCGAAAAAUUUU$_{GA-5'}$ (SEQ ID NO: 1728)

βc-2659 Target: 5'-TTTTACCCAAACTGGCTTTTTAAAACT-3' (SEQ ID NO: 2837)

5'-AUUUUACCCAAACUGGCUUUUUAAA$^{CA-3'}$ (SEQ ID NO: 6165)
3'-UAAAAUGGGUUUGACCGAAAAAUUU$_{UG-5'}$ (SEQ ID NO: 1729)

βc-2660 Target: 5'-ATTTTACCCAAACTGGCTTTTTAAAAC-3' (SEQ ID NO: 2838)

5'-CCAACCAAGUCUUUCUGAAGUUCUG$^{CC-3'}$ (SEQ ID NO: 6166)

3'-GGUUGGUUCAGAAAGACUUCAAGAC$_{A_{U-5'}}$ (SEQ ID NO: 1730)

βc-2701 Target: 5'-CCAACCAAGTCTTTCTGAAGTTCTGTA-3' (SEQ ID NO: 2839)

5'-CCACCCUACCAACCAAGUCUUUCUG$^{C_{C-3'}}$ (SEQ ID NO: 6167)
3'-GGUGGGAUGGUUGGUUCAGAAAGAC$_{U_{U-5'}}$ (SEQ ID NO: 1731)

βc-2709 Target: 5'-CCACCCTACCAACCAAGTCTTTCTGAA-3' (SEQ ID NO: 2840)

5'-AUUUACAAAUAGCCUAAACCACUCC$^{A_{C-3'}}$ (SEQ ID NO: 6168)
3'-UAAAUGUUUAUCGGAUUUGGUGAGG$_{G_{U-5'}}$ (SEQ ID NO: 1732)

βc-2733 Target: 5'-ATTTACAAATAGCCTAAACCACTCCCA-3' (SEQ ID NO: 2841)

5'-GAUUUACAAAUAGCCUAAACCACUC$^{A_{A-3'}}$ (SEQ ID NO: 6169)
3'-CUAAAUGUUUAUCGGAUUUGGUGAG$_{G_{G-5'}}$ (SEQ ID NO: 1733)

βc-2734 Target: 5'-GATTTACAAATAGCCTAAACCACTCCC-3' (SEQ ID NO: 2842)

5'-AGAUUUACAAAUAGCCUAAACCACU$^{A_{A-3'}}$ (SEQ ID NO: 6170)
3'-UCUAAAUGUUUAUCGGAUUUGGUGA$_{G_{G-5'}}$ (SEQ ID NO: 1734)

βc-2735 Target: 5'-AGATTTACAAATAGCCTAAACCACTCC-3' (SEQ ID NO: 2843)

5'-CAGAUUUACAAAUAGCCUAAACCAC$^{C_{A-3'}}$ (SEQ ID NO: 6171)
3'-GUCUAAAUGUUUAUCGGAUUUGGUG$_{A_{G-5'}}$ (SEQ ID NO: 1735)

βc-2736 Target: 5'-CAGATTTACAAATAGCCTAAACCACTC-3' (SEQ ID NO: 2844)

5'-UGUUUUUGUGGCAGAUUUACAAAUA$^{A_{A-3'}}$ (SEQ ID NO: 6172)
3'-ACAAAAACACCGUCUAAAUGUUUAU$_{C_{G-5'}}$ (SEQ ID NO: 1736)

βc-2747 Target: 5'-TGTTTTTGTGGCAGATTTACAAATAGC-3' (SEQ ID NO: 2845)

5'-CUGUUUUUGUGGCAGAUUUACAAAU$^{C_{A-3'}}$ (SEQ ID NO: 6173)
3'-GACAAAAACACCGUCUAAAUGUUUA$_{U_{C-5'}}$ (SEQ ID NO: 1737)

βc-2748 Target: 5'-CTGTTTTTGTGGCAGATTTACAAATAG-3' (SEQ ID NO: 2846)

5'-CCUGUUUUUGUGGCAGAUUUACAAA$^{C_{C-3'}}$ (SEQ ID NO: 6174)
3'-GGACAAAAACACCGUCUAAAUGUUU$_{A_{U-5'}}$ (SEQ ID NO: 1738)

βc-2749 Target: 5'-CCTGTTTTTGTGGCAGATTTACAAATA-3' (SEQ ID NO: 2847)

5'-AUAUACCUGUUUUUGUGGCAGAUUU$^{C_{A-3'}}$ (SEQ ID NO: 6175)
3'-UAUAUGGACAAAAACACCGUCUAAA$_{U_{G-5'}}$ (SEQ ID NO: 1739)

βc-2754 Target: 5'-ATATACCTGTTTTTGTGGCAGATTTAC-3' (SEQ ID NO: 2848)

5'-CUUUCAAAGUAUAUACCUGUUUUUG$^{C_{A-3'}}$ (SEQ ID NO: 6176)
3'-GAAAGUUUCAUAUAUGGACAAAAAC$_{A_{C-5'}}$ (SEQ ID NO: 1740)

βc-2764 Target: 5'-CTTTCAAAGTATATACCTGTTTTTGTG-3' (SEQ ID NO: 2849)

5'-CAUCUCCUUUCAAAGUAUAUACCUG$^{C}C-3'$ (SEQ ID NO: 6177)
3'-GUAGAGGAAAGUUUCAUAUAUGGAC$_{A}A-5'$, (SEQ ID NO: 1741)

βc-2770 Target: 5'-CATCTCCTTTCAAAGTATATACCTGTT-3' (SEQ ID NO: 2850)

5'-ACAUCUCCUUUCAAAGUAUAUACCU$^{A}C-3'$ (SEQ ID NO: 6178)
3'-UGUAGAGGAAAGUUUCAUAUAUGGA$_{C}A-5'$, (SEQ ID NO: 1742)

βc-2771 Target: 5'-ACATCTCCTTTCAAAGTATATACCTGT-3' (SEQ ID NO: 2851)

5'-AGACAUCUCCUUUCAAAGUAUAUAC$^{A}C-3'$ (SEQ ID NO: 6179)
3'-UCUGUAGAGGAAAGUUUCAUAUAUG$_{G}A-5'$, (SEQ ID NO: 1743)

βc-2773 Target: 5'-AGACATCTCCTTTCAAAGTATATACCT-3' (SEQ ID NO: 2852)

5'-AAGACAUCUCCUUUCAAAGUAUAUA$^{A}A-3'$ (SEQ ID NO: 6180)
3'-UUCUGUAGAGGAAAGUUUCAUAUAU$_{G}G-5'$, (SEQ ID NO: 1744)

βc-2774 Target: 5'-AAGACATCTCCTTTCAAAGTATATACC-3' (SEQ ID NO: 2853)

5'-CAAGACAUCUCCUUUCAAAGUAUAU$^{C}A-3'$ (SEQ ID NO: 6181)
3'-GUUCUGUAGAGGAAAGUUUCAUAUA$_{U}G-5'$, (SEQ ID NO: 1745)

βc-2775 Target: 5'-CAAGACATCTCCTTTCAAAGTATATAC-3' (SEQ ID NO: 2854)

5'-UGUUCCAAGACAUCUCCUUUCAAAG$^{C}C-3'$ (SEQ ID NO: 6182)
3'-ACAAGGUUCUGUAGAGGAAAGUUUC$_{A}U-5'$, (SEQ ID NO: 1746)

βc-2780 Target: 5'-TGTTCCAAGACATCTCCTTTCAAAGTA-3' (SEQ ID NO: 2855)

5'-CAUUCCAAUGUUCCAAGACAUCUCC$^{C}C-3'$ (SEQ ID NO: 6183)
3'-GUAAGGUUACAAGGUUCUGUAGAGG$_{A}A-5'$, (SEQ ID NO: 1747)

βc-2788 Target: 5'-CATTCCAATGTTCCAAGACATCTCCTT-3' (SEQ ID NO: 2856)

5'-ACAUUCCAAUGUUCCAAGACAUCUC$^{A}C-3'$ (SEQ ID NO: 6184)
3'-UGUAAGGUUACAAGGUUCUGUAGAG$_{G}A-5'$, (SEQ ID NO: 1748)

βc-2789 Target: 5'-ACATTCCAATGTTCCAAGACATCTCCT-3' (SEQ ID NO: 2857)

5'-GAACAUUCCAAUGUUCCAAGACAUC$^{C}A-3'$ (SEQ ID NO: 6185)
3'-CUUGUAAGGUUACAAGGUUCUGUAG$_{A}G-5'$, (SEQ ID NO: 1749)

βc-2791 Target: 5'-GAACATTCCAATGTTCCAAGACATCTC-3' (SEQ ID NO: 2858)

5'-CCAGAAAUCUGAGAACAUUCCAAUG$^{C}C-3'$ (SEQ ID NO: 6186)
3'-GGUCUUUAGACUCUUGUAAGGUUAC$_{A}A-5'$, (SEQ ID NO: 1750)

βc-2803 Target: 5'-CCAGAAATCTGAGAACATTCCAATGTT-3' (SEQ ID NO: 2859)

5'-ACAACCAGAAAUCUGAGAACAUUCC$^{C}C-3'$ (SEQ ID NO: 6187)
3'-UGUUGGUCUUUAGACUCUUGUAAGG$_{U}U-5'$, (SEQ ID NO: 1751)

βc-2807 Target: 5'-ACAACCAGAAATCTGAGAACATTCCAA-3' (SEQ ID NO: 2860)

5'-UAACAACCAGAAAUCUGAGAACAUU^{A}$^{A-3'}$ (SEQ ID NO: 6188)
3'-AUUGUUGGUCUUUAGACUCUUGUAA$_{G}$$_{G-5'}$ (SEQ ID NO: 1752)

βc-2809 Target: 5'-TAACAACCAGAAATCTGAGAACATTCC-3' (SEQ ID NO: 2861)

5'-AUAACAACCAGAAAUCUGAGAACAU^{C}$^{A-3'}$ (SEQ ID NO: 6189)
3'-UAUUGUUGGUCUUUAGACUCUUGUA$_{A}$$_{G-5'}$ (SEQ ID NO: 1753)

βc-2810 Target: 5'-ATAACAACCAGAAATCTGAGAACATTC-3' (SEQ ID NO: 2862)

5'-CAUAACAACCAGAAAUCUGAGAACA^{C}$^{C-3'}$ (SEQ ID NO: 6190)
3'-GUAUUGUUGGUCUUUAGACUCUUGU$_{A}$$_{A-5'}$ (SEQ ID NO: 1754)

βc-2811 Target: 5'-CATAACAACCAGAAATCTGAGAACATT-3' (SEQ ID NO: 2863)

5'-UGAUCACAUAACAACCAGAAAUCUG^{C}$^{A-3'}$ (SEQ ID NO: 6191)
3'-ACUAGUGUAUUGUUGGUCUUUAGAC$_{U}$$_{C-5'}$ (SEQ ID NO: 1755)

βc-2817 Target: 5'-TGATCACATAACAACCAGAAATCTGAG-3' (SEQ ID NO: 2864)

5'-AUGAUCACAUAACAACCAGAAAUCU^{A}$^{C-3'}$ (SEQ ID NO: 6192)
3'-UACUAGUGUAUUGUUGGUCUUUAGA$_{C}$$_{U-5'}$ (SEQ ID NO: 1756)

βc-2818 Target: 5'-ATGATCACATAACAACCAGAAATCTGA-3' (SEQ ID NO: 2865)

5'-CCACACAUGAUCACAUAACAACCAG^{C}$^{C-3'}$ (SEQ ID NO: 6193)
3'-GGUGUGUACUAGUGUAUUGUUGGUC$_{U}$$_{U-5'}$ (SEQ ID NO: 1757)

βc-2824 Target: 5'-CCACACATGATCACATAACAACCAGAA-3' (SEQ ID NO: 2866)

5'-CUUCCACACAUGAUCACAUAACAAC^{A}$^{C-3'}$ (SEQ ID NO: 6194)
3'-GAAGGUGUGUACUAGUGUAUUGUUG$_{G}$$_{U-5'}$ (SEQ ID NO: 1758)

βc-2827 Target: 5'-CTTCCACACATGATCACATAACAACCA-3' (SEQ ID NO: 2867)

5'-AAUAACUUCCACACAUGAUCACAUA^{C}$^{A-3'}$ (SEQ ID NO: 6195)
3'-UUAUUGAAGGUGUGUACUAGUGUAU$_{U}$$_{G-5'}$ (SEQ ID NO: 1759)

βc-2832 Target: 5'-AATAACTTCCACACATGATCACATAAC-3' (SEQ ID NO: 2868)

5'-UAAUAACUUCCACACAUGAUCACAU^{C}$^{C-3'}$ (SEQ ID NO: 6196)
3'-AUUAUUGAAGGUGUGUACUAGUGUA$_{U}$$_{U-5'}$ (SEQ ID NO: 1760)

βc-2833 Target: 5'-TAATAACTTCCACACATGATCACATAA-3' (SEQ ID NO: 2869)

5'-UUAAUAACUUCCACACAUGAUCACA^{C}$^{C-3'}$ (SEQ ID NO: 6197)
3'-AAUUAUUGAAGGUGUGUACUAGUGU$_{A}$$_{U-5'}$ (SEQ ID NO: 1761)

βc-2834 Target: 5'-TTAATAACTTCCACACATGATCACATA-3' (SEQ ID NO: 2870)

5'-GUUAAUAACUUCCACACAUGAUCAC^{C}$^{C-3'}$ (SEQ ID NO: 6198)

3'-CAAUUAUUGAAGGUGUGUACUAGUG$_{U_{A-5'}}$ (SEQ ID NO: 1762)

βc-2835 Target: 5'-GTTAATAACTTCCACACATGATCAC-3' (SEQ ID NO: 2871)

5'-CAUUAAAGUUAAUAACUUCCACACA$^{C_{A-3'}}$ (SEQ ID NO: 6199)
3'-GUAAUUUCAAUUAUUGAAGGUGUGU$_{A_{C-5'}}$ (SEQ ID NO: 1763)

βc-2842 Target: 5'-CATTAAAGTTAATAACTTCCACACATG-3' (SEQ ID NO: 2872)

5'-ACAUUAAAGUUAAUAACUUCCACAC$^{C_{C-3'}}$ (SEQ ID NO: 6200)
3'-UGUAAUUUCAAUUAUUGAAGGUGUG$_{U_{A-5'}}$ (SEQ ID NO: 1764)

βc-2843 Target: 5'-ACATTAAAGTTAATAACTTCCACAC-3' (SEQ ID NO: 2873)

5'-AAACAUUAAAGUUAAUAACUUCCAC$^{C_{A-3'}}$ (SEQ ID NO: 6201)
3'-UUUGUAAUUUCAAUUAUUGAAGGUG$_{U_{G-5'}}$ (SEQ ID NO: 1765)

βc-2845 Target: 5'-AAACATTAAAGTTAATAACTTCCACAC-3' (SEQ ID NO: 2874)

5'-AAAACAUUAAAGUUAAUAACUUCCA$^{A_{C-3'}}$ (SEQ ID NO: 6202)
3'-UUUUGUAAUUUCAAUUAUUGAAGGU$_{G_{U-5'}}$ (SEQ ID NO: 1766)

βc-2846 Target: 5'-AAAACATTAAAGTTAATAACTTCCACA-3' (SEQ ID NO: 2875)

5'-AAAAACAUUAAAGUUAAUAACUUCC$^{C_{A-3'}}$ (SEQ ID NO: 6203)
3'-UUUUUGUAAUUUCAAUUAUUGAAGG$_{U_{G-5'}}$ (SEQ ID NO: 1767)

βc-2847 Target: 5'-AAAAACATTAAAGTTAATAACTTCCAC-3' (SEQ ID NO: 2876)

5'-AAAAAACAUUAAAGUUAAUAACUUC$^{A_{C-3'}}$ (SEQ ID NO: 6204)
3'-UUUUUUGUAAUUUCAAUUAUUGAAG$_{G_{U-5'}}$ (SEQ ID NO: 1768)

βc-2848 Target: 5'-AAAAAACATTAAAGTTAATAACTTCCA-3' (SEQ ID NO: 2877)

5'-CAAAAAACAUUAAAGUUAAUAACUU$^{A_{A-3'}}$ (SEQ ID NO: 6205)
3'-GUUUUUUGUAAUUUCAAUUAUUGAA$_{G_{G-5'}}$ (SEQ ID NO: 1769)

βc-2849 Target: 5'-CAAAAAACATTAAAGTTAATAACTTCC-3' (SEQ ID NO: 2878)

5'-GCAAAAAACAUUAAAGUUAAUAACU$^{C_{A-3'}}$ (SEQ ID NO: 6206)
3'-CGUUUUUUGUAAUUUCAAUUAUUGA$_{A_{G-5'}}$ (SEQ ID NO: 1770)

βc-2850 Target: 5'-GCAAAAAACATTAAAGTTAATAACTTC-3' (SEQ ID NO: 2879)

5'-UGGCAAAAAACAUUAAAGUUAAUAA$^{A_{C-3'}}$ (SEQ ID NO: 6207)
3'-ACCGUUUUUUGUAAUUUCAAUUAUU$_{G_{A-5'}}$ (SEQ ID NO: 1771)

βc-2852 Target: 5'-TGGCAAAAAACATTAAAGTTAATAACT-3' (SEQ ID NO: 2880)

5'-GUGGCAAAAAACAUUAAAGUUAAUA$^{C_{A-3'}}$ (SEQ ID NO: 6208)
3'-CACCGUUUUUUGUAAUUUCAAUUAU$_{U_{G-5'}}$ (SEQ ID NO: 1772)

βc-2853 Target: 5'-GTGGCAAAAAACATTAAAGTTAATAAC-3' (SEQ ID NO: 2881)

5'-UUGCAAAAGCUGUGGCAAAAAACAU$^{CC-3'}$ (SEQ ID NO: 6209)
3'-AACGUUUUCGACACCGUUUUUUGUA$_{AU-5'}$ (SEQ ID NO: 1773)

βc-2864 Target: 5'-TTGCAAAAGCTGTGGCAAAAAACATTA-3' (SEQ ID NO: 2882)

5'-GUUGCAAAAGCUGUGGCAAAAAACA$^{CC-3'}$ (SEQ ID NO: 6210)
3'-CAACGUUUUCGACACCGUUUUUUGU$_{AA-5'}$ (SEQ ID NO: 1774)

βc-2865 Target: 5'-GTTGCAAAAGCTGTGGCAAAAAACATT-3' (SEQ ID NO: 2883)

5'-ACUCAUUUGAGUAUUAAGUUGCAAA$^{CA-3'}$ (SEQ ID NO: 6211)
3'-UGAGUAAACUCAUAAUUCAACGUUU$_{UC-5'}$ (SEQ ID NO: 1775)

βc-2882 Target: 5'-ACTCATTTGAGTATTAAGTTGCAAAAG-3' (SEQ ID NO: 2884)

5'-UUAAAACAGCAAAUGUUACUCAUUU$^{AC-3'}$ (SEQ ID NO: 6212)
3'-AAUUUUGUCGUUUACAAUGAGUAAA$_{CU-5'}$ (SEQ ID NO: 1776)

βc-2899 Target: 5'-TTAAAACAGCAAATGTTACTCATTTGA-3' (SEQ ID NO: 2885)

5'-UUUAAAACAGCAAAUGUUACUCAUU$^{CA-3'}$ (SEQ ID NO: 6213)
3'-AAAUUUUGUCGUUUACAAUGAGUAA$_{AC-5'}$ (SEQ ID NO: 1777)

βc-2900 Target: 5'-TTTAAAACAGCAAATGTTACTCATTTG-3' (SEQ ID NO: 2886)

5'-GUUUAAAACAGCAAAUGUUACUCAU$^{CC-3'}$ (SEQ ID NO: 6214)
3'-CAAAUUUUGUCGUUUACAAUGAGUA$_{AA-5'}$ (SEQ ID NO: 1778)

βc-2901 Target: 5'-GTTTAAAACAGCAAATGTTACTCATTT-3' (SEQ ID NO: 2887)

5'-UGUUUAAAACAGCAAAUGUUACUCA$^{CC-3'}$ (SEQ ID NO: 6215)
3'-ACAAAUUUUGUCGUUUACAAUGAGU$_{AA-5'}$ (SEQ ID NO: 1779)

βc-2902 Target: 5'-TGTTTAAAACAGCAAATGTTACTCATT-3' (SEQ ID NO: 2888)

5'-AUGUUUAAAACAGCAAAUGUUACUC$^{CC-3'}$ (SEQ ID NO: 6216)
3'-UACAAAUUUUGUCGUUUACAAUGAG$_{UA-5'}$ (SEQ ID NO: 1780)

βc-2903 Target: 5'-ATGTTTAAAACAGCAAATGTTACTC-3' (SEQ ID NO: 2889)

5'-AAUGUUUAAAACAGCAAAUGUUACU$^{AC-3'}$ (SEQ ID NO: 6217)
3'-UUACAAAUUUUGUCGUUUACAAUGA$_{GU-5'}$ (SEQ ID NO: 1781)

βc-2904 Target: 5'-AATGTTTAAAACAGCAAATGTTACTCA-3' (SEQ ID NO: 2890)

5'-CUAUUAAUGUUUAAAACAGCAAAUG$^{CC-3'}$ (SEQ ID NO: 6218)
3'-GAUAAUUACAAAUUUUGUCGUUUAC$_{AA-5'}$ (SEQ ID NO: 1782)

βc-2909 Target: 5'-CTATTAATGTTTAAAACAGCAAATGTT-3' (SEQ ID NO: 2891)

5'-AGAGAAAGGCUGCUAUUAAUGUUUA$^{CC-3'}$ (SEQ ID NO: 6219)
3'-UCUCUUUCCGACGAUAAUUACAAAU$_{UU-5'}$ (SEQ ID NO: 1783)

βc-2921 Target: 5'-AGAGAAAGGCTGCTATTAATGTTTAAA-3' (SEQ ID NO: 2892)

5'-CAAGUUCAGACAAUACAGCUGUAUA$^{C}C-3'$ (SEQ ID NO: 6220)
3'-GUUCAAGUCUGUUAUGUCGACAUAU$_{U}U_{-5'}$ (SEQ ID NO: 1784)

βc-2949 Target: 5'-CAAGTTCAGACAATACAGCTGTATAAA-3' (SEQ ID NO: 2893)

5'-UCACAAUGCAAGUUCAGACAAUACA$^{A}A-3'$ (SEQ ID NO: 6221)
3'-AGUGUUACGUUCAAGUCUGUUAUGU$_{C}G_{-5'}$ (SEQ ID NO: 1785)

βc-2957 Target: 5'-TCACAATGCAAGTTCAGACAATACAGC-3' (SEQ ID NO: 2894)

5'-AAUCACAAUGCAAGUUCAGACAAUA$^{A}C-3'$ (SEQ ID NO: 6222)
3'-UUAGUGUUACGUUCAAGUCUGUUAU$_{G}U_{-5'}$ (SEQ ID NO: 1786)

βc-2959 Target: 5'-AATCACAATGCAAGTTCAGACAATACA-3' (SEQ ID NO: 2895)

5'-CCAAUCACAAUGCAAGUUCAGACAA$^{C}C-3'$ (SEQ ID NO: 6223)
3'-GGUUAGUGUUACGUUCAAGUCUGUU$_{A}U_{-5'}$ (SEQ ID NO: 1787)

βc-2961 Target: 5'-CCAATCACAATGCAAGTTCAGACAATA-3' (SEQ ID NO: 2896)

5'-CAGGCCAAUCACAAUGCAAGUUCAG$^{C}A-3'$ (SEQ ID NO: 6224)
3'-GUCCGGUUAGUGUUACGUUCAAGUC$_{U}G_{-5'}$ (SEQ ID NO: 1788)

βc-2965 Target: 5'-CAGGCCAATCACAATGCAAGTTCAGAC-3' (SEQ ID NO: 2897)

5'-UUGUUCCCAUAGGAAACUCAGCUUG$^{A}C-3'$ (SEQ ID NO: 6225)
3'-AACAAGGGUAUCCUUUGAGUCGAAC$_{C}A_{-5'}$ (SEQ ID NO: 1789)

βc-3052 Target: 5'-TTGTTCCCATAGGAAACTCAGCTTGGT-3' (SEQ ID NO: 2898)

5'-CUUCAAUUGUUCCCAUAGGAAACUC$^{C}A-3'$ (SEQ ID NO: 6226)
3'-GAAGUUAACAAGGGUAUCCUUUGAG$_{U}C_{-5'}$ (SEQ ID NO: 1790)

βc-3058 Target: 5'-CTTCAATTGTTCCCATAGGAAACTCAG-3' (SEQ ID NO: 2899)

5'-ACUUCAAUUGUUCCCAUAGGAAACU$^{A}C-3'$ (SEQ ID NO: 6227)
3'-UGAAGUUAACAAGGGUAUCCUUUGA$_{G}U_{-5'}$ (SEQ ID NO: 1791)

βc-3059 Target: 5'-ACTTCAATTGTTCCCATAGGAAACTCA-3' (SEQ ID NO: 2900)

5'-AAGUUUACUUCAAUUGUUCCCAUAG$^{A}C-3'$ (SEQ ID NO: 6228)
3'-UUCAAAUGAAGUUAACAAGGGUAUC$_{C}U_{-5'}$ (SEQ ID NO: 1792)

βc-3065 Target: 5'-AAGTTTACTTCAATTGTTCCCATAGGA-3' (SEQ ID NO: 2901)

5'-AAAGUUUACUUCAAUUGUUCCCAUA$^{A}A-3'$ (SEQ ID NO: 6229)
3'-UUUCAAAUGAAGUUAACAAGGGUAU$_{C}C_{-5'}$ (SEQ ID NO: 1793)

βc-3066 Target: 5'-AAAGTTTACTTCAATTGTTCCCATAGG-3' (SEQ ID NO: 2902)

5'-ACAAAAAGUUUACUUCAAUUGUUCC$^{A}C-3'$ (SEQ ID NO: 6230)

3'-UGUUUUUCAAAUGAAGUUAACAAGG$_{G_{U-5}}$, (SEQ ID NO: 1794)

βc-3070 Target: 5'-ACAAAAAGTTTACTTCAATTGTTCCCA-3' (SEQ ID NO: 2903)

5'-CAGAACAAAAAGUUUACUUCAAUUG^{C}$^{C-3'}$ (SEQ ID NO: 6231)
3'-GUCUUGUUUUUCAAAUGAAGUUAAC$_{A_{A-5}}$, (SEQ ID NO: 1795)

βc-3074 Target: 5'-CAGAACAAAAAGTTTACTTCAATTGTT-3' (SEQ ID NO: 2904)

5'-AGGACCAGAACAAAAAGUUUACUUC^{C}$^{C-3'}$ (SEQ ID NO: 6232)
3'-UCCUGGUCUUGUUUUUCAAAUGAAG$_{U_{U-5}}$, (SEQ ID NO: 1796)

βc-3079 Target: 5'-AGGACCAGAACAAAAAGTTTACTTCAA-3' (SEQ ID NO: 2905)

5'-AAGGACCAGAACAAAAAGUUUACUU^{A}$^{C-3'}$ (SEQ ID NO: 6233)
3'-UUCCUGGUCUUGUUUUUCAAAUGAA$_{G_{U-5}}$, (SEQ ID NO: 1797)

βc-3080 Target: 5'-AAGGACCAGAACAAAAAGTTTACTTCA-3' (SEQ ID NO: 2906)

5'-CGACCAAAAAGGACCAGAACAAAAA^{A}$^{C-3'}$ (SEQ ID NO: 6234)
3'-GCUGGUUUUUCCUGGUCUUGUUUUU$_{C_{A-5}}$, (SEQ ID NO: 1798)

βc-3088 Target: 5'-CGACCAAAAAGGACCAGAACAAAAAGT-3' (SEQ ID NO: 2907)

5'-UCGACCAAAAAGGACCAGAACAAAA^{C}$^{A-3'}$ (SEQ ID NO: 6235)
3'-AGCUGGUUUUUCCUGGUCUUGUUUU$_{U_{C-5}}$, (SEQ ID NO: 1799)

βc-3089 Target: 5'-TCGACCAAAAAGGACCAGAACAAAAAG-3' (SEQ ID NO: 2908)

5'-UUACUCCUCGACCAAAAAGGACCAG^{C}$^{C-3'}$ (SEQ ID NO: 6236)
3'-AAUGAGGAGCUGGUUUUUCCUGGUC$_{U_{U-5}}$, (SEQ ID NO: 1800)

βc-3096 Target: 5'-TTACTCCTCGACCAAAAAGGACCAGAA-3' (SEQ ID NO: 2909)

5'-AAUCCAUUUGUAUUGUUACUCCUCG^{C}$^{A-3'}$ (SEQ ID NO: 6237)
3'-UUAGGUAAACAUAACAAUGAGGAGC$_{U_{G-5}}$, (SEQ ID NO: 1801)

βc-3111 Target: 5'-AATCCATTTGTATTGTTACTCCTCGAC-3' (SEQ ID NO: 2910)

5'-AAAUCCAUUUGUAUUGUUACUCCUC^{A}$^{C-3'}$ (SEQ ID NO: 6238)
3'-UUUAGGUAAACAUAACAAUGAGGAG$_{C_{U-5}}$, (SEQ ID NO: 1802)

βc-3112 Target: 5'-AAATCCATTTGTATTGTTACTCCTCGA-3' (SEQ ID NO: 2911)

5'-AAAAUCCAUUUGUAUUGUUACUCCU^{A}$^{A-3'}$ (SEQ ID NO: 6239)
3'-UUUUAGGUAAACAUAACAAUGAGGA$_{G_{C-5}}$, (SEQ ID NO: 1803)

βc-3113 Target: 5'-AAAATCCATTTGTATTGTTACTCCTCG-3' (SEQ ID NO: 2912)

5'-CAAAAUCCAUUUGUAUUGUUACUCC^{C}$^{A-3'}$ (SEQ ID NO: 6240)
3'-GUUUUAGGUAAACAUAACAAUGAGG$_{A_{G-5}}$, (SEQ ID NO: 1804)

βc-3114 Target: 5'-CAAAATCCATTTGTATTGTTACTCCTC-3' (SEQ ID NO: 2913)

5'-CCAAAAUCCAUUUGUAUUGUUACUC^{A}$^{C-3'}$ (SEQ ID NO: 6241)
3'-GGUUUUAGGUAAACAUAACAAUGAG$_{G}$$_{A-5'}$ (SEQ ID NO: 1805)

βc-3115 Target: 5'-CCAAAATCCATTTGTATTGTTACTCCT-3' (SEQ ID NO: 2914)

5'-UCACUCCCAAAAUCCAUUUGUAUUG^{C}$^{C-3'}$ (SEQ ID NO: 6242)
3'-AGUGAGGGUUUUAGGUAAACAUAAC$_{A}$$_{A-5'}$ (SEQ ID NO: 1806)

βc-3121 Target: 5'-TCACTCCCAAAATCCATTTGTATTGTT-3' (SEQ ID NO: 2915)

5'-UCUUCACUUCUUGAGUCACUCCCAA^{C}$^{C-3'}$ (SEQ ID NO: 6243)
3'-AGAAGUGAAGAACUCAGUGAGGGUU$_{U}$$_{U-5'}$ (SEQ ID NO: 1807)

βc-3136 Target: 5'-TCTTCACTTCTTGAGTCACTCCCAAAA-3' (SEQ ID NO: 2916)

5'-AUUCUUCACUUCUUGAGUCACUCCC^{C}$^{C-3'}$ (SEQ ID NO: 6244)
3'-UAAGAAGUGAAGAACUCAGUGAGGG$_{U}$$_{U-5'}$ (SEQ ID NO: 1808)

βc-3138 Target: 5'-ATTCTTCACTTCTTGAGTCACTCCCAA-3' (SEQ ID NO: 2917)

5'-CAUUCUUCACUUCUUGAGUCACUCC^{A}$^{C-3'}$ (SEQ ID NO: 6245)
3'-GUAAGAAGUGAAGAACUCAGUGAGG$_{G}$$_{U-5'}$ (SEQ ID NO: 1809)

βc-3139 Target: 5'-CATTCTTCACTTCTTGAGTCACTCCCA-3' (SEQ ID NO: 2918)

5'-GCAUUCUUCACUUCUUGAGUCACUC^{A}$^{A-3'}$ (SEQ ID NO: 6246)
3'-CGUAAGAAGUGAAGAACUCAGUGAG$_{G}$$_{G-5'}$ (SEQ ID NO: 1810)

βc-3140 Target: 5'-GCATTCTTCACTTCTTGAGTCACTCCC-3' (SEQ ID NO: 2919)

5'-GUGCAUUCUUCACUUCUUGAGUCAC^{C}$^{A-3'}$ (SEQ ID NO: 6247)
3'-CACGUAAGAAGUGAAGAACUCAGUG$_{A}$$_{G-5'}$ (SEQ ID NO: 1811)

βc-3142 Target: 5'-GTGCATTCTTCACTTCTTGAGTCACTC-3' (SEQ ID NO: 2920)

5'-CCAUUCUUGUGCAUUCUUCACUUCU^{C}$^{A-3'}$ (SEQ ID NO: 6248)
3'-GGUAAGAACACGUAAGAAGUGAAGA$_{A}$$_{C-5'}$ (SEQ ID NO: 1812)

βc-3150 Target: 5'-CCATTCTTGTGCATTCTTCACTTCTTG-3' (SEQ ID NO: 2921)

5'-GAUCCAUUCUUGUGCAUUCUUCACU^{C}$^{A-3'}$ (SEQ ID NO: 6249)
3'-CUAGGUAAGAACACGUAAGAAGUGA$_{A}$$_{G-5'}$ (SEQ ID NO: 1813)

βc-3153 Target: 5'-GATCCATTCTTGTGCATTCTTCACTTC-3' (SEQ ID NO: 2922)

5'-UGAUCCAUUCUUGUGCAUUCUUCAC^{C}$^{C-3'}$ (SEQ ID NO: 6250)
3'-ACUAGGUAAGAACACGUAAGAAGUG$_{A}$$_{A-5'}$ (SEQ ID NO: 1814)

βc-3154 Target: 5'-TGATCCATTCTTGTGCATTCTTCACTT-3' (SEQ ID NO: 2923)

5'-GUGAUCCAUUCUUGUGCAUUCUUCA^{A}$^{C-3'}$ (SEQ ID NO: 6251)
3'-CACUAGGUAAGAACACGUAAGAAGU$_{G}$$_{A-5'}$ (SEQ ID NO: 1815)

βc-3155 Target: 5'-GTGATCCATTCTTGTGCATTCTTCACT-3' (SEQ ID NO: 2924)

5'-UAAAUUCCAUCUUGUGAUCCAUUCU$^{CA-3'}$ (SEQ ID NO: 6252)
3'-AUUUAAGGUAGAACACUAGGUAAGA$_{AC-5'}$ (SEQ ID NO: 1816)

βc-3168 Target: 5'-TAAATTCCATCTTGTGATCCATTCTTG-3' (SEQ ID NO: 2925)

5'-GAUAAAUUCCAUCUUGUGAUCCAUU$^{AC-3'}$ (SEQ ID NO: 6253)
3'-CUAUUUAAGGUAGAACACUAGGUAA$_{GA-5'}$ (SEQ ID NO: 1817)

βc-3170 Target: 5'-GATAAATTCCATCTTGTGATCCATTCT-3' (SEQ ID NO: 2926)

5'-UGAUAAAUUCCAUCUUGUGAUCCAU$^{CA-3'}$ (SEQ ID NO: 6254)
3'-ACUAUUUAAGGUAGAACACUAGGUA$_{AG-5'}$ (SEQ ID NO: 1818)

βc-3171 Target: 5'-TGATAAATTCCATCTTGTGATCCATTC-3' (SEQ ID NO: 2927)

5'-UUGAUAAAUUCCAUCUUGUGAUCCA$^{CC-3'}$ (SEQ ID NO: 6255)
3'-AACUAUUUAAGGUAGAACACUAGGU$_{AA-5'}$ (SEQ ID NO: 1819)

βc-3172 Target: 5'-TTGATAAATTCCATCTTGTGATCCATT-3' (SEQ ID NO: 2928)

5'-UUUGAUAAAUUCCAUCUUGUGAUCC$^{CC-3'}$ (SEQ ID NO: 6256)
3'-AAACUAUUUAAGGUAGAACACUAGG$_{UA-5'}$ (SEQ ID NO: 1820)

βc-3173 Target: 5'-TTTGATAAATTCCATCTTGTGATCC-3' (SEQ ID NO: 2929)

5'-AAGGCUAGGGUUUGAUAAAUUCCAU$^{AC-3'}$ (SEQ ID NO: 6257)
3'-UUCCGAUCCCAAACUAUUUAAGGUA$_{GA-5'}$ (SEQ ID NO: 1821)

βc-3183 Target: 5'-AAGGCTAGGGTTTGATAAATTCCATCT-3' (SEQ ID NO: 2930)

5'-AAAAAAAUUUAACAAGCAAGGCUAG$^{AA-3'}$ (SEQ ID NO: 6258)
3'-UUUUUUUAAAUUGUUCGUUCCGAUC$_{CC-5'}$ (SEQ ID NO: 1822)

βc-3200 Target: 5'-AAAAAAATTTAACAAGCAAGGCTAGGG-3' (SEQ ID NO: 2931)

5'-AAAAAAAAAAAAAAAAUUUAACAAG$^{AC-3'}$ (SEQ ID NO: 6259)
3'-UUUUUUUUUUUUUUUUUAAAUUGUUC$_{GU-5'}$ (SEQ ID NO: 1823)

βc-3209 Target: 5'-AAAAAAAAAAAAAAAATTTAACAAGCA-3' (SEQ ID NO: 2932)

5'-AAAAAAAAAAAAAAAAAUUUAACAA$^{AA-3'}$ (SEQ ID NO: 6260)
3'-UUUUUUUUUUUUUUUUUAAAUUGUU$_{CG-5'}$ (SEQ ID NO: 1824)

βc-3210 Target: 5'-AAAAAAAAAAAAAAAATTTAACAAGC-3' (SEQ ID NO: 2933)

5'-AAAAAAAAAAAAAAAAAAUUUAACA$^{CA-3'}$ (SEQ ID NO: 6261)
3'-UUUUUUUUUUUUUUUUUAAAUUGU$_{UC-5'}$ (SEQ ID NO: 1825)

βc-3211 Target: 5'-AAAAAAAAAAAAAAAAATTTAACAAG-3' (SEQ ID NO: 2934)

5'-AAAAAAAAAAAAAAAAAAUUUAAC$^{CC-3'}$ (SEQ ID NO: 6262)

3'-UUUUUUUUUUUUUUUUUUUAAAUUG$_{U_{U-5'}}$ (SEQ ID NO: 1826)

βc-3212 Target: 5'-AAAAAAAAAAAAAAAAAAATTTAACAA-3' (SEQ ID NO: 2935)

5'-UAAAAAAAAAAAAAAAAAAAUUUAA$^{A_{C-3'}}$ (SEQ ID NO: 6263)
3'-AUUUUUUUUUUUUUUUUUUUAAAUU$_{G_{U-5'}}$ (SEQ ID NO: 1827)

βc-3213 Target: 5'-TAAAAAAAAAAAAAAAAAAATTTAACA-3' (SEQ ID NO: 2936)

5'-UUAAAAAAAAAAAAAAAAAAAUUUA$^{C_{A-3'}}$ (SEQ ID NO: 6264)
3'-AAUUUUUUUUUUUUUUUUUUUAAAU$_{U_{G-5'}}$ (SEQ ID NO: 1828)

βc-3214 Target: 5'-TTAAAAAAAAAAAAAAAAAATTTAAC-3' (SEQ ID NO: 2937)

5'-CUUAAAAAAAAAAAAAAAAAAAUUU$^{C_{C-3'}}$ (SEQ ID NO: 6265)
3'-GAAUUUUUUUUUUUUUUUUUUUAAA$_{U_{U-5'}}$ (SEQ ID NO: 1829)

βc-3215 Target: 5'-CTTAAAAAAAAAAAAAAAAAATTTAA-3' (SEQ ID NO: 2938)

5'-UCUUAAAAAAAAAAAAAAAAAAAUU$^{C_{C-3'}}$ (SEQ ID NO: 6266)
3'-AGAAUUUUUUUUUUUUUUUUUUUAA$_{A_{U-5'}}$ (SEQ ID NO: 1830)

βc-3216 Target: 5'-TCTTAAAAAAAAAAAAAAAAAATTTA-3' (SEQ ID NO: 2939)

5'-AUUCUUAAAAAAAAAAAAAAAAAAA$^{C_{C-3'}}$ (SEQ ID NO: 6267)
3'-UAAGAAUUUUUUUUUUUUUUUUUUU$_{A_{A-5'}}$ (SEQ ID NO: 1831)

βc-3218 Target: 5'-ATTCTTAAAAAAAAAAAAAAAAAATT-3' (SEQ ID NO: 2940)

5'-UAUUCUUAAAAAAAAAAAAAAAAAAA$^{C_{C-3'}}$ (SEQ ID NO: 6268)
3'-AUAAGAAUUUUUUUUUUUUUUUUUUU$_{A_{A-5'}}$ (SEQ ID NO: 1832)

βc-3219 Target: 5'-TATTCTTAAAAAAAAAAAAAAAAAAAT-3' (SEQ ID NO: 2941)

5'-AUAUUCUUAAAAAAAAAAAAAAAAAA$^{C_{C-3'}}$ (SEQ ID NO: 6269)
3'-UAUAAGAAUUUUUUUUUUUUUUUUUU$_{U_{U-5'}}$ (SEQ ID NO: 1833)

βc-3220 Target: 5'-ATATTCTTAAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2942)

5'-GAUAUUCUUAAAAAAAAAAAAAAAAA$^{C_{C-3'}}$ (SEQ ID NO: 6270)
3'-CUAUAAGAAUUUUUUUUUUUUUUUUU$_{U_{U-5'}}$ (SEQ ID NO: 1834)

βc-3221 Target: 5'-GATATTCTTAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2943)

5'-AGAUAUUCUUAAAAAAAAAAAAAAAA$^{C_{C-3'}}$ (SEQ ID NO: 6271)
3'-UCUAUAAGAAUUUUUUUUUUUUUUUU$_{U_{U-5'}}$ (SEQ ID NO: 1835)

βc-3222 Target: 5'-AGATATTCTTAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2944)

5'-CAGAUAUUCUUAAAAAAAAAAAAAAA$^{C_{C-3'}}$ (SEQ ID NO: 6272)
3'-GUCUAUAAGAAUUUUUUUUUUUUUUU$_{U_{U-5'}}$ (SEQ ID NO: 1836)

βc-3223 Target: 5'-CAGATATTCTTAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2945)

5'-ACAGAUAUUCUUAAAAAAAAAAAAA$^{CC-3'}$ (SEQ ID NO: 6273)
3'-UGUCUAUAAGAAUUUUUUUUUUUU$_{U-5'}$ (SEQ ID NO: 1837)

βc-3224 Target: 5'-ACAGATATTCTTAAAAAAAAAAAAAA-3' (SEQ ID NO: 2946)

5'-CAUUACAGAUAUUCUUAAAAAAAAA$^{CC-3'}$ (SEQ ID NO: 6274)
3'-GUAAUGUCUAUAAGAAUUUUUUUUU$_{U-5'}$ (SEQ ID NO: 1838)

βc-3228 Target: 5'-CATTACAGATATTCTTAAAAAAAAAAA-3' (SEQ ID NO: 2947)

5'-CCAUUACAGAUAUUCUUAAAAAAAA$^{CC-3'}$ (SEQ ID NO: 6275)
3'-GGUAAUGUCUAUAAGAAUUUUUUUU$_{U-5'}$ (SEQ ID NO: 1839)

βc-3229 Target: 5'-CCATTACAGATATTCTTAAAAAAAAAA-3' (SEQ ID NO: 2948)

5'-AGUACCAUUACAGAUAUUCUUAAAA$^{CC-3'}$ (SEQ ID NO: 6276)
3'-UCAUGGUAAUGUCUAUAAGAAUUUU$_{U-5'}$ (SEQ ID NO: 1840)

βc-3233 Target: 5'-AGTACCATTACAGATATTCTTAAAAAA-3' (SEQ ID NO: 2949)

5'-CAGUACCAUUACAGAUAUUCUUAAA$^{CC-3'}$ (SEQ ID NO: 6277)
3'-GUCAUGGUAAUGUCUAUAAGAAUUU$_{U-5'}$ (SEQ ID NO: 1841)

βc-3234 Target: 5'-CAGTACCATTACAGATATTCTTAAAAA-3' (SEQ ID NO: 2950)

5'-UCAGUACCAUUACAGAUAUUCUUAA$^{CC-3'}$ (SEQ ID NO: 6278)
3'-AGUCAUGGUAAUGUCUAUAAGAAUU$_{U-5'}$ (SEQ ID NO: 1842)

βc-3235 Target: 5'-TCAGTACCATTACAGATATTCTTAAAA-3' (SEQ ID NO: 2951)

5'-AAAGUCAGUACCAUUACAGAUAUUC$^{CC-3'}$ (SEQ ID NO: 6279)
3'-UUUCAGUCAUGGUAAUGUCUAUAAG$_{A-5'}$ (SEQ ID NO: 1843)

βc-3239 Target: 5'-AAAGTCAGTACCATTACAGATATTCTT-3' (SEQ ID NO: 2952)

5'-GCUACUUCAAAGCAAGCAAAGUCAG$^{CC-3'}$ (SEQ ID NO: 6280)
3'-CGAUGAAGUUUCGUUCGUUUCAGUC$_{A-5'}$ (SEQ ID NO: 1844)

βc-3256 Target: 5'-GCTACTTCAAAGCAAGCAAAGTCAGTA-3' (SEQ ID NO: 2953)

5'-AAAAAAAGAGCUACUUCAAAGCAAG$^{AC-3'}$ (SEQ ID NO: 6281)
3'-UUUUUUUCUCGAUGAAGUUUCGUUC$_{G-5'}$ (SEQ ID NO: 1845)

βc-3265 Target: 5'-AAAAAAAGAGCTACTTCAAAGCAAGCA-3' (SEQ ID NO: 2954)

5'-AAAAAAAAAAAAGAGCUACUUCAAA$^{AA-3'}$ (SEQ ID NO: 6282)
3'-UUUUUUUUUUUUCUCGAUGAAGUUU$_{C-5'}$ (SEQ ID NO: 1846)

βc-3270 Target: 5'-AAAAAAAAAAAAGAGCTACTTCAAAGC-3' (SEQ ID NO: 2955)

5'-AAAAAAAAAAAAGAGCUACUUCAA$^{CA-3'}$ (SEQ ID NO: 6283)
3'-UUUUUUUUUUUUCUCGAUGAAGUU$_{C-5'}$ (SEQ ID NO: 1847)

βc-3271 Target: 5'-AAAAAAAAAAAAAGAGCTACTTCAAAG-3' (SEQ ID NO: 2956)

5'-AAAAAAAAAAAAAAAGAGCUACUUC^{C}C-3' (SEQ ID NO: 6284)
3'-UUUUUUUUUUUUUUUUCUCGAUGAAG$_{U}$U-5' (SEQ ID NO: 1848)

βc-3273 Target: 5'-AAAAAAAAAAAAAAAAGAGCTACTTCAA-3' (SEQ ID NO: 2957)

5'-AAAAAAAAAAAAAAAAGAGCUACUU^{A}C-3' (SEQ ID NO: 6285)
3'-UUUUUUUUUUUUUUUUCUCGAUGAA$_{G}$U-5' (SEQ ID NO: 1849)

βc-3274 Target: 5'-AAAAAAAAAAAAAAAAGAGCTACTTCA-3' (SEQ ID NO: 2958)

5'-AAAAAAAAAAAAAAAAAGAGCUACU^{C}A-3' (SEQ ID NO: 6286)
3'-UUUUUUUUUUUUUUUUUCUCGAUGA$_{A}$G-5' (SEQ ID NO: 1850)

βc-3275 Target: 5'-AAAAAAAAAAAAAAAAAGAGCTACTTC-3' (SEQ ID NO: 2959)

5'-AAAAAAAAAAAAAAAAAAGAGCUAC^{C}C-3' (SEQ ID NO: 6287)
3'-UUUUUUUUUUUUUUUUUUCUCGAUG$_{A}$A-5' (SEQ ID NO: 1851)

βc-3276 Target: 5'-AAAAAAAAAAAAAAAAAAGAGCTACTT-3' (SEQ ID NO: 2960)

5'-AAAAAAAAAAAAAAAAAAAAAAAAG^{C}A-3' (SEQ ID NO: 6288)
3'-UUUUUUUUUUUUUUUUUUUUUUUUC$_{U}$C-5' (SEQ ID NO: 1852)

βc-3282 Target: 5'-AAAAAAAAAAAAAAAAAAAAAAAAGAG-3' (SEQ ID NO: 2961)

5'-AAAAAAAAAAAAAAAAAAAAAAAAA^{A}C-3' (SEQ ID NO: 6289)
3'-UUUUUUUUUUUUUUUUUUUUUUUUU$_{C}$U-5' (SEQ ID NO: 1853)

βc-3283 Target: 5'-AAAAAAAAAAAAAAAAAAAAAAAAAGA-3' (SEQ ID NO: 2962)

5'-CAAAAAAAAAAAAAAAAAAAAAAAA^{C}A-3' (SEQ ID NO: 6290)
3'-GUUUUUUUUUUUUUUUUUUUUUUUU$_{C}$U-5' (SEQ ID NO: 1854)

βc-3284 Target: 5'-CAAAAAAAAAAAAAAAAAAAAAAAAAG-3' (SEQ ID NO: 2963)

5'-GCAAAAAAAAAAAAAAAAAAAAAAA^{C}C-3' (SEQ ID NO: 6291)
3'-CGUUUUUUUUUUUUUUUUUUUUUUU$_{U}$U-5' (SEQ ID NO: 1855)

βc-3285 Target: 5'-GCAAAAAAAAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2964)

5'-CUGCAAAAAAAAAAAAAAAAAAAAA^{C}C-3' (SEQ ID NO: 6292)
3'-GACGUUUUUUUUUUUUUUUUUUUUU$_{U}$U-5' (SEQ ID NO: 1856)

βc-3287 Target: 5'-CTGCAAAAAAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2965)

5'-ACUGCAAAAAAAAAAAAAAAAAAAA^{C}C-3' (SEQ ID NO: 6293)
3'-UGACGUUUUUUUUUUUUUUUUUUUU$_{U}$U-5' (SEQ ID NO: 1857)

βc-3288 Target: 5'-ACTGCAAAAAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2966)

5'-AGUUACUGCAAAAAAAAAAAAAAAA^{C}C-3' (SEQ ID NO: 6294)

3'-UCAAUGACGUUUUUUUUUUUUUUU$_{U-5}$, (SEQ ID NO: 1858)

βc-3292 Target: 5'-AGTTACTGCAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2967)

5'-CAGUUACUGCAAAAAAAAAAAAAA^{C}$^{C-3'}$ (SEQ ID NO: 6295)
3'-GUCAAUGACGUUUUUUUUUUUUUU$_{U-5}$, (SEQ ID NO: 1859)

βc-3293 Target: 5'-CAGTTACTGCAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2968)

5'-ACAGUUACUGCAAAAAAAAAAAAAA^{C}$^{C-3'}$ (SEQ ID NO: 6296)
3'-UGUCAAUGACGUUUUUUUUUUUUUU$_{U-5}$, (SEQ ID NO: 1860)

βc-3294 Target: 5'-ACAGTTACTGCAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2969)

5'-AAAAACAGUUACUGCAAAAAAAAAA^{C}$^{C-3'}$ (SEQ ID NO: 6297)
3'-UUUUUGUCAAUGACGUUUUUUUUUU$_{U-5}$, (SEQ ID NO: 1861)

βc-3298 Target: 5'-AAAAACAGTTACTGCAAAAAAAAAAAA-3' (SEQ ID NO: 2970)

5'-AAAAAACAGUUACUGCAAAAAAAAA^{C}$^{C-3'}$ (SEQ ID NO: 6298)
3'-UUUUUUGUCAAUGACGUUUUUUUUU$_{U-5}$, (SEQ ID NO: 1862)

βc-3299 Target: 5'-AAAAAACAGTTACTGCAAAAAAAAAAA-3' (SEQ ID NO: 2971)

5'-UAAAAAACAGUUACUGCAAAAAAAA^{C}$^{C-3'}$ (SEQ ID NO: 6299)
3'-AUUUUUUGUCAAUGACGUUUUUUUU$_{U-5}$, (SEQ ID NO: 1863)

βc-3300 Target: 5'-TAAAAAACAGTTACTGCAAAAAAAAAA-3' (SEQ ID NO: 2972)

5'-CUUAAAAAAACAGUUACUGCAAAAAA^{C}$^{C-3'}$ (SEQ ID NO: 6300)
3'-GAAUUUUUUGUCAAUGACGUUUUUU$_{U-5}$, (SEQ ID NO: 1864)

βc-3302 Target: 5'-CTTAAAAAACAGTTACTGCAAAAAAAA-3' (SEQ ID NO: 2973)

5'-ACUUAAAAAAACAGUUACUGCAAAAA^{C}$^{C-3'}$ (SEQ ID NO: 6301)
3'-UGAAUUUUUUGUCAAUGACGUUUUU$_{U-5}$, (SEQ ID NO: 1865)

βc-3303 Target: 5'-ACTTAAAAAACAGTTACTGCAAAAAAA-3' (SEQ ID NO: 2974)

5'-AGACUUAAAAAACAGUUACUGCAAA^{C}$^{C-3'}$ (SEQ ID NO: 6302)
3'-UCUGAAUUUUUUGUCAAUGACGUUU$_{U-5}$, (SEQ ID NO: 1866)

βc-3305 Target: 5'-AGACTTAAAAAACAGTTACTGCAAAAA-3' (SEQ ID NO: 2975)

5'-ACACUACGAGAGACUUAAAAAACAG^{C}$^{C-3'}$ (SEQ ID NO: 6303)
3'-UGUGAUGCUCUCUGAAUUUUUUGUC$_{A}$$_{A-5}$, (SEQ ID NO: 1867)

βc-3315 Target: 5'-ACACTACGAGAGACTTAAAAAACAGTT-3' (SEQ ID NO: 2976)

5'-UAACACUACGAGAGACUUAAAAAAC^{C}$^{A-3'}$ (SEQ ID NO: 6304)
3'-AUUGUGAUGCUCUCUGAAUUUUUUG$_{U}$$_{C-5}$, (SEQ ID NO: 1868)

βc-3317 Target: 5'-TAACACTACGAGAGACTTAAAAAACAG-3' (SEQ ID NO: 2977)

5'-UUAACACUACGAGAGACUUAAAAAA$^{AC-3'}$ (SEQ ID NO: 6305)
3'-AAUUGUGAUGCUCUCUGAAUUUUUU$_{G_{U-5'}}$ (SEQ ID NO: 1869)

βc-3318 Target: 5'-TTAACACTACGAGAGACTTAAAAAACA-3' (SEQ ID NO: 2978)

5'-ACUUAACACUACGAGAGACUUAAAA$^{CC-3'}$ (SEQ ID NO: 6306)
3'-UGAAUUGUGAUGCUCUCUGAAUUUU$_{U_{U-5'}}$ (SEQ ID NO: 1870)

βc-3320 Target: 5'-ACTTAACACTACGAGAGACTTAAAAAA-3' (SEQ ID NO: 2979)

5'-AUAACUUAACACUACGAGAGACUUA$^{CC-3'}$ (SEQ ID NO: 6307)
3'-UAUUGAAUUGUGAUGCUCUCUGAAU$_{U_{U-5'}}$ (SEQ ID NO: 1871)

βc-3323 Target: 5'-ATAACTTAACACTACGAGAGACTTAAA-3' (SEQ ID NO: 2980)

5'-UAUAACUUAACACUACGAGAGACUU$^{CC-3'}$ (SEQ ID NO: 6308)
3'-AUAUUGAAUUGUGAUGCUCUCUGAA$_{U_{U-5'}}$ (SEQ ID NO: 1872)

βc-3324 Target: 5'-TATAACTTAACACTACGAGAGACTTAA-3' (SEQ ID NO: 2981)

5'-GUAUUCACUAUAACUUAACACUACG$^{CA-3'}$ (SEQ ID NO: 6309)
3'-CAUAAGUGAUAUUGAAUUGUGAUGC$_{U_{C-5'}}$ (SEQ ID NO: 1873)

βc-3332 Target: 5'-GTATTCACTATAACTTAACACTACGAG-3' (SEQ ID NO: 2982)

5'-AGUAUUCACUAUAACUUAACACUAC$^{AC-3'}$ (SEQ ID NO: 6310)
3'-UCAUAAGUGAUAUUGAAUUGUGAUG$_{C_{U-5'}}$ (SEQ ID NO: 1874)

βc-3333 Target: 5'-AGTATTCACTATAACTTAACACTACGA-3' (SEQ ID NO: 2983)

5'-CAGUAUUCACUAUAACUUAACACUA$^{AA-3'}$ (SEQ ID NO: 6311)
3'-GUCAUAAGUGAUAUUGAAUUGUGAU$_{G_{C-5'}}$ (SEQ ID NO: 1875)

βc-3334 Target: 5'-CAGTATTCACTATAACTTAACACTACG-3' (SEQ ID NO: 2984)

5'-GCAGUAUUCACUAUAACUUAACACU$^{CA-3'}$ (SEQ ID NO: 6312)
3'-CGUCAUAAGUGAUAUUGAAUUGUGA$_{U_{G-5'}}$ (SEQ ID NO: 1876)

βc-3335 Target: 5'-GCAGTATTCACTATAACTTAACACTAC-3' (SEQ ID NO: 2985)

5'-AGAAAUUGCUGUAGCAGUAUUCACU$^{CC-3'}$ (SEQ ID NO: 6313)
3'-UCUUUAACGACAUCGUCAUAAGUGA$_{U_{A-5'}}$ (SEQ ID NO: 1877)

βc-3348 Target: 5'-AGAAATTGCTGTAGCAGTATTCACTAT-3' (SEQ ID NO: 2986)

5'-UAGAAAUUGCUGUAGCAGUAUUCAC$^{CC-3'}$ (SEQ ID NO: 6314)
3'-AUCUUUAACGACAUCGUCAUAAGUG$_{A_{U-5'}}$ (SEQ ID NO: 1878)

βc-3349 Target: 5'-TAGAAATTGCTGTAGCAGTATTCACTA-3' (SEQ ID NO: 2987)

5'-UUAGAAAUUGCUGUAGCAGUAUUCA$^{AC-3'}$ (SEQ ID NO: 6315)
3'-AAUCUUUAACGACAUCGUCAUAAGU$_{G_{A-5'}}$ (SEQ ID NO: 1879)

βc-3350 Target: 5'-TTAGAAATTGCTGTAGCAGTATTCACT-3' (SEQ ID NO: 2988)

5'-ACUCAAUUCUUAAAAAUUAGAAAUU$^{A}{}^{A-3'}$ (SEQ ID NO: 6316)
3'-UGAGUUAAGAAUUUUUAAUCUUUAA$_{C}{}_{G-5'}$ (SEQ ID NO: 1880)

βc-3366 Target: 5'-ACTCAATTCTTAAAAATTAGAAATTGC-3' (SEQ ID NO: 2989)

5'-CCAUUACUCAAUUCUUAAAAAUUAG$^{C}{}^{C-3'}$ (SEQ ID NO: 6317)
3'-GGUAAUGAGUUAAGAAUUUUUAAUC$_{U}{}_{U-5'}$ (SEQ ID NO: 1881)

βc-3371 Target: 5'-CCATTACTCAATTCTTAAAAATTAGAA-3' (SEQ ID NO: 2990)

5'-ACACCAUUACUCAAUUCUUAAAAAU$^{C}{}^{C-3'}$ (SEQ ID NO: 6318)
3'-UGUGGUAAUGAGUUAAGAAUUUUUA$_{A}{}_{U-5'}$ (SEQ ID NO: 1882)

βc-3374 Target: 5'-ACACCATTACTCAATTCTTAAAAATTA-3' (SEQ ID NO: 2991)

5'-CUACACCAUUACUCAAUUCUUAAAA$^{C}{}^{C-3'}$ (SEQ ID NO: 6319)
3'-GAUGUGGUAAUGAGUUAAGAAUUUU$_{U}{}_{A-5'}$ (SEQ ID NO: 1883)

βc-3376 Target: 5'-CTACACCATTACTCAATTCTTAAAAAT-3' (SEQ ID NO: 2992)

5'-UCUACACCAUUACUCAAUUCUUAAA$^{C}{}^{C-3'}$ (SEQ ID NO: 6320)
3'-AGAUGUGGUAAUGAGUUAAGAAUUU$_{U}{}_{U-5'}$ (SEQ ID NO: 1884)

βc-3377 Target: 5'-TCTACACCATTACTCAATTCTTAAAAA-3' (SEQ ID NO: 2993)

5'-GUUCUACACCAUUACUCAAUUCUUA$^{C}{}^{C-3'}$ (SEQ ID NO: 6321)
3'-CAAGAUGUGGUAAUGAGUUAAGAAU$_{U}{}_{U-5'}$ (SEQ ID NO: 1885)

βc-3379 Target: 5'-GTTCTACACCATTACTCAATTCTTAAA-3' (SEQ ID NO: 2994)

5'-GUGUUCUACACCAUUACUCAAUUCU$^{C}{}^{C-3'}$ (SEQ ID NO: 6322)
3'-CACAAGAUGUGGUAAUGAGUUAAGA$_{A}{}_{U-5'}$ (SEQ ID NO: 1886)

βc-3381 Target: 5'-GTGTTCTACACCATTACTCAATTCTTA-3' (SEQ ID NO: 2995)

5'-AUGAAUUAGUGUUCUACACCAUUAC$^{C}{}^{A-3'}$ (SEQ ID NO: 6323)
3'-UACUUAAUCACAAGAUGUGGUAAUG$_{A}{}_{G-5'}$ (SEQ ID NO: 1887)

βc-3389 Target: 5'-ATGAATTAGTGTTCTACACCATTACTC-3' (SEQ ID NO: 2996)

5'-UGAUUAUGAAUUAGUGUUCUACACC$^{C}{}^{C-3'}$ (SEQ ID NO: 6324)
3'-ACUAAUACUUAAUCACAAGAUGUGG$_{U}{}_{A-5'}$ (SEQ ID NO: 1888)

βc-3394 Target: 5'-TGATTATGAATTAGTGTTCTACACC-3' (SEQ ID NO: 2997)

5'-GUGAUUAUGAAUUAGUGUUCUACAC$^{A}{}^{C-3'}$ (SEQ ID NO: 6325)
3'-CACUAAUACUUAAUCACAAGAUGUG$_{G}{}_{U-5'}$ (SEQ ID NO: 1889)

βc-3395 Target: 5'-GTGATTATGAATTAGTGTTCTACACCA-3' (SEQ ID NO: 2998)

5'-AGUGAUUAUGAAUUAGUGUUCUACA$^{A}{}^{A-3'}$ (SEQ ID NO: 6326)

3'-UCACUAAUACUUAAUCACAAGAUGU$_{G_{G-5'}}$ (SEQ ID NO: 1890)

βc-3396 Target: 5'-AGTGATTATGAATTAGTGTTCTACACC-3' (SEQ ID NO: 2999)

5'-AUUAAUUAGAGUGAUUAUGAAUUAG$^{C_{A-3'}}$ (SEQ ID NO: 6327)
3'-UAAUUAAUCUCACUAAUACUUAAUC$_{A_{C-5'}}$ (SEQ ID NO: 1891)

βc-3405 Target: 5'-ATTAATTAGAGTGATTATGAATTAGTG-3' (SEQ ID NO: 3000)

5'-AAUUAAUUAGAGUGAUUAUGAAUUA$^{A_{C-3'}}$ (SEQ ID NO: 6328)
3'-UUAAUUAAUCUCACUAAUACUUAAU$_{C_{A-5'}}$ (SEQ ID NO: 1892)

βc-3406 Target: 5'-AATTAATTAGAGTGATTATGAATTAGT-3' (SEQ ID NO: 3001)

5'-CAAUUAAUUAGAGUGAUUAUGAAUU$^{C_{A-3'}}$ (SEQ ID NO: 6329)
3'-GUUAAUUAAUCUCACUAAUACUUAA$_{U_{C-5'}}$ (SEQ ID NO: 1893)

βc-3407 Target: 5'-CAATTAATTAGAGTGATTATGAATTAG-3' (SEQ ID NO: 3002)

5'-AUUACAAUUAAUUAGAGUGAUUAUG$^{C_{C-3'}}$ (SEQ ID NO: 6330)
3'-UAAUGUUAAUUAAUCUCACUAAUAC$_{U_{U-5'}}$ (SEQ ID NO: 1894)

βc-3411 Target: 5'-ATTACAATTAATTAGAGTGATTATGAA-3' (SEQ ID NO: 3003)

5'-GAUUACAAUUAAUUAGAGUGAUUAU$^{A_{C-3'}}$ (SEQ ID NO: 6331)
3'-CUAAUGUUAAUUAAUCUCACUAAUA$_{C_{U-5'}}$ (SEQ ID NO: 1895)

βc-3412 Target: 5'-GATTACAATTAATTAGAGTGATTATGA-3' (SEQ ID NO: 3004)

5'-AGAUUACAAUUAAUUAGAGUGAUUA$^{C_{A-3'}}$ (SEQ ID NO: 6332)
3'-UCUAAUGUUAAUUAAUCUCACUAAU$_{A_{C-5'}}$ (SEQ ID NO: 1896)

βc-3413 Target: 5'-AGATTACAATTAATTAGAGTGATTATG-3' (SEQ ID NO: 3005)

5'-CUUUAUUCAGAUUACAAUUAAUUAG$^{C_{A-3'}}$ (SEQ ID NO: 6333)
3'-GAAAUAAGUCUAAUGUUAAUUAAUC$_{U_{C-5'}}$ (SEQ ID NO: 1897)

βc-3421 Target: 5'-CTTTATTCAGATTACAATTAATTAGAG-3' (SEQ ID NO: 3006)

5'-ACUUUAUUCAGAUUACAAUUAAUUA$^{A_{C-3'}}$ (SEQ ID NO: 6334)
3'-UGAAAUAAGUCUAAUGUUAAUUAAU$_{C_{U-5'}}$ (SEQ ID NO: 1898)

βc-3422 Target: 5'-ACTTTATTCAGATTACAATTAATTAGA-3' (SEQ ID NO: 3007)

5'-UUACACUUUAUUCAGAUUACAAUUA$^{C_{C-3'}}$ (SEQ ID NO: 6335)
3'-AAUGUGAAAUAAGUCUAAUGUUAAU$_{U_{A-5'}}$ (SEQ ID NO: 1899)

βc-3426 Target: 5'-TTACACTTTATTCAGATTACAATTAAT-3' (SEQ ID NO: 3008)

5'-GUUACACUUUAUUCAGAUUACAAUU$^{C_{C-3'}}$ (SEQ ID NO: 6336)
3'-CAAUGUGAAAUAAGUCUAAUGUUAA$_{U_{U-5'}}$ (SEQ ID NO: 1900)

βc-3427 Target: 5'-GTTACACTTTATTCAGATTACAATTAA-3' (SEQ ID NO: 3009)

5'-UGUUACACUUUAUUCAGAUUACAAU$^{CC-3'}$ (SEQ ID NO: 6337)
3'-ACAAUGUGAAAUAAGUCUAAUGUUA$_{AU-5'}$ (SEQ ID NO: 1901)

βc-3428 Target: 5'-TGTTACACTTTATTCAGATTACAATTA-3' (SEQ ID NO: 3010)

5'-UUGUUACACUUUAUUCAGAUUACAA$^{CC-3'}$ (SEQ ID NO: 6338)
3'-AACAAUGUGAAAUAAGUCUAAUGUU$_{AA-5'}$ (SEQ ID NO: 1902)

βc-3429 Target: 5'-TTGTTACACTTTATTCAGATTACAATT-3' (SEQ ID NO: 3011)

5'-AUUGUUACACUUUAUUCAGAUUACA$^{CC-3'}$ (SEQ ID NO: 6339)
3'-UAACAAUGUGAAAUAAGUCUAAUGU$_{UA-5'}$ (SEQ ID NO: 1903)

βc-3430 Target: 5'-ATTGTTACACTTTATTCAGATTACAAT-3' (SEQ ID NO: 3012)

5'-CUACACAAUUGUUACACUUUAUUCA$^{AC-3'}$ (SEQ ID NO: 6340)
3'-GAUGUGUUAACAAUGUGAAAUAAGU$_{CU-5'}$ (SEQ ID NO: 1904)

βc-3437 Target: 5'-CTACACAATTGTTACACTTTATTCAGA-3' (SEQ ID NO: 3013)

5'-AAGGCUACACAAUUGUUACACUUUA$^{CC-3'}$ (SEQ ID NO: 6341)
3'-UUCCGAUGUGUUAACAAUGUGAAAU$_{AA-5'}$ (SEQ ID NO: 1905)

βc-3441 Target: 5'-AAGGCTACACAATTGTTACACTTTATT-3' (SEQ ID NO: 3014)

5'-ACAAAAAGGCUACACAAUUGUUACA$^{AC-3'}$ (SEQ ID NO: 6342)
3'-UGUUUUUCCGAUGUGUUAACAAUGU$_{GA-5'}$ (SEQ ID NO: 1906)

βc-3446 Target: 5'-ACAAAAAGGCTACACAATTGTTACACT-3' (SEQ ID NO: 3015)

5'-UUUUAUACAAAAAGGCUACACAAUU$^{AC-3'}$ (SEQ ID NO: 6343)
3'-AAAAUAUGUUUUUCCGAUGUGUUAA$_{CA-5'}$ (SEQ ID NO: 1907)

βc-3452 Target: 5'-TTTTATACAAAAAGGCTACACAATTGT-3' (SEQ ID NO: 3016)

5'-AUUUUAUACAAAAAGGCUACACAAU$^{CA-3'}$ (SEQ ID NO: 6344)
3'-UAAAAUAUGUUUUUCCGAUGUGUUA$_{AC-5'}$ (SEQ ID NO: 1908)

βc-3453 Target: 5'-ATTTTATACAAAAAGGCTACACAATTG-3' (SEQ ID NO: 3017)

5'-CUAUUUUAUACAAAAAGGCUACACA$^{CC-3'}$ (SEQ ID NO: 6345)
3'-GAUAAAAUAUGUUUUUCCGAUGUGU$_{UA-5'}$ (SEQ ID NO: 1909)

βc-3455 Target: 5'-CTATTTTATACAAAAAGGCTACACAAT-3' (SEQ ID NO: 3018)

5'-UCUAUUUUAUACAAAAAGGCUACAC$^{CC-3'}$ (SEQ ID NO: 6346)
3'-AGAUAAAAUAUGUUUUUCCGAUGUG$_{UU-5'}$ (SEQ ID NO: 1910)

βc-3456 Target: 5'-TCTATTTTATACAAAAAGGCTACACAA-3' (SEQ ID NO: 3019)

5'-UGUCUAUUUUAUACAAAAAGGCUAC$^{CA-3'}$ (SEQ ID NO: 6347)
3'-ACAGAUAAAAUAUGUUUUUCCGAUG$_{UG-5'}$ (SEQ ID NO: 1911)

βc-3458 Target: 5'-TGTCTATTTTATACAAAAAGGCTACAC-3' (SEQ ID NO: 3020)

5'-UCUAUUUGUCUAUUUUAUACAAAAA$^{AA-3'}$ (SEQ ID NO: 6348)
3'-AGAUAAACAGAUAAAAUAUGUUUUU$_{CC-5'}$ (SEQ ID NO: 1912)

βc-3464 Target: 5'-TCTATTTGTCTATTTTATACAAAAAGG-3' (SEQ ID NO: 3021)

5'-UUUCUAUUUGUCUAUUUUAUACAAA$^{CC-3'}$ (SEQ ID NO: 6349)
3'-AAAGAUAAACAGAUAAAAUAUGUUU$_{UU-5'}$ (SEQ ID NO: 1913)

βc-3466 Target: 5'-TTTCTATTTGTCTATTTTATACAAAAA-3' (SEQ ID NO: 3022)

5'-UUUUCUAUUUGUCUAUUUUAUACAA$^{CC-3'}$ (SEQ ID NO: 6350)
3'-AAAAGAUAAACAGAUAAAAUAUGUU$_{UU-5'}$ (SEQ ID NO: 1914)

βc-3467 Target: 5'-TTTTCTATTTGTCTATTTTATACAAAA-3' (SEQ ID NO: 3023)

5'-AUUUUCUAUUUGUCUAUUUUAUACA$^{CC-3'}$ (SEQ ID NO: 6351)
3'-UAAAAGAUAAACAGAUAAAAUAUGU$_{UU-5'}$ (SEQ ID NO: 1915)

βc-3468 Target: 5'-ATTTTCTATTTGTCTATTTTATACAAA-3' (SEQ ID NO: 3024)

5'-CAUUUUCUAUUUGUCUAUUUUAUAC$^{CC-3'}$ (SEQ ID NO: 6352)
3'-GUAAAAGAUAAACAGAUAAAAUAUG$_{UU-5'}$ (SEQ ID NO: 1916)

βc-3469 Target: 5'-CATTTTCTATTTGTCTATTTTATACAA-3' (SEQ ID NO: 3025)

5'-CCAUUUUCUAUUUGUCUAUUUUAUA$^{AC-3'}$ (SEQ ID NO: 6353)
3'-GGUAAAAGAUAAACAGAUAAAAUAU$_{GU-5'}$ (SEQ ID NO: 1917)

βc-3470 Target: 5'-CCATTTTCTATTTGTCTATTTTATACA-3' (SEQ ID NO: 3026)

5'-GGACCAUUUUCUAUUUGUCUAUUUU$^{CC-3'}$ (SEQ ID NO: 6354)
3'-CCUGGUAAAAGAUAAACAGAUAAAA$_{UA-5'}$ (SEQ ID NO: 1918)

βc-3473 Target: 5'-GGACCATTTTCTATTTGTCTATTTTAT-3' (SEQ ID NO: 3027)

5'-UGGACCAUUUUCUAUUUGUCUAUUU$^{CC-3'}$ (SEQ ID NO: 6355)
3'-ACCUGGUAAAAGAUAAACAGAUAAA$_{AU-5'}$ (SEQ ID NO: 1919)

βc-3474 Target: 5'-TGGACCATTTTCTATTTGTCTATTTTA-3' (SEQ ID NO: 3028)

5'-UUGGACCAUUUUCUAUUUGUCUAUU$^{CC-3'}$ (SEQ ID NO: 6356)
3'-AACCUGGUAAAAGAUAAACAGAUAA$_{AA-5'}$ (SEQ ID NO: 1920)

βc-3475 Target: 5'-TTGGACCATTTTCTATTTGTCTATTTT-3' (SEQ ID NO: 3029)

5'-AAACUAAUUGGACCAUUUUCUAUUU$^{AC-3'}$ (SEQ ID NO: 6357)
3'-UUUGAUUAACCUGGUAAAAGAUAAA$_{CA-5'}$ (SEQ ID NO: 1921)

βc-3482 Target: 5'-AAACTAATTGGACCATTTTCTATTTGT-3' (SEQ ID NO: 3030)

5'-GAAACUAAUUGGACCAUUUUCUAUU$^{CA-3'}$ (SEQ ID NO: 6358)

3'-CUUUGAUUAACCUGGUAAAAGAUAA$_{AC-5'}$ (SEQ ID NO: 1922)

βc-3483 Target: 5'-GAAACTAATTGGACCATTTTCTATTTG-3' (SEQ ID NO: 3031)

5'-GGAAACUAAUUGGACCAUUUUCUAU$^{CC-3'}$ (SEQ ID NO: 6359)
3'-CCUUUGAUUAACCUGGUAAAAGAUA$_{AA-5'}$ (SEQ ID NO: 1923)

βc-3484 Target: 5'-GGAAACTAATTGGACCATTTTCTATTT-3' (SEQ ID NO: 3032)

5'-AGGAAACUAAUUGGACCAUUUUCUA$^{CC-3'}$ (SEQ ID NO: 6360)
3'-UCCUUUGAUUAACCUGGUAAAAGAU$_{AA-5'}$ (SEQ ID NO: 1924)

βc-3485 Target: 5'-AGGAAACTAATTGGACCATTTTCTATT-3' (SEQ ID NO: 3033)

5'-UUAAAAAGGAAACUAAUUGGACCAU$^{CC-3'}$ (SEQ ID NO: 6361)
3'-AAUUUUUCCUUUGAUUAACCUGGUA$_{AA-5'}$ (SEQ ID NO: 1925)

βc-3491 Target: 5'-TTAAAAAGGAAACTAATTGGACCATTT-3' (SEQ ID NO: 3034)

5'-AUUAAAAAGGAAACUAAUUGGACCA$^{CC-3'}$ (SEQ ID NO: 6362)
3'-UAAUUUUUCCUUUGAUUAACCUGGU$_{AA-5'}$ (SEQ ID NO: 1926)

βc-3492 Target: 5'-ATTAAAAAGGAAACTAATTGGACCATT-3' (SEQ ID NO: 3035)

5'-AAGCAUAUUAAAAAGGAAACUAAUU$^{AA-3'}$ (SEQ ID NO: 6363)
3'-UUCGUAUAAUUUUUCCUUUGAUUAA$_{CC-5'}$ (SEQ ID NO: 1927)

βc-3498 Target: 5'-AAGCATATTAAAAAGGAAACTAATTGG-3' (SEQ ID NO: 3036)

5'-UAAGCAUAUUAAAAAGGAAACUAAU$^{CA-3'}$ (SEQ ID NO: 6364)
3'-AUUCGUAUAAUUUUUCCUUUGAUUA$_{AC-5'}$ (SEQ ID NO: 1928)

βc-3499 Target: 5'-TAAGCATATTAAAAAGGAAACTAATTG-3' (SEQ ID NO: 3037)

5'-AUUUUAAGCAUAUUAAAAAGGAAAC$^{CC-3'}$ (SEQ ID NO: 6365)
3'-UAAAAUUCGUAUAAUUUUUCCUUUG$_{AU-5'}$ (SEQ ID NO: 1929)

βc-3503 Target: 5'-ATTTTAAGCATATTAAAAAGGAAACTA-3' (SEQ ID NO: 3038)

5'-CUGCUUAUUUUAAGCAUAUUAAAAA$^{AA-3'}$ (SEQ ID NO: 6366)
3'-GACGAAUAAAAUUCGUAUAAUUUUU$_{CC-5'}$ (SEQ ID NO: 1930)

βc-3509 Target: 5'-CTGCTTATTTTAAGCATATTAAAAAGG-3' (SEQ ID NO: 3039)

5'-CCUGCUUAUUUUAAGCAUAUUAAAA$^{CA-3'}$ (SEQ ID NO: 6367)
3'-GGACGAAUAAAAUUCGUAUAAUUUU$_{UC-5'}$ (SEQ ID NO: 1931)

βc-3510 Target: 5'-CCTGCTTATTTTAAGCATATTAAAAAG-3' (SEQ ID NO: 3040)

5'-GAUCCACCUGCUUAUUUUAAGCAUA$^{CC-3'}$ (SEQ ID NO: 6368)
3'-CUAGGUGGACGAAUAAAAUUCGUAU$_{AA-5'}$ (SEQ ID NO: 1932)

βc-3516 Target: 5'-GATCCACCTGCTTATTTTAAGCATATT-3' (SEQ ID NO: 3041)

5'-CAAAAACAUGAAAUAGAUCCACCUG$^{AC-3'}$ (SEQ ID NO: 6369)
3'-GUUUUUGUACUUUAUCUAGGUGGAC$_{GA-5'}$ (SEQ ID NO: 1933)

βc-3531 Target: 5'-CAAAAACATGAAATAGATCCACCTGCT-3' (SEQ ID NO: 3042)

5'-UCAAAAACAUGAAAUAGAUCCACCU$^{AA-3'}$ (SEQ ID NO: 6370)
3'-AGUUUUUGUACUUUAUCUAGGUGGA$_{CG-5'}$ (SEQ ID NO: 1934)

βc-3532 Target: 5'-TCAAAAACATGAAATAGATCCACCTGC-3' (SEQ ID NO: 3043)

5'-GAUCAAAAACAUGAAAUAGAUCCAC$^{AC-3'}$ (SEQ ID NO: 6371)
3'-CUAGUUUUUGUACUUUAUCUAGGUG$_{GA-5'}$ (SEQ ID NO: 1935)

βc-3534 Target: 5'-GATCAAAAACATGAAATAGATCCACCT-3' (SEQ ID NO: 3044)

5'-UGAUCAAAAACAUGAAAUAGAUCCA$^{AA-3'}$ (SEQ ID NO: 6372)
3'-ACUAGUUUUUGUACUUUAUCUAGGU$_{GG-5'}$ (SEQ ID NO: 1936)

βc-3535 Target: 5'-TGATCAAAAACATGAAATAGATCCACC-3' (SEQ ID NO: 3045)

5'-UUGAUCAAAAACAUGAAAUAGAUCC$^{CA-3'}$ (SEQ ID NO: 6373)
3'-AACUAGUUUUUGUACUUUAUCUAGG$_{UG-5'}$ (SEQ ID NO: 1937)

βc-3536 Target: 5'-TTGATCAAAAACATGAAATAGATCCAC-3' (SEQ ID NO: 3046)

5'-AGUUUUUGAUCAAAAACAUGAAAUA$^{AC-3'}$ (SEQ ID NO: 6374)
3'-UCAAAAACUAGUUUUUGUACUUUAU$_{CU-5'}$ (SEQ ID NO: 1938)

βc-3541 Target: 5'-AGTTTTTGATCAAAAACATGAAATAGA-3' (SEQ ID NO: 3047)

5'-CCAAAUAGUUUUUGAUCAAAAACAU$^{AC-3'}$ (SEQ ID NO: 6375)
3'-GGUUUAUCAAAAACUAGUUUUUGUA$_{CU-5'}$ (SEQ ID NO: 1939)

βc-3547 Target: 5'-CCAAATAGTTTTTGATCAAAAACATGA-3' (SEQ ID NO: 3048)

5'-UAUCCCAAAUAGUUUUUGAUCAAAA$^{CA-3'}$ (SEQ ID NO: 6376)
3'-AUAGGGUUUAUCAAAAACUAGUUUU$_{UG-5'}$ (SEQ ID NO: 1940)

βc-3551 Target: 5'-TATCCCAAATAGTTTTTGATCAAAAAC-3' (SEQ ID NO: 3049)

5'-AUAUCCCAAAUAGUUUUUGAUCAAA$^{CC-3'}$ (SEQ ID NO: 6377)
3'-UAUAGGGUUUAUCAAAAACUAGUUU$_{UU-5'}$ (SEQ ID NO: 1941)

βc-3552 Target: 5'-ATATCCCAAATAGTTTTTGATCAAAAA-3' (SEQ ID NO: 3050)

5'-CAUAUCCCAAAUAGUUUUUGAUCAA$^{CC-3'}$ (SEQ ID NO: 6378)
3'-GUAUAGGGUUUAUCAAAAACUAGUU$_{UU-5'}$ (SEQ ID NO: 1942)

βc-3553 Target: 5'-CATATCCCAAATAGTTTTTGATCAAAA-3' (SEQ ID NO: 3051)

5'-ACAUAUCCCAAAUAGUUUUUGAUCA$^{CC-3'}$ (SEQ ID NO: 6379)
3'-UGUAUAGGGUUUAUCAAAAACUAGU$_{UU-5'}$ (SEQ ID NO: 1943)

βc-3554 Target: 5'-ACATATCCCAAATAGTTTTTGATCAAA-3' (SEQ ID NO: 3052)

5'-CCAUACAUAUCCCAAAUAGUUUUUG$^{CC-3'}$ (SEQ ID NO: 6380)
3'-GGUAUGUAUAGGGUUUAUCAAAAAC$_{UA-5'}$ (SEQ ID NO: 1944)

βc-3558 Target: 5'-CCATACATATCCCAAATAGTTTTTGAT-3' (SEQ ID NO: 3053)

5'-UUACCCUACCCAUACAUAUCCCAAA$^{CC-3'}$ (SEQ ID NO: 6381)
3'-AAUGGGAUGGGUAUGUAUAGGGUUU$_{AU-5'}$ (SEQ ID NO: 1945)

βc-3567 Target: 5'-TTACCCTACCCATACATATCCCAAATA-3' (SEQ ID NO: 3054)

5'-UUUACCCUACCCAUACAUAUCCCAA$^{CC-3'}$ (SEQ ID NO: 6382)
3'-AAAUGGGAUGGGUAUGUAUAGGGUU$_{UA-5'}$ (SEQ ID NO: 1946)

βc-3568 Target: 5'-TTTACCCTACCCATACATATCCCAAAT-3' (SEQ ID NO: 3055)

5'-AUUUACCCUACCCAUACAUAUCCCA$^{CC-3'}$ (SEQ ID NO: 6383)
3'-UAAAUGGGAUGGGUAUGUAUAGGGU$_{UU-5'}$ (SEQ ID NO: 1947)

βc-3569 Target: 5'-ATTTACCCTACCCATACATATCCCAAA-3' (SEQ ID NO: 3056)

5'-ACACCUCUUACUGAUUUACCCUACC$^{AC-3'}$ (SEQ ID NO: 6384)
3'-UGUGGAGAAUGACUAAAUGGGAUGG$_{GU-5'}$ (SEQ ID NO: 1948)

βc-3582 Target: 5'-ACACCTCTTACTGATTTACCCTACCCA-3' (SEQ ID NO: 3057)

5'-UAACACCUCUUACUGAUUUACCCUA$^{AA-3'}$ (SEQ ID NO: 6385)
3'-AUUGUGGAGAAUGACUAAAUGGGAU$_{GG-5'}$ (SEQ ID NO: 1949)

βc-3584 Target: 5'-TAACACCTCTTACTGATTTACCCTACC-3' (SEQ ID NO: 3058)

5'-AUAACACCUCUUACUGAUUUACCCU$^{CA-3'}$ (SEQ ID NO: 6386)
3'-UAUUGUGGAGAAUGACUAAAUGGGA$_{UG-5'}$ (SEQ ID NO: 1950)

βc-3585 Target: 5'-ATAACACCTCTTACTGATTTACCCTAC-3' (SEQ ID NO: 3059)

5'-AAUAACACCUCUUACUGAUUUACCC$^{CC-3'}$ (SEQ ID NO: 6387)
3'-UUAUUGUGGAGAAUGACUAAAUGGG$_{AU-5'}$ (SEQ ID NO: 1951)

βc-3586 Target: 5'-AATAACACCTCTTACTGATTTACCCTA-3' (SEQ ID NO: 3060)

5'-AAAUAACACCUCUUACUGAUUUACC$^{AC-3'}$ (SEQ ID NO: 6388)
3'-UUUAUUGUGGAGAAUGACUAAAUGG$_{GA-5'}$ (SEQ ID NO: 1952)

βc-3587 Target: 5'-AAATAACACCTCTTACTGATTTACCCT-3' (SEQ ID NO: 3061)

5'-CAAAUAACACCUCUUACUGAUUUAC$^{AA-3'}$ (SEQ ID NO: 6389)
3'-GUUUAUUGUGGAGAAUGACUAAAUG$_{GG-5'}$ (SEQ ID NO: 1953)

βc-3588 Target: 5'-CAAATAACACCTCTTACTGATTTACCC-3' (SEQ ID NO: 3062)

5'-AGGUUCCAAAUAACACCUCUUACUG$^{CC-3'}$ (SEQ ID NO: 6390)

3'-UCCAAGGUUUAUUGUGGAGAAUGAC$_{U_{A-5'}}$ (SEQ ID NO: 1954)

βc-3594 Target: 5'-AGGTTCCAAATAACACCTCTTACTGAT-3' (SEQ ID NO: 3063)

5'-AAAACAAGGUUCCAAAUAACACCUC$^{C_{C-3'}}$ (SEQ ID NO: 6391)
3'-UUUUGUUCCAAGGUUUAUUGUGGAG$_{A_{A-5'}}$ (SEQ ID NO: 1955)

βc-3600 Target: 5'-AAAACAAGGTTCCAAATAACACCTCTT-3' (SEQ ID NO: 3064)

5'-CAAAACAAGGUUCCAAAUAACACCU$^{A_{C-3'}}$ (SEQ ID NO: 6392)
3'-GUUUUGUUCCAAGGUUUAUUGUGGA$_{G_{A-5'}}$ (SEQ ID NO: 1956)

βc-3601 Target: 5'-CAAAACAAGGTTCCAAATAACACCTCT-3' (SEQ ID NO: 3065)

5'-CCAAAACAAGGUUCCAAAUAACACC$^{C_{A-3'}}$ (SEQ ID NO: 6393)
3'-GGUUUUGUUCCAAGGUUUAUUGUGG$_{A_{G-5'}}$ (SEQ ID NO: 1957)

βc-3602 Target: 5'-CCAAAACAAGGTTCCAAATAACACCTC-3' (SEQ ID NO: 3066)

5'-ACUGUCCAAAACAAGGUUCCAAAUA$^{C_{A-3'}}$ (SEQ ID NO: 6394)
3'-UGACAGGUUUUGUUCCAAGGUUUAU$_{U_{G-5'}}$ (SEQ ID NO: 1958)

βc-3607 Target: 5'-ACTGTCCAAAACAAGGTTCCAAATAAC-3' (SEQ ID NO: 3067)

5'-GUAAACUGUCCAAAACAAGGUUCCA$^{C_{C-3'}}$ (SEQ ID NO: 6395)
3'-CAUUUGACAGGUUUUGUUCCAAGGU$_{U_{U-5'}}$ (SEQ ID NO: 1959)

βc-3611 Target: 5'-GTAAACTGTCCAAAACAAGGTTCCAAA-3' (SEQ ID NO: 3068)

5'-GGUAAACUGUCCAAAACAAGGUUCC$^{C_{C-3'}}$ (SEQ ID NO: 6396)
3'-CCAUUUGACAGGUUUUGUUCCAAGG$_{U_{U-5'}}$ (SEQ ID NO: 1960)

βc-3612 Target: 5'-GGTAAACTGTCCAAAACAAGGTTCCAA-3' (SEQ ID NO: 3069)

5'-AGGCAACUGGUAAACUGUCCAAAAC$^{C_{C-3'}}$ (SEQ ID NO: 6397)
3'-UCCGUUGACCAUUUGACAGGUUUUG$_{U_{U-5'}}$ (SEQ ID NO: 1961)

βc-3620 Target: 5'-AGGCAACTGGTAAACTGTCCAAAACAA-3' (SEQ ID NO: 3070)

5'-GGGAUAAAAGGCAACUGGUAAACUG$^{C_{A-3'}}$ (SEQ ID NO: 6398)
3'-CCCUAUUUUCCGUUGACCAUUUGAC$_{A_{G-5'}}$ (SEQ ID NO: 1962)

βc-3628 Target: 5'-GGGATAAAAGGCAACTGGTAAACTGTC-3' (SEQ ID NO: 3071)

5'-UGGGAUAAAAGGCAACUGGUAAACU$^{A_{C-3'}}$ (SEQ ID NO: 6399)
3'-ACCCUAUUUUCCGUUGACCAUUUGA$_{C_{A-5'}}$ (SEQ ID NO: 1963)

βc-3629 Target: 5'-TGGGATAAAAGGCAACTGGTAAACTGT-3' (SEQ ID NO: 3072)

5'-ACAACUUUGGGAUAAAAGGCAACUG$^{A_{C-3'}}$ (SEQ ID NO: 6400)
3'-UGUUGAAACCCUAUUUUCCGUUGAC$_{C_{A-5'}}$ (SEQ ID NO: 1964)

βc-3636 Target: 5'-ACAACTTTGGGATAAAAGGCAACTGGT-3' (SEQ ID NO: 3073)

5'-CAACAACUUUGGGAUAAAAGGCAAC^{C}A-3' (SEQ ID NO: 6401)
3'-GUUGUUGAAACCCUAUUUUCCGUUG$_{A}$$_{C-5'}$ (SEQ ID NO: 1965)

βc-3638 Target: 5'-CAACAACTTTGGGATAAAAGGCAACTG-3' (SEQ ID NO: 3074)

5'-GGUUACAACAACUUUGGGAUAAAAG^{A}A-3' (SEQ ID NO: 6402)
3'-CCAAUGUUGUUGAAACCCUAUUUUC$_{G}$$_{G-5'}$ (SEQ ID NO: 1966)

βc-3643 Target: 5'-GGTTACAACAACTTTGGGATAAAAGGC-3' (SEQ ID NO: 3075)

5'-AGGUUACAACAACUUUGGGAUAAAA^{A}A-3' (SEQ ID NO: 6403)
3'-UCCAAUGUUGUUGAAACCCUAUUUU$_{C}$$_{C-5'}$ (SEQ ID NO: 1967)

βc-3644 Target: 5'-AGGTTACAACAACTTTGGGATAAAAGG-3' (SEQ ID NO: 3076)

5'-CAGGUUACAACAACUUUGGGAUAAA^{C}A-3' (SEQ ID NO: 6404)
3'-GUCCAAUGUUGUUGAAACCCUAUUU$_{U}$$_{C-5'}$ (SEQ ID NO: 1968)

βc-3645 Target: 5'-CAGGTTACAACAACTTTGGGATAAAAG-3' (SEQ ID NO: 3077)

5'-UAUCACAGCAGGUUACAACAACUUU^{A}A-3' (SEQ ID NO: 6405)
3'-AUAGUGUCGUCCAAUGUUGUUGAAA$_{C}$$_{C-5'}$ (SEQ ID NO: 1969)

βc-3653 Target: 5'-TATCACAGCAGGTTACAACAACTTTGG-3' (SEQ ID NO: 3078)

5'-GUAUCACAGCAGGUUACAACAACUU^{C}A-3' (SEQ ID NO: 6406)
3'-CAUAGUGUCGUCCAAUGUUGUUGAA$_{A}$$_{C-5'}$ (SEQ ID NO: 1970)

βc-3654 Target: 5'-GTATCACAGCAGGTTACAACAACTTTG-3' (SEQ ID NO: 3079)

5'-UCGUAUCACAGCAGGUUACAACAAC^{C}C-3' (SEQ ID NO: 6407)
3'-AGCAUAGUGUCGUCCAAUGUUGUUG$_{A}$$_{A-5'}$ (SEQ ID NO: 1971)

βc-3656 Target: 5'-TCGTATCACAGCAGGTTACAACAACTT-3' (SEQ ID NO: 3080)

5'-UUUCUCUUGAAGCAUCGUAUCACAG^{A}C-3' (SEQ ID NO: 6408)
3'-AAAGAGAACUUCGUAGCAUAGUGUC$_{G}$$_{U-5'}$ (SEQ ID NO: 1972)

βc-3670 Target: 5'-TTTCTCTTGAAGCATCGTATCACAGCA-3' (SEQ ID NO: 3081)

5'-UUUUCUCUUGAAGCAUCGUAUCACA^{A}A-3' (SEQ ID NO: 6409)
3'-AAAAGAGAACUUCGUAGCAUAGUGU$_{C}$$_{G-5'}$ (SEQ ID NO: 1973)

βc-3671 Target: 5'-TTTTCTCTTGAAGCATCGTATCACAGC-3' (SEQ ID NO: 3082)

5'-CAUUUUCUCUUGAAGCAUCGUAUCA^{A}C-3' (SEQ ID NO: 6410)
3'-GUAAAAGAGAACUUCGUAGCAUAGU$_{G}$$_{U-5'}$ (SEQ ID NO: 1974)

βc-3673 Target: 5'-CATTTTCTCTTGAAGCATCGTATCACA-3' (SEQ ID NO: 3083)

5'-UUUUUUAUAACCGCAUUUUCUCUUG^{C}C-3' (SEQ ID NO: 6411)
3'-AAAAAAUAUUGGCGUAAAAGAGAAC$_{U}$$_{U-5'}$ (SEQ ID NO: 1975)

βc-3686 Target: 5'-TTTTTTATAACCGCATTTTCTCTTGAA-3' (SEQ ID NO: 3084)

5'-AUUUUUUAUAACCGCAUUUUCUCUU$^{AC-3'}$ (SEQ ID NO: 6412)
3'-UAAAAAAUAUUGGCGUAAAAGAGAA$_{CU-5'}$ (SEQ ID NO: 1976)

βc-3687 Target: 5'-ATTTTTTATAACCGCATTTTCTCTTGA-3' (SEQ ID NO: 3085)

5'-CAUUUUUUAUAACCGCAUUUUCUCU$^{CA-3'}$ (SEQ ID NO: 6413)
3'-GUAAAAAAUAUUGGCGUAAAAGAGA$_{AC-5'}$ (SEQ ID NO: 1977)

βc-3688 Target: 5'-CATTTTTTATAACCGCATTTTCTCTTG-3' (SEQ ID NO: 3086)

5'-CCAUUUUUUAUAACCGCAUUUUCUC$^{CC-3'}$ (SEQ ID NO: 6414)
3'-GGUAAAAAAUAUUGGCGUAAAAGAG$_{AA-5'}$ (SEQ ID NO: 1978)

βc-3689 Target: 5'-CCATTTTTTATAACCGCATTTTCTCTT-3' (SEQ ID NO: 3087)

5'-CUGAACCAUUUUUUAUAACCGCAUU$^{CC-3'}$ (SEQ ID NO: 6415)
3'-GACUUGGUAAAAAAUAUUGGCGUAA$_{AA-5'}$ (SEQ ID NO: 1979)

βc-3694 Target: 5'-CTGAACCATTTTTTATAACCGCATTTT-3' (SEQ ID NO: 3088)

5'-UAAUUCUGAACCAUUUUUUAUAACC$^{AA-3'}$ (SEQ ID NO: 6416)
3'-AUUAAGACUUGGUAAAAAAUAUUGG$_{CG-5'}$ (SEQ ID NO: 1980)

βc-3699 Target: 5'-TAATTCTGAACCATTTTTTATAACCGC-3' (SEQ ID NO: 3089)

5'-UUAAUUCUGAACCAUUUUUUAUAAC$^{AA-3'}$ (SEQ ID NO: 6417)
3'-AAUUAAGACUUGGUAAAAAAUAUUG$_{GC-5'}$ (SEQ ID NO: 1981)

βc-3700 Target: 5'-TTAATTCTGAACCATTTTTTATAACCG-3' (SEQ ID NO: 3090)

5'-UUUAAUUCUGAACCAUUUUUUAUAA$^{AA-3'}$ (SEQ ID NO: 6418)
3'-AAAUUAAGACUUGGUAAAAAAUAUU$_{GG-5'}$ (SEQ ID NO: 1982)

βc-3701 Target: 5'-TTTAATTCTGAACCATTTTTTATAACC-3' (SEQ ID NO: 3091)

5'-GUUUAAUUCUGAACCAUUUUUUAUA$^{CA-3'}$ (SEQ ID NO: 6419)
3'-CAAAUUAAGACUUGGUAAAAAAUAU$_{UG-5'}$ (SEQ ID NO: 1983)

βc-3702 Target: 5'-GTTTAATTCTGAACCATTTTTTATAAC-3' (SEQ ID NO: 3092)

5'-AGUUUAAUUCUGAACCAUUUUUUAU$^{CC-3'}$ (SEQ ID NO: 6420)
3'-UCAAAUUAAGACUUGGUAAAAAAUA$_{UU-5'}$ (SEQ ID NO: 1984)

βc-3703 Target: 5'-AGTTTAATTCTGAACCATTTTTTATAA-3' (SEQ ID NO: 3093)

5'-AAGUUUAAUUCUGAACCAUUUUUUA$^{CC-3'}$ (SEQ ID NO: 6421)
3'-UUCAAAUUAAGACUUGGUAAAAAAU$_{AU-5'}$ (SEQ ID NO: 1985)

βc-3704 Target: 5'-AAGTTTAATTCTGAACCATTTTTTATA-3' (SEQ ID NO: 3094)

5'-AUUAAAAGUUUAAUUCUGAACCAUU$^{CC-3'}$ (SEQ ID NO: 6422)

3'-UAAUUUUCAAAUUAAGACUUGGUAA$_{A_{A-5'}}$ (SEQ ID NO: 1986)

βc-3709 Target: 5'-ATTAAAAGTTTAATTCTGAACCATTTT-3' (SEQ ID NO: 3095)

5'-AAUUAAAAGUUUAAUUCUGAACCAU$^{C_{C-3'}}$ (SEQ ID NO: 6423)
3'-UUAAUUUUCAAAUUAAGACUUGGUA$_{A_{A-5'}}$ (SEQ ID NO: 1987)

βc-3710 Target: 5'-AATTAAAAGTTTAATTCTGAACCATTT-3' (SEQ ID NO: 3096)

5'-UGAAUUAAAAGUUUAAUUCUGAACC$^{C_{C-3'}}$ (SEQ ID NO: 6424)
3'-ACUUAAUUUUCAAAUUAAGACUUGG$_{U_{A-5'}}$ (SEQ ID NO: 1988)

βc-3712 Target: 5'-TGAATTAAAAGTTTAATTCTGAACC-3' (SEQ ID NO: 3097)

5'-CAAUACAGCUAAAGGAUGAUUUACA$^{A_{A-3'}}$ (SEQ ID NO: 6425)
3'-GUUAUGUCGAUUUCCUACUAAAUGU$_{C_{C-5'}}$ (SEQ ID NO: 1989)

βc-2634t2 Target: 5'-CAATACAGCTAAAGGATGATTTACAGG-3' (SEQ ID NO: 3098)

5'-ACAAUACAGCUAAAGGAUGAUUUAC$^{C_{A-3'}}$ (SEQ ID NO: 6426)
3'-UGUUAUGUCGAUUUCCUACUAAAUG$_{U_{C-5'}}$ (SEQ ID NO: 1990)

βc-2635t2 Target: 5'-ACAATACAGCTAAAGGATGATTTACAG-3' (SEQ ID NO: 3099)

5'-AGACAAUACAGCUAAAGGAUGAUUU$^{C_{A-3'}}$ (SEQ ID NO: 6427)
3'-UCUGUUAUGUCGAUUUCCUACUAAA$_{U_{G-5'}}$ (SEQ ID NO: 1991)

βc-2637t2 Target: 5'-AGACAATACAGCTAAAGGATGATTTAC-3' (SEQ ID NO: 3100)

5'-GUUACUCCUAAAGGAUGAUUUACAG$^{A_{C-3'}}$ (SEQ ID NO: 6428)
3'-CAAUGAGGAUUUCCUACUAAAUGUC$_{C_{A-5'}}$ (SEQ ID NO: 1992)

βc-2633t3 Target: 5'-GTTACTCCTAAAGGATGATTTACAGGT-3' (SEQ ID NO: 3101)

5'-UGUUACUCCUAAAGGAUGAUUUACA$^{A_{A-3'}}$ (SEQ ID NO: 6429)
3'-ACAAUGAGGAUUUCCUACUAAAUGU$_{C_{C-5'}}$ (SEQ ID NO: 1993)

βc-2634t3 Target: 5'-TGTTACTCCTAAAGGATGATTTACAGG-3' (SEQ ID NO: 3102)

5'-UUGUUACUCCUAAAGGAUGAUUUAC$^{C_{A-3'}}$ (SEQ ID NO: 6430)
3'-AACAAUGAGGAUUUCCUACUAAAUG$_{U_{C-5'}}$ (SEQ ID NO: 1994)

βc-2635t3 Target: 5'-TTGTTACTCCTAAAGGATGATTTACAG-3' (SEQ ID NO: 3103)

5'-AUUGUUACUCCUAAAGGAUGAUUUA$^{A_{C-3'}}$ (SEQ ID NO: 6431)
3'-UAACAAUGAGGAUUUCCUACUAAAU$_{G_{U-5'}}$ (SEQ ID NO: 1995)

βc-2636t3 Target: 5'-ATTGTTACTCCTAAAGGATGATTTACA-3' (SEQ ID NO: 3104)

5'-GGAUUCCAGAAUCCAAGUAAGACUG$^{A_{C-3'}}$ (SEQ ID NO: 6432)
3'-CCUAAGGUCUUAGGUUCAUUCUGAC$_{G_{A-5'}}$ (SEQ ID NO: 1996)

βc-m318 Target: 5'-GGATTCCAGAATCCAAGTAAGACTGCT-3' (SEQ ID NO: 3105)

5'-CUUGCUCCCAUUCAUAAAGGACUUG$^{AA-3'}$ (SEQ ID NO: 6433)
3'-GAACGAGGGUAAGUAUUUCCUGAAC$_{C-5'}$ (SEQ ID NO: 1997)

βc-m417 Target: 5'-CTTGCTCCCATTCATAAAGGACTTGGG-3' (SEQ ID NO: 3106)

5'-CGUCAAUAUCAGCUACUUGCUCUUG$^{AA-3'}$ (SEQ ID NO: 6434)
3'-GCAGUUAUAGUCGAUGAACGAGAAC$_{G-5'}$ (SEQ ID NO: 1998)

βc-m462 Target: 5'-CGTCAATATCAGCTACTTGCTCTTGCG-3' (SEQ ID NO: 3107)

5'-CCGUCAAUAUCAGCUACUUGCUCUU$^{AA-3'}$ (SEQ ID NO: 6435)
3'-GGCAGUUAUAGUCGAUGAACGAGAA$_{C-5'}$ (SEQ ID NO: 1999)

βc-m463 Target: 5'-CCGTCAATATCAGCTACTTGCTCTTGC-3' (SEQ ID NO: 3108)

5'-ACUGCCCGUCAAUAUCAGCUACUUG$^{AC-3'}$ (SEQ ID NO: 6436)
3'-UGACGGGCAGUUAUAGUCGAUGAAC$_{G-5'}$ (SEQ ID NO: 2000)

βc-m468 Target: 5'-ACTGCCCGTCAATATCAGCTACTTGCT-3' (SEQ ID NO: 3109)

5'-UGUUUCAACAUCUGUGAUGGUUCAG$^{AA-3'}$ (SEQ ID NO: 6437)
3'-ACAAAGUUGUAGACACUACCAAGUC$_{G-5'}$ (SEQ ID NO: 2001)

βc-m613 Target: 5'-TGTTTCAACATCTGTGATGGTTCAGCC-3' (SEQ ID NO: 3110)

5'-AUGUUUCAACAUCUGUGAUGGUUCA$^{AA-3'}$ (SEQ ID NO: 6438)
3'-UACAAAGUUGUAGACACUACCAAGU$_{C-5'}$ (SEQ ID NO: 2002)

βc-m614 Target: 5'-ATGTTTCAACATCTGTGATGGTTCAGC-3' (SEQ ID NO: 3111)

5'-UGACAACUGCAUGUUUCAACAUCUG$^{CA-3'}$ (SEQ ID NO: 6439)
3'-ACUGUUGACGUACAAAGUUGUAGAC$_{A-5'}$ (SEQ ID NO: 2003)

βc-m624 Target: 5'-TGACAACTGCATGTTTCAACATCTGTG-3' (SEQ ID NO: 3112)

5'-AUUGACAACUGCAUGUUUCAACAUC$^{CA-3'}$ (SEQ ID NO: 6440)
3'-UAACUGUUGACGUACAAAGUUGUAG$_{A-5'}$ (SEQ ID NO: 2004)

βc-m626 Target: 5'-ATTGACAACTGCATGTTTCAACATCTG-3' (SEQ ID NO: 3113)

5'-UCAAAUUGACAACUGCAUGUUUCAA$^{AC-3'}$ (SEQ ID NO: 6441)
3'-AGUUUAACUGUUGACGUACAAAGUU$_{G-5'}$ (SEQ ID NO: 2005)

βc-m630 Target: 5'-TCAAATTGACAACTGCATGTTTCAACA-3' (SEQ ID NO: 3114)

5'-AGUUAAUCAAAUUGACAACUGCAUG$^{CC-3'}$ (SEQ ID NO: 6442)
3'-UCAAUUAGUUUAACUGUUGACGUAC$_{A-5'}$ (SEQ ID NO: 2006)

βc-m636 Target: 5'-AGTTAATCAAATTGACAACTGCATGTT-3' (SEQ ID NO: 3115)

5'-CCUGAUAGUUAAUCAAAUUGACAAC$^{CA-3'}$ (SEQ ID NO: 6443)
3'-GGACUAUCAAUUAGUUUAACUGUUG$_{A-5'}$ (SEQ ID NO: 2007)

βc-m642 Target: 5'-CCTGATAGTTAATCAAATTGACAACTG-3' (SEQ ID NO: 3116)

5'-CGUCAUCCUGAUAGUUAAUCAAAUU$^{AC-3'}$ (SEQ ID NO: 6444)
3'-GCAGUAGGACUAUCAAUUAGUUUAA$_{CU-5'}$ (SEQ ID NO: 2008)

βc-m648 Target: 5'-CGTCATCCTGATAGTTAATCAAATTGA-3' (SEQ ID NO: 3117)

5'-GCGUCAUCCUGAUAGUUAAUCAAAU$^{CA-3'}$ (SEQ ID NO: 6445)
3'-CGCAGUAGGACUAUCAAUUAGUUUA$_{AC-5'}$ (SEQ ID NO: 2009)

βc-m649 Target: 5'-GCGTCATCCTGATAGTTAATCAAATTG-3' (SEQ ID NO: 3118)

5'-CCUCAUCGUUUAGCAGUUUUGUCAG$^{AC-3'}$ (SEQ ID NO: 6446)
3'-GGAGUAGCAAAUCGUCAAAACAGUC$_{GA-5'}$ (SEQ ID NO: 2010)

βc-m702 Target: 5'-CCTCATCGTTTAGCAGTTTTGTCAGCT-3' (SEQ ID NO: 3119)

5'-CUGGUCCUCAUCGUUUAGCAGUUUU$^{AC-3'}$ (SEQ ID NO: 6447)
3'-GACCAGGAGUAGCAAAUCGUCAAAA$_{CA-5'}$ (SEQ ID NO: 2011)

βc-m707 Target: 5'-CTGGTCCTCATCGTTTAGCAGTTTTGT-3' (SEQ ID NO: 3120)

5'-CAUAACAGCAGCUUUAUUAACUACC$^{CA-3'}$ (SEQ ID NO: 6448)
3'-GUAUUGUCGUCGAAAUAAUUGAUGG$_{UG-5'}$ (SEQ ID NO: 2012)

βc-m734 Target: 5'-CATAACAGCAGCTTTATTAACTACCAC-3' (SEQ ID NO: 3121)

5'-CCAUAACAGCAGCUUUAUUAACUAC$^{AC-3'}$ (SEQ ID NO: 6449)
3'-GGUAUUGUCGUCGAAAUAAUUGAUG$_{GU-5'}$ (SEQ ID NO: 2013)

βc-m735 Target: 5'-CCATAACAGCAGCTTTATTAACTACCA-3' (SEQ ID NO: 3122)

5'-GGACCAUAACAGCAGCUUUAUUAAC$^{CC-3'}$ (SEQ ID NO: 6450)
3'-CCUGGUAUUGUCGUCGAAAUAAUUG$_{AU-5'}$ (SEQ ID NO: 2014)

βc-m738 Target: 5'-GGACCATAACAGCAGCTTTATTAACTA-3' (SEQ ID NO: 3123)

5'-UGGACCAUAACAGCAGCUUUAUUAA$^{AC-3'}$ (SEQ ID NO: 6451)
3'-ACCUGGUAUUGUCGUCGAAAUAAUU$_{GA-5'}$ (SEQ ID NO: 2015)

βc-m739 Target: 5'-TGGACCATAACAGCAGCTTTATTAACT-3' (SEQ ID NO: 3124)

5'-CUGUCUCUACAUCAUUUGUAUUCUG$^{AC-3'}$ (SEQ ID NO: 6452)
3'-GACAGAGAUGUAGUAAACAUAAGAC$_{GU-5'}$ (SEQ ID NO: 2016)

βc-m843 Target: 5'-CTGTCTCTACATCATTTGTATTCTGCA-3' (SEQ ID NO: 3125)

5'-GCUGUCUCUACAUCAUUUGUAUUCU$^{AA-3'}$ (SEQ ID NO: 6453)
3'-CGACAGAGAUGUAGUAAACAUAAGA$_{CG-5'}$ (SEQ ID NO: 2017)

βc-m844 Target: 5'-GCTGTCTCTACATCATTTGTATTCTGC-3' (SEQ ID NO: 3126)

5'-GCAACCAUUUUCUGCAGUCCACCAG$^{AC-3'}$ (SEQ ID NO: 6454)

3'-CGUUGGUAAAAGACGUCAGGUGGUC$_{G_{A-5'}}$ (SEQ ID NO: 2018)

βc-m1063 Target: 5'-GCAACCATTTTCTGCAGTCCACCAGCT-3' (SEQ ID NO: 3127)

5'-AAGCAACCAUUUUCUGCAGUCCACC$^{C_{A-3'}}$ (SEQ ID NO: 6455)
3'-UUCGUUGGUAAAAGACGUCAGGUGG$_{U_{C-5'}}$ (SEQ ID NO: 2019)

βc-m1065 Target: 5'-AAGCAACCATTTTCTGCAGTCCACCAG-3' (SEQ ID NO: 3128)

5'-UUGUUUUGUUGAGCAAAGCAACCAU$^{C_{C-3'}}$ (SEQ ID NO: 6456)
3'-AACAAAACAACUCGUUUCGUUGGUA$_{A_{A-5'}}$ (SEQ ID NO: 2020)

βc-m1080 Target: 5'-TTGTTTTGTTGAGCAAAGCAACCATTT-3' (SEQ ID NO: 3129)

5'-UUUGUUUUGUUGAGCAAAGCAACCA$^{C_{C-3'}}$ (SEQ ID NO: 6457)
3'-AAACAAAACAACUCGUUUCGUUGGU$_{A_{A-5'}}$ (SEQ ID NO: 2021)

βc-m1081 Target: 5'-TTTGTTTTGTTGAGCAAAGCAACCATT-3' (SEQ ID NO: 3130)

5'-UAGCCAAGAAUUUCACGUUUGUUUU$^{A_{C-3'}}$ (SEQ ID NO: 6458)
3'-AUCGGUUCUUAAAGUGCAAACAAAA$_{C_{A-5'}}$ (SEQ ID NO: 2022)

βc-m1098 Target: 5'-TAGCCAAGAATTTCACGTTTGTTTTGT-3' (SEQ ID NO: 3131)

5'-CUUGAUUGCCAUAAGCUAAGAUCUG$^{C_{C-3'}}$ (SEQ ID NO: 6459)
3'-GAACUAACGGUAUUCGAUUCUAGAC$_{U_{U-5'}}$ (SEQ ID NO: 2023)

βc-m1140 Target: 5'-CTTGATTGCCATAAGCTAAGATCTGAA-3' (SEQ ID NO: 3132)

5'-GCUCUCUUGAUUGCCAUAAGCUAAG$^{C_{C-3'}}$ (SEQ ID NO: 6460)
3'-CGAGAGAACUAACGGUAUUCGAUUC$_{U_{A-5'}}$ (SEQ ID NO: 2024)

βc-m1145 Target: 5'-GCTCTCTTGATTGCCATAAGCTAAGAT-3' (SEQ ID NO: 3133)

5'-CUUCUCAUAAGUGUAGGUCCUCAUU$^{C_{C-3'}}$ (SEQ ID NO: 6461)
3'-GAAGAGUAUUCACAUCCAGGAGUAA$_{U_{A-5'}}$ (SEQ ID NO: 2025)

βc-m1217 Target: 5'-CTTCTCATAAGTGTAGGTCCTCATTAT-3' (SEQ ID NO: 3134)

5'-GCUUCUCAUAAGUGUAGGUCCUCAU$^{C_{C-3'}}$ (SEQ ID NO: 6462)
3'-CGAAGAGUAUUCACAUCCAGGAGUA$_{A_{U-5'}}$ (SEQ ID NO: 2026)

βc-m1218 Target: 5'-GCTTCTCATAAGTGTAGGTCCTCATTA-3' (SEQ ID NO: 3135)

5'-AAGCUUCUCAUAAGUGUAGGUCCUC$^{C_{C-3'}}$ (SEQ ID NO: 6463)
3'-UUCGAAGAGUAUUCACAUCCAGGAG$_{U_{A-5'}}$ (SEQ ID NO: 2027)

βc-m1220 Target: 5'-AAGCTTCTCATAAGTGTAGGTCCTC-3' (SEQ ID NO: 3136)

5'-GAAGCUUCUCAUAAGUGUAGGUCCU$^{A_{C-3'}}$ (SEQ ID NO: 6464)
3'-CUUCGAAGAGUAUUCACAUCCAGGA$_{G_{U-5'}}$ (SEQ ID NO: 2028)

βc-m1221 Target: 5'-GAAGCTTCTCATAAGTGTAGGTCCTCA-3' (SEQ ID NO: 3137)

5'-GAGUCCAAAGACAGUUUUGAACAAG^{C}$_{A-3'}$ (SEQ ID NO: 6465)
3'-CUCAGGUUUCUGUCAAAACUUGUUC$_{A}$$_{G-5'}$ (SEQ ID NO: 2029)

βc-m1365 Target: 5'-GAGTCCAAAGACAGTTTTGAACAAGTC-3' (SEQ ID NO: 3138)

5'-AGAGUCCAAAGACAGUUUUGAACAA^{A}$_{C-3'}$ (SEQ ID NO: 6466)
3'-UCUCAGGUUUCUGUCAAAACUUGUU$_{C}$$_{A-5'}$ (SEQ ID NO: 2030)

βc-m1366 Target: 5'-AGAGTCCAAAGACAGTTTTGAACAAGT-3' (SEQ ID NO: 3139)

5'-CCACAUUUAUAUCAUCGGAACCCAG^{C}$_{C-3'}$ (SEQ ID NO: 6467)
3'-GGUGUAAAUAUAGUAGCCUUGGGUC$_{U}$$_{U-5'}$ (SEQ ID NO: 2031)

βc-m1461 Target: 5'-CCACATTTATATCATCGGAACCCAGAA-3' (SEQ ID NO: 3140)

5'-UGACCACAUUUAUAUCAUCGGAACC^{A}$_{C-3'}$ (SEQ ID NO: 6468)
3'-ACUGGUGUAAAUAUAGUAGCCUUGG$_{G}$$_{U-5'}$ (SEQ ID NO: 2032)

βc-m1464 Target: 5'-TGACCACATTTATATCATCGGAACCCA-3' (SEQ ID NO: 3141)

5'-CUGCACAGGUGACCACAUUUAUAUC^{C}$_{C-3'}$ (SEQ ID NO: 6469)
3'-GACGUGUCCACUGGUGUAAAUAUAG$_{U}$$_{A-5'}$ (SEQ ID NO: 2033)

βc-m1473 Target: 5'-CTGCACAGGTGACCACATTTATATC-3' (SEQ ID NO: 3142)

5'-GCUGCACAGGUGACCACAUUUAUAU^{A}$_{C-3'}$ (SEQ ID NO: 6470)
3'-CGACGUGUCCACUGGUGUAAAUAUA$_{G}$$_{U-5'}$ (SEQ ID NO: 2034)

βc-m1474 Target: 5'-GCTGCACAGGTGACCACATTTATATCA-3' (SEQ ID NO: 3143)

5'-UUGUAAUUAUUGCAAGUGAGGUUAG^{C}$_{A-3'}$ (SEQ ID NO: 6471)
3'-AACAUUAAUAACGUUCACUCCAAUC$_{U}$$_{C-5'}$ (SEQ ID NO: 2035)

βc-m1510 Target: 5'-TTGTAATTATTGCAAGTGAGGTTAGAG-3' (SEQ ID NO: 3144)

5'-CAUCAUCUUGUUUUUGUAAUUAUUG^{A}$_{C-3'}$ (SEQ ID NO: 6472)
3'-GUAGUAGAACAAAAACAUUAAUAAC$_{G}$$_{U-5'}$ (SEQ ID NO: 2036)

βc-m1523 Target: 5'-CATCATCTTGTTTTTGTAATTATTGCA-3' (SEQ ID NO: 3145)

5'-CCAUCAUCUUGUUUUUGUAAUUAUU^{A}$_{A-3'}$ (SEQ ID NO: 6473)
3'-GGUAGUAGAACAAAAACAUUAAUAA$_{C}$$_{G-5'}$ (SEQ ID NO: 2037)

βc-m1524 Target: 5'-CCATCATCTTGTTTTTGTAATTATTGC-3' (SEQ ID NO: 3146)

5'-ACACCAUCAUCUUGUUUUUGUAAUU^{C}$_{C-3'}$ (SEQ ID NO: 6474)
3'-UGUGGUAGUAGAACAAAAACAUUAA$_{U}$$_{A-5'}$ (SEQ ID NO: 2038)

βc-m1527 Target: 5'-ACACCATCATCTTGTTTTTGTAATTAT-3' (SEQ ID NO: 3147)

5'-UUGGCACACCAUCAUCUUGUUUUUG^{C}$_{C-3'}$ (SEQ ID NO: 6475)
3'-AACCGUGUGGUAGUAGAACAAAAAC$_{A}$$_{U-5'}$ (SEQ ID NO: 2039)

βc-m1532 Target: 5'-TTGGCACACCATCATCTTGTTTTTGTA-3' (SEQ ID NO: 3148)

5'-UCAAUCCAACAGUUGCCUUUAUCAG^{C}$^{A-3'}$ (SEQ ID NO: 6476)
3'-AGUUAGGUUGUCAACGGAAAUAGUC$_{U}$$_{C-5'}$ (SEQ ID NO: 2040)

βc-m1752 Target: 5'-TCAATCCAACAGTTGCCTTTATCAGAG-3' (SEQ ID NO: 3149)

5'-UCGAAUCAAUCCAACAGUUGCCUUU^{C}$^{C-3'}$ (SEQ ID NO: 6477)
3'-AGCUUAGUUAGGUUGUCAACGGAAA$_{U}$$_{A-5'}$ (SEQ ID NO: 2041)

βc-m1757 Target: 5'-TCGAATCAATCCAACAGTTGCCTTTAT-3' (SEQ ID NO: 3150)

5'-GCUGAACUAGUCGUGGAAUAGCACC^{A}$^{C-3'}$ (SEQ ID NO: 6478)
3'-CGACUUGAUCAGCACCUUAUCGUGG$_{G}$$_{A-5'}$ (SEQ ID NO: 2042)

βc-m1827 Target: 5'-GCTGAACTAGTCGTGGAATAGCACCCT-3' (SEQ ID NO: 3151)

5'-AGUACACCCUUCUACUAUCUCCUCC^{C}$^{C-3'}$ (SEQ ID NO: 6479)
3'-UCAUGUGGGAAGAUGAUAGAGGAGG$_{U}$$_{A-5'}$ (SEQ ID NO: 2043)

βc-m1934 Target: 5'-AGTACACCCTTCTACTATCTCCTCC-3' (SEQ ID NO: 3152)

5'-CAGUACACCCUUCUACUAUCUCCUC^{A}$^{C-3'}$ (SEQ ID NO: 6480)
3'-GUCAUGUGGGAAGAUGAUAGAGGAG$_{G}$$_{U-5'}$ (SEQ ID NO: 2044)

βc-m1935 Target: 5'-CAGTACACCCTTCTACTATCTCCTCCA-3' (SEQ ID NO: 3153)

5'-CCAGUACACCCUUCUACUAUCUCCU^{A}$^{A-3'}$ (SEQ ID NO: 6481)
3'-GGUCAUGUGGGAAGAUGAUAGAGGA$_{G}$$_{G-5'}$ (SEQ ID NO: 2045)

βc-m1936 Target: 5'-CCAGTACACCCTTCTACTATCTCCTCC-3' (SEQ ID NO: 3154)

5'-GAGCUCCAGUACACCCUUCUACUAU^{A}$^{C-3'}$ (SEQ ID NO: 6482)
3'-CUCGAGGUCAUGUGGGAAGAUGAUA$_{G}$$_{A-5'}$ (SEQ ID NO: 2046)

βc-m1941 Target: 5'-GAGCTCCAGTACACCCTTCTACTATCT-3' (SEQ ID NO: 3155)

5'-AAACAAUGGAAUGGUAUUGAGUCCU^{A}$^{A-3'}$ (SEQ ID NO: 6483)
3'-UUUGUUACCUUACCAUAACUCAGGA$_{G}$$_{C-5'}$ (SEQ ID NO: 2047)

βc-m2009 Target: 5'-AAACAATGGAATGGTATTGAGTCCTCG-3' (SEQ ID NO: 3156)

5'-CUGCACAAACAAUGGAAUGGUAUUG^{C}$^{A-3'}$ (SEQ ID NO: 6484)
3'-GACGUGUUUGUUACCUUACCAUAAC$_{U}$$_{C-5'}$ (SEQ ID NO: 2048)

βc-m2015 Target: 5'-CTGCACAAACAATGGAATGGTATTGAG-3' (SEQ ID NO: 3157)

5'-ACUGCACAAACAAUGGAAUGGUAUU^{A}$^{C-3'}$ (SEQ ID NO: 6485)
3'-UGACGUGUUUGUUACCUUACCAUAA$_{C}$$_{U-5'}$ (SEQ ID NO: 2049)

βc-m2016 Target: 5'-ACTGCACAAACAATGGAATGGTATTGA-3' (SEQ ID NO: 3158)

5'-AAGCAACUGCACAAACAAUGGAAUG^{A}$^{C-3'}$ (SEQ ID NO: 6486)

3'-UUCGUUGACGUGUUUGUUACCUUAC$_{C_{A-5'}}$ (SEQ ID NO: 2050)

βc-m2021 Target: 5'-AAGCAACTGCACAAACAATGGAATGGT-3' (SEQ ID NO: 3159)

5'-GAGAAUAAAGCAACUGCACAAACAA$^{CA-3'}$ (SEQ ID NO: 6487)
3'-CUCUUAUUUCGUUGACGUGUUUGUU$_{AC-5'}$ (SEQ ID NO: 2051)

βc-m2028 Target: 5'-GAGAATAAAGCAACTGCACAAACAATG-3' (SEQ ID NO: 3160)

5'-UUUCAAUGGGAGAAUAAAGCAACUG$^{AC-3'}$ (SEQ ID NO: 6488)
3'-AAAGUUACCCUCUUAUUUCGUUGAC$_{GU-5'}$ (SEQ ID NO: 2052)

βc-m2037 Target: 5'-TTTCAATGGGAGAATAAAGCAACTGCA-3' (SEQ ID NO: 3161)

5'-UUUUCAAUGGGAGAAUAAAGCAACU$^{AA-3'}$ (SEQ ID NO: 6489)
3'-AAAAGUUACCCUCUUAUUUCGUUGA$_{CG-5'}$ (SEQ ID NO: 2053)

βc-m2038 Target: 5'-TTTTCAATGGGAGAATAAAGCAACTGC-3' (SEQ ID NO: 3162)

5'-AUUUUCAAUGGGAGAAUAAAGCAAC$^{CA-3'}$ (SEQ ID NO: 6490)
3'-UAAAAGUUACCCUCUUAUUUCGUUG$_{AC-5'}$ (SEQ ID NO: 2054)

βc-m2039 Target: 5'-ATTTTCAATGGGAGAATAAAGCAACTG-3' (SEQ ID NO: 3163)

5'-GGAUAUUUUCAAUGGGAGAAUAAAG$^{AC-3'}$ (SEQ ID NO: 6491)
3'-CCUAUAAAAGUUACCCUCUUAUUUC$_{GU-5'}$ (SEQ ID NO: 2055)

βc-m2043 Target: 5'-GGATATTTTCAATGGGAGAATAAAGCA-3' (SEQ ID NO: 3164)

5'-UGGAUAUUUUCAAUGGGAGAAUAAA$^{AA-3'}$ (SEQ ID NO: 6492)
3'-ACCUAUAAAAGUUACCCUCUUAUUU$_{CG-5'}$ (SEQ ID NO: 2056)

βc-m2044 Target: 5'-TGGATATTTTCAATGGGAGAATAAAGC-3' (SEQ ID NO: 3165)

5'-UUGGAUAUUUUCAAUGGGAGAAUAA$^{CA-3'}$ (SEQ ID NO: 6493)
3'-AACCUAUAAAAGUUACCCUCUUAUU$_{UC-5'}$ (SEQ ID NO: 2057)

βc-m2045 Target: 5'-TTGGATATTTTCAATGGGAGAATAAAG-3' (SEQ ID NO: 3166)

5'-CAGCUACUCUUUGGAUAUUUUCAAU$^{AA-3'}$ (SEQ ID NO: 6494)
3'-GUCGAUGAGAAACCUAUAAAAGUUA$_{CC-5'}$ (SEQ ID NO: 2058)

βc-m2055 Target: 5'-CAGCTACTCTTTGGATATTTTCAATGG-3' (SEQ ID NO: 3167)

5'-GCAGCUACUCUUUGGAUAUUUUCAA$^{CA-3'}$ (SEQ ID NO: 6495)
3'-CGUCGAUGAGAAACCUAUAAAAGUU$_{AC-5'}$ (SEQ ID NO: 2059)

βc-m2056 Target: 5'-GCAGCTACTCTTTGGATATTTTCAATG-3' (SEQ ID NO: 3168)

5'-CCGCUUCUUGUAAUCCUGUGGCUUG$^{CA-3'}$ (SEQ ID NO: 6496)
3'-GGCGAAGAACAUUAGGACACCGAAC$_{AG-5'}$ (SEQ ID NO: 2060)

βc-m2231 Target: 5'-CCGCTTCTTGTAATCCTGTGGCTTGTC-3' (SEQ ID NO: 3169)

5'-CCAGUCCAAGAUCUGCAGUCUCAUU^{A}$^{A-3'}$ (SEQ ID NO: 6497)
3'-GGUCAGGUUCUAGACGUCAGAGUAA$_{G}$$_{G-5'}$ (SEQ ID NO: 2061)

βc-m2307 Target: 5'-CCAGTCCAAGATCTGCAGTCTCATTCC-3' (SEQ ID NO: 3170)

5'-CGUAUCCACCAGAGUGAAAAGAACG^{A}$^{C-3'}$ (SEQ ID NO: 6498)
3'-GCAUAGGUGGUCUCACUUUUCUUGC$_{C}$$_{A-5'}$ (SEQ ID NO: 2062)

βc-m2385 Target: 5'-CGTATCCACCAGAGTGAAAAGAACGGT-3' (SEQ ID NO: 3171)

5'-CAGGCCAGCUGAUUGCUAUCACCUG^{A}$^{A-3'}$ (SEQ ID NO: 6499)
3'-GUCCGGUCGACUAACGAUAGUGGAC$_{C}$$_{C-5'}$ (SEQ ID NO: 2063)

βc-m2539 Target: 5'-CAGGCCAGCTGATTGCTATCACCTGGG-3' (SEQ ID NO: 3172)

5'-CGAUUUACAGGUCAGUAUCAAACCA^{A}$^{A-3'}$ (SEQ ID NO: 6500)
3'-GCUAAAUGUCCAGUCAUAGUUUGGU$_{C}$$_{C-5'}$ (SEQ ID NO: 2064)

βc-m2562 Target: 5'-CGATTTACAGGTCAGTATCAAACCAGG-3' (SEQ ID NO: 3173)

5'-ACGAUUUACAGGUCAGUAUCAAACC^{C}$^{A-3'}$ (SEQ ID NO: 6501)
3'-UGCUAAAUGUCCAGUCAUAGUUUGG$_{U}$$_{C-5'}$ (SEQ ID NO: 2065)

βc-m2563 Target: 5'-ACGATTTACAGGTCAGTATCAAACCAG-3' (SEQ ID NO: 3174)

5'-UUUCUUACCUAAAGGACGAUUUACA^{A}$^{A-3'}$ (SEQ ID NO: 6502)
3'-AAAGAAUGGAUUUCCUGCUAAAUGU$_{C}$$_{C-5'}$ (SEQ ID NO: 2066)

βc-m2578 Target: 5'-TTTCTTACCTAAAGGACGATTTACAGG-3' (SEQ ID NO: 3175)

5'-GCUUUCUUACCUAAAGGACGAUUUA^{A}$^{C-3'}$ (SEQ ID NO: 6503)
3'-CGAAAGAAUGGAUUUCCUGCUAAAU$_{G}$$_{U-5'}$ (SEQ ID NO: 2067)

βc-m2580 Target: 5'-GCTTTCTTACCTAAAGGACGATTTACA-3' (SEQ ID NO: 3176)

5'-CUUUUAUAAGCUUUCUUACCUAAAG^{A}$^{C-3'}$ (SEQ ID NO: 6504)
3'-GAAAAUAUUCGAAAGAAUGGAUUUC$_{C}$$_{U-5'}$ (SEQ ID NO: 2068)

βc-m2589 Target: 5'-CTTTTATAAGCTTTCTTACCTAAAGGA-3' (SEQ ID NO: 3177)

5'-GCUUUUAUAAGCUUUCUUACCUAAA^{A}$^{A-3'}$ (SEQ ID NO: 6505)
3'-CGAAAAUAUUCGAAAGAAUGGAUUU$_{C}$$_{C-5'}$ (SEQ ID NO: 2069)

βc-m2590 Target: 5'-GCTTTTATAAGCTTTCTTACCTAAAGG-3' (SEQ ID NO: 3178)

5'-CUGGCUUUUAUAAGCUUUCUUACCU^{C}$^{C-3'}$ (SEQ ID NO: 6506)
3'-GACCGAAAAUAUUCGAAAGAAUGGA$_{U}$$_{U-5'}$ (SEQ ID NO: 2070)

βc-m2593 Target: 5'-CTGGCTTTTATAAGCTTTCTTACCTAA-3' (SEQ ID NO: 3179)

5'-CCACACUGGCUUUUAUAAGCUUUCU^{C}$^{C-3'}$ (SEQ ID NO: 6507)
3'-GGUGUGACCGAAAAUAUUCGAAAGA$_{A}$$_{U-5'}$ (SEQ ID NO: 2071)

βc-m2598 Target: 5'-CCACACTGGCTTTTATAAGCTTTCTTA-3' (SEQ ID NO: 3180)

5'-AUUCACCCACACUGGCUUUUAUAAG$^{AC-3'}$ (SEQ ID NO: 6508)
3'-UAAGUGGGUGUGACCGAAAAUAUUC$_{GA-5'}$ (SEQ ID NO: 2072)

βc-m2604 Target: 5'-ATTCACCCACACTGGCTTTTATAAGCT-3' (SEQ ID NO: 3181)

5'-CCUACCAAGUCUUUCUGGAGUUCUG$^{AC-3'}$ (SEQ ID NO: 6509)
3'-GGAUGGUUCAGAAAGACCUCAAGAC$_{GU-5'}$ (SEQ ID NO: 2073)

βc-m2644 Target: 5'-CCTACCAAGTCTTTCTGGAGTTCTGCA-3' (SEQ ID NO: 3182)

5'-AUUUACAAACAGGCCUAAAACCAUU$^{AA-3'}$ (SEQ ID NO: 6510)
3'-UAAAUGUUUGUCCGGAUUUUGGUAA$_{GG-5'}$ (SEQ ID NO: 2074)

βc-m2674 Target: 5'-ATTTACAAACAGGCCTAAAACCATTCC-3' (SEQ ID NO: 3183)

5'-GAUUUACAAACAGGCCUAAAACCAU$^{CA-3'}$ (SEQ ID NO: 6511)
3'-CUAAAUGUUUGUCCGGAUUUUGGUA$_{AG-5'}$ (SEQ ID NO: 2075)

βc-m2675 Target: 5'-GATTTACAAACAGGCCTAAAACCATTC-3' (SEQ ID NO: 3184)

5'-AGAUUUACAAACAGGCCUAAAACCA$^{CC-3'}$ (SEQ ID NO: 6512)
3'-UCUAAAUGUUUGUCCGGAUUUUGGU$_{AA-5'}$ (SEQ ID NO: 2076)

βc-m2676 Target: 5'-AGATTTACAAACAGGCCTAAAACCATT-3' (SEQ ID NO: 3185)

5'-CAUCUCCUUCCAAGGUAUGUAUCUG$^{CC-3'}$ (SEQ ID NO: 6513)
3'-GUAGAGGAAGGUUCCAUACAUAGAC$_{AA-5'}$ (SEQ ID NO: 2077)

βc-m2710 Target: 5'-CATCTCCTTCCAAGGTATGTATCTGTT-3' (SEQ ID NO: 3186)

5'-ACAUCUCCUUCCAAGGUAUGUAUCU$^{AC-3'}$ (SEQ ID NO: 6514)
3'-UGUAGAGGAAGGUUCCAUACAUAGA$_{CA-5'}$ (SEQ ID NO: 2078)

βc-m2711 Target: 5'-ACATCTCCTTCCAAGGTATGTATCTGT-3' (SEQ ID NO: 3187)

5'-ACUUCCACACAUGAACAUCUCCUUC$^{AC-3'}$ (SEQ ID NO: 6515)
3'-UGAAGGUGUGUACUUGUAGAGGAAG$_{GU-5'}$ (SEQ ID NO: 2079)

βc-m2725 Target: 5'-ACTTCCACACATGAACATCTCCTTCCA-3' (SEQ ID NO: 3188)

5'-GAAACUUCCACACAUGAACAUCUCC$^{CC-3'}$ (SEQ ID NO: 6516)
3'-CUUUGAAGGUGUGUACUUGUAGAGG$_{AA-5'}$ (SEQ ID NO: 2080)

βc-m2728 Target: 5'-GAAACTTCCACACATGAACATCTCCTT-3' (SEQ ID NO: 3189)

5'-AGAAACUUCCACACAUGAACAUCUC$^{AC-3'}$ (SEQ ID NO: 6517)
3'-UCUUUGAAGGUGUGUACUUGUAGAG$_{GA-5'}$ (SEQ ID NO: 2081)

βc-m2729 Target: 5'-AGAAACTTCCACACATGAACATCTCCT-3' (SEQ ID NO: 3190)

5'-GAGAAACUUCCACACAUGAACAUCU$^{AA-3'}$ (SEQ ID NO: 6518)

3'-CUCUUUGAAGGUGUGUACUUGUAGA$_{G-5'}$ (SEQ ID NO: 2082)

βc-m2730 Target: 5'-GAGAAACTTCCACACATGAACATCTCC-3' (SEQ ID NO: 3191)

5'-UGAGAAACUUCCACACAUGAACAUC$^{CA-3'}$ (SEQ ID NO: 6519)
3'-ACUCUUUGAAGGUGUGUACUUGUAG$_{A-5'}$ (SEQ ID NO: 2083)

βc-m2731 Target: 5'-TGAGAAACTTCCACACATGAACATCTC-3' (SEQ ID NO: 3192)

5'-CAUCAACGUGAGAAACUUCCACACA$^{CA-3'}$ (SEQ ID NO: 6520)
3'-GUAGUUGCACUCUUUGAAGGUGUGU$_{A-5'}$ (SEQ ID NO: 2084)

βc-m2739 Target: 5'-CATCAACGTGAGAAACTTCCACACATG-3' (SEQ ID NO: 3193)

5'-AAACAUCAACGUGAGAAACUUCCAC$^{CA-3'}$ (SEQ ID NO: 6521)
3'-UUUGUAGUUGCACUCUUUGAAGGUG$_{U-5'}$ (SEQ ID NO: 2085)

βc-m2742 Target: 5'-AAACATCAACGTGAGAAACTTCCACAC-3' (SEQ ID NO: 3194)

5'-AAAACAUCAACGUGAGAAACUUCCA$^{AC-3'}$ (SEQ ID NO: 6522)
3'-UUUUGUAGUUGCACUCUUUGAAGGU$_{G-5'}$ (SEQ ID NO: 2086)

βc-m2743 Target: 5'-AAAACATCAACGTGAGAAACTTCCACA-3' (SEQ ID NO: 3195)

5'-AAAAACAUCAACGUGAGAAACUUCC$^{CA-3'}$ (SEQ ID NO: 6523)
3'-UUUUUGUAGUUGCACUCUUUGAAGG$_{U-5'}$ (SEQ ID NO: 2087)

βc-m2744 Target: 5'-AAAAACATCAACGTGAGAAACTTCCAC-3' (SEQ ID NO: 3196)

5'-CAAAAACAUCAACGUGAGAAACUUC$^{AC-3'}$ (SEQ ID NO: 6524)
3'-GUUUUUGUAGUUGCACUCUUUGAAG$_{G-5'}$ (SEQ ID NO: 2088)

βc-m2745 Target: 5'-CAAAAACATCAACGTGAGAAACTTCCA-3' (SEQ ID NO: 3197)

5'-GCAAAAACAUCAACGUGAGAAACUU$^{AA-3'}$ (SEQ ID NO: 6525)
3'-CGUUUUUGUAGUUGCACUCUUUGAA$_{G-5'}$ (SEQ ID NO: 2089)

βc-m2746 Target: 5'-GCAAAAACATCAACGTGAGAAACTTCC-3' (SEQ ID NO: 3198)

5'-UGGCAAAAACAUCAACGUGAGAAAC$^{CC-3'}$ (SEQ ID NO: 6526)
3'-ACCGUUUUUGUAGUUGCACUCUUUG$_{A-5'}$ (SEQ ID NO: 2090)

βc-m2748 Target: 5'-TGGCAAAAACATCAACGTGAGAAACTT-3' (SEQ ID NO: 3199)

5'-CUGCAAAAGCUGUGGCAAAAACAUC$^{CC-3'}$ (SEQ ID NO: 6527)
3'-GACGUUUUCGACACCGUUUUUGUAG$_{U-5'}$ (SEQ ID NO: 2091)

βc-m2760 Target: 5'-CTGCAAAAGCTGTGGCAAAAACATCAA-3' (SEQ ID NO: 3200)

5'-GCUGCAAAAGCUGUGGCAAAAACAU$^{AC-3'}$ (SEQ ID NO: 6528)
3'-CGACGUUUUCGACACCGUUUUUGUA$_{G-5'}$ (SEQ ID NO: 2092)

βc-m2761 Target: 5'-GCTGCAAAAGCTGTGGCAAAAACATCA-3' (SEQ ID NO: 3201)

5'-ACUCAUCUGAGUAUAACGCUGCAAA$^{CA-3'}$ (SEQ ID NO: 6529)
3'-UGAGUAGACUCAUAUUGCGACGUUU$_{UC-5'}$ (SEQ ID NO: 2093)

βc-m2778 Target: 5'-ACTCATCTGAGTATAACGCTGCAAAAG-3' (SEQ ID NO: 3202)

5'-UGAAAACAGCAAAUGUUACUCAUCU$^{AC-3'}$ (SEQ ID NO: 6530)
3'-ACUUUUGUCGUUUACAAUGAGUAGA$_{CU-5'}$ (SEQ ID NO: 2094)

βc-m2795 Target: 5'-TGAAAACAGCAAATGTTACTCATCTGA-3' (SEQ ID NO: 3203)

5'-UUGAAAACAGCAAAUGUUACUCAUC$^{CA-3'}$ (SEQ ID NO: 6531)
3'-AACUUUUGUCGUUUACAAUGAGUAG$_{AC-5'}$ (SEQ ID NO: 2095)

βc-m2796 Target: 5'-TTGAAAACAGCAAATGTTACTCATCTG-3' (SEQ ID NO: 3204)

5'-GUUGAAAACAGCAAAUGUUACUCAU$^{AC-3'}$ (SEQ ID NO: 6532)
3'-CAACUUUUGUCGUUUACAAUGAGUA$_{GA-5'}$ (SEQ ID NO: 2096)

βc-m2797 Target: 5'-GTTGAAAACAGCAAATGTTACTCATCT-3' (SEQ ID NO: 3205)

5'-CUAUUAAUGUUGAAAACAGCAAAUG$^{CC-3'}$ (SEQ ID NO: 6533)
3'-GAUAAUUACAACUUUUGUCGUUUAC$_{AA-5'}$ (SEQ ID NO: 2097)

βc-m2805 Target: 5'-CTATTAATGTTGAAAACAGCAAATGTT-3' (SEQ ID NO: 3206)

5'-ACACUACAGCUGUAUAGAGAGAAAG$^{AA-3'}$ (SEQ ID NO: 6534)
3'-UGUGAUGUCGACAUAUCUCUCUUUC$_{CG-5'}$ (SEQ ID NO: 2098)

βc-m2834 Target: 5'-ACACTACAGCTGTATAGAGAGAAAGGC-3' (SEQ ID NO: 3207)

5'-CAGGCCAAUCACAAUGCACGUUCAG$^{CA-3'}$ (SEQ ID NO: 6535)
3'-GUCCGGUUAGUGUUACGUGCAAGUC$_{UG-5'}$ (SEQ ID NO: 2099)

βc-m2859 Target: 5'-CAGGCCAATCACAATGCACGTTCAGAC-3' (SEQ ID NO: 3208)

5'-CUGUUCCCAUAGGAAACUCAGCUUG$^{AC-3'}$ (SEQ ID NO: 6536)
3'-GACAAGGGUAUCCUUUGAGUCGAAC$_{CA-5'}$ (SEQ ID NO: 2100)

βc-m2946 Target: 5'-CTGTTCCCATAGGAAACTCAGCTTGGT-3' (SEQ ID NO: 3209)

5'-CAGAACAAAAAGCGUACUUCGACUG$^{CC-3'}$ (SEQ ID NO: 6537)
3'-GUCUUGUUUUUCGCAUGAAGCUGAC$_{AA-5'}$ (SEQ ID NO: 2101)

βc-m2968 Target: 5'-CAGAACAAAAAGCGTACTTCGACTGTT-3' (SEQ ID NO: 3210)

5'-AAGGACCAGAACAAAAAGCGUACUU$^{AA-3'}$ (SEQ ID NO: 6538)
3'-UUCCUGGUCUUGUUUUUCGCAUGAA$_{GC-5'}$ (SEQ ID NO: 2102)

βc-m2974 Target: 5'-AAGGACCAGAACAAAAAGCGTACTTCG-3' (SEQ ID NO: 3211)

5'-CGACCAAAAAGGACCAGAACAAAAA$^{AA-3'}$ (SEQ ID NO: 6539)
3'-GCUGGUUUUUCCUGGUCUUGUUUUU$_{CG-5'}$ (SEQ ID NO: 2103)

βc-m2982 Target: 5'-CGACCAAAAAGGACCAGAACAAAAAGC-3' (SEQ ID NO: 3212)

5'-UCGACCAAAAAGGACCAGAACAAAA$^{CA-3'}$ (SEQ ID NO: 6540)
3'-AGCUGGUUUUUCCUGGUCUUGUUUU$_{UC-5'}$ (SEQ ID NO: 2104)

βc-m2983 Target: 5'-TCGACCAAAAAGGACCAGAACAAAAAG-3' (SEQ ID NO: 3213)

5'-UUACUCCUCGACCAAAAAGGACCAG$^{CC-3'}$ (SEQ ID NO: 6541)
3'-AAUGAGGAGCUGGUUUUUCCUGGUC$_{UU-5'}$ (SEQ ID NO: 2105)

βc-m2990 Target: 5'-TTACTCCTCGACCAAAAAGGACCAGAA-3' (SEQ ID NO: 3214)

5'-AAUCCAUUUGUAUUGUUACUCCUCG$^{CA-3'}$ (SEQ ID NO: 6542)
3'-UUAGGUAAACAUAACAAUGAGGAGC$_{UG-5'}$ (SEQ ID NO: 2106)

βc-m3005 Target: 5'-AATCCATTTGTATTGTTACTCCTCGAC-3' (SEQ ID NO: 3215)

5'-AAAUCCAUUUGUAUUGUUACUCCUC$^{AC-3'}$ (SEQ ID NO: 6543)
3'-UUUAGGUAAACAUAACAAUGAGGAG$_{CU-5'}$ (SEQ ID NO: 2107)

βc-m3006 Target: 5'-AAATCCATTTGTATTGTTACTCCTCGA-3' (SEQ ID NO: 3216)

5'-CAAAUCCAUUUGUAUUGUUACUCCU$^{AA-3'}$ (SEQ ID NO: 6544)
3'-GUUUAGGUAAACAUAACAAUGAGGA$_{GC-5'}$ (SEQ ID NO: 2108)

βc-m3007 Target: 5'-CAAATCCATTTGTATTGTTACTCCTCG-3' (SEQ ID NO: 3217)

5'-CCAAAUCCAUUUGUAUUGUUACUCC$^{CA-3'}$ (SEQ ID NO: 6545)
3'-GGUUUAGGUAAACAUAACAAUGAGG$_{AG-5'}$ (SEQ ID NO: 2109)

βc-m3008 Target: 5'-CCAAATCCATTTGTATTGTTACTCCTC-3' (SEQ ID NO: 3218)

5'-UCACUCCCCAAAUCCAUUUGUAUUG$^{CC-3'}$ (SEQ ID NO: 6546)
3'-AGUGAGGGGUUUAGGUAAACAUAAC$_{AA-5'}$ (SEQ ID NO: 2110)

βc-m3015 Target: 5'-TCACTCCCCAAATCCATTTGTATTGTT-3' (SEQ ID NO: 3219)

5'-GAUCCAUUCGUGUGCAUUCUUCACU$^{AA-3'}$ (SEQ ID NO: 6547)
3'-CUAGGUAAGCACACGUAAGAAGUGA$_{CG-5'}$ (SEQ ID NO: 2111)

βc-m3047 Target: 5'-GATCCATTCGTGTGCATTCTTCACTGC-3' (SEQ ID NO: 3220)

5'-UGAUCCAUUCGUGUGCAUUCUUCAC$^{CA-3'}$ (SEQ ID NO: 6548)
3'-ACUAGGUAAGCACACGUAAGAAGUG$_{AC-5'}$ (SEQ ID NO: 2112)

βc-m3048 Target: 5'-TGATCCATTCGTGTGCATTCTTCACTG-3' (SEQ ID NO: 3221)

5'-GUGAUCCAUUCGUGUGCAUUCUUCA$^{AC-3'}$ (SEQ ID NO: 6549)
3'-CACUAGGUAAGCACACGUAAGAAGU$_{GA-5'}$ (SEQ ID NO: 2113)

βc-m3049 Target: 5'-GTGATCCATTCGTGTGCATTCTTCACT-3' (SEQ ID NO: 3222)

5'-UAAAACAAAGAACAAGCAAGGCUAG$^{AA-3'}$ (SEQ ID NO: 6550)

3'-AUUUUGUUUCUUGUUCGUUCCGAUC$_{C_{C-5'}}$ (SEQ ID NO: 2114)

βc-m3093 Target: 5'-TAAAACAAAGAACAAGCAAGGCTAGGG-3' (SEQ ID NO: 3223)

5'-GCACCACUACAGAUAUUAAAACAAA$^{AC-3'}$ (SEQ ID NO: 6551)
3'-CGUGGUGAUGUCUAUAAUUUUGUUU$_{C_{U-5'}}$ (SEQ ID NO: 2115)

βc-m3109 Target: 5'-GCACCACTACAGATATTAAAACAAAGA-3' (SEQ ID NO: 3224)

5'-CAGCACCACUACAGAUAUUAAAACA$^{CC-3'}$ (SEQ ID NO: 6552)
3'-GUCGUGGUGAUGUCUAUAAUUUUGU$_{U_{U-5'}}$ (SEQ ID NO: 2116)

βc-m3111 Target: 5'-CAGCACCACTACAGATATTAAAACAAA-3' (SEQ ID NO: 3225)

5'-UCAGCACCACUACAGAUAUUAAAAC$^{CC-3'}$ (SEQ ID NO: 6553)
3'-AGUCGUGGUGAUGUCUAUAAUUUUG$_{U_{U-5'}}$ (SEQ ID NO: 2117)

βc-m3112 Target: 5'-TCAGCACCACTACAGATATTAAAACAA-3' (SEQ ID NO: 3226)

5'-AAAAAAUAAAAGCAAGCAAAGUCAG$^{AC-3'}$ (SEQ ID NO: 6554)
3'-UUUUUUAUUUUCGUUCGUUUCAGUC$_{G_{U-5'}}$ (SEQ ID NO: 2118)

βc-m3133 Target: 5'-AAAAAATAAAAGCAAGCAAAGTCAGCA-3' (SEQ ID NO: 3227)

5'-CUGCAAAAAAUAAAAGCAAGCAAAG$^{CA-3'}$ (SEQ ID NO: 6555)
3'-GACGUUUUUUAUUUUCGUUCGUUUC$_{A_{G-5'}}$ (SEQ ID NO: 2119)

βc-m3137 Target: 5'-CTGCAAAAAATAAAAGCAAGCAAAGTC-3' (SEQ ID NO: 3228)

5'-AGUUACUGCAAAAAAUAAAAGCAAG$^{AC-3'}$ (SEQ ID NO: 6556)
3'-UCAAUGACGUUUUUUAUUUUCGUUC$_{G_{U-5'}}$ (SEQ ID NO: 2120)

βc-m3142 Target: 5'-AGTTACTGCAAAAAATAAAAGCAAGCA-3' (SEQ ID NO: 3229)

5'-ACUAACAGUUACUGCAAAAAAUAAA$^{CA-3'}$ (SEQ ID NO: 6557)
3'-UGAUUGUCAAUGACGUUUUUUAUUU$_{U_{C-5'}}$ (SEQ ID NO: 2121)

βc-m3148 Target: 5'-ACTAACAGTTACTGCAAAAAATAAAAG-3' (SEQ ID NO: 3230)

5'-AAACUAACAGUUACUGCAAAAAAUA$^{CC-3'}$ (SEQ ID NO: 6558)
3'-UUUGAUUGUCAAUGACGUUUUUUAU$_{U_{U-5'}}$ (SEQ ID NO: 2122)

βc-m3150 Target: 5'-AAACTAACAGTTACTGCAAAAAATAAA-3' (SEQ ID NO: 3231)

5'-AAAAACUAACAGUUACUGCAAAAAA$^{CC-3'}$ (SEQ ID NO: 6559)
3'-UUUUUGAUUGUCAAUGACGUUUUUU$_{A_{U-5'}}$ (SEQ ID NO: 2123)

βc-m3152 Target: 5'-AAAAACTAACAGTTACTGCAAAAAATA-3' (SEQ ID NO: 3232)

5'-UAAAAACUAACAGUUACUGCAAAAA$^{CC-3'}$ (SEQ ID NO: 6560)
3'-AUUUUUGAUUGUCAAUGACGUUUUU$_{U_{A-5'}}$ (SEQ ID NO: 2124)

βc-m3153 Target: 5'-TAAAAACTAACAGTTACTGCAAAAAAT-3' (SEQ ID NO: 3233)

5'-CUUAAAAACUAACAGUUACUGCAAA$^{CC-3'}$ (SEQ ID NO: 6561)
3'-GAAUUUUUGAUUGUCAAUGACGUUU$_{U_{U-5'}}$ (SEQ ID NO: 2125)

βc-m3155 Target: 5'-CTTAAAAACTAACAGTTACTGCAAAAA-3' (SEQ ID NO: 3234)

5'-ACUACUUAAAAACUAACAGUUACUG$^{AC-3'}$ (SEQ ID NO: 6562)
3'-UGAUGAAUUUUUGAUUGUCAAUGAC$_{G_{U-5'}}$ (SEQ ID NO: 2126)

βc-m3159 Target: 5'-ACTACTTAAAAACTAACAGTTACTGCA-3' (SEQ ID NO: 3235)

5'-ACACUACUUAAAAACUAACAGUUAC$^{CA-3'}$ (SEQ ID NO: 6563)
3'-UGUGAUGAAUUUUUGAUUGUCAAUG$_{A_{C-5'}}$ (SEQ ID NO: 2127)

βc-m3161 Target: 5'-ACACTACTTAAAAACTAACAGTTACTG-3' (SEQ ID NO: 3236)

5'-CAUAACACUACUUAAAAACUAACAG$^{CC-3'}$ (SEQ ID NO: 6564)
3'-GUAUUGUGAUGAAUUUUUGAUUGUC$_{A_{A-5'}}$ (SEQ ID NO: 2128)

βc-m3165 Target: 5'-CATAACACTACTTAAAAACTAACAGTT-3' (SEQ ID NO: 3237)

5'-ACAUAACACUACUUAAAAACUAACA$^{AC-3'}$ (SEQ ID NO: 6565)
3'-UGUAUUGUGAUGAAUUUUUGAUUGU$_{C_{A-5'}}$ (SEQ ID NO: 2129)

βc-m3166 Target: 5'-ACATAACACTACTTAAAAACTAACAGT-3' (SEQ ID NO: 3238)

5'-GAACAUAACACUACUUAAAAACUAA$^{AC-3'}$ (SEQ ID NO: 6566)
3'-CUUGUAUUGUGAUGAAUUUUUGAUU$_{G_{U-5'}}$ (SEQ ID NO: 2130)

βc-m3168 Target: 5'-GAACATAACACTACTTAAAAACTAACA-3' (SEQ ID NO: 3239)

5'-AGAACAUAACACUACUUAAAAACUA$^{CA-3'}$ (SEQ ID NO: 6567)
3'-UCUUGUAUUGUGAUGAAUUUUUGAU$_{U_{G-5'}}$ (SEQ ID NO: 2131)

βc-m3169 Target: 5'-AGAACATAACACTACTTAAAAACTAAC-3' (SEQ ID NO: 3240)

5'-UAGAACAUAACACUACUUAAAAACU$^{CC-3'}$ (SEQ ID NO: 6568)
3'-AUCUUGUAUUGUGAUGAAUUUUUGA$_{U_{U-5'}}$ (SEQ ID NO: 2132)

βc-m3170 Target: 5'-TAGAACATAACACTACTTAAAAACTAA-3' (SEQ ID NO: 3241)

5'-CUAGAACAUAACACUACUUAAAAAC$^{CC-3'}$ (SEQ ID NO: 6569)
3'-GAUCUUGUAUUGUGAUGAAUUUUUG$_{A_{U-5'}}$ (SEQ ID NO: 2133)

βc-m3171 Target: 5'-CTAGAACATAACACTACTTAAAAACTA-3' (SEQ ID NO: 3242)

5'-GUUCACUAGAACAUAACACUACUUA$^{CC-3'}$ (SEQ ID NO: 6570)
3'-CAAGUGAUCUUGUAUUGUGAUGAAU$_{U_{U-5'}}$ (SEQ ID NO: 2134)

βc-m3176 Target: 5'-GTTCACTAGAACATAACACTACTTAAA-3' (SEQ ID NO: 3243)

5'-AGGUUCACUAGAACAUAACACUACU$^{CC-3'}$ (SEQ ID NO: 6571)
3'-UCCAAGUGAUCUUGUAUUGUGAUGA$_{A_{U-5'}}$ (SEQ ID NO: 2135)

βc-m3178 Target: 5'-AGGTTCACTAGAACATAACACTACTTA-3' (SEQ ID NO: 3244)

5'-CAGGUUCACUAGAACAUAACACUAC$^{CC-3'}$ (SEQ ID NO: 6572)
3'-GUCCAAGUGAUCUUGUAUUGUGAUG$_{AA-5'}$ (SEQ ID NO: 2136)

βc-m3179 Target: 5'-CAGGTTCACTAGAACATAACACTACTT-3' (SEQ ID NO: 3245)

5'-CCAUUACUCGGUUCUUAGAAAUCAG$^{CC-3'}$ (SEQ ID NO: 6573)
3'-GGUAAUGAGCCAAGAAUCUUUAGUC$_{UU-5'}$ (SEQ ID NO: 2137)

βc-m3216 Target: 5'-CCATTACTCGGTTCTTAGAAATCAGAA-3' (SEQ ID NO: 3246)

5'-ACACCAUUACUCGGUUCUUAGAAAU$^{AC-3'}$ (SEQ ID NO: 6574)
3'-UGUGGUAAUGAGCCAAGAAUCUUUA$_{GU-5'}$ (SEQ ID NO: 2138)

βc-m3219 Target: 5'-ACACCATTACTCGGTTCTTAGAAATCA-3' (SEQ ID NO: 3247)

5'-GUUCUACACCAUUACUCGGUUCUUA$^{AC-3'}$ (SEQ ID NO: 6575)
3'-CAAGAUGUGGUAAUGAGCCAAGAAU$_{CU-5'}$ (SEQ ID NO: 2139)

βc-m3224 Target: 5'-GTTCTACACCATTACTCGGTTCTTAGA-3' (SEQ ID NO: 3248)

5'-AUGAAUUAGUGUUCUACACCAUUAC$^{CA-3'}$ (SEQ ID NO: 6576)
3'-UACUUAAUCACAAGAUGUGGUAAUG$_{AG-5'}$ (SEQ ID NO: 2140)

βc-m3234 Target: 5'-ATGAATTAGTGTTCTACACCATTACTC-3' (SEQ ID NO: 3249)

5'-UGAUUAUGAAUUAGUGUUCUACACC$^{CC-3'}$ (SEQ ID NO: 6577)
3'-ACUAAUACUUAAUCACAAGAUGUGG$_{UA-5'}$ (SEQ ID NO: 2141)

βc-m3239 Target: 5'-TGATTATGAATTAGTGTTCTACACC-3' (SEQ ID NO: 3250)

5'-GUGAUUAUGAAUUAGUGUUCUACAC$^{AC-3'}$ (SEQ ID NO: 6578)
3'-CACUAAUACUUAAUCACAAGAUGUG$_{GU-5'}$ (SEQ ID NO: 2142)

βc-m3240 Target: 5'-GTGATTATGAATTAGTGTTCTACACCA-3' (SEQ ID NO: 3251)

5'-CGUGAUUAUGAAUUAGUGUUCUACA$^{AA-3'}$ (SEQ ID NO: 6579)
3'-GCACUAAUACUUAAUCACAAGAUGU$_{GG-5'}$ (SEQ ID NO: 2143)

βc-m3241 Target: 5'-CGTGATTATGAATTAGTGTTCTACACC-3' (SEQ ID NO: 3252)

5'-UUACAAUUAGCGUGAUUAUGAAUUA$^{AC-3'}$ (SEQ ID NO: 6580)
3'-AAUGUUAAUCGCACUAAUACUUAAU$_{CA-5'}$ (SEQ ID NO: 2144)

βc-m3251 Target: 5'-TTACAATTAGCGTGATTATGAATTAGT-3' (SEQ ID NO: 3253)

5'-AUUACAAUUAGCGUGAUUAUGAAUU$^{CA-3'}$ (SEQ ID NO: 6581)
3'-UAAUGUUAAUCGCACUAAUACUUAA$_{UC-5'}$ (SEQ ID NO: 2145)

βc-m3252 Target: 5'-ATTACAATTAGCGTGATTATGAATTAG-3' (SEQ ID NO: 3254)

5'-CCAGAUUACAAUUAGCGUGAUUAUG$^{CC-3'}$ (SEQ ID NO: 6582)

3'-GGUCUAAUGUUAAUCGCACUAAUAC$_{U_{U-5'}}$ (SEQ ID NO: 2146)

βc-m3256 Target: 5'-CCAGATTACAATTAGCGTGATTATGAA-3' (SEQ ID NO: 3255)

5'-GUUACACGUCUCCAGAUUACAAUUA$^{A^{A-3'}}$ (SEQ ID NO: 6583)
3'-CAAUGUGCAGAGGUCUAAUGUUAAU$_{C_{G-5'}}$ (SEQ ID NO: 2147)

βc-m3267 Target: 5'-GTTACACGTCTCCAGATTACAATTAGC-3' (SEQ ID NO: 3256)

5'-AUGUUACACGUCUCCAGAUUACAAU$^{C^{C-3'}}$ (SEQ ID NO: 6584)
3'-UACAAUGUGCAGAGGUCUAAUGUUA$_{A_{U-5'}}$ (SEQ ID NO: 2148)

βc-m3269 Target: 5'-ATGTTACACGTCTCCAGATTACAATTA-3' (SEQ ID NO: 3257)

5'-GCUACACAAUGUUACACGUCUCCAG$^{C^{C-3'}}$ (SEQ ID NO: 6585)
3'-CGAUGUGUUACAAUGUGCAGAGGUC$_{U_{A-5'}}$ (SEQ ID NO: 2149)

βc-m3277 Target: 5'-GCTACACAATGTTACACGTCTCCAGAT-3' (SEQ ID NO: 3258)

5'-AGGCUACACAAUGUUACACGUCUCC$^{C^{A-3'}}$ (SEQ ID NO: 6586)
3'-UCCGAUGUGUUACAAUGUGCAGAGG$_{U_{C-5'}}$ (SEQ ID NO: 2150)

βc-m3279 Target: 5'-AGGCTACACAATGTTACACGTCTCCAG-3' (SEQ ID NO: 3259)

5'-AUACAAAAGGCUACACAAUGUUACA$^{A^{A-3'}}$ (SEQ ID NO: 6587)
3'-UAUGUUUUCCGAUGUGUUACAAUGU$_{G_{C-5'}}$ (SEQ ID NO: 2151)

βc-m3286 Target: 5'-ATACAAAAGGCTACACAATGTTACACG-3' (SEQ ID NO: 3260)

5'-UAUACAAAAGGCUACACAAUGUUAC$^{C^{A-3'}}$ (SEQ ID NO: 6588)
3'-AUAUGUUUUCCGAUGUGUUACAAUG$_{U_{G-5'}}$ (SEQ ID NO: 2152)

βc-m3287 Target: 5'-TATACAAAAGGCTACACAATGTTACAC-3' (SEQ ID NO: 3261)

5'-UAUUUAUACAAAAGGCUACACAAUG$^{C^{C-3'}}$ (SEQ ID NO: 6589)
3'-AUAAAUAUGUUUUCCGAUGUGUUAC$_{A_{A-5'}}$ (SEQ ID NO: 2153)

βc-m3291 Target: 5'-TATTTATACAAAAGGCTACACAATGTT-3' (SEQ ID NO: 3262)

5'-CUAUUUAUACAAAAGGCUACACAAU$^{A^{C-3'}}$ (SEQ ID NO: 6590)
3'-GAUAAAUAUGUUUUCCGAUGUGUUA$_{C_{A-5'}}$ (SEQ ID NO: 2154)

βc-m3292 Target: 5'-CTATTTATACAAAAGGCTACACAATGT-3' (SEQ ID NO: 3263)

5'-UGUCUAUUUAUACAAAAGGCUACAC$^{C^{C-3'}}$ (SEQ ID NO: 6591)
3'-ACAGAUAAAUAUGUUUUCCGAUGUG$_{U_{U-5'}}$ (SEQ ID NO: 2155)

βc-m3295 Target: 5'-TGTCTATTTATACAAAAGGCTACACAA-3' (SEQ ID NO: 3264)

5'-CUGUCUAUUUAUACAAAAGGCUACA$^{A^{C-3'}}$ (SEQ ID NO: 6592)
3'-GACAGAUAAAUAUGUUUUCCGAUGU$_{G_{U-5'}}$ (SEQ ID NO: 2156)

βc-m3296 Target: 5'-CTGTCTATTTATACAAAAGGCTACACA-3' (SEQ ID NO: 3265)

5'-UCUGUCUAUUUAUACAAAAGGCUAC$^{CA-3'}$ (SEQ ID NO: 6593)
3'-AGACAGAUAAAUAUGUUUUCCGAUG$_{UG-5'}$ (SEQ ID NO: 2157)

βc-m3297 Target: 5'-TCTGTCTATTTATACAAAAGGCTACAC-3' (SEQ ID NO: 3266)

5'-UUUCUAUCUGUCUAUUUAUACAAAA$^{AA-3'}$ (SEQ ID NO: 6594)
3'-AAAGAUAGACAGAUAAAUAUGUUUU$_{CC-5'}$ (SEQ ID NO: 2158)

βc-m3303 Target: 5'-TTTCTATCTGTCTATTTATACAAAAGG-3' (SEQ ID NO: 3267)

5'-AUUUCUAUCUGUCUAUUUAUACAAA$^{CA-3'}$ (SEQ ID NO: 6595)
3'-UAAAGAUAGACAGAUAAAUAUGUUU$_{UC-5'}$ (SEQ ID NO: 2159)

βc-m3304 Target: 5'-ATTTCTATCTGTCTATTTATACAAAAG-3' (SEQ ID NO: 3268)

5'-CAUUUCUAUCUGUCUAUUUAUACAA$^{CC-3'}$ (SEQ ID NO: 6596)
3'-GUAAAGAUAGACAGAUAAAUAUGUU$_{UU-5'}$ (SEQ ID NO: 2160)

βc-m3305 Target: 5'-CATTTCTATCTGTCTATTTATACAAAA-3' (SEQ ID NO: 3269)

5'-CCAUUUCUAUCUGUCUAUUUAUACA$^{CC-3'}$ (SEQ ID NO: 6597)
3'-GGUAAAGAUAGACAGAUAAAUAUGU$_{UU-5'}$ (SEQ ID NO: 2161)

βc-m3306 Target: 5'-CCATTTCTATCTGTCTATTTATACAAA-3' (SEQ ID NO: 3270)

5'-CGGACCAUUUCUAUCUGUCUAUUUA$^{CC-3'}$ (SEQ ID NO: 6598)
3'-GCCUGGUAAAGAUAGACAGAUAAAU$_{AU-5'}$ (SEQ ID NO: 2162)

βc-m3310 Target: 5'-CGGACCATTTCTATCTGTCTATTTATA-3' (SEQ ID NO: 3271)

5'-UCGGACCAUUUCUAUCUGUCUAUUU$^{CC-3'}$ (SEQ ID NO: 6599)
3'-AGCCUGGUAAAGAUAGACAGAUAAA$_{UA-5'}$ (SEQ ID NO: 2163)

βc-m3311 Target: 5'-TCGGACCATTTCTATCTGTCTATTTAT-3' (SEQ ID NO: 3272)

5'-AAACUAAUCGGACCAUUUCUAUCUG$^{CA-3'}$ (SEQ ID NO: 6600)
3'-UUUGAUUAGCCUGGUAAAGAUAGAC$_{AG-5'}$ (SEQ ID NO: 2164)

βc-m3318 Target: 5'-AAACTAATCGGACCATTTCTATCTGTC-3' (SEQ ID NO: 3273)

5'-GAAACUAAUCGGACCAUUUCUAUCU$^{AC-3'}$ (SEQ ID NO: 6601)
3'-CUUUGAUUAGCCUGGUAAAGAUAGA$_{CA-5'}$ (SEQ ID NO: 2165)

βc-m3319 Target: 5'-GAAACTAATCGGACCATTTCTATCTGT-3' (SEQ ID NO: 3274)

5'-GGAAACUAAUCGGACCAUUUCUAUC$^{CA-3'}$ (SEQ ID NO: 6602)
3'-CCUUUGAUUAGCCUGGUAAAGAUAG$_{AC-5'}$ (SEQ ID NO: 2166)

βc-m3320 Target: 5'-GGAAACTAATCGGACCATTTCTATCTG-3' (SEQ ID NO: 3275)

5'-AGGAAACUAAUCGGACCAUUUCUAU$^{AC-3'}$ (SEQ ID NO: 6603)
3'-UCCUUUGAUUAGCCUGGUAAAGAUA$_{GA-5'}$ (SEQ ID NO: 2167)

βc-m3321 Target: 5'-AGGAAACTAATCGGACCATTTCTATCT-3' (SEQ ID NO: 3276)

5'-AUUAAAAAGGAAACUAAUCGGACCA^{C}$^{C-3'}$ (SEQ ID NO: 6604)
3'-UAAUUUUUCCUUUGAUUAGCCUGGU$_{A}$$_{A-5'}$ (SEQ ID NO: 2168)

βc-m3328 Target: 5'-ATTAAAAAGGAAACTAATCGGACCATT-3' (SEQ ID NO: 3277)

5'-AAGCAUAUUAAAAAGGAAACUAAUC^{A}$^{A-3'}$ (SEQ ID NO: 6605)
3'-UUCGUAUAAUUUUUCCUUUGAUUAG$_{C}$$_{C-5'}$ (SEQ ID NO: 2169)

βc-m3334 Target: 5'-AAGCATATTAAAAAGGAAACTAATCGG-3' (SEQ ID NO: 3278)

5'-UAAGCAUAUUAAAAAGGAAACUAAU^{A}$^{A-3'}$ (SEQ ID NO: 6606)
3'-AUUCGUAUAAUUUUUCCUUUGAUUA$_{G}$$_{C-5'}$ (SEQ ID NO: 2170)

βc-m3335 Target: 5'-TAAGCATATTAAAAAGGAAACTAATCG-3' (SEQ ID NO: 3279)

5'-AUUUUAAGCAUAUUAAAAAGGAAAC^{C}$^{C-3'}$ (SEQ ID NO: 6607)
3'-UAAAAUUCGUAUAAUUUUUCCUUUG$_{A}$$_{U-5'}$ (SEQ ID NO: 2171)

βc-m3339 Target: 5'-ATTTTAAGCATATTAAAAAGGAAACTA-3' (SEQ ID NO: 3280)

5'-CUGCUUAUUUUAAGCAUAUUAAAAA^{A}$^{A-3'}$ (SEQ ID NO: 6608)
3'-GACGAAUAAAAUUCGUAUAAUUUUU$_{C}$$_{C-5'}$ (SEQ ID NO: 2172)

βc-m3345 Target: 5'-CTGCTTATTTTAAGCATATTAAAAAGG-3' (SEQ ID NO: 3281)

5'-CCUGCUUAUUUUAAGCAUAUUAAAA^{C}$^{A-3'}$ (SEQ ID NO: 6609)
3'-GGACGAAUAAAAUUCGUAUAAUUUU$_{U}$$_{C-5'}$ (SEQ ID NO: 2173)

βc-m3346 Target: 5'-CCTGCTTATTTTAAGCATATTAAAAAG-3' (SEQ ID NO: 3282)

5'-GAUCCACCUGCUUAUUUUAAGCAUA^{C}$^{C-3'}$ (SEQ ID NO: 6610)
3'-CUAGGUGGACGAAUAAAAUUCGUAU$_{A}$$_{A-5'}$ (SEQ ID NO: 2174)

βc-m3352 Target: 5'-GATCCACCTGCTTATTTTAAGCATATT-3' (SEQ ID NO: 3283)

5'-CAAAAACAUGAAAUAGAUCCACCUG^{A}$^{C-3'}$ (SEQ ID NO: 6611)
3'-GUUUUUGUACUUUAUCUAGGUGGAC$_{G}$$_{A-5'}$ (SEQ ID NO: 2175)

βc-m3367 Target: 5'-CAAAAACATGAAATAGATCCACCTGCT-3' (SEQ ID NO: 3284)

5'-UCAAAAACAUGAAAUAGAUCCACCU^{A}$^{A-3'}$ (SEQ ID NO: 6612)
3'-AGUUUUUGUACUUUAUCUAGGUGGA$_{C}$$_{G-5'}$ (SEQ ID NO: 2176)

βc-m3368 Target: 5'-TCAAAAACATGAAATAGATCCACCTGC-3' (SEQ ID NO: 3285)

5'-GUUCAAAAACAUGAAAUAGAUCCAC^{A}$^{C-3'}$ (SEQ ID NO: 6613)
3'-CAAGUUUUUGUACUUUAUCUAGGUG$_{G}$$_{A-5'}$ (SEQ ID NO: 2177)

βc-m3370 Target: 5'-GTTCAAAAACATGAAATAGATCCACCT-3' (SEQ ID NO: 3286)

5'-UGUUCAAAAACAUGAAAUAGAUCCA^{A}$^{A-3'}$ (SEQ ID NO: 6614)

3'-ACAAGUUUUUGUACUUUAUCUAGGU$_{G-5'}$ (SEQ ID NO: 2178)

βc-m3371 Target: 5'-TGTTCAAAAACATGAAATAGATCCACC-3' (SEQ ID NO: 3287)

5'-UUGUUCAAAAACAUGAAAUAGAUCC$^{CA-3'}$ (SEQ ID NO: 6615)
3'-AACAAGUUUUUGUACUUUAUCUAGG$_{U_{G-5'}}$ (SEQ ID NO: 2179)

βc-m3372 Target: 5'-TTGTTCAAAAACATGAAATAGATCCAC-3' (SEQ ID NO: 3288)

5'-AGUUUUUGUUCAAAAACAUGAAAUA$^{AC-3'}$ (SEQ ID NO: 6616)
3'-UCAAAAACAAGUUUUUGUACUUUAU$_{C_{U-5'}}$ (SEQ ID NO: 2180)

βc-m3377 Target: 5'-AGTTTTTGTTCAAAAACATGAAATAGA-3' (SEQ ID NO: 3289)

5'-CGAUAAAGUUUUUGUUCAAAAACAU$^{AC-3'}$ (SEQ ID NO: 6617)
3'-GCUAUUUCAAAAACAAGUUUUUGUA$_{C_{U-5'}}$ (SEQ ID NO: 2181)

βc-m3383 Target: 5'-CGATAAAGTTTTTGTTCAAAAACATGA-3' (SEQ ID NO: 3290)

5'-UAUCCCCGAUAAAGUUUUUGUUCAA$^{CC-3'}$ (SEQ ID NO: 6618)
3'-AUAGGGGCUAUUUCAAAAACAAGUU$_{U_{U-5'}}$ (SEQ ID NO: 2182)

βc-m3389 Target: 5'-TATCCCCGATAAAGTTTTTGTTCAAAA-3' (SEQ ID NO: 3291)

5'-GUAUCCCCGAUAAAGUUUUUGUUCA$^{CC-3'}$ (SEQ ID NO: 6619)
3'-CAUAGGGGCUAUUUCAAAAACAAGU$_{U_{U-5'}}$ (SEQ ID NO: 2183)

βc-m3390 Target: 5'-GTATCCCCGATAAAGTTTTTGTTCAAA-3' (SEQ ID NO: 3292)

5'-ACACCUCUUACUGAUUUACCCUACC$^{AA-3'}$ (SEQ ID NO: 6620)
3'-UGUGGAGAAUGACUAAAUGGGAUGG$_{C_{G-5'}}$ (SEQ ID NO: 2184)

βc-m3419 Target: 5'-ACACCTCTTACTGATTTACCCTACCGC-3' (SEQ ID NO: 3293)

5'-UAACACCUCUUACUGAUUUACCCUA$^{AA-3'}$ (SEQ ID NO: 6621)
3'-AUUGUGGAGAAUGACUAAAUGGGAU$_{G_{G-5'}}$ (SEQ ID NO: 2185)

βc-m3421 Target: 5'-TAACACCTCTTACTGATTTACCCTACC-3' (SEQ ID NO: 3294)

5'-AUAACACCUCUUACUGAUUUACCCU$^{CA-3'}$ (SEQ ID NO: 6622)
3'-UAUUGUGGAGAAUGACUAAAUGGGA$_{U_{G-5'}}$ (SEQ ID NO: 2186)

βc-m3422 Target: 5'-ATAACACCTCTTACTGATTTACCCTAC-3' (SEQ ID NO: 3295)

5'-AAUAACACCUCUUACUGAUUUACCC$^{CC-3'}$ (SEQ ID NO: 6623)
3'-UUAUUGUGGAGAAUGACUAAAUGGG$_{A_{U-5'}}$ (SEQ ID NO: 2187)

βc-m3423 Target: 5'-AATAACACCTCTTACTGATTTACCCTA-3' (SEQ ID NO: 3296)

5'-AAAUAACACCUCUUACUGAUUUACC$^{AC-3'}$ (SEQ ID NO: 6624)
3'-UUUAUUGUGGAGAAUGACUAAAUGG$_{G_{A-5'}}$ (SEQ ID NO: 2188)

βc-m3424 Target: 5'-AAATAACACCTCTTACTGATTTACCCT-3' (SEQ ID NO: 3297)

5'-CAAAUAACACCUCUUACUGAUUUAC^{A}$^{A-3'}$ (SEQ ID NO: 6625)
3'-GUUUAUUGUGGAGAAUGACUAAAUG$_{G}$$_{G-5'}$ (SEQ ID NO: 2189)

βc-m3425 Target: 5'-CAAATAACACCTCTTACTGATTTACCC-3' (SEQ ID NO: 3298)

5'-AAGGCUCAAAUAACACCUCUUACUG^{C}$^{C-3'}$ (SEQ ID NO: 6626)
3'-UUCCGAGUUUAUUGUGGAGAAUGAC$_{U}$$_{A-5'}$ (SEQ ID NO: 2190)

βc-m3431 Target: 5'-AAGGCTCAAATAACACCTCTTACTGAT-3' (SEQ ID NO: 3299)

5'-AAAACAAGGCUCAAAUAACACCUCU^{C}$^{C-3'}$ (SEQ ID NO: 6627)
3'-UUUUGUUCCGAGUUUAUUGUGGAGA$_{A}$$_{U-5'}$ (SEQ ID NO: 2191)

βc-m3436 Target: 5'-AAAACAAGGCTCAAATAACACCTCTTA-3' (SEQ ID NO: 3300)

5'-CAAAACAAGGCUCAAAUAACACCUC^{C}$^{C-3'}$ (SEQ ID NO: 6628)
3'-GUUUUGUUCCGAGUUUAUUGUGGAG$_{A}$$_{A-5'}$ (SEQ ID NO: 2192)

βc-m3437 Target: 5'-CAAAACAAGGCTCAAATAACACCTCTT-3' (SEQ ID NO: 3301)

5'-CCAAAACAAGGCUCAAAUAACACCU^{A}$^{C-3'}$ (SEQ ID NO: 6629)
3'-GGUUUUGUUCCGAGUUUAUUGUGGA$_{G}$$_{A-5'}$ (SEQ ID NO: 2193)

βc-m3438 Target: 5'-CCAAAACAAGGCTCAAATAACACCTCT-3' (SEQ ID NO: 3302)

5'-UGUCCAAAACAAGGCUCAAAUAACA^{A}$^{A-3'}$ (SEQ ID NO: 6630)
3'-ACAGGUUUUGUUCCGAGUUUAUUGU$_{G}$$_{G-5'}$ (SEQ ID NO: 2194)

βc-m3441 Target: 5'-TGTCCAAAACAAGGCTCAAATAACACC-3' (SEQ ID NO: 3303)

5'-ACUGUCCAAAACAAGGCUCAAAUAA^{A}$^{C-3'}$ (SEQ ID NO: 6631)
3'-UGACAGGUUUUGUUCCGAGUUUAUU$_{G}$$_{U-5'}$ (SEQ ID NO: 2195)

βc-m3443 Target: 5'-ACTGTCCAAAACAAGGCTCAAATAACA-3' (SEQ ID NO: 3304)

5'-GGUAUACUGUCCAAAACAAGGCUCA^{C}$^{C-3'}$ (SEQ ID NO: 6632)
3'-CCAUAUGACAGGUUUUGUUCCGAGU$_{U}$$_{U-5'}$ (SEQ ID NO: 2196)

βc-m3448 Target: 5'-GGTATACTGTCCAAAACAAGGCTCAAA-3' (SEQ ID NO: 3305)

5'-AGGCAACUGGUAUACUGUCCAAAAC^{C}$^{C-3'}$ (SEQ ID NO: 6633)
3'-UCCGUUGACCAUAUGACAGGUUUUG$_{U}$$_{U-5'}$ (SEQ ID NO: 2197)

βc-m3456 Target: 5'-AGGCAACTGGTATACTGTCCAAAACAA-3' (SEQ ID NO: 3306)

5'-GGGAUAAAAGGCAACUGGUAUACUG^{C}$^{A-3'}$ (SEQ ID NO: 6634)
3'-CCCUAUUUUCCGUUGACCAUAUGAC$_{A}$$_{G-5'}$ (SEQ ID NO: 2198)

βc-m3464 Target: 5'-GGGATAAAAGGCAACTGGTATACTGTC-3' (SEQ ID NO: 3307)

5'-UGGGAUAAAAGGCAACUGGUAUACU^{A}$^{C-3'}$ (SEQ ID NO: 6635)
3'-ACCCUAUUUUCCGUUGACCAUAUGA$_{C}$$_{A-5'}$ (SEQ ID NO: 2199)

βc-m3465 Target: 5'-TGGGATAAAAGGCAACTGGTATACTGT-3' (SEQ ID NO: 3308)

5'-ACAACUUUGGGAUAAAAGGCAACUG$^{AC-3'}$ (SEQ ID NO: 6636)
3'-UGUUGAAACCCUAUUUUCCGUUGAC$_{CA-5'}$ (SEQ ID NO: 2200)

βc-m3472 Target: 5'-ACAACTTTGGGATAAAAGGCAACTGGT-3' (SEQ ID NO: 3309)

5'-CAACAACUUUGGGAUAAAAGGCAAC$^{CA-3'}$ (SEQ ID NO: 6637)
3'-GUUGUUGAAACCCUAUUUUCCGUUG$_{AC-5'}$ (SEQ ID NO: 2201)

βc-m3474 Target: 5'-CAACAACTTTGGGATAAAAGGCAACTG-3' (SEQ ID NO: 3310)

5'-GGUUACAACAACUUUGGGAUAAAAG$^{AA-3'}$ (SEQ ID NO: 6638)
3'-CCAAUGUUGUUGAAACCCUAUUUUC$_{CG-5'}$ (SEQ ID NO: 2202)

βc-m3479 Target: 5'-GGTTACAACAACTTTGGGATAAAAGGC-3' (SEQ ID NO: 3311)

5'-AGGUUACAACAACUUUGGGAUAAAA$^{AA-3'}$ (SEQ ID NO: 6639)
3'-UCCAAUGUUGUUGAAACCCUAUUUU$_{CC-5'}$ (SEQ ID NO: 2203)

βc-m3480 Target: 5'-AGGTTACAACAACTTTGGGATAAAAGG-3' (SEQ ID NO: 3312)

5'-CAGGUUACAACAACUUUGGGAUAAA$^{CA-3'}$ (SEQ ID NO: 6640)
3'-GUCCAAUGUUGUUGAAACCCUAUUU$_{UC-5'}$ (SEQ ID NO: 2204)

βc-m3481 Target: 5'-CAGGTTACAACAACTTTGGGATAAAAG-3' (SEQ ID NO: 3313)

5'-UAUCACAGCAGGUUACAACAACUUU$^{AA-3'}$ (SEQ ID NO: 6641)
3'-AUAGUGUCGUCCAAUGUUGUUGAAA$_{CC-5'}$ (SEQ ID NO: 2205)

βc-m3489 Target: 5'-TATCACAGCAGGTTACAACAACTTTGG-3' (SEQ ID NO: 3314)

5'-GUAUCACAGCAGGUUACAACAACUU$^{CA-3'}$ (SEQ ID NO: 6642)
3'-CAUAGUGUCGUCCAAUGUUGUUGAA$_{AC-5'}$ (SEQ ID NO: 2206)

βc-m3490 Target: 5'-GTATCACAGCAGGTTACAACAACTTTG-3' (SEQ ID NO: 3315)

5'-UUGUAUCACAGCAGGUUACAACAAC$^{CC-3'}$ (SEQ ID NO: 6643)
3'-AACAUAGUGUCGUCCAAUGUUGUUG$_{AA-5'}$ (SEQ ID NO: 2207)

βc-m3492 Target: 5'-TTGTATCACAGCAGGTTACAACAACTT-3' (SEQ ID NO: 3316)

5'-CCGCAUCUGUUGAAGCAUUGUAUCA$^{AC-3'}$ (SEQ ID NO: 6644)
3'-GGCGUAGACAACUUCGUAACAUAGU$_{GU-5'}$ (SEQ ID NO: 2208)

βc-m3509 Target: 5'-CCGCATCTGTTGAAGCATTGTATCACA-3' (SEQ ID NO: 3317)

5'-UCUGAACCAUUUCUAUAACCGCAUC$^{CA-3'}$ (SEQ ID NO: 6645)
3'-AGACUUGGUAAAGAUAUUGGCGUAG$_{AC-5'}$ (SEQ ID NO: 2209)

βc-m3527 Target: 5'-TCTGAACCATTTCTATAACCGCATCTG-3' (SEQ ID NO: 3318)

5'-UAAUUCUGAACCAUUUCUAUAACCG$^{AC-3'}$ (SEQ ID NO: 6646)

3'-AUUAAGACUUGGUAAAGAUAUUGGC$_{G_{U-5'}}$ (SEQ ID NO: 2210)

βc-m3531 Target: 5'-TAATTCTGAACCATTTCTATAACCGCA-3' (SEQ ID NO: 3319)

5'-UUUAAUUCUGAACCAUUUCUAUAAC$^{A^{A-3'}}$ (SEQ ID NO: 6647)
3'-AAAUUAAGACUUGGUAAAGAUAUUG$_{G_{C-5'}}$ (SEQ ID NO: 2211)

βc-m3533 Target: 5'-TTTAATTCTGAACCATTTCTATAACCG-3' (SEQ ID NO: 3320)

5'-GUUUAAUUCUGAACCAUUUCUAUAA$^{A^{A-3'}}$ (SEQ ID NO: 6648)
3'-CAAAUUAAGACUUGGUAAAGAUAUU$_{G_{G-5'}}$ (SEQ ID NO: 2212)

βc-m3534 Target: 5'-GTTTAATTCTGAACCATTTCTATAACC-3' (SEQ ID NO: 3321)

5'-AGUUUAAUUCUGAACCAUUUCUAUA$^{C^{A-3'}}$ (SEQ ID NO: 6649)
3'-UCAAAUUAAGACUUGGUAAAGAUAU$_{U_{G-5'}}$ (SEQ ID NO: 2213)

βc-m3535 Target: 5'-AGTTTAATTCTGAACCATTTCTATAAC-3' (SEQ ID NO: 3322)

5'-AAGUUUAAUUCUGAACCAUUUCUAU$^{C^{C-3'}}$ (SEQ ID NO: 6650)
3'-UUCAAAUUAAGACUUGGUAAAGAUA$_{U_{U-5'}}$ (SEQ ID NO: 2214)

βc-m3536 Target: 5'-AAGTTTAATTCTGAACCATTTCTATAA-3' (SEQ ID NO: 3323)

5'-AUUAAAAGUUUAAUUCUGAACCAUU$^{C^{A-3'}}$ (SEQ ID NO: 6651)
3'-UAAUUUUCAAAUUAAGACUUGGUAA$_{A_{G-5'}}$ (SEQ ID NO: 2215)

βc-m3541 Target: 5'-ATTAAAAGTTTAATTCTGAACCATTTC-3' (SEQ ID NO: 3324)

5'-AAUUAAAAGUUUAAUUCUGAACCAU$^{C^{C-3'}}$ (SEQ ID NO: 6652)
3'-UUAAUUUUCAAAUUAAGACUUGGUA$_{A_{A-5'}}$ (SEQ ID NO: 2216)

βc-m3542 Target: 5'-AATTAAAAGTTTAATTCTGAACCATTT-3' (SEQ ID NO: 3325)

5'-UGAAUUAAAAGUUUAAUUCUGAACC$^{C^{C-3'}}$ (SEQ ID NO: 6653)
3'-ACUUAAUUUUCAAAUUAAGACUUGG$_{U_{A-5'}}$ (SEQ ID NO: 2217)

βc-m3544 Target: 5'-TGAATTAAAAGTTTAATTCTGAACC-3' (SEQ ID NO: 3326)

5'-UUUGAAUGAAUUAAAAGUUUAAUUC$^{C^{A-3'}}$ (SEQ ID NO: 6654)
3'-AAACUUACUUAAUUUUCAAAUUAAG$_{A_{C-5'}}$ (SEQ ID NO: 2218)

βc-m3550 Target: 5'-TTTGAATGAATTAAAAGTTTAATTCTG-3' (SEQ ID NO: 3327)

5'-UUUUUUUGAAUGAAUUAAAAGUUUA$^{C^{C-3'}}$ (SEQ ID NO: 6655)
3'-AAAAAAACUUACUUAAUUUUCAAAU$_{U_{A-5'}}$ (SEQ ID NO: 2219)

βc-m3554 Target: 5'-TTTTTTTGAATGAATTAAAAGTTTAAT-3' (SEQ ID NO: 3328)

5'-UUUUUUUUUUUGAAUGAAUUAAAAG$^{C^{C-3'}}$ (SEQ ID NO: 6656)
3'-AAAAAAAAAAACUUACUUAAUUUUC$_{A_{A-5'}}$ (SEQ ID NO: 2220)

βc-m3558 Target: 5'-TTTTTTTTTTTGAATGAATTAAAAGTT-3' (SEQ ID NO: 3329)

5'-UUUUUUUUUUUUGAAUGAAUUAAAA$^{AC-3'}$ (SEQ ID NO: 6657)
3'-AAAAAAAAAAAACUUACUUAAUUUU$_{CA-5'}$ (SEQ ID NO: 2221)

βc-m3559 Target: 5'-TTTTTTTTTTTTGAATGAATTAAAAGT-3' (SEQ ID NO: 3330)

5'-UUUUUUUUUUUUUGAAUGAAUUAAA$^{CA-3'}$ (SEQ ID NO: 6658)
3'-AAAAAAAAAAAAACUUACUUAAUUU$_{UC-5'}$ (SEQ ID NO: 2222)

βc-m3560 Target: 5'-TTTTTTTTTTTTTGAATGAATTAAAAG-3' (SEQ ID NO: 3331)

5'-UUUUUUUUUUUUUUUGAAUGAAUUAA$^{CC-3'}$ (SEQ ID NO: 6659)
3'-AAAAAAAAAAAAAACUUACUUAAUU$_{UU-5'}$ (SEQ ID NO: 2223)

βc-m3561 Target: 5'-TTTTTTTTTTTTTTGAATGAATTAAAA-3' (SEQ ID NO: 3332)

5'-UUUUUUUUUUUUUUUUGAAUGAAUUA$^{CC-3'}$ (SEQ ID NO: 6660)
3'-AAAAAAAAAAAAAAACUUACUUAAU$_{UU-5'}$ (SEQ ID NO: 2224)

βc-m3562 Target: 5'-TTTTTTTTTTTTTTTGAATGAATTAAA-3' (SEQ ID NO: 3333)

5'-UUUUUUUUUUUUUUUUUGAAUGAAUU$^{CC-3'}$ (SEQ ID NO: 6661)
3'-AAAAAAAAAAAAAAAACUUACUUAA$_{UU-5'}$ (SEQ ID NO: 2225)

βc-m3563 Target: 5'-TTTTTTTTTTTTTTTTGAATGAATTAA-3' (SEQ ID NO: 3334)

Table 13: Additional Selected Anti-β-catenin DsiRNAs, Blunt, Unfrayed Duplexes

5'-GUUGUAUGGUAUACUUCAAAUACCCUC-3' (SEQ ID NO: 7150)
3'-CAACAUACCAUAUGAAGUUUAUGGGAG-5' (SEQ ID NO: 1605)

βc-244 Target: 5'-GTTGTATGGTATACTTCAAATACCCTC-3' (SEQ ID NO: 2714)

5'-CAAAACAGUUGUAUGGUAUACUUCAAA-3' (SEQ ID NO: 7151)
3'-GUUUUGUCAACAUACCAUAUGAAGUUU-5' (SEQ ID NO: 1606)

βc-251 Target: 5'-CAAAACAGTTGTATGGTATACTTCAAA-3' (SEQ ID NO: 2715)

5'-UCAAAACAGUUGUAUGGUAUACUUCAA-3' (SEQ ID NO: 7152)
3'-AGUUUUGUCAACAUACCAUAUGAAGUU-5' (SEQ ID NO: 1607)

βc-252 Target: 5'-TCAAAACAGTTGTATGGTATACTTCAA-3' (SEQ ID NO: 2716)

5'-UUUCAAAACAGUUGUAUGGUAUACUUC-3' (SEQ ID NO: 7153)
3'-AAAGUUUUGUCAACAUACCAUAUGAAG-5' (SEQ ID NO: 1608)

βc-254 Target: 5'-TTTCAAAACAGTTGTATGGTATACTTC-3' (SEQ ID NO: 2717)

5'-UUUUCAAAACAGUUGUAUGGUAUACUU-3' (SEQ ID NO: 7154)
3'-AAAAGUUUUGUCAACAUACCAUAUGAA-5' (SEQ ID NO: 1609)

βc-255 Target: 5'-TTTTCAAAACAGTTGTATGGTATACTT-3' (SEQ ID NO: 2718)

5'-AUUUUCAAAACAGUUGUAUGGUAUACU-3' (SEQ ID NO: 7155)
3'-UAAAAGUUUUGUCAACAUACCAUAUGA-5' (SEQ ID NO: 1610)

βc-256 Target: 5'-ATTTTCAAAACAGTTGTATGGTATACT-3' (SEQ ID NO: 2719)

5'-UUGUCCACGCUGGAUUUUCAAAACAGU-3' (SEQ ID NO: 7156)
3'-AACAGGUGCGACCUAAAAGUUUUGUCA-5' (SEQ ID NO: 1611)

βc-269 Target: 5'-TTGTCCACGCTGGATTTTCAAAACAGT-3' (SEQ ID NO: 2720)

5'-AUUGUCCACGCUGGAUUUUCAAAACAG-3' (SEQ ID NO: 7157)
3'-UAACAGGUGCGACCUAAAAGUUUUGUC-5' (SEQ ID NO: 1612)

βc-270 Target: 5'-ATTGTCCACGCTGGATTTTCAAAACAG-3' (SEQ ID NO: 2721)

5'-CCAUCAAAUCAGCUUGAGUAGCCAUUG-3' (SEQ ID NO: 7158)
3'-GGUAGUUUAGUCGAACUCAUCGGUAAC-5' (SEQ ID NO: 1613)

βc-293 Target: 5'-CCATCAAATCAGCTTGAGTAGCCATTG-3' (SEQ ID NO: 2722)

5'-UGUCCAACUCCAUCAAAUCAGCUUGAG-3' (SEQ ID NO: 7159)
3'-ACAGGUUGAGGUAGUUUAGUCGAACUC-5' (SEQ ID NO: 1614)

βc-302 Target: 5'-TGTCCAACTCCATCAAATCAGCTTGAG-3' (SEQ ID NO: 2723)

5'-CUUCCUCAGGAUUGCCUUUACCACUCA-3' (SEQ ID NO: 7160)
3'-GAAGGAGUCCUAACGGAAAUGGUGAGU-5' (SEQ ID NO: 1615)

βc-431 Target: 5'-CTTCCTCAGGATTGCCTTTACCACTCA-3' (SEQ ID NO: 2724)

5'-UCUUCCUCAGGAUUGCCUUUACCACUC-3' (SEQ ID NO: 7161)
3'-AGAAGGAGUCCUAACGGAAAUGGUGAG-5' (SEQ ID NO: 1616)

βc-432 Target: 5'-TCTTCCTCAGGATTGCCTTTACCACTC-3' (SEQ ID NO: 2725)

5'-CAUCAAUAUCAGCUACUUGUUCUUGAG-3' (SEQ ID NO: 7162)
3'-GUAGUUAUAGUCGAUGAACAAGAACUC-5' (SEQ ID NO: 1617)

βc-518 Target: 5'-CATCAATATCAGCTACTTGTTCTTGAG-3' (SEQ ID NO: 2726)

5'-CCAUCAAUAUCAGCUACUUGUUCUUGA-3' (SEQ ID NO: 7163)
3'-GGUAGUUAUAGUCGAUGAACAAGAACU-5' (SEQ ID NO: 1618)

βc-519 Target: 5'-CCATCAATATCAGCTACTTGTTCTTGA-3' (SEQ ID NO: 2727)

5'-ACUGUCCAUCAAUAUCAGCUACUUGUU-3' (SEQ ID NO: 7164)
3'-UGACAGGUAGUUAUAGUCGAUGAACAA-5' (SEQ ID NO: 1619)

βc-524 Target: 5'-ACTGTCCATCAATATCAGCTACTTGTT-3' (SEQ ID NO: 2728)

5'-AUUGCAUACUGUCCAUCAAUAUCAGCU-3' (SEQ ID NO: 7165)
3'-UAACGUAUGACAGGUAGUUAUAGUCGA-5' (SEQ ID NO: 1620)

βc-531 Target: 5'-ATTGCATACTGTCCATCAATATCAGCT-3' (SEQ ID NO: 2729)

5'-CGAGUCAUUGCAUACUGUCCAUCAAUA-3' (SEQ ID NO: 7166)
3'-GCUCAGUAACGUAUGACAGGUAGUUAU-5' (SEQ ID NO: 1621)

βc-537 Target: 5'-CGAGTCATTGCATACTGTCCATCAATA-3' (SEQ ID NO: 2730)

5'-CCUCAUCUAAUGUCUCAGGGAACAUAG-3' (SEQ ID NO: 7167)
3'-GGAGUAGAUUACAGAGUCCCUUGUAUC-5' (SEQ ID NO: 1622)

βc-584 Target: 5'-CCTCATCTAATGTCTCAGGGAACATAG-3' (SEQ ID NO: 2731)

5'-UUACAACUGCAUGUUUCAGCAUCUGUG-3' (SEQ ID NO: 7168)
3'-AAUGUUGACGUACAAAGUCGUAGACAC-5' (SEQ ID NO: 1623)

βc-680 Target: 5'-TTACAACTGCATGTTTCAGCATCTGTG-3' (SEQ ID NO: 2732)

5'-GUUUACAACUGCAUGUUUCAGCAUCUG-3' (SEQ ID NO: 7169)
3'-CAAAUGUUGACGUACAAAGUCGUAGAC-5' (SEQ ID NO: 1624)

βc-682 Target: 5'-GTTTACAACTGCATGTTTCAGCATCTG-3' (SEQ ID NO: 2733)

5'-AGUUAAUCAAGUUUACAACUGCAUGUU-3' (SEQ ID NO: 7170)
3'-UCAAUUAGUUCAAAUGUUGACGUACAA-5' (SEQ ID NO: 1625)

βc-692 Target: 5'-AGTTAATCAAGTTTACAACTGCATGTT-3' (SEQ ID NO: 2734)

5'-CUUGAUAGUUAAUCAAGUUUACAACUG-3' (SEQ ID NO: 7171)
3'-GAACUAUCAAUUAGUUCAAAUGUUGAC-5' (SEQ ID NO: 1626)

βc-698 Target: 5'-CTTGATAGTTAATCAAGTTTACAACTG-3' (SEQ ID NO: 2735)

5'-CUGCAUCAUCUUGAUAGUUAAUCAAGU-3' (SEQ ID NO: 7172)
3'-GACGUAGUAGAACUAUCAAUUAGUUCA-5' (SEQ ID NO: 1627)

βc-707 Target: 5'-CTGCATCATCTTGATAGTTAATCAAGT-3' (SEQ ID NO: 2736)

5'-UCUGCAUCAUCUUGAUAGUUAAUCAAG-3' (SEQ ID NO: 7173)
3'-AGACGUAGUAGAACUAUCAAUUAGUUC-5' (SEQ ID NO: 1628)

βc-708 Target: 5'-TCTGCATCATCTTGATAGTTAATCAAG-3' (SEQ ID NO: 2737)

5'-CUGGUCCUCGUCAUUUAGCAGUUUUGU-3' (SEQ ID NO: 7174)
3'-GACCAGGAGCAGUAAAUCGUCAAAACA-5' (SEQ ID NO: 1629)

βc-763 Target: 5'-CTGGTCCTCGTCATTTAGCAGTTTTGT-3' (SEQ ID NO: 2738)

5'-CAUAACUGCAGCCUUAUUAACCACCAC-3' (SEQ ID NO: 7175)
3'-GUAUUGACGUCGGAAUAAUUGGUGGUG-5' (SEQ ID NO: 1630)

βc-790 Target: 5'-CATAACTGCAGCCTTATTAACCACCAC-3' (SEQ ID NO: 2739)

5'-CCAUAACUGCAGCCUUAUUAACCACCA-3' (SEQ ID NO: 7176)
3'-GGUAUUGACGUCGGAAUAAUUGGUGGU-5' (SEQ ID NO: 1631)

βc-791 Target: 5'-CCATAACTGCAGCCTTATTAACCACCA-3' (SEQ ID NO: 2740)

5'-GGACCAUAACUGCAGCCUUAUUAACCA-3' (SEQ ID NO: 7177)
3'-CCUGGUAUUGACGUCGGAAUAAUUGGU-5' (SEQ ID NO: 1632)

βc-794 Target: 5'-GGACCATAACTGCAGCCTTATTAACCA-3' (SEQ ID NO: 2741)

5'-CCUUUUUAGAAAGCUGAUGGACCAUAA-3' (SEQ ID NO: 7178)
3'-GGAAAAAUCUUUCGACUACCUGGUAUU-5' (SEQ ID NO: 1633)

βc-812 Target: 5'-CCTTTTTAGAAAGCTGATGGACCATAA-3' (SEQ ID NO: 2742)

5'-AUGGUACGUACAAUAGCAGACACCAUC-3' (SEQ ID NO: 7179)
3'-UACCAUGCAUGUUAUCGUCUGUGGUAG-5' (SEQ ID NO: 1634)

βc-873 Target: 5'-ATGGTACGTACAATAGCAGACACCATC-3' (SEQ ID NO: 2743)

5'-CAUCAUUUGUAUUCUGCAUGGUACGUA-3' (SEQ ID NO: 7180)
3'-GUAGUAAACAUAAGACGUACCAUGCAU-5' (SEQ ID NO: 1635)

βc-890 Target: 5'-CATCATTTGTATTCTGCATGGTACGTA-3' (SEQ ID NO: 2744)

5'-CUGUUUCUACAUCAUUUGUAUUCUGCA-3' (SEQ ID NO: 7181)
3'-GACAAAGAUGUAGUAAACAUAAGACGU-5' (SEQ ID NO: 1636)

βc-899 Target: 5'-CTGTTTCTACATCATTTGTATTCTGCA-3' (SEQ ID NO: 2745)

5'-GCUGUUUCUACAUCAUUUGUAUUCUGC-3' (SEQ ID NO: 7182)
3'-CGACAAAGAUGUAGUAAACAUAAGACG-5' (SEQ ID NO: 1637)

βc-900 Target: 5'-GCTGTTTCTACATCATTTGTATTCTGC-3' (SEQ ID NO: 2746)

5'-GUACAACGAGCUGUUUCUACAUCAUUU-3' (SEQ ID NO: 7183)
3'-CAUGUUGCUCGACAAAGAUGUAGUAAA-5' (SEQ ID NO: 1638)

βc-909 Target: 5'-GTACAACGAGCTGTTTCTACATCATTT-3' (SEQ ID NO: 2747)

5'-CGGUACAACGAGCUGUUUCUACAUCAU-3' (SEQ ID NO: 7184)
3'-GCCAUGUUGCUCGACAAAGAUGUAGUA-5' (SEQ ID NO: 1639)

βc-911 Target: 5'-CGGTACAACGAGCTGTTTCTACATC-3' (SEQ ID NO: 2748)

5'-GCGGUACAACGAGCUGUUUCUACAUCA-3' (SEQ ID NO: 7185)
3'-CGCCAUGUUGCUCGACAAAGAUGUAGU-5' (SEQ ID NO: 1640)

βc-912 Target: 5'-GCGGTACAACGAGCTGTTTCTACATCA-3' (SEQ ID NO: 2749)

5'-GCAUAAAACAACACAGAAUCCACUGGU-3' (SEQ ID NO: 7186)
3'-CGUAUUUUGUUGUGUCUUAGGUGACCA-5' (SEQ ID NO: 1641)

βc-1032 Target: 5'-GCATAAAACAACACAGAATCCACTGGT-3' (SEQ ID NO: 2750)

5'-UGGCAUAAAACAACACAGAAUCCACUG-3' (SEQ ID NO: 7187)
3'-ACCGUAUUUUGUUGUGUCUUAGGUGAC-5' (SEQ ID NO: 1642)

βc-1034 Target: 5'-TGGCATAAAACAACACAGAATCCACTG-3' (SEQ ID NO: 2751)

5'-AUGGCAUAAAACAACACAGAAUCCACU-3' (SEQ ID NO: 7188)
3'-UACCGUAUUUUGUUGUGUCUUAGGUGA-5' (SEQ ID NO: 1643)

βc-1035 Target: 5'-ATGGCATAAAACAACACAGAATCCACT-3' (SEQ ID NO: 2752)

5'-UAGCUCCUUCUUGAUGUAAUAAAAGGU-3' (SEQ ID NO: 7189)
3'-AUCGAGGAAGAACUACAUUAUUUUCCA-5' (SEQ ID NO: 1644)

βc-1076 Target: 5'-TAGCTCCTTCTTGATGTAATAAAAGGT-3' (SEQ ID NO: 2753)

5'-UUAGCUCCUUCUUGAUGUAAUAAAAGG-3' (SEQ ID NO: 7190)
3'-AAUCGAGGAAGAACUACAUUAUUUUCC-5' (SEQ ID NO: 1645)

βc-1077 Target: 5'-TTAGCTCCTTCTTGATGTAATAAAAGG-3' (SEQ ID NO: 2754)

5'-UUUAACAUUUGUUUUGUUGAGCAAGGC-3' (SEQ ID NO: 7191)
3'-AAAUUGUAAACAAAACAACUCGUUCCG-5' (SEQ ID NO: 1646)

βc-1144 Target: 5'-TTTAACATTTGTTTTGTTGAGCAAGGC-3' (SEQ ID NO: 2755)

5'-UAGCCAAGAAUUUAACAUUUGUUUUGU-3' (SEQ ID NO: 7192)
3'-AUCGGUUCUUAAAUUGUAAACAAAACA-5' (SEQ ID NO: 1647)

βc-1154 Target: 5'-TAGCCAAGAATTTAACATTTGTTTTGT-3' (SEQ ID NO: 2756)

5'-CGUAAUAGCCAAGAAUUUAACAUUUGU-3' (SEQ ID NO: 7193)
3'-GCAUUAUCGGUUCUUAAAUUGUAAACA-5' (SEQ ID NO: 1648)

βc-1159 Target: 5'-CGTAATAGCCAAGAATTTAACATTTGT-3' (SEQ ID NO: 2757)

5'-UCGUAAUAGCCAAGAAUUUAACAUUUG-3' (SEQ ID NO: 7194)
3'-AGCAUUAUCGGUUCUUAAAUUGUAAAC-5' (SEQ ID NO: 1649)

βc-1160 Target: 5'-TCGTAATAGCCAAGAATTTAACATTTG-3' (SEQ ID NO: 2758)

5'-UAAGCUAAAAUUUGAAGGCAGUCUGUC-3' (SEQ ID NO: 7195)
3'-AUUCGAUUUUAAACUUCCGUCAGACAG-5' (SEQ ID NO: 1650)

βc-1185 Target: 5'-TAAGCTAAAATTTGAAGGCAGTCTGTC-3' (SEQ ID NO: 2759)

5'-UAGGUCCUCAUUAUAUUUACUAAAGCU-3' (SEQ ID NO: 7196)
3'-AUCCAGGAGUAAUAUAAAUGAUUUCGA-5' (SEQ ID NO: 1651)

βc-1260 Target: 5'-TAGGTCCTCATTATATTTACTAAAGCT-3' (SEQ ID NO: 2760)

5'-AAGUAUAGGUCCUCAUUAUAUUUACUA-3' (SEQ ID NO: 7197)
3'-UUCAUAUCCAGGAGUAAUAUAAAUGAU-5' (SEQ ID NO: 1652)

βc-1265 Target: 5'-AAGTATAGGTCCTCATTATATTTACTA-3' (SEQ ID NO: 2761)

5'-UAAGUAUAGGUCCUCAUUAUAUUUACU-3' (SEQ ID NO: 7198)
3'-AUUCAUAUCCAGGAGUAAUAUAAAUGA-5' (SEQ ID NO: 1653)

βc-1266 Target: 5'-TAAGTATAGGTCCTCATTATATTTACT-3' (SEQ ID NO: 2762)

5'-GUUUUUCGUAAGUAUAGGUCCUCAUUA-3' (SEQ ID NO: 7199)
3'-CAAAAAGCAUUCAUAUCCAGGAGUAAU-5' (SEQ ID NO: 1654)

βc-1274 Target: 5'-GTTTTTCGTAAGTATAGGTCCTCATTA-3' (SEQ ID NO: 2763)

5'-AGUUUUUCGUAAGUAUAGGUCCUCAUU-3' (SEQ ID NO: 7200)
3'-UCAAAAAGCAUUCAUAUCCAGGAGUAA-5' (SEQ ID NO: 1655)

βc-1275 Target: 5'-AGTTTTTCGTAAGTATAGGTCCTCATT-3' (SEQ ID NO: 2764)

5'-UAGUUUUUCGUAAGUAUAGGUCCUCAU-3' (SEQ ID NO: 7201)
3'-AUCAAAAAGCAUUCAUAUCCAGGAGUA-5' (SEQ ID NO: 1656)

βc-1276 Target: 5'-TAGTTTTTCGTAAGTATAGGTCCTC-3' (SEQ ID NO: 2765)

5'-GUAGUUUUUCGUAAGUAUAGGUCCUCA-3' (SEQ ID NO: 7202)
3'-CAUCAAAAAGCAUUCAUAUCCAGGAGU-5' (SEQ ID NO: 1657)

βc-1277 Target: 5'-GTAGTTTTTCGTAAGTATAGGTCCTCA-3' (SEQ ID NO: 2766)

5'-GUGGUCCACAGUAGUUUUUCGUAAGUA-3' (SEQ ID NO: 7203)
3'-CACCAGGUGUCAUCAAAAAGCAUUCAU-5' (SEQ ID NO: 1658)

βc-1287 Target: 5'-GTGGTCCACAGTAGTTTTTCGTAAGTA-3' (SEQ ID NO: 2767)

5'-UCUACAAUAGCCGGCUUAUUACUAGAG-3' (SEQ ID NO: 7204)
3'-AGAUGUUAUCGGCCGAAUAAUGAUCUC-5' (SEQ ID NO: 1659)

βc-1344 Target: 5'-TCTACAATAGCCGGCTTATTACTAGAG-3' (SEQ ID NO: 2768)

5'-CUUCUACAAUAGCCGGCUUAUUACUAG-3' (SEQ ID NO: 7205)
3'-GAAGAUGUUAUCGGCCGAAUAAUGAUC-5' (SEQ ID NO: 1660)

βc-1346 Target: 5'-CTTCTACAATAGCCGGCTTATTACTAG-3' (SEQ ID NO: 2769)

5'-AGUCCUAAAGCUUGCAUUCCACCAGCU-3' (SEQ ID NO: 7206)
3'-UCAGGAUUUCGAACGUAAGGUGGUCGA-5' (SEQ ID NO: 1661)

βc-1371 Target: 5'-AGTCCTAAAGCTTGCATTCCACCAGCT-3' (SEQ ID NO: 2770)

5'-AAGUCCUAAAGCUUGCAUUCCACCAGC-3' (SEQ ID NO: 7207)
3'-UUCAGGAUUUCGAACGUAAGGUGGUCG-5' (SEQ ID NO: 1662)

βc-1372 Target: 5'-AAGTCCTAAAGCTTGCATTCCACCAGC-3' (SEQ ID NO: 2771)

5'-GAAGUCCUAAAGCUUGCAUUCCACCAG-3' (SEQ ID NO: 7208)
3'-CUUCAGGAUUUCGAACGUAAGGUGGUC-5' (SEQ ID NO: 1663)

βc-1373 Target: 5'-GAAGTCCTAAAGCTTGCATTCCACCAG-3' (SEQ ID NO: 2772)

5'-CAGUUCUGAACAAGACGUUGACUUGGA-3' (SEQ ID NO: 7209)
3'-GUCAAGACUUGUUCUGCAACUGAACCU-5' (SEQ ID NO: 1664)

βc-1410 Target: 5'-CAGTTCTGAACAAGACGTTGACTTGGA-3' (SEQ ID NO: 2773)

5'-ACAGUUCUGAACAAGACGUUGACUUGG-3' (SEQ ID NO: 7210)
3'-UGUCAAGACUUGUUCUGCAACUGAACC-5' (SEQ ID NO: 1665)

βc-1411 Target: 5'-ACAGTTCTGAACAAGACGTTGACTTGG-3' (SEQ ID NO: 2774)

5'-GAGUCCAAAGACAGUUCUGAACAAGAC-3' (SEQ ID NO: 7211)
3'-CUCAGGUUUCUGUCAAGACUUGUUCUG-5' (SEQ ID NO: 1666)

βc-1421 Target: 5'-GAGTCCAAAGACAGTTCTGAACAAGAC-3' (SEQ ID NO: 2775)

5'-CCUUCCUGUUUAGUUGCAGCAUCUGAA-3' (SEQ ID NO: 7212)
3'-GGAAGGACAAAUCAACGUCGUAGACUU-5' (SEQ ID NO: 1667)

βc-1458 Target: 5'-CCTTCCTGTTTAGTTGCAGCATCTGAA-3' (SEQ ID NO: 2776)

5'-CCACAUUUAUAUCAUCUGAACCCAGAA-3' (SEQ ID NO: 7213)
3'-GGUGUAAAUAUAGUAGACUUGGGUCUU-5' (SEQ ID NO: 1668)

βc-1517 Target: 5'-CCACATTTATATCATCTGAACCCAGAA-3' (SEQ ID NO: 2777)

5'-UGACCACAUUUAUAUCAUCUGAACCCA-3' (SEQ ID NO: 7214)
3'-ACUGGUGUAAAUAUAGUAGACUUGGGU-5' (SEQ ID NO: 1669)

βc-1520 Target: 5'-TGACCACATTTATATCATCTGAACCCA-3' (SEQ ID NO: 2778)

5'-CUGCACAGGUGACCACAUUUAUAUCAU-3' (SEQ ID NO: 7215)
3'-GACGUGUCCACUGGUGUAAAUAUAGUA-5' (SEQ ID NO: 1670)

βc-1529 Target: 5'-CTGCACAGGTGACCACATTTATATC-3' (SEQ ID NO: 2779)

5'-GCUGCACAGGUGACCACAUUUAUAUCA-3' (SEQ ID NO: 7216)
3'-CGACGUGUCCACUGGUGUAAAUAUAGU-5' (SEQ ID NO: 1671)

βc-1530 Target: 5'-GCTGCACAGGTGACCACATTTATATCA-3' (SEQ ID NO: 2780)

5'-AUUGCAAGUGAGGUUAGAAAGAAUUCC-3' (SEQ ID NO: 7217)
3'-UAACGUUCACUCCAAUCUUUCUUAAGG-5' (SEQ ID NO: 1672)

βc-1558 Target: 5'-ATTGCAAGTGAGGTTAGAAAGAATTCC-3' (SEQ ID NO: 2781)

5'-UUAUAAUUAUUGCAAGUGAGGUUAGAA-3' (SEQ ID NO: 7218)
3'-AAUAUUAAUAACGUUCACUCCAAUCUU-5' (SEQ ID NO: 1673)

βc-1566 Target: 5'-TTATAATTATTGCAAGTGAGGTTAGAA-3' (SEQ ID NO: 2782)

5'-CAUCAUCUUGUUCUUAUAAUUAUUGCA-3' (SEQ ID NO: 7219)
3'-GUAGUAGAACAAGAAUAUUAAUAACGU-5' (SEQ ID NO: 1674)

βc-1579 Target: 5'-CATCATCTTGTTCTTATAATTATTGCA-3' (SEQ ID NO: 2783)

5'-CCAUCAUCUUGUUCUUAUAAUUAUUGC-3' (SEQ ID NO: 7220)
3'-GGUAGUAGAACAAGAAUAUUAAUAACG-5' (SEQ ID NO: 1675)

βc-1580 Target: 5'-CCATCATCTTGTTCTTATAATTATTGC-3' (SEQ ID NO: 2784)

5'-AGACCAUCAUCUUGUUCUUAUAAUUAU-3' (SEQ ID NO: 7221)
3'-UCUGGUAGUAGAACAAGAAUAUUAAUA-5' (SEQ ID NO: 1676)

βc-1583 Target: 5'-AGACCATCATCTTGTTCTTATAATTAT-3' (SEQ ID NO: 2785)

5'-GCAGACCAUCAUCUUGUUCUUAUAAUU-3' (SEQ ID NO: 7222)
3'-CGUCUGGUAGUAGAACAAGAAUAUUAA-5' (SEQ ID NO: 1677)

βc-1585 Target: 5'-GCAGACCATCATCTTGTTCTTATAATT-3' (SEQ ID NO: 2786)

5'-UCAAUCCAACAGUAGCCUUUAUCAGAG-3' (SEQ ID NO: 7223)
3'-AGUUAGGUUGUCAUCGGAAAUAGUCUC-5' (SEQ ID NO: 1678)

βc-1808 Target: 5'-TCAATCCAACAGTAGCCTTTATCAGAG-3' (SEQ ID NO: 2787)

5'-UCGAAUCAAUCCAACAGUAGCCUUUAU-3' (SEQ ID NO: 7224)
3'-AGCUUAGUUAGGUUGUCAUCGGAAAUA-5' (SEQ ID NO: 1679)

βc-1813 Target: 5'-TCGAATCAATCCAACAGTAGCCTTTAT-3' (SEQ ID NO: 2788)

5'-CCUCCACAAAUUGCUGCUGUGUCCCAC-3' (SEQ ID NO: 7225)
3'-GGAGGUGUUUAACGACGACACAGGGUG-5' (SEQ ID NO: 1680)

βc-1955 Target: 5'-CCTCCACAAATTGCTGCTGTGTCCCAC-3' (SEQ ID NO: 2789)

5'-GUACAACCUUCAACUAUUUCUUCCAUG-3' (SEQ ID NO: 7226)
3'-CAUGUUGGAAGUUGAUAAAGAAGGUAC-5' (SEQ ID NO: 1681)

βc-1989 Target: 5'-GTACAACCTTCAACTATTTCTTCCATG-3' (SEQ ID NO: 2790)

5'-GGUACAACCUUCAACUAUUUCUUCCAU-3' (SEQ ID NO: 7227)
3'-CCAUGUUGGAAGUUGAUAAAGAAGGUA-5' (SEQ ID NO: 1682)

βc-1990 Target: 5'-GGTACAACCTTCAACTATTTCTTCC-3' (SEQ ID NO: 2791)

5'-CGGUACAACCUUCAACUAUUUCUUCCA-3' (SEQ ID NO: 7228)
3'-GCCAUGUUGGAAGUUGAUAAAGAAGGU-5' (SEQ ID NO: 1683)

βc-1991 Target: 5'-CGGTACAACCTTCAACTATTTCTTCCA-3' (SEQ ID NO: 2792)

5'-CCGGUACAACCUUCAACUAUUUCUUCC-3' (SEQ ID NO: 7229)
3'-GGCCAUGUUGGAAGUUGAUAAAGAAGG-5' (SEQ ID NO: 1684)

βc-1992 Target: 5'-CCGGTACAACCTTCAACTATTTCTTCC-3' (SEQ ID NO: 2793)

5'-GGGCUCCGGUACAACCUUCAACUAUUU-3' (SEQ ID NO: 7230)
3'-CCCGAGGCCAUGUUGGAAGUUGAUAAA-5' (SEQ ID NO: 1685)

βc-1997 Target: 5'-GGGCTCCGGTACAACCTTCAACTATTT-3' (SEQ ID NO: 2794)

5'-UAACAAUUCGGUUGUGAACAUCCCGAG-3' (SEQ ID NO: 7231)
3'-AUUGUUAAGCCAACACUUGUAGGGCUC-5' (SEQ ID NO: 1686)

βc-2036 Target: 5'-TAACAATTCGGTTGTGAACATCCCGAG-3' (SEQ ID NO: 2795)

5'-AUAACAAUUCGGUUGUGAACAUCCCGA-3' (SEQ ID NO: 7232)
3'-UAUUGUUAAGCCAACACUUGUAGGGCU-5' (SEQ ID NO: 1687)

βc-2037 Target: 5'-ATAACAATTCGGTTGTGAACATCCCGA-3' (SEQ ID NO: 2796)

5'-GAUAACAAUUCGGUUGUGAACAUCCCG-3' (SEQ ID NO: 7233)
3'-CUAUUGUUAAGCCAACACUUGUAGGGC-5' (SEQ ID NO: 1688)

βc-2038 Target: 5'-GATAACAATTCGGTTGTGAACATCCCG-3' (SEQ ID NO: 2797)

5'-UGAUAACAAUUCGGUUGUGAACAUCCC-3' (SEQ ID NO: 7234)
3'-ACUAUUGUUAAGCCAACACUUGUAGGG-5' (SEQ ID NO: 1689)

βc-2039 Target: 5'-TGATAACAATTCGGTTGTGAACATCCC-3' (SEQ ID NO: 2798)

5'-CUGAUAACAAUUCGGUUGUGAACAUCC-3' (SEQ ID NO: 7235)
3'-GACUAUUGUUAAGCCAACACUUGUAGG-5' (SEQ ID NO: 1690)

βc-2040 Target: 5'-CTGATAACAATTCGGTTGTGAACATCC-3' (SEQ ID NO: 2799)

5'-UCUGAUAACAAUUCGGUUGUGAACAUC-3' (SEQ ID NO: 7236)
3'-AGACUAUUGUUAAGCCAACACUUGUAG-5' (SEQ ID NO: 1691)

βc-2041 Target: 5'-TCTGATAACAATTCGGTTGTGAACATC-3' (SEQ ID NO: 2800)

5'-GUAUUUAGUCCUCUGAUAACAAUUCGG-3' (SEQ ID NO: 7237)
3'-CAUAAAUCAGGAGACUAUUGUUAAGCC-5' (SEQ ID NO: 1692)

βc-2052 Target: 5'-GTATTTAGTCCTCTGATAACAATTCGG-3' (SEQ ID NO: 2801)

5'-GGUAUUUAGUCCUCUGAUAACAAUUCG-3' (SEQ ID NO: 7238)
3'-CCAUAAAUCAGGAGACUAUUGUUAAGC-5' (SEQ ID NO: 1693)

βc-2053 Target: 5'-GGTATTTAGTCCTCTGATAACAATTCG-3' (SEQ ID NO: 2802)

5'-UGGUAUUUAGUCCUCUGAUAACAAUUC-3' (SEQ ID NO: 7239)
3'-ACCAUAAAUCAGGAGACUAUUGUUAAG-5' (SEQ ID NO: 1694)

βc-2054 Target: 5'-TGGTATTTAGTCCTCTGATAACAATTC-3' (SEQ ID NO: 2803)

5'-AUGGUAUUUAGUCCUCUGAUAACAAUU-3' (SEQ ID NO: 7240)
3'-UACCAUAAAUCAGGAGACUAUUGUUAA-5' (SEQ ID NO: 1695)

βc-2055 Target: 5'-ATGGTATTTAGTCCTCTGATAACAATT-3' (SEQ ID NO: 2804)

5'-AAACAAUGGAAUGGUAUUUAGUCCUCU-3' (SEQ ID NO: 7241)
3'-UUUGUUACCUUACCAUAAAUCAGGAGA-5' (SEQ ID NO: 1696)

βc-2065 Target: 5'-AAACAATGGAATGGTATTTAGTCCTCT-3' (SEQ ID NO: 2805)

5'-GCACAAACAAUGGAAUGGUAUUUAGUC-3' (SEQ ID NO: 7242)
3'-CGUGUUUGUUACCUUACCAUAAAUCAG-5' (SEQ ID NO: 1697)

βc-2069 Target: 5'-GCACAAACAATGGAATGGTATTTAGTC-3' (SEQ ID NO: 2806)

5'-CUGCACAAACAAUGGAAUGGUAUUUAG-3' (SEQ ID NO: 7243)
3'-GACGUGUUUGUUACCUUACCAUAAAUC-5' (SEQ ID NO: 1698)

βc-2071 Target: 5'-CTGCACAAACAATGGAATGGTATTTAG-3' (SEQ ID NO: 2807)

5'-GCUGCACAAACAAUGGAAUGGUAUUUA-3' (SEQ ID NO: 7244)
3'-CGACGUGUUUGUUACCUUACCAUAAAU-5' (SEQ ID NO: 1699)

βc-2072 Target: 5'-GCTGCACAAACAATGGAATGGTATTTA-3' (SEQ ID NO: 2808)

5'-CAGCUACUCUUUGGAUGUUUUCAAUGG-3' (SEQ ID NO: 7245)
3'-GUCGAUGAGAAACCUACAAAAGUUACC-5' (SEQ ID NO: 1700)

βc-2111 Target: 5'-CAGCTACTCTTTGGATGTTTTCAATGG-3' (SEQ ID NO: 2809)

5'-GCAGCUACUCUUUGGAUGUUUUCAAUG-3' (SEQ ID NO: 7246)
3'-CGUCGAUGAGAAACCUACAAAAGUUAC-5' (SEQ ID NO: 1701)

βc-2112 Target: 5'-GCAGCTACTCTTTGGATGTTTTCAATG-3' (SEQ ID NO: 2810)

5'-CAGCUUCAAUAGCUUCUGCAGCUUCCU-3' (SEQ ID NO: 7247)
3'-GUCGAAGUUAUCGAAGACGUCGAAGGA-5' (SEQ ID NO: 1702)

βc-2168 Target: 5'-CAGCTTCAATAGCTTCTGCAGCTTCCT-3' (SEQ ID NO: 2811)

5'-GCUCCCUCAGCUUCAAUAGCUUCUGCA-3' (SEQ ID NO: 7248)
3'-CGAGGGAGUCGAAGUUAUCGAAGACGU-5' (SEQ ID NO: 1703)

βc-2175 Target: 5'-GCTCCCTCAGCTTCAATAGCTTCTGCA-3' (SEQ ID NO: 2812)

5'-UGGCUCCCUCAGCUUCAAUAGCUUCUG-3' (SEQ ID NO: 7249)
3'-ACCGAGGGAGUCGAAGUUAUCGAAGAC-5' (SEQ ID NO: 1704)

βc-2177 Target: 5'-TGGCTCCCTCAGCTTCAATAGCTTCTG-3' (SEQ ID NO: 2813)

5'-UCAUUCCUAGAGUGAAGUAACUCUGUC-3' (SEQ ID NO: 7250)
3'-AGUAAGGAUCUCACUUCAUUGAGACAG-5' (SEQ ID NO: 1705)

βc-2214 Target: 5'-TCATTCCTAGAGTGAAGTAACTCTGTC-3' (SEQ ID NO: 2814)

5'-CUUCAUUCCUAGAGUGAAGUAACUCUG-3' (SEQ ID NO: 7251)
3'-GAAGUAAGGAUCUCACUUCAUUGAGAC-5' (SEQ ID NO: 1706)

βc-2216 Target: 5'-CTTCATTCCTAGAGTGAAGTAACTCTG-3' (SEQ ID NO: 2815)

5'-CCUUCAUUCCUAGAGUGAAGUAACUCU-3' (SEQ ID NO: 7252)
3'-GGAAGUAAGGAUCUCACUUCAUUGAGA-5' (SEQ ID NO: 1707)

βc-2217 Target: 5'-CCTTCATTCCTAGAGTGAAGTAACTCT-3' (SEQ ID NO: 2816)

5'-UGUCCUCAGACAUUCGGAACAAAACAG-3' (SEQ ID NO: 7253)
3'-ACAGGAGUCUGUAAGCCUUGUUUUGUC-5' (SEQ ID NO: 1708)

βc-2264 Target: 5'-TGTCCTCAGACATTCGGAACAAAACAG-3' (SEQ ID NO: 2817)

5'-CUUGUCCUCAGACAUUCGGAACAAAAC-3' (SEQ ID NO: 7254)
3'-GAACAGGAGUCUGUAAGCCUUGUUUUG-5' (SEQ ID NO: 1709)

βc-2266 Target: 5'-CTTGTCCTCAGACATTCGGAACAAAAC-3' (SEQ ID NO: 2818)

5'-CCGUUUCUUGUAAUCUUGUGGCUUGUC-3' (SEQ ID NO: 7255)
3'-GGCAAAGAACAUUAGAACACCGAACAG-5' (SEQ ID NO: 1710)

βc-2287 Target: 5'-CCGTTTCTTGTAATCTTGTGGCTTGTC-3' (SEQ ID NO: 2819)

5'-ACUGAAAGCCGUUUCUUGUAAUCUUGU-3' (SEQ ID NO: 7256)
3'-UGACUUUCGGCAAAGAACAUUAGAACA-5' (SEQ ID NO: 1711)

βc-2295 Target: 5'-ACTGAAAGCCGTTTCTTGTAATCTTGT-3' (SEQ ID NO: 2820)

5'-CAGCUCAACUGAAAGCCGUUUCUUGUA-3' (SEQ ID NO: 7257)
3'-GUCGAGUUGACUUUCGGCAAAGAACAU-5' (SEQ ID NO: 1712)

βc-2302 Target: 5'-CAGCTCAACTGAAAGCCGTTTCTTGTA-3' (SEQ ID NO: 2821)

5'-CAAGUCCAAGAUCAGCAGUCUCAUUCC-3' (SEQ ID NO: 7258)
3'-GUUCAGGUUCUAGUCGUCAGAGUAAGG-5' (SEQ ID NO: 1713)

βc-2363 Target: 5'-CAAGTCCAAGATCAGCAGTCTCATTCC-3' (SEQ ID NO: 2822)

5'-GCACCAAUAUCAAGUCCAAGAUCAGCA-3' (SEQ ID NO: 7259)
3'-CGUGGUUAUAGUUCAGGUUCUAGUCGU-5' (SEQ ID NO: 1714)

βc-2373 Target: 5'-GCACCAATATCAAGTCCAAGATCAGCA-3' (SEQ ID NO: 2823)

5'-AAAGAACGAUAGCUAGGAUCAUCCUGG-3' (SEQ ID NO: 7260)
3'-UUUCUUGCUAUCGAUCCUAGUAGGACC-5' (SEQ ID NO: 1715)

βc-2424 Target: 5'-AAAGAACGATAGCTAGGATCATCCTGG-3' (SEQ ID NO: 2824)

5'-CAUAUCCACCAGAGUGAAAAGAACGAU-3' (SEQ ID NO: 7261)
3'-GUAUAGGUGGUCUCACUUUUCUUGCUA-5' (SEQ ID NO: 1716)

βc-2441 Target: 5'-CATATCCACCAGAGTGAAAAGAACGAT-3' (SEQ ID NO: 2825)

5'-UGAUUUACAGGUCAGUAUCAAACCAGG-3' (SEQ ID NO: 7262)
3'-ACUAAAUGUCCAGUCAUAGUUUGGUCC-5' (SEQ ID NO: 1717)

βc-2618 Target: 5'-TGATTTACAGGTCAGTATCAAACCAGG-3' (SEQ ID NO: 2826)

5'-AUGAUUUACAGGUCAGUAUCAAACCAG-3' (SEQ ID NO: 7263)
3'-UACUAAAUGUCCAGUCAUAGUUUGGUC-5' (SEQ ID NO: 1718)

βc-2619 Target: 5'-ATGATTTACAGGTCAGTATCAAACCAG-3' (SEQ ID NO: 2827)

5'-GAUGAUUUACAGGUCAGUAUCAAACCA-3' (SEQ ID NO: 7264)
3'-CUACUAAAUGUCCAGUCAUAGUUUGGU-5' (SEQ ID NO: 1719)

βc-2620 Target: 5'-GATGATTTACAGGTCAGTATCAAACCA-3' (SEQ ID NO: 2828)

5'-CUUCUUACCUAAAGGAUGAUUUACAGG-3' (SEQ ID NO: 7265)
3'-GAAGAAUGGAUUUCCUACUAAAUGUCC-5' (SEQ ID NO: 1720)

βc-2634 Target: 5'-CTTCTTACCTAAAGGATGATTTACAGG-3' (SEQ ID NO: 2829)

5'-ACUUCUUACCUAAAGGAUGAUUUACAG-3' (SEQ ID NO: 7266)
3'-UGAAGAAUGGAUUUCCUACUAAAUGUC-5' (SEQ ID NO: 1721)

βc-2635 Target: 5'-ACTTCTTACCTAAAGGATGATTTACAG-3' (SEQ ID NO: 2830)

5'-AAACUUCUUACCUAAAGGAUGAUUUAC-3' (SEQ ID NO: 7267)
3'-UUUGAAGAAUGGAUUUCCUACUAAAUG-5' (SEQ ID NO: 1722)

βc-2637 Target: 5'-AAACTTCTTACCTAAAGGATGATTTAC-3' (SEQ ID NO: 2831)

5'-GCUUUUUAAAACUUCUUACCUAAAGGA-3' (SEQ ID NO: 7268)
3'-CGAAAAAUUUUGAAGAAUGGAUUUCCU-5' (SEQ ID NO: 1723)

βc-2645 Target: 5'-GCTTTTTAAAACTTCTTACCTAAAGGA-3' (SEQ ID NO: 2832)

5'-UGGCUUUUUAAAACUUCUUACCUAAAG-3' (SEQ ID NO: 7269)
3'-ACCGAAAAAUUUUGAAGAAUGGAUUUC-5' (SEQ ID NO: 1724)

βc-2647 Target: 5'-TGGCTTTTTAAAACTTCTTACCTAAAG-3' (SEQ ID NO: 2833)

5'-CCAAACUGGCUUUUUAAAACUUCUUAC-3' (SEQ ID NO: 7270)
3'-GGUUUGACCGAAAAAUUUUGAAGAAUG-5' (SEQ ID NO: 1725)

βc-2653 Target: 5'-CCAAACTGGCTTTTTAAAACTTCTTAC-3' (SEQ ID NO: 2834)

5'-UUACCCAAACUGGCUUUUUAAAACUUC-3' (SEQ ID NO: 7271)
3'-AAUGGGUUUGACCGAAAAAUUUUGAAG-5' (SEQ ID NO: 1726)

βc-2657 Target: 5'-TTACCCAAACTGGCTTTTTAAAACTTC-3' (SEQ ID NO: 2835)

5'-UUUACCCAAACUGGCUUUUUAAAACUU-3' (SEQ ID NO: 7272)
3'-AAAUGGGUUUGACCGAAAAAUUUUGAA-5' (SEQ ID NO: 1727)

βc-2658 Target: 5'-TTTACCCAAACTGGCTTTTTAAAACTT-3' (SEQ ID NO: 2836)

5'-UUUUACCCAAACUGGCUUUUUAAAACU-3' (SEQ ID NO: 7273)
3'-AAAAUGGGUUUGACCGAAAAAUUUUGA-5' (SEQ ID NO: 1728)

βc-2659 Target: 5'-TTTTACCCAAACTGGCTTTTTAAAACT-3' (SEQ ID NO: 2837)

5'-AUUUUACCCAAACUGGCUUUUUAAAAC-3' (SEQ ID NO: 7274)
3'-UAAAAUGGGUUUGACCGAAAAAUUUUG-5' (SEQ ID NO: 1729)

βc-2660 Target: 5'-ATTTTACCCAAACTGGCTTTTTAAAAC-3' (SEQ ID NO: 2838)

5'-CCAACCAAGUCUUUCUGAAGUUCUGUA-3' (SEQ ID NO: 7275)
3'-GGUUGGUUCAGAAAGACUUCAAGACAU-5' (SEQ ID NO: 1730)

βc-2701 Target: 5'-CCAACCAAGTCTTTCTGAAGTTCTGTA-3' (SEQ ID NO: 2839)

5'-CCACCCUACCAACCAAGUCUUUCUGAA-3' (SEQ ID NO: 7276)
3'-GGUGGGAUGGUUGGUUCAGAAAGACUU-5' (SEQ ID NO: 1731)

βc-2709 Target: 5'-CCACCCTACCAACCAAGTCTTTCTGAA-3' (SEQ ID NO: 2840)

5'-AUUUACAAAUAGCCUAAACCACUCCCA-3' (SEQ ID NO: 7277)
3'-UAAAUGUUUAUCGGAUUUGGUGAGGGU-5' (SEQ ID NO: 1732)

βc-2733 Target: 5'-ATTTACAAATAGCCTAAACCACTCCCA-3' (SEQ ID NO: 2841)

5'-GAUUUACAAAUAGCCUAAACCACUCCC-3' (SEQ ID NO: 7278)
3'-CUAAAUGUUUAUCGGAUUUGGUGAGGG-5' (SEQ ID NO: 1733)

βc-2734 Target: 5'-GATTTACAAATAGCCTAAACCACTCCC-3' (SEQ ID NO: 2842)

5'-AGAUUUACAAAUAGCCUAAACCACUCC-3' (SEQ ID NO: 7279)
3'-UCUAAAUGUUUAUCGGAUUUGGUGAGG-5' (SEQ ID NO: 1734)

βc-2735 Target: 5'-AGATTTACAAATAGCCTAAACCACTCC-3' (SEQ ID NO: 2843)

5'-CAGAUUUACAAAUAGCCUAAACCACUC-3' (SEQ ID NO: 7280)
3'-GUCUAAAUGUUUAUCGGAUUUGGUGAG-5' (SEQ ID NO: 1735)

βc-2736 Target: 5'-CAGATTTACAAATAGCCTAAACCACTC-3' (SEQ ID NO: 2844)

5'-UGUUUUUGUGGCAGAUUUACAAAUAGC-3' (SEQ ID NO: 7281)
3'-ACAAAAACACCGUCUAAAUGUUUAUCG-5' (SEQ ID NO: 1736)

βc-2747 Target: 5'-TGTTTTTGTGGCAGATTTACAAATAGC-3' (SEQ ID NO: 2845)

5'-CUGUUUUUGUGGCAGAUUUACAAAUAG-3' (SEQ ID NO: 7282)
3'-GACAAAAACACCGUCUAAAUGUUUAUC-5' (SEQ ID NO: 1737)

βc-2748 Target: 5'-CTGTTTTTGTGGCAGATTTACAAATAG-3' (SEQ ID NO: 2846)

5'-CCUGUUUUUGUGGCAGAUUUACAAAUA-3' (SEQ ID NO: 7283)
3'-GGACAAAAACACCGUCUAAAUGUUUAU-5' (SEQ ID NO: 1738)

βc-2749 Target: 5'-CCTGTTTTTGTGGCAGATTTACAAATA-3' (SEQ ID NO: 2847)

5'-AUAUACCUGUUUUUGUGGCAGAUUUAC-3' (SEQ ID NO: 7284)
3'-UAUAUGGACAAAAACACCGUCUAAAUG-5' (SEQ ID NO: 1739)

βc-2754 Target: 5'-ATATACCTGTTTTTGTGGCAGATTTAC-3' (SEQ ID NO: 2848)

5'-CUUUCAAAGUAUAUACCUGUUUUUGUG-3' (SEQ ID NO: 7285)
3'-GAAAGUUUCAUAUAUGGACAAAAACAC-5' (SEQ ID NO: 1740)

βc-2764 Target: 5'-CTTTCAAAGTATATACCTGTTTTTGTG-3' (SEQ ID NO: 2849)

5'-CAUCUCCUUUCAAAGUAUAUACCUGUU-3' (SEQ ID NO: 7286)
3'-GUAGAGGAAAGUUUCAUAUAUGGACAA-5' (SEQ ID NO: 1741)

βc-2770 Target: 5'-CATCTCCTTTCAAAGTATATACCTGTT-3' (SEQ ID NO: 2850)

5'-ACAUCUCCUUUCAAAGUAUAUACCUGU-3' (SEQ ID NO: 7287)
3'-UGUAGAGGAAAGUUUCAUAUAUGGACA-5' (SEQ ID NO: 1742)

βc-2771 Target: 5'-ACATCTCCTTTCAAAGTATATACCTGT-3' (SEQ ID NO: 2851)

5'-AGACAUCUCCUUUCAAAGUAUAUACCU-3' (SEQ ID NO: 7288)
3'-UCUGUAGAGGAAAGUUUCAUAUAUGGA-5' (SEQ ID NO: 1743)

βc-2773 Target: 5'-AGACATCTCCTTTCAAAGTATATACCT-3' (SEQ ID NO: 2852)

5'-AAGACAUCUCCUUUCAAAGUAUAUACC-3' (SEQ ID NO: 7289)
3'-UUCUGUAGAGGAAAGUUUCAUAUAUGG-5' (SEQ ID NO: 1744)

βc-2774 Target: 5'-AAGACATCTCCTTTCAAAGTATATACC-3' (SEQ ID NO: 2853)

5'-CAAGACAUCUCCUUUCAAAGUAUAUAC-3' (SEQ ID NO: 7290)
3'-GUUCUGUAGAGGAAAGUUUCAUAUAUG-5' (SEQ ID NO: 1745)

βc-2775 Target: 5'-CAAGACATCTCCTTTCAAAGTATATAC-3' (SEQ ID NO: 2854)

5'-UGUUCCAAGACAUCUCCUUUCAAAGUA-3' (SEQ ID NO: 7291)
3'-ACAAGGUUCUGUAGAGGAAAGUUUCAU-5' (SEQ ID NO: 1746)

βc-2780 Target: 5'-TGTTCCAAGACATCTCCTTTCAAAGTA-3' (SEQ ID NO: 2855)

5'-CAUUCCAAUGUUCCAAGACAUCUCCUU-3' (SEQ ID NO: 7292)
3'-GUAAGGUUACAAGGUUCUGUAGAGGAA-5' (SEQ ID NO: 1747)

βc-2788 Target: 5'-CATTCCAATGTTCCAAGACATCTCCTT-3' (SEQ ID NO: 2856)

5'-ACAUUCCAAUGUUCCAAGACAUCUCCU-3' (SEQ ID NO: 7293)
3'-UGUAAGGUUACAAGGUUCUGUAGAGGA-5' (SEQ ID NO: 1748)

βc-2789 Target: 5'-ACATTCCAATGTTCCAAGACATCTCCT-3' (SEQ ID NO: 2857)

5'-GAACAUUCCAAUGUUCCAAGACAUCUC-3' (SEQ ID NO: 7294)
3'-CUUGUAAGGUUACAAGGUUCUGUAGAG-5' (SEQ ID NO: 1749)

βc-2791 Target: 5'-GAACATTCCAATGTTCCAAGACATCTC-3' (SEQ ID NO: 2858)

5'-CCAGAAAUCUGAGAACAUUCCAAUGUU-3' (SEQ ID NO: 7295)
3'-GGUCUUUAGACUCUUGUAAGGUUACAA-5' (SEQ ID NO: 1750)

βc-2803 Target: 5'-CCAGAAATCTGAGAACATTCCAATGTT-3' (SEQ ID NO: 2859)

5'-ACAACCAGAAAUCUGAGAACAUUCCAA-3' (SEQ ID NO: 7296)
3'-UGUUGGUCUUUAGACUCUUGUAAGGUU-5' (SEQ ID NO: 1751)

βc-2807 Target: 5'-ACAACCAGAAATCTGAGAACATTCCAA-3' (SEQ ID NO: 2860)

5'-UAACAACCAGAAAUCUGAGAACAUUCC-3' (SEQ ID NO: 7297)
3'-AUUGUUGGUCUUUAGACUCUUGUAAGG-5' (SEQ ID NO: 1752)

βc-2809 Target: 5'-TAACAACCAGAAATCTGAGAACATTCC-3' (SEQ ID NO: 2861)

5'-AUAACAACCAGAAAUCUGAGAACAUUC-3' (SEQ ID NO: 7298)
3'-UAUUGUUGGUCUUUAGACUCUUGUAAG-5' (SEQ ID NO: 1753)

βc-2810 Target: 5'-ATAACAACCAGAAATCTGAGAACATTC-3' (SEQ ID NO: 2862)

5'-CAUAACAACCAGAAAUCUGAGAACAUU-3' (SEQ ID NO: 7299)
3'-GUAUUGUUGGUCUUUAGACUCUUGUAA-5' (SEQ ID NO: 1754)

βc-2811 Target: 5'-CATAACAACCAGAAATCTGAGAACATT-3' (SEQ ID NO: 2863)

5'-UGAUCACAUAACAACCAGAAAUCUGAG-3' (SEQ ID NO: 7300)
3'-ACUAGUGUAUUGUUGGUCUUUAGACUC-5' (SEQ ID NO: 1755)

βc-2817 Target: 5'-TGATCACATAACAACCAGAAATCTGAG-3' (SEQ ID NO: 2864)

5'-AUGAUCACAUAACAACCAGAAAUCUGA-3' (SEQ ID NO: 7301)
3'-UACUAGUGUAUUGUUGGUCUUUAGACU-5' (SEQ ID NO: 1756)

βc-2818 Target: 5'-ATGATCACATAACAACCAGAAATCTGA-3' (SEQ ID NO: 2865)

5'-CCACACAUGAUCACAUAACAACCAGAA-3' (SEQ ID NO: 7302)
3'-GGUGUGUACUAGUGUAUUGUUGGUCUU-5' (SEQ ID NO: 1757)

βc-2824 Target: 5'-CCACACATGATCACATAACAACCAGAA-3' (SEQ ID NO: 2866)

5'-CUUCCACACAUGAUCACAUAACAACCA-3' (SEQ ID NO: 7303)
3'-GAAGGUGUGUACUAGUGUAUUGUUGGU-5' (SEQ ID NO: 1758)

βc-2827 Target: 5'-CTTCCACACATGATCACATAACAACCA-3' (SEQ ID NO: 2867)

5'-AAUAACUUCCACACAUGAUCACAUAAC-3' (SEQ ID NO: 7304)
3'-UUAUUGAAGGUGUGUACUAGUGUAUUG-5' (SEQ ID NO: 1759)

βc-2832 Target: 5'-AATAACTTCCACACATGATCACATAAC-3' (SEQ ID NO: 2868)

5'-UAAUAACUUCCACACAUGAUCACAUAA-3' (SEQ ID NO: 7305)
3'-AUUAUUGAAGGUGUGUACUAGUGUAUU-5' (SEQ ID NO: 1760)

βc-2833 Target: 5'-TAATAACTTCCACACATGATCACATAA-3' (SEQ ID NO: 2869)

5'-UUAAUAACUUCCACACAUGAUCACAUA-3' (SEQ ID NO: 7306)
3'-AAUUAUUGAAGGUGUGUACUAGUGUAU-5' (SEQ ID NO: 1761)

βc-2834 Target: 5'-TTAATAACTTCCACACATGATCACATA-3' (SEQ ID NO: 2870)

5'-GUUAAUAACUUCCACACAUGAUCACAU-3' (SEQ ID NO: 7307)
3'-CAAUUAUUGAAGGUGUGUACUAGUGUA-5' (SEQ ID NO: 1762)

βc-2835 Target: 5'-GTTAATAACTTCCACACATGATCAC-3' (SEQ ID NO: 2871)

5'-CAUUAAAGUUAAUAACUUCCACACAUG-3' (SEQ ID NO: 7308)
3'-GUAAUUUCAAUUAUUGAAGGUGUGUAC-5' (SEQ ID NO: 1763)

βc-2842 Target: 5'-CATTAAAGTTAATAACTTCCACACATG-3' (SEQ ID NO: 2872)

5'-ACAUUAAAGUUAAUAACUUCCACACAU-3' (SEQ ID NO: 7309)
3'-UGUAAUUUCAAUUAUUGAAGGUGUGUA-5' (SEQ ID NO: 1764)

βc-2843 Target: 5'-ACATTAAAGTTAATAACTTCCACAC-3' (SEQ ID NO: 2873)

5'-AAACAUUAAAGUUAAUAACUUCCACAC-3' (SEQ ID NO: 7310)
3'-UUUGUAAUUUCAAUUAUUGAAGGUGUG-5' (SEQ ID NO: 1765)

βc-2845 Target: 5'-AAACATTAAAGTTAATAACTTCCACAC-3' (SEQ ID NO: 2874)

5'-AAAACAUUAAAGUUAAUAACUUCCACA-3' (SEQ ID NO: 7311)
3'-UUUUGUAAUUUCAAUUAUUGAAGGUGU-5' (SEQ ID NO: 1766)

βc-2846 Target: 5'-AAAACATTAAAGTTAATAACTTCCACA-3' (SEQ ID NO: 2875)

5'-AAAAACAUUAAAGUUAAUAACUUCCAC-3' (SEQ ID NO: 7312)
3'-UUUUUGUAAUUUCAAUUAUUGAAGGUG-5' (SEQ ID NO: 1767)

βc-2847 Target: 5'-AAAAACATTAAAGTTAATAACTTCCAC-3' (SEQ ID NO: 2876)

5'-AAAAAACAUUAAAGUUAAUAACUUCCA-3' (SEQ ID NO: 7313)
3'-UUUUUUGUAAUUUCAAUUAUUGAAGGU-5' (SEQ ID NO: 1768)

βc-2848 Target: 5'-AAAAAACATTAAAGTTAATAACTTCCA-3' (SEQ ID NO: 2877)

5'-CAAAAAACAUUAAAGUUAAUAACUUCC-3' (SEQ ID NO: 7314)
3'-GUUUUUUGUAAUUUCAAUUAUUGAAGG-5' (SEQ ID NO: 1769)

βc-2849 Target: 5'-CAAAAAACATTAAAGTTAATAACTTCC-3' (SEQ ID NO: 2878)

5'-GCAAAAAACAUUAAAGUUAAUAACUUC-3' (SEQ ID NO: 7315)
3'-CGUUUUUUGUAAUUUCAAUUAUUGAAG-5' (SEQ ID NO: 1770)

βc-2850 Target: 5'-GCAAAAAACATTAAAGTTAATAACTTC-3' (SEQ ID NO: 2879)

5'-UGGCAAAAAACAUUAAAGUUAAUAACU-3' (SEQ ID NO: 7316)
3'-ACCGUUUUUUGUAAUUUCAAUUAUUGA-5' (SEQ ID NO: 1771)

βc-2852 Target: 5'-TGGCAAAAAACATTAAAGTTAATAACT-3' (SEQ ID NO: 2880)

5'-GUGGCAAAAAACAUUAAAGUUAAUAAC-3' (SEQ ID NO: 7317)
3'-CACCGUUUUUUGUAAUUUCAAUUAUUG-5' (SEQ ID NO: 1772)

βc-2853 Target: 5'-GTGGCAAAAAACATTAAAGTTAATAAC-3' (SEQ ID NO: 2881)

5'-UUGCAAAAGCUGUGGCAAAAAACAUUA-3' (SEQ ID NO: 7318)
3'-AACGUUUUCGACACCGUUUUUUGUAAU-5' (SEQ ID NO: 1773)

βc-2864 Target: 5'-TTGCAAAAGCTGTGGCAAAAAACATTA-3' (SEQ ID NO: 2882)

5'-GUUGCAAAAGCUGUGGCAAAAAACAUU-3' (SEQ ID NO: 7319)
3'-CAACGUUUUCGACACCGUUUUUUGUAA-5' (SEQ ID NO: 1774)

βc-2865 Target: 5'-GTTGCAAAAGCTGTGGCAAAAAACATT-3' (SEQ ID NO: 2883)

5'-ACUCAUUUGAGUAUUAAGUUGCAAAAG-3' (SEQ ID NO: 7320)
3'-UGAGUAAACUCAUAAUUCAACGUUUUC-5' (SEQ ID NO: 1775)

βc-2882 Target: 5'-ACTCATTTGAGTATTAAGTTGCAAAAG-3' (SEQ ID NO: 2884)

5'-UUAAAACAGCAAAUGUUACUCAUUUGA-3' (SEQ ID NO: 7321)
3'-AAUUUUGUCGUUUACAAUGAGUAAACU-5' (SEQ ID NO: 1776)

βc-2899 Target: 5'-TTAAAACAGCAAATGTTACTCATTTGA-3' (SEQ ID NO: 2885)

5'-UUUAAAACAGCAAAUGUUACUCAUUUG-3' (SEQ ID NO: 7322)
3'-AAAUUUUGUCGUUUACAAUGAGUAAAC-5' (SEQ ID NO: 1777)

βc-2900 Target: 5'-TTTAAAACAGCAAATGTTACTCATTTG-3' (SEQ ID NO: 2886)

5'-GUUUAAAACAGCAAAUGUUACUCAUUU-3' (SEQ ID NO: 7323)
3'-CAAAUUUUGUCGUUUACAAUGAGUAAA-5' (SEQ ID NO: 1778)

βc-2901 Target: 5'-GTTTAAAACAGCAAATGTTACTCATTT-3' (SEQ ID NO: 2887)

5'-UGUUUAAAACAGCAAAUGUUACUCAUU-3' (SEQ ID NO: 7324)
3'-ACAAAUUUUGUCGUUUACAAUGAGUAA-5' (SEQ ID NO: 1779)

βc-2902 Target: 5'-TGTTTAAAACAGCAAATGTTACTCATT-3' (SEQ ID NO: 2888)

5'-AUGUUUAAAACAGCAAAUGUUACUCAU-3' (SEQ ID NO: 7325)
3'-UACAAAUUUUGUCGUUUACAAUGAGUA-5' (SEQ ID NO: 1780)

βc-2903 Target: 5'-ATGTTTAAAACAGCAAATGTTACTC-3' (SEQ ID NO: 2889)

5'-AAUGUUUAAAACAGCAAAUGUUACUCA-3' (SEQ ID NO: 7326)
3'-UUACAAAUUUUGUCGUUUACAAUGAGU-5' (SEQ ID NO: 1781)

βc-2904 Target: 5'-AATGTTTAAAACAGCAAATGTTACTCA-3' (SEQ ID NO: 2890)

5'-CUAUUAAUGUUUAAAACAGCAAAUGUU-3' (SEQ ID NO: 7327)
3'-GAUAAUUACAAAUUUUGUCGUUUACAA-5' (SEQ ID NO: 1782)

βc-2909 Target: 5'-CTATTAATGTTTAAAACAGCAAATGTT-3' (SEQ ID NO: 2891)

5'-AGAGAAAGGCUGCUAUUAAUGUUUAAA-3' (SEQ ID NO: 7328)
3'-UCUCUUUCCGACGAUAAUUACAAAUUU-5' (SEQ ID NO: 1783)

βc-2921 Target: 5'-AGAGAAAGGCTGCTATTAATGTTTAAA-3' (SEQ ID NO: 2892)

5'-CAAGUUCAGACAAUACAGCUGUAUAAA-3' (SEQ ID NO: 7329)
3'-GUUCAAGUCUGUUAUGUCGACAUAUUU-5' (SEQ ID NO: 1784)

βc-2949 Target: 5'-CAAGTTCAGACAATACAGCTGTATAAA-3' (SEQ ID NO: 2893)

5'-UCACAAUGCAAGUUCAGACAAUACAGC-3' (SEQ ID NO: 7330)
3'-AGUGUUACGUUCAAGUCUGUUAUGUCG-5' (SEQ ID NO: 1785)

βc-2957 Target: 5'-TCACAATGCAAGTTCAGACAATACAGC-3' (SEQ ID NO: 2894)

5'-AAUCACAAUGCAAGUUCAGACAAUACA-3' (SEQ ID NO: 7331)
3'-UUAGUGUUACGUUCAAGUCUGUUAUGU-5' (SEQ ID NO: 1786)

βc-2959 Target: 5'-AATCACAATGCAAGTTCAGACAATACA-3' (SEQ ID NO: 2895)

5'-CCAAUCACAAUGCAAGUUCAGACAAUA-3' (SEQ ID NO: 7332)
3'-GGUUAGUGUUACGUUCAAGUCUGUUAU-5' (SEQ ID NO: 1787)

βc-2961 Target: 5'-CCAATCACAATGCAAGTTCAGACAATA-3' (SEQ ID NO: 2896)

5'-CAGGCCAAUCACAAUGCAAGUUCAGAC-3' (SEQ ID NO: 7333)
3'-GUCCGGUUAGUGUUACGUUCAAGUCUG-5' (SEQ ID NO: 1788)

βc-2965 Target: 5'-CAGGCCAATCACAATGCAAGTTCAGAC-3' (SEQ ID NO: 2897)

5'-UUGUUCCCAUAGGAAACUCAGCUUGGU-3' (SEQ ID NO: 7334)
3'-AACAAGGGUAUCCUUUGAGUCGAACCA-5' (SEQ ID NO: 1789)

βc-3052 Target: 5'-TTGTTCCCATAGGAAACTCAGCTTGGT-3' (SEQ ID NO: 2898)

5'-CUUCAAUUGUUCCCAUAGGAAACUCAG-3' (SEQ ID NO: 7335)
3'-GAAGUUAACAAGGGUAUCCUUUGAGUC-5' (SEQ ID NO: 1790)

βc-3058 Target: 5'-CTTCAATTGTTCCCATAGGAAACTCAG-3' (SEQ ID NO: 2899)

5'-ACUUCAAUUGUUCCCAUAGGAAACUCA-3' (SEQ ID NO: 7336)
3'-UGAAGUUAACAAGGGUAUCCUUUGAGU-5' (SEQ ID NO: 1791)

βc-3059 Target: 5'-ACTTCAATTGTTCCCATAGGAAACTCA-3' (SEQ ID NO: 2900)

5'-AAGUUUACUUCAAUUGUUCCCAUAGGA-3' (SEQ ID NO: 7337)
3'-UUCAAAUGAAGUUAACAAGGGUAUCCU-5' (SEQ ID NO: 1792)

βc-3065 Target: 5'-AAGTTTACTTCAATTGTTCCCATAGGA-3' (SEQ ID NO: 2901)

5'-AAAGUUUACUUCAAUUGUUCCCAUAGG-3' (SEQ ID NO: 7338)
3'-UUUCAAAUGAAGUUAACAAGGGUAUCC-5' (SEQ ID NO: 1793)

βc-3066 Target: 5'-AAAGTTTACTTCAATTGTTCCCATAGG-3' (SEQ ID NO: 2902)

5'-ACAAAAAGUUUACUUCAAUUGUUCCCA-3' (SEQ ID NO: 7339)
3'-UGUUUUUCAAAUGAAGUUAACAAGGGU-5' (SEQ ID NO: 1794)

βc-3070 Target: 5'-ACAAAAAGTTTACTTCAATTGTTCCCA-3' (SEQ ID NO: 2903)

5'-CAGAACAAAAAGUUUACUUCAAUUGUU-3' (SEQ ID NO: 7340)
3'-GUCUUGUUUUUCAAAUGAAGUUAACAA-5' (SEQ ID NO: 1795)

βc-3074 Target: 5'-CAGAACAAAAAGTTTACTTCAATTGTT-3' (SEQ ID NO: 2904)

5'-AGGACCAGAACAAAAAGUUUACUUCAA-3' (SEQ ID NO: 7341)
3'-UCCUGGUCUUGUUUUUCAAAUGAAGUU-5' (SEQ ID NO: 1796)

βc-3079 Target: 5'-AGGACCAGAACAAAAAGTTTACTTCAA-3' (SEQ ID NO: 2905)

5'-AAGGACCAGAACAAAAAGUUUACUUCA-3' (SEQ ID NO: 7342)
3'-UUCCUGGUCUUGUUUUUCAAAUGAAGU-5' (SEQ ID NO: 1797)

βc-3080 Target: 5'-AAGGACCAGAACAAAAAGTTTACTTCA-3' (SEQ ID NO: 2906)

5'-CGACCAAAAAGGACCAGAACAAAAAGU-3' (SEQ ID NO: 7343)
3'-GCUGGUUUUUCCUGGUCUUGUUUUUCA-5' (SEQ ID NO: 1798)

βc-3088 Target: 5'-CGACCAAAAAGGACCAGAACAAAAAGT-3' (SEQ ID NO: 2907)

5'-UCGACCAAAAAGGACCAGAACAAAAAG-3' (SEQ ID NO: 7344)
3'-AGCUGGUUUUUCCUGGUCUUGUUUUUC-5' (SEQ ID NO: 1799)

βc-3089 Target: 5'-TCGACCAAAAAGGACCAGAACAAAAAG-3' (SEQ ID NO: 2908)

5'-UUACUCCUCGACCAAAAAGGACCAGAA-3' (SEQ ID NO: 7345)
3'-AAUGAGGAGCUGGUUUUUCCUGGUCUU-5' (SEQ ID NO: 1800)

βc-3096 Target: 5'-TTACTCCTCGACCAAAAAGGACCAGAA-3' (SEQ ID NO: 2909)

5'-AAUCCAUUUGUAUUGUUACUCCUCGAC-3' (SEQ ID NO: 7346)
3'-UUAGGUAAACAUAACAAUGAGGAGCUG-5' (SEQ ID NO: 1801)

βc-3111 Target: 5'-AATCCATTTGTATTGTTACTCCTCGAC-3' (SEQ ID NO: 2910)

5'-AAAUCCAUUUGUAUUGUUACUCCUCGA-3' (SEQ ID NO: 7347)
3'-UUUAGGUAAACAUAACAAUGAGGAGCU-5' (SEQ ID NO: 1802)

βc-3112 Target: 5'-AAATCCATTTGTATTGTTACTCCTCGA-3' (SEQ ID NO: 2911)

5'-AAAAUCCAUUUGUAUUGUUACUCCUCG-3' (SEQ ID NO: 7348)
3'-UUUUAGGUAAACAUAACAAUGAGGAGC-5' (SEQ ID NO: 1803)

βc-3113 Target: 5'-AAAATCCATTTGTATTGTTACTCCTCG-3' (SEQ ID NO: 2912)

5'-CAAAAUCCAUUUGUAUUGUUACUCCUC-3' (SEQ ID NO: 7349)
3'-GUUUUAGGUAAACAUAACAAUGAGGAG-5' (SEQ ID NO: 1804)

βc-3114 Target: 5'-CAAAATCCATTTGTATTGTTACTCCTC-3' (SEQ ID NO: 2913)

5'-CCAAAAUCCAUUUGUAUUGUUACUCCU-3' (SEQ ID NO: 7350)
3'-GGUUUUAGGUAAACAUAACAAUGAGGA-5' (SEQ ID NO: 1805)

βc-3115 Target: 5'-CCAAAATCCATTTGTATTGTTACTCCT-3' (SEQ ID NO: 2914)

5'-UCACUCCCAAAAUCCAUUUGUAUUGUU-3' (SEQ ID NO: 7351)
3'-AGUGAGGGUUUUAGGUAAACAUAACAA-5' (SEQ ID NO: 1806)

βc-3121 Target: 5'-TCACTCCCAAAATCCATTTGTATTGTT-3' (SEQ ID NO: 2915)

5'-UCUUCACUUCUUGAGUCACUCCCAAAA-3' (SEQ ID NO: 7352)
3'-AGAAGUGAAGAACUCAGUGAGGGUUUU-5' (SEQ ID NO: 1807)

βc-3136 Target: 5'-TCTTCACTTCTTGAGTCACTCCCAAAA-3' (SEQ ID NO: 2916)

5'-AUUCUUCACUUCUUGAGUCACUCCCAA-3' (SEQ ID NO: 7353)
3'-UAAGAAGUGAAGAACUCAGUGAGGGUU-5' (SEQ ID NO: 1808)

βc-3138 Target: 5'-ATTCTTCACTTCTTGAGTCACTCCCAA-3' (SEQ ID NO: 2917)

5'-CAUUCUUCACUUCUUGAGUCACUCCCA-3' (SEQ ID NO: 7354)
3'-GUAAGAAGUGAAGAACUCAGUGAGGGU-5' (SEQ ID NO: 1809)

βc-3139 Target: 5'-CATTCTTCACTTCTTGAGTCACTCCCA-3' (SEQ ID NO: 2918)

5'-GCAUUCUUCACUUCUUGAGUCACUCCC-3' (SEQ ID NO: 7355)
3'-CGUAAGAAGUGAAGAACUCAGUGAGGG-5' (SEQ ID NO: 1810)

βc-3140 Target: 5'-GCATTCTTCACTTCTTGAGTCACTCCC-3' (SEQ ID NO: 2919)

5'-GUGCAUUCUUCACUUCUUGAGUCACUC-3' (SEQ ID NO: 7356)
3'-CACGUAAGAAGUGAAGAACUCAGUGAG-5' (SEQ ID NO: 1811)

βc-3142 Target: 5'-GTGCATTCTTCACTTCTTGAGTCACTC-3' (SEQ ID NO: 2920)

5'-CCAUUCUUGUGCAUUCUUCACUUCUUG-3' (SEQ ID NO: 7357)
3'-GGUAAGAACACGUAAGAAGUGAAGAAC-5' (SEQ ID NO: 1812)

βc-3150 Target: 5'-CCATTCTTGTGCATTCTTCACTTCTTG-3' (SEQ ID NO: 2921)

5'-GAUCCAUUCUUGUGCAUUCUUCACUUC-3' (SEQ ID NO: 7358)
3'-CUAGGUAAGAACACGUAAGAAGUGAAG-5' (SEQ ID NO: 1813)

βc-3153 Target: 5'-GATCCATTCTTGTGCATTCTTCACTTC-3' (SEQ ID NO: 2922)

5'-UGAUCCAUUCUUGUGCAUUCUUCACUU-3' (SEQ ID NO: 7359)
3'-ACUAGGUAAGAACACGUAAGAAGUGAA-5' (SEQ ID NO: 1814)

βc-3154 Target: 5'-TGATCCATTCTTGTGCATTCTTCACTT-3' (SEQ ID NO: 2923)

5'-GUGAUCCAUUCUUGUGCAUUCUUCACU-3' (SEQ ID NO: 7360)
3'-CACUAGGUAAGAACACGUAAGAAGUGA-5' (SEQ ID NO: 1815)

βc-3155 Target: 5'-GTGATCCATTCTTGTGCATTCTTCACT-3' (SEQ ID NO: 2924)

5'-UAAAUUCCAUCUUGUGAUCCAUUCUUG-3' (SEQ ID NO: 7361)
3'-AUUUAAGGUAGAACACUAGGUAAGAAC-5' (SEQ ID NO: 1816)

βc-3168 Target: 5'-TAAATTCCATCTTGTGATCCATTCTTG-3' (SEQ ID NO: 2925)

5'-GAUAAAUUCCAUCUUGUGAUCCAUUCU-3' (SEQ ID NO: 7362)
3'-CUAUUUAAGGUAGAACACUAGGUAAGA-5' (SEQ ID NO: 1817)

βc-3170 Target: 5'-GATAAATTCCATCTTGTGATCCATTCT-3' (SEQ ID NO: 2926)

5'-UGAUAAAUUCCAUCUUGUGAUCCAUUC-3' (SEQ ID NO: 7363)
3'-ACUAUUUAAGGUAGAACACUAGGUAAG-5' (SEQ ID NO: 1818)

βc-3171 Target: 5'-TGATAAATTCCATCTTGTGATCCATTC-3' (SEQ ID NO: 2927)

5'-UUGAUAAAUUCCAUCUUGUGAUCCAUU-3' (SEQ ID NO: 7364)
3'-AACUAUUUAAGGUAGAACACUAGGUAA-5' (SEQ ID NO: 1819)

βc-3172 Target: 5'-TTGATAAATTCCATCTTGTGATCCATT-3' (SEQ ID NO: 2928)

5'-UUUGAUAAAUUCCAUCUUGUGAUCCAU-3' (SEQ ID NO: 7365)
3'-AAACUAUUUAAGGUAGAACACUAGGUA-5' (SEQ ID NO: 1820)

βc-3173 Target: 5'-TTTGATAAATTCCATCTTGTGATCC-3' (SEQ ID NO: 2929)

5'-AAGGCUAGGGUUUGAUAAAUUCCAUCU-3' (SEQ ID NO: 7366)
3'-UUCCGAUCCCAAACUAUUUAAGGUAGA-5' (SEQ ID NO: 1821)

βc-3183 Target: 5'-AAGGCTAGGGTTTGATAAATTCCATCT-3' (SEQ ID NO: 2930)

5'-AAAAAAAUUUAACAAGCAAGGCUAGGG-3' (SEQ ID NO: 7367)
3'-UUUUUUUAAAUUGUUCGUUCCGAUCCC-5' (SEQ ID NO: 1822)

βc-3200 Target: 5'-AAAAAAATTTAACAAGCAAGGCTAGGG-3' (SEQ ID NO: 2931)

5'-AAAAAAAAAAAAAAAAAUUUAACAAGCA-3' (SEQ ID NO: 7368)
3'-UUUUUUUUUUUUUUUUUAAAUUGUUCGU-5' (SEQ ID NO: 1823)

βc-3209 Target: 5'-AAAAAAAAAAAAAAAATTTAACAAGCA-3' (SEQ ID NO: 2932)

5'-AAAAAAAAAAAAAAAAAUUUAACAAGC-3' (SEQ ID NO: 7369)
3'-UUUUUUUUUUUUUUUUUAAAUUGUUCG-5' (SEQ ID NO: 1824)

βc-3210 Target: 5'-AAAAAAAAAAAAAAAATTTAACAAGC-3' (SEQ ID NO: 2933)

5'-AAAAAAAAAAAAAAAAAUUUAACAAG-3' (SEQ ID NO: 7370)
3'-UUUUUUUUUUUUUUUUUAAAUUGUUC-5' (SEQ ID NO: 1825)

βc-3211 Target: 5'-AAAAAAAAAAAAAAAAATTTAACAAG-3' (SEQ ID NO: 2934)

5'-AAAAAAAAAAAAAAAAAAUUUAACAA-3' (SEQ ID NO: 7371)
3'-UUUUUUUUUUUUUUUUUAAAUUGUU-5' (SEQ ID NO: 1826)

βc-3212 Target: 5'-AAAAAAAAAAAAAAAAATTTAACAA-3' (SEQ ID NO: 2935)

5'-UAAAAAAAAAAAAAAAAAAUUUAACA-3' (SEQ ID NO: 7372)
3'-AUUUUUUUUUUUUUUUUUAAAUUGU-5' (SEQ ID NO: 1827)

βc-3213 Target: 5'-TAAAAAAAAAAAAAAAAATTTAACA-3' (SEQ ID NO: 2936)

5'-UUAAAAAAAAAAAAAAAAAAUUUAAC-3' (SEQ ID NO: 7373)
3'-AAUUUUUUUUUUUUUUUUUAAAUUG-5' (SEQ ID NO: 1828)

βc-3214 Target: 5'-TTAAAAAAAAAAAAAAAAATTTAAC-3' (SEQ ID NO: 2937)

5'-CUUAAAAAAAAAAAAAAAAAAUUUAA-3' (SEQ ID NO: 7374)
3'-GAAUUUUUUUUUUUUUUUUUAAAUU-5' (SEQ ID NO: 1829)

βc-3215 Target: 5'-CTTAAAAAAAAAAAAAAAAATTTAA-3' (SEQ ID NO: 2938)

5'-UCUUAAAAAAAAAAAAAAAAAAUUUA-3' (SEQ ID NO: 7375)
3'-AGAAUUUUUUUUUUUUUUUUUAAAU-5' (SEQ ID NO: 1830)

βc-3216 Target: 5'-TCTTAAAAAAAAAAAAAAAATTTA-3' (SEQ ID NO: 2939)

5'-AUUCUUAAAAAAAAAAAAAAAAAAUU-3' (SEQ ID NO: 7376)
3'-UAAGAAUUUUUUUUUUUUUUUUUAA-5' (SEQ ID NO: 1831)

βc-3218 Target: 5'-ATTCTTAAAAAAAAAAAAAAAATT-3' (SEQ ID NO: 2940)

5'-UAUUCUUAAAAAAAAAAAAAAAAAAAU-3' (SEQ ID NO: 7377)
3'-AUAAGAAUUUUUUUUUUUUUUUUUUUA-5' (SEQ ID NO: 1832)

βc-3219 Target: 5'-TATTCTTAAAAAAAAAAAAAAAAAAAT-3' (SEQ ID NO: 2941)

5'-AUAUUCUUAAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 7378)
3'-UAUAAGAAUUUUUUUUUUUUUUUUUUU-5' (SEQ ID NO: 1833)

βc-3220 Target: 5'-ATATTCTTAAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2942)

5'-GAUAUUCUUAAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 7379)
3'-CUAUAAGAAUUUUUUUUUUUUUUUUUUU-5' (SEQ ID NO: 1834)

βc-3221 Target: 5'-GATATTCTTAAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2943)

5'-AGAUAUUCUUAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 7380)
3'-UCUAUAAGAAUUUUUUUUUUUUUUUUUU-5' (SEQ ID NO: 1835)

βc-3222 Target: 5'-AGATATTCTTAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2944)

5'-CAGAUAUUCUUAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 7381)
3'-GUCUAUAAGAAUUUUUUUUUUUUUUUU-5' (SEQ ID NO: 1836)

βc-3223 Target: 5'-CAGATATTCTTAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2945)

5'-ACAGAUAUUCUUAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 7382)
3'-UGUCUAUAAGAAUUUUUUUUUUUUUUUU-5' (SEQ ID NO: 1837)

βc-3224 Target: 5'-ACAGATATTCTTAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2946)

5'-CAUUACAGAUAUUCUUAAAAAAAAAAAA-3' (SEQ ID NO: 7383)
3'-GUAAUGUCUAUAAGAAUUUUUUUUUUUU-5' (SEQ ID NO: 1838)

βc-3228 Target: 5'-CATTACAGATATTCTTAAAAAAAAAAAA-3' (SEQ ID NO: 2947)

5'-CCAUUACAGAUAUUCUUAAAAAAAAAAA-3' (SEQ ID NO: 7384)
3'-GGUAAUGUCUAUAAGAAUUUUUUUUUUU-5' (SEQ ID NO: 1839)

βc-3229 Target: 5'-CCATTACAGATATTCTTAAAAAAAAAAA-3' (SEQ ID NO: 2948)

5'-AGUACCAUUACAGAUAUUCUUAAAAAA-3' (SEQ ID NO: 7385)
3'-UCAUGGUAAUGUCUAUAAGAAUUUUUU-5' (SEQ ID NO: 1840)

βc-3233 Target: 5'-AGTACCATTACAGATATTCTTAAAAAA-3' (SEQ ID NO: 2949)

5'-CAGUACCAUUACAGAUAUUCUUAAAAA-3' (SEQ ID NO: 7386)
3'-GUCAUGGUAAUGUCUAUAAGAAUUUUU-5' (SEQ ID NO: 1841)

βc-3234 Target: 5'-CAGTACCATTACAGATATTCTTAAAAA-3' (SEQ ID NO: 2950)

5'-UCAGUACCAUUACAGAUAUUCUUAAAA-3' (SEQ ID NO: 7387)
3'-AGUCAUGGUAAUGUCUAUAAGAAUUUU-5' (SEQ ID NO: 1842)

βc-3235 Target: 5'-TCAGTACCATTACAGATATTCTTAAAA-3' (SEQ ID NO: 2951)

5'-AAAGUCAGUACCAUUACAGAUAUUCUU-3' (SEQ ID NO: 7388)
3'-UUUCAGUCAUGGUAAUGUCUAUAAGAA-5' (SEQ ID NO: 1843)

βc-3239 Target: 5'-AAAGTCAGTACCATTACAGATATTCTT-3' (SEQ ID NO: 2952)

5'-GCUACUUCAAAGCAAGCAAAGUCAGUA-3' (SEQ ID NO: 7389)
3'-CGAUGAAGUUUCGUUCGUUUCAGUCAU-5' (SEQ ID NO: 1844)

βc-3256 Target: 5'-GCTACTTCAAAGCAAGCAAAGTCAGTA-3' (SEQ ID NO: 2953)

5'-AAAAAAAGAGCUACUUCAAAGCAAGCA-3' (SEQ ID NO: 7390)
3'-UUUUUUUCUCGAUGAAGUUUCGUUCGU-5' (SEQ ID NO: 1845)

βc-3265 Target: 5'-AAAAAAAGAGCTACTTCAAAGCAAGCA-3' (SEQ ID NO: 2954)

5'-AAAAAAAAAAAAGAGCUACUUCAAAGC-3' (SEQ ID NO: 7391)
3'-UUUUUUUUUUUUUCUCGAUGAAGUUUCG-5' (SEQ ID NO: 1846)

βc-3270 Target: 5'-AAAAAAAAAAAAGAGCTACTTCAAAGC-3' (SEQ ID NO: 2955)

5'-AAAAAAAAAAAAAGAGCUACUUCAAAG-3' (SEQ ID NO: 7392)
3'-UUUUUUUUUUUUUCUCGAUGAAGUUUC-5' (SEQ ID NO: 1847)

βc-3271 Target: 5'-AAAAAAAAAAAAAGAGCTACTTCAAAG-3' (SEQ ID NO: 2956)

5'-AAAAAAAAAAAAAAAAGAGCUACUUCAA-3' (SEQ ID NO: 7393)
3'-UUUUUUUUUUUUUUUUCUCGAUGAAGUU-5' (SEQ ID NO: 1848)

βc-3273 Target: 5'-AAAAAAAAAAAAAAAAGAGCTACTTCAA-3' (SEQ ID NO: 2957)

5'-AAAAAAAAAAAAAAAAAGAGCUACUUCA-3' (SEQ ID NO: 7394)
3'-UUUUUUUUUUUUUUUUUCUCGAUGAAGU-5' (SEQ ID NO: 1849)

βc-3274 Target: 5'-AAAAAAAAAAAAAAAAAGAGCTACTTCA-3' (SEQ ID NO: 2958)

5'-AAAAAAAAAAAAAAAAAAGAGCUACUUC-3' (SEQ ID NO: 7395)
3'-UUUUUUUUUUUUUUUUUUCUCGAUGAAG-5' (SEQ ID NO: 1850)

βc-3275 Target: 5'-AAAAAAAAAAAAAAAAAAGAGCTACTTC-3' (SEQ ID NO: 2959)

5'-AAAAAAAAAAAAAAAAAAAGAGCUACUU-3' (SEQ ID NO: 7396)
3'-UUUUUUUUUUUUUUUUUUUCUCGAUGAA-5' (SEQ ID NO: 1851)

βc-3276 Target: 5'-AAAAAAAAAAAAAAAAAAAGAGCTACTT-3' (SEQ ID NO: 2960)

5'-AAAAAAAAAAAAAAAAAAAAAAAAAGAG-3' (SEQ ID NO: 7397)
3'-UUUUUUUUUUUUUUUUUUUUUUUUUCUC-5' (SEQ ID NO: 1852)

βc-3282 Target: 5'-AAAAAAAAAAAAAAAAAAAAAAAAAGAG-3' (SEQ ID NO: 2961)

5'-AAAAAAAAAAAAAAAAAAAAAAAAAGA-3' (SEQ ID NO: 7398)
3'-UUUUUUUUUUUUUUUUUUUUUUUUUCU-5' (SEQ ID NO: 1853)

βc-3283 Target: 5'-AAAAAAAAAAAAAAAAAAAAAAAAAGA-3' (SEQ ID NO: 2962)

5'-CAAAAAAAAAAAAAAAAAAAAAAAAAG-3' (SEQ ID NO: 7399)
3'-GUUUUUUUUUUUUUUUUUUUUUUUUUC-5' (SEQ ID NO: 1854)

βc-3284 Target: 5'-CAAAAAAAAAAAAAAAAAAAAAAAAAG-3' (SEQ ID NO: 2963)

5'-GCAAAAAAAAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 7400)
3'-CGUUUUUUUUUUUUUUUUUUUUUUUUU-5' (SEQ ID NO: 1855)

βc-3285 Target: 5'-GCAAAAAAAAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2964)

5'-CUGCAAAAAAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 7401)
3'-GACGUUUUUUUUUUUUUUUUUUUUUUU-5' (SEQ ID NO: 1856)

βc-3287 Target: 5'-CTGCAAAAAAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2965)

5'-ACUGCAAAAAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 7402)
3'-UGACGUUUUUUUUUUUUUUUUUUUUUU-5' (SEQ ID NO: 1857)

βc-3288 Target: 5'-ACTGCAAAAAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2966)

5'-AGUUACUGCAAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 7403)
3'-UCAAUGACGUUUUUUUUUUUUUUUUU-5' (SEQ ID NO: 1858)

βc-3292 Target: 5'-AGTTACTGCAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2967)

5'-CAGUUACUGCAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 7404)
3'-GUCAAUGACGUUUUUUUUUUUUUUUUU-5' (SEQ ID NO: 1859)

βc-3293 Target: 5'-CAGTTACTGCAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2968)

5'-ACAGUUACUGCAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 7405)
3'-UGUCAAUGACGUUUUUUUUUUUUUUUUU-5' (SEQ ID NO: 1860)

βc-3294 Target: 5'-ACAGTTACTGCAAAAAAAAAAAAAAAAA-3' (SEQ ID NO: 2969)

5'-AAAAACAGUUACUGCAAAAAAAAAAAAA-3' (SEQ ID NO: 7406)
3'-UUUUUGUCAAUGACGUUUUUUUUUUUUU-5' (SEQ ID NO: 1861)

βc-3298 Target: 5'-AAAAACAGTTACTGCAAAAAAAAAAAAA-3' (SEQ ID NO: 2970)

5'-AAAAAACAGUUACUGCAAAAAAAAAAAA-3' (SEQ ID NO: 7407)
3'-UUUUUUGUCAAUGACGUUUUUUUUUUUU-5' (SEQ ID NO: 1862)

βc-3299 Target: 5'-AAAAAACAGTTACTGCAAAAAAAAAAAA-3' (SEQ ID NO: 2971)

5'-UAAAAAACAGUUACUGCAAAAAAAAAA-3' (SEQ ID NO: 7408)
3'-AUUUUUUGUCAAUGACGUUUUUUUUUU-5' (SEQ ID NO: 1863)

βc-3300 Target: 5'-TAAAAAACAGTTACTGCAAAAAAAAAA-3' (SEQ ID NO: 2972)

5'-CUUAAAAAACAGUUACUGCAAAAAAAA-3' (SEQ ID NO: 7409)
3'-GAAUUUUUUGUCAAUGACGUUUUUUUU-5' (SEQ ID NO: 1864)

βc-3302 Target: 5'-CTTAAAAAACAGTTACTGCAAAAAAAA-3' (SEQ ID NO: 2973)

5'-ACUUAAAAAACAGUUACUGCAAAAAAA-3' (SEQ ID NO: 7410)
3'-UGAAUUUUUUGUCAAUGACGUUUUUUU-5' (SEQ ID NO: 1865)

βc-3303 Target: 5'-ACTTAAAAAACAGTTACTGCAAAAAAA-3' (SEQ ID NO: 2974)

5'-AGACUUAAAAAACAGUUACUGCAAAAA-3' (SEQ ID NO: 7411)
3'-UCUGAAUUUUUUGUCAAUGACGUUUUU-5' (SEQ ID NO: 1866)

βc-3305 Target: 5'-AGACTTAAAAAACAGTTACTGCAAAAA-3' (SEQ ID NO: 2975)

5'-ACACUACGAGAGACUUAAAAAACAGUU-3' (SEQ ID NO: 7412)
3'-UGUGAUGCUCUCUGAAUUUUUUGUCAA-5' (SEQ ID NO: 1867)

βc-3315 Target: 5'-ACACTACGAGAGACTTAAAAAACAGTT-3' (SEQ ID NO: 2976)

5'-UAACACUACGAGAGACUUAAAAAACAG-3' (SEQ ID NO: 7413)
3'-AUUGUGAUGCUCUCUGAAUUUUUUGUC-5' (SEQ ID NO: 1868)

βc-3317 Target: 5'-TAACACTACGAGAGACTTAAAAAACAG-3' (SEQ ID NO: 2977)

5'-UUAACACUACGAGAGACUUAAAAAACA-3' (SEQ ID NO: 7414)
3'-AAUUGUGAUGCUCUCUGAAUUUUUUGU-5' (SEQ ID NO: 1869)

βc-3318 Target: 5'-TTAACACTACGAGAGACTTAAAAAACA-3' (SEQ ID NO: 2978)

5'-ACUUAACACUACGAGAGACUUAAAAAA-3' (SEQ ID NO: 7415)
3'-UGAAUUGUGAUGCUCUCUGAAUUUUUU-5' (SEQ ID NO: 1870)

βc-3320 Target: 5'-ACTTAACACTACGAGAGACTTAAAAAA-3' (SEQ ID NO: 2979)

5'-AUAACUUAACACUACGAGAGACUUAAA-3' (SEQ ID NO: 7416)
3'-UAUUGAAUUGUGAUGCUCUCUGAAUUU-5' (SEQ ID NO: 1871)

βc-3323 Target: 5'-ATAACTTAACACTACGAGAGACTTAAA-3' (SEQ ID NO: 2980)

5'-UAUAACUUAACACUACGAGAGACUUAA-3' (SEQ ID NO: 7417)
3'-AUAUUGAAUUGUGAUGCUCUCUGAAUU-5' (SEQ ID NO: 1872)

βc-3324 Target: 5'-TATAACTTAACACTACGAGAGACTTAA-3' (SEQ ID NO: 2981)

5'-GUAUUCACUAUAACUUAACACUACGAG-3' (SEQ ID NO: 7418)
3'-CAUAAGUGAUAUUGAAUUGUGAUGCUC-5' (SEQ ID NO: 1873)

βc-3332 Target: 5'-GTATTCACTATAACTTAACACTACGAG-3' (SEQ ID NO: 2982)

5'-AGUAUUCACUAUAACUUAACACUACGA-3' (SEQ ID NO: 7419)
3'-UCAUAAGUGAUAUUGAAUUGUGAUGCU-5' (SEQ ID NO: 1874)

βc-3333 Target: 5'-AGTATTCACTATAACTTAACACTACGA-3' (SEQ ID NO: 2983)

5'-CAGUAUUCACUAUAACUUAACACUACG-3' (SEQ ID NO: 7420)
3'-GUCAUAAGUGAUAUUGAAUUGUGAUGC-5' (SEQ ID NO: 1875)

βc-3334 Target: 5'-CAGTATTCACTATAACTTAACACTACG-3' (SEQ ID NO: 2984)

5'-GCAGUAUUCACUAUAACUUAACACUAC-3' (SEQ ID NO: 7421)
3'-CGUCAUAAGUGAUAUUGAAUUGUGAUG-5' (SEQ ID NO: 1876)

βc-3335 Target: 5'-GCAGTATTCACTATAACTTAACACTAC-3' (SEQ ID NO: 2985)

5'-AGAAAUUGCUGUAGCAGUAUUCACUAU-3' (SEQ ID NO: 7422)
3'-UCUUUAACGACAUCGUCAUAAGUGAUA-5' (SEQ ID NO: 1877)

βc-3348 Target: 5'-AGAAATTGCTGTAGCAGTATTCACTAT-3' (SEQ ID NO: 2986)

5'-UAGAAAUUGCUGUAGCAGUAUUCACUA-3' (SEQ ID NO: 7423)
3'-AUCUUUAACGACAUCGUCAUAAGUGAU-5' (SEQ ID NO: 1878)

βc-3349 Target: 5'-TAGAAATTGCTGTAGCAGTATTCACTA-3' (SEQ ID NO: 2987)

5'-UUAGAAAUUGCUGUAGCAGUAUUCACU-3' (SEQ ID NO: 7424)
3'-AAUCUUUAACGACAUCGUCAUAAGUGA-5' (SEQ ID NO: 1879)

βc-3350 Target: 5'-TTAGAAATTGCTGTAGCAGTATTCACT-3' (SEQ ID NO: 2988)

5'-ACUCAAUUCUUAAAAAUUAGAAAUUGC-3' (SEQ ID NO: 7425)
3'-UGAGUUAAGAAUUUUUAAUCUUUAACG-5' (SEQ ID NO: 1880)

βc-3366 Target: 5'-ACTCAATTCTTAAAAATTAGAAATTGC-3' (SEQ ID NO: 2989)

5'-CCAUUACUCAAUUCUUAAAAAUUAGAA-3' (SEQ ID NO: 7426)
3'-GGUAAUGAGUUAAGAAUUUUUAAUCUU-5' (SEQ ID NO: 1881)

βc-3371 Target: 5'-CCATTACTCAATTCTTAAAAATTAGAA-3' (SEQ ID NO: 2990)

5'-ACACCAUUACUCAAUUCUUAAAAAUUA-3' (SEQ ID NO: 7427)
3'-UGUGGUAAUGAGUUAAGAAUUUUUAAU-5' (SEQ ID NO: 1882)

βc-3374 Target: 5'-ACACCATTACTCAATTCTTAAAAATTA-3' (SEQ ID NO: 2991)

5'-CUACACCAUUACUCAAUUCUUAAAAAU-3' (SEQ ID NO: 7428)
3'-GAUGUGGUAAUGAGUUAAGAAUUUUUA-5' (SEQ ID NO: 1883)

βc-3376 Target: 5'-CTACACCATTACTCAATTCTTAAAAAT-3' (SEQ ID NO: 2992)

5'-UCUACACCAUUACUCAAUUCUUAAAAA-3' (SEQ ID NO: 7429)
3'-AGAUGUGGUAAUGAGUUAAGAAUUUUU-5' (SEQ ID NO: 1884)

βc-3377 Target: 5'-TCTACACCATTACTCAATTCTTAAAAA-3' (SEQ ID NO: 2993)

5'-GUUCUACACCAUUACUCAAUUCUUAAA-3' (SEQ ID NO: 7430)
3'-CAAGAUGUGGUAAUGAGUUAAGAAUUU-5' (SEQ ID NO: 1885)

βc-3379 Target: 5'-GTTCTACACCATTACTCAATTCTTAAA-3' (SEQ ID NO: 2994)

5'-GUGUUCUACACCAUUACUCAAUUCUUA-3' (SEQ ID NO: 7431)
3'-CACAAGAUGUGGUAAUGAGUUAAGAAU-5' (SEQ ID NO: 1886)

βc-3381 Target: 5'-GTGTTCTACACCATTACTCAATTCTTA-3' (SEQ ID NO: 2995)

5'-AUGAAUUAGUGUUCUACACCAUUACUC-3' (SEQ ID NO: 7432)
3'-UACUUAAUCACAAGAUGUGGUAAUGAG-5' (SEQ ID NO: 1887)

βc-3389 Target: 5'-ATGAATTAGTGTTCTACACCATTACTC-3' (SEQ ID NO: 2996)

5'-UGAUUAUGAAUUAGUGUUCUACACCAU-3' (SEQ ID NO: 7433)
3'-ACUAAUACUUAAUCACAAGAUGUGGUA-5' (SEQ ID NO: 1888)

βc-3394 Target: 5'-TGATTATGAATTAGTGTTCTACACC-3' (SEQ ID NO: 2997)

5'-GUGAUUAUGAAUUAGUGUUCUACACCA-3' (SEQ ID NO: 7434)
3'-CACUAAUACUUAAUCACAAGAUGUGGU-5' (SEQ ID NO: 1889)

βc-3395 Target: 5'-GTGATTATGAATTAGTGTTCTACACCA-3' (SEQ ID NO: 2998)

5'-AGUGAUUAUGAAUUAGUGUUCUACACC-3' (SEQ ID NO: 7435)
3'-UCACUAAUACUUAAUCACAAGAUGUGG-5' (SEQ ID NO: 1890)

βc-3396 Target: 5'-AGTGATTATGAATTAGTGTTCTACACC-3' (SEQ ID NO: 2999)

5'-AUUAAUUAGAGUGAUUAUGAAUUAGUG-3' (SEQ ID NO: 7436)
3'-UAAUUAAUCUCACUAAUACUUAAUCAC-5' (SEQ ID NO: 1891)

βc-3405 Target: 5'-ATTAATTAGAGTGATTATGAATTAGTG-3' (SEQ ID NO: 3000)

5'-AAUUAAUUAGAGUGAUUAUGAAUUAGU-3' (SEQ ID NO: 7437)
3'-UUAAUUAAUCUCACUAAUACUUAAUCA-5' (SEQ ID NO: 1892)

βc-3406 Target: 5'-AATTAATTAGAGTGATTATGAATTAGT-3' (SEQ ID NO: 3001)

5'-CAAUUAAUUAGAGUGAUUAUGAAUUAG-3' (SEQ ID NO: 7438)
3'-GUUAAUUAAUCUCACUAAUACUUAAUC-5' (SEQ ID NO: 1893)

βc-3407 Target: 5'-CAATTAATTAGAGTGATTATGAATTAG-3' (SEQ ID NO: 3002)

5'-AUUACAAUUAAUUAGAGUGAUUAUGAA-3' (SEQ ID NO: 7439)
3'-UAAUGUUAAUUAAUCUCACUAAUACUU-5' (SEQ ID NO: 1894)

βc-3411 Target: 5'-ATTACAATTAATTAGAGTGATTATGAA-3' (SEQ ID NO: 3003)

5'-GAUUACAAUUAAUUAGAGUGAUUAUGA-3' (SEQ ID NO: 7440)
3'-CUAAUGUUAAUUAAUCUCACUAAUACU-5' (SEQ ID NO: 1895)

βc-3412 Target: 5'-GATTACAATTAATTAGAGTGATTATGA-3' (SEQ ID NO: 3004)

5'-AGAUUACAAUUAAUUAGAGUGAUUAUG-3' (SEQ ID NO: 7441)
3'-UCUAAUGUUAAUUAAUCUCACUAAUAC-5' (SEQ ID NO: 1896)

βc-3413 Target: 5'-AGATTACAATTAATTAGAGTGATTATG-3' (SEQ ID NO: 3005)

5'-CUUUAUUCAGAUUACAAUUAAUUAGAG-3' (SEQ ID NO: 7442)
3'-GAAAUAAGUCUAAUGUUAAUUAAUCUC-5' (SEQ ID NO: 1897)

βc-3421 Target: 5'-CTTTATTCAGATTACAATTAATTAGAG-3' (SEQ ID NO: 3006)

5'-ACUUUAUUCAGAUUACAAUUAAUUAGA-3' (SEQ ID NO: 7443)
3'-UGAAAUAAGUCUAAUGUUAAUUAAUCU-5' (SEQ ID NO: 1898)

βc-3422 Target: 5'-ACTTTATTCAGATTACAATTAATTAGA-3' (SEQ ID NO: 3007)

5'-UUACACUUUAUUCAGAUUACAAUUAAU-3' (SEQ ID NO: 7444)
3'-AAUGUGAAAUAAGUCUAAUGUUAAUUA-5' (SEQ ID NO: 1899)

βc-3426 Target: 5'-TTACACTTTATTCAGATTACAATTAAT-3' (SEQ ID NO: 3008)

5'-GUUACACUUUAUUCAGAUUACAAUUAA-3' (SEQ ID NO: 7445)
3'-CAAUGUGAAAUAAGUCUAAUGUUAAUU-5' (SEQ ID NO: 1900)

βc-3427 Target: 5'-GTTACACTTTATTCAGATTACAATTAA-3' (SEQ ID NO: 3009)

5'-UGUUACACUUUAUUCAGAUUACAAUUA-3' (SEQ ID NO: 7446)
3'-ACAAUGUGAAAUAAGUCUAAUGUUAAU-5' (SEQ ID NO: 1901)

βc-3428 Target: 5'-TGTTACACTTTATTCAGATTACAATTA-3' (SEQ ID NO: 3010)

5'-UUGUUACACUUUAUUCAGAUUACAAUU-3' (SEQ ID NO: 7447)
3'-AACAAUGUGAAAUAAGUCUAAUGUUAA-5' (SEQ ID NO: 1902)

βc-3429 Target: 5'-TTGTTACACTTTATTCAGATTACAATT-3' (SEQ ID NO: 3011)

5'-AUUGUUACACUUUAUUCAGAUUACAAU-3' (SEQ ID NO: 7448)
3'-UAACAAUGUGAAAUAAGUCUAAUGUUA-5' (SEQ ID NO: 1903)

βc-3430 Target: 5'-ATTGTTACACTTTATTCAGATTACAAT-3' (SEQ ID NO: 3012)

5'-CUACACAAUUGUUACACUUUAUUCAGA-3' (SEQ ID NO: 7449)
3'-GAUGUGUUAACAAUGUGAAAUAAGUCU-5' (SEQ ID NO: 1904)

βc-3437 Target: 5'-CTACACAATTGTTACACTTTATTCAGA-3' (SEQ ID NO: 3013)

5'-AAGGCUACACAAUUGUUACACUUUAUU-3' (SEQ ID NO: 7450)
3'-UUCCGAUGUGUUAACAAUGUGAAAUAA-5' (SEQ ID NO: 1905)

βc-3441 Target: 5'-AAGGCTACACAATTGTTACACTTTATT-3' (SEQ ID NO: 3014)

5'-ACAAAAAGGCUACACAAUUGUUACACU-3' (SEQ ID NO: 7451)
3'-UGUUUUUCCGAUGUGUUAACAAUGUGA-5' (SEQ ID NO: 1906)

βc-3446 Target: 5'-ACAAAAAGGCTACACAATTGTTACACT-3' (SEQ ID NO: 3015)

5'-UUUUAUACAAAAAGGCUACACAAUUGU-3' (SEQ ID NO: 7452)
3'-AAAAUAUGUUUUUCCGAUGUGUUAACA-5' (SEQ ID NO: 1907)

βc-3452 Target: 5'-TTTTATACAAAAAGGCTACACAATTGT-3' (SEQ ID NO: 3016)

5'-AUUUUAUACAAAAAGGCUACACAAUUG-3' (SEQ ID NO: 7453)
3'-UAAAAUAUGUUUUUCCGAUGUGUUAAC-5' (SEQ ID NO: 1908)

βc-3453 Target: 5'-ATTTTATACAAAAAGGCTACACAATTG-3' (SEQ ID NO: 3017)

5'-CUAUUUUAUACAAAAAGGCUACACAAU-3' (SEQ ID NO: 7454)
3'-GAUAAAAUAUGUUUUUCCGAUGUGUUA-5' (SEQ ID NO: 1909)

βc-3455 Target: 5'-CTATTTTATACAAAAAGGCTACACAAT-3' (SEQ ID NO: 3018)

5'-UCUAUUUUAUACAAAAAGGCUACACAA-3' (SEQ ID NO: 7455)
3'-AGAUAAAAUAUGUUUUUCCGAUGUGUU-5' (SEQ ID NO: 1910)

βc-3456 Target: 5'-TCTATTTTATACAAAAAGGCTACACAA-3' (SEQ ID NO: 3019)

5'-UGUCUAUUUUAUACAAAAAGGCUACAC-3' (SEQ ID NO: 7456)
3'-ACAGAUAAAAUAUGUUUUUCCGAUGUG-5' (SEQ ID NO: 1911)

βc-3458 Target: 5'-TGTCTATTTTATACAAAAAGGCTACAC-3' (SEQ ID NO: 3020)

5'-UCUAUUUGUCUAUUUUAUACAAAAAGG-3' (SEQ ID NO: 7457)
3'-AGAUAAACAGAUAAAAUAUGUUUUUCC-5' (SEQ ID NO: 1912)

βc-3464 Target: 5'-TCTATTTGTCTATTTTATACAAAAAGG-3' (SEQ ID NO: 3021)

5'-UUUCUAUUUGUCUAUUUUAUACAAAAA-3' (SEQ ID NO: 7458)
3'-AAAGAUAAACAGAUAAAAUAUGUUUUU-5' (SEQ ID NO: 1913)

βc-3466 Target: 5'-TTTCTATTTGTCTATTTTATACAAAAA-3' (SEQ ID NO: 3022)

5'-UUUUCUAUUUGUCUAUUUUAUACAAAA-3' (SEQ ID NO: 7459)
3'-AAAAGAUAAACAGAUAAAAUAUGUUUU-5' (SEQ ID NO: 1914)

βc-3467 Target: 5'-TTTTCTATTTGTCTATTTTATACAAAA-3' (SEQ ID NO: 3023)

5'-AUUUUCUAUUUGUCUAUUUUAUACAAA-3' (SEQ ID NO: 7460)
3'-UAAAAGAUAAACAGAUAAAAUAUGUUU-5' (SEQ ID NO: 1915)

βc-3468 Target: 5'-ATTTTCTATTTGTCTATTTTATACAAA-3' (SEQ ID NO: 3024)

5'-CAUUUUCUAUUUGUCUAUUUUAUACAA-3' (SEQ ID NO: 7461)
3'-GUAAAAGAUAAACAGAUAAAAUAUGUU-5' (SEQ ID NO: 1916)

βc-3469 Target: 5'-CATTTTCTATTTGTCTATTTTATACAA-3' (SEQ ID NO: 3025)

5'-CCAUUUUCUAUUUGUCUAUUUUAUACA-3' (SEQ ID NO: 7462)
3'-GGUAAAAGAUAAACAGAUAAAAUAUGU-5' (SEQ ID NO: 1917)

βc-3470 Target: 5'-CCATTTTCTATTTGTCTATTTTATACA-3' (SEQ ID NO: 3026)

5'-GGACCAUUUUCUAUUUGUCUAUUUUAU-3' (SEQ ID NO: 7463)
3'-CCUGGUAAAAGAUAAACAGAUAAAAUA-5' (SEQ ID NO: 1918)

βc-3473 Target: 5'-GGACCATTTTCTATTTGTCTATTTTAT-3' (SEQ ID NO: 3027)

5'-UGGACCAUUUUCUAUUUGUCUAUUUUA-3' (SEQ ID NO: 7464)
3'-ACCUGGUAAAAGAUAAACAGAUAAAAU-5' (SEQ ID NO: 1919)

βc-3474 Target: 5'-TGGACCATTTTCTATTTGTCTATTTTA-3' (SEQ ID NO: 3028)

5'-UUGGACCAUUUUCUAUUUGUCUAUUUU-3' (SEQ ID NO: 7465)
3'-AACCUGGUAAAAGAUAAACAGAUAAAA-5' (SEQ ID NO: 1920)

βc-3475 Target: 5'-TTGGACCATTTTCTATTTGTCTATTTT-3' (SEQ ID NO: 3029)

5'-AAACUAAUUGGACCAUUUUCUAUUUGU-3' (SEQ ID NO: 7466)
3'-UUUGAUUAACCUGGUAAAAGAUAAACA-5' (SEQ ID NO: 1921)

βc-3482 Target: 5'-AAACTAATTGGACCATTTTCTATTTGT-3' (SEQ ID NO: 3030)

5'-GAAACUAAUUGGACCAUUUUCUAUUUG-3' (SEQ ID NO: 7467)
3'-CUUUGAUUAACCUGGUAAAAGAUAAAC-5' (SEQ ID NO: 1922)

βc-3483 Target: 5'-GAAACTAATTGGACCATTTTCTATTTG-3' (SEQ ID NO: 3031)

5'-GGAAACUAAUUGGACCAUUUUCUAUUU-3' (SEQ ID NO: 7468)
3'-CCUUUGAUUAACCUGGUAAAAGAUAAA-5' (SEQ ID NO: 1923)

βc-3484 Target: 5'-GGAAACTAATTGGACCATTTTCTATTT-3' (SEQ ID NO: 3032)

5'-AGGAAACUAAUUGGACCAUUUUCUAUU-3' (SEQ ID NO: 7469)
3'-UCCUUUGAUUAACCUGGUAAAAGAUAA-5' (SEQ ID NO: 1924)

βc-3485 Target: 5'-AGGAAACTAATTGGACCATTTTCTATT-3' (SEQ ID NO: 3033)

5'-UUAAAAAGGAAACUAAUUGGACCAUUU-3' (SEQ ID NO: 7470)
3'-AAUUUUUCCUUUGAUUAACCUGGUAAA-5' (SEQ ID NO: 1925)

βc-3491 Target: 5'-TTAAAAAGGAAACTAATTGGACCATTT-3' (SEQ ID NO: 3034)

5'-AUUAAAAAGGAAACUAAUUGGACCAUU-3' (SEQ ID NO: 7471)
3'-UAAUUUUUCCUUUGAUUAACCUGGUAA-5' (SEQ ID NO: 1926)

βc-3492 Target: 5'-ATTAAAAAGGAAACTAATTGGACCATT-3' (SEQ ID NO: 3035)

5'-AAGCAUAUUAAAAAGGAAACUAAUUGG-3' (SEQ ID NO: 7472)
3'-UUCGUAUAAUUUUUCCUUUGAUUAACC-5' (SEQ ID NO: 1927)

βc-3498 Target: 5'-AAGCATATTAAAAAGGAAACTAATTGG-3' (SEQ ID NO: 3036)

5'-UAAGCAUAUUAAAAAGGAAACUAAUUG-3' (SEQ ID NO: 7473)
3'-AUUCGUAUAAUUUUUCCUUUGAUUAAC-5' (SEQ ID NO: 1928)

βc-3499 Target: 5'-TAAGCATATTAAAAAGGAAACTAATTG-3' (SEQ ID NO: 3037)

5'-AUUUUAAGCAUAUUAAAAAGGAAACUA-3' (SEQ ID NO: 7474)
3'-UAAAAUUCGUAUAAUUUUUCCUUUGAU-5' (SEQ ID NO: 1929)

βc-3503 Target: 5'-ATTTTAAGCATATTAAAAAGGAAACTA-3' (SEQ ID NO: 3038)

5'-CUGCUUAUUUUAAGCAUAUUAAAAAGG-3' (SEQ ID NO: 7475)
3'-GACGAAUAAAAUUCGUAUAAUUUUUCC-5' (SEQ ID NO: 1930)

βc-3509 Target: 5'-CTGCTTATTTTAAGCATATTAAAAAGG-3' (SEQ ID NO: 3039)

5'-CCUGCUUAUUUUAAGCAUAUUAAAAAG-3' (SEQ ID NO: 7476)
3'-GGACGAAUAAAAUUCGUAUAAUUUUUC-5' (SEQ ID NO: 1931)

βc-3510 Target: 5'-CCTGCTTATTTTAAGCATATTAAAAAG-3' (SEQ ID NO: 3040)

5'-GAUCCACCUGCUUAUUUUAAGCAUAUU-3' (SEQ ID NO: 7477)
3'-CUAGGUGGACGAAUAAAAUUCGUAUAA-5' (SEQ ID NO: 1932)

βc-3516 Target: 5'-GATCCACCTGCTTATTTTAAGCATATT-3' (SEQ ID NO: 3041)

5'-CAAAAACAUGAAAUAGAUCCACCUGCU-3' (SEQ ID NO: 7478)
3'-GUUUUUGUACUUUAUCUAGGUGGACGA-5' (SEQ ID NO: 1933)

βc-3531 Target: 5'-CAAAAACATGAAATAGATCCACCTGCT-3' (SEQ ID NO: 3042)

5'-UCAAAAACAUGAAAUAGAUCCACCUGC-3' (SEQ ID NO: 7479)
3'-AGUUUUUGUACUUUAUCUAGGUGGACG-5' (SEQ ID NO: 1934)

βc-3532 Target: 5'-TCAAAAACATGAAATAGATCCACCTGC-3' (SEQ ID NO: 3043)

5'-GAUCAAAAACAUGAAAUAGAUCCACCU-3' (SEQ ID NO: 7480)
3'-CUAGUUUUUGUACUUUAUCUAGGUGGA-5' (SEQ ID NO: 1935)

βc-3534 Target: 5'-GATCAAAAACATGAAATAGATCCACCT-3' (SEQ ID NO: 3044)

5'-UGAUCAAAAACAUGAAAUAGAUCCACC-3' (SEQ ID NO: 7481)
3'-ACUAGUUUUUGUACUUUAUCUAGGUGG-5' (SEQ ID NO: 1936)

βc-3535 Target: 5'-TGATCAAAAACATGAAATAGATCCACC-3' (SEQ ID NO: 3045)

5'-UUGAUCAAAAACAUGAAAUAGAUCCAC-3' (SEQ ID NO: 7482)
3'-AACUAGUUUUUGUACUUUAUCUAGGUG-5' (SEQ ID NO: 1937)

βc-3536 Target: 5'-TTGATCAAAAACATGAAATAGATCCAC-3' (SEQ ID NO: 3046)

5'-AGUUUUUGAUCAAAAACAUGAAAUAGA-3' (SEQ ID NO: 7483)
3'-UCAAAAACUAGUUUUUGUACUUUAUCU-5' (SEQ ID NO: 1938)

βc-3541 Target: 5'-AGTTTTTGATCAAAAACATGAAATAGA-3' (SEQ ID NO: 3047)

5'-CCAAAUAGUUUUUGAUCAAAAACAUGA-3' (SEQ ID NO: 7484)
3'-GGUUUAUCAAAAACUAGUUUUUGUACU-5' (SEQ ID NO: 1939)

βc-3547 Target: 5'-CCAAATAGTTTTTGATCAAAAACATGA-3' (SEQ ID NO: 3048)

5'-UAUCCCAAAUAGUUUUUGAUCAAAAAC-3' (SEQ ID NO: 7485)
3'-AUAGGGUUUAUCAAAAACUAGUUUUUG-5' (SEQ ID NO: 1940)

βc-3551 Target: 5'-TATCCCAAATAGTTTTTGATCAAAAAC-3' (SEQ ID NO: 3049)

5'-AUAUCCCAAAUAGUUUUUGAUCAAAAA-3' (SEQ ID NO: 7486)
3'-UAUAGGGUUUAUCAAAAACUAGUUUUU-5' (SEQ ID NO: 1941)

βc-3552 Target: 5'-ATATCCCAAATAGTTTTTGATCAAAAA-3' (SEQ ID NO: 3050)

5'-CAUAUCCCAAAUAGUUUUUGAUCAAAA-3' (SEQ ID NO: 7487)
3'-GUAUAGGGUUUAUCAAAAACUAGUUUU-5' (SEQ ID NO: 1942)

βc-3553 Target: 5'-CATATCCCAAATAGTTTTTGATCAAAA-3' (SEQ ID NO: 3051)

5'-ACAUAUCCCAAAUAGUUUUUGAUCAAA-3' (SEQ ID NO: 7488)
3'-UGUAUAGGGUUUAUCAAAAACUAGUUU-5' (SEQ ID NO: 1943)

βc-3554 Target: 5'-ACATATCCCAAATAGTTTTTGATCAAA-3' (SEQ ID NO: 3052)

5'-CCAUACAUAUCCCAAAUAGUUUUUGAU-3' (SEQ ID NO: 7489)
3'-GGUAUGUAUAGGGUUUAUCAAAAACUA-5' (SEQ ID NO: 1944)

βc-3558 Target: 5'-CCATACATATCCCAAATAGTTTTTGAT-3' (SEQ ID NO: 3053)

5'-UUACCCUACCCAUACAUAUCCCAAAUA-3' (SEQ ID NO: 7490)
3'-AAUGGGAUGGGUAUGUAUAGGGUUUAU-5' (SEQ ID NO: 1945)

βc-3567 Target: 5'-TTACCCTACCCATACATATCCCAAATA-3' (SEQ ID NO: 3054)

5'-UUUACCCUACCCAUACAUAUCCCAAAU-3' (SEQ ID NO: 7491)
3'-AAAUGGGAUGGGUAUGUAUAGGGUUUA-5' (SEQ ID NO: 1946)

βc-3568 Target: 5'-TTTACCCTACCCATACATATCCCAAAT-3' (SEQ ID NO: 3055)

5'-AUUUACCCUACCCAUACAUAUCCCAAA-3' (SEQ ID NO: 7492)
3'-UAAAUGGGAUGGGUAUGUAUAGGGUUU-5' (SEQ ID NO: 1947)

βc-3569 Target: 5'-ATTTACCCTACCCATACATATCCCAAA-3' (SEQ ID NO: 3056)

5'-ACACCUCUUACUGAUUUACCCUACCCA-3' (SEQ ID NO: 7493)
3'-UGUGGAGAAUGACUAAAUGGGAUGGGU-5' (SEQ ID NO: 1948)

βc-3582 Target: 5'-ACACCTCTTACTGATTTACCCTACCCA-3' (SEQ ID NO: 3057)

5'-UAACACCUCUUACUGAUUUACCCUACC-3' (SEQ ID NO: 7494)
3'-AUUGUGGAGAAUGACUAAAUGGGAUGG-5' (SEQ ID NO: 1949)

βc-3584 Target: 5'-TAACACCTCTTACTGATTTACCCTACC-3' (SEQ ID NO: 3058)

5'-AUAACACCUCUUACUGAUUUACCCUAC-3' (SEQ ID NO: 7495)
3'-UAUUGUGGAGAAUGACUAAAUGGGAUG-5' (SEQ ID NO: 1950)

βc-3585 Target: 5'-ATAACACCTCTTACTGATTTACCCTAC-3' (SEQ ID NO: 3059)

5'-AAUAACACCUCUUACUGAUUUACCCUA-3' (SEQ ID NO: 7496)
3'-UUAUUGUGGAGAAUGACUAAAUGGGAU-5' (SEQ ID NO: 1951)

βc-3586 Target: 5'-AATAACACCTCTTACTGATTTACCCTA-3' (SEQ ID NO: 3060)

5'-AAAUAACACCUCUUACUGAUUUACCCU-3' (SEQ ID NO: 7497)
3'-UUUAUUGUGGAGAAUGACUAAAUGGGA-5' (SEQ ID NO: 1952)

βc-3587 Target: 5'-AAATAACACCTCTTACTGATTTACCCT-3' (SEQ ID NO: 3061)

5'-CAAAUAACACCUCUUACUGAUUUACCC-3' (SEQ ID NO: 7498)
3'-GUUUAUUGUGGAGAAUGACUAAAUGGG-5' (SEQ ID NO: 1953)

βc-3588 Target: 5'-CAAATAACACCTCTTACTGATTTACCC-3' (SEQ ID NO: 3062)

5'-AGGUUCCAAAUAACACCUCUUACUGAU-3' (SEQ ID NO: 7499)
3'-UCCAAGGUUUAUUGUGGAGAAUGACUA-5' (SEQ ID NO: 1954)

βc-3594 Target: 5'-AGGTTCCAAATAACACCTCTTACTGAT-3' (SEQ ID NO: 3063)

5'-AAAACAAGGUUCCAAAUAACACCUCUU-3' (SEQ ID NO: 7500)
3'-UUUUGUUCCAAGGUUUAUUGUGGAGAA-5' (SEQ ID NO: 1955)

βc-3600 Target: 5'-AAAACAAGGTTCCAAATAACACCTCTT-3' (SEQ ID NO: 3064)

5'-CAAAACAAGGUUCCAAAUAACACCUCU-3' (SEQ ID NO: 7501)
3'-GUUUUGUUCCAAGGUUUAUUGUGGAGA-5' (SEQ ID NO: 1956)

βc-3601 Target: 5'-CAAAACAAGGTTCCAAATAACACCTCT-3' (SEQ ID NO: 3065)

5'-CCAAAACAAGGUUCCAAAUAACACCUC-3' (SEQ ID NO: 7502)
3'-GGUUUUGUUCCAAGGUUUAUUGUGGAG-5' (SEQ ID NO: 1957)

βc-3602 Target: 5'-CCAAAACAAGGTTCCAAATAACACCTC-3' (SEQ ID NO: 3066)

5'-ACUGUCCAAAACAAGGUUCCAAAUAAC-3' (SEQ ID NO: 7503)
3'-UGACAGGUUUUGUUCCAAGGUUUAUUG-5' (SEQ ID NO: 1958)

βc-3607 Target: 5'-ACTGTCCAAAACAAGGTTCCAAATAAC-3' (SEQ ID NO: 3067)

5'-GUAAACUGUCCAAAACAAGGUUCCAAA-3' (SEQ ID NO: 7504)
3'-CAUUUGACAGGUUUUGUUCCAAGGUUU-5' (SEQ ID NO: 1959)

βc-3611 Target: 5'-GTAAACTGTCCAAAACAAGGTTCCAAA-3' (SEQ ID NO: 3068)

5'-GGUAAACUGUCCAAAACAAGGUUCCAA-3' (SEQ ID NO: 7505)
3'-CCAUUUGACAGGUUUUGUUCCAAGGUU-5' (SEQ ID NO: 1960)

βc-3612 Target: 5'-GGTAAACTGTCCAAAACAAGGTTCCAA-3' (SEQ ID NO: 3069)

5'-AGGCAACUGGUAAACUGUCCAAAACAA-3' (SEQ ID NO: 7506)
3'-UCCGUUGACCAUUUGACAGGUUUUGUU-5' (SEQ ID NO: 1961)

βc-3620 Target: 5'-AGGCAACTGGTAAACTGTCCAAAACAA-3' (SEQ ID NO: 3070)

5'-GGGAUAAAAGGCAACUGGUAAACUGUC-3' (SEQ ID NO: 7507)
3'-CCCUAUUUUCCGUUGACCAUUUGACAG-5' (SEQ ID NO: 1962)

βc-3628 Target: 5'-GGGATAAAAGGCAACTGGTAAACTGTC-3' (SEQ ID NO: 3071)

5'-UGGGAUAAAAGGCAACUGGUAAACUGU-3' (SEQ ID NO: 7508)
3'-ACCCUAUUUUCCGUUGACCAUUUGACA-5' (SEQ ID NO: 1963)

βc-3629 Target: 5'-TGGGATAAAAGGCAACTGGTAAACTGT-3' (SEQ ID NO: 3072)

5'-ACAACUUUGGGAUAAAAGGCAACUGGU-3' (SEQ ID NO: 7509)
3'-UGUUGAAACCCUAUUUUCCGUUGACCA-5' (SEQ ID NO: 1964)

βc-3636 Target: 5'-ACAACTTTGGGATAAAAGGCAACTGGT-3' (SEQ ID NO: 3073)

5'-CAACAACUUUGGGAUAAAAGGCAACUG-3' (SEQ ID NO: 7510)
3'-GUUGUUGAAACCCUAUUUUCCGUUGAC-5' (SEQ ID NO: 1965)

βc-3638 Target: 5'-CAACAACTTTGGGATAAAAGGCAACTG-3' (SEQ ID NO: 3074)

5'-GGUUACAACAACUUUGGGAUAAAAGGC-3' (SEQ ID NO: 7511)
3'-CCAAUGUUGUUGAAACCCUAUUUUCCG-5' (SEQ ID NO: 1966)

βc-3643 Target: 5'-GGTTACAACAACTTTGGGATAAAAGGC-3' (SEQ ID NO: 3075)

5'-AGGUUACAACAACUUUGGGAUAAAAGG-3' (SEQ ID NO: 7512)
3'-UCCAAUGUUGUUGAAACCCUAUUUUCC-5' (SEQ ID NO: 1967)

βc-3644 Target: 5'-AGGTTACAACAACTTTGGGATAAAAGG-3' (SEQ ID NO: 3076)

5'-CAGGUUACAACAACUUUGGGAUAAAAG-3' (SEQ ID NO: 7513)
3'-GUCCAAUGUUGUUGAAACCCUAUUUUC-5' (SEQ ID NO: 1968)

βc-3645 Target: 5'-CAGGTTACAACAACTTTGGGATAAAAG-3' (SEQ ID NO: 3077)

5'-UAUCACAGCAGGUUACAACAACUUUGG-3' (SEQ ID NO: 7514)
3'-AUAGUGUCGUCCAAUGUUGUUGAAACC-5' (SEQ ID NO: 1969)

βc-3653 Target: 5'-TATCACAGCAGGTTACAACAACTTTGG-3' (SEQ ID NO: 3078)

5'-GUAUCACAGCAGGUUACAACAACUUUG-3' (SEQ ID NO: 7515)
3'-CAUAGUGUCGUCCAAUGUUGUUGAAAC-5' (SEQ ID NO: 1970)

βc-3654 Target: 5'-GTATCACAGCAGGTTACAACAACTTTG-3' (SEQ ID NO: 3079)

5'-UCGUAUCACAGCAGGUUACAACAACUU-3' (SEQ ID NO: 7516)
3'-AGCAUAGUGUCGUCCAAUGUUGUUGAA-5' (SEQ ID NO: 1971)

βc-3656 Target: 5'-TCGTATCACAGCAGGTTACAACAACTT-3' (SEQ ID NO: 3080)

5'-UUUCUCUUGAAGCAUCGUAUCACAGCA-3' (SEQ ID NO: 7517)
3'-AAAGAGAACUUCGUAGCAUAGUGUCGU-5' (SEQ ID NO: 1972)

βc-3670 Target: 5'-TTTCTCTTGAAGCATCGTATCACAGCA-3' (SEQ ID NO: 3081)

5'-UUUUCUCUUGAAGCAUCGUAUCACAGC-3' (SEQ ID NO: 7518)
3'-AAAAGAGAACUUCGUAGCAUAGUGUCG-5' (SEQ ID NO: 1973)

βc-3671 Target: 5'-TTTTCTCTTGAAGCATCGTATCACAGC-3' (SEQ ID NO: 3082)

5'-CAUUUUCUCUUGAAGCAUCGUAUCACA-3' (SEQ ID NO: 7519)
3'-GUAAAAGAGAACUUCGUAGCAUAGUGU-5' (SEQ ID NO: 1974)

βc-3673 Target: 5'-CATTTTCTCTTGAAGCATCGTATCACA-3' (SEQ ID NO: 3083)

5'-UUUUUUAUAACCGCAUUUUCUCUUGAA-3' (SEQ ID NO: 7520)
3'-AAAAAAUAUUGGCGUAAAAGAGAACUU-5' (SEQ ID NO: 1975)

βc-3686 Target: 5'-TTTTTTATAACCGCATTTTCTCTTGAA-3' (SEQ ID NO: 3084)

5'-AUUUUUUAUAACCGCAUUUUCUCUUGA-3' (SEQ ID NO: 7521)
3'-UAAAAAAUAUUGGCGUAAAAGAGAACU-5' (SEQ ID NO: 1976)

βc-3687 Target: 5'-ATTTTTTATAACCGCATTTTCTCTTGA-3' (SEQ ID NO: 3085)

5'-CAUUUUUUAUAACCGCAUUUUCUCUUG-3' (SEQ ID NO: 7522)
3'-GUAAAAAAUAUUGGCGUAAAAGAGAAC-5' (SEQ ID NO: 1977)

βc-3688 Target: 5'-CATTTTTTATAACCGCATTTTCTCTTG-3' (SEQ ID NO: 3086)

5'-CCAUUUUUUUAUAACCGCAUUUUCUCUU-3' (SEQ ID NO: 7523)
3'-GGUAAAAAAAUAUUGGCGUAAAAGAGAA-5' (SEQ ID NO: 1978)

βc-3689 Target: 5'-CCATTTTTTATAACCGCATTTTCTCTT-3' (SEQ ID NO: 3087)

5'-CUGAACCAUUUUUUUAUAACCGCAUUUU-3' (SEQ ID NO: 7524)
3'-GACUUGGUAAAAAAUAUUGGCGUAAAA-5' (SEQ ID NO: 1979)

βc-3694 Target: 5'-CTGAACCATTTTTTATAACCGCATTTT-3' (SEQ ID NO: 3088)

5'-UAAUUCUGAACCAUUUUUUUAUAACCGC-3' (SEQ ID NO: 7525)
3'-AUUAAGACUUGGUAAAAAAUAUUGGCG-5' (SEQ ID NO: 1980)

βc-3699 Target: 5'-TAATTCTGAACCATTTTTTATAACCGC-3' (SEQ ID NO: 3089)

5'-UUAAUUCUGAACCAUUUUUUUAUAACCG-3' (SEQ ID NO: 7526)
3'-AAUUAAGACUUGGUAAAAAAUAUUGGC-5' (SEQ ID NO: 1981)

βc-3700 Target: 5'-TTAATTCTGAACCATTTTTTATAACCG-3' (SEQ ID NO: 3090)

5'-UUUAAUUCUGAACCAUUUUUUUAUAACC-3' (SEQ ID NO: 7527)
3'-AAAUUAAGACUUGGUAAAAAAUAUUGG-5' (SEQ ID NO: 1982)

βc-3701 Target: 5'-TTTAATTCTGAACCATTTTTTATAACC-3' (SEQ ID NO: 3091)

5'-GUUUAAUUCUGAACCAUUUUUUUAUAAC-3' (SEQ ID NO: 7528)
3'-CAAAUUAAGACUUGGUAAAAAAUAUUG-5' (SEQ ID NO: 1983)

βc-3702 Target: 5'-GTTTAATTCTGAACCATTTTTTATAAC-3' (SEQ ID NO: 3092)

5'-AGUUUAAUUCUGAACCAUUUUUUUAUAA-3' (SEQ ID NO: 7529)
3'-UCAAAUUAAGACUUGGUAAAAAAUAUU-5' (SEQ ID NO: 1984)

βc-3703 Target: 5'-AGTTTAATTCTGAACCATTTTTTATAA-3' (SEQ ID NO: 3093)

5'-AAGUUUAAUUCUGAACCAUUUUUUUAUA-3' (SEQ ID NO: 7530)
3'-UUCAAAUUAAGACUUGGUAAAAAAUAU-5' (SEQ ID NO: 1985)

βc-3704 Target: 5'-AAGTTTAATTCTGAACCATTTTTTATA-3' (SEQ ID NO: 3094)

5'-AUUAAAAGUUUAAUUCUGAACCAUUUU-3' (SEQ ID NO: 7531)
3'-UAAUUUUCAAAUUAAGACUUGGUAAAA-5' (SEQ ID NO: 1986)

βc-3709 Target: 5'-ATTAAAAGTTTAATTCTGAACCATTTT-3' (SEQ ID NO: 3095)

5'-AAUUAAAAGUUUAAUUCUGAACCAUUU-3' (SEQ ID NO: 7532)
3'-UUAAUUUUCAAAUUAAGACUUGGUAAA-5' (SEQ ID NO: 1987)

βc-3710 Target: 5'-AATTAAAAGTTTAATTCTGAACCATTT-3' (SEQ ID NO: 3096)

5'-UGAAUUAAAAGUUUAAUUCUGAACCAU-3' (SEQ ID NO: 7533)
3'-ACUUAAUUUUCAAAUUAAGACUUGGUA-5' (SEQ ID NO: 1988)

βc-3712 Target: 5'-TGAATTAAAAGTTTAATTCTGAACC-3' (SEQ ID NO: 3097)

5'-CAAUACAGCUAAAGGAUGAUUUACAGG-3' (SEQ ID NO: 7534)
3'-GUUAUGUCGAUUUCCUACUAAAUGUCC-5' (SEQ ID NO: 1989)

βc-2634t2 Target: 5'-CAATACAGCTAAAGGATGATTTACAGG-3' (SEQ ID NO: 3098)

5'-ACAAUACAGCUAAAGGAUGAUUUACAG-3' (SEQ ID NO: 7535)
3'-UGUUAUGUCGAUUUCCUACUAAAUGUC-5' (SEQ ID NO: 1990)

βc-2635t2 Target: 5'-ACAATACAGCTAAAGGATGATTTACAG-3' (SEQ ID NO: 3099)

5'-AGACAAUACAGCUAAAGGAUGAUUUAC-3' (SEQ ID NO: 7536)
3'-UCUGUUAUGUCGAUUUCCUACUAAAUG-5' (SEQ ID NO: 1991)

βc-2637t2 Target: 5'-AGACAATACAGCTAAAGGATGATTTAC-3' (SEQ ID NO: 3100)

5'-GUUACUCCUAAAGGAUGAUUUACAGGU-3' (SEQ ID NO: 7537)
3'-CAAUGAGGAUUUCCUACUAAAUGUCCA-5' (SEQ ID NO: 1992)

βc-2633t3 Target: 5'-GTTACTCCTAAAGGATGATTTACAGGT-3' (SEQ ID NO: 3101)

5'-UGUUACUCCUAAAGGAUGAUUUACAGG-3' (SEQ ID NO: 7538)
3'-ACAAUGAGGAUUUCCUACUAAAUGUCC-5' (SEQ ID NO: 1993)

βc-2634t3 Target: 5'-TGTTACTCCTAAAGGATGATTTACAGG-3' (SEQ ID NO: 3102)

5'-UUGUUACUCCUAAAGGAUGAUUUACAG-3' (SEQ ID NO: 7539)
3'-AACAAUGAGGAUUUCCUACUAAAUGUC-5' (SEQ ID NO: 1994)

βc-2635t3 Target: 5'-TTGTTACTCCTAAAGGATGATTTACAG-3' (SEQ ID NO: 3103)

5'-AUUGUUACUCCUAAAGGAUGAUUUACA-3' (SEQ ID NO: 7540)
3'-UAACAAUGAGGAUUUCCUACUAAAUGU-5' (SEQ ID NO: 1995)

βc-2636t3 Target: 5'-ATTGTTACTCCTAAAGGATGATTTACA-3' (SEQ ID NO: 3104)

5'-GGAUUCCAGAAUCCAAGUAAGACUGCU-3' (SEQ ID NO: 7541)
3'-CCUAAGGUCUUAGGUUCAUUCUGACGA-5' (SEQ ID NO: 1996)

βc-m318 Target: 5'-GGATTCCAGAATCCAAGTAAGACTGCT-3' (SEQ ID NO: 3105)

5'-CUUGCUCCCAUUCAUAAAGGACUUGGG-3' (SEQ ID NO: 7542)
3'-GAACGAGGGUAAGUAUUUCCUGAACCC-5' (SEQ ID NO: 1997)

βc-m417 Target: 5'-CTTGCTCCCATTCATAAAGGACTTGGG-3' (SEQ ID NO: 3106)

5'-CGUCAAUAUCAGCUACUUGCUCUUGCG-3' (SEQ ID NO: 7543)
3'-GCAGUUAUAGUCGAUGAACGAGAACGC-5' (SEQ ID NO: 1998)

βc-m462 Target: 5'-CGTCAATATCAGCTACTTGCTCTTGCG-3' (SEQ ID NO: 3107)

5'-CCGUCAAUAUCAGCUACUUGCUCUUGC-3' (SEQ ID NO: 7544)
3'-GGCAGUUAUAGUCGAUGAACGAGAACG-5' (SEQ ID NO: 1999)

βc-m463 Target: 5'-CCGTCAATATCAGCTACTTGCTCTTGC-3' (SEQ ID NO: 3108)

5'-ACUGCCCGUCAAUAUCAGCUACUUGCU-3' (SEQ ID NO: 7545)
3'-UGACGGGCAGUUAUAGUCGAUGAACGA-5' (SEQ ID NO: 2000)

βc-m468 Target: 5'-ACTGCCCGTCAATATCAGCTACTTGCT-3' (SEQ ID NO: 3109)

5'-UGUUUCAACAUCUGUGAUGGUUCAGCC-3' (SEQ ID NO: 7546)
3'-ACAAAGUUGUAGACACUACCAAGUCGG-5' (SEQ ID NO: 2001)

βc-m613 Target: 5'-TGTTTCAACATCTGTGATGGTTCAGCC-3' (SEQ ID NO: 3110)

5'-AUGUUUCAACAUCUGUGAUGGUUCAGC-3' (SEQ ID NO: 7547)
3'-UACAAAGUUGUAGACACUACCAAGUCG-5' (SEQ ID NO: 2002)

βc-m614 Target: 5'-ATGTTTCAACATCTGTGATGGTTCAGC-3' (SEQ ID NO: 3111)

5'-UGACAACUGCAUGUUUCAACAUCUGUG-3' (SEQ ID NO: 7548)
3'-ACUGUUGACGUACAAAGUUGUAGACAC-5' (SEQ ID NO: 2003)

βc-m624 Target: 5'-TGACAACTGCATGTTTCAACATCTGTG-3' (SEQ ID NO: 3112)

5'-AUUGACAACUGCAUGUUUCAACAUCUG-3' (SEQ ID NO: 7549)
3'-UAACUGUUGACGUACAAAGUUGUAGAC-5' (SEQ ID NO: 2004)

βc-m626 Target: 5'-ATTGACAACTGCATGTTTCAACATCTG-3' (SEQ ID NO: 3113)

5'-UCAAAUUGACAACUGCAUGUUUCAACA-3' (SEQ ID NO: 7550)
3'-AGUUUAACUGUUGACGUACAAAGUUGU-5' (SEQ ID NO: 2005)

βc-m630 Target: 5'-TCAAATTGACAACTGCATGTTTCAACA-3' (SEQ ID NO: 3114)

5'-AGUUAAUCAAAUUGACAACUGCAUGUU-3' (SEQ ID NO: 7551)
3'-UCAAUUAGUUUAACUGUUGACGUACAA-5' (SEQ ID NO: 2006)

βc-m636 Target: 5'-AGTTAATCAAATTGACAACTGCATGTT-3' (SEQ ID NO: 3115)

5'-CCUGAUAGUUAAUCAAAUUGACAACUG-3' (SEQ ID NO: 7552)
3'-GGACUAUCAAUUAGUUUAACUGUUGAC-5' (SEQ ID NO: 2007)

βc-m642 Target: 5'-CCTGATAGTTAATCAAATTGACAACTG-3' (SEQ ID NO: 3116)

5'-CGUCAUCCUGAUAGUUAAUCAAAUUGA-3' (SEQ ID NO: 7553)
3'-GCAGUAGGACUAUCAAUUAGUUUAACU-5' (SEQ ID NO: 2008)

βc-m648 Target: 5'-CGTCATCCTGATAGTTAATCAAATTGA-3' (SEQ ID NO: 3117)

5'-GCGUCAUCCUGAUAGUUAAUCAAAUUG-3' (SEQ ID NO: 7554)
3'-CGCAGUAGGACUAUCAAUUAGUUUAAC-5' (SEQ ID NO: 2009)

βc-m649 Target: 5'-GCGTCATCCTGATAGTTAATCAAATTG-3' (SEQ ID NO: 3118)

5'-CCUCAUCGUUUAGCAGUUUUGUCAGCU-3' (SEQ ID NO: 7555)
3'-GGAGUAGCAAAUCGUCAAAACAGUCGA-5' (SEQ ID NO: 2010)

βc-m702 Target: 5'-CCTCATCGTTTAGCAGTTTTGTCAGCT-3' (SEQ ID NO: 3119)

5'-CUGGUCCUCAUCGUUUAGCAGUUUUGU-3' (SEQ ID NO: 7556)
3'-GACCAGGAGUAGCAAAUCGUCAAAACA-5' (SEQ ID NO: 2011)

βc-m707 Target: 5'-CTGGTCCTCATCGTTTAGCAGTTTTGT-3' (SEQ ID NO: 3120)

5'-CAUAACAGCAGCUUUAUUAACUACCAC-3' (SEQ ID NO: 7557)
3'-GUAUUGUCGUCGAAAUAAUUGAUGGUG-5' (SEQ ID NO: 2012)

βc-m734 Target: 5'-CATAACAGCAGCTTTATTAACTACCAC-3' (SEQ ID NO: 3121)

5'-CCAUAACAGCAGCUUUAUUAACUACCA-3' (SEQ ID NO: 7558)
3'-GGUAUUGUCGUCGAAAUAAUUGAUGGU-5' (SEQ ID NO: 2013)

βc-m735 Target: 5'-CCATAACAGCAGCTTTATTAACTACCA-3' (SEQ ID NO: 3122)

5'-GGACCAUAACAGCAGCUUUAUUAACUA-3' (SEQ ID NO: 7559)
3'-CCUGGUAUUGUCGUCGAAAUAAUUGAU-5' (SEQ ID NO: 2014)

βc-m738 Target: 5'-GGACCATAACAGCAGCTTTATTAACTA-3' (SEQ ID NO: 3123)

5'-UGGACCAUAACAGCAGCUUUAUUAACU-3' (SEQ ID NO: 7560)
3'-ACCUGGUAUUGUCGUCGAAAUAAUUGA-5' (SEQ ID NO: 2015)

βc-m739 Target: 5'-TGGACCATAACAGCAGCTTTATTAACT-3' (SEQ ID NO: 3124)

5'-CUGUCUCUACAUCAUUUGUAUUCUGCA-3' (SEQ ID NO: 7561)
3'-GACAGAGAUGUAGUAAACAUAAGACGU-5' (SEQ ID NO: 2016)

βc-m843 Target: 5'-CTGTCTCTACATCATTTGTATTCTGCA-3' (SEQ ID NO: 3125)

5'-GCUGUCUCUACAUCAUUUGUAUUCUGC-3' (SEQ ID NO: 7562)
3'-CGACAGAGAUGUAGUAAACAUAAGACG-5' (SEQ ID NO: 2017)

βc-m844 Target: 5'-GCTGTCTCTACATCATTTGTATTCTGC-3' (SEQ ID NO: 3126)

5'-GCAACCAUUUUCUGCAGUCCACCAGCU-3' (SEQ ID NO: 7563)
3'-CGUUGGUAAAAGACGUCAGGUGGUCGA-5' (SEQ ID NO: 2018)

βc-m1063 Target: 5'-GCAACCATTTTCTGCAGTCCACCAGCT-3' (SEQ ID NO: 3127)

5'-AAGCAACCAUUUUCUGCAGUCCACCAG-3' (SEQ ID NO: 7564)
3'-UUCGUUGGUAAAAGACGUCAGGUGGUC-5' (SEQ ID NO: 2019)

βc-m1065 Target: 5'-AAGCAACCATTTTCTGCAGTCCACCAG-3' (SEQ ID NO: 3128)

5'-UUGUUUUGUUGAGCAAAGCAACCAUUU-3' (SEQ ID NO: 7565)
3'-AACAAAACAACUCGUUUCGUUGGUAAA-5' (SEQ ID NO: 2020)

βc-m1080 Target: 5'-TTGTTTTGTTGAGCAAAGCAACCATTT-3' (SEQ ID NO: 3129)

5'-UUUGUUUUGUUGAGCAAAGCAACCAUU-3' (SEQ ID NO: 7566)
3'-AAACAAAACAACUCGUUUCGUUGGUAA-5' (SEQ ID NO: 2021)

βc-m1081 Target: 5'-TTTGTTTTGTTGAGCAAAGCAACCATT-3' (SEQ ID NO: 3130)

5'-UAGCCAAGAAUUUCACGUUUGUUUUGU-3' (SEQ ID NO: 7567)
3'-AUCGGUUCUUAAAGUGCAAACAAAACA-5' (SEQ ID NO: 2022)

βc-m1098 Target: 5'-TAGCCAAGAATTTCACGTTTGTTTTGT-3' (SEQ ID NO: 3131)

5'-CUUGAUUGCCAUAAGCUAAGAUCUGAA-3' (SEQ ID NO: 7568)
3'-GAACUAACGGUAUUCGAUUCUAGACUU-5' (SEQ ID NO: 2023)

βc-m1140 Target: 5'-CTTGATTGCCATAAGCTAAGATCTGAA-3' (SEQ ID NO: 3132)

5'-GCUCUCUUGAUUGCCAUAAGCUAAGAU-3' (SEQ ID NO: 7569)
3'-CGAGAGAACUAACGGUAUUCGAUUCUA-5' (SEQ ID NO: 2024)

βc-m1145 Target: 5'-GCTCTCTTGATTGCCATAAGCTAAGAT-3' (SEQ ID NO: 3133)

5'-CUUCUCAUAAGUGUAGGUCCUCAUUAU-3' (SEQ ID NO: 7570)
3'-GAAGAGUAUUCACAUCCAGGAGUAAUA-5' (SEQ ID NO: 2025)

βc-m1217 Target: 5'-CTTCTCATAAGTGTAGGTCCTCATTAT-3' (SEQ ID NO: 3134)

5'-GCUUCUCAUAAGUGUAGGUCCUCAUUA-3' (SEQ ID NO: 7571)
3'-CGAAGAGUAUUCACAUCCAGGAGUAAU-5' (SEQ ID NO: 2026)

βc-m1218 Target: 5'-GCTTCTCATAAGTGTAGGTCCTCATTA-3' (SEQ ID NO: 3135)

5'-AAGCUUCUCAUAAGUGUAGGUCCUCAU-3' (SEQ ID NO: 7572)
3'-UUCGAAGAGUAUUCACAUCCAGGAGUA-5' (SEQ ID NO: 2027)

βc-m1220 Target: 5'-AAGCTTCTCATAAGTGTAGGTCCTC-3' (SEQ ID NO: 3136)

5'-GAAGCUUCUCAUAAGUGUAGGUCCUCA-3' (SEQ ID NO: 7573)
3'-CUUCGAAGAGUAUUCACAUCCAGGAGU-5' (SEQ ID NO: 2028)

βc-m1221 Target: 5'-GAAGCTTCTCATAAGTGTAGGTCCTCA-3' (SEQ ID NO: 3137)

5'-GAGUCCAAAGACAGUUUUGAACAAGUC-3' (SEQ ID NO: 7574)
3'-CUCAGGUUUCUGUCAAAACUUGUUCAG-5' (SEQ ID NO: 2029)

βc-m1365 Target: 5'-GAGTCCAAAGACAGTTTTGAACAAGTC-3' (SEQ ID NO: 3138)

5'-AGAGUCCAAAGACAGUUUUGAACAAGU-3' (SEQ ID NO: 7575)
3'-UCUCAGGUUUCUGUCAAAACUUGUUCA-5' (SEQ ID NO: 2030)

βc-m1366 Target: 5'-AGAGTCCAAAGACAGTTTTGAACAAGT-3' (SEQ ID NO: 3139)

5'-CCACAUUUAUAUCAUCGGAACCCAGAA-3' (SEQ ID NO: 7576)
3'-GGUGUAAAUAUAGUAGCCUUGGGUCUU-5' (SEQ ID NO: 2031)

βc-m1461 Target: 5'-CCACATTTATATCATCGGAACCCAGAA-3' (SEQ ID NO: 3140)

5'-UGACCACAUUUAUAUCAUCGGAACCCA-3' (SEQ ID NO: 7577)
3'-ACUGGUGUAAAUAUAGUAGCCUUGGGU-5' (SEQ ID NO: 2032)

βc-m1464 Target: 5'-TGACCACATTTATATCATCGGAACCCA-3' (SEQ ID NO: 3141)

5'-CUGCACAGGUGACCACAUUUAUAUCAU-3' (SEQ ID NO: 7578)
3'-GACGUGUCCACUGGUGUAAAUAUAGUA-5' (SEQ ID NO: 2033)

βc-m1473 Target: 5'-CTGCACAGGTGACCACATTTATATC-3' (SEQ ID NO: 3142)

5'-GCUGCACAGGUGACCACAUUUAUAUCA-3' (SEQ ID NO: 7579)
3'-CGACGUGUCCACUGGUGUAAAUAUAGU-5' (SEQ ID NO: 2034)

βc-m1474 Target: 5'-GCTGCACAGGTGACCACATTTATATCA-3' (SEQ ID NO: 3143)

5'-UUGUAAUUAUUGCAAGUGAGGUUAGAG-3' (SEQ ID NO: 7580)
3'-AACAUUAAUAACGUUCACUCCAAUCUC-5' (SEQ ID NO: 2035)

βc-m1510 Target: 5'-TTGTAATTATTGCAAGTGAGGTTAGAG-3' (SEQ ID NO: 3144)

5'-CAUCAUCUUGUUUUUGUAAUUAUUGCA-3' (SEQ ID NO: 7581)
3'-GUAGUAGAACAAAAACAUUAAUAACGU-5' (SEQ ID NO: 2036)

βc-m1523 Target: 5'-CATCATCTTGTTTTTGTAATTATTGCA-3' (SEQ ID NO: 3145)

5'-CCAUCAUCUUGUUUUUGUAAUUAUUGC-3' (SEQ ID NO: 7582)
3'-GGUAGUAGAACAAAAACAUUAAUAACG-5' (SEQ ID NO: 2037)

βc-m1524 Target: 5'-CCATCATCTTGTTTTTGTAATTATTGC-3' (SEQ ID NO: 3146)

5'-ACACCAUCAUCUUGUUUUUGUAAUUAU-3' (SEQ ID NO: 7583)
3'-UGUGGUAGUAGAACAAAAACAUUAAUA-5' (SEQ ID NO: 2038)

βc-m1527 Target: 5'-ACACCATCATCTTGTTTTTGTAATTAT-3' (SEQ ID NO: 3147)

5'-UUGGCACACCAUCAUCUUGUUUUUGUA-3' (SEQ ID NO: 7584)
3'-AACCGUGUGGUAGUAGAACAAAAACAU-5' (SEQ ID NO: 2039)

βc-m1532 Target: 5'-TTGGCACACCATCATCTTGTTTTTGTA-3' (SEQ ID NO: 3148)

5'-UCAAUCCAACAGUUGCCUUUAUCAGAG-3' (SEQ ID NO: 7585)
3'-AGUUAGGUUGUCAACGGAAAUAGUCUC-5' (SEQ ID NO: 2040)

βc-m1752 Target: 5'-TCAATCCAACAGTTGCCTTTATCAGAG-3' (SEQ ID NO: 3149)

5'-UCGAAUCAAUCCAACAGUUGCCUUUAU-3' (SEQ ID NO: 7586)
3'-AGCUUAGUUAGGUUGUCAACGGAAAUA-5' (SEQ ID NO: 2041)

βc-m1757 Target: 5'-TCGAATCAATCCAACAGTTGCCTTTAT-3' (SEQ ID NO: 3150)

5'-GCUGAACUAGUCGUGGAAUAGCACCCU-3' (SEQ ID NO: 7587)
3'-CGACUUGAUCAGCACCUUAUCGUGGGA-5' (SEQ ID NO: 2042)

βc-m1827 Target: 5'-GCTGAACTAGTCGTGGAATAGCACCCT-3' (SEQ ID NO: 3151)

5'-AGUACACCCUUCUACUAUCUCCUCCAU-3' (SEQ ID NO: 7588)
3'-UCAUGUGGGAAGAUGAUAGAGGAGGUA-5' (SEQ ID NO: 2043)

βc-m1934 Target: 5'-AGTACACCCTTCTACTATCTCCTCC-3' (SEQ ID NO: 3152)

5'-CAGUACACCCUUCUACUAUCUCCUCCA-3' (SEQ ID NO: 7589)
3'-GUCAUGUGGGAAGAUGAUAGAGGAGGU-5' (SEQ ID NO: 2044)

βc-m1935 Target: 5'-CAGTACACCCTTCTACTATCTCCTCCA-3' (SEQ ID NO: 3153)

5'-CCAGUACACCCUUCUACUAUCUCCUCC-3' (SEQ ID NO: 7590)
3'-GGUCAUGUGGGAAGAUGAUAGAGGAGG-5' (SEQ ID NO: 2045)

βc-m1936 Target: 5'-CCAGTACACCCTTCTACTATCTCCTCC-3' (SEQ ID NO: 3154)

5'-GAGCUCCAGUACACCCUUCUACUAUCU-3' (SEQ ID NO: 7591)
3'-CUCGAGGUCAUGUGGGAAGAUGAUAGA-5' (SEQ ID NO: 2046)

βc-m1941 Target: 5'-GAGCTCCAGTACACCCTTCTACTATCT-3' (SEQ ID NO: 3155)

5'-AAACAAUGGAAUGGUAUUGAGUCCUCG-3' (SEQ ID NO: 7592)
3'-UUUGUUACCUUACCAUAACUCAGGAGC-5' (SEQ ID NO: 2047)

βc-m2009 Target: 5'-AAACAATGGAATGGTATTGAGTCCTCG-3' (SEQ ID NO: 3156)

5'-CUGCACAAACAAUGGAAUGGUAUUGAG-3' (SEQ ID NO: 7593)
3'-GACGUGUUUGUUACCUUACCAUAACUC-5' (SEQ ID NO: 2048)

βc-m2015 Target: 5'-CTGCACAAACAATGGAATGGTATTGAG-3' (SEQ ID NO: 3157)

5'-ACUGCACAAACAAUGGAAUGGUAUUGA-3' (SEQ ID NO: 7594)
3'-UGACGUGUUUGUUACCUUACCAUAACU-5' (SEQ ID NO: 2049)

βc-m2016 Target: 5'-ACTGCACAAACAATGGAATGGTATTGA-3' (SEQ ID NO: 3158)

5'-AAGCAACUGCACAAACAAUGGAAUGGU-3' (SEQ ID NO: 7595)
3'-UUCGUUGACGUGUUUGUUACCUUACCA-5' (SEQ ID NO: 2050)

βc-m2021 Target: 5'-AAGCAACTGCACAAACAATGGAATGGT-3' (SEQ ID NO: 3159)

5'-GAGAAUAAAGCAACUGCACAAACAAUG-3' (SEQ ID NO: 7596)
3'-CUCUUAUUUCGUUGACGUGUUUGUUAC-5' (SEQ ID NO: 2051)

βc-m2028 Target: 5'-GAGAATAAAGCAACTGCACAAACAATG-3' (SEQ ID NO: 3160)

5'-UUUCAAUGGGAGAAUAAAGCAACUGCA-3' (SEQ ID NO: 7597)
3'-AAAGUUACCCUCUUAUUUCGUUGACGU-5' (SEQ ID NO: 2052)

βc-m2037 Target: 5'-TTTCAATGGGAGAATAAAGCAACTGCA-3' (SEQ ID NO: 3161)

5'-UUUUCAAUGGGAGAAUAAAGCAACUGC-3' (SEQ ID NO: 7598)
3'-AAAAGUUACCCUCUUAUUUCGUUGACG-5' (SEQ ID NO: 2053)

βc-m2038 Target: 5'-TTTTCAATGGGAGAATAAAGCAACTGC-3' (SEQ ID NO: 3162)

5'-AUUUUCAAUGGGAGAAUAAAGCAACUG-3' (SEQ ID NO: 7599)
3'-UAAAAGUUACCCUCUUAUUUCGUUGAC-5' (SEQ ID NO: 2054)

βc-m2039 Target: 5'-ATTTTCAATGGGAGAATAAAGCAACTG-3' (SEQ ID NO: 3163)

5'-GGAUAUUUUCAAUGGGAGAAUAAAGCA-3' (SEQ ID NO: 7600)
3'-CCUAUAAAAGUUACCCUCUUAUUUCGU-5' (SEQ ID NO: 2055)

βc-m2043 Target: 5'-GGATATTTTCAATGGGAGAATAAAGCA-3' (SEQ ID NO: 3164)

5'-UGGAUAUUUUCAAUGGGAGAAUAAAGC-3' (SEQ ID NO: 7601)
3'-ACCUAUAAAAGUUACCCUCUUAUUUCG-5' (SEQ ID NO: 2056)

βc-m2044 Target: 5'-TGGATATTTTCAATGGGAGAATAAAGC-3' (SEQ ID NO: 3165)

5'-UUGGAUAUUUUCAAUGGGAGAAUAAAG-3' (SEQ ID NO: 7602)
3'-AACCUAUAAAAGUUACCCUCUUAUUUC-5' (SEQ ID NO: 2057)

βc-m2045 Target: 5'-TTGGATATTTTCAATGGGAGAATAAAG-3' (SEQ ID NO: 3166)

5'-CAGCUACUCUUUGGAUAUUUUCAAUGG-3' (SEQ ID NO: 7603)
3'-GUCGAUGAGAAACCUAUAAAAGUUACC-5' (SEQ ID NO: 2058)

βc-m2055 Target: 5'-CAGCTACTCTTTGGATATTTTCAATGG-3' (SEQ ID NO: 3167)

5'-GCAGCUACUCUUUGGAUAUUUUCAAUG-3' (SEQ ID NO: 7604)
3'-CGUCGAUGAGAAACCUAUAAAAGUUAC-5' (SEQ ID NO: 2059)

βc-m2056 Target: 5'-GCAGCTACTCTTTGGATATTTTCAATG-3' (SEQ ID NO: 3168)

5'-CCGCUUCUUGUAAUCCUGUGGCUUGUC-3' (SEQ ID NO: 7605)
3'-GGCGAAGAACAUUAGGACACCGAACAG-5' (SEQ ID NO: 2060)

βc-m2231 Target: 5'-CCGCTTCTTGTAATCCTGTGGCTTGTC-3' (SEQ ID NO: 3169)

5'-CCAGUCCAAGAUCUGCAGUCUCAUUCC-3' (SEQ ID NO: 7606)
3'-GGUCAGGUUCUAGACGUCAGAGUAAGG-5' (SEQ ID NO: 2061)

βc-m2307 Target: 5'-CCAGTCCAAGATCTGCAGTCTCATTCC-3' (SEQ ID NO: 3170)

5'-CGUAUCCACCAGAGUGAAAAGAACGGU-3' (SEQ ID NO: 7607)
3'-GCAUAGGUGGUCUCACUUUUCUUGCCA-5' (SEQ ID NO: 2062)

βc-m2385 Target: 5'-CGTATCCACCAGAGTGAAAAGAACGGT-3' (SEQ ID NO: 3171)

5'-CAGGCCAGCUGAUUGCUAUCACCUGGG-3' (SEQ ID NO: 7608)
3'-GUCCGGUCGACUAACGAUAGUGGACCC-5' (SEQ ID NO: 2063)

βc-m2539 Target: 5'-CAGGCCAGCTGATTGCTATCACCTGGG-3' (SEQ ID NO: 3172)

5'-CGAUUUACAGGUCAGUAUCAAACCAGG-3' (SEQ ID NO: 7609)
3'-GCUAAAUGUCCAGUCAUAGUUUGGUCC-5' (SEQ ID NO: 2064)

βc-m2562 Target: 5'-CGATTTACAGGTCAGTATCAAACCAGG-3' (SEQ ID NO: 3173)

5'-ACGAUUUACAGGUCAGUAUCAAACCAG-3' (SEQ ID NO: 7610)
3'-UGCUAAAUGUCCAGUCAUAGUUUGGUC-5' (SEQ ID NO: 2065)

βc-m2563 Target: 5'-ACGATTTACAGGTCAGTATCAAACCAG-3' (SEQ ID NO: 3174)

5'-UUUCUUACCUAAAGGACGAUUUACAGG-3' (SEQ ID NO: 7611)
3'-AAAGAAUGGAUUUCCUGCUAAAUGUCC-5' (SEQ ID NO: 2066)

βc-m2578 Target: 5'-TTTCTTACCTAAAGGACGATTTACAGG-3' (SEQ ID NO: 3175)

5'-GCUUUCUUACCUAAAGGACGAUUUACA-3' (SEQ ID NO: 7612)
3'-CGAAAGAAUGGAUUUCCUGCUAAAUGU-5' (SEQ ID NO: 2067)

βc-m2580 Target: 5'-GCTTTCTTACCTAAAGGACGATTTACA-3' (SEQ ID NO: 3176)

5'-CUUUUAUAAGCUUUCUUACCUAAAGGA-3' (SEQ ID NO: 7613)
3'-GAAAAUAUUCGAAAGAAUGGAUUUCCU-5' (SEQ ID NO: 2068)

βc-m2589 Target: 5'-CTTTTATAAGCTTTCTTACCTAAAGGA-3' (SEQ ID NO: 3177)

5'-GCUUUUAUAAGCUUUCUUACCUAAAGG-3' (SEQ ID NO: 7614)
3'-CGAAAAUAUUCGAAAGAAUGGAUUUCC-5' (SEQ ID NO: 2069)

βc-m2590 Target: 5'-GCTTTTATAAGCTTTCTTACCTAAAGG-3' (SEQ ID NO: 3178)

5'-CUGGCUUUUAUAAGCUUUCUUACCUAA-3' (SEQ ID NO: 7615)
3'-GACCGAAAAUAUUCGAAAGAAUGGAUU-5' (SEQ ID NO: 2070)

βc-m2593 Target: 5'-CTGGCTTTTATAAGCTTTCTTACCTAA-3' (SEQ ID NO: 3179)

5'-CCACACUGGCUUUUAUAAGCUUUCUUA-3' (SEQ ID NO: 7616)
3'-GGUGUGACCGAAAAUAUUCGAAAGAAU-5' (SEQ ID NO: 2071)

βc-m2598 Target: 5'-CCACACTGGCTTTTATAAGCTTTCTTA-3' (SEQ ID NO: 3180)

5'-AUUCACCCACACUGGCUUUUAUAAGCU-3' (SEQ ID NO: 7617)
3'-UAAGUGGGUGUGACCGAAAAUAUUCGA-5' (SEQ ID NO: 2072)

βc-m2604 Target: 5'-ATTCACCCACACTGGCTTTTATAAGCT-3' (SEQ ID NO: 3181)

5'-CCUACCAAGUCUUUCUGGAGUUCUGCA-3' (SEQ ID NO: 7618)
3'-GGAUGGUUCAGAAAGACCUCAAGACGU-5' (SEQ ID NO: 2073)

βc-m2644 Target: 5'-CCTACCAAGTCTTTCTGGAGTTCTGCA-3' (SEQ ID NO: 3182)

5'-AUUUACAAACAGGCCUAAAACCAUUCC-3' (SEQ ID NO: 7619)
3'-UAAAUGUUUGUCCGGAUUUUGGUAAGG-5' (SEQ ID NO: 2074)

βc-m2674 Target: 5'-ATTTACAAACAGGCCTAAAACCATTCC-3' (SEQ ID NO: 3183)

5'-GAUUUACAAACAGGCCUAAAACCAUUC-3' (SEQ ID NO: 7620)
3'-CUAAAUGUUUGUCCGGAUUUUGGUAAG-5' (SEQ ID NO: 2075)

βc-m2675 Target: 5'-GATTTACAAACAGGCCTAAAACCATTC-3' (SEQ ID NO: 3184)

5'-AGAUUUACAAACAGGCCUAAAACCAUU-3' (SEQ ID NO: 7621)
3'-UCUAAAUGUUUGUCCGGAUUUUGGUAA-5' (SEQ ID NO: 2076)

βc-m2676 Target: 5'-AGATTTACAAACAGGCCTAAAACCATT-3' (SEQ ID NO: 3185)

5'-CAUCUCCUUCCAAGGUAUGUAUCUGUU-3' (SEQ ID NO: 7622)
3'-GUAGAGGAAGGUUCCAUACAUAGACAA-5' (SEQ ID NO: 2077)

βc-m2710 Target: 5'-CATCTCCTTCCAAGGTATGTATCTGTT-3' (SEQ ID NO: 3186)

5'-ACAUCUCCUUCCAAGGUAUGUAUCUGU-3' (SEQ ID NO: 7623)
3'-UGUAGAGGAAGGUUCCAUACAUAGACA-5' (SEQ ID NO: 2078)

βc-m2711 Target: 5'-ACATCTCCTTCCAAGGTATGTATCTGT-3' (SEQ ID NO: 3187)

5'-ACUUCCACACAUGAACAUCUCCUUCCA-3' (SEQ ID NO: 7624)
3'-UGAAGGUGUGUACUUGUAGAGGAAGGU-5' (SEQ ID NO: 2079)

βc-m2725 Target: 5'-ACTTCCACACATGAACATCTCCTTCCA-3' (SEQ ID NO: 3188)

5'-GAAACUUCCACACAUGAACAUCUCCUU-3' (SEQ ID NO: 7625)
3'-CUUUGAAGGUGUGUACUUGUAGAGGAA-5' (SEQ ID NO: 2080)

βc-m2728 Target: 5'-GAAACTTCCACACATGAACATCTCCTT-3' (SEQ ID NO: 3189)

5'-AGAAACUUCCACACAUGAACAUCUCCU-3' (SEQ ID NO: 7626)
3'-UCUUUGAAGGUGUGUACUUGUAGAGGA-5' (SEQ ID NO: 2081)

βc-m2729 Target: 5'-AGAAACTTCCACACATGAACATCTCCT-3' (SEQ ID NO: 3190)

5'-GAGAAACUUCCACACAUGAACAUCUCC-3' (SEQ ID NO: 7627)
3'-CUCUUUGAAGGUGUGUACUUGUAGAGG-5' (SEQ ID NO: 2082)

βc-m2730 Target: 5'-GAGAAACTTCCACACATGAACATCTCC-3' (SEQ ID NO: 3191)

5'-UGAGAAACUUCCACACAUGAACAUCUC-3' (SEQ ID NO: 7628)
3'-ACUCUUUGAAGGUGUGUACUUGUAGAG-5' (SEQ ID NO: 2083)

βc-m2731 Target: 5'-TGAGAAACTTCCACACATGAACATCTC-3' (SEQ ID NO: 3192)

5'-CAUCAACGUGAGAAACUUCCACACAUG-3' (SEQ ID NO: 7629)
3'-GUAGUUGCACUCUUUGAAGGUGUGUAC-5' (SEQ ID NO: 2084)

βc-m2739 Target: 5'-CATCAACGTGAGAAACTTCCACACATG-3' (SEQ ID NO: 3193)

5'-AAACAUCAACGUGAGAAACUUCCACAC-3' (SEQ ID NO: 7630)
3'-UUUGUAGUUGCACUCUUUGAAGGUGUG-5' (SEQ ID NO: 2085)

βc-m2742 Target: 5'-AAACATCAACGTGAGAAACTTCCACAC-3' (SEQ ID NO: 3194)

5'-AAAACAUCAACGUGAGAAACUUCCACA-3' (SEQ ID NO: 7631)
3'-UUUUGUAGUUGCACUCUUUGAAGGUGU-5' (SEQ ID NO: 2086)

βc-m2743 Target: 5'-AAAACATCAACGTGAGAAACTTCCACA-3' (SEQ ID NO: 3195)

5'-AAAAACAUCAACGUGAGAAACUUCCAC-3' (SEQ ID NO: 7632)
3'-UUUUUGUAGUUGCACUCUUUGAAGGUG-5' (SEQ ID NO: 2087)

βc-m2744 Target: 5'-AAAAACATCAACGTGAGAAACTTCCAC-3' (SEQ ID NO: 3196)

5'-CAAAAACAUCAACGUGAGAAACUUCCA-3' (SEQ ID NO: 7633)
3'-GUUUUUGUAGUUGCACUCUUUGAAGGU-5' (SEQ ID NO: 2088)

βc-m2745 Target: 5'-CAAAAACATCAACGTGAGAAACTTCCA-3' (SEQ ID NO: 3197)

5'-GCAAAAACAUCAACGUGAGAAACUUCC-3' (SEQ ID NO: 7634)
3'-CGUUUUUGUAGUUGCACUCUUUGAAGG-5' (SEQ ID NO: 2089)

βc-m2746 Target: 5'-GCAAAAACATCAACGTGAGAAACTTCC-3' (SEQ ID NO: 3198)

5'-UGGCAAAAACAUCAACGUGAGAAACUU-3' (SEQ ID NO: 7635)
3'-ACCGUUUUUGUAGUUGCACUCUUUGAA-5' (SEQ ID NO: 2090)

βc-m2748 Target: 5'-TGGCAAAAACATCAACGTGAGAAACTT-3' (SEQ ID NO: 3199)

5'-CUGCAAAAGCUGUGGCAAAAACAUCAA-3' (SEQ ID NO: 7636)
3'-GACGUUUUCGACACCGUUUUUGUAGUU-5' (SEQ ID NO: 2091)

βc-m2760 Target: 5'-CTGCAAAAGCTGTGGCAAAAACATCAA-3' (SEQ ID NO: 3200)

5'-GCUGCAAAAGCUGUGGCAAAAACAUCA-3' (SEQ ID NO: 7637)
3'-CGACGUUUUCGACACCGUUUUUGUAGU-5' (SEQ ID NO: 2092)

βc-m2761 Target: 5'-GCTGCAAAAGCTGTGGCAAAAACATCA-3' (SEQ ID NO: 3201)

5'-ACUCAUCUGAGUAUAACGCUGCAAAAG-3' (SEQ ID NO: 7638)
3'-UGAGUAGACUCAUAUUGCGACGUUUUC-5' (SEQ ID NO: 2093)

βc-m2778 Target: 5'-ACTCATCTGAGTATAACGCTGCAAAAG-3' (SEQ ID NO: 3202)

5'-UGAAAACAGCAAAUGUUACUCAUCUGA-3' (SEQ ID NO: 7639)
3'-ACUUUUGUCGUUUACAAUGAGUAGACU-5' (SEQ ID NO: 2094)

βc-m2795 Target: 5'-TGAAAACAGCAAATGTTACTCATCTGA-3' (SEQ ID NO: 3203)

5'-UUGAAAACAGCAAAUGUUACUCAUCUG-3' (SEQ ID NO: 7640)
3'-AACUUUUGUCGUUUACAAUGAGUAGAC-5' (SEQ ID NO: 2095)

βc-m2796 Target: 5'-TTGAAAACAGCAAATGTTACTCATCTG-3' (SEQ ID NO: 3204)

5'-GUUGAAAACAGCAAAUGUUACUCAUCU-3' (SEQ ID NO: 7641)
3'-CAACUUUUGUCGUUUACAAUGAGUAGA-5' (SEQ ID NO: 2096)

βc-m2797 Target: 5'-GTTGAAAACAGCAAATGTTACTCATCT-3' (SEQ ID NO: 3205)

5'-CUAUUAAUGUUGAAAACAGCAAAUGUU-3' (SEQ ID NO: 7642)
3'-GAUAAUUACAACUUUUGUCGUUUACAA-5' (SEQ ID NO: 2097)

βc-m2805 Target: 5'-CTATTAATGTTGAAAACAGCAAATGTT-3' (SEQ ID NO: 3206)

5'-ACACUACAGCUGUAUAGAGAGAAAGGC-3' (SEQ ID NO: 7643)
3'-UGUGAUGUCGACAUAUCUCUCUUUCCG-5' (SEQ ID NO: 2098)

βc-m2834 Target: 5'-ACACTACAGCTGTATAGAGAGAAAGGC-3' (SEQ ID NO: 3207)

5'-CAGGCCAAUCACAAUGCACGUUCAGAC-3' (SEQ ID NO: 7644)
3'-GUCCGGUUAGUGUUACGUGCAAGUCUG-5' (SEQ ID NO: 2099)

βc-m2859 Target: 5'-CAGGCCAATCACAATGCACGTTCAGAC-3' (SEQ ID NO: 3208)

5'-CUGUUCCCAUAGGAAACUCAGCUUGGU-3' (SEQ ID NO: 7645)
3'-GACAAGGGUAUCCUUUGAGUCGAACCA-5' (SEQ ID NO: 2100)

βc-m2946 Target: 5'-CTGTTCCCATAGGAAACTCAGCTTGGT-3' (SEQ ID NO: 3209)

5'-CAGAACAAAAAGCGUACUUCGACUGUU-3' (SEQ ID NO: 7646)
3'-GUCUUGUUUUUCGCAUGAAGCUGACAA-5' (SEQ ID NO: 2101)

βc-m2968 Target: 5'-CAGAACAAAAAGCGTACTTCGACTGTT-3' (SEQ ID NO: 3210)

5'-AAGGACCAGAACAAAAAGCGUACUUCG-3' (SEQ ID NO: 7647)
3'-UUCCUGGUCUUGUUUUUCGCAUGAAGC-5' (SEQ ID NO: 2102)

βc-m2974 Target: 5'-AAGGACCAGAACAAAAAGCGTACTTCG-3' (SEQ ID NO: 3211)

5'-CGACCAAAAAGGACCAGAACAAAAAGC-3' (SEQ ID NO: 7648)
3'-GCUGGUUUUUCCUGGUCUUGUUUUUCG-5' (SEQ ID NO: 2103)

βc-m2982 Target: 5'-CGACCAAAAAGGACCAGAACAAAAAGC-3' (SEQ ID NO: 3212)

5'-UCGACCAAAAAGGACCAGAACAAAAAG-3' (SEQ ID NO: 7649)
3'-AGCUGGUUUUUCCUGGUCUUGUUUUUC-5' (SEQ ID NO: 2104)

βc-m2983 Target: 5'-TCGACCAAAAAGGACCAGAACAAAAAG-3' (SEQ ID NO: 3213)

5'-UUACUCCUCGACCAAAAAGGACCAGAA-3' (SEQ ID NO: 7650)
3'-AAUGAGGAGCUGGUUUUUCCUGGUCUU-5' (SEQ ID NO: 2105)

βc-m2990 Target: 5'-TTACTCCTCGACCAAAAAGGACCAGAA-3' (SEQ ID NO: 3214)

5'-AAUCCAUUUGUAUUGUUACUCCUCGAC-3' (SEQ ID NO: 7651)
3'-UUAGGUAAACAUAACAAUGAGGAGCUG-5' (SEQ ID NO: 2106)

βc-m3005 Target: 5'-AATCCATTTGTATTGTTACTCCTCGAC-3' (SEQ ID NO: 3215)

5'-AAAUCCAUUUGUAUUGUUACUCCUCGA-3' (SEQ ID NO: 7652)
3'-UUUAGGUAAACAUAACAAUGAGGAGCU-5' (SEQ ID NO: 2107)

βc-m3006 Target: 5'-AAATCCATTTGTATTGTTACTCCTCGA-3' (SEQ ID NO: 3216)

5'-CAAAUCCAUUUGUAUUGUUACUCCUCG-3' (SEQ ID NO: 7653)
3'-GUUUAGGUAAACAUAACAAUGAGGAGC-5' (SEQ ID NO: 2108)

βc-m3007 Target: 5'-CAAATCCATTTGTATTGTTACTCCTCG-3' (SEQ ID NO: 3217)

5'-CCAAAUCCAUUUGUAUUGUUACUCCUC-3' (SEQ ID NO: 7654)
3'-GGUUUAGGUAAACAUAACAAUGAGGAG-5' (SEQ ID NO: 2109)

βc-m3008 Target: 5'-CCAAATCCATTTGTATTGTTACTCCTC-3' (SEQ ID NO: 3218)

5'-UCACUCCCCAAAUCCAUUUGUAUUGUU-3' (SEQ ID NO: 7655)
3'-AGUGAGGGGUUUAGGUAAACAUAACAA-5' (SEQ ID NO: 2110)

βc-m3015 Target: 5'-TCACTCCCCAAATCCATTTGTATTGTT-3' (SEQ ID NO: 3219)

5'-GAUCCAUUCGUGUGCAUUCUUCACUGC-3' (SEQ ID NO: 7656)
3'-CUAGGUAAGCACACGUAAGAAGUGACG-5' (SEQ ID NO: 2111)

βc-m3047 Target: 5'-GATCCATTCGTGTGCATTCTTCACTGC-3' (SEQ ID NO: 3220)

5'-UGAUCCAUUCGUGUGCAUUCUUCACUG-3' (SEQ ID NO: 7657)
3'-ACUAGGUAAGCACACGUAAGAAGUGAC-5' (SEQ ID NO: 2112)

βc-m3048 Target: 5'-TGATCCATTCGTGTGCATTCTTCACTG-3' (SEQ ID NO: 3221)

5'-GUGAUCCAUUCGUGUGCAUUCUUCACU-3' (SEQ ID NO: 7658)
3'-CACUAGGUAAGCACACGUAAGAAGUGA-5' (SEQ ID NO: 2113)

βc-m3049 Target: 5'-GTGATCCATTCGTGTGCATTCTTCACT-3' (SEQ ID NO: 3222)

5'-UAAAACAAAGAACAAGCAAGGCUAGGG-3' (SEQ ID NO: 7659)
3'-AUUUUGUUUCUUGUUCGUUCCGAUCCC-5' (SEQ ID NO: 2114)

βc-m3093 Target: 5'-TAAAACAAAGAACAAGCAAGGCTAGGG-3' (SEQ ID NO: 3223)

5'-GCACCACUACAGAUAUUAAAACAAAGA-3' (SEQ ID NO: 7660)
3'-CGUGGUGAUGUCUAUAAUUUUGUUUCU-5' (SEQ ID NO: 2115)

βc-m3109 Target: 5'-GCACCACTACAGATATTAAAACAAAGA-3' (SEQ ID NO: 3224)

5'-CAGCACCACUACAGAUAUUAAAACAAA-3' (SEQ ID NO: 7661)
3'-GUCGUGGUGAUGUCUAUAAUUUUGUUU-5' (SEQ ID NO: 2116)

βc-m3111 Target: 5'-CAGCACCACTACAGATATTAAAACAAA-3' (SEQ ID NO: 3225)

5'-UCAGCACCACUACAGAUAUUAAAACAA-3' (SEQ ID NO: 7662)
3'-AGUCGUGGUGAUGUCUAUAAUUUUGUU-5' (SEQ ID NO: 2117)

βc-m3112 Target: 5'-TCAGCACCACTACAGATATTAAAACAA-3' (SEQ ID NO: 3226)

5'-AAAAAAUAAAAGCAAGCAAAGUCAGCA-3' (SEQ ID NO: 7663)
3'-UUUUUUAUUUUCGUUCGUUUCAGUCGU-5' (SEQ ID NO: 2118)

βc-m3133 Target: 5'-AAAAAATAAAAGCAAGCAAAGTCAGCA-3' (SEQ ID NO: 3227)

5'-CUGCAAAAAAUAAAAGCAAGCAAAGUC-3' (SEQ ID NO: 7664)
3'-GACGUUUUUUAUUUUCGUUCGUUUCAG-5' (SEQ ID NO: 2119)

βc-m3137 Target: 5'-CTGCAAAAAATAAAAGCAAGCAAAGTC-3' (SEQ ID NO: 3228)

5'-AGUUACUGCAAAAAAUAAAAGCAAGCA-3' (SEQ ID NO: 7665)
3'-UCAAUGACGUUUUUUAUUUUCGUUCGU-5' (SEQ ID NO: 2120)

βc-m3142 Target: 5'-AGTTACTGCAAAAAATAAAAGCAAGCA-3' (SEQ ID NO: 3229)

5'-ACUAACAGUUACUGCAAAAAAUAAAAG-3' (SEQ ID NO: 7666)
3'-UGAUUGUCAAUGACGUUUUUUAUUUUC-5' (SEQ ID NO: 2121)

βc-m3148 Target: 5'-ACTAACAGTTACTGCAAAAAATAAAAG-3' (SEQ ID NO: 3230)

5'-AAACUAACAGUUACUGCAAAAAAUAAA-3' (SEQ ID NO: 7667)
3'-UUUGAUUGUCAAUGACGUUUUUUAUUU-5' (SEQ ID NO: 2122)

βc-m3150 Target: 5'-AAACTAACAGTTACTGCAAAAAATAAA-3' (SEQ ID NO: 3231)

5'-AAAAACUAACAGUUACUGCAAAAAAUA-3' (SEQ ID NO: 7668)
3'-UUUUUGAUUGUCAAUGACGUUUUUUAU-5' (SEQ ID NO: 2123)

βc-m3152 Target: 5'-AAAAACTAACAGTTACTGCAAAAAATA-3' (SEQ ID NO: 3232)

5'-UAAAAACUAACAGUUACUGCAAAAAAU-3' (SEQ ID NO: 7669)
3'-AUUUUUGAUUGUCAAUGACGUUUUUUA-5' (SEQ ID NO: 2124)

βc-m3153 Target: 5'-TAAAAACTAACAGTTACTGCAAAAAAT-3' (SEQ ID NO: 3233)

5'-CUUAAAAACUAACAGUUACUGCAAAAA-3' (SEQ ID NO: 7670)
3'-GAAUUUUUGAUUGUCAAUGACGUUUUU-5' (SEQ ID NO: 2125)

βc-m3155 Target: 5'-CTTAAAAACTAACAGTTACTGCAAAAA-3' (SEQ ID NO: 3234)

5'-ACUACUUAAAAACUAACAGUUACUGCA-3' (SEQ ID NO: 7671)
3'-UGAUGAAUUUUUGAUUGUCAAUGACGU-5' (SEQ ID NO: 2126)

βc-m3159 Target: 5'-ACTACTTAAAAACTAACAGTTACTGCA-3' (SEQ ID NO: 3235)

5'-ACACUACUUAAAAACUAACAGUUACUG-3' (SEQ ID NO: 7672)
3'-UGUGAUGAAUUUUUGAUUGUCAAUGAC-5' (SEQ ID NO: 2127)

βc-m3161 Target: 5'-ACACTACTTAAAAACTAACAGTTACTG-3' (SEQ ID NO: 3236)

5'-CAUAACACUACUUAAAAACUAACAGUU-3' (SEQ ID NO: 7673)
3'-GUAUUGUGAUGAAUUUUUGAUUGUCAA-5' (SEQ ID NO: 2128)

βc-m3165 Target: 5'-CATAACACTACTTAAAAACTAACAGTT-3' (SEQ ID NO: 3237)

5'-ACAUAACACUACUUAAAAACUAACAGU-3' (SEQ ID NO: 7674)
3'-UGUAUUGUGAUGAAUUUUUGAUUGUCA-5' (SEQ ID NO: 2129)

βc-m3166 Target: 5'-ACATAACACTACTTAAAAACTAACAGT-3' (SEQ ID NO: 3238)

5'-GAACAUAACACUACUUAAAAACUAACA-3' (SEQ ID NO: 7675)
3'-CUUGUAUUGUGAUGAAUUUUUGAUUGU-5' (SEQ ID NO: 2130)

βc-m3168 Target: 5'-GAACATAACACTACTTAAAAACTAACA-3' (SEQ ID NO: 3239)

5'-AGAACAUAACACUACUUAAAAACUAAC-3' (SEQ ID NO: 7676)
3'-UCUUGUAUUGUGAUGAAUUUUUGAUUG-5' (SEQ ID NO: 2131)

βc-m3169 Target: 5'-AGAACATAACACTACTTAAAAACTAAC-3' (SEQ ID NO: 3240)

5'-UAGAACAUAACACUACUUAAAAACUAA-3' (SEQ ID NO: 7677)
3'-AUCUUGUAUUGUGAUGAAUUUUUGAUU-5' (SEQ ID NO: 2132)

βc-m3170 Target: 5'-TAGAACATAACACTACTTAAAAACTAA-3' (SEQ ID NO: 3241)

5'-CUAGAACAUAACACUACUUAAAAACUA-3' (SEQ ID NO: 7678)
3'-GAUCUUGUAUUGUGAUGAAUUUUUGAU-5' (SEQ ID NO: 2133)

βc-m3171 Target: 5'-CTAGAACATAACACTACTTAAAAACTA-3' (SEQ ID NO: 3242)

5'-GUUCACUAGAACAUAACACUACUUAAA-3' (SEQ ID NO: 7679)
3'-CAAGUGAUCUUGUAUUGUGAUGAAUUU-5' (SEQ ID NO: 2134)

βc-m3176 Target: 5'-GTTCACTAGAACATAACACTACTTAAA-3' (SEQ ID NO: 3243)

5'-AGGUUCACUAGAACAUAACACUACUUA-3' (SEQ ID NO: 7680)
3'-UCCAAGUGAUCUUGUAUUGUGAUGAAU-5' (SEQ ID NO: 2135)

βc-m3178 Target: 5'-AGGTTCACTAGAACATAACACTACTTA-3' (SEQ ID NO: 3244)

5'-CAGGUUCACUAGAACAUAACACUACUU-3' (SEQ ID NO: 7681)
3'-GUCCAAGUGAUCUUGUAUUGUGAUGAA-5' (SEQ ID NO: 2136)

βc-m3179 Target: 5'-CAGGTTCACTAGAACATAACACTACTT-3' (SEQ ID NO: 3245)

5'-CCAUUACUCGGUUCUUAGAAAUCAGAA-3' (SEQ ID NO: 7682)
3'-GGUAAUGAGCCAAGAAUCUUUAGUCUU-5' (SEQ ID NO: 2137)

βc-m3216 Target: 5'-CCATTACTCGGTTCTTAGAAATCAGAA-3' (SEQ ID NO: 3246)

5'-ACACCAUUACUCGGUUCUUAGAAAUCA-3' (SEQ ID NO: 7683)
3'-UGUGGUAAUGAGCCAAGAAUCUUUAGU-5' (SEQ ID NO: 2138)

βc-m3219 Target: 5'-ACACCATTACTCGGTTCTTAGAAATCA-3' (SEQ ID NO: 3247)

5'-GUUCUACACCAUUACUCGGUUCUUAGA-3' (SEQ ID NO: 7684)
3'-CAAGAUGUGGUAAUGAGCCAAGAAUCU-5' (SEQ ID NO: 2139)

βc-m3224 Target: 5'-GTTCTACACCATTACTCGGTTCTTAGA-3' (SEQ ID NO: 3248)

5'-AUGAAUUAGUGUUCUACACCAUUACUC-3' (SEQ ID NO: 7685)
3'-UACUUAAUCACAAGAUGUGGUAAUGAG-5' (SEQ ID NO: 2140)

βc-m3234 Target: 5'-ATGAATTAGTGTTCTACACCATTACTC-3' (SEQ ID NO: 3249)

5'-UGAUUAUGAAUUAGUGUUCUACACCAU-3' (SEQ ID NO: 7686)
3'-ACUAAUACUUAAUCACAAGAUGUGGUA-5' (SEQ ID NO: 2141)

βc-m3239 Target: 5'-TGATTATGAATTAGTGTTCTACACC-3' (SEQ ID NO: 3250)

5'-GUGAUUAUGAAUUAGUGUUCUACACCA-3' (SEQ ID NO: 7687)
3'-CACUAAUACUUAAUCACAAGAUGUGGU-5' (SEQ ID NO: 2142)

βc-m3240 Target: 5'-GTGATTATGAATTAGTGTTCTACACCA-3' (SEQ ID NO: 3251)

5'-CGUGAUUAUGAAUUAGUGUUCUACACC-3' (SEQ ID NO: 7688)
3'-GCACUAAUACUUAAUCACAAGAUGUGG-5' (SEQ ID NO: 2143)

βc-m3241 Target: 5'-CGTGATTATGAATTAGTGTTCTACACC-3' (SEQ ID NO: 3252)

5'-UUACAAUUAGCGUGAUUAUGAAUUAGU-3' (SEQ ID NO: 7689)
3'-AAUGUUAAUCGCACUAAUACUUAAUCA-5' (SEQ ID NO: 2144)

βc-m3251 Target: 5'-TTACAATTAGCGTGATTATGAATTAGT-3' (SEQ ID NO: 3253)

5'-AUUACAAUUAGCGUGAUUAUGAAUUAG-3' (SEQ ID NO: 7690)
3'-UAAUGUUAAUCGCACUAAUACUUAAUC-5' (SEQ ID NO: 2145)

βc-m3252 Target: 5'-ATTACAATTAGCGTGATTATGAATTAG-3' (SEQ ID NO: 3254)

5'-CCAGAUUACAAUUAGCGUGAUUAUGAA-3' (SEQ ID NO: 7691)
3'-GGUCUAAUGUUAAUCGCACUAAUACUU-5' (SEQ ID NO: 2146)

βc-m3256 Target: 5'-CCAGATTACAATTAGCGTGATTATGAA-3' (SEQ ID NO: 3255)

5'-GUUACACGUCUCCAGAUUACAAUUAGC-3' (SEQ ID NO: 7692)
3'-CAAUGUGCAGAGGUCUAAUGUUAAUCG-5' (SEQ ID NO: 2147)

βc-m3267 Target: 5'-GTTACACGTCTCCAGATTACAATTAGC-3' (SEQ ID NO: 3256)

5'-AUGUUACACGUCUCCAGAUUACAAUUA-3' (SEQ ID NO: 7693)
3'-UACAAUGUGCAGAGGUCUAAUGUUAAU-5' (SEQ ID NO: 2148)

βc-m3269 Target: 5'-ATGTTACACGTCTCCAGATTACAATTA-3' (SEQ ID NO: 3257)

5'-GCUACACAAUGUUACACGUCUCCAGAU-3' (SEQ ID NO: 7694)
3'-CGAUGUGUUACAAUGUGCAGAGGUCUA-5' (SEQ ID NO: 2149)

βc-m3277 Target: 5'-GCTACACAATGTTACACGTCTCCAGAT-3' (SEQ ID NO: 3258)

5'-AGGCUACACAAUGUUACACGUCUCCAG-3' (SEQ ID NO: 7695)
3'-UCCGAUGUGUUACAAUGUGCAGAGGUC-5' (SEQ ID NO: 2150)

βc-m3279 Target: 5'-AGGCTACACAATGTTACACGTCTCCAG-3' (SEQ ID NO: 3259)

5'-AUACAAAAGGCUACACAAUGUUACACG-3' (SEQ ID NO: 7696)
3'-UAUGUUUUCCGAUGUGUUACAAUGUGC-5' (SEQ ID NO: 2151)

βc-m3286 Target: 5'-ATACAAAAGGCTACACAATGTTACACG-3' (SEQ ID NO: 3260)

5'-UAUACAAAAGGCUACACAAUGUUACAC-3' (SEQ ID NO: 7697)
3'-AUAUGUUUUCCGAUGUGUUACAAUGUG-5' (SEQ ID NO: 2152)

βc-m3287 Target: 5'-TATACAAAAGGCTACACAATGTTACAC-3' (SEQ ID NO: 3261)

5'-UAUUUAUACAAAAGGCUACACAAUGUU-3' (SEQ ID NO: 7698)
3'-AUAAAUAUGUUUUCCGAUGUGUUACAA-5' (SEQ ID NO: 2153)

βc-m3291 Target: 5'-TATTTATACAAAAGGCTACACAATGTT-3' (SEQ ID NO: 3262)

5'-CUAUUUAUACAAAAGGCUACACAAUGU-3' (SEQ ID NO: 7699)
3'-GAUAAAUAUGUUUUCCGAUGUGUUACA-5' (SEQ ID NO: 2154)

βc-m3292 Target: 5'-CTATTTATACAAAAGGCTACACAATGT-3' (SEQ ID NO: 3263)

5'-UGUCUAUUUAUACAAAAGGCUACACAA-3' (SEQ ID NO: 7700)
3'-ACAGAUAAAUAUGUUUUCCGAUGUGUU-5' (SEQ ID NO: 2155)

βc-m3295 Target: 5'-TGTCTATTTATACAAAAGGCTACACAA-3' (SEQ ID NO: 3264)

5'-CUGUCUAUUUAUACAAAAGGCUACACA-3' (SEQ ID NO: 7701)
3'-GACAGAUAAAUAUGUUUUCCGAUGUGU-5' (SEQ ID NO: 2156)

βc-m3296 Target: 5'-CTGTCTATTTATACAAAAGGCTACACA-3' (SEQ ID NO: 3265)

5'-UCUGUCUAUUUAUACAAAAGGCUACAC-3' (SEQ ID NO: 7702)
3'-AGACAGAUAAAUAUGUUUUCCGAUGUG-5' (SEQ ID NO: 2157)

βc-m3297 Target: 5'-TCTGTCTATTTATACAAAAGGCTACAC-3' (SEQ ID NO: 3266)

5'-UUUCUAUCUGUCUAUUUAUACAAAAGG-3' (SEQ ID NO: 7703)
3'-AAAGAUAGACAGAUAAAUAUGUUUUCC-5' (SEQ ID NO: 2158)

βc-m3303 Target: 5'-TTTCTATCTGTCTATTTATACAAAAGG-3' (SEQ ID NO: 3267)

5'-AUUUCUAUCUGUCUAUUUAUACAAAAG-3' (SEQ ID NO: 7704)
3'-UAAAGAUAGACAGAUAAAUAUGUUUUC-5' (SEQ ID NO: 2159)

βc-m3304 Target: 5'-ATTTCTATCTGTCTATTTATACAAAAG-3' (SEQ ID NO: 3268)

5'-CAUUUCUAUCUGUCUAUUUAUACAAAA-3' (SEQ ID NO: 7705)
3'-GUAAAGAUAGACAGAUAAAUAUGUUUU-5' (SEQ ID NO: 2160)

βc-m3305 Target: 5'-CATTTCTATCTGTCTATTTATACAAAA-3' (SEQ ID NO: 3269)

5'-CCAUUUCUAUCUGUCUAUUUAUACAAA-3' (SEQ ID NO: 7706)
3'-GGUAAAGAUAGACAGAUAAAUAUGUUU-5' (SEQ ID NO: 2161)

βc-m3306 Target: 5'-CCATTTCTATCTGTCTATTTATACAAA-3' (SEQ ID NO: 3270)

5'-CGGACCAUUUCUAUCUGUCUAUUUAUA-3' (SEQ ID NO: 7707)
3'-GCCUGGUAAAGAUAGACAGAUAAAUAU-5' (SEQ ID NO: 2162)

βc-m3310 Target: 5'-CGGACCATTTCTATCTGTCTATTTATA-3' (SEQ ID NO: 3271)

5'-UCGGACCAUUUCUAUCUGUCUAUUUAU-3' (SEQ ID NO: 7708)
3'-AGCCUGGUAAAGAUAGACAGAUAAAUA-5' (SEQ ID NO: 2163)

βc-m3311 Target: 5'-TCGGACCATTTCTATCTGTCTATTTAT-3' (SEQ ID NO: 3272)

5'-AAACUAAUCGGACCAUUUCUAUCUGUC-3' (SEQ ID NO: 7709)
3'-UUUGAUUAGCCUGGUAAAGAUAGACAG-5' (SEQ ID NO: 2164)

βc-m3318 Target: 5'-AAACTAATCGGACCATTTCTATCTGTC-3' (SEQ ID NO: 3273)

5'-GAAACUAAUCGGACCAUUUCUAUCUGU-3' (SEQ ID NO: 7710)
3'-CUUUGAUUAGCCUGGUAAAGAUAGACA-5' (SEQ ID NO: 2165)

βc-m3319 Target: 5'-GAAACTAATCGGACCATTTCTATCTGT-3' (SEQ ID NO: 3274)

5'-GGAAACUAAUCGGACCAUUUCUAUCUG-3' (SEQ ID NO: 7711)
3'-CCUUUGAUUAGCCUGGUAAAGAUAGAC-5' (SEQ ID NO: 2166)

βc-m3320 Target: 5'-GGAAACTAATCGGACCATTTCTATCTG-3' (SEQ ID NO: 3275)

5'-AGGAAACUAAUCGGACCAUUUCUAUCU-3' (SEQ ID NO: 7712)
3'-UCCUUUGAUUAGCCUGGUAAAGAUAGA-5' (SEQ ID NO: 2167)

βc-m3321 Target: 5'-AGGAAACTAATCGGACCATTTCTATCT-3' (SEQ ID NO: 3276)

5'-AUUAAAAAGGAAACUAAUCGGACCAUU-3' (SEQ ID NO: 7713)
3'-UAAUUUUUCCUUUGAUUAGCCUGGUAA-5' (SEQ ID NO: 2168)

βc-m3328 Target: 5'-ATTAAAAAGGAAACTAATCGGACCATT-3' (SEQ ID NO: 3277)

5'-AAGCAUAUUAAAAAGGAAACUAAUCGG-3' (SEQ ID NO: 7714)
3'-UUCGUAUAAUUUUUCCUUUGAUUAGCC-5' (SEQ ID NO: 2169)

βc-m3334 Target: 5'-AAGCATATTAAAAAGGAAACTAATCGG-3' (SEQ ID NO: 3278)

5'-UAAGCAUAUUAAAAAGGAAACUAAUCG-3' (SEQ ID NO: 7715)
3'-AUUCGUAUAAUUUUUCCUUUGAUUAGC-5' (SEQ ID NO: 2170)

βc-m3335 Target: 5'-TAAGCATATTAAAAAGGAAACTAATCG-3' (SEQ ID NO: 3279)

5'-AUUUUAAGCAUAUUAAAAAGGAAACUA-3' (SEQ ID NO: 7716)
3'-UAAAAUUCGUAUAAUUUUUCCUUUGAU-5' (SEQ ID NO: 2171)

βc-m3339 Target: 5'-ATTTTAAGCATATTAAAAAGGAAACTA-3' (SEQ ID NO: 3280)

5'-CUGCUUAUUUUAAGCAUAUUAAAAAGG-3' (SEQ ID NO: 7717)
3'-GACGAAUAAAAUUCGUAUAAUUUUUCC-5' (SEQ ID NO: 2172)

βc-m3345 Target: 5'-CTGCTTATTTTAAGCATATTAAAAAGG-3' (SEQ ID NO: 3281)

5'-CCUGCUUAUUUUAAGCAUAUUAAAAAG-3' (SEQ ID NO: 7718)
3'-GGACGAAUAAAAUUCGUAUAAUUUUUC-5' (SEQ ID NO: 2173)

βc-m3346 Target: 5'-CCTGCTTATTTTAAGCATATTAAAAAG-3' (SEQ ID NO: 3282)

5'-GAUCCACCUGCUUAUUUUAAGCAUAUU-3' (SEQ ID NO: 7719)
3'-CUAGGUGGACGAAUAAAAUUCGUAUAA-5' (SEQ ID NO: 2174)

βc-m3352 Target: 5'-GATCCACCTGCTTATTTTAAGCATATT-3' (SEQ ID NO: 3283)

5'-CAAAAACAUGAAAUAGAUCCACCUGCU-3' (SEQ ID NO: 7720)
3'-GUUUUUGUACUUUAUCUAGGUGGACGA-5' (SEQ ID NO: 2175)

βc-m3367 Target: 5'-CAAAAACATGAAATAGATCCACCTGCT-3' (SEQ ID NO: 3284)

5'-UCAAAAACAUGAAAUAGAUCCACCUGC-3' (SEQ ID NO: 7721)
3'-AGUUUUUGUACUUUAUCUAGGUGGACG-5' (SEQ ID NO: 2176)

βc-m3368 Target: 5'-TCAAAAACATGAAATAGATCCACCTGC-3' (SEQ ID NO: 3285)

5'-GUUCAAAAACAUGAAAUAGAUCCACCU-3' (SEQ ID NO: 7722)
3'-CAAGUUUUUGUACUUUAUCUAGGUGGA-5' (SEQ ID NO: 2177)

βc-m3370 Target: 5'-GTTCAAAAACATGAAATAGATCCACCT-3' (SEQ ID NO: 3286)

5'-UGUUCAAAAACAUGAAAUAGAUCCACC-3' (SEQ ID NO: 7723)
3'-ACAAGUUUUUGUACUUUAUCUAGGUGG-5' (SEQ ID NO: 2178)

βc-m3371 Target: 5'-TGTTCAAAAACATGAAATAGATCCACC-3' (SEQ ID NO: 3287)

5'-UUGUUCAAAAACAUGAAAUAGAUCCAC-3' (SEQ ID NO: 7724)
3'-AACAAGUUUUUGUACUUUAUCUAGGUG-5' (SEQ ID NO: 2179)

βc-m3372 Target: 5'-TTGTTCAAAAACATGAAATAGATCCAC-3' (SEQ ID NO: 3288)

5'-AGUUUUUGUUCAAAAACAUGAAAUAGA-3' (SEQ ID NO: 7725)
3'-UCAAAAACAAGUUUUUGUACUUUAUCU-5' (SEQ ID NO: 2180)

βc-m3377 Target: 5'-AGTTTTTGTTCAAAAACATGAAATAGA-3' (SEQ ID NO: 3289)

5'-CGAUAAAGUUUUUGUUCAAAAACAUGA-3' (SEQ ID NO: 7726)
3'-GCUAUUUCAAAAACAAGUUUUUGUACU-5' (SEQ ID NO: 2181)

βc-m3383 Target: 5'-CGATAAAGTTTTTGTTCAAAAACATGA-3' (SEQ ID NO: 3290)

5'-UAUCCCCGAUAAAGUUUUUGUUCAAAA-3' (SEQ ID NO: 7727)
3'-AUAGGGGCUAUUUCAAAAACAAGUUUU-5' (SEQ ID NO: 2182)

βc-m3389 Target: 5'-TATCCCCGATAAAGTTTTTGTTCAAAA-3' (SEQ ID NO: 3291)

5'-GUAUCCCCGAUAAAGUUUUUGUUCAAA-3' (SEQ ID NO: 7728)
3'-CAUAGGGGCUAUUUCAAAAACAAGUUU-5' (SEQ ID NO: 2183)

βc-m3390 Target: 5'-GTATCCCCGATAAAGTTTTTGTTCAAA-3' (SEQ ID NO: 3292)

5'-ACACCUCUUACUGAUUUACCCUACCGC-3' (SEQ ID NO: 7729)
3'-UGUGGAGAAUGACUAAAUGGGAUGGCG-5' (SEQ ID NO: 2184)

βc-m3419 Target: 5'-ACACCTCTTACTGATTTACCCTACCGC-3' (SEQ ID NO: 3293)

5'-UAACACCUCUUACUGAUUUACCCUACC-3' (SEQ ID NO: 7730)
3'-AUUGUGGAGAAUGACUAAAUGGGAUGG-5' (SEQ ID NO: 2185)

βc-m3421 Target: 5'-TAACACCTCTTACTGATTTACCCTACC-3' (SEQ ID NO: 3294)

5'-AUAACACCUCUUACUGAUUUACCCUAC-3' (SEQ ID NO: 7731)
3'-UAUUGUGGAGAAUGACUAAAUGGGAUG-5' (SEQ ID NO: 2186)

βc-m3422 Target: 5'-ATAACACCTCTTACTGATTTACCCTAC-3' (SEQ ID NO: 3295)

5'-AAUAACACCUCUUACUGAUUUACCCUA-3' (SEQ ID NO: 7732)
3'-UUAUUGUGGAGAAUGACUAAAUGGGAU-5' (SEQ ID NO: 2187)

βc-m3423 Target: 5'-AATAACACCTCTTACTGATTTACCCTA-3' (SEQ ID NO: 3296)

5'-AAAUAACACCUCUUACUGAUUUACCCU-3' (SEQ ID NO: 7733)
3'-UUUAUUGUGGAGAAUGACUAAAUGGGA-5' (SEQ ID NO: 2188)

βc-m3424 Target: 5'-AAATAACACCTCTTACTGATTTACCCT-3' (SEQ ID NO: 3297)

5'-CAAAUAACACCUCUUACUGAUUUACCC-3' (SEQ ID NO: 7734)
3'-GUUUAUUGUGGAGAAUGACUAAAUGGG-5' (SEQ ID NO: 2189)

βc-m3425 Target: 5'-CAAATAACACCTCTTACTGATTTACCC-3' (SEQ ID NO: 3298)

5'-AAGGCUCAAAUAACACCUCUUACUGAU-3' (SEQ ID NO: 7735)
3'-UUCCGAGUUUAUUGUGGAGAAUGACUA-5' (SEQ ID NO: 2190)

βc-m3431 Target: 5'-AAGGCTCAAATAACACCTCTTACTGAT-3' (SEQ ID NO: 3299)

5'-AAAACAAGGCUCAAAUAACACCUCUUA-3' (SEQ ID NO: 7736)
3'-UUUUGUUCCGAGUUUAUUGUGGAGAAU-5' (SEQ ID NO: 2191)

βc-m3436 Target: 5'-AAAACAAGGCTCAAATAACACCTCTTA-3' (SEQ ID NO: 3300)

5'-CAAAACAAGGCUCAAAUAACACCUCUU-3' (SEQ ID NO: 7737)
3'-GUUUUGUUCCGAGUUUAUUGUGGAGAA-5' (SEQ ID NO: 2192)

βc-m3437 Target: 5'-CAAAACAAGGCTCAAATAACACCTCTT-3' (SEQ ID NO: 3301)

5'-CCAAAACAAGGCUCAAAUAACACCUCU-3' (SEQ ID NO: 7738)
3'-GGUUUUGUUCCGAGUUUAUUGUGGAGA-5' (SEQ ID NO: 2193)

βc-m3438 Target: 5'-CCAAAACAAGGCTCAAATAACACCTCT-3' (SEQ ID NO: 3302)

5'-UGUCCAAAACAAGGCUCAAAUAACACC-3' (SEQ ID NO: 7739)
3'-ACAGGUUUUGUUCCGAGUUUAUUGUGG-5' (SEQ ID NO: 2194)

βc-m3441 Target: 5'-TGTCCAAAACAAGGCTCAAATAACACC-3' (SEQ ID NO: 3303)

5'-ACUGUCCAAAACAAGGCUCAAAUAACA-3' (SEQ ID NO: 7740)
3'-UGACAGGUUUUGUUCCGAGUUUAUUGU-5' (SEQ ID NO: 2195)

βc-m3443 Target: 5'-ACTGTCCAAAACAAGGCTCAAATAACA-3' (SEQ ID NO: 3304)

5'-GGUAUACUGUCCAAAACAAGGCUCAAA-3' (SEQ ID NO: 7741)
3'-CCAUAUGACAGGUUUUGUUCCGAGUUU-5' (SEQ ID NO: 2196)

βc-m3448 Target: 5'-GGTATACTGTCCAAAACAAGGCTCAAA-3' (SEQ ID NO: 3305)

5'-AGGCAACUGGUAUACUGUCCAAAACAA-3' (SEQ ID NO: 7742)
3'-UCCGUUGACCAUAUGACAGGUUUUGUU-5' (SEQ ID NO: 2197)

βc-m3456 Target: 5'-AGGCAACTGGTATACTGTCCAAAACAA-3' (SEQ ID NO: 3306)

5'-GGGAUAAAAGGCAACUGGUAUACUGUC-3' (SEQ ID NO: 7743)
3'-CCCUAUUUUCCGUUGACCAUAUGACAG-5' (SEQ ID NO: 2198)

βc-m3464 Target: 5'-GGGATAAAAGGCAACTGGTATACTGTC-3' (SEQ ID NO: 3307)

5'-UGGGAUAAAAGGCAACUGGUAUACUGU-3' (SEQ ID NO: 7744)
3'-ACCCUAUUUUCCGUUGACCAUAUGACA-5' (SEQ ID NO: 2199)

βc-m3465 Target: 5'-TGGGATAAAAGGCAACTGGTATACTGT-3' (SEQ ID NO: 3308)

5'-ACAACUUUGGGAUAAAAGGCAACUGGU-3' (SEQ ID NO: 7745)
3'-UGUUGAAACCCUAUUUUCCGUUGACCA-5' (SEQ ID NO: 2200)

βc-m3472 Target: 5'-ACAACTTTGGGATAAAAGGCAACTGGT-3' (SEQ ID NO: 3309)

5'-CAACAACUUUGGGAUAAAAGGCAACUG-3' (SEQ ID NO: 7746)
3'-GUUGUUGAAACCCUAUUUUCCGUUGAC-5' (SEQ ID NO: 2201)

βc-m3474 Target: 5'-CAACAACTTTGGGATAAAAGGCAACTG-3' (SEQ ID NO: 3310)

5'-GGUUACAACAACUUUGGGAUAAAAGGC-3' (SEQ ID NO: 7747)
3'-CCAAUGUUGUUGAAACCCUAUUUUCCG-5' (SEQ ID NO: 2202)

βc-m3479 Target: 5'-GGTTACAACAACTTTGGGATAAAAGGC-3' (SEQ ID NO: 3311)

5'-AGGUUACAACAACUUUGGGAUAAAAGG-3' (SEQ ID NO: 7748)
3'-UCCAAUGUUGUUGAAACCCUAUUUUCC-5' (SEQ ID NO: 2203)

βc-m3480 Target: 5'-AGGTTACAACAACTTTGGGATAAAAGG-3' (SEQ ID NO: 3312)

5'-CAGGUUACAACAACUUUGGGAUAAAAG-3' (SEQ ID NO: 7749)
3'-GUCCAAUGUUGUUGAAACCCUAUUUUC-5' (SEQ ID NO: 2204)

βc-m3481 Target: 5'-CAGGTTACAACAACTTTGGGATAAAAG-3' (SEQ ID NO: 3313)

5'-UAUCACAGCAGGUUACAACAACUUUGG-3' (SEQ ID NO: 7750)
3'-AUAGUGUCGUCCAAUGUUGUUGAAACC-5' (SEQ ID NO: 2205)

βc-m3489 Target: 5'-TATCACAGCAGGTTACAACAACTTTGG-3' (SEQ ID NO: 3314)

5'-GUAUCACAGCAGGUUACAACAACUUUG-3' (SEQ ID NO: 7751)
3'-CAUAGUGUCGUCCAAUGUUGUUGAAAC-5' (SEQ ID NO: 2206)

βc-m3490 Target: 5'-GTATCACAGCAGGTTACAACAACTTTG-3' (SEQ ID NO: 3315)

5'-UUGUAUCACAGCAGGUUACAACAACUU-3' (SEQ ID NO: 7752)
3'-AACAUAGUGUCGUCCAAUGUUGUUGAA-5' (SEQ ID NO: 2207)

βc-m3492 Target: 5'-TTGTATCACAGCAGGTTACAACAACTT-3' (SEQ ID NO: 3316)

5'-CCGCAUCUGUUGAAGCAUUGUAUCACA-3' (SEQ ID NO: 7753)
3'-GGCGUAGACAACUUCGUAACAUAGUGU-5' (SEQ ID NO: 2208)

βc-m3509 Target: 5'-CCGCATCTGTTGAAGCATTGTATCACA-3' (SEQ ID NO: 3317)

5'-UCUGAACCAUUUCUAUAACCGCAUCUG-3' (SEQ ID NO: 7754)
3'-AGACUUGGUAAAGAUAUUGGCGUAGAC-5' (SEQ ID NO: 2209)

βc-m3527 Target: 5'-TCTGAACCATTTCTATAACCGCATCTG-3' (SEQ ID NO: 3318)

5'-UAAUUCUGAACCAUUUCUAUAACCGCA-3' (SEQ ID NO: 7755)
3'-AUUAAGACUUGGUAAAGAUAUUGGCGU-5' (SEQ ID NO: 2210)

βc-m3531 Target: 5'-TAATTCTGAACCATTTCTATAACCGCA-3' (SEQ ID NO: 3319)

5'-UUUAAUUCUGAACCAUUUCUAUAACCG-3' (SEQ ID NO: 7756)
3'-AAAUUAAGACUUGGUAAAGAUAUUGGC-5' (SEQ ID NO: 2211)

βc-m3533 Target: 5'-TTTAATTCTGAACCATTTCTATAACCG-3' (SEQ ID NO: 3320)

5'-GUUUAAUUCUGAACCAUUUCUAUAACC-3' (SEQ ID NO: 7757)
3'-CAAAUUAAGACUUGGUAAAGAUAUUGG-5' (SEQ ID NO: 2212)

βc-m3534 Target: 5'-GTTTAATTCTGAACCATTTCTATAACC-3' (SEQ ID NO: 3321)

5'-AGUUUAAUUCUGAACCAUUUCUAUAAC-3' (SEQ ID NO: 7758)
3'-UCAAAUUAAGACUUGGUAAAGAUAUUG-5' (SEQ ID NO: 2213)

βc-m3535 Target: 5'-AGTTTAATTCTGAACCATTTCTATAAC-3' (SEQ ID NO: 3322)

5'-AAGUUUAAUUCUGAACCAUUUCUAUAA-3' (SEQ ID NO: 7759)
3'-UUCAAAUUAAGACUUGGUAAAGAUAUU-5' (SEQ ID NO: 2214)

βc-m3536 Target: 5'-AAGTTTAATTCTGAACCATTTCTATAA-3' (SEQ ID NO: 3323)

5'-AUUAAAAGUUUAAUUCUGAACCAUUUC-3' (SEQ ID NO: 7760)
3'-UAAUUUUCAAAUUAAGACUUGGUAAAG-5' (SEQ ID NO: 2215)

βc-m3541 Target: 5'-ATTAAAAGTTTAATTCTGAACCATTTC-3' (SEQ ID NO: 3324)

5'-AAUUAAAAGUUUAAUUCUGAACCAUUU-3' (SEQ ID NO: 7761)
3'-UUAAUUUUCAAAUUAAGACUUGGUAAA-5' (SEQ ID NO: 2216)

βc-m3542 Target: 5'-AATTAAAAGTTTAATTCTGAACCATTT-3' (SEQ ID NO: 3325)

5'-UGAAUUAAAAGUUUAAUUCUGAACCAU-3' (SEQ ID NO: 7762)
3'-ACUUAAUUUUCAAAUUAAGACUUGGUA-5' (SEQ ID NO: 2217)

βc-m3544 Target: 5'-TGAATTAAAAGTTTAATTCTGAACC-3' (SEQ ID NO: 3326)

5'-UUUGAAUGAAUUAAAAGUUUAAUUCUG-3' (SEQ ID NO: 7763)
3'-AAACUUACUUAAUUUUCAAAUUAAGAC-5' (SEQ ID NO: 2218)

βc-m3550 Target: 5'-TTTGAATGAATTAAAAGTTTAATTCTG-3' (SEQ ID NO: 3327)

5'-UUUUUUUGAAUGAAUUAAAAGUUUAAU-3' (SEQ ID NO: 7764)
3'-AAAAAAACUUACUUAAUUUUCAAAUUA-5' (SEQ ID NO: 2219)

βc-m3554 Target: 5'-TTTTTTTGAATGAATTAAAAGTTTAAT-3' (SEQ ID NO: 3328)

5'-UUUUUUUUUUUUGAAUGAAUUAAAAGUU-3' (SEQ ID NO: 7765)
3'-AAAAAAAAAAACUUACUUAAUUUUCAA-5' (SEQ ID NO: 2220)

βc-m3558 Target: 5'-TTTTTTTTTTTGAATGAATTAAAAGTT-3' (SEQ ID NO: 3329)

5'-UUUUUUUUUUUUGAAUGAAUUAAAAGU-3' (SEQ ID NO: 7766)
3'-AAAAAAAAAAAACUUACUUAAUUUUCA-5' (SEQ ID NO: 2221)

βc-m3559 Target: 5'-TTTTTTTTTTTTGAATGAATTAAAAGT-3' (SEQ ID NO: 3330)

5'-UUUUUUUUUUUUUGAAUGAAUUAAAAG-3' (SEQ ID NO: 7767)
3'-AAAAAAAAAAAAACUUACUUAAUUUUC-5' (SEQ ID NO: 2222)

βc-m3560 Target: 5'-TTTTTTTTTTTTGAATGAATTAAAAG-3' (SEQ ID NO: 3331)

5'-UUUUUUUUUUUUUGAAUGAAUUAAAA-3' (SEQ ID NO: 7768)
3'-AAAAAAAAAAAAACUUACUUAAUUUU-5' (SEQ ID NO: 2223)

βc-m3561 Target: 5'-TTTTTTTTTTTTTGAATGAATTAAAA-3' (SEQ ID NO: 3332)

5'-UUUUUUUUUUUUUUGAAUGAAUUAAA-3' (SEQ ID NO: 7769)
3'-AAAAAAAAAAAAAACUUACUUAAUUU-5' (SEQ ID NO: 2224)

βc-m3562 Target: 5'-TTTTTTTTTTTTTTGAATGAATTAAA-3' (SEQ ID NO: 3333)

5'-UUUUUUUUUUUUUUUGAAUGAAUUAA-3' (SEQ ID NO: 7770)
3'-AAAAAAAAAAAAAAACUUACUUAAUU-5' (SEQ ID NO: 2225)

βc-m3563 Target: 5'-TTTTTTTTTTTTTTTGAATGAATTAA-3' (SEQ ID NO: 3334)

Within Tables 2-4 and 9 above, underlined residues indicate 2'-O-methyl residues. In Tables 2-4, 6-9 and 11-13 above, UPPER CASE indicates ribonucleotides, and lower case denotes deoxyribonucleotides. The DsiRNA agents of Tables 2-4 and 9 above are 25/27mer agents possessing a blunt end. The structures and/or modification patterning of the agents of Tables 2-4, 6, 9 and 11 above can be readily adapted to the above generic sequence structures, *e.g.*, the 3' overhang of the second strand can be extended or contracted, 2'-O-methylation of the second strand can be expanded towards the 5' end of the second strand, optionally at alternating sites, etc. Such further modifications are optional, as 25/27mer DsiRNAs with such modifications can also be readily designed from the above DsiRNA agents and are also expected to be functional inhibitors of β-catenin expression. Similarly, the 27mer "blunt/fray" and "blunt/blunt" DsiRNA structures and/or modification patterns of the agents of of Tables 7-8 and 12-13 above can also be readily adapted to the above generic sequence structures, *e.g.*, for application of modification patterning of the antisense strand to such structures and/or adaptation of such sequences to the above generic structures.

In certain embodiments, 27mer DsiRNAs possessing independent strand lengths each of 27 nucleotides are designed and synthesized for targeting of the same sites within the β-catenin transcript as the asymmetric "25/27" structures shown in Tables 2-4, 6, 9 and 11 herein. Exemplary "27/27" DsiRNAs are optionally designed with a "blunt/fray" structure as shown for the DsiRNAs of Tables 7 and 12 above, or with a "blunt/blunt" structure as shown for the DsiRNAs of Tables 8 and 13 above.

In certain embodiments, the DsiRNA agents of the invention require, *e.g.*, at least 19, at least 20, at least 21, at least 22, at least 23, at least 24, at least 25 or at least 26 residues of the first strand to be complementary to corresponding residues of the second strand. In certain related embodiments, these first strand residues complementary to corresponding residues of the second strand are optionally consecutive residues.

As used herein "DsiRNAmm" refers to a DisRNA having a "mismatch tolerant region" containing one, two, three or four mismatched base pairs of the duplex formed by the sense and antisense strands of the DsiRNA, where such mismatches are positioned within the DsiRNA at a location(s) lying between (and thus not including) the two terminal base pairs of either end of the DsiRNA. The mismatched base pairs are located within a "mismatch-tolerant region" which is defined herein with respect to the location of the projected Ago2 cut site of the corresponding target nucleic acid. The mismatch tolerant region is located "upstream of" the projected Ago2 cut site of the target strand. "Upstream" in this context will be understood as the 5'-most portion of the DsiRNAmm duplex, where 5' refers to the orientation of the sense strand of the DsiRNA duplex. Therefore, the mismatch tolerant region is upstream of the base on the sense (passenger) strand that corresponds to the projected Ago2 cut site of the target nucleic acid (see Figure 1); alternatively, when referring to the antisense (guide) strand of the DsiRNAmm, the mismatch tolerant region can also be described as positioned downstream of the base that is complementary to the projected Ago2 cut site of the target nucleic acid, that is, the 3'-most portion of the antisense strand of the DsiRNAmm (where position 1 of the antisense strand is the 5' terminal nucleotide of the antisense strand, see Figure 1).

In one embodiment, for example with numbering as depicted in Figure 1, the mismatch tolerant region is positioned between and including base pairs 3-9 when numbered from the nucleotide starting at the 5' end of the sense strand of the duplex. Therefore, a DsiRNAmm of the invention possesses a single mismatched base pair at any one of positions 3, 4, 5, 6, 7, 8 or 9 of the sense strand of a right-hand extended DsiRNA (where position 1 is the 5' terminal nucleotide of the sense strand and position 9 is the nucleotide residue of the sense strand that is immediately 5' of the projected Ago2 cut site of the target β-catenin RNA sequence corresponding to the sense strand sequence). In certain embodiments, for a DsiRNAmm that possesses a mismatched base pair nucleotide at any of positions 3, 4, 5, 6, 7, 8 or 9 of the sense

strand, the corresponding mismatched base pair nucleotide of the antisense strand not only forms a mismatched base pair with the DsiRNAmm sense strand sequence, but also forms a mismatched base pair with a DsiRNAmm target β-catenin RNA sequence (thus, complementarity between the antisense strand sequence and the sense strand sequence is disrupted at the mismatched base pair within the DsiRNAmm, and complementarity is similarly disrupted between the antisense strand sequence of the DsiRNAmm and the target β-catenin RNA sequence). In alternative embodiments, the mismatch base pair nucleotide of the antisense strand of a DsiRNAmm only form a mismatched base pair with a corresponding nucleotide of the sense strand sequence of the DsiRNAmm, yet base pairs with its corresponding target β-catenin RNA sequence nucleotide (thus, complementarity between the antisense strand sequence and the sense strand sequence is disrupted at the mismatched base pair within the DsiRNAmm, yet complementarity is maintained between the antisense strand sequence of the DsiRNAmm and the target β-catenin RNA sequence).

A DsiRNAmm of the invention that possesses a single mismatched base pair within the mismatch-tolerant region (mismatch region) as described above (*e.g.*, a DsiRNAmm harboring a mismatched nucleotide residue at any one of positions 3, 4, 5, 6, 7, 8 or 9 of the sense strand) can further include one, two or even three additional mismatched base pairs. In preferred embodiments, these one, two or three additional mismatched base pairs of the DsiRNAmm occur at position(s) 3, 4, 5, 6, 7, 8 and/or 9 of the sense strand (and at corresponding residues of the antisense strand). In one embodiment where one additional mismatched base pair is present within a DsiRNAmm, the two mismatched base pairs of the sense strand can occur, *e.g.*, at nucleotides of both position 4 and position 6 of the sense strand (with mismatch also occurring at corresponding nucleotide residues of the antisense strand).

In DsiRNAmm agents possessing two mismatched base pairs, mismatches can occur consecutively (*e.g.*, at consecutive positions along the sense strand nucleotide sequence). Alternatively, nucleotides of the sense strand that form mismatched base pairs with the antisense strand sequence can be interspersed by nucleotides that base pair with the antisense strand sequence (*e.g.*, for a DsiRNAmm possessing mismatched nucleotides at positions 3 and 6, but not at positions 4 and 5, the mismatched residues of sense strand positions 3 and 6 are interspersed by two nucleotides that form matched base pairs with corresponding residues of the antisense strand). For example, two residues of the sense strand (located within the mismatch-

tolerant region of the sense strand) that form mismatched base pairs with the corresponding antisense strand sequence can occur with zero, one, two, three, four or five matched base pairs located between these mismatched base pairs.

For certain DsiRNAmm agents possessing three mismatched base pairs, mismatches can occur consecutively (*e.g.*, in a triplet along the sense strand nucleotide sequence). Alternatively, nucleotides of the sense strand that form mismatched base pairs with the antisense strand sequence can be interspersed by nucleotides that form matched base pairs with the antisense strand sequence (*e.g.*, for a DsiRNAmm possessing mismatched nucleotides at positions 3, 4 and 8, but not at positions 5, 6 and 7, the mismatched residues of sense strand positions 3 and 4 are adjacent to one another, while the mismatched residues of sense strand positions 4 and 8 are interspersed by three nucleotides that form matched base pairs with corresponding residues of the antisense strand). For example, three residues of the sense strand (located within the mismatch-tolerant region of the sense strand) that form mismatched base pairs with the corresponding antisense strand sequence can occur with zero, one, two, three or four matched base pairs located between any two of these mismatched base pairs.

For certain DsiRNAmm agents possessing four mismatched base pairs, mismatches can occur consecutively (*e.g.*, in a quadruplet along the sense strand nucleotide sequence). Alternatively, nucleotides of the sense strand that form mismatched base pairs with the antisense strand sequence can be interspersed by nucleotides that form matched base pairs with the antisense strand sequence (*e.g.*, for a DsiRNAmm possessing mismatched nucleotides at positions 3, 5, 7 and 8, but not at positions 4 and 6, the mismatched residues of sense strand positions 7 and 8 are adjacent to one another, while the mismatched residues of sense strand positions 3 and 5 are interspersed by one nucleotide that forms a matched base pair with the corresponding residue of the antisense strand – similarly, the the mismatched residues of sense strand positions 5 and 7 are also interspersed by one nucleotide that forms a matched base pair with the corresponding residue of the antisense strand). For example, four residues of the sense strand (located within the mismatch-tolerant region of the sense strand) that form mismatched base pairs with the corresponding antisense strand sequence can occur with zero, one, two or three matched base pairs located between any two of these mismatched base pairs.

In another embodiment, for example with numbering also as depicted in Figure 1, a DsiRNAmm of the invention comprises a mismatch tolerant region which possesses a single mismatched base pair nucleotide at any one of positions 17, 18, 19, 20, 21, 22 or 23 of the antisense strand of the DsiRNA (where position 1 is the 5' terminal nucleotide of the antisense strand and position 17 is the nucleotide residue of the antisense strand that is immediately 3' (downstream) in the antisense strand of the projected Ago2 cut site of the target β-catenin RNA sequence sufficiently complementary to the antisense strand sequence). In certain embodiments, for a DsiRNAmm that possesses a mismatched base pair nucleotide at any of positions 17, 18, 19, 20, 21, 22 or 23 of the antisense strand with respect to the sense strand of the DsiRNAmm, the mismatched base pair nucleotide of the antisense strand not only forms a mismatched base pair with the DsiRNAmm sense strand sequence, but also forms a mismatched base pair with a DsiRNAmm target β-catenin RNA sequence (thus, complementarity between the antisense strand sequence and the sense strand sequence is disrupted at the mismatched base pair within the DsiRNAmm, and complementarity is similarly disrupted between the antisense strand sequence of the DsiRNAmm and the target β-catenin RNA sequence). In alternative embodiments, the mismatch base pair nucleotide of the antisense strand of a DsiRNAmm only forms a mismatched base pair with a corresponding nucleotide of the sense strand sequence of the DsiRNAmm, yet base pairs with its corresponding target β-catenin RNA sequence nucleotide (thus, complementarity between the antisense strand sequence and the sense strand sequence is disrupted at the mismatched base pair within the DsiRNAmm, yet complementarity is maintained between the antisense strand sequence of the DsiRNAmm and the target β-catenin RNA sequence).

A DsiRNAmm of the invention that possesses a single mismatched base pair within the mismatch-tolerant region as described above (*e.g.*, a DsiRNAmm harboring a mismatched nucleotide residue at positions 17, 18, 19, 20, 21, 22 or 23 of the antisense strand) can further include one, two or even three additional mismatched base pairs. In preferred embodiments, these one, two or three additional mismatched base pairs of the DsiRNAmm occur at position(s) 17, 18, 19, 20, 21, 22 and/or 23 of the antisense strand (and at corresponding residues of the sense strand). In one embodiment where one additional mismatched base pair is present within a DsiRNAmm, the two mismatched base pairs of the antisense strand can occur, *e.g.*, at

nucleotides of both position 18 and position 20 of the antisense strand (with mismatch also occurring at corresponding nucleotide residues of the sense strand).

In DsiRNAmm agents possessing two mismatched base pairs, mismatches can occur consecutively (*e.g.*, at consecutive positions along the antisense strand nucleotide sequence). Alternatively, nucleotides of the antisense strand that form mismatched base pairs with the sense strand sequence can be interspersed by nucleotides that base pair with the sense strand sequence (*e.g.*, for a DsiRNAmm possessing mismatched nucleotides at positions 17 and 20, but not at positions 18 and 19, the mismatched residues of antisense strand positions 17 and 20 are interspersed by two nucleotides that form matched base pairs with corresponding residues of the sense strand). For example, two residues of the antisense strand (located within the mismatch-tolerant region of the sense strand) that form mismatched base pairs with the corresponding sense strand sequence can occur with zero, one, two, three, four, five, six or seven matched base pairs located between these mismatched base pairs.

For certain DsiRNAmm agents possessing three mismatched base pairs, mismatches can occur consecutively (*e.g.*, in a triplet along the antisense strand nucleotide sequence). Alternatively, nucleotides of the antisense strand that form mismatched base pairs with the sense strand sequence can be interspersed by nucleotides that form matched base pairs with the sense strand sequence (*e.g.*, for a DsiRNAmm possessing mismatched nucleotides at positions 17, 18 and 22, but not at positions 19, 20 and 21, the mismatched residues of antisense strand positions 17 and 18 are adjacent to one another, while the mismatched residues of antisense strand positions 18 and 122 are interspersed by three nucleotides that form matched base pairs with corresponding residues of the sense strand). For example, three residues of the antisense strand (located within the mismatch-tolerant region of the antisense strand) that form mismatched base pairs with the corresponding sense strand sequence can occur with zero, one, two, three, four, five or six matched base pairs located between any two of these mismatched base pairs.

For certain DsiRNAmm agents possessing four mismatched base pairs, mismatches can occur consecutively (*e.g.*, in a quadruplet along the antisense strand nucleotide sequence). Alternatively, nucleotides of the antisense strand that form mismatched base pairs with the sense strand sequence can be interspersed by nucleotides that form matched base pairs with the sense strand sequence (*e.g.*, for a DsiRNAmm possessing mismatched nucleotides at positions 18, 20, 22 and 23, but

not at positions 19 and 21, the mismatched residues of antisense strand positions 22 and 23 are adjacent to one another, while the mismatched residues of antisense strand positions 18 and 20 are interspersed by one nucleotide that forms a matched base pair with the corresponding residue of the sense strand – similarly, the the mismatched residues of antisense strand positions 20 and 22 are also interspersed by one nucleotide that forms a matched base pair with the corresponding residue of the sense strand). For example, four residues of the antisense strand (located within the mismatch-tolerant region of the antisense strand) that form mismatched base pairs with the corresponding sense strand sequence can occur with zero, one, two, three, four or five matched base pairs located between any two of these mismatched base pairs.

For reasons of clarity, the location(s) of mismatched nucleotide residues within the above DsiRNAmm agents are numbered in reference to the 5' terminal residue of either sense or antisense strands of the DsiRNAmm. The numbering of positions located within the mismatch-tolerant region (mismatch region) of the antisense strand can shift with variations in the proximity of the 5' terminus of the sense or antisense strand to the projected Ago2 cleavage site. Thus, the location(s) of preferred mismatch sites within either antisense strand or sense strand can also be identified as the permissible proximity of such mismatches to the projected Ago2 cut site. Accordingly, in one preferred embodiment, the position of a mismatch nucleotide of the sense strand of a DsiRNAmm is the nucleotide residue of the sense strand that is located immediately 5' (upstream) of the projected Ago2 cleavage site of the corresponding target β-catenin RNA sequence. In other preferred embodiments, a mismatch nucleotide of the sense strand of a DsiRNAmm is positioned at the nucleotide residue of the sense strand that is located two nucleotides 5' (upstream) of the projected Ago2 cleavage site, three nucleotides 5' (upstream) of the projected Ago2 cleavage site, four nucleotides 5' (upstream) of the projected Ago2 cleavage site, five nucleotides 5' (upstream) of the projected Ago2 cleavage site, six nucleotides 5' (upstream) of the projected Ago2 cleavage site, seven nucleotides 5' (upstream) of the projected Ago2 cleavage site, eight nucleotides 5' (upstream) of the projected Ago2 cleavage site, or nine nucleotides 5' (upstream) of the projected Ago2 cleavage site.

Exemplary single mismatch-containing 25/27mer DsiRNAs (DsiRNAmm) include the following structures (such mismatch-containing structures may also be incorporated into other exemplary DsiRNA structures shown herein).

5′-XX^{M}XXXXXXXXXXXXXXXXXXXXDD-3'
3′-XXXX$_{M}$XXXXXXXXXXXXXXXXXXXXXX-5′

5′-XXX^{M}XXXXXXXXXXXXXXXXXXXXDD-3'
3′-XXXXX$_{M}$XXXXXXXXXXXXXXXXXXXXXX-5′

5′-XXXX^{M}XXXXXXXXXXXXXXXXXXXXDD-3'
3′-XXXXXX$_{M}$XXXXXXXXXXXXXXXXXXXXXX-5′

5′-XXXXX^{M}XXXXXXXXXXXXXXXXXXXXDD-3'
3′-XXXXXXX$_{M}$XXXXXXXXXXXXXXXXXXXXXX-5′

5′-XXXXXX^{M}XXXXXXXXXXXXXXXXXXXXDD-3'
3′-XXXXXXXX$_{M}$XXXXXXXXXXXXXXXXXXXXXX-5′

5′-XXXXXXX^{M}XXXXXXXXXXXXXXXXXXXXDD-3'
3′-XXXXXXXXX$_{M}$XXXXXXXXXXXXXXXXXXXXXX-5′

5′-XXXXXXXX^{M}XXXXXXXXXXXXXXXXXXXXDD-3'
3′-XXXXXXXXXX$_{M}$XXXXXXXXXXXXXXXXXXXXXX-5′

wherein “X”=RNA, "D"=DNA and “M”=Nucleic acid residues (RNA, DNA or non-natural or modified nucleic acids) that do not base pair (hydrogen bond) with corresponding “M” residues of otherwise complementary strand when strands are annealed. Any of the residues of such agents can optionally be 2'-O-methyl RNA monomers – alternating positioning of 2'-O-methyl RNA monomers that commences from the 3’-terminal residue of the bottom (second) strand, as shown above, can also be used in the above DsiRNAmm agents. For the above mismatch structures, the top

strand is the sense strand, and the bottom strand is the antisense strand.

In certain embodiments, a DsiRNA of the invention can contain mismatches that exist in reference to the target β-catenin RNA sequence yet do not necessarily exist as mismatched base pairs within the two strands of the DsiRNA – thus, a DsiRNA can possess perfect complementarity between first and second strands of a DsiRNA, yet still possess mismatched residues in reference to a target β-catenin RNA (which, in certain embodiments, may be advantageous in promoting efficacy and/or potency and/or duration of effect). In certain embodiments, where mismatches occur between antisense strand and target β-catenin RNA sequence, the position of a mismatch is located within the antisense strand at a position(s) that corresponds to a sequence of the sense strand located 5' of the projected Ago2 cut site of the target region – *e.g.*, antisense strand residue(s) positioned within the antisense strand to the 3' of the antisense residue which is complementary to the projected Ago2 cut site of the target sequence.

Exemplary 25/27mer DsiRNAs that harbor a single mismatched residue in reference to target sequences include the following structures.

```
Target RNA Sequence: 5'-. . . AXXXXXXXXXXXXXXXXXXXX . . .-3'
DsiRNAmm Sense Strand:       5'-XXXXXXXXXXXXXXXXXXXXXXXDD-3'
DsiRNAmm Antisense Strand: 3'-EXXXXXXXXXXXXXXXXXXXXXXXXX-5'

Target RNA Sequence: 5'-. . . XAXXXXXXXXXXXXXXXXXXX . . .-3'
DsiRNAmm Sense Strand:       5'-XXXXXXXXXXXXXXXXXXXXXXXDD-3'
DsiRNAmm Antisense Strand: 3'-XEXXXXXXXXXXXXXXXXXXXXXXXX-5'

Target RNA Sequence:   5'-. . . AXXXXXXXXXXXXXXXXXXX . . .-3'
DsiRNAmm Sense Strand:       5'-BXXXXXXXXXXXXXXXXXXXXXXXDD-3'
DsiRNAmm Antisense Strand: 3'-XXEXXXXXXXXXXXXXXXXXXXXXX-5'

Target RNA Sequence:   5'-. . . XAXXXXXXXXXXXXXXXXXX . . .-3'
DsiRNAmm Sense Strand:       5'-XBXXXXXXXXXXXXXXXXXXXXXDD-3'
DsiRNAmm Antisense Strand: 3'-XXXEXXXXXXXXXXXXXXXXXXXXX-5'

Target RNA Sequence:   5'-. . . XXAXXXXXXXXXXXXXXXXX . . .-3'
DsiRNAmm Sense Strand:       5'-XXBXXXXXXXXXXXXXXXXXXXXDD-3'
```

DsiRNAmm Antisense Strand: 3′-XXXXEXXXXXXXXXXXXXXXXXXX-5′

Target RNA Sequence: 5′-. . . XXXAXXXXXXXXXXXXXX . . .-3′
DsiRNAmm Sense Strand: 5′-XXXBXXXXXXXXXXXXXXXXXXDD-3'
DsiRNAmm Antisense Strand: 3′-XXXXXEXXXXXXXXXXXXXXXXXX-5′

Target RNA Sequence: 5′-. . . XXXXAXXXXXXXXXXXXX . . .-3′
DsiRNAmm Sense Strand: 5′-XXXXBXXXXXXXXXXXXXXXXXDD-3'
DsiRNAmm Antisense Strand: 3′-XXXXXXEXXXXXXXXXXXXXXXXX-5′

Target RNA Sequence: 5′-. . . XXXXXAXXXXXXXXXXXX . . .-3′
DsiRNAmm Sense Strand: 5′-XXXXXBXXXXXXXXXXXXXXXXDD-3'
DsiRNAmm Antisense Strand: 3′-XXXXXXXEXXXXXXXXXXXXXXXX-5′

Target RNA Sequence: 5′-. . . XXXXXXAXXXXXXXXXXX . . .-3′
DsiRNAmm Sense Strand: 5′-XXXXXXBXXXXXXXXXXXXXXXXDD-3'
DsiRNAmm Antisense Strand: 3′-XXXXXXXXEXXXXXXXXXXXXXXXX-5′

Target RNA Sequence: 5′-. . . XXXXXXXAXXXXXXXXXX . . .-3′
DsiRNAmm Sense Strand: 5′-XXXXXXXBXXXXXXXXXXXXXXXXDD-3'
DsiRNAmm Antisense Strand: 3′-XXXXXXXXXEXXXXXXXXXXXXXXXX-5′

Target RNA Sequence: 5′-. . . XXXXXXXXAXXXXXXXXX . . .-3′
DsiRNAmm Sense Strand: 5′-XXXXXXXXBXXXXXXXXXXXXXXXXDD-3'
DsiRNAmm Antisense Strand: 3′-XXXXXXXXXXEXXXXXXXXXXXXXXXX-5′

wherein “X”=RNA, “D”=DNA and “E”=Nucleic acid residues (RNA, DNA or non-natural or modified nucleic acids) that do not base pair (hydrogen bond) with corresponding “A” RNA residues of otherwise complementary (target) strand when strands are annealed, yet optionally do base pair with corresponding “B” residues (“B” residues are also RNA, DNA or non-natural or modified nucleic acids). Any of the residues of such agents can optionally be 2'-O-methyl RNA monomers – alternating positioning of 2'-O-methyl RNA monomers that commences from the 3’-terminal residue of the bottom (second) strand, as shown above, can also be used in the above DsiRNA agents.

In addition to the above-exemplified structures, DsiRNAs of the invention can

also possess one, two or three additional residues that form further mismatches with the target β-catenin RNA sequence. Such mismatches can be consecutive, or can be interspersed by nucleotides that form matched base pairs with the target β-catenin RNA sequence. Where interspersed by nucleotides that form matched base pairs, mismatched residues can be spaced apart from each other within a single strand at an interval of one, two, three, four, five, six, seven or even eight base paired nucleotides between such mismatch-forming residues.

As for the above-described DsiRNAmm agents, a preferred location within DsiRNAs for antisense strand nucleotides that form mismatched base pairs with target β-catenin RNA sequence (yet may or may not form mismatches with corresponding sense strand nucleotides) is within the antisense strand region that is located 3' (downstream) of the antisense strand sequence which is complementary to the projected Ago2 cut site of the DsiRNA (*e.g.*, in Figure 1, the region of the antisense strand which is 3' of the projected Ago2 cut site is preferred for mismatch-forming residues and happens to be located at positions 17-23 of the antisense strand for the 25/27mer agent shown in Figure 1). Thus, in one embodiment, the position of a mismatch nucleotide (in relation to the target β-catenin RNA sequence) of the antisense strand of a DsiRNAmm is the nucleotide residue of the antisense strand that is located immediately 3' (downstream) within the antisense strand sequence of the projected Ago2 cleavage site of the corresponding target β-catenin RNA sequence. In other preferred embodiments, a mismatch nucleotide of the antisense strand of a DsiRNAmm (in relation to the target β-catenin RNA sequence) is positioned at the nucleotide residue of the antisense strand that is located two nucleotides 3' (downstream) of the corresponding projected Ago2 cleavage site, three nucleotides 3' (downstream) of the corresponding projected Ago2 cleavage site, four nucleotides 3' (downstream) of the corresponding projected Ago2 cleavage site, five nucleotides 3' (downstream) of the corresponding projected Ago2 cleavage site, six nucleotides 3' (downstream) of the projected Ago2 cleavage site, seven nucleotides 3' (downstream) of the projected Ago2 cleavage site, eight nucleotides 3' (downstream) of the projected Ago2 cleavage site, or nine nucleotides 3' (downstream) of the projected Ago2 cleavage site.

In DsiRNA agents possessing two mismatch-forming nucleotides of the antisense strand (where mismatch-forming nucleotides are mismatch forming in relation to target β-catenin RNA sequence), mismatches can occur consecutively (*e.g.*,

at consecutive positions along the antisense strand nucleotide sequence). Alternatively, nucleotides of the antisense strand that form mismatched base pairs with the target β-catenin RNA sequence can be interspersed by nucleotides that base pair with the target β-catenin RNA sequence (*e.g.*, for a DsiRNA possessing mismatch-forming nucleotides at positions 17 and 20 (starting from the 5' terminus (position 1) of the antisense strand of the 25/27mer agent shown in Figure 1), but not at positions 18 and 19, the mismatched residues of sense strand positions 17 and 20 are interspersed by two nucleotides that form matched base pairs with corresponding residues of the target β-catenin RNA sequence). For example, two residues of the antisense strand (located within the mismatch-tolerant region of the antisense strand) that form mismatched base pairs with the corresponding target β-catenin RNA sequence can occur with zero, one, two, three, four or five matched base pairs (with respect to target β-catenin RNA sequence) located between these mismatch-forming base pairs.

For certain DsiRNAs possessing three mismatch-forming base pairs (mismatch-forming with respect to target β-catenin RNA sequence), mismatch-forming nucleotides can occur consecutively (*e.g.*, in a triplet along the antisense strand nucleotide sequence). Alternatively, nucleotides of the antisense strand that form mismatched base pairs with the target β-catenin RNA sequence can be interspersed by nucleotides that form matched base pairs with the target β-catenin RNA sequence (*e.g.*, for a DsiRNA possessing mismatched nucleotides at positions 17, 18 and 22, but not at positions 19, 20 and 21, the mismatch-forming residues of antisense strand positions 17 and 18 are adjacent to one another, while the mismatch-forming residues of antisense strand positions 18 and 22 are interspersed by three nucleotides that form matched base pairs with corresponding residues of the target β-catenin RNA). For example, three residues of the antisense strand (located within the mismatch-tolerant region of the antisense strand) that form mismatched base pairs with the corresponding target β-catenin RNA sequence can occur with zero, one, two, three or four matched base pairs located between any two of these mismatch-forming base pairs.

For certain DsiRNAs possessing four mismatch-forming base pairs (mismatch-forming with respect to target β-catenin RNA sequence), mismatch-forming nucleotides can occur consecutively (*e.g.*, in a quadruplet along the sense strand nucleotide sequence). Alternatively, nucleotides of the antisense strand that

form mismatched base pairs with the target β-catenin RNA sequence can be interspersed by nucleotides that form matched base pairs with the target β-catenin RNA sequence (*e.g.*, for a DsiRNA possessing mismatch-forming nucleotides at positions 17, 19, 21 and 22, but not at positions 18 and 20, the mismatch-forming residues of antisense strand positions 21 and 22 are adjacent to one another, while the mismatch-forming residues of antisense strand positions 17 and 19 are interspersed by one nucleotide that forms a matched base pair with the corresponding residue of the target β-catenin RNA sequence – similarly, the mismatch-forming residues of antisense strand positions 19 and 21 are also interspersed by one nucleotide that forms a matched base pair with the corresponding residue of the target β-catenin RNA sequence). For example, four residues of the antisense strand (located within the mismatch-tolerant region of the antisense strand) that form mismatched base pairs with the corresponding target β-catenin RNA sequence can occur with zero, one, two or three matched base pairs located between any two of these mismatch-forming base pairs.

The above DsiRNAmm and other DsiRNA structures are described in order to exemplify certain structures of DsiRNAmm and DsiRNA agents. Design of the above DsiRNAmm and DsiRNA structures can be adapted to generate, *e.g.*, DsiRNAmm forms of other DsiRNA structures shown *infra*. As exemplified above, DsiRNAs can also be designed that possess single mismatches (or two, three or four mismatches) between the antisense strand of the DsiRNA and a target sequence, yet optionally can retain perfect complementarity between sense and antisense strand sequences of a DsiRNA.

It is further noted that the DsiRNA agents exemplified *infra* can also possess insertion/deletion (in/del) structures within their double-stranded and/or target β-catenin RNA-aligned structures. Accordingly, the DsiRNAs of the invention can be designed to possess in/del variations in, *e.g.*, antisense strand sequence as compared to target β-catenin RNA sequence and/or antisense strand sequence as compared to sense strand sequence, with preferred location(s) for placement of such in/del nucleotides corresponding to those locations described above for positioning of mismatched and/or mismatch-forming base pairs.

It is also noted that the DsiRNAs of the instant invention can tolerate mismatches within the 3'-terminal region of the sense strand/5'-terminal region of the antisense strand, as this region is modeled to be processed by Dicer and liberated from

the guide strand sequence that loads into RISC. Exemplary DsiRNA structures of the invention that harbor such mismatches include the following:

```
Target RNA Sequence: 5′-. . . XXXXXXXXXXXXXXXXXXXXHXXX .
. .-3′
DsiRNA Sense Strand:       5′-XXXXXXXXXXXXXXXXXXXXIXDD-
3'
DsiRNA Antisense Strand: 3′-XXXXXXXXXXXXXXXXXXXXXJXXX-
5′

Target RNA Sequence: 5′-. . . XXXXXXXXXXXXXXXXXXXXXHXX .
. .-3′
DsiRNA Sense Strand:       5′-XXXXXXXXXXXXXXXXXXXXXIDD-
3'
DsiRNA Antisense Strand: 3′-XXXXXXXXXXXXXXXXXXXXXXJXX-
5′

Target RNA Sequence: 5′-. . . XXXXXXXXXXXXXXXXXXXXXXHX .
. .-3′
DsiRNA Sense Strand:       5′-XXXXXXXXXXXXXXXXXXXXXXID-
3'
DsiRNA Antisense Strand: 3′-XXXXXXXXXXXXXXXXXXXXXXXJX-
5′

Target RNA Sequence: 5′-. . . XXXXXXXXXXXXXXXXXXXXXXXH .
. .-3′
DsiRNA Sense Strand:       5′-XXXXXXXXXXXXXXXXXXXXXXXDI-
3'
DsiRNA Antisense Strand: 3′-XXXXXXXXXXXXXXXXXXXXXXXJ-
5′
```

wherein "X"=RNA, "D"=DNA and "I" and "J"=Nucleic acid residues (RNA, DNA or non-natural or modified nucleic acids) that do not base pair (hydrogen bond) with one another, yet optionally "J" is complementary to target RNA sequence nucleotide "H". Any of the residues of such agents can optionally be 2'-O-methyl RNA monomers –

alternating positioning of 2'-O-methyl RNA monomers that commences from the 3'-terminal residue of the bottom (second) strand, as shown above – or any of the above-described methylation patterns – can also be used in the above DsiRNA agents. The above mismatches can also be combined within the DsiRNAs of the instant invention.

In the below structures, such mismatches are introduced within the asymmetric βc-1569 DsiRNA (newly-introduced mismatch residues are *italicized*):

βc-1569 25/27mer DsiRNA, mismatch position = 22 of sense strand (from 5'-terminus)

5'-ACCUCACUUGCAAUAAUUAUA^{C}Gaa-3' (SEQ ID NO: 7775)
3'-AUUGGAGUGAACGUUAUUAAUAU$_{U}$CUU-5' (SEQ ID NO: 1287)

Optionally, the mismatched "C" residue of position 22 of the sense strand is alternatively "U" or "G".

βc-1569 25/27mer DsiRNA, mismatch position = 23 of sense strand

5'-ACCUCACUUGCAAUAAUUAUAA^{U}aa-3' (SEQ ID NO: 7776)
3'-AUUGGAGUGAACGUUAUUAAUAUU$_{C}$UU-5' (SEQ ID NO: 1287)

Optionally, the mismatched "U" residue of position 23 of the sense strand is alternatively "A" or "C".

βc-1569 25/27mer DsiRNA, mismatch position = 24 of sense strand

5'-ACCUCACUUGCAAUAAUUAUAAG^{C}a-3' (SEQ ID NO: 7777)
3'-AUUGGAGUGAACGUUAUUAAUAUUC$_{U}$U-5' (SEQ ID NO: 1287)

Optionally, the mismatched "c" residue of position 24 of the sense strand is alternatively "t" or "g".

βc-1569 25/27mer DsiRNA, mismatch position = 25 of sense strand

5'-ACCUCACUUGCAAUAAUUAUAAGa^{C}-3' (SEQ ID NO: 7778)
3'-AUUGGAGUGAACGUUAUUAAUAUUCU$_{U}$-5' (SEQ ID NO: 1287)

Optionally, the mismatched "c" residue of position 25 of the sense strand is alternatively "t" or "g".

βc-1569 25/27mer DsiRNA, mismatch position = 1 of antisense strand

5'-ACCUCACUUGCAAUAAUUAUAAGa^{a}-3' (SEQ ID NO: 178)

3'-AUUGGAGUGAACGUUAUUAAUAUUCU$_{G}$-5' (SEQ ID NO: 7779)

Optionally, the mismatched "G" residue of position 1 of the antisense strand is alternatively "A" or "C".

βc-1569 25/27mer DsiRNA, mismatch position = 2 of antisense strand

5'-ACCUCACUUGCAAUAAUUAUAAG^{a}a-3' (SEQ ID NO: 178)

3'-AUUGGAGUGAACGUUAUUAAUAUUC$_{G}$U-5' (SEQ ID NO: 7780)

Optionally, the mismatched "G" residue of position 2 of the antisense strand is alternatively "A" or "C".

βc-1569 25/27mer DsiRNA, mismatch position = 3 of antisense strand

5'-ACCUCACUUGCAAUAAUUAUAA^{G}aa-3' (SEQ ID NO: 178)

3'-AUUGGAGUGAACGUUAUUAAUAUU$_{A}$UU-5' (SEQ ID NO: 7781)

Optionally, the mismatched "A" residue of position 3 of the antisense strand is alternatively "U" or "G".

βc-1569 25/27mer DsiRNA, mismatch position = 4 of antisense strand

5'-ACCUCACUUGCAAUAAUUAUA^{A}Gaa-3' (SEQ ID NO: 178)

3'-AUUGGAGUGAACGUUAUUAAUAU$_{G}$CUU-5' (SEQ ID NO: 7782)

Optionally, the mismatched "G" residue of position 4 of the antisense strand is alternatively "A" or "C".

As an additional example, such mismatches are introduced within the asymmetric βc-3393 DsiRNA (newly-introduced mismatch residues are *italicized*):

βc-3393 25/27mer DsiRNA, mismatch position = 22 of sense strand (from 5'-terminus)

5'-UGGUGUAGAACACUAAUUCAU^{C}Atc-3' (SEQ ID NO: 7787)

3'-UUACCACAUCUUGUGAUUAAGUA$_{U}$UAG-5' (SEQ ID NO: 1506)

Optionally, the mismatched "C" residue of position 22 of the sense strand is alternatively "U" or "G".

βc-3393 25/27mer DsiRNA, mismatch position = 23 of sense strand

5'-UGGUGUAGAACACUAAUUCAUA^{C}tc-3' (SEQ ID NO: 7788)

3'-UUACCACAUCUUGUGAUUAAGUAU$_{U}$AG-5' (SEQ ID NO: 1506)

Optionally, the mismatched "C" residue of position 23 of the sense strand is alternatively "G" or "U".

βc-3393 25/27mer DsiRNA, mismatch position = 24 of sense strand

5'-UGGUGUAGAACACUAAUUCAUAA^{C}c-3' (SEQ ID NO: 7789)

3'-UUACCACAUCUUGUGAUUAAGUAUU$_{A}$G-5' (SEQ ID NO: 1506)

Optionally, the mismatched "c" residue of position 24 of the sense strand is alternatively "a" or "g".

βc-3393 25/27mer DsiRNA, mismatch position = 25 of sense strand

5'-UGGUGUAGAACACUAAUUCAUAAt^{a}-3' (SEQ ID NO: 7790)

3'-UUACCACAUCUUGUGAUUAAGUAUUA$_{G}$-5' (SEQ ID NO: 1506)

Optionally, the mismatched "a" residue of position 25 of the sense strand is alternatively "t" or "g".

βc-3393 25/27mer DsiRNA, mismatch position = 1 of antisense strand

5'-UGGUGUAGAACACUAAUUCAUAAt^{C}-3' (SEQ ID NO: 397)

3'-UUACCACAUCUUGUGAUUAAGUAUUA$_{A}$-5' (SEQ ID NO: 7791)

Optionally, the mismatched "A" residue of position 1 of the antisense strand is alternatively "U" or "C".

βc-3393 25/27mer DsiRNA, mismatch position = 2 of antisense strand

5'-UGGUGUAGAACACUAAUUCAUAA^{t}c-3' (SEQ ID NO: 397)

3'-UUACCACAUCUUGUGAUUAAGUAUU$_{C}$G-5' (SEQ ID NO: 7792)

Optionally, the mismatched "C" residue of position 2 of the antisense strand is alternatively "G" or "U".

βc-3393 25/27mer DsiRNA, mismatch position = 3 of antisense strand

5'-UGGUGUAGAACACUAAUUCAUA^{A}tc-3' (SEQ ID NO: 397)

3'-UUACCACAUCUUGUGAUUAAGUAU$_{C}$AG-5' (SEQ ID NO: 7793)

Optionally, the mismatched "C" residue of position 3 of the antisense strand is alternatively "U" or "A".

βc-3393 25/27mer DsiRNA, mismatch position = 4 of antisense strand

5'-UGGUGUAGAACACUAAUUCAU^{A}Atc-3' (SEQ ID NO: 397)

3'-UUACCACAUCUUGUGAUUAAGUA$_{C}$UAG-5' (SEQ ID NO: 7794)

Optionally, the mismatched "C" residue of position 4 of the antisense strand is alternatively "U" or "A".

As noted above, introduction of such mismatches can be performed upon any of the DsiRNAs described herein.

The mismatches of such DsiRNA structures can be combined to produce a DsiRNA possessing, *e.g.*, two, three or even four mismatches within the 3'-terminal four nucleotides of the sense strand/5'-terminal four nucleotides of the antisense strand.

Indeed, in view of the flexibility of sequences which can be incorporated into DsiRNAs at the 3'-terminal residues of the sense strand/5'-terminal residues of the antisense strand, in certain embodiments, the sequence requirements of an asymmetric DsiRNA of the instant invention can be represented as the following (minimalist) structure (shown for an exemplary βc-1569 DsiRNA sequence):

5′-ACCUCACUUGCAAUAAUUAUAXXX[X]$_{n}$-3′ (SEQ ID NO: 7783)

3′-AUUGGAGUGAACGUUAUUAAUXXXXX[X]$_{n}$-5′ (SEQ ID NO: 7784)

where n= 1 to 5, 1 to 10, 1 to 20, 1 to 30, 1 to 50, or 1 to 80 or more.

βc-1569 Target: 5′-TAACCTCACTTGCAATAATTAXXXXXX-3′ (SEQ ID NO: 7785)

The β-catenin target site may also be a site which is targeted by one or more of several oligonucleotides whose complementary target sites overlap with a stated target site. For example, for an exemplary βc-288 DsiRNA, it is noted that certain DsiRNAs targeting overlapping and only slightly offset β-catenin sequences can exhibit activity

levels similar to that of βc-288 (specifically, see βc-284, βc-285, βc-286, βc-287, βc-289, βc-290 and βc-291 DsiRNAs of Table 14 below). Thus, in certain embodiments, a designated target sequence region can be effectively targeted by a series of DsiRNAs possessing largely overlapping sequences. (*E.g.*, if considering DsiRNAs surrounding the βc-288 site, a more encompassing β-catenin target sequence might be recited as, *e.g.*, 5'-CAGCGTGGACAATGGCTACTCAAGCTGATTTGAT-3' (SEQ ID NO: 7786), wherein any given DsiRNA (*e.g.*, a DsiRNA selected from βc-284, βc-285, βc-286, βc-287, βc-288, βc-289, βc-290 and βc-291) only targets a sub-sequence within such a sequence region, yet the entire sequence can be considered a viable target for such a series of DsiRNAs).

Additionally and/or alternatively, mismatches within the 3'-terminal four nucleotides of the sense strand/5'-terminal four nucleotides of the antisense strand can be combined with mismatches positioned at other mismatch-tolerant positions, as described above.

In view of the present identification of the above-described Dicer substrate agents (DsiRNAs) as inhibitors of β-catenin levels *via* targeting of specific β-catenin sequences, it is also recognized that DsiRNAs having structures similar to those described herein can also be synthesized which target other sequences within the β-catenin sequence of SEQ ID NOs: 1-3 or SEQ ID NOs: 5-6, or within variants thereof (*e.g.*, target sequences possessing 80% identity, 90% identity, 95% identity, 96% identity, 97% identity, 98% identity, 99% or more identity to a sequence of SEQ ID NOs: 1-3 or SEQ ID NOs: 5-6).

Anti-β-catenin DsiRNA Design/Synthesis

It has been found empirically that longer dsRNA species of from 25 to 35 nucleotides (DsiRNAs) and especially from 25 to 30 nucleotides give unexpectedly effective results in terms of potency and duration of action, as compared to 19-23mer siRNA agents. Without wishing to be bound by the underlying theory of the dsRNA processing mechanism, it is thought that the longer dsRNA species serve as a substrate for the Dicer enzyme in the cytoplasm of a cell. In addition to cleaving the dsRNA of the invention into shorter segments, Dicer is thought to facilitate the incorporation of a single-stranded cleavage product derived from the cleaved dsRNA into the RISC complex that is responsible for the destruction of the cytoplasmic RNA

(*e.g.*, β-catenin RNA) of or derived from the target gene, β-catenin (or other gene associated with a β-catenin-associated disease or disorder). Prior studies (Rossi *et al.*, U.S. Patent Application No. 2007/0265220) have shown that the cleavability of a dsRNA species (specifically, a DsiRNA agent) by Dicer corresponds with increased potency and duration of action of the dsRNA species.

Certain preferred anti-β-catenin DsiRNA agents were selected from a pre-screened population. Design of DsiRNAs can optionally involve use of predictive scoring algorithms that perform *in silico* assessments of the projected activity/efficacy of a number of possible DsiRNA agents spanning a region of sequence. Information regarding the design of such scoring algorithms can be found, *e.g.*, in Gong *et al.* (*BMC Bioinformatics* 2006, **7:**516), though a more recent "v3" algorithm represents a theoretically improved algorithm relative to siRNA scoring algorithms previously available in the art. (E.g., the "v3" and "v4" scoring algorithms are machine learning algorithms that are not reliant upon any biases in human sequence. In addition, the "v3" and "v4" algorithms derive from data sets that are many-fold larger than that from which an older "v2" algorithm such as that described in Gong *et al.* derives.)

The first and second oligonucleotides of the DsiRNA agents of the instant invention are not required to be completely complementary. In fact, in one embodiment, the 3'-terminus of the sense strand contains one or more mismatches. In one aspect, two mismatches are incorporated at the 3' terminus of the sense strand. In another embodiment, the DsiRNA of the invention is a double stranded RNA molecule containing two RNA oligonucleotides each of which is 27 nucleotides in length and, when annealed to each other, have blunt ends and a two nucleotide mismatch on the 3'-terminus of the sense strand (the 5'-terminus of the antisense strand). The use of mismatches or decreased thermodynamic stability (specifically at the 3'-sense/5'-antisense position) has been proposed to facilitate or favor entry of the antisense strand into RISC (Schwarz *et al.*, 2003, *Cell* 115: 199-208; Khvorova *et al.*, 2003, *Cell* 115: 209-216), presumably by affecting some rate-limiting unwinding steps that occur with entry of the siRNA into RISC. Thus, terminal base composition has been included in design algorithms for selecting active 21mer siRNA duplexes (Ui-Tei *et al.*, 2004, *Nucleic Acids Res* 32: 936-948; Reynolds *et al.*, 2004, *Nat Biotechnol* 22: 326-330). With Dicer cleavage of the dsRNA of this embodiment, the small end-terminal sequence which contains the mismatches will either be left unpaired with the antisense strand (become part of a 3'-overhang) or be cleaved

entirely off the final 21-mer siRNA. These "mismatches", therefore, do not persist as mismatches in the final RNA component of RISC. The finding that base mismatches or destabilization of segments at the 3'-end of the sense strand of Dicer substrate improved the potency of synthetic duplexes in RNAi, presumably by facilitating processing by Dicer, was a surprising finding of past works describing the design and use of 25-30mer dsRNAs (also termed "DsiRNAs" herein; Rossi *et al.*, U.S. Patent Application Nos. 2005/0277610, 2005/0244858 and 2007/0265220).

Modification of Anti-β-catenin DsiRNAs

One major factor that inhibits the effect of double stranded RNAs ("dsRNAs") is the degradation of dsRNAs (*e.g.*, siRNAs and DsiRNAs) by nucleases. A 3'-exonuclease is the primary nuclease activity present in serum and modification of the 3'-ends of antisense DNA oligonucleotides is crucial to prevent degradation (Eder *et al.*, 1991, *Antisense Res Dev*, 1: 141-151). An RNase-T family nuclease has been identified called ERI-1 which has 3' to 5' exonuclease activity that is involved in regulation and degradation of siRNAs (Kennedy *et al.*, 2004, *Nature* 427: 645-649; Hong *et al.*, 2005, *Biochem J*, 390: 675-679). This gene is also known as Thex1 (NM_02067) in mice or THEX1 (NM_153332) in humans and is involved in degradation of histone mRNA; it also mediates degradation of 3'-overhangs in siRNAs, but does not degrade duplex RNA (Yang *et al.*, 2006, *J Biol Chem*, 281: 30447-30454). It is therefore reasonable to expect that 3'-end-stabilization of dsRNAs, including the DsiRNAs of the instant invention, will improve stability.

XRN1 (NM_019001) is a 5' to 3' exonuclease that resides in P-bodies and has been implicated in degradation of mRNA targeted by miRNA (Rehwinkel *et al.*, 2005, *RNA* 11: 1640-1647) and may also be responsible for completing degradation initiated by internal cleavage as directed by a siRNA. XRN2 (NM _012255) is a distinct 5' to 3' exonuclease that is involved in nuclear RNA processing.

RNase A is a major endonuclease activity in mammals that degrades RNAs. It is specific for ssRNA and cleaves at the 3'-end of pyrimidine bases. SiRNA degradation products consistent with RNase A cleavage can be detected by mass spectrometry after incubation in serum (Turner *et al.*, 2007, *Mol Biosyst* 3: 43-50). The 3'-overhangs enhance the susceptibility of siRNAs to RNase degradation. Depletion of RNase A from serum reduces degradation of siRNAs; this degradation

does show some sequence preference and is worse for sequences having poly A/U sequence on the ends (Haupenthal *et al.*, 2006 *Biochem Pharmacol* 71: 702-710). This suggests the possibility that lower stability regions of the duplex may "breathe" and offer transient single-stranded species available for degradation by RNase A. RNase A inhibitors can be added to serum and improve siRNA longevity and potency (Haupenthal *et al.*, 2007, *Int J. Cancer* 121: 206-210).

In 21mers, phosphorothioate or boranophosphate modifications directly stabilize the internucleoside phosphate linkage. Boranophosphate modified RNAs are highly nuclease resistant, potent as silencing agents, and are relatively non-toxic. Boranophosphate modified RNAs cannot be manufactured using standard chemical synthesis methods and instead are made by in vitro transcription (IVT) (Hall *et al.*, 2004, *Nucleic Acids Res* 32: 5991-6000; Hall *et al.*, 2006, *Nucleic Acids Res* 34: 2773-2781). Phosphorothioate (PS) modifications can be easily placed in the RNA duplex at any desired position and can be made using standard chemical synthesis methods. The PS modification shows dose-dependent toxicity, so most investigators have recommended limited incorporation in siRNAs, favoring the 3'-ends where protection from nucleases is most important (Harborth *et al.*, 2003, *Antisense Nucleic Acid Drug Dev* 13: 83-105; Chiu and Rana, 2003, *Mol Cell* 10: 549-561; Braasch *et al.*, 2003, *Biochemistry* 42: 7967-7975; Amarzguioui *et al.*, 2003, *Nucleic Acids Research* 31: 589-595). More extensive PS modification can be compatible with potent RNAi activity; however, use of sugar modifications (such as 2'-O-methyl RNA) may be superior (Choung *et al.*, 2006, *Biochem Biophys Res Commun* 342: 919-927).

A variety of substitutions can be placed at the 2'-position of the ribose which generally increases duplex stability (T_m) and can greatly improve nuclease resistance. 2'-O-methyl RNA is a naturally occurring modification found in mammalian ribosomal RNAs and transfer RNAs. 2'-O-methyl modification in siRNAs is known, but the precise position of modified bases within the duplex is important to retain potency and complete substitution of 2'-O-methyl RNA for RNA will inactivate the siRNA. For example, a pattern that employs alternating 2'-O-methyl bases can have potency equivalent to unmodified RNA and is quite stable in serum (Choung *et al.*, 2006, *Biochem Biophys Res Commun* 342: 919-927; Czauderna *et al.*, 2003, *Nucleic Acids Research* 31: 2705-2716).

The 2'-fluoro (2'-F) modification is also compatible with dsRNA (*e.g.*, siRNA

and DsiRNA) function; it is most commonly placed at pyrimidine sites (due to reagent cost and availability) and can be combined with 2'-O-methyl modification at purine positions; 2'-F purines are available and can also be used. Heavily modified duplexes of this kind can be potent triggers of RNAi in vitro (Allerson *et al.*, 2005, *J Med Chem* 48: 901-904; Prakash *et al.*, 2005, *J Med Chem* 48: 4247-4253; Kraynack and Baker, 2006, *RNA* 12: 163-176) and can improve performance and extend duration of action when used in vivo (Morrissey *et al.*, 2005, *Hepatology* 41: 1349-1356; Morrissey *et al.*, 2005, *Nat Biotechnol* 23: 1002-1007). A highly potent, nuclease stable, blunt 19mer duplex containing alternative 2'-F and 2'-O-Me bases is taught by Allerson. In this design, alternating 2'-O-Me residues are positioned in an identical pattern to that employed by Czauderna, however the remaining RNA residues are converted to 2'-F modified bases. A highly potent, nuclease resistant siRNA employed by Morrissey employed a highly potent, nuclease resistant siRNA *in vivo*. In addition to 2'-O-Me RNA and 2'-F RNA, this duplex includes DNA, RNA, inverted abasic residues, and a 3'-terminal PS internucleoside linkage. While extensive modification has certain benefits, more limited modification of the duplex can also improve in vivo performance and is both simpler and less costly to manufacture. Soutschek *et al.* (2004, *Nature* 432: 173-178) employed a duplex *in vivo* and was mostly RNA with two 2'-O-Me RNA bases and limited 3'-terminal PS internucleoside linkages.

Locked nucleic acids (LNAs) are a different class of 2'-modification that can be used to stabilize dsRNA (*e.g.*, siRNA and DsiRNA). Patterns of LNA incorporation that retain potency are more restricted than 2'-O-methyl or 2'-F bases, so limited modification is preferred (Braasch *et al.*, 2003, *Biochemistry* 42: 7967-7975; Grunweller *et al.*, 2003, *Nucleic Acids Res* 31: 3185-3193; Elmen *et al.*, 2005, *Nucleic Acids Res* 33: 439-447). Even with limited incorporation, the use of LNA modifications can improve dsRNA performance *in vivo* and may also alter or improve off target effect profiles (Mook *et al.*, 2007, *Mol Cancer Ther* 6: 833-843).

Synthetic nucleic acids introduced into cells or live animals can be recognized as "foreign" and trigger an immune response. Immune stimulation constitutes a major class of off-target effects which can dramatically change experimental results and even lead to cell death. The innate immune system includes a collection of receptor molecules that specifically interact with DNA and RNA that mediate these responses, some of which are located in the cytoplasm and some of which reside in endosomes

(Marques and Williams, 2005, *Nat Biotechnol* 23: 1399-1405; Schlee *et al.*, 2006, *Mol Ther* 14: 463-470). Delivery of siRNAs by cationic lipids or liposomes exposes the siRNA to both cytoplasmic and endosomal compartments, maximizing the risk for triggering a type 1 interferon (IFN) response both *in vitro* and *in vivo* (Morrissey *et al.*, 2005, *Nat Biotechnol* 23: 1002-1007; Sioud and Sorensen, 2003, *Biochem Biophys Res Commun* 312: 1220-1225; Sioud, 2005, *J Mol Biol* 348: 1079-1090; Ma *et al.*, 2005, *Biochem Biophys Res Commun* 330: 755-759). RNAs transcribed within the cell are less immunogenic (Robbins *et al.*, 2006, *Nat Biotechnol* 24: 566-571) and synthetic RNAs that are immunogenic when delivered using lipid-based methods can evade immune stimulation when introduced unto cells by mechanical means, even *in vivo* (Heidel *et al.*, 2004, *Nat Biotechnol* 22: 1579-1582). However, lipid based delivery methods are convenient, effective, and widely used. Some general strategy to prevent immune responses is needed, especially for *in vivo* application where all cell types are present and the risk of generating an immune response is highest. Use of chemically modified RNAs may solve most or even all of these problems.

In certain embodiments, modifications can be included in the anti-β-catenin DsiRNA agents of the present invention so long as the modification does not prevent the DsiRNA agent from possessing β-catenin inhibitory activity. In one embodiment, one or more modifications are made that enhance Dicer processing of the DsiRNA agent (an assay for determining Dicer processing of a DsiRNA is described *supra*). In a second embodiment, one or more modifications are made that result in more effective β-catenin inhibition (as described herein, β-catenin inhibition/ β-catenin inhibitory activity of a DsiRNA can be assayed *via* art-recognized methods for determining RNA levels, or for determining β-catenin polypeptide levels, should such levels be assessed in lieu of or in addition to assessment of, *e.g.*, β-catenin mRNA levels). In a third embodiment, one or more modifications are made that support greater β-catenin inhibitory activity (means of determining β-catenin inhibitory activity are described *supra*). In a fourth embodiment, one or more modifications are made that result in greater potency of β-catenin inhibitory activity per each DsiRNA agent molecule to be delivered to the cell (potency of β-catenin inhibitory activity is described *supra*). Modifications can be incorporated in the 3'-terminal region, the 5'-terminal region, in both the 3'-terminal and 5'-terminal region or in some instances in various positions within the sequence. With the restrictions noted above in mind, numbers and combinations of modifications can be incorporated into the DsiRNA

agent. Where multiple modifications are present, they may be the same or different. Modifications to bases, sugar moieties, the phosphate backbone, and their combinations are contemplated. Either 5'-terminus can be phosphorylated.

Examples of modifications contemplated for the phosphate backbone include phosphonates, including methylphosphonate, phosphorothioate, and phosphotriester modifications such as alkylphosphotriesters, and the like. Examples of modifications contemplated for the sugar moiety include 2'-alkyl pyrimidine, such as 2'-O-methyl, 2'-fluoro, amino, and deoxy modifications and the like (see, *e.g.*, Amarzguioui *et al.*, 2003, *Nucleic Acids Research* 31: 589-595). Examples of modifications contemplated for the base groups include abasic sugars, 2-O-alkyl modified pyrimidines, 4-thiouracil, 5-bromouracil, 5-iodouracil, and 5-(3-aminoallyl)-uracil and the like. Locked nucleic acids, or LNA's, could also be incorporated. Many other modifications are known and can be used so long as the above criteria are satisfied. Examples of modifications are also disclosed in U.S. Pat. Nos. 5,684,143, 5,858,988 and 6,291,438 and in U.S. published patent application No. 2004/0203145 A1. Other modifications are disclosed in Herdewijn (2000, *Antisense Nucleic Acid Drug Dev* 10: 297-310), Eckstein (2000, *Antisense Nucleic Acid Drug Dev* 10: 117-21), Rusckowski *et al.* (2000, *Antisense Nucleic Acid Drug Dev* 10: 333-345), Stein *et al.* (2001, *Antisense Nucleic Acid Drug Dev* 11: 317-25); Vorobjev *et al.* (2001, *Antisense Nucleic Acid Drug Dev* 11: 77-85).

One or more modifications contemplated can be incorporated into either strand. The placement of the modifications in the DsiRNA agent can greatly affect the characteristics of the DsiRNA agent, including conferring greater potency and stability, reducing toxicity, enhance Dicer processing, and minimizing an immune response. In one embodiment, the antisense strand or the sense strand or both strands have one or more 2'-O-methyl modified nucleotides. In another embodiment, the antisense strand contains 2'-O-methyl modified nucleotides. In another embodiment, the antisense stand contains a 3' overhang that is comprised of 2'-O-methyl modified nucleotides. The antisense strand could also include additional 2'-O-methyl modified nucleotides.

In certain embodiments of the present invention, the anti-β-catenin DsiRNA agent has one or more of the following properties: (i) the DsiRNA agent is asymmetric, *e.g.*, has a 3' overhang on the antisense strand and (ii) the DsiRNA agent has a modified 3' end on the sense strand to direct orientation of Dicer binding and

processing of the dsRNA to an active siRNA. According to this embodiment, the longest strand in the dsRNA comprises 25-35 nucleotides (*e.g.*, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34 or 35 nucleotides). In certain such embodiments, the DsiRNA agent is asymmetric such that the sense strand comprises 25-34 nucleotides and the 3' end of the sense strand forms a blunt end with the 5' end of the antisense strand while the antisense strand comprises 26-35 nucleotides and forms an overhang on the 3' end of the antisense strand. In one embodiment, the DsiRNA agent is asymmetric such that the sense strand comprises 25-28 nucleotides and the antisense strand comprises 25-30 nucleotides. Thus, the resulting dsRNA has an overhang on the 3' end of the antisense strand. The overhang is 1-4 nucleotides, for example 2 nucleotides. The sense strand may also have a 5' phosphate.

In other embodiments, the sense strand of the DsiRNA agent is modified for Dicer processing by suitable modifiers located at the 3' end of the sense strand, i.e., the DsiRNA agent is designed to direct orientation of Dicer binding and processing. Suitable modifiers include nucleotides such as deoxyribonucleotides, dideoxyribonucleotides, acyclonucleotides and the like and sterically hindered molecules, such as fluorescent molecules and the like. Acyclonucleotides substitute a 2-hydroxyethoxymethyl group for the 2'-deoxyribofuranosyl sugar normally present in dNMPs. Other nucleotides modifiers could include 3'-deoxyadenosine (cordycepin), 3'-azido-3'-deoxythymidine (AZT), 2',3'-dideoxyinosine (ddI), 2',3'-dideoxy-3'-thiacytidine (3TC), 2',3'-didehydro-2',3'-dideoxythymidine (d4T) and the monophosphate nucleotides of 3'-azido-3'-deoxythymidine (AZT), 2',3'-dideoxy-3'-thiacytidine (3TC) and 2',3'-didehydro-2',3'-dideoxythymidine (d4T). In one embodiment, deoxynucleotides are used as the modifiers. When nucleotide modifiers are utilized, 1-3 nucleotide modifiers, or 2 nucleotide modifiers are substituted for the ribonucleotides on the 3' end of the sense strand. When sterically hindered molecules are utilized, they are attached to the ribonucleotide at the 3' end of the antisense strand. Thus, the length of the strand does not change with the incorporation of the modifiers. In another embodiment, the invention contemplates substituting two DNA bases in the DsiRNA agent to direct the orientation of Dicer processing of the antisense strand. In a further embodiment of the present invention, two terminal DNA bases are substituted for two ribonucleotides on the 3'-end of the sense strand forming a blunt end of the duplex on the 3' end of the sense strand and the 5' end of the antisense strand, and a two-nucleotide RNA overhang is located on the 3'-end of the

antisense strand. This is an asymmetric composition with DNA on the blunt end and RNA bases on the overhanging end.

The sense and antisense strands of a DsiRNA agent of the instant invention anneal under biological conditions, such as the conditions found in the cytoplasm of a cell. In addition, a region of one of the sequences, particularly of the antisense strand, of the DsiRNA agent has a sequence length of at least 15 (in certain embodiments, 19) nucleotides, wherein these nucleotides are adjacent to the 3' end of antisense strand (e.g., in the 21-nucleotide region adjacent to the 3' end of the antisense strand) and are sufficiently complementary to a nucleotide sequence of the target β-catenin RNA.

Additionally, the DsiRNA agent structure can be optimized to ensure that the oligonucleotide segment generated from Dicer's cleavage will be the portion of the oligonucleotide that is most effective in inhibiting gene expression. For example, in one embodiment of the invention, a 27-bp oligonucleotide of the DsiRNA agent structure is synthesized wherein the anticipated 21 to 22-bp segment that will inhibit gene expression is located on the 3'-end of the antisense strand. The remaining bases located on the 5'-end of the antisense strand will be cleaved by Dicer and will be discarded. This cleaved portion can be homologous (*i.e.*, based on the sequence of the target sequence) or non-homologous and added to extend the nucleic acid strand.

The DsiRNA agent can also have one or more of the following additional properties: (a) the antisense strand has a right shift from the typical 21mer (*e.g.*, the DsiRNA comprises a length of antisense strand nucleotides that extends to the 5' of a projected Dicer cleavage site within the DsiRNA, with such antisense strand nucleotides base paired with corresponding nucleotides of the sense strand extending 3' of a projected Dicer cleavage site in the sense strand), (b) the strands may not be completely complementary, *i.e.*, the strands may contain simple mismatched base pairs (in certain embodiments, the DsiRNAs of the invention possess 1, 2, 3, 4 or even 5 or more mismatched base pairs, provided that β-catenin inhibitory activity of the DsiRNA possessing mismatched base pairs is retained at sufficient levels (e.g., retains at least 50% β-catenin inhibitory activity or more, at least 60% β-catenin inhibitory activity or more, at least 70% β-catenin inhibitory activity or more, at least 80% β-catenin inhibitory activity or more, at least 90% β-catenin inhibitory activity or more or at least 95% β-catenin inhibitory activity or more as compared to a corresponding DsiRNA not possessing mismatched base pairs. In certain embodiments, mismatched base pairs exist between the antisense and sense strands of a DsiRNA. In some

embodiments, mismatched base pairs exist (or are predicted to exist) between the antisense strand and the target RNA. In certain embodiments, the presence of a mismatched base pair(s) between an antisense strand residue and a corresponding residue within the target RNA that is located 3' in the target RNA sequence of a projected Ago2 cleavage site retains and may even enhance β-catenin inhibitory activity of a DsiRNA of the invention) and (c) base modifications such as locked nucleic acid(s) may be included in the 5' end of the sense strand. A "typical" 21mer siRNA is designed using conventional techniques. In one technique, a variety of sites are commonly tested in parallel or pools containing several distinct siRNA duplexes specific to the same target with the hope that one of the reagents will be effective (Ji *et al.*, 2003, *FEBS Lett* 552: 247-252). Other techniques use design rules and algorithms to increase the likelihood of obtaining active RNAi effector molecules (Schwarz *et al.*, 2003, *Cell* 115: 199-208; Khvorova *et al.*, 2003, *Cell* 115: 209-216; Ui-Tei *et al.*, 2004, *Nucleic Acids Res* 32: 936-948; Reynolds *et al.*, 2004, *Nat Biotechnol* 22: 326-330; Krol *et al.*, 2004, *J Biol Chem* 279: 42230-42239; Yuan *et al.*, 2004, *Nucl Acids Res* 32(Webserver issue):W130-134; Boese *et al.*, 2005, *Methods Enzymol* 392: 73-96). High throughput selection of siRNA has also been developed (U.S. published patent application No. 2005/0042641 A1). Potential target sites can also be analyzed by secondary structure predictions (Heale *et al.*, 2005, *Nucleic Acids Res* 33(3): e30). This 21mer is then used to design a right shift to include 3-9 additional nucleotides on the 5' end of the 21mer. The sequence of these additional nucleotides is not restricted. In one embodiment, the added ribonucleotides are based on the sequence of the target gene. Even in this embodiment, full complementarity between the target sequence and the antisense siRNA is not required.

The first and second oligonucleotides of a DsiRNA agent of the instant invention are not required to be completely complementary. They only need to be sufficiently complementary to anneal under biological conditions and to provide a substrate for Dicer that produces a siRNA sufficiently complementary to the target sequence. Locked nucleic acids, or LNA's, are well known to a skilled artisan (Elmen *et al.*, 2005, *Nucleic Acids Res* 33: 439-447; Kurreck *et al.*, 2002, *Nucleic Acids Res* 30: 1911-1918; Crinelli *et al.*, 2002, *Nucleic Acids Res* 30: 2435-2443; Braasch and Corey, 2001, *Chem Biol* 8: 1-7; Bondensgaard *et al.*, 2000, *Chemistry* 6: 2687-2695; Wahlestedt *et al.*, 2000, *Proc Natl Acad Sci USA* 97: 5633-5638). In one

embodiment, an LNA is incorporated at the 5' terminus of the sense strand. In another embodiment, an LNA is incorporated at the 5' terminus of the sense strand in duplexes designed to include a 3' overhang on the antisense strand.

In certain embodiments, the DsiRNA agent of the instant invention has an asymmetric structure, with the sense strand having a 25-base pair length, and the antisense strand having a 27-base pair length with a 2 base 3'-overhang. In other embodiments, this DsiRNA agent having an asymmetric structure further contains 2 deoxynucleotides at the 3' end of the sense strand in place of two of the ribonucleotides.

Certain DsiRNA agent compositions containing two separate oligonucleotides can be linked by a third structure. The third structure will not block Dicer activity on the DsiRNA agent and will not interfere with the directed destruction of the RNA transcribed from the target gene. In one embodiment, the third structure may be a chemical linking group. Many suitable chemical linking groups are known in the art and can be used. Alternatively, the third structure may be an oligonucleotide that links the two oligonucleotides of the DsiRNA agent in a manner such that a hairpin structure is produced upon annealing of the two oligonucleotides making up the dsRNA composition. The hairpin structure will not block Dicer activity on the DsiRNA agent and will not interfere with the directed destruction of the β-catenin RNA.

In certain embodiments, the anti-β-catenin DsiRNA agent of the invention has several properties which enhance its processing by Dicer. According to such embodiments, the DsiRNA agent has a length sufficient such that it is processed by Dicer to produce an siRNA and at least one of the following properties: (i) the DsiRNA agent is asymmetric, *e.g.*, has a 3' overhang on the sense strand and (ii) the DsiRNA agent has a modified 3' end on the antisense strand to direct orientation of Dicer binding and processing of the dsRNA to an active siRNA. According to these embodiments, the longest strand in the DsiRNA agent comprises 25-30 nucleotides. In one embodiment, the sense strand comprises 25-30 nucleotides and the antisense strand comprises 25-28 nucleotides. Thus, the resulting dsRNA has an overhang on the 3' end of the sense strand. The overhang is 1-4 nucleotides, such as 2 nucleotides. The antisense strand may also have a 5' phosphate.

In certain embodiments, the sense strand of a DsiRNA agent is modified for Dicer processing by suitable modifiers located at the 3' end of the sense strand, *i.e.*,

the DsiRNA agent is designed to direct orientation of Dicer binding and processing. Suitable modifiers include nucleotides such as deoxyribonucleotides, dideoxyribonucleotides, acyclonucleotides and the like and sterically hindered molecules, such as fluorescent molecules and the like. Acyclonucleotides substitute a 2-hydroxyethoxymethyl group for the 2'-deoxyribofuranosyl sugar normally present in dNMPs. Other nucleotide modifiers could include 3'-deoxyadenosine (cordycepin), 3'-azido-3'-deoxythymidine (AZT), 2',3'-dideoxyinosine (ddI), 2',3'-dideoxy-3'-thiacytidine (3TC), 2',3'-didehydro-2',3'-dideoxythymidine (d4T) and the monophosphate nucleotides of 3'-azido-3'-deoxythymidine (AZT), 2',3'-dideoxy-3'-thiacytidine (3TC) and 2',3'-didehydro-2',3'-dideoxythymidine (d4T). In one embodiment, deoxynucleotides are used as the modifiers. When nucleotide modifiers are utilized, 1-3 nucleotide modifiers, or 2 nucleotide modifiers are substituted for the ribonucleotides on the 3' end of the sense strand. When sterically hindered molecules are utilized, they are attached to the ribonucleotide at the 3' end of the antisense strand. Thus, the length of the strand does not change with the incorporation of the modifiers. In another embodiment, the invention contemplates substituting two DNA bases in the dsRNA to direct the orientation of Dicer processing. In a further invention, two terminal DNA bases are located on the 3' end of the sense strand in place of two ribonucleotides forming a blunt end of the duplex on the 5' end of the antisense strand and the 3' end of the sense strand, and a two-nucleotide RNA overhang is located on the 3'-end of the antisense strand. This is an asymmetric composition with DNA on the blunt end and RNA bases on the overhanging end.

In certain other embodiments, the antisense strand of a DsiRNA agent is modified for Dicer processing by suitable modifiers located at the 3' end of the antisense strand, *i.e.*, the DsiRNA agent is designed to direct orientation of Dicer binding and processing. Suitable modifiers include nucleotides such as deoxyribonucleotides, dideoxyribonucleotides, acyclonucleotides and the like and sterically hindered molecules, such as fluorescent molecules and the like. Acyclonucleotides substitute a 2-hydroxyethoxymethyl group for the 2'-deoxyribofuranosyl sugar normally present in dNMPs. Other nucleotide modifiers could include 3'-deoxyadenosine (cordycepin), 3'-azido-3'-deoxythymidine (AZT), 2',3'-dideoxyinosine (ddI), 2',3'-dideoxy-3'-thiacytidine (3TC), 2',3'-didehydro-2',3'-dideoxythymidine (d4T) and the monophosphate nucleotides of 3'-azido-3'-deoxythymidine (AZT), 2',3'-dideoxy-3'-thiacytidine (3TC) and 2',3'-didehydro-2',3'-

dideoxythymidine (d4T). In one embodiment, deoxynucleotides are used as the modifiers. When nucleotide modifiers are utilized, 1-3 nucleotide modifiers, or 2 nucleotide modifiers are substituted for the ribonucleotides on the 3' end of the antisense strand. When sterically hindered molecules are utilized, they are attached to the ribonucleotide at the 3' end of the antisense strand. Thus, the length of the strand does not change with the incorporation of the modifiers. In another embodiment, the invention contemplates substituting two DNA bases in the dsRNA to direct the orientation of Dicer processing. In a further invention, two terminal DNA bases are located on the 3' end of the antisense strand in place of two ribonucleotides forming a blunt end of the duplex on the 5' end of the sense strand and the 3' end of the antisense strand, and a two-nucleotide RNA overhang is located on the 3'-end of the sense strand. This is also an asymmetric composition with DNA on the blunt end and RNA bases on the overhanging end.

The sense and antisense strands anneal under biological conditions, such as the conditions found in the cytoplasm of a cell. In addition, a region of one of the sequences, particularly of the antisense strand, of the dsRNA has a sequence length of at least 19 nucleotides, wherein these nucleotides are adjacent to the 3' end of antisense strand and are sufficiently complementary to a nucleotide sequence of the target β-catenin RNA.

Additionally, the DsiRNA agent structure contains two portions based on Dicer cleavage, a first portion which survives the Dicer-cleavage process and proceeds to actively engage the target RNA as part of the RISC complex and a second portion which is not active in RISC. The first portion will contain the sequence known to be most effective at RNA interference at the target RNA/RISC level, whereas the second portion may or may not be complementary to the target sequence. For example, in one embodiment of the invention, a 27-bp oligonucleotide of the DsiRNA agent structure is synthesized wherein the anticipated 21 to 22-bp segment that forms a hybrid with the target nucleic acid and thereby inhibits gene expression is located on the 3'-end of the antisense strand. The remaining bases located on the 5'-end of the antisense strand will be cleaved by Dicer and thus will not be a contiguous part of the Dicer-cleaved RNAi molecule. This second portion can be homologous (*i.e.*, based on the sequence of the target sequence) or non-homologous and added to extend the nucleic acid strand.

US 2007/0265220 discloses that 27mer DsiRNAs show improved stability in serum over comparable 21mer siRNA compositions, even absent chemical modification. Modifications of DsiRNA agents, such as inclusion of 2'-O-methyl RNA in the antisense strand, in patterns such as detailed above, when coupled with addition of a 5' Phosphate, can improve stability of DsiRNA agents. Addition of 5'-phosphate to all strands in synthetic RNA duplexes may be an inexpensive and physiological method to confer some limited degree of nuclease stability.

The chemical modification patterns of the dsRNA agents of the instant invention are designed to enhance the efficacy of such agents. Accordingly, such modifications are designed to avoid reducing potency of dsRNA agents; to avoid interfering with Dicer processing of DsiRNA agents; to improve stability in biological fluids (reduce nuclease sensitivity) of dsRNA agents; or to block or evade detection by the innate immune system. Such modifications are also designed to avoid being toxic and to avoid increasing the cost or impact the ease of manufacturing the instant dsRNA agents of the invention.

β-Catenin Biology and Biochemistry

Known human and mouse β-catenin cDNA and polypeptide sequences include the following:

Human Wild-type β-catenin (cadherin-associated protein) sequence, transcript variant 1 (SEQ ID NO: 1; Homo sapiens CTNNB1, transcript variant 1; GenBank Accession No. NM_001904.3):

AGGATACAGCGGCTTCTGCGCGACTTATAAGAGCTCCTTGTGCGGCGCCA
TTTTAAGCCTCTCGGTCTGTGGCAGCAGCGTTGGCCCGGCCCCGGGAGCG
GAGAGCGAGGGGAGGCGGAGACGGAGGAAGGTCTGAGGAGCAGCTTCAG
TCCCCGCCGAGCCGCCACCGCAGGTCGAGGACGGTCGGACTCCCGCGGCG
GGAGGAGCCTGTTCCCCTGAGGGTATTTGAAGTATACCATACAACTGTTTT
GAAAATCCAGCGTGGACAATGGCTACTCAAGCTGATTTGATGGAGTTGGA
CATGGCCATGGAACCAGACAGAAAAGCGGCTGTTAGTCACTGGCAGCAAC
AGTCTTACCTGGACTCTGGAATCCATTCTGGTGCCACTACCACAGCTCCTT
CTCTGAGTGGTAAAGGCAATCCTGAGGAAGAGGATGTGGATACCTCCCAA
GTCCTGTATGAGTGGGAACAGGGATTTTCTCAGTCCTTCACTCAAGAACA
AGTAGCTGATATTGATGGACAGTATGCAATGACTCGAGCTCAGAGGGTAC

GAGCTGCTATGTTCCCTGAGACATTAGATGAGGGCATGCAGATCCCATCT
ACACAGTTTGATGCTGCTCATCCCACTAATGTCCAGCGTTTGGCTGAACCA
TCACAGATGCTGAAACATGCAGTTGTAAACTTGATTAACTATCAAGATGA
TGCAGAACTTGCCACACGTGCAATCCCTGAACTGACAAAACTGCTAAATG
ACGAGGACCAGGTGGTGGTTAATAAGGCTGCAGTTATGGTCCATCAGCTT
TCTAAAAAGGAAGCTTCCAGACACGCTATCATGCGTTCTCCTCAGATGGT
GTCTGCTATTGTACGTACCATGCAGAATACAAATGATGTAGAAACAGCTC
GTTGTACCGCTGGGACCTTGCATAACCTTTCCCATCATCGTGAGGGCTTAC
TGGCCATCTTTAAGTCTGGAGGCATTCCTGCCCTGGTGAAAATGCTTGGTT
CACCAGTGGATTCTGTGTTGTTTTATGCCATTACAACTCTCCACAACCTTTT
ATTACATCAAGAAGGAGCTAAAATGGCAGTGCGTTTAGCTGGTGGGCTGC
AGAAAATGGTTGCCTTGCTCAACAAAACAAATGTTAAATTCTTGGCTATTA
CGACAGACTGCCTTCAAATTTTAGCTTATGGCAACCAAGAAAGCAAGCTC
ATCATACTGGCTAGTGGTGGACCCCAAGCTTTAGTAAATATAATGAGGAC
CTATACTTACGAAAAACTACTGTGGACCACAAGCAGAGTGCTGAAGGTGC
TATCTGTCTGCTCTAGTAATAAGCCGGCTATTGTAGAAGCTGGTGGAATGC
AAGCTTTAGGACTTCACCTGACAGATCCAAGTCAACGTCTTGTTCAGAACT
GTCTTTGGACTCTCAGGAATCTTTCAGATGCTGCAACTAAACAGGAAGGG
ATGGAAGGTCTCCTTGGGACTCTTGTTCAGCTTCTGGGTTCAGATGATATA
AATGTGGTCACCTGTGCAGCTGGAATTCTTTCTAACCTCACTTGCAATAAT
TATAAGAACAAGATGATGGTCTGCCAAGTGGGTGGTATAGAGGCTCTTGT
GCGTACTGTCCTTCGGGCTGGTGACAGGGAAGACATCACTGAGCCTGCCA
TCTGTGCTCTTCGTCATCTGACCAGCCGACACCAAGAAGCAGAGATGGCC
CAGAATGCAGTTCGCCTTCACTATGGACTACCAGTTGTGGTTAAGCTCTTA
CACCCACCATCCCACTGGCCTCTGATAAAGGCTACTGTTGGATTGATTCGA
AATCTTGCCCTTTGTCCCGCAAATCATGCACCTTTGCGTGAGCAGGGTGCC
ATTCCACGACTAGTTCAGTTGCTTGTTCGTGCACATCAGGATACCCAGCGC
CGTACGTCCATGGGTGGGACACAGCAGCAATTTGTGGAGGGGGTCCGCAT
GGAAGAAATAGTTGAAGGTTGTACCGGAGCCCTTCACATCCTAGCTCGGG
ATGTTCACAACCGAATTGTTATCAGAGGACTAAATACCATTCCATTGTTTG
TGCAGCTGCTTTATTCTCCCATTGAAAACATCCAAAGAGTAGCTGCAGGG
GTCCTCTGTGAACTTGCTCAGGACAAGGAAGCTGCAGAAGCTATTGAAGC
TGAGGGAGCCACAGCTCCTCTGACAGAGTTACTTCACTCTAGGAATGAAG
GTGTGGCGACATATGCAGCTGCTGTTTTGTTCCGAATGTCTGAGGACAAGC

CACAAGATTACAAGAAACGGCTTTCAGTTGAGCTGACCAGCTCTCTCTTCA
GAACAGAGCCAATGGCTTGGAATGAGACTGCTGATCTTGGACTTGATATT
GGTGCCCAGGGAGAACCCCTTGGATATCGCCAGGATGATCCTAGCTATCG
TTCTTTTCACTCTGGTGGATATGGCCAGGATGCCTTGGGTATGGACCCCAT
GATGGAACATGAGATGGGTGGCCACCACCCTGGTGCTGACTATCCAGTTG
ATGGGCTGCCAGATCTGGGGCATGCCCAGGACCTCATGGATGGGCTGCCT
CCAGGTGACAGCAATCAGCTGGCCTGGTTTGATACTGACCTGTAAATCAT
CCTTTAGGTAAGAAGTTTTAAAAAGCCAGTTTGGGTAAAATACTTTTACTC
TGCCTACAGAACTTCAGAAAGACTTGGTTGGTAGGGTGGGAGTGGTTTAG
GCTATTTGTAAATCTGCCACAAAAACAGGTATATACTTTGAAAGGAGATG
TCTTGGAACATTGGAATGTTCTCAGATTTCTGGTTGTTATGTGATCATGTG
TGGAAGTTATTAACTTTAATGTTTTTTGCCACAGCTTTTGCAACTTAATACT
CAAATGAGTAACATTTGCTGTTTTAAACATTAATAGCAGCCTTTCTCTCTT
TATACAGCTGTATTGTCTGAACTTGCATTGTGATTGGCCTGTAGAGTTGCT
GAGAGGGCTCGAGGGGTGGGCTGGTATCTCAGAAAGTGCCTGACACACTA
ACCAAGCTGAGTTTCCTATGGGAACAATTGAAGTAAACTTTTTGTTCTGGT
CCTTTTTGGTCGAGGAGTAACAATACAAATGGATTTTGGGAGTGACTCAA
GAAGTGAAGAATGCACAAGAATGGATCACAAGATGGAATTTATCAAACC
CTAGCCTTGCTTGTTAAATTTTTTTTTTTTTTTTTTAAGAATATCTGTAATG
GTACTGACTTTGCTTGCTTTGAAGTAGCTCTTTTTTTTTTTTTTTTTTTTT
TTGCAGTAACTGTTTTTTAAGTCTCTCGTAGTGTTAAGTTATAGTGAATAC
TGCTACAGCAATTTCTAATTTTTAAGAATTGAGTAATGGTGTAGAACACTA
ATTCATAATCACTCTAATTAATTGTAATCTGAATAAAGTGTAACAATTGTG
TAGCCTTTTTGTATAAAATAGACAAATAGAAAATGGTCCAATTAGTTTCCT
TTTTAATATGCTTAAAATAAGCAGGTGGATCTATTTCATGTTTTTGATCAA
AAACTATTTGGGATATGTATGGGTAGGGTAAATCAGTAAGAGGTGTTATT
TGGAACCTTGTTTTGGACAGTTTACCAGTTGCCTTTTATCCCAAAGTTGTT
GTAACCTGCTGTGATACGATGCTTCAAGAGAAAATGCGGTTATAAAAAAT
GGTTCAGAATTAAACTTTTAATTCATTCGATTG

Human Wild-type β-catenin (cadherin-associated protein) sequence, transcript variant 2 (SEQ ID NO: 2; Homo sapiens CTNNB1, transcript variant 2; GenBank Accession No. NM_001098209.1):

AGGATACAGCGGCTTCTGCGCGACTTATAAGAGCTCCTTGTGCGGCGCCA
TTTTAAGCCTCTCGGTCTGTGGCAGCAGCGTTGGCCCGGCCCCGGGAGCG
GAGAGCGAGGGGAGGCGGAGACGGAGGAAGGTCTGAGGAGCAGCTTCAG
TCCCCGCCGAGCCGCCACCGCAGGTCGAGGACGGTCGGACTCCCGCGGCG
GGAGGAGCCTGTTCCCCTGAGGGTATTTGAAGTATACCATACAACTGTTTT
GAAAATCCAGCGTGGACAATGGCTACTCAAGCTGATTTGATGGAGTTGGA
CATGGCCATGGAACCAGACAGAAAAGCGGCTGTTAGTCACTGGCAGCAAC
AGTCTTACCTGGACTCTGGAATCCATTCTGGTGCCACTACCACAGCTCCTT
CTCTGAGTGGTAAAGGCAATCCTGAGGAAGAGGATGTGGATACCTCCCAA
GTCCTGTATGAGTGGGAACAGGGATTTTCTCAGTCCTTCACTCAAGAACA
AGTAGCTGATATTGATGGACAGTATGCAATGACTCGAGCTCAGAGGGTAC
GAGCTGCTATGTTCCCTGAGACATTAGATGAGGGCATGCAGATCCCATCT
ACACAGTTTGATGCTGCTCATCCCACTAATGTCCAGCGTTTGGCTGAACCA
TCACAGATGCTGAAACATGCAGTTGTAAACTTGATTAACTATCAAGATGA
TGCAGAACTTGCCACACGTGCAATCCCTGAACTGACAAAACTGCTAAATG
ACGAGGACCAGGTGGTGGTTAATAAGGCTGCAGTTATGGTCCATCAGCTT
TCTAAAAAGGAAGCTTCCAGACACGCTATCATGCGTTCTCCTCAGATGGT
GTCTGCTATTGTACGTACCATGCAGAATACAAATGATGTAGAAACAGCTC
GTTGTACCGCTGGGACCTTGCATAACCTTTCCCATCATCGTGAGGGCTTAC
TGGCCATCTTTAAGTCTGGAGGCATTCCTGCCCTGGTGAAAATGCTTGGTT
CACCAGTGGATTCTGTGTTGTTTTATGCCATTACAACTCTCCACAACCTTTT
ATTACATCAAGAAGGAGCTAAAATGGCAGTGCGTTTAGCTGGTGGGCTGC
AGAAAATGGTTGCCTTGCTCAACAAAACAAATGTTAAATTCTTGGCTATTA
CGACAGACTGCCTTCAAATTTTAGCTTATGGCAACCAAGAAAGCAAGCTC
ATCATACTGGCTAGTGGTGGACCCCAAGCTTTAGTAAATATAATGAGGAC
CTATACTTACGAAAAACTACTGTGGACCACAAGCAGAGTGCTGAAGGTGC
TATCTGTCTGCTCTAGTAATAAGCCGGCTATTGTAGAAGCTGGTGGAATGC
AAGCTTTAGGACTTCACCTGACAGATCCAAGTCAACGTCTTGTTCAGAACT
GTCTTTGGACTCTCAGGAATCTTTCAGATGCTGCAACTAAACAGGAAGGG
ATGGAAGGTCTCCTTGGGACTCTTGTTCAGCTTCTGGGTTCAGATGATATA
AATGTGGTCACCTGTGCAGCTGGAATTCTTTCTAACCTCACTTGCAATAAT
TATAAGAACAAGATGATGGTCTGCCAAGTGGGTGGTATAGAGGCTCTTGT
GCGTACTGTCCTTCGGGCTGGTGACAGGGAAGACATCACTGAGCCTGCCA
TCTGTGCTCTTCGTCATCTGACCAGCCGACACCAAGAAGCAGAGATGGCC

CAGAATGCAGTTCGCCTTCACTATGGACTACCAGTTGTGGTTAAGCTCTTA
CACCCACCATCCCACTGGCCTCTGATAAAGGCTACTGTTGGATTGATTCGA
AATCTTGCCCTTTGTCCCGCAAATCATGCACCTTTGCGTGAGCAGGGTGCC
ATTCCACGACTAGTTCAGTTGCTTGTTCGTGCACATCAGGATACCCAGCGC
CGTACGTCCATGGGTGGGACACAGCAGCAATTTGTGGAGGGGGTCCGCAT
GGAAGAAATAGTTGAAGGTTGTACCGGAGCCCTTCACATCCTAGCTCGGG
ATGTTCACAACCGAATTGTTATCAGAGGACTAAATACCATTCCATTGTTTG
TGCAGCTGCTTTATTCTCCCATTGAAAACATCCAAAGAGTAGCTGCAGGG
GTCCTCTGTGAACTTGCTCAGGACAAGGAAGCTGCAGAAGCTATTGAAGC
TGAGGGAGCCACAGCTCCTCTGACAGAGTTACTTCACTCTAGGAATGAAG
GTGTGGCGACATATGCAGCTGCTGTTTTGTTCCGAATGTCTGAGGACAAGC
CACAAGATTACAAGAAACGGCTTTCAGTTGAGCTGACCAGCTCTCTCTTCA
GAACAGAGCCAATGGCTTGGAATGAGACTGCTGATCTTGGACTTGATATT
GGTGCCCAGGGAGAACCCCTTGGATATCGCCAGGATGATCCTAGCTATCG
TTCTTTTCACTCTGGTGGATATGGCCAGGATGCCTTGGGTATGGACCCCAT
GATGGAACATGAGATGGGTGGCCACCACCCTGGTGCTGACTATCCAGTTG
ATGGGCTGCCAGATCTGGGGCATGCCCAGGACCTCATGGATGGGCTGCCT
CCAGGTGACAGCAATCAGCTGGCCTGGTTTGATACTGACCTGTAAATCAT
CCTTTAGCTGTATTGTCTGAACTTGCATTGTGATTGGCCTGTAGAGTTGCT
GAGAGGGCTCGAGGGGTGGGCTGGTATCTCAGAAAGTGCCTGACACACTA
ACCAAGCTGAGTTTCCTATGGGAACAATTGAAGTAAACTTTTTGTTCTGGT
CCTTTTTGGTCGAGGAGTAACAATACAAATGGATTTTGGGAGTGACTCAA
GAAGTGAAGAATGCACAAGAATGGATCACAAGATGGAATTTATCAAACC
CTAGCCTTGCTTGTTAAATTTTTTTTTTTTTTTTTTAAGAATATCTGTAATG
GTACTGACTTTGCTTGCTTTGAAGTAGCTCTTTTTTTTTTTTTTTTTTTTT
TTGCAGTAACTGTTTTTTAAGTCTCTCGTAGTGTTAAGTTATAGTGAATAC
TGCTACAGCAATTTCTAATTTTTAAGAATTGAGTAATGGTGTAGAACACTA
ATTCATAATCACTCTAATTAATTGTAATCTGAATAAAGTGTAACAATTGTG
TAGCCTTTTTGTATAAAATAGACAAATAGAAAATGGTCCAATTAGTTTCCT
TTTTAATATGCTTAAAATAAGCAGGTGGATCTATTTCATGTTTTTGATCAA
AAACTATTTGGGATATGTATGGGTAGGGTAAATCAGTAAGAGGTGTTATT
TGGAACCTTGTTTTGGACAGTTTACCAGTTGCCTTTTATCCCAAAGTTGTT
GTAACCTGCTGTGATACGATGCTTCAAGAGAAAATGCGGTTATAAAAAAT
GGTTCAGAATTAAACTTTTAATTCATTCGATTG

Human Wild-type β-catenin (cadherin-associated protein) sequence, transcript variant 3 (SEQ ID NO: 3; Homo sapiens CTNNB1, transcript variant 3; GenBank Accession No. NM_001098210.1):

AGGATACAGCGGCTTCTGCGCGACTTATAAGAGCTCCTTGTGCGGCGCCA
TTTTAAGCCTCTCGGTCTGTGGCAGCAGCGTTGGCCCGGCCCCGGGAGCG
GAGAGCGAGGGGAGGCGGAGACGGAGGAAGGTCTGAGGAGCAGCTTCAG
TCCCCGCCGAGCCGCCACCGCAGGTCGAGGACGGTCGGACTCCCGCGGCG
GGAGGAGCCTGTTCCCCTGAGGGTATTTGAAGTATACCATACAACTGTTTT
GAAAATCCAGCGTGGACAATGGCTACTCAAGCTGATTTGATGGAGTTGGA
CATGGCCATGGAACCAGACAGAAAAGCGGCTGTTAGTCACTGGCAGCAAC
AGTCTTACCTGGACTCTGGAATCCATTCTGGTGCCACTACCACAGCTCCTT
CTCTGAGTGGTAAAGGCAATCCTGAGGAAGAGGATGTGGATACCTCCCAA
GTCCTGTATGAGTGGGAACAGGGATTTTCTCAGTCCTTCACTCAAGAACA
AGTAGCTGATATTGATGGACAGTATGCAATGACTCGAGCTCAGAGGGTAC
GAGCTGCTATGTTCCCTGAGACATTAGATGAGGGCATGCAGATCCCATCT
ACACAGTTTGATGCTGCTCATCCCACTAATGTCCAGCGTTTGGCTGAACCA
TCACAGATGCTGAAACATGCAGTTGTAAACTTGATTAACTATCAAGATGA
TGCAGAACTTGCCACACGTGCAATCCCTGAACTGACAAAACTGCTAAATG
ACGAGGACCAGGTGGTGGTTAATAAGGCTGCAGTTATGGTCCATCAGCTT
TCTAAAAAGGAAGCTTCCAGACACGCTATCATGCGTTCTCCTCAGATGGT
GTCTGCTATTGTACGTACCATGCAGAATACAAATGATGTAGAAACAGCTC
GTTGTACCGCTGGGACCTTGCATAACCTTTCCCATCATCGTGAGGGCTTAC
TGGCCATCTTTAAGTCTGGAGGCATTCCTGCCCTGGTGAAAATGCTTGGTT
CACCAGTGGATTCTGTGTTGTTTTATGCCATTACAACTCTCCACAACCTTTT
ATTACATCAAGAAGGAGCTAAAATGGCAGTGCGTTTAGCTGGTGGGCTGC
AGAAAATGGTTGCCTTGCTCAACAAAACAAATGTTAAATTCTTGGCTATTA
CGACAGACTGCCTTCAAATTTTAGCTTATGGCAACCAAGAAAGCAAGCTC
ATCATACTGGCTAGTGGTGGACCCCAAGCTTTAGTAAATATAATGAGGAC
CTATACTTACGAAAAACTACTGTGGACCACAAGCAGAGTGCTGAAGGTGC
TATCTGTCTGCTCTAGTAATAAGCCGGCTATTGTAGAAGCTGGTGGAATGC
AAGCTTTAGGACTTCACCTGACAGATCCAAGTCAACGTCTTGTTCAGAACT
GTCTTTGGACTCTCAGGAATCTTTCAGATGCTGCAACTAAACAGGAAGGG
ATGGAAGGTCTCCTTGGGACTCTTGTTCAGCTTCTGGGTTCAGATGATATA

AATGTGGTCACCTGTGCAGCTGGAATTCTTTCTAACCTCACTTGCAATAAT
TATAAGAACAAGATGATGGTCTGCCAAGTGGGTGGTATAGAGGCTCTTGT
GCGTACTGTCCTTCGGGCTGGTGACAGGGAAGACATCACTGAGCCTGCCA
TCTGTGCTCTTCGTCATCTGACCAGCCGACACCAAGAAGCAGAGATGGCC
CAGAATGCAGTTCGCCTTCACTATGGACTACCAGTTGTGGTTAAGCTCTTA
CACCCACCATCCCACTGGCCTCTGATAAAGGCTACTGTTGGATTGATTCGA
AATCTTGCCCTTTGTCCCGCAAATCATGCACCTTTGCGTGAGCAGGGTGCC
ATTCCACGACTAGTTCAGTTGCTTGTTCGTGCACATCAGGATACCCAGCGC
CGTACGTCCATGGGTGGGACACAGCAGCAATTTGTGGAGGGGGTCCGCAT
GGAAGAAATAGTTGAAGGTTGTACCGGAGCCCTTCACATCCTAGCTCGGG
ATGTTCACAACCGAATTGTTATCAGAGGACTAAATACCATTCCATTGTTTG
TGCAGCTGCTTTATTCTCCCATTGAAAACATCCAAAGAGTAGCTGCAGGG
GTCCTCTGTGAACTTGCTCAGGACAAGGAAGCTGCAGAAGCTATTGAAGC
TGAGGGAGCCACAGCTCCTCTGACAGAGTTACTTCACTCTAGGAATGAAG
GTGTGGCGACATATGCAGCTGCTGTTTTGTTCCGAATGTCTGAGGACAAGC
CACAAGATTACAAGAAACGGCTTTCAGTTGAGCTGACCAGCTCTCTCTTCA
GAACAGAGCCAATGGCTTGGAATGAGACTGCTGATCTTGGACTTGATATT
GGTGCCCAGGGAGAACCCCTTGGATATCGCCAGGATGATCCTAGCTATCG
TTCTTTTCACTCTGGTGGATATGGCCAGGATGCCTTGGGTATGGACCCCAT
GATGGAACATGAGATGGGTGGCCACCACCCTGGTGCTGACTATCCAGTTG
ATGGGCTGCCAGATCTGGGGCATGCCCAGGACCTCATGGATGGGCTGCCT
CCAGGTGACAGCAATCAGCTGGCCTGGTTTGATACTGACCTGTAAATCAT
CCTTTAGGAGTAACAATACAAATGGATTTTGGGAGTGACTCAAGAAGTGA
AGAATGCACAAGAATGGATCACAAGATGGAATTTATCAAACCCTAGCCTT
GCTTGTTAAATTTTTTTTTTTTTTTTTTAAGAATATCTGTAATGGTACTGA
CTTTGCTTGCTTTGAAGTAGCTCTTTTTTTTTTTTTTTTTTTTTTGCAGT
AACTGTTTTTTAAGTCTCTCGTAGTGTTAAGTTATAGTGAATACTGCTACA
GCAATTTCTAATTTTTAAGAATTGAGTAATGGTGTAGAACACTAATTCATA
ATCACTCTAATTAATTGTAATCTGAATAAAGTGTAACAATTGTGTAGCCTT
TTTGTATAAAATAGACAAATAGAAAATGGTCCAATTAGTTTCCTTTTTAAT
ATGCTTAAAATAAGCAGGTGGATCTATTTCATGTTTTTGATCAAAAACTAT
TTGGGATATGTATGGGTAGGGTAAATCAGTAAGAGGTGTTATTTGGAACC
TTGTTTTGGACAGTTTACCAGTTGCCTTTTATCCCAAAGTTGTTGTAACCTG

CTGTGATACGATGCTTCAAGAGAAAATGCGGTTATAAAAAATGGTTCAGA
ATTAAACTTTTAATTCATTCGATTG

Human Wild-type β-catenin sequence, amino acid Sequence NP_001895.1 (SEQ ID NO: 4; translation of NM_001904.3, NM_001098209.1 or NM_001098210.1):

MATQADLMELDMAMEPDRKAAVSHWQQQSYLDSGIHSGATTTAPSLSGKG
NPEEEDVDTSQVLYEWEQGFSQSFTQEQVADIDGQYAMTRAQRVRAAMFPE
TLDEGMQIPSTQFDAAHPTNVQRLAEPSQMLKHAVVNLINYQDDAELATRAI
PELTKLLNDEDQVVVNKAAVMVHQLSKKEASRHAIMRSPQMVSAIVRTMQN
TNDVETARCTAGTLHNLSHHREGLLAIFKSGGIPALVKMLGSPVDSVLFYAIT
TLHNLLLHQEGAKMAVRLAGGLQKMVALLNKTNVKFLAITTDCLQILAYGN
QESKLIILASGGPQALVNIMRTYTYEKLLWTTSRVLKVLSVCSSNKPAIVEAG
GMQALGLHLTDPSQRLVQNCLWTLRNLSDAATKQEGMEGLLGTLVQLLGSD
DINVVTCAAGILSNLTCNNYKNKMMVCQVGGIEALVRTVLRAGDREDITEPA
ICALRHLTSRHQEAEMAQNAVRLHYGLPVVVKLLHPPSHWPLIKATVGLIRN
LALCPANHAPLREQGAIPRLVQLLVRAHQDTQRRTSMGGTQQQFVEGVRME
EIVEGCTGALHILARDVHNRIVIRGLNTIPLFVQLLYSPIENIQRVAAGVLCELA
QDKEAAEAIEAEGATAPLTELLHSRNEGVATYAAAVLFRMSEDKPQDYKKR
LSVELTSSLFRTEPMAWNETADLGLDIGAQGEPLGYRQDDPSYRSFHSGGYG
QDALGMDPMMEHEMGGHHPGADYPVDGLPDLGHAQDLMDGLPPGDSNQL
AWFDTDL

Mouse Wild-type β-catenin sequence (SEQ ID NO: 5; Mus musculus catenin (cadherin associated protein), beta 1 (Ctnnb1), transcript variant 1 in C57BL/6; GenBank Accession No. NM_007614.3; Note: mouse DsiRNA target sequence positions correspond to NM_007614.2 below):

GCGCGGCGGAACGCTCCGCGCGGAGCGGCAGCGGCAGGATACACGGTGC
CGCGCCGCTTATAAATCGCTCCTTGTGCGGCGCCATCTTAAGCCCTCGCTC
GGTGGCGGCCGCGTCAGCTCGTGTCCTGTGAAGCCCGCGGCCCGGGGAGG
CGGAGACGGAGCACGGTGGGCGCCGAGCCGTCAGTGCAGGAGGCCGAGG
CCGAGCGGGCGGCCGCGAGTGAGCAGCGCGCGGGCCTGAGGGTACCTGA
AGCTCAGCGCACAGCTGCTGTGACACCGCTGCGTGGACAATGGCTACTCA
AGCTGACCTGATGGAGTTGGACATGGCCATGGAGCCGGACAGAAAAGCT
GCTGTCAGCCACTGGCAGCAGCAGTCTTACTTGGATTCTGGAATCCATTCT

GGTGCCACCACCACAGCTCCTTCCCTGAGTGGCAAGGGCAACCCTGAGGA
AGAAGATGTTGACACCTCCCAAGTCCTTTATGAATGGGAGCAAGGCTTTT
CCCAGTCCTTCACGCAAGAGCAAGTAGCTGATATTGACGGGCAGTATGCA
ATGACTAGGGCTCAGAGGGTCCGAGCTGCCATGTTCCCTGAGACGCTAGA
TGAGGGCATGCAGATCCCATCCACGCAGTTTGACGCTGCTCATCCCACTA
ATGTCCAGCGCTTGGCTGAACCATCACAGATGTTGAAACATGCAGTTGTC
AATTTGATTAACTATCAGGATGACGCGGAACTTGCCACACGTGCAATTCCT
GAGCTGACAAAACTGCTAAACGATGAGGACCAGGTGGTAGTTAATAAAG
CTGCTGTTATGGTCCATCAGCTTTCCAAAAAGGAAGCTTCCAGACATGCCA
TCATGCGCTCCCCTCAGATGGTGTCTGCCATTGTACGCACCATGCAGAATA
CAAATGATGTAGAGACAGCTCGTTGTACTGCTGGGACTCTGCACAACCTTT
CTCACCACCGCGAGGGCTTGCTGGCCATCTTTAAGTCTGGTGGCATCCCAG
CGCTGGTGAAAATGCTTGGGTCACCAGTGGATTCTGTACTGTTCTACGCCA
TCACGACACTGCATAATCTCCTGCTCCATCAGGAAGGAGCTAAAATGGCA
GTGCGCCTAGCTGGTGGACTGCAGAAAATGGTTGCTTTGCTCAACAAAAC
AAACGTGAAATTCTTGGCTATTACAACAGACTGCCTTCAGATCTTAGCTTA
TGGCAATCAAGAGAGCAAGCTCATCATTCTGGCCAGTGGTGGACCCCAAG
CCTTAGTAAACATAATGAGGACCTACACTTATGAGAAGCTTCTGTGGACC
ACAAGCAGAGTGCTGAAGGTGCTGTCTGTCTGCTCTAGCAACAAGCCGGC
CATTGTAGAAGCTGGTGGGATGCAGGCACTGGGGCTTCATCTGACAGACC
CAAGTCAGCGACTTGTTCAAAACTGTCTTTGGACTCTCAGAAACCTTTCAG
ATGCAGCGACTAAGCAGGAAGGGATGGAAGGCCTCCTTGGGACTCTAGTG
CAGCTTCTGGGTTCCGATGATATAAATGTGGTCACCTGTGCAGCTGGAATT
CTCTCTAACCTCACTTGCAATAATTACAAAAACAAGATGATGGTGTGCCA
AGTGGGTGGCATAGAGGCTCTTGTACGCACCGTCCTTCGTGCTGGTGACA
GGGAAGACATCACTGAGCCTGCCATCTGTGCTCTTCGTCATCTGACCAGCC
GGCATCAGGAAGCCGAGATGGCCCAGAATGCCGTTCGCCTTCATTATGGA
CTGCCTGTTGTGGTTAAACTCCTGCACCCACCATCCCACTGGCCTCTGATA
AAGGCAACTGTTGGATTGATTCGAAACCTTGCCCTTTGCCCAGCAAATCAT
GCGCCTTTGCGGGAACAGGGTGCTATTCCACGACTAGTTCAGCTGCTTGTA
CGAGCACATCAGGACACCCAACGGCGCACCTCCATGGGTGGAACGCAGC
AGCAGTTTGTGGAGGGCGTGCGCATGGAGGAGATAGTAGAAGGGTGTACT
GGAGCTCTCCACATCCTTGCTCGGGACGTTCACAACCGGATTGTAATCCGA
GGACTCAATACCATTCCATTGTTTGTGCAGTTGCTTTATTCTCCCATTGAA

AATATCCAAAGAGTAGCTGCAGGGGTCCTCTGTGAACTTGCTCAGGACAA
GGAGGCTGCAGAGGCCATTGAAGCTGAGGGAGCCACAGCTCCCCTGACA
GAGTTACTCCACTCCAGGAATGAAGGCGTGGCAACATACGCAGCTGCTGT
CCTATTCCGAATGTCTGAGGACAAGCCACAGGATTACAAGAAGCGGCTTT
CAGTCGAGCTGACCAGTTCCCTCTTCAGGACAGAGCCAATGGCTTGGAAT
GAGACTGCAGATCTTGGACTGGACATTGGTGCCCAGGGAGAAGCCCTTGG
ATATCGCCAGGATGATCCCAGCTACCGTTCTTTTCACTCTGGTGGATACGG
CCAGGATGCCTTGGGGATGGACCCTATGATGGAGCATGAGATGGGTGGCC
ACCACCCTGGTGCTGACTATCCAGTTGATGGGCTGCCTGATCTGGGACAC
GCCCAGGACCTCATGGATGGGCTGCCCCCAGGTGATAGCAATCAGCTGGC
CTGGTTTGATACTGACCTGTAAATCGTCCTTTAGGTAAGAAAGCTTATAAA
AGCCAGTGTGGGTGAATACTTTACTCTGCCTGCAGAACTCCAGAAAGACT
TGGTAGGGTGGGAATGGTTTTAGGCCTGTTTGTAAATCTGCCACCAAACA
GATACATACCTTGGAAGGAGATGTTCATGTGTGGAAGTTTCTCACGTTGAT
GTTTTTGCCACAGCTTTTGCAGCGTTATACTCAGATGAGTAACATTTGCTG
TTTTCAACATTAATAGCAGCCTTTCTCTCTATACAGCTGTAGTGTCTGAAC
GTGCATTGTGATTGGCCTGTAGAGTTGCTGAGAGGGCTCGAGGGGTGGGC
TGGTATCTCAGAAAGTGCCTGACACACTAACCAAGCTGAGTTTCCTATGG
GAACAGTCGAAGTACGCTTTTTGTTCTGGTCCTTTTTGGTCGAGGAGTAAC
AATACAAATGGATTTGGGGAGTGACTCACGCAGTGAAGAATGCACACGA
ATGGATCACAAGATGGCGTTATCAAACCCTAGCCTTGCTTGTTCTTTGTTT
TAATATCTGTAGTGGTGCTGACTTTGCTTGCTTTTATTTTTTGCAGTAACTG
TTAGTTTTTAAGTAGTGTTATGTTCTAGTGAACCTGCTACAGCAATTTCTG
ATTTCTAAGAACCGAGTAATGGTGTAGAACACTAATTCATAATCACGCTA
ATTGTAATCTGGAGACGTGTAACATTGTGTAGCCTTTTGTATAAATAGACA
GATAGAAATGGTCCGATTAGTTTCCTTTTTAATATGCTTAAAATAAGCAGG
TGGATCTATTTCATGTTTTTGAACAAAAACTTTATCGGGGATACGTGCGGT
AGGGTAAATCAGTAAGAGGTGTTATTTGAGCCTTGTTTTGGACAGTATACC
AGTTGCCTTTTATCCCAAAGTTGTTGTAACCTGCTGTGATACAATGCTTCA
ACAGATGCGGTTATAGAAATGGTTCAGAATTAAACTTTTAATTCATTCAAA
AAAAAAAAAAAAAAA

Mouse Wild-type β-catenin sequence (SEQ ID NO: 6; Mus musculus catenin (cadherin associated protein), beta 1 (Ctnnb1) in C57BL/6; GenBank Accession No.

NM_007614.2; mouse DsiRNA target sequence positions correspond to NM_007614.2):

GCGGCGCCATCTTAAGCCCTCGCTCGGTGGCGGCCGCGTCAGCTCGTGTCC
TGTGAAGCCCGCGGCCCGGGGAGGCGGAGACGGAGCACGGTGGGCGCCG
AGCCGTCAGTGCAGGAGGCCGAGGCCGAGCGGGCGGCCGCGAGTGAGCA
GCGCGCGGGCCTGAGGGTACCTGAAGCTCAGCGCACAGCTGCTGTGACAC
CGCTGCGTGGACAATGGCTACTCAAGCTGACCTGATGGAGTTGGACATGG
CCATGGAGCCGGACAGAAAAGCTGCTGTCAGCCACTGGCAGCAGCAGTCT
TACTTGGATTCTGGAATCCATTCTGGTGCCACCACCACAGCTCCTTCCCTG
AGTGGCAAGGGCAACCCTGAGGAAGAAGATGTTGACACCTCCCAAGTCCT
TTATGAATGGGAGCAAGGCTTTTCCCAGTCCTTCACGCAAGAGCAAGTAG
CTGATATTGACGGGCAGTATGCAATGACTAGGGCTCAGAGGGTCCGAGCT
GCCATGTTCCCTGAGACGCTAGATGAGGGCATGCAGATCCCATCCACGCA
GTTTGACGCTGCTCATCCCACTAATGTCCAGCGCTTGGCTGAACCATCACA
GATGTTGAAACATGCAGTTGTCAATTTGATTAACTATCAGGATGACGCGG
AACTTGCCACACGTGCAATTCCTGAGCTGACAAAACTGCTAAACGATGAG
GACCAGGTGGTAGTTAATAAAGCTGCTGTTATGGTCCATCAGCTTTCCAAA
AAGGAAGCTTCCAGACATGCCATCATGCGCTCCCCTCAGATGGTGTCTGC
CATTGTACGCACCATGCAGAATACAAATGATGTAGAGACAGCTCGTTGTA
CTGCTGGGACTCTGCACAACCTTTCTCACCACCGCGAGGGCTTGCTGGCCA
TCTTTAAGTCTGGTGGCATCCCAGCGCTGGTGAAAATGCTTGGGTCACCAG
TGGATTCTGTACTGTTCTACGCCATCACGACACTGCATAATCTCCTGCTCC
ATCAGGAAGGAGCTAAAATGGCAGTGCGCCTAGCTGGTGGACTGCAGAA
AATGGTTGCTTTGCTCAACAAAACAAACGTGAAATTCTTGGCTATTACAAC
AGACTGCCTTCAGATCTTAGCTTATGGCAATCAAGAGAGCAAGCTCATCA
TTCTGGCCAGTGGTGGACCCCAAGCCTTAGTAAACATAATGAGGACCTAC
ACTTATGAGAAGCTTCTGTGGACCACAAGCAGAGTGCTGAAGGTGCTGTC
TGTCTGCTCTAGCAACAAGCCGGCCATTGTAGAAGCTGGTGGGATGCAGG
CACTGGGGCTTCATCTGACAGACCCAAGTCAGCGACTTGTTCAAAACTGT
CTTTGGACTCTCAGAAACCTTTCAGATGCAGCGACTAAGCAGGAAGGGAT
GGAAGGCCTCCTTGGGACTCTAGTGCAGCTTCTGGGTTCCGATGATATAA
ATGTGGTCACCTGTGCAGCTGGAATTCTCTCTAACCTCACTTGCAATAATT
ACAAAAACAAGATGATGGTGTGCCAAGTGGGTGGCATAGAGGCTCTTGTA

CGCACCGTCCTTCGTGCTGGTGACAGGGAAGACATCACTGAGCCTGCCAT
CTGTGCTCTTCGTCATCTGACCAGCCGGCATCAGGAAGCCGAGATGGCCC
AGAATGCCGTTCGCCTTCATTATGGACTGCCTGTTGTGGTTAAACTCCTGC
ACCCACCATCCCACTGGCCTCTGATAAAGGCAACTGTTGGATTGATTCGA
AACCTTGCCCTTTGCCCAGCAAATCATGCGCCTTTGCGGGAACAGGGTGCT
ATTCCACGACTAGTTCAGCTGCTTGTACGAGCACATCAGGACACCCAACG
GCGCACCTCCATGGGTGGAACGCAGCAGCAGTTTGTGGAGGGCGTGCGCA
TGGAGGAGATAGTAGAAGGGTGTACTGGAGCTCTCCACATCCTTGCTCGG
GACGTTCACAACCGGATTGTAATCCGAGGACTCAATACCATTCCATTGTTT
GTGCAGTTGCTTTATTCTCCCATTGAAAATATCCAAAGAGTAGCTGCAGGG
GTCCTCTGTGAACTTGCTCAGGACAAGGAGGCTGCAGAGGCCATTGAAGC
TGAGGGAGCCACAGCTCCCCTGACAGAGTTACTCCACTCCAGGAATGAAG
GCGTGGCAACATACGCAGCTGCTGTCCTATTCCGAATGTCTGAGGACAAG
CCACAGGATTACAAGAAGCGGCTTTCAGTCGAGCTGACCAGTTCCCTCTTC
AGGACAGAGCCAATGGCTTGGAATGAGACTGCAGATCTTGGACTGGACAT
TGGTGCCCAGGGAGAAGCCCTTGGATATCGCCAGGATGATCCCAGCTACC
GTTCTTTTCACTCTGGTGGATACGGCCAGGATGCCTTGGGGATGGACCCTA
TGATGGAGCATGAGATGGGTGGCCACCACCCTGGTGCTGACTATCCAGTT
GATGGGCTGCCTGATCTGGGACACGCCCAGGACCTCATGGATGGGCTGCC
CCCAGGTGATAGCAATCAGCTGGCCTGGTTTGATACTGACCTGTAAATCGT
CCTTTAGGTAAGAAAGCTTATAAAAGCCAGTGTGGGTGAATACTTTACTCT
GCCTGCAGAACTCCAGAAAGACTTGGTAGGGTGGGAATGGTTTTAGGCCT
GTTTGTAAATCTGCCACCAAACAGATACATACCTTGGAAGGAGATGTTCA
TGTGTGGAAGTTTCTCACGTTGATGTTTTTGCCACAGCTTTTGCAGCGTTAT
ACTCAGATGAGTAACATTTGCTGTTTTCAACATTAATAGCAGCCTTTCTCT
CTATACAGCTGTAGTGTCTGAACGTGCATTGTGATTGGCCTGTAGAGTTGC
TGAGAGGGCTCGAGGGGTGGGCTGGTATCTCAGAAAGTGCCTGACACACT
AACCAAGCTGAGTTTCCTATGGGAACAGTCGAAGTACGCTTTTTGTTCTGG
TCCTTTTTGGTCGAGGAGTAACAATACAAATGGATTTGGGGAGTGACTCA
CGCAGTGAAGAATGCACACGAATGGATCACAAGATGGCGTTATCAAACCC
TAGCCTTGCTTGTTCTTTGTTTTAATATCTGTAGTGGTGCTGACTTTGCTTG
CTTTTATTTTTTGCAGTAACTGTTAGTTTTTAAGTAGTGTTATGTTCTAGTG
AACCTGCTACAGCAATTTCTGATTTCTAAGAACCGAGTAATGGTGTAGAA
CACTAATTCATAATCACGCTAATTGTAATCTGGAGACGTGTAACATTGTGT

AGCCTTTTGTATAAATAGACAGATAGAAATGGTCCGATTAGTTTCCTTTTT
AATATGCTTAAAATAAGCAGGTGGATCTATTTCATGTTTTTGAACAAAAAC
TTTATCGGGGATACGTGCGGTAGGGTAAATCAGTAAGAGGTGTTATTTGA
GCCTTGTTTTGGACAGTATACCAGTTGCCTTTTATCCCAAAGTTGTTGTAA
CCTGCTGTGATACAATGCTTCAACAGATGCGGTTATAGAAATGGTTCAGA
ATTAAACTTTTAATTCATTCAAAAAAAAAAAAAAAAA

Mouse Wild-type β-catenin Amino Acid Sequence NP_031640.1 (SEQ ID NO: 7; translation of NM_007614.2 or NM_007614.3):

MATQADLMELDMAMEPDRKAAVSHWQQQSYLDSGIHSGATTTAPSLSGKG
NPEEEDVDTSQVLYEWEQGFSQSFTQEQVADIDGQYAMTRAQRVRAAMFPE
TLDEGMQIPSTQFDAAHPTNVQRLAEPSQMLKHAVVNLINYQDDAELATRAI
PELTKLLNDEDQVVVNKAAVMVHQLSKKEASRHAIMRSPQMVSAIVRTMQN
TNDVETARCTAGTLHNLSHHREGLLAIFKSGGIPALVKMLGSPVDSVLFYAIT
TLHNLLLHQEGAKMAVRLAGGLQKMVALLNKTNVKFLAITTDCLQILAYGN
QESKLIILASGGPQALVNIMRTYTYEKLLWTTSRVLKVLSVCSSNKPAIVEAG
GMQALGLHLTDPSQRLVQNCLWTLRNLSDAATKQEGMEGLLGTLVQLLGSD
DINVVTCAAGILSNLTCNNYKNKMMVCQVGGIEALVRTVLRAGDREDITEPA
ICALRHLTSRHQEAEMAQNAVRLHYGLPVVVKLLHPPSHWPLIKATVGLIRN
LALCPANHAPLREQGAIPRLVQLLVRAHQDTQRRTSMGGTQQQFVEGVRME
EIVEGCTGALHILARDVHNRIVIRGLNTIPLFVQLLYSPIENIQRVAAGVLCELA
QDKEAAEAIEAEGATAPLTELLHSRNEGVATYAAAVLFRMSEDKPQDYKKR
LSVELTSSLFRTEPMAWNETADLGLDIGAQGEALGYRQDDPSYRSFHSGGYG
QDALGMDPMMEHEMGGHHPGADYPVDGLPDLGHAQDLMDGLPPGDSNQL
AWFDTDL

β-catenin is a protein that in humans is encoded by the *CTNNB1* gene (Kraus et al. Genomics 23: 272-4) – accordingly, reference herein to the human "β-catenin gene" specifically refers to the *CTNNB1* gene. β-catenin is a subunit of the cadherin protein complex and has been demonstrated to be an integral component in the Wnt signaling pathway. *Drosophila armadillo* is a β-catenin homolog, rendering β-catenin a member of the armadillo family.

As a member of the armadillo family, the β-catenin protein contains multiple copies of the so-called armadillo repeat domain, which is a domain specialized for

protein-protein binding. When β-catenin is not associated with cadherins and alpha-catenin, it can interact with other proteins such as ICAT and APC.

Functionally, cadherin complexes constitute adherens junctions (Ajs), which are required for creation and maintenance of epithelial cell layers via regulation of cell growth and adhesion between neighboring cells. β-catenin also anchors the actin cytoskeleton and is modeled to be responsible for transmitting contact inhibition signals that cause cells to stop dividing once an epithelial sheet is complete (EntrezGene: catenin). β-catenin has been shown to play a significant role in liver biology, e.g., liver development (both embryonic and postnatal), liver regeneration following partial hepatectomy, HGF-induced hepatomegaly, liver zonation, and pathogenesis of liver cancer (Thompson and Monga. *Hepatology* 45: 1298-1305).

Without being bound by theory, β-catenin is modeled to function in the Wnt signaling pathway in the following manner. When Wnt is not present, GSK-3 (a kinase) constitutively phosphorylates the β-catenin protein. β-catenin is associated with axin (scaffolding protein) complexed with GSK3 and APC (adenomatosis polyposis coli). The creation of this complex acts to substantially increase the phosphorylation of β-catenin by facilitating the action of GSK3. When β-catenin is phosphorylated, it is degraded and, thus, β-catenin does not build up in the cell to a significant level. When Wnt binds to frizzled (Fz), its receptor, dishevelled (Dsh), is recruited to the membrane. GSK3 is inhibited by the activation of Dsh by Fz. Because of this, β-catenin is permitted to build up in the cytosol and can be subsequently translocated into the nucleus, where it performs a variety of functions. β-catenin can act in conjunction with TCF and LEF to activate specific target genes involved in different processes.

β-catenin is an oncogene. An increase in β-catenin production has been noted in subjects with basal cell carcinoma, and such increase leads to the increase in proliferation of related tumors (Saldanha *et al. Br. J Dermatol.* 151: 157-64). Mutations in β-catenin are a cause of colorectal cancer (CRC), pilomatrixoma (PTR), medulloblastoma (MDB), and ovarian cancer. β-catenin also binds to the product of the APC gene, which is mutated in adenomatous polyposis of the colon.

The ability of β-catenin to bind to other proteins is regulated by tyrosine kinases (Lilien and Balsamo *Curr. Opin. Cell Biol.* 17: 459–65) and serine kinases such as GSK-3 (Castellone *et al. Science* 310: 1504–10). When β-catenin is not assembled in complexes with cadherins, it can form a complex with axin. While

bound to axin, β-catenin can be phosphorylated by GSK-3, which creates a signal for the rapid ubiquitin-dependent degradation of β-catenin by proteosomes. Various signals such as the Wnt signalling pathway can inhibit GSK-3-mediated phosphorylation of β-catenin (Liu *et al. Curr. Biol.* 15: 1989–97), allowing β-catenin to go to the cell nucleus, interact with transcription factors, and regulate gene transcription.

β-catenin can be phosphorylated by other kinases such as protein kinase A (PKA). Phosphorylation of β-catenin by PKA has been associated with reduced degradation of β-catenin, increased levels of β-catenin in the nucleus and interaction of β-catenin with TCF family transcription factors to regulate gene expression (Hino *et al. Mol. Cell. Biol.* 25: 9063–72).

β-catenin has also been shown to interact with the following proteins: Androgen receptor, APC, AXIN1, CBY1, CDH1, CDH2, CDH3, CDK5R1, CHUK, CTNNA1, CTNND1, EGFR, FHL2, GSK3B, HER2/neu, HNF4A, IKK2, LEF1, MAGI1, MUC1, NR5A1, PCAF, PHF17, Plakoglobin, PTPN14, PTPRF, PRPRK, PSEN1, RuvB-like 1, SMAD7, SLC9A3R1, SMARCA4, USP9X and VE-cadherin (http://en.wikipedia.org/wiki/Beta-catenin).

In Vitro Assay to Assess DsiRNA β-catenin Inhibitory Activity

An *in vitro* assay that recapitulates RNAi in a cell-free system can be used to evaluate DsiRNA constructs targeting β-catenin RNA sequence(s), and thus to assess β-catenin-specific gene inhibitory activity (also referred to herein as β-catenin inhibitory activity) of a DsiRNA. The assay comprises the system described by Tuschl *et al.*, 1999, Genes and Development, 13, 3191-3197 and Zamore *et al.*, 2000, Cell, 101, 25-33 adapted for use with DsiRNA agents directed against β-catenin RNA. A *Drosophila* extract derived from syncytial blastoderm is used to reconstitute RNAi activity *in vitro*. Target RNA is generated *via in vitro* transcription from a selected β-catenin expressing plasmid using T7 RNA polymerase or *via* chemical synthesis. Sense and antisense DsiRNA strands (for example 20 uM each) are annealed by incubation in buffer (such as 100 mM potassium acetate, 30 mM HEPES-KOH, pH 7.4, 2 mM magnesium acetate) for 1 minute at 90°C followed by 1 hour at 37°C, then diluted in lysis buffer (for example 100 mM potassium acetate, 30 mM HEPES-KOH at pH 7.4, 2 mM magnesium acetate). Annealing can be monitored by gel

electrophoresis on an agarose gel in TBE buffer and stained with ethidium bromide. The *Drosophila* lysate is prepared using zero to two-hour-old embryos from Oregon R flies collected on yeasted molasses agar that are dechorionated and lysed. The lysate is centrifuged and the supernatant isolated. The assay comprises a reaction mixture containing 50% lysate [vol/vol], RNA (10-50 pM final concentration), and 10% [vol/vol] lysis buffer containing DsiRNA (10 nM final concentration). The reaction mixture also contains 10 mM creatine phosphate, 10 ug/ml creatine phosphokinase, 100 um GTP, 100 uM UTP, 100 uM CTP, 500 uM ATP, 5 mM DTT, 0.1 U/uL RNasin (Promega), and 100 uM of each amino acid. The final concentration of potassium acetate is adjusted to 100 mM. The reactions are pre-assembled on ice and preincubated at 25°C for 10 minutes before adding RNA, then incubated at 25°C for an additional 60 minutes. Reactions are quenched with 4 volumes of 1.25xPassive Lysis Buffer (Promega). Target RNA cleavage is assayed by RT-PCR analysis or other methods known in the art and are compared to control reactions in which DsiRNA is omitted from the reaction.

Alternately, internally-labeled target RNA for the assay is prepared by *in vitro* transcription in the presence of [alpha-^{32}P] CTP, passed over a G50 Sephadex column by spin chromatography and used as target RNA without further purification. Optionally, target RNA is 5'-^{32}P-end labeled using T4 polynucleotide kinase enzyme. Assays are performed as described above and target RNA and the specific RNA cleavage products generated by RNAi are visualized on an autoradiograph of a gel. The percentage of cleavage is determined by PHOSPHOR IMAGER® (autoradiography) quantitation of bands representing intact control RNA or RNA from control reactions without DsiRNA and the cleavage products generated by the assay.

In one embodiment, this assay is used to determine target sites in the β-catenin RNA target for DsiRNA mediated RNAi cleavage, wherein a plurality of DsiRNA constructs are screened for RNAi mediated cleavage of the β-catenin RNA target, for example, by analyzing the assay reaction by electrophoresis of labeled target RNA, or by northern blotting, as well as by other methodology well known in the art.

In certain embodiments, a DsiRNA of the invention is deemed to possess β-catenin inhibitory activity if, *e.g.*, a 50% reduction in β-catenin RNA levels is observed in a system, cell, tissue or organism, relative to a suitable control.

Additional metes and bounds for determination of β-catenin inhibitory activity of a DsiRNA of the invention are described *supra*.

Conjugation and Delivery of Anti-β-catenin DsiRNA Agents

In certain embodiments the present invention relates to a method for treating a subject having a β-catenin-associated disease or disorder, or at risk of developing a β-catenin-associated disease or disorder. In such embodiments, the DsiRNA can act as novel therapeutic agents for controlling the β-catenin-associated disease or disorder. The method comprises administering a pharmaceutical composition of the invention to the patient (*e.g.*, human), such that the expression, level and/or activity of a β-catenin RNA is reduced. The expression, level and/or activity of a polypeptide encoded by a β-catenin RNA might also be reduced by a DsiRNA of the instant invention, even where said DsiRNA is directed against a non-coding region of the β-catenin transcript (*e.g.*, a targeted 5' UTR or 3' UTR sequence). Because of their high specificity, the DsiRNAs of the present invention can specifically target β-catenin sequences of cells and tissues, optionally in an allele-specific manner where polymorphic alleles exist within an individual and/or population.

In the treatment of a β-catenin-associated disease or disorder, the DsiRNA can be brought into contact with the cells or tissue of a subject, *e.g.*, the cells or tissue of a subject exhibiting disregulation of β-catenin and/or otherwise targeted for reduction of β-catenin levels. For example, DsiRNA substantially identical to all or part of a β-catenin RNA sequence, may be brought into contact with or introduced into such a cell, either *in vivo* or *in vitro*. Similarly, DsiRNA substantially identical to all or part of a β-catenin RNA sequence may administered directly to a subject having or at risk of developing a β-catenin-associated disease or disorder.

Therapeutic use of the DsiRNA agents of the instant invention can involve use of formulations of DsiRNA agents comprising multiple different DsiRNA agent sequences. For example, two or more, three or more, four or more, five or more, etc. of the presently described agents can be combined to produce a formulation that, *e.g.*, targets multiple different regions of the β-catenin RNA, or that not only target β-catenin RNA but also target, *e.g.*, cellular target genes associated with a β-catenin-associated disease or disorder. A DsiRNA agent of the instant invention may also be constructed such that either strand of the DsiRNA agent independently targets two or

more regions of β-catenin RNA, or such that one of the strands of the DsiRNA agent targets a cellular target gene of β-catenin known in the art.

Use of multifunctional DsiRNA molecules that target more then one region of a target nucleic acid molecule can also provide potent inhibition of β-catenin RNA levels and expression. For example, a single multifunctional DsiRNA construct of the invention can target both the βc-1569 and βc-1683 sites simultaneously; additionally and/or alternatively, single or multifunctional agents of the invention can be designed to selectively target one splice variant of β-catenin over another.

Thus, the DsiRNA agents of the instant invention, individually, or in combination or in conjunction with other drugs, can be used to treat, inhibit, reduce, or prevent a β-catenin-associated disease or disorder. For example, the DsiRNA molecules can be administered to a subject or can be administered to other appropriate cells evident to those skilled in the art, individually or in combination with one or more drugs under conditions suitable for the treatment.

The DsiRNA molecules also can be used in combination with other known treatments to treat, inhibit, reduce, or prevent a β-catenin-associated disease or disorder in a subject or organism. For example, the described molecules could be used in combination with one or more known compounds, treatments, or procedures to treat, inhibit, reduce, or prevent a β-catenin-associated disease or disorder in a subject or organism as are known in the art.

A DsiRNA agent of the invention can be conjugated (*e.g.*, at its 5' or 3' terminus of its sense or antisense strand) or unconjugated to another moiety (*e.g.* a non-nucleic acid moiety such as a peptide), an organic compound (*e.g.*, a dye, cholesterol, or the like). Modifying DsiRNA agents in this way may improve cellular uptake or enhance cellular targeting activities of the resulting DsiRNA agent derivative as compared to the corresponding unconjugated DsiRNA agent, are useful for tracing the DsiRNA agent derivative in the cell, or improve the stability of the DsiRNA agent derivative compared to the corresponding unconjugated DsiRNA agent.

Methods of Introducing Nucleic Acids, Vectors, and Host Cells

DsiRNA agents of the invention may be directly introduced into a cell (*i.e.*, intracellularly); or introduced extracellularly into a cavity, interstitial space, into the circulation of an organism, introduced orally, or may be introduced by bathing a cell

or organism in a solution containing the nucleic acid. Vascular or extravascular circulation, the blood or lymph system, and the cerebrospinal fluid are sites where the nucleic acid may be introduced.

The DsiRNA agents of the invention can be introduced using nucleic acid delivery methods known in art including injection of a solution containing the nucleic acid, bombardment by particles covered by the nucleic acid, soaking the cell or organism in a solution of the nucleic acid, or electroporation of cell membranes in the presence of the nucleic acid. Other methods known in the art for introducing nucleic acids to cells may be used, such as lipid-mediated carrier transport, chemical-mediated transport, and cationic liposome transfection such as calcium phosphate, and the like. The nucleic acid may be introduced along with other components that perform one or more of the following activities: enhance nucleic acid uptake by the cell or other-wise increase inhibition of the target β-catenin RNA.

A cell having a target β-catenin RNA may be from the germ line or somatic, totipotent or pluripotent, dividing or non-dividing, parenchyma or epithelium, immortalized or transformed, or the like. The cell may be a stem cell or a differentiated cell. Cell types that are differentiated include adipocytes, fibroblasts, myocytes, cardiomyocytes, endothelium, neurons, glia, blood cells, megakaryocytes, lymphocytes, macrophages, neutrophils, eosinophils, basophils, mast cells, leukocytes, granulocytes, keratinocytes, chondrocytes, osteoblasts, osteoclasts, hepatocytes, and cells of the endocrine or exocrine glands.

Depending on the particular target β-catenin RNA sequence and the dose of DsiRNA agent material delivered, this process may provide partial or complete loss of function for the β-catenin RNA. A reduction or loss of RNA levels or expression (either β-catenin RNA expression or encoded polypeptide expression) in at least 50%, 60%, 70%, 80%, 90%, 95% or 99% or more of targeted cells is exemplary. Inhibition of β-catenin RNA levels or expression refers to the absence (or observable decrease) in the level of β-catenin RNA or β-catenin RNA-encoded protein. Specificity refers to the ability to inhibit the β-catenin RNA without manifest effects on other genes of the cell. The consequences of inhibition can be confirmed by examination of the outward properties of the cell or organism or by biochemical techniques such as RNA solution hybridization, nuclease protection, Northern hybridization, reverse transcription, gene expression monitoring with a microarray, antibody binding, enzyme linked immunosorbent assay (ELISA), Western blotting, radioimmunoassay

(RIA), other immunoassays, and fluorescence activated cell analysis (FACS). Inhibition of target β-catenin RNA sequence(s) by the DsiRNA agents of the invention also can be measured based upon the effect of administration of such DsiRNA agents upon development/progression of a β-catenin-associated disease or disorder, *e.g.*, tumor formation, growth, metastasis, etc., either *in vivo* or *in vitro*. Treatment and/or reductions in tumor or cancer cell levels can include halting or reduction of growth of tumor or cancer cell levels or reductions of, *e.g.*, 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 95% or 99% or more, and can also be measured in logarithmic terms, *e.g.*, 10-fold, 100-fold, 1000-fold, 10^5-fold, 10^6-fold, 10^7-fold reduction in cancer cell levels could be achieved *via* administration of the DsiRNA agents of the invention to cells, a tissue, or a subject.

For RNA-mediated inhibition in a cell line or whole organism, expression a reporter or drug resistance gene whose protein product is easily assayed can be measured. Such reporter genes include acetohydroxyacid synthase (AHAS), alkaline phosphatase (AP), β galactosidase (LacZ), β glucoronidase (GUS), chloramphenicol acetyltransferase (CAT), green fluorescent protein (GFP), horseradish peroxidase (HRP), luciferase (Luc), nopaline synthase (NOS), octopine synthase (OCS), and derivatives thereof. Multiple selectable markers are available that confer resistance to ampicillin, bleomycin, chloramphenicol, gentarnycin, hygromycin, kanamycin, lincomycin, methotrexate, phosphinothricin, puromycin, and tetracyclin. Depending on the assay, quantitation of the amount of gene expression allows one to determine a degree of inhibition which is greater than 10%, 33%, 50%, 90%, 95% or 99% as compared to a cell not treated according to the present invention.

Lower doses of injected material and longer times after administration of RNA silencing agent may result in inhibition in a smaller fraction of cells (e.g., at least 10%, 20%, 50%, 75%, 90%, or 95% of targeted cells). Quantitation of gene expression in a cell may show similar amounts of inhibition at the level of accumulation of target β-catenin RNA or translation of target protein. As an example, the efficiency of inhibition may be determined by assessing the amount of gene product in the cell; RNA may be detected with a hybridization probe having a nucleotide sequence outside the region used for the inhibitory DsiRNA, or translated polypeptide may be detected with an antibody raised against the polypeptide sequence of that region.

The DsiRNA agent may be introduced in an amount which allows delivery of at least one copy per cell. Higher doses (e.g., at least 5, 10, 100, 500 or 1000 copies per cell) of material may yield more effective inhibition; lower doses may also be useful for specific applications.

Pharmaceutical Compositions

In certain embodiments, the present invention provides for a pharmaceutical composition comprising the DsiRNA agent of the present invention. The DsiRNA agent sample can be suitably formulated and introduced into the environment of the cell by any means that allows for a sufficient portion of the sample to enter the cell to induce gene silencing, if it is to occur. Many formulations for dsRNA are known in the art and can be used so long as the dsRNA gains entry to the target cells so that it can act. *See*, *e.g.*, U.S. published patent application Nos. 2004/0203145 A1 and 2005/0054598 A1. For example, the DsiRNA agent of the instant invention can be formulated in buffer solutions such as phosphate buffered saline solutions, liposomes, micellar structures, and capsids. Formulations of DsiRNA agent with cationic lipids can be used to facilitate transfection of the DsiRNA agent into cells. For example, cationic lipids, such as lipofectin (U.S. Pat. No. 5,705,188), cationic glycerol derivatives, and polycationic molecules, such as polylysine (published PCT International Application WO 97/30731), can be used. Suitable lipids include Oligofectamine, Lipofectamine (Life Technologies), NC388 (Ribozyme Pharmaceuticals, Inc., Boulder, Colo.), or FuGene 6 (Roche) all of which can be used according to the manufacturer's instructions.

Such compositions typically include the nucleic acid molecule and a pharmaceutically acceptable carrier. As used herein the language "pharmaceutically acceptable carrier" includes saline, solvents, dispersion media, coatings, antibacterial and antifungal agents, isotonic and absorption delaying agents, and the like, compatible with pharmaceutical administration. Supplementary active compounds can also be incorporated into the compositions.

A pharmaceutical composition is formulated to be compatible with its intended route of administration. Examples of routes of administration include parenteral, e.g., intravenous, intradermal, subcutaneous, oral (e.g., inhalation), transdermal (topical), transmucosal, and rectal administration. Solutions or

suspensions used for parenteral, intradermal, or subcutaneous application can include the following components: a sterile diluent such as water for injection, saline solution, fixed oils, polyethylene glycols, glycerine, propylene glycol or other synthetic solvents; antibacterial agents such as benzyl alcohol or methyl parabens; antioxidants such as ascorbic acid or sodium bisulfite; cHeLating agents such as ethylenediaminetetraacetic acid; buffers such as acetates, citrates or phosphates and agents for the adjustment of tonicity such as sodium chloride or dextrose. pH can be adjusted with acids or bases, such as hydrochloric acid or sodium hydroxide. The parenteral preparation can be enclosed in ampoules, disposable syringes or multiple dose vials made of glass or plastic.

Pharmaceutical compositions suitable for injectable use include sterile aqueous solutions (where water soluble) or dispersions and sterile powders for the extemporaneous preparation of sterile injectable solutions or dispersion. For intravenous administration, suitable carriers include physiological saline, bacteriostatic water, Cremophor EL.TM. (BASF, Parsippany, N.J.) or phosphate buffered saline (PBS). In all cases, the composition must be sterile and should be fluid to the extent that easy syringability exists. It should be stable under the conditions of manufacture and storage and must be preserved against the contaminating action of microorganisms such as bacteria and fungi. The carrier can be a solvent or dispersion medium containing, for example, water, ethanol, polyol (for example, glycerol, propylene glycol, and liquid polyetheylene glycol, and the like), and suitable mixtures thereof. The proper fluidity can be maintained, for example, by the use of a coating such as lecithin, by the maintenance of the required particle size in the case of dispersion and by the use of surfactants. Prevention of the action of microorganisms can be achieved by various antibacterial and antifungal agents, for example, parabens, chlorobutanol, phenol, ascorbic acid, thimerosal, and the like. In many cases, it will be preferable to include isotonic agents, for example, sugars, polyalcohols such as manitol, sorbitol, sodium chloride in the composition. Prolonged absorption of the injectable compositions can be brought about by including in the composition an agent which delays absorption, for example, aluminum monostearate and gelatin.

Sterile injectable solutions can be prepared by incorporating the active compound in the required amount in a selected solvent with one or a combination of ingredients enumerated above, as required, followed by filtered sterilization.

Generally, dispersions are prepared by incorporating the active compound into a sterile vehicle, which contains a basic dispersion medium and the required other ingredients from those enumerated above. In the case of sterile powders for the preparation of sterile injectable solutions, the preferred methods of preparation are vacuum drying and freeze-drying which yields a powder of the active ingredient plus any additional desired ingredient from a previously sterile-filtered solution thereof.

Oral compositions generally include an inert diluent or an edible carrier. For the purpose of oral therapeutic administration, the active compound can be incorporated with excipients and used in the form of tablets, troches, or capsules, e.g., gelatin capsules. Oral compositions can also be prepared using a fluid carrier for use as a mouthwash. Pharmaceutically compatible binding agents, and/or adjuvant materials can be included as part of the composition. The tablets, pills, capsules, troches and the like can contain any of the following ingredients, or compounds of a similar nature: a binder such as microcrystalline cellulose, gum tragacanth or gelatin; an excipient such as starch or lactose, a disintegrating agent such as alginic acid, Primogel, or corn starch; a lubricant such as magnesium stearate or Sterotes; a glidant such as colloidal silicon dioxide; a sweetening agent such as sucrose or saccharin; or a flavoring agent such as peppermint, methyl salicylate, or orange flavoring.

For administration by inhalation, the compounds are delivered in the form of an aerosol spray from pressured container or dispenser which contains a suitable propellant, e.g., a gas such as carbon dioxide, or a nebulizer. Such methods include those described in U.S. Pat. No. 6,468,798.

Systemic administration can also be by transmucosal or transdermal means. For transmucosal or transdermal administration, penetrants appropriate to the barrier to be permeated are used in the formulation. Such penetrants are generally known in the art, and include, for example, for transmucosal administration, detergents, bile salts, and fusidic acid derivatives. Transmucosal administration can be accomplished through the use of nasal sprays or suppositories. For transdermal administration, the active compounds are formulated into ointments, salves, gels, or creams as generally known in the art.

The compounds can also be prepared in the form of suppositories (e.g., with conventional suppository bases such as cocoa butter and other glycerides) or retention enemas for rectal delivery.

The compounds can also be administered by transfection or infection using

methods known in the art, including but not limited to the methods described in McCaffrey et al. (2002), Nature, 418(6893), 38-9 (hydrodynamic transfection); Xia et al. (2002), Nature Biotechnol., 20(10), 1006-10 (viral-mediated delivery); or Putnam (1996), Am. J. Health Syst. Pharm. 53(2), 151-160, erratum at Am. J. Health Syst. Pharm. 53(3), 325 (1996).

The compounds can also be administered by a method suitable for administration of nucleic acid agents, such as a DNA vaccine. These methods include gene guns, bio injectors, and skin patches as well as needle-free methods such as the micro-particle DNA vaccine technology disclosed in U.S. Pat. No. 6,194,389, and the mammalian transdermal needle-free vaccination with powder-form vaccine as disclosed in U.S. Pat. No. 6,168,587. Additionally, intranasal delivery is possible, as described in, inter alia, Hamajima et al. (1998), Clin. Immunol. Immunopathol., 88(2), 205-10. Liposomes (e.g., as described in U.S. Pat. No. 6,472,375) and microencapsulation can also be used. Biodegradable targetable microparticle delivery systems can also be used (e.g., as described in U.S. Pat. No. 6,471,996).

In one embodiment, the active compounds are prepared with carriers that will protect the compound against rapid elimination from the body, such as a controlled release formulation, including implants and microencapsulated delivery systems. Biodegradable, biocompatible polymers can be used, such as ethylene vinyl acetate, polyanhydrides, polyglycolic acid, collagen, polyorthoesters, and polylactic acid. Such formulations can be prepared using standard techniques. The materials can also be obtained commercially from Alza Corporation and Nova Pharmaceuticals, Inc. Liposomal suspensions (including liposomes targeted to infected cells with monoclonal antibodies to viral antigens) can also be used as pharmaceutically acceptable carriers. These can be prepared according to methods known to those skilled in the art, for example, as described in U.S. Pat. No. 4,522,811.

Toxicity and therapeutic efficacy of such compounds can be determined by standard pharmaceutical procedures in cell cultures or experimental animals, e.g., for determining the LD_{50} (the dose lethal to 50% of the population) and the ED_{50} (the dose therapeutically effective in 50% of the population). The dose ratio between toxic and therapeutic effects is the therapeutic index and it can be expressed as the ratio LD_{50}/ED_{50}. Compounds which exhibit high therapeutic indices are preferred. While compounds that exhibit toxic side effects may be used, care should be taken to design a delivery system that targets such compounds to the site of affected tissue in order to

minimize potential damage to uninfected cells and, thereby, reduce side effects.

The data obtained from the cell culture assays and animal studies can be used in formulating a range of dosage for use in humans. The dosage of such compounds lies preferably within a range of circulating concentrations that include the ED_{50} with little or no toxicity. The dosage may vary within this range depending upon the dosage form employed and the route of administration utilized. For a compound used in the method of the invention, the therapeutically effective dose can be estimated initially from cell culture assays. A dose may be formulated in animal models to achieve a circulating plasma concentration range that includes the IC_{50} (*i.e.*, the concentration of the test compound which achieves a half-maximal inhibition of symptoms) as determined in cell culture. Such information can be used to more accurately determine useful doses in humans. Levels in plasma may be measured, for example, by high performance liquid chromatography.

As defined herein, a therapeutically effective amount of a nucleic acid molecule (i.e., an effective dosage) depends on the nucleic acid selected. For instance, if a plasmid encoding a DsiRNA agent is selected, single dose amounts in the range of approximately 1 pg to 1000 mg may be administered; in some embodiments, 10, 30, 100, or 1000 pg, or 10, 30, 100, or 1000 ng, or 10, 30, 100, or 1000 μg, or 10, 30, 100, or 1000 mg may be administered. In some embodiments, 1-5 g of the compositions can be administered. The compositions can be administered one from one or more times per day to one or more times per week; including once every other day. The skilled artisan will appreciate that certain factors may influence the dosage and timing required to effectively treat a subject, including but not limited to the severity of the disease or disorder, previous treatments, the general health and/or age of the subject, and other diseases present. Moreover, treatment of a subject with a therapeutically effective amount of a protein, polypeptide, or antibody can include a single treatment or, preferably, can include a series of treatments.

The nucleic acid molecules of the invention can be inserted into expression constructs, e.g., viral vectors, retroviral vectors, expression cassettes, or plasmid viral vectors, e.g., using methods known in the art, including but not limited to those described in Xia et al., (2002), supra. Expression constructs can be delivered to a subject by, for example, inhalation, orally, intravenous injection, local administration (see U.S. Pat. No. 5,328,470) or by stereotactic injection (see e.g., Chen et al. (1994),

Proc. Natl. Acad. Sci. USA, 91, 3054-3057). The pharmaceutical preparation of the delivery vector can include the vector in an acceptable diluent, or can comprise a slow release matrix in which the delivery vehicle is imbedded. Alternatively, where the complete delivery vector can be produced intact from recombinant cells, *e.g.*, retroviral vectors, the pharmaceutical preparation can include one or more cells which produce the gene delivery system.

The expression constructs may be constructs suitable for use in the appropriate expression system and include, but are not limited to retroviral vectors, linear expression cassettes, plasmids and viral or virally-derived vectors, as known in the art. Such expression constructs may include one or more inducible promoters, RNA Pol III promoter systems such as U6 snRNA promoters or H1 RNA polymerase III promoters, or other promoters known in the art. The constructs can include one or both strands of the siRNA. Expression constructs expressing both strands can also include loop structures linking both strands, or each strand can be separately transcribed from separate promoters within the same construct. Each strand can also be transcribed from a separate expression construct, *e.g.*, Tuschl (2002, *Nature Biotechnol* 20: 500-505).

It can be appreciated that the method of introducing DsiRNA agents into the environment of the cell will depend on the type of cell and the make up of its environment. For example, when the cells are found within a liquid, one preferable formulation is with a lipid formulation such as in lipofectamine and the DsiRNA agents can be added directly to the liquid environment of the cells. Lipid formulations can also be administered to animals such as by intravenous, intramuscular, or intraperitoneal injection, or orally or by inhalation or other methods as are known in the art. When the formulation is suitable for administration into animals such as mammals and more specifically humans, the formulation is also pharmaceutically acceptable. Pharmaceutically acceptable formulations for administering oligonucleotides are known and can be used. In some instances, it may be preferable to formulate DsiRNA agents in a buffer or saline solution and directly inject the formulated DsiRNA agents into cells, as in studies with oocytes. The direct injection of DsiRNA agents duplexes may also be done. For suitable methods of introducing dsRNA (*e.g.*, DsiRNA agents), see U.S. published patent application No. 2004/0203145 A1.

Suitable amounts of a DsiRNA agent must be introduced and these amounts

can be empirically determined using standard methods. Typically, effective concentrations of individual DsiRNA agent species in the environment of a cell will be 50 nanomolar or less, 10 nanomolar or less, or compositions in which concentrations of 1 nanomolar or less can be used. In another embodiment, methods utilizing a concentration of 200 picomolar or less, 100 picomolar or less, 50 picomolar or less, 20 picomolar or less, and even a concentration of 10 picomolar or less, 5 picomolar or less, 2 picomolar or less or 1 picomolar or less can be used in many circumstances.

The method can be carried out by addition of the DsiRNA agent compositions to an extracellular matrix in which cells can live provided that the DsiRNA agent composition is formulated so that a sufficient amount of the DsiRNA agent can enter the cell to exert its effect. For example, the method is amenable for use with cells present in a liquid such as a liquid culture or cell growth media, in tissue explants, or in whole organisms, including animals, such as mammals and especially humans.

The level or activity of a β-catenin RNA can be determined by a suitable method now known in the art or that is later developed. It can be appreciated that the method used to measure a target RNA and/or the "expression" of a target gene can depend upon the nature of the target gene and its encoded RNA. For example, where the target β-catenin RNA sequence encodes a protein, the term "expression" can refer to a protein or the β-catenin RNA/transcript derived from the β-catenin gene (either genomic or of exogenous origin). In such instances the expression of the target β-catenin RNA can be determined by measuring the amount of β-catenin RNA/transcript directly or by measuring the amount of β-catenin protein. Protein can be measured in protein assays such as by staining or immunoblotting or, if the protein catalyzes a reaction that can be measured, by measuring reaction rates. All such methods are known in the art and can be used. Where target β-catenin RNA levels are to be measured, art-recognized methods for detecting RNA levels can be used (*e.g.*, RT-PCR, Northern Blotting, etc.). In targeting β-catenin RNAs with the DsiRNA agents of the instant invention, it is also anticipated that measurement of the efficacy of a DsiRNA agent in reducing levels of β-catenin RNA or protein in a subject, tissue, in cells, either *in vitro* or *in vivo*, or in cell extracts can also be used to determine the extent of reduction of β-catenin-associated phenotypes (*e.g.*, disease or disorders, *e.g.*, cancer or tumor formation, growth, metastasis, spread, etc.). The above measurements can be made on cells, cell extracts, tissues, tissue extracts or other

suitable source material.

The determination of whether the expression of a β-catenin RNA has been "reduced" can be by a suitable method that can reliably detect changes in RNA levels. Typically, the determination is made by introducing into the environment of a cell undigested DsiRNA such that at least a portion of that DsiRNA agent enters the cytoplasm, and then measuring the level of the target RNA. The same measurement is made on identical untreated cells and the results obtained from each measurement are compared.

The DsiRNA agent can be formulated as a pharmaceutical composition which comprises a pharmacologically effective amount of a DsiRNA agent and pharmaceutically acceptable carrier. A pharmacologically or therapeutically effective amount refers to that amount of a DsiRNA agent effective to produce the intended pharmacological, therapeutic or preventive result. The phrases "pharmacologically effective amount" and "therapeutically effective amount" or simply "effective amount" refer to that amount of an RNA effective to produce the intended pharmacological, therapeutic or preventive result. For example, if a given clinical treatment is considered effective when there is at least a 20% reduction in a measurable parameter associated with a disease or disorder, a therapeutically effective amount of a drug for the treatment of that disease or disorder is the amount necessary to effect at least a 20% reduction in that parameter.

Suitably formulated pharmaceutical compositions of this invention can be administered by means known in the art such as by parenteral routes, including intravenous, intramuscular, intraperitoneal, subcutaneous, transdermal, airway (aerosol), rectal, vaginal and topical (including buccal and sublingual) administration. In some embodiments, the pharmaceutical compositions are administered by intravenous or intraparenteral infusion or injection.

In general, a suitable dosage unit of dsRNA will be in the range of 0.001 to 0.25 milligrams per kilogram body weight of the recipient per day, or in the range of 0.01 to 20 micrograms per kilogram body weight per day, or in the range of 0.01 to 10 micrograms per kilogram body weight per day, or in the range of 0.10 to 5 micrograms per kilogram body weight per day, or in the range of 0.1 to 2.5 micrograms per kilogram body weight per day. Pharmaceutical composition comprising the dsRNA can be administered once daily. However, the therapeutic agent may also be dosed in dosage units containing two, three, four, five, six or more

sub-doses administered at appropriate intervals throughout the day. In that case, the dsRNA contained in each sub-dose must be correspondingly smaller in order to achieve the total daily dosage unit. The dosage unit can also be compounded for a single dose over several days, e.g., using a conventional sustained release formulation which provides sustained and consistent release of the dsRNA over a several day period. Sustained release formulations are well known in the art. In this embodiment, the dosage unit contains a corresponding multiple of the daily dose. Regardless of the formulation, the pharmaceutical composition must contain dsRNA in a quantity sufficient to inhibit expression of the target gene in the animal or human being treated. The composition can be compounded in such a way that the sum of the multiple units of dsRNA together contain a sufficient dose.

Data can be obtained from cell culture assays and animal studies to formulate a suitable dosage range for humans. The dosage of compositions of the invention lies within a range of circulating concentrations that include the ED_{50} (as determined by known methods) with little or no toxicity. The dosage may vary within this range depending upon the dosage form employed and the route of administration utilized. For a compound used in the method of the invention, the therapeutically effective dose can be estimated initially from cell culture assays. A dose may be formulated in animal models to achieve a circulating plasma concentration range of the compound that includes the IC_{50} (i.e., the concentration of the test compound which achieves a half-maximal inhibition of symptoms) as determined in cell culture. Such information can be used to more accurately determine useful doses in humans. Levels of dsRNA in plasma may be measured by standard methods, for example, by high performance liquid chromatography.

The pharmaceutical compositions can be included in a kit, container, pack, or dispenser together with instructions for administration.

Methods of Treatment

The present invention provides for both prophylactic and therapeutic methods of treating a subject at risk of (or susceptible to) a disease or disorder caused, in whole or in part, by β-catenin (*e.g.*, misregulation and/or elevation of β-catenin transcript and/or β-catenin protein levels), or treatable *via* selective targeting of β-catenin.

"Treatment", or "treating" as used herein, is defined as the application or administration of a therapeutic agent (*e.g.*, a DsiRNA agent or vector or transgene encoding same) to a patient, or application or administration of a therapeutic agent to an isolated tissue or cell line from a patient, who has the disease or disorder, a symptom of disease or disorder or a predisposition toward a disease or disorder, with the purpose to cure, heal, alleviate, relieve, alter, remedy, ameliorate, improve or affect the disease or disorder, the symptoms of the disease or disorder, or the predisposition toward disease.

In one aspect, the invention provides a method for preventing in a subject, a disease or disorder as described above (including, *e.g.*, prevention of the commencement of transforming events within a subject *via* inhibition of β-catenin expression), by administering to the subject a therapeutic agent (*e.g.*, a DsiRNA agent or vector or transgene encoding same). Subjects at risk for the disease can be identified by, for example, one or a combination of diagnostic or prognostic assays as described herein. Administration of a prophylactic agent can occur prior to the detection of, *e.g.*, cancer in a subject, or the manifestation of symptoms characteristic of the disease or disorder, such that the disease or disorder is prevented or, alternatively, delayed in its progression.

Another aspect of the invention pertains to methods of treating subjects therapeutically, *i.e.*, altering the onset of symptoms of the disease or disorder. These methods can be performed *in vitro* (*e.g.*, by culturing the cell with the DsiRNA agent) or, alternatively, *in vivo* (*e.g.*, by administering the DsiRNA agent to a subject).

With regards to both prophylactic and therapeutic methods of treatment, such treatments may be specifically tailored or modified, based on knowledge obtained from the field of pharmacogenomics. "Pharmacogenomics", as used herein, refers to the application of genomics technologies such as gene sequencing, statistical genetics, and gene expression analysis to drugs in clinical development and on the market. More specifically, the term refers the study of how a patient's genes determine his or her response to a drug (*e.g.*, a patient's "drug response phenotype", or "drug response genotype"). Thus, another aspect of the invention provides methods for tailoring an individual's prophylactic or therapeutic treatment with either the target β-catenin RNA molecules of the present invention or target β-catenin RNA modulators according to that individual's drug response genotype. Pharmacogenomics allows a clinician or

physician to target prophylactic or therapeutic treatments to patients who will most benefit from the treatment and to avoid treatment of patients who will experience toxic drug-related side effects.

Therapeutic agents can be tested in a selected animal model. For example, a DsiRNA agent (or expression vector or transgene encoding same) as described herein can be used in an animal model to determine the efficacy, toxicity, or side effects of treatment with said agent. Alternatively, an agent (*e.g.*, a therapeutic agent) can be used in an animal model to determine the mechanism of action of such an agent.

Models Useful to Evaluate the Down-Regulation of β-catenin mRNA Levels and Expression

Cell Culture

The DsiRNA agents of the invention can be tested for cleavage activity *in vivo*, for example, using the following procedure. The nucleotide sequences within the β-catenin cDNA targeted by the DsiRNA agents of the invention are shown in the above β-catenin sequences.

The DsiRNA reagents of the invention can be tested in cell culture using HeLa or other mammalian cells to determine the extent of β-catenin RNA and β-catenin protein inhibition. DsiRNA reagents (*e.g.*, see Figure 1, and above-recited structures) are selected against the β-catenin target as described herein. β-catenin RNA inhibition is measured after delivery of these reagents by a suitable transfection agent to, for example, cultured HeLa cells or other transformed or non-transformed mammalian cells in culture. Relative amounts of target β-catenin RNA are measured versus actin or other appropriate control using real-time PCR monitoring of amplification (*e.g.*, ABI 7700 TAQMAN®). A comparison is made to a mixture of oligonucleotide sequences made to unrelated targets or to a randomized DsiRNA control with the same overall length and chemistry, but randomly substituted at each position, or simply to appropriate vehicle-treated or untreated controls. Primary and secondary lead reagents are chosen for the target and optimization performed. After an optimal transfection agent concentration is chosen, a RNA time-course of inhibition is performed with the lead DsiRNA molecule.

TAQMAN® (Real-Time PCR Monitoring of Amplification) and Lightcycler Quantification of mRNA

Total RNA is prepared from cells following DsiRNA delivery, for example, using Ambion Rnaqueous 4-PCR purification kit for large scale extractions, or Promega SV96 for 96-well assays. For Taqman analysis, dual-labeled probes are synthesized with, for example, the reporter dyes FAM or VIC covalently linked at the 5'-end and the quencher dye TAMARA conjugated to the 3'-end. PCR amplifications are performed on, for example, an ABI PRISM 7700 Sequence detector using 50 uL reactions consisting of 10 uL total RNA, 100 nM forward primer, 100 mM reverse primer, 100 nM probe, 1xTaqMan PCR reaction buffer (PE-Applied Biosystems), 5.5 mM MgCl2, 100 uM each dATP, dCTP, dGTP and dTTP, 0.2U RNase Inhibitor (Promega), 0.025U AmpliTaq Gold (PE-Applied Biosystems) and 0.2U M-MLV Reverse Transcriptase (Promega). The thermal cycling conditions can consist of 30 minutes at 48°C, 10 minutes at 95°C, followed by 40 cycles of 15 seconds at 95°C and 1 minute at 60°C. Quantitation of target β-catenin mRNA level is determined relative to standards generated from serially diluted total cellular RNA (300, 100, 30, 10 ng/rxn) and normalizing to, for example, 36B4 mRNA in either parallel or same tube TaqMan reactions.

Western Blotting

Cellular protein extracts can be prepared using a standard micro preparation technique (for example using RIPA buffer). Cellular protein extracts are run on 4-12% Tris-Glycine polyacrylamide gel and transferred onto membranes. Non-specific binding can be blocked by incubation, for example, with 5% non-fat milk for 1 hour followed by primary antibody for 16 hours at 4°C. Following washes, the secondary antibody is applied, for example (1:10,000 dilution) for 1 hour at room temperature and the signal detected on a VersaDoc imaging system

In several cell culture systems, cationic lipids have been shown to enhance the bioavailability of oligonucleotides to cells in culture (Bennet, et al., 1992, Mol. Pharmacology, 41, 1023-1033). In one embodiment, DsiRNA molecules of the invention are complexed with cationic lipids for cell culture experiments. DsiRNA and cationic lipid mixtures are prepared in serum-free OptimMEM (InVitrogen) immediately prior to addition to the cells. OptiMEM is warmed to room temperature (about 20-25°C) and cationic lipid is added to the final desired concentration. DsiRNA molecules are added to OptiMEM to the desired concentration and the solution is added to the diluted DsiRNA and incubated for 15 minutes at room

temperature. In dose response experiments, the RNA complex is serially diluted into OptiMEM prior to addition of the cationic lipid.

Animal Models

Evaluating the efficacy of anti-β-catenin DsiRNA agents in animal models is performed as follows. Animal models of cancer and/or proliferative diseases, conditions, or disorders as are known in the art can be used for evaluation of the efficacy, potency, toxicity, etc. of anti-β-catenin DsiRNAs. Suitable animal models of proliferative disease include, *e.g.*, transgenic rodents (*e.g.*, mice, rats) bearing gain of function proto-oncogenes (*e.g.*, Myc, Src) and/or loss of function of tumour suppressor proteins (*e.g.*, p53, Rb) or rodents that have been exposed to radiation or chemical mutagens that induce DNA changes that facilitate neoplastic transformation. Many such animal models are commercially available, for example, from The Jackson Laboratory, Bar Harbor, ME, USA. These animal models may be used as a source cells or tissue for assays of the compositions of the invention. Such models can also be used or adapted for use for pre-clinical evaluation of the efficacy of DsiRNA compositions of the invention in modulating β-catenin gene expression toward therapeutic use.

As in cell culture models, the most β-catenin relevant mouse tumor xenografts are those derived from cancer cells that express β-catenin proteins, such as SW480 or HCT116 colon cancer cells. Xenograft models of colon cancer relevant to study of the anti-tumor effect of modulating β-catenin have been described by various groups. A xenograft animal model useful according to the in vention is described in Verma *et al.* 2003, *Clinical Cancer Research* 9: 1291-1300. Use of these models has demonstrated that inhibition of β-catenin expression by anti-β-catenin agents causes inhibition of tumor growth in animals.

Such models can be used in evaluating the efficacy of DsiRNA molecules of the invention to inhibit β-catenin levels, expression, tumor/cancer formation, growth, spread, development of other β-catenin-associated phenotypes, diseases or disorders, etc. These models and others can similarly be used to evaluate the safety/toxicity and efficacy of DsiRNA molecules of the invention in a pre-clinical setting.

Examples of animal model systems useful for evaluation of the β-catenin-targeting DsiRNAs of the invention include wild-type mice, and orthotopic or subcutaneous SW480 or HCT116 xenograft tumor model mice. In an exemplary *in*

vivo experiment, DsiRNAs of the invention are tail vein injected into such mouse models at doses ranging from 1 to 10 mg/kg or, alternatively, repeated doses are administered at single-dose IC_{50} levels, and organs (*e.g.*, prostate, liver, kidney, lung, pancreas, colon, skin, spleen, bone marrow, lymph nodes, mammary fat pad, etc.) are harvested 24 hours after administration of the final dose. Such organs are then evaluated for mouse and/or human β-catenin levels, depending upon the model used. Duration of action can also be examined at, *e.g.*, 1, 4, 7, 14, 21 or more days after final DsiRNA administration.

The practice of the present invention employs, unless otherwise indicated, conventional techniques of chemistry, molecular biology, microbiology, recombinant DNA, genetics, immunology, cell biology, cell culture and transgenic biology, which are within the skill of the art. See, e.g., Maniatis et al., 1982, Molecular Cloning (Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y.); Sambrook et al., 1989, Molecular Cloning, 2nd Ed. (Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y.); Sambrook and Russell, 2001, Molecular Cloning, 3rd Ed. (Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y.); Ausubel et al., 1992), Current Protocols in Molecular Biology (John Wiley & Sons, including periodic updates); Glover, 1985, DNA Cloning (IRL Press, Oxford); Anand, 1992; Guthrie and Fink, 1991; Harlow and Lane, 1988, Antibodies, (Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y.); Jakoby and Pastan, 1979; Nucleic Acid Hybridization (B. D. Hames & S. J. Higgins eds. 1984); Transcription And Translation (B. D. Hames & S. J. Higgins eds. 1984); Culture Of Animal Cells (R. I. Freshney, Alan R. Liss, Inc., 1987); Immobilized Cells And Enzymes (IRL Press, 1986); B. Perbal, A Practical Guide To Molecular Cloning (1984); the treatise, Methods In Enzymology (Academic Press, Inc., N.Y.); Gene Transfer Vectors For Mammalian Cells (J. H. Miller and M. P. Calos eds., 1987, Cold Spring Harbor Laboratory); Methods In Enzymology, Vols. 154 and 155 (Wu et al. eds.), Immunochemical Methods In Cell And Molecular Biology (Mayer and Walker, eds., Academic Press, London, 1987); Handbook Of Experimental Immunology, Volumes I-IV (D. M. Weir and C. C. Blackwell, eds., 1986); Riott, Essential Immunology, 6th Edition, Blackwell Scientific Publications, Oxford, 1988; Hogan et al., Manipulating the Mouse Embryo, (Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y., 1986); Westerfield, M., The zebrafish book. A guide for the laboratory use of zebrafish (Danio rerio), (4th Ed., Univ. of

Oregon Press, Eugene, 2000).

Unless otherwise defined, all technical and scientific terms used herein have the same meaning as commonly understood by one of ordinary skill in the art to which this invention belongs. Although methods and materials similar or equivalent to those described herein can be used in the practice or testing of the present invention, suitable methods and materials are described below. All publications, patent applications, patents, and other references mentioned herein are incorporated by reference in their entirety. In case of conflict, the present specification, including definitions, will control. In addition, the materials, methods, and examples are illustrative only and not intended to be limiting.

EXAMPLES

The present invention is described by reference to the following Examples, which are offered by way of illustration and are not intended to limit the invention in any manner. Standard techniques well known in the art or the techniques specifically described below were utilized.

Anti-β-Catenin DsiRNAs

Anti-β-catenin DsiRNA agents were provided as follows.

Example 1: Preparation and Assessment of Double-Stranded RNA Oligonucleotides

Oligonucleotide Synthesis and Purification

DsiRNA molecules according to the invention target sites on human β-catenin sequences or mouse β-catenin sequences (such DsiRNAs are termed "common" DsiRNAs). The sequence of one strand of each DsiRNA molecule was complementary to the target β-catenin site sequences described above. The DsiRNA molecules were chemically synthesized using methods described herein. Generally, DsiRNA constructs were synthesized using solid phase oligonucleotide synthesis methods as described for 19-23mer siRNAs (see for example Usman *et al.*, U.S. Pat. Nos. 5,804,683; 5,831,071; 5,998,203; 6,117,657; 6,353,098; 6,362,323; 6,437,117; 6,469,158; Scaringe *et al.*, U.S. Pat. Nos. 6,111,086; 6,008,400; 6,111,086).

Individual RNA strands were synthesized and HPLC purified according to standard methods (Integrated DNA Technologies, Coralville, Iowa). For example, RNA oligonucleotides were synthesized using solid phase phosphoramidite chemistry, deprotected and desalted on NAP-5 columns (Amersham Pharmacia Biotech, Piscataway, N.J.) using standard techniques (Damha and Olgivie, 1993, *Methods Mol Biol* 20: 81-114; Wincott *et al.*, 1995, *Nucleic Acids Res* 23: 2677-84). The oligomers were purified using ion-exchange high performance liquid chromatography (IE-HPLC) on an Amersham Source 15Q column (1.0 cm x 25 cm; Amersham Pharmacia Biotech, Piscataway, N.J.) using a 15 min step-linear gradient. The gradient varies from 90:10 Buffers A:B to 52:48 Buffers A:B, where Buffer A is 100 mM Tris pH 8.5 and Buffer B is 100 mM Tris pH 8.5, 1 M NaCl. Samples were monitored at 260 nm and peaks corresponding to the full-length oligonucleotide species are collected, pooled, desalted on NAP-5 columns, and lyophilized.

The purity of each oligomer was determined by capillary electrophoresis (CE) on a Beckman PACE 5000 (Beckman Coulter, Inc., Fullerton, Calif.). The CE capillaries had a 100 μm inner diameter and contains ssDNA 100R Gel (Beckman-Coulter). Typically, about 0.6 nmole of oligonucleotide was injected into a capillary, run in an electric field of 444 V/cm and detected by UV absorbance at 260 nm. Denaturing Tris-Borate-7 M-urea running buffer was purchased from Beckman-Coulter. Oligoribonucleotides were obtained that are at least 90% pure as assessed by CE for use in experiments described below. Compound identity was verified by matrix-assisted laser desorption ionization time-of-flight (MALDI-TOF) mass spectroscopy on a Voyager DE.TM. Biospectometry Work Station (Applied Biosystems, Foster City, Calif.) following the manufacturer's recommended protocol. Relative molecular masses of all oligomers were obtained, often within 0.2% of expected molecular mass.

Preparation of Duplexes

Single-stranded RNA (ssRNA) oligomers were resuspended, e.g., at 100 μM concentration in duplex buffer consisting of 100 mM potassium acetate, 30 mM HEPES, pH 7.5. Complementary sense and antisense strands were mixed in equal molar amounts to yield a final solution of, *e.g.*, 50 μM duplex. Samples were heated to 100°C for 5' in RNA buffer (IDT) and allowed to cool to room temperature before

use. Double-stranded RNA (dsRNA) oligomers were stored at -20°C. Single-stranded RNA oligomers were stored lyophilized or in nuclease-free water at -80°C.

Nomenclature

For consistency, the following nomenclature has been employed in the instant specification. Names given to duplexes indicate the length of the oligomers and the presence or absence of overhangs. A "25/27" is an asymmetric duplex having a 25 base sense strand and a 27 base antisense strand with a 2-base 3'-overhang. A "27/25" is an asymmetric duplex having a 27 base sense strand and a 25 base antisense strand.

Cell culture and RNA Transfection

HeLa cells were obtained from ATCC and maintained in DMEM (HyClone) supplemented with 10% fetal bovine serum (HyClone) at 37°C under 5% CO_2. Hepa 1-6 cells were obtained from ATCC and maintained in DMEM (HyClone) supplemented with 10% fetal bovine serum (HyClone) at 37°C under 5% CO_2. For RNA transfections, cells were transfected with DsiRNAs as indicated at a final concentration of 1 nM or 0.1 nM using Lipofectamine™ RNAiMAX (Invitrogen) and following manufacturer's instructions. Briefly, an aliquot of stock solution of each DsiRNA was mixed with Opti-MEM I (Invitrogen) to reach a volume of 87.5uL; Lipofectamine™ RNAiMAX was diluted in OptiMEM to 87.5uL. The resulting 150μL mix was added at 50uL per well into triplicate individual wells of 96 well plates and incubated for 20 min at RT to allow DsiRNA:Lipofectamine™ RNAiMAX complexes to form. Meanwhile, HeLa cells were trypsinized and resuspended in medium. Finally, 100uL of the cell suspension were added to each well (final volume 150uL) and plates were placed into the incubator for 24 hours.

Assessment of β-catenin Inhibition

β-catenin target gene knockdown was determined by qRT-PCR, with values normalized to HPRT and SFRS9 housekeeping genes, and to transfections with control DsiRNAs.

RNA isolation and analysis

Media was aspirated, and total RNA was extracted using the SV96 kit (Promega). Approximately 100ng of total RNA was reverse-transcribed using SuperscriptII,

Oligo dT, and random hexamers following manufacturer's instructions. Typically, one-sixth of the resulting cDNA was analyzed by qPCR using primers and probes specific for both the β-catenin gene and for the human genes HPRT-1 and SFRS9. An ABI 7700 was used for the amplification reactions. Each sample was tested in triplicate. Relative β-catenin RNA levels were normalized to HPRT1 and SFRS9 RNA levels and compared with RNA levels obtained in control samples treated with the control DsiRNAs.

Example 2: DsiRNA Inhibition of β-Catenin – Primary Screen

DsiRNA molecules targeting β-catenin were designed and synthesized as described above and tested in HeLa cells for inhibition. For transfection, annealed DsiRNAs were mixed with the transfection reagent (Lipofectamine™ RNAiMAX, Invitrogen) in a volume of 50 µl/well and incubated for 20 minutes at room temperature. The HeLa (human) or Hepa 1-6 (mouse) cells were trypsinized, resuspended in media, and added to wells (100uL per well) to give a final DsiRNA concentration of 1 nM in a volume of 150 µl. Each DsiRNA transfection mixture was added to 3 wells for triplicate DsiRNA treatments. Cells were incubated at 37°C for 24 hours in the continued presence of the DsiRNA transfection mixture. At 24 hours, RNA was prepared from each well of treated cells. The supernatants with the transfection mixtures were first removed and discarded, then the cells were lysed and RNA prepared from each well. Target β-catenin RNA levels following treatment were evaluated by qRT-PCR for the β-catenin target gene, with values normalized to those obtained for controls. Triplicate data was averaged and the % error determined for each treatment. Normalized data were graphed and the reduction of target mRNA by active DsiRNAs in comparison to controls was determined.

β-catenin targeting DsiRNAs of Tables 2-4 above were examined for β-catenin inhibitory efficacy..

488 asymmetric DsiRNAs (tested DsiRNAs possessed a 25/27mer structure) were prepared and tested for β-catenin inhibitory efficacy in human HeLa and mouse Hepa 1-6 cells incubated in the presence of such DsiRNAs at a concentration of 1 nM. Sequences and structures of all 488 tested asymmetric DsiRNAs are shown above in Tables 2-4, with underlined nucleotide residues indicating 2'-O-methyl modified

residues; ribonucleotide residues are shown as UPPER CASE, while deoxyribonucleotide residues are shown as lower case.

Assay of these 488 β-catenin targeting DsiRNAs in human HeLa and mouse Hepa 1-6 cells at 1 nM revealed the following β-catenin inhibitory efficacies, presented in Tables 14-17. β-catenin levels were determined using qPCR assays positioned at locations within the β-catenin transcript (for human HeLa cell experiments, paired qPCR assays were performed for the human β-catenin 1297-1397 amplicon (Yakima Yellow) and the human β-catenin 3506-3659 amplicon (FAM); for mouse Hepa 1-6 cell experiments, paired qPCR assays were performed for the mouse β-catenin 1232-1394 amplicon (FAM) and mouse β-catenin 2848-2930 amplicon (MAX); values presented in Tables 14-17 below are averaged values of these paired qPCR assays).

Table 14: β-Catenin Inhibitory Efficacy of DsiRNAs Assayed at 1 nM in Human HeLa Cells

Tested DsiRNA (Target Location in human β-catenin transcript variant 1)	Mouse β-catenin Target Location (in NM_007614.2)	% Remaining β-catenin mRNA ± % Error
βc-240		5 ± 21.1
βc-244		3.8 ± 2.8
βc-253		5.5 ± 1.7
βc-259		3.6 ± 11.3
βc-264		4.1 ± 9.5
βc-496		3.9 ± 5.3
βc-516		4.4 ± 6.5
βc-522		8.6 ± 11.7
βc-524		6.7 ± 10.9
βc-540		5.3 ± 4.7
βc-582		3.8 ± 6.8
βc-686		2.1 ± 2.8
βc-692		2.2 ± 4.9
βc-697		3.9 ± 4.4
βc-707		4.3 ± 6.9
βc-753		5.2 ± 6.1
βc-870		3 ± 7.7
βc-889		2.9 ± 4.9
βc-1060		4 ± 3.6
βc-1065		7.7 ± 4.6
βc-1070		4.6 ± 2.1
βc-1076		7.1 ± 5.1
βc-1154		3.2 ± 10.7
βc-1180		4.8 ± 4
βc-1185		7.6 ± 9
βc-1260		8.7 ± 5.5

βc-1294		16.7 ± 6.2
βc-1412		6.4 ± 12.1
βc-1418		6.1 ± 10.4
βc-1423		153.2 ± 5.2
βc-1520		8.5 ± 10.4
βc-1561		7.5 ± 5.8
βc-1571		5 ± 3.4
βc-1579		5.9 ± 4.4
βc-1620		3.7 ± 4.1
βc-1816		4.9 ± 3.4
βc-1987		8.2 ± 3.1
βc-1989		10.6 ± 4.9
βc-2111		12.1 ± 2.2
βc-2282		6.2 ± 5.6
βc-2624		12 ± 46.4
βc-2647		103.1 ± 4.4
βc-2770		121.5 ± 5.1
βc-2848		107.6 ± 4.3
βc-2874		44.2 ± 3.3
βc-2909		100.8 ± 4.9
βc-3074		81.1 ± 5.5
βc-3197		8.4 ± 11.8
βc-3203		5.1 ± 8.3
βc-3273		67.6 ± 5.1
βc-3333		5.5 ± 8.4
βc-3349		6.5 ± 9.7
βc-3354		5.6 ± 11.1
βc-3371		15.5 ± 16.8
βc-3376		21.5 ± 9.1
βc-3411		8.7 ± 7.5
βc-3426		5.9 ± N/A
βc-3431		3.4 ± 7
βc-3437		6.5 ± 5
βc-3458		9.2 ± 2.3
βc-3468		7.1 ± 4.5
βc-3488		7.5 ± 4.3
βc-3496		9.2 ± 5.1
βc-3552		25.9 ± 4
βc-3600		8.2 ± 7.4
βc-3605		6.2 ± 5.8
βc-3615		5.4 ± 3.9
βc-3674		5.8 ± 4.1
βc-3686		6.4 ± 4
βc-3691		4.6 ± 3
βc-3700		8.7 ± 4
βc-3707		7.2 ± 4.6
βc-284	228	4.9 ± 14.1
βc-285	229	6.7 ± 3.2
βc-286	230	6.7 ± 6.3
βc-287	231	7.8 ± 7.4
βc-288	232	5.3 ± 4
βc-289	233	5.9 ± 13.9
βc-290	234	6.7 ± 3.2
βc-291	235	6.1 ± 6.2

βc-312	256	13.1 ± 3.1
βc-313	257	14 ± 5.3
βc-314	258	17.7 ± 8.9
βc-315	259	40.2 ± 5
βc-316	260	23.2 ± 3.6
βc-317	261	12.4 ± 2.7
βc-318	262	18 ± 4.7
βc-389	333	51.5 ± 3.8
βc-390	334	10.9 ± 4.8
βc-391	335	7.6 ± 9.4
βc-392	336	15.7 ± 3.9
βc-393	337	7.8 ± 2.5
βc-600	544	63.1 ± 4.6
βc-601	545	59.2 ± 3.7
βc-602	546	31.8 ± 2.5
βc-603	547	14.9 ± 9
βc-604	548	21.9 ± 4
βc-605	549	10.1 ± 1.4
βc-638	582	9.9 ± 2.7
βc-639	583	4.6 ± 7.8
βc-640	584	100.3 ± 11.7
βc-641	585	10.4 ± 2.3
βc-642	586	13.5 ± 4.2
βc-643	587	41.8 ± 5.2
βc-644	588	32.5 ± N/A
βc-645	589	10.5 ± 2.5
βc-665	609	8.8 ± 5.6
βc-666	610	6.7 ± 2
βc-667	611	8.9 ± 3.2
βc-731	675	7.3 ± 6.9
βc-732	676	53.9 ± 6.1
βc-809	753	8.6 ± 1.7
βc-810	754	12.2 ± 8.3
βc-830	774	5.8 ± 3
βc-831	775	10.5 ± 2.6
βc-893	837	3.6 ± 6.2
βc-894	838	3.5 ± 2
βc-895	839	3.6 ± 2.1
βc-896	840	4.3 ± 10.3
βc-897	841	4.9 ± 8.8
βc-898	842	7.9 ± 9.3
βc-899	843	6.8 ± 6.3
βc-900	844	3.9 ± 2.8
βc-977	921	10.4 ± 5
βc-978	922	28.1 ± 2.4
βc-1091	1035	8.8 ± 7.7
βc-1092	1036	25.4 ± 3.2
βc-1093	1037	11.9 ± 1.6
βc-1094	1038	10.1 ± 3.4
βc-1095	1039	7.9 ± 4.5
βc-1301	1245	12.4 ± 5.2
βc-1302	1246	14.2 ± 5.8
βc-1303	1247	10 ± 4.8
βc-1304	1248	8.4 ± 3.8

βc-1305	1249	6.8 ± 8
βc-1306	1250	6.1 ± 9.5
βc-1307	1251	5.7 ± 3.6
βc-1308	1252	5.7 ± 5.1
βc-1309	1253	6.9 ± 3.7
βc-1310	1254	4.5 ± 3.2
βc-1311	1255	5.3 ± 4.5
βc-1312	1256	9.8 ± 1.2
βc-1313	1257	5.7 ± 6.3
βc-1314	1258	5.2 ± 5.9
βc-1430	1374	20.6 ± 7.8
βc-1431	1375	17.5 ± 4
βc-1526	1470	35.8 ± 4.5
βc-1527	1471	40.7 ± 10.2
βc-1528	1472	22.8 ± 4.2
βc-1529	1473	21.8 ± 7.6
βc-1530	1474	17.3 ± 11.4
βc-1531	1475	62.1 ± 8.3
βc-1532	1476	37.8 ± 19.1
βc-1533	1477	16.3 ± 6.2
βc-1534	1478	80.7 ± 17
βc-1535	1479	27.1 ± 6.7
βc-1536	1480	13.3 ± 4.3
βc-1537	1481	12.9 ± 4.1
βc-1538	1482	11.9 ± 3
βc-1539	1483	10.9 ± 8.9
βc-1540	1484	5 ± 6.1
βc-1541	1485	4.2 ± 9.8
βc-1542	1486	9.8 ± 2.1
βc-1543	1487	5.7 ± 6.4
βc-1544	1488	4.8 ± 5.8
βc-1545	1489	4 ± 5.5
βc-1565	1509	6.5 ± 8.5
βc-1566	1510	3.6 ± 6.6
βc-1567	1511	3.5 ± 17.3
βc-1568	1512	3.2 ± 8.4
βc-1569	1513	2.7 ± 13
βc-1652	1596	5.1 ± 14.3
βc-1653	1597	5.8 ± 13.2
βc-1654	1598	26.4 ± 2.6
βc-1655	1599	17.8 ± 3.9
βc-1656	1600	18.7 ± 7.4
βc-1657	1601	35.4 ± 7.7
βc-1658	1602	10 ± 4.4
βc-1659	1603	10.2 ± 10.5
βc-1660	1604	31.5 ± 2.4
βc-1661	1605	14.3 ± 5
βc-1662	1606	5 ± 4.4
βc-1663	1607	21.7 ± 4.7
βc-1664	1608	67 ± 8.6
βc-1665	1609	16.6 ± 14.3
βc-1666	1610	11.3 ± 6.3
βc-1667	1611	6.2 ± 19.5
βc-1668	1612	33.5 ± 6.3

βc-1669	1613	26.1 ± 3
βc-1670	1614	27.7 ± 3.8
βc-1671	1615	9.3 ± 2.2
βc-1672	1616	23.4 ± 5.4
βc-1673	1617	21.7 ± 9.1
βc-1674	1618	15.1 ± 4
βc-1675	1619	31 ± 5.9
βc-1676	1620	12.1 ± 10.6
βc-1677	1621	23.2 ± 15.4
βc-1678	1622	6.9 ± 10.8
βc-1679	1623	13 ± 9.6
βc-1680	1624	5 ± 10.6
βc-1681	1625	4 ± 6.5
βc-1682	1626	2.8 ± 6.2
βc-1683	1627	2.8 ± 5.7
βc-1684	1628	7.4 ± 2.7
βc-1685	1629	11.3 ± 6.3
βc-1686	1630	15.6 ± 4.3
βc-1687	1631	7.6 ± 4.4
βc-1688	1632	17.8 ± 5
βc-1689	1633	23.7 ± 7.5
βc-1690	1634	8.1 ± 3
βc-1691	1635	8.5 ± 4.6
βc-1692	1636	33.9 ± 28.1
βc-1693	1637	45.6 ± 4.8
βc-1694	1638	12.7 ± 3.4
βc-1695	1639	9.4 ± 5.6
βc-1787	1731	46.4 ± 6.2
βc-1788	1732	28 ± 3.8
βc-1789	1733	28.6 ± 6.5
βc-1790	1734	65.2 ± 5.1
βc-1791	1735	13.6 ± 4
βc-1792	1736	10.2 ± 16.3
βc-1793	1737	18.7 ± 7.7
βc-1794	1738	36.7 ± 5
βc-1795	1739	31.2 ± 9.1
βc-1796	1740	8.5 ± 5
βc-1797	1741	23.8 ± 4.1
βc-1798	1742	49.2 ± 3.1
βc-1799	1743	58 ± 3
βc-1800	1744	26.3 ± 5.7
βc-1820	1764	3.8 ± 7.8
βc-1821	1765	4.8 ± 13.4
βc-2072	2016	7.6 ± 14
βc-2073	2017	12.4 ± 8.5
βc-2074	2018	10.8 ± 6.2
βc-2075	2019	7.6 ± 1.9
βc-2076	2020	13.5 ± 6.5
βc-2077	2021	12.1 ± 7
βc-2097	2041	3.9 ± 2.7
βc-2098	2042	6.2 ± 3.6
βc-2099	2043	6 ± 3.8
βc-2100	2044	11.4 ± 8.6
βc-2141	2085	8.3 ± 8.7

βc-2142	2086	17.9 ± 2.4
βc-2143	2087	6.2 ± 11.2
βc-2144	2088	4.4 ± 16.1
βc-2145	2089	8.8 ± 12.2
βc-2146	2090	9.4 ± 9.6
βc-2147	2091	10.5 ± 12.2
βc-2148	2092	6.5 ± 2.7
βc-2149	2093	16.3 ± 5.8
βc-2150	2094	10.7 ± 5.2
βc-2151	2095	5.7 ± 3.2
βc-2183	2127	38.1 ± 2.9
βc-2184	2128	41.5 ± 4.3
βc-2185	2129	83.7 ± 2.3
βc-2270	2214	23.8 ± 12.6
βc-2271	2215	18.8 ± 9.6
βc-2272	2216	6.7 ± 3.5
βc-2273	2217	8.4 ± 5.5
βc-2274	2218	6.2 ± 4.4
βc-2275	2219	7.2 ± 5.8
βc-2276	2220	7.1 ± 2.4
βc-2277	2221	4.8 ± 2.8
βc-2345	2289	8.5 ± 2.5
βc-2346	2290	7 ± 4.5
βc-2347	2291	6.8 ± 5.9
βc-2348	2292	12.3 ± 14.8
βc-2349	2293	6.2 ± 12.8
βc-2350	2294	4.1 ± 11.7
βc-2351	2295	6.9 ± 9.1
βc-2352	2296	11.5 ± 13
βc-2353	2297	19.1 ± 4.7
βc-2354	2298	17.1 ± 3.6
βc-2355	2299	8.1 ± 6.5
βc-2411	2355	6.6 ± 2.1
βc-2412	2356	8.1 ± 3.9
βc-2413	2357	10.1 ± 3.5
βc-2414	2358	9.8 ± 1
βc-2415	2359	10.9 ± 4.3
βc-2441	2385	9.5 ± 3
βc-2442	2386	5.2 ± 5
βc-2443	2387	8.8 ± 11.9
βc-2444	2388	10.2 ± 4
βc-2445	2389	5.3 ± 6.4
βc-2501	2445	74.5 ± 3.1
βc-2502	2446	95.4 ± 4.2
βc-2503	2447	116.5 ± 5
βc-2504	2448	108.9 ± 5.3
βc-2505	2449	98.7 ± 5
βc-2506	2450	43.5 ± 2.7
βc-2507	2451	89.5 ± 1.9
βc-2508	2452	54.6 ± 7
βc-2509	2453	19.4 ± 10.5
βc-2510	2454	47.1 ± 3.5
βc-2511	2455	60.7 ± 4.9
βc-2512	2456	53.7 ± 9.7

βc-2513	2457	18 ± N/A
βc-2514	2458	6.5 ± 4.9
βc-2515	2459	13.5 ± 3.7
βc-2516	2460	11.3 ± 3
βc-2517	2461	6.2 ± 3.5
βc-2518	2462	6.9 ± 4.8
βc-2519	2463	9.1 ± 2.8
βc-2520	2464	6.6 ± 4
βc-2521	2465	6.4 ± 3.9
βc-2522	2466	7.6 ± 5.6
βc-2523	2467	6.1 ± 7.6
βc-2524	2468	5.5 ± 3
βc-2525	2469	3.6 ± 1.3
βc-2526	2470	4.9 ± 2.8
βc-2527	2471	58 ± 9.2
βc-2528	2472	22.5 ± 5.3
βc-2529	2473	24.5 ± 9.5
βc-2530	2474	53.5 ± 1.3
βc-2531	2475	19.3 ± 9.1
βc-2532	2476	17.2 ± 11.5
βc-2533	2477	21.5 ± 9.8
βc-2534	2478	77.4 ± 2.4
βc-2535	2479	55.4 ± 4.3
βc-2567	2511	77.9 ± 4.1
βc-2568	2512	51.2 ± 9.2
βc-2569	2513	38.2 ± 2.8
βc-2603	2547	11 ± 7.7
βc-2604	2548	9.7 ± 5.6
βc-2605	2549	29.1 ± 4.2
βc-2606	2550	23.4 ± 4.4
βc-2607	2551	10.6 ± 2.6
βc-2608	2552	16 ± 6.4
βc-2609	2553	23.3 ± 15.2
βc-2610	2554	16.2 ± 5.1
βc-2611	2555	3.8 ± 1.4
βc-2612	2556	2.2 ± 4.6
βc-2613	2557	8.4 ± 2.3
βc-2614	2558	4.9 ± 3.4
βc-2615	2559	6.7 ± 6.4
βc-2616	2560	8.4 ± 7.7
βc-2617	2561	6.2 ± 6.3
βc-2618	2562	6.6 ± 6.2
βc-2619	2563	6 ± 4.1
βc-2620	2564	5.9 ± 11.4
βc-2621	2565	9.5 ± 13.2
βc-2622	2566	7.3 ± 10
βc-2623	2567	7.2 ± 9.8
βc-2869	2765	86.5 ± 9.1
βc-2902	2798	67.7 ± 3.1
βc-2923	2819	76.5 ± 3.1
βc-2925	2821	88.6 ± 5.6
βc-2927	2823	79.9 ± 6.5
βc-2929	2825	71.1 ± 1.2
βc-2973	2867	49.8 ± 6.9

βc-2975	2869	46.3 ± 5.6
βc-2977	2871	43.2 ± 1.4
βc-2979	2873	59.3 ± 4.3
βc-2981	2875	47 ± 5.2
βc-2983	2877	59.8 ± 1.9
βc-2985	2879	50.9 ± 3.1
βc-2987	2881	54.5 ± 2.8
βc-2989	2883	50.7 ± 2.4
βc-3015	2909	72.2 ± 2.5
βc-3017	2911	56.9 ± 3.9
βc-3019	2913	62.5 ± 4.1
βc-3021	2915	59.5 ± 3.2
βc-3046	2940	77.4 ± 19.4
βc-3048	2942	45.3 ± 15.3
βc-3050	2944	60.2 ± 10.5
βc-3052	2946	58.5 ± 5.3
βc-3054	2948	84.7 ± 5.1
βc-3056	2950	64.8 ± 7.4
βc-3087	2981	58.7 ± 6.6
βc-3089	2983	47.4 ± 6
βc-3091	2985	52.6 ± 6
βc-3093	2987	45.7 ± 14.5
βc-3095	2989	49.7 ± 3.8
βc-3097	2991	72.3 ± 13.4
βc-3099	2993	39.7 ± 3.4
βc-3101	2995	31.4 ± 13.3
βc-3103	2997	35.6 ± 9
βc-3105	2999	16 ± 7.7
βc-3107	3001	41.3 ± 33.6
βc-3109	3003	5.3 ± 35.8
βc-3111	3005	4.5 ± 7.6
βc-3113	3007	7.5 ± 9.8
βc-3115	3009	5.1 ± 15.4
βc-3191	3084	10.2 ± 9.9
βc-3193	3086	9.3 ± 5.5
βc-3195	3088	4.4 ± 3.1
βc-3387	3232	4.8 ± 7.8
βc-3389	3234	3.6 ± 6
βc-3391	3236	4.7 ± 7.2
βc-3393	3238	2.7 ± 7.1
βc-3395	3240	4.9 ± 3.7
βc-3397	3242	4.8 ± 3.1
βc-3399	3244	3.9 ± 9.3
βc-3401	3246	4.8 ± 9.8
βc-3500	3336	5.7 ± 3.4
βc-3502	3338	8.3 ± 3.9
βc-3504	3340	7 ± 6.2
βc-3506	3342	9.7 ± 2.3
βc-3508	3344	9.2 ± 2.9
βc-3509	3345	13.8 ± 4.2
βc-3510	3346	56.3 ± 5
βc-3512	3348	20.8 ± 4.6
βc-3514	3350	9.7 ± 3.3
βc-3516	3352	12.7 ± 7.4

βc-3518	3354	7.5 ± 5.7
βc-3520	3356	6.6 ± 2.6
βc-3522	3358	7.5 ± 7.1
βc-3524	3360	10.5 ± 4.4
βc-3526	3362	9.4 ± N/A
βc-3528	3364	8.2 ± 8.9
βc-3530	3366	8.2 ± 9
βc-3532	3368	7.5 ± 5.4
βc-3534	3370	5.6 ± 11.9
βc-3536	3372	5.7 ± 2.8
βc-3538	3374	7.5 ± 2.8
βc-3583	3420	10 ± 5.2
βc-3585	3422	9.4 ± 7.8
βc-3587	3424	7 ± 5
βc-3589	3426	6.5 ± 5.6
βc-3591	3428	5.4 ± 6.6
βc-3593	3430	11.5 ± 5.7
βc-3633	3469	14.6 ± 3.9
βc-3635	3471	9.5 ± 3.6
βc-3637	3473	11.6 ± 5
βc-3639	3475	18.9 ± 10.1
βc-3641	3477	8.4 ± 5.4
βc-3643	3479	10.8 ± 5.6
βc-3645	3481	12.6 ± 3.2
βc-3647	3483	15.1 ± 2.7
βc-3649	3485	14.4 ± 3.1
βc-3651	3487	7.2 ± 11.1
βc-3653	3489	6.3 ± 5.7
βc-3655	3491	10.9 ± 7.7
βc-3657	3493	7 ± 3.5
βc-3659	3495	5.4 ± 8.4
βc-3708	3540	6.3 ± 11.3
βc-3710	3542	5.5 ± 11.8
βc-3712	3544	4.8 ± 8.1
βc-3714	3546	7.4 ± 3.6
βc-3716	3548	20.2 ± 11.6

The data shown in above Table 14 were also plotted graphically (see Figures 2 and 3).

Table 15: 100 Human β-Catenin-Targeting DsiRNAs (Rank Ordered by Inhibition)

Tested DsiRNA (Target Location in human β-catenin transcript variant 1)	Mouse β-catenin Target Location (in NM_007614.2)	% Remaining β-catenin mRNA ± % Error
βc-686		2.1 ± 2.8
βc-692		2.2 ± 4.9
βc-2612	2556	2.2 ± 4.6
βc-1569	1513	2.7 ± 13
βc-3393	3238	2.7 ± 7.1
βc-1682	1626	2.8 ± 6.2
βc-1683	1627	2.8 ± 5.7

βc-889		2.9 ± 4.9
βc-870		3 ± 7.7
βc-1154		3.2 ± 10.7
βc-1568	1512	3.2 ± 8.4
βc-3431		3.4 ± 7
βc-894	838	3.5 ± 2
βc-1567	1511	3.5 ± 17.3
βc-259		3.6 ± 11.3
βc-893	837	3.6 ± 6.2
βc-895	839	3.6 ± 2.1
βc-1566	1510	3.6 ± 6.6
βc-2525	2469	3.6 ± 1.3
βc-3389	3234	3.6 ± 6
βc-1620		3.7 ± 4.1
βc-244		3.8 ± 2.8
βc-582		3.8 ± 6.8
βc-1820	1764	3.8 ± 7.8
βc-2611	2555	3.8 ± 1.4
βc-496		3.9 ± 5.3
βc-697		3.9 ± 4.4
βc-900	844	3.9 ± 2.8
βc-2097	2041	3.9 ± 2.7
βc-3399	3244	3.9 ± 9.3
βc-1060		4 ± 3.6
βc-1545	1489	4 ± 5.5
βc-1681	1625	4 ± 6.5
βc-264		4.1 ± 9.5
βc-2350	2294	4.1 ± 11.7
βc-1541	1485	4.2 ± 9.8
βc-707		4.3 ± 6.9
βc-896	840	4.3 ± 10.3
βc-516		4.4 ± 6.5
βc-2144	2088	4.4 ± 16.1
βc-3195	3088	4.4 ± 3.1
βc-1310	1254	4.5 ± 3.2
βc-3111	3005	4.5 ± 7.6
βc-1070		4.6 ± 2.1
βc-3691		4.6 ± 3
βc-639	583	4.6 ± 7.8
βc-3391	3236	4.7 ± 7.2
βc-1180		4.8 ± 4
βc-1544	1488	4.8 ± 5.8
βc-1821	1765	4.8 ± 13.4
βc-2277	2221	4.8 ± 2.8
βc-3387	3232	4.8 ± 7.8
βc-3397	3242	4.8 ± 3.1
βc-3401	3246	4.8 ± 9.8
βc-3712	3544	4.8 ± 8.1
βc-1816		4.9 ± 3.4
βc-284	228	4.9 ± 14.1
βc-897	841	4.9 ± 8.8
βc-2526	2470	4.9 ± 2.8
βc-2614	2558	4.9 ± 3.4
βc-3395	3240	4.9 ± 3.7

βc-240		5 ± 21.1
βc-1571		5 ± 3.4
βc-1540	1484	5 ± 6.1
βc-1662	1606	5 ± 4.4
βc-1680	1624	5 ± 10.6
βc-3203		5.1 ± 8.3
βc-1652	1596	5.1 ± 14.3
βc-3115	3009	5.1 ± 15.4
βc-753		5.2 ± 6.1
βc-1314	1258	5.2 ± 5.9
βc-2442	2386	5.2 ± 5
βc-540		5.3 ± 4.7
βc-288	232	5.3 ± 4
βc-1311	1255	5.3 ± 4.5
βc-2445	2389	5.3 ± 6.4
βc-3109	3003	5.3 ± 35.8
βc-3615		5.4 ± 3.9
βc-3591	3428	5.4 ± 6.6
βc-3659	3495	5.4 ± 8.4
βc-253		5.5 ± 1.7
βc-3333		5.5 ± 8.4
βc-2524	2468	5.5 ± 3
βc-3710	3542	5.5 ± 11.8
βc-3354		5.6 ± 11.1
βc-3534	3370	5.6 ± 11.9
βc-1307	1251	5.7 ± 3.6
βc-1308	1252	5.7 ± 5.1
βc-1313	1257	5.7 ± 6.3
βc-1543	1487	5.7 ± 6.4
βc-2151	2095	5.7 ± 3.2
βc-3500	3336	5.7 ± 3.4
βc-3536	3372	5.7 ± 2.8
βc-3674		5.8 ± 4.1
βc-830	774	5.8 ± 3
βc-1653	1597	5.8 ± 13.2
βc-1579		5.9 ± 4.4
βc-3426		5.9 ± N/A
βc-289	233	5.9 ± 13.9
βc-2620	2564	5.9 ± 11.4

Table 16: β-Catenin Inhibitory Efficacy of DsiRNAs at 1 nM in Mouse Hepa 1-6 Cells

Tested DsiRNA/Mouse β-catenin Target Location (in NM_007614.2)	Tested DsiRNA/Human β-catenin transcript variant 1 Target Location	% Remaining β-catenin mRNA ± % Error
228	βc-284	32 ± 23
229	βc-285	27.2 ± 10.7
230	βc-286	24.5 ± 14.5
231	βc-287	35.9 ± 19.7

232	βc-288	43.1 ± 12
233	βc-289	34.8 ± 7
234	βc-290	41.6 ± 15.9
235	βc-291	48.4 ± 25.1
256	βc-312	109.7 ± N/A
257	βc-313	68.5 ± 6.7
258	βc-314	93.4 ± 8.6
259	βc-315	69.4 ± 3.4
260	βc-316	101 ± 3.4
261	βc-317	67.6 ± 10.5
262	βc-318	88 ± 11
333	βc-389	107.4 ± 6.7
334	βc-390	99.2 ± 14.4
335	βc-391	68.5 ± 7.4
336	βc-392	77.4 ± 5.5
337	βc-393	53.8 ± 6.8
544	βc-600	65.9 ± 7.7
545	βc-601	54.1 ± 6.3
546	βc-602	44.1 ± 12.9
547	βc-603	37.3 ± 7.3
548	βc-604	83 ± 14.5
549	βc-605	44.6 ± 9.2
582	βc-638	22.6 ± 5.9
583	βc-639	12.2 ± 15.4
584	βc-640	102.1 ± 8.4
585	βc-641	24.4 ± 9
586	βc-642	32.3 ± 29.7
587	βc-643	62.1 ± 10.6
588	βc-644	56.1 ± 6.8
589	βc-645	18.4 ± 6.2
609	βc-665	23.7 ± 7
610	βc-666	23.3 ± 7.2
611	βc-667	18.5 ± 6.1
675	βc-731	34.4 ± 13.7
676	βc-732	127.2 ± 3.4
753	βc-809	56 ± 7.6
754	βc-810	82.4 ± 5.4
774	βc-830	26.5 ± 6.2
775	βc-831	16.1 ± 7.3
837	βc-893	9.2 ± 9.5
838	βc-894	10.5 ± 9.4
839	βc-895	12.5 ± 16.7
840	βc-896	14.1 ± 19.2
841	βc-897	25.7 ± 10
842	βc-898	20.1 ± 19.7
843	βc-899	21.5 ± 13.6
844	βc-900	13.8 ± 9.7
921	βc-977	44.1 ± 12
922	βc-978	58.4 ± 43
1035	βc-1091	97.2 ± 10.9
1036	βc-1092	111.4 ± 10.5
1037	βc-1093	122 ± 13.4
1038	βc-1094	54.1 ± 3.6
1039	βc-1095	53.2 ± 6.9

1245	βc-1301	25.5 ± 3.9
1246	βc-1302	28.7 ± 5.2
1247	βc-1303	33.5 ± 3.2
1248	βc-1304	31.2 ± 11.2
1249	βc-1305	22.1 ± 17.3
1250	βc-1306	23.5 ± 15.8
1251	βc-1307	15.7 ± 13.3
1252	βc-1308	16.4 ± 13.6
1253	βc-1309	13.5 ± 4.8
1254	βc-1310	14.9 ± 8.1
1255	βc-1311	17.6 ± 12.9
1256	βc-1312	33.4 ± 6.4
1257	βc-1313	16.8 ± 11.1
1258	βc-1314	18.4 ± 4.8
1374	βc-1430	57.1 ± 4.4
1375	βc-1431	42.3 ± 7.5
1470	βc-1526	64.7 ± 8.8
1471	βc-1527	36.8 ± 12.4
1472	βc-1528	31.6 ± 18.8
1473	βc-1529	25.7 ± 13.3
1474	βc-1530	30.3 ± 13.7
1475	βc-1531	56.3 ± 2.2
1476	βc-1532	31.5 ± 5
1477	βc-1533	21.2 ± 2.6
1478	βc-1534	77.6 ± 5.7
1479	βc-1535	34.3 ± 8.3
1480	βc-1536	14.7 ± 3.6
1481	βc-1537	14.1 ± 9
1482	βc-1538	21.1 ± 4
1483	βc-1539	19.5 ± 8.4
1484	βc-1540	11.7 ± N/A
1485	βc-1541	7.3 ± 7.1
1486	βc-1542	14.7 ± 7.8
1487	βc-1543	11.7 ± 5.9
1488	βc-1544	8.2 ± 8.2
1489	βc-1545	7.4 ± 10.1
1509	βc-1565	21.2 ± 9.1
1510	βc-1566	9 ± 18.1
1511	βc-1567	10.7 ± 16.4
1512	βc-1568	8.3 ± 14.9
1513	βc-1569	7 ± 12.8
1596	βc-1652	10.1 ± 13.9
1597	βc-1653	23.4 ± 32.9
1598	βc-1654	67.3 ± 27.6
1599	βc-1655	38.5 ± 12.3
1600	βc-1656	26.3 ± 14.2
1601	βc-1657	38 ± 8.9
1602	βc-1658	12.7 ± 6.8
1603	βc-1659	25.9 ± 7.6
1604	βc-1660	56.5 ± 12.8
1605	βc-1661	27.3 ± 13.4
1606	βc-1662	12.3 ± 18.1
1607	βc-1663	46.1 ± 27.2
1608	βc-1664	71.2 ± 17.1

1609	βc-1665	25.8 ± 11.4
1610	βc-1666	15.7 ± 4.7
1611	βc-1667	20.8 ± 4
1612	βc-1668	61 ± 29.3
1613	βc-1669	46.7 ± 11.4
1614	βc-1670	44.9 ± 1.6
1615	βc-1671	30.7 ± 20.8
1616	βc-1672	52.8 ± 12.9
1617	βc-1673	56.7 ± 11.2
1618	βc-1674	28 ± 7
1619	βc-1675	37.5 ± 11.1
1620	βc-1676	16 ± 7.2
1621	βc-1677	40.8 ± 3.1
1622	βc-1678	14.1 ± 10.8
1623	βc-1679	26.7 ± 14.4
1624	βc-1680	14.8 ± 7.4
1625	βc-1681	10.7 ± 5
1626	βc-1682	10.9 ± 21.3
1627	βc-1683	7.3 ± 11
1628	βc-1684	11.1 ± 3.3
1629	βc-1685	21.5 ± 18
1630	βc-1686	23.4 ± 4.7
1631	βc-1687	15.2 ± 16.6
1632	βc-1688	21.6 ± 4.9
1633	βc-1689	33.6 ± 34.5
1634	βc-1690	24.1 ± 10.9
1635	βc-1691	33.7 ± 10.9
1636	βc-1692	42.5 ± 3.9
1637	βc-1693	83.4 ± 14
1638	βc-1694	19.8 ± 2.6
1639	βc-1695	15.9 ± 10.9
1731	βc-1787	65.2 ± 8.7
1732	βc-1788	33.4 ± 25.5
1733	βc-1789	35.4 ± 16.3
1734	βc-1790	46.6 ± 16.4
1735	βc-1791	15 ± 9.5
1736	βc-1792	12.8 ± 4.4
1737	βc-1793	15.8 ± 8.3
1738	βc-1794	28.4 ± 7.1
1739	βc-1795	23.5 ± 17.2
1740	βc-1796	9 ± 14.1
1741	βc-1797	26.1 ± 6.6
1742	βc-1798	50.2 ± 10.2
1743	βc-1799	55.9 ± 2.7
1744	βc-1800	36.3 ± 6.5
1764	βc-1820	7.3 ± 37.9
1765	βc-1821	5.6 ± 13.9
2016	βc-2072	12.3 ± 15
2017	βc-2073	12.4 ± 10.3
2018	βc-2074	16.3 ± 14.8
2019	βc-2075	8.2 ± 15.3
2020	βc-2076	9.8 ± 7.1
2021	βc-2077	16.9 ± 42
2041	βc-2097	5.6 ± 10.2

2042	βc-2098	7.4 ± 6
2043	βc-2099	12.6 ± 21.8
2044	βc-2100	28.7 ± 7.6
2085	βc-2141	29.7 ± 14.1
2086	βc-2142	46.2 ± 4.4
2087	βc-2143	16 ± 10.8
2088	βc-2144	13.8 ± 18.6
2089	βc-2145	29.6 ± 10.3
2090	βc-2146	40.5 ± 5.3
2091	βc-2147	27.9 ± 11.4
2092	βc-2148	21.8 ± 2.2
2093	βc-2149	60.3 ± 4.4
2094	βc-2150	42.8 ± 3.9
2095	βc-2151	29 ± 2.4
2127	βc-2183	75 ± 4.7
2128	βc-2184	76.5 ± 4.7
2129	βc-2185	129.6 ± 16.4
2214	βc-2270	65.8 ± 4.7
2215	βc-2271	40.8 ± N/A
2216	βc-2272	13.5 ± 8.5
2217	βc-2273	21.5 ± 3
2218	βc-2274	17.6 ± 6.2
2219	βc-2275	28.9 ± 6.2
2220	βc-2276	21.2 ± 5.4
2221	βc-2277	26.9 ± 2.8
2289	βc-2345	20.8 ± 8.7
2290	βc-2346	13.6 ± 7.2
2291	βc-2347	17 ± 12.8
2292	βc-2348	19.2 ± 3.3
2293	βc-2349	9.6 ± 6.4
2294	βc-2350	10.4 ± 12.8
2295	βc-2351	17 ± 8.9
2296	βc-2352	31.2 ± 13.1
2297	βc-2353	37.1 ± N/A
2298	βc-2354	32.4 ± 6
2299	βc-2355	21.5 ± 5.3
2355	βc-2411	16.6 ± 6.3
2356	βc-2412	12.8 ± 8
2357	βc-2413	18.6 ± 5.8
2358	βc-2414	16.3 ± 12.4
2359	βc-2415	27.2 ± 11.4
2385	βc-2441	20.1 ± 18.9
2386	βc-2442	9.2 ± 4
2387	βc-2443	14.4 ± 8.1
2388	βc-2444	14.2 ± 3.4
2389	βc-2445	9.8 ± 7.6
2445	βc-2501	67.3 ± 5.1
2446	βc-2502	72.4 ± 6.2
2447	βc-2503	96.8 ± 6.3
2448	βc-2504	112.6 ± 7.5
2449	βc-2505	68.5 ± 9.4
2450	βc-2506	128.8 ± 10.4
2451	βc-2507	144.3 ± 12.9
2452	βc-2508	99.5 ± 8.8

2453	βc-2509	80.5 ± 8.4
2454	βc-2510	88.6 ± 10.6
2455	βc-2511	105.9 ± 8.8
2456	βc-2512	126.3 ± 18.2
2457	βc-2513	30.4 ± 13.7
2458	βc-2514	22.6 ± 2.4
2459	βc-2515	45.2 ± 30.1
2460	βc-2516	27.6 ± 7.2
2461	βc-2517	19.7 ± N/A
2462	βc-2518	21.9 ± 10.5
2463	βc-2519	29.9 ± 14.6
2464	βc-2520	27.2 ± 6.1
2465	βc-2521	11.5 ± N/A
2466	βc-2522	17.9 ± 8.4
2467	βc-2523	18.5 ± 4.5
2468	βc-2524	16.8 ± 6.6
2469	βc-2525	19.4 ± 14.4
2470	βc-2526	10.7 ± 6.8
2471	βc-2527	62.5 ± 8.1
2472	βc-2528	64.5 ± 14.2
2473	βc-2529	41.4 ± 12.6
2474	βc-2530	73.5 ± 7.1
2475	βc-2531	32.2 ± 10.4
2476	βc-2532	23.9 ± 18.7
2477	βc-2533	40 ± 10
2478	βc-2534	60.4 ± N/A
2479	βc-2535	81.3 ± 4.9
2511	βc-2567	104.5 ± 12.9
2512	βc-2568	53 ± 9
2513	βc-2569	67.1 ± 3.6
2547	βc-2603	18.1 ± 7.9
2548	βc-2604	14.2 ± 2.5
2549	βc-2605	28.9 ± 5.9
2550	βc-2606	23.7 ± 6.8
2551	βc-2607	17.1 ± 16.7
2552	βc-2608	18.1 ± 3.6
2553	βc-2609	23.8 ± N/A
2554	βc-2610	22.6 ± 21.5
2555	βc-2611	9.4 ± 7.6
2556	βc-2612	5.1 ± 4.1
2557	βc-2613	16.3 ± 7.8
2558	βc-2614	11 ± 8.5
2559	βc-2615	11.6 ± 4
2560	βc-2616	14.8 ± 4.1
2561	βc-2617	9.8 ± 8.1
2562	βc-2618	12 ± 8.8
2563	βc-2619	10.7 ± 13.7
2564	βc-2620	9.2 ± 18.9
2565	βc-2621	16.9 ± 9.6
2566	βc-2622	15.5 ± 7.2
2567	βc-2623	15 ± 6.1
2765	βc-2869	24.5 ± 26.4
2798	βc-2902	10.1 ± 9.5
2819	βc-2923	16.9 ± 2

2821	βc-2925	11.2 ± 6.3
2823	βc-2927	15.4 ± 9.6
2825	βc-2929	9.8 ± 10
2867	βc-2973	16.6 ± 5.2
2869	βc-2975	28.7 ± 12.7
2871	βc-2977	17 ± 9.7
2873	βc-2979	20 ± 13
2875	βc-2981	20 ± 17.9
2877	βc-2983	29 ± 5.7
2879	βc-2985	12.1 ± 13
2881	βc-2987	18.3 ± 7.6
2883	βc-2989	12.4 ± 6.9
2909	βc-3015	12 ± 9.6
2911	βc-3017	18.6 ± 21.3
2913	βc-3019	15.8 ± 16.6
2915	βc-3021	24 ± 5.9
2940	βc-3046	24.3 ± 5.1
2942	βc-3048	10.8 ± 18.4
2944	βc-3050	15.9 ± 7.1
2946	βc-3052	16 ± 15.8
2948	βc-3054	13.4 ± 8.2
2950	βc-3056	35.2 ± 11.8
2981	βc-3087	8.9 ± 27.7
2983	βc-3089	11.3 ± 3.5
2985	βc-3091	26.6 ± 4.1
2987	βc-3093	7.3 ± 6.4
2989	βc-3095	16.1 ± 7
2991	βc-3097	6.7 ± 4.3
2993	βc-3099	12.5 ± 5.7
2995	βc-3101	11.4 ± 3.3
2997	βc-3103	7.4 ± 9.7
2999	βc-3105	7.4 ± 3
3001	βc-3107	8.6 ± 5.1
3003	βc-3109	6.3 ± 9.2
3005	βc-3111	5.8 ± 6.9
3007	βc-3113	8 ± 3.6
3009	βc-3115	7.9 ± 8.8
3084	βc-3191	15.9 ± 4.2
3086	βc-3193	22.1 ± 8.4
3088	βc-3195	11.1 ± 14.2
3232	βc-3387	8.3 ± 12.4
3234	βc-3389	6.1 ± 16.4
3236	βc-3391	7.5 ± 12.1
3238	βc-3393	5.9 ± 14.7
3240	βc-3395	9.6 ± 8.1
3242	βc-3397	12.7 ± 2.5
3244	βc-3399	5.4 ± 9.6
3246	βc-3401	9.4 ± 10.7
3336	βc-3500	10.2 ± 1.6
3338	βc-3502	8 ± 6.6
3340	βc-3504	9 ± 3
3342	βc-3506	17.7 ± 3.3
3344	βc-3508	23.8 ± 4
3345	βc-3509	25.3 ± 3.6

3346	βc-3510	63.9 ± 10.6
3348	βc-3512	25.2 ± 6.4
3350	βc-3514	10.1 ± 2
3352	βc-3516	17.9 ± 1.9
3354	βc-3518	11.1 ± 5.4
3356	βc-3520	8.5 ± 2.6
3358	βc-3522	12.5 ± 8.6
3360	βc-3524	15.4 ± 7.4
3362	βc-3526	7 ± 7.7
3364	βc-3528	10.5 ± 10.7
3366	βc-3530	12.9 ± 11.6
3368	βc-3532	7.2 ± 15.4
3370	βc-3534	7.7 ± 13.4
3372	βc-3536	9.7 ± 15.8
3374	βc-3538	12.6 ± 8.8
3420	βc-3583	19.8 ± 4
3422	βc-3585	10.6 ± 2.4
3424	βc-3587	8.7 ± 2.9
3426	βc-3589	9.7 ± 1.7
3428	βc-3591	7.5 ± 4.2
3430	βc-3593	22 ± 1.7
3469	βc-3633	14.2 ± 5.1
3471	βc-3635	12.1 ± 7.6
3473	βc-3637	17.3 ± 5.6
3475	βc-3639	9.8 ± 5.4
3477	βc-3641	9.7 ± 6.5
3479	βc-3643	11 ± 5.2
3481	βc-3645	6.9 ± 8.9
3483	βc-3647	17.5 ± 5
3485	βc-3649	16.7 ± 1.8
3487	βc-3651	12.2 ± 4.3
3489	βc-3653	16.5 ± 3.3
3491	βc-3655	11.4 ± 14.1
3493	βc-3657	10 ± 10.2
3495	βc-3659	8.7 ± 5
3540	βc-3708	7.4 ± 7
3542	βc-3710	8.7 ± 3.2
3544	βc-3712	6 ± 9.4
3546	βc-3714	11.9 ± 2.9
3548	βc-3716	27 ± 7.1
βc-m314		77.1 ± 15.6
βc-m325		99.1 ± 19.3
βc-m408		50.4 ± 23.7
βc-m460		58.7 ± 16.5
βc-m526		12.9 ± 4.5
βc-m631		13.7 ± 11.2
βc-m636		16.5 ± 19.9
βc-m642		10.8 ± 8.5
βc-m723		13.7 ± 12.1
βc-m970		12.3 ± 10.9
βc-m976		12 ± 9.5
βc-m981		15.3 ± 4.1
βc-m1066		11.3 ± 8.6
βc-m1106		10.6 ± 7.8

βc-m1354	9.7 ± 6.1
βc-m1363	11.1 ± 3.3
βc-m1373	11.8 ± N/A
βc-m1508	11.5 ± 7.1
βc-m1515	9.4 ± 6.9
βc-m1682	11.8 ± 11.4
βc-m1693	16 ± 14
βc-m1698	13.5 ± 6
βc-m1705	10.7 ± 5.3
βc-m1763	7.7 ± 14.2
βc-m2008	18.3 ± 3.5
βc-m2226	11.7 ± 10
βc-m2427	30.8 ± 2.4
βc-m2568	9.7 ± 3.9
βc-m2614	13.3 ± 4.1
βc-m2770	17.5 ± 4.9
βc-m2777	29.8 ± 17.2
βc-m2784	16 ± 15.1
βc-m2806	8.6 ± 8
βc-m2850	13.4 ± 3.1
βc-m2965	12.5 ± 10.3
βc-m2970	11.6 ± 7.6
βc-m2976	12.8 ± 4.3
βc-m3092	7.5 ± 29.8
βc-m3097	11.6 ± 2.7
βc-m3198	14.7 ± 9.3
βc-m3207	7.9 ± N/A
βc-m3433	15.4 ± 6.4
βc-m3439	14.3 ± 4.4
βc-m3444	9.7 ± 8.4
βc-m3449	9.9 ± 15.8
βc-m3522	10.3 ± 5.5
βc-m3533	10 ± 5.2
βc-m3538	10.1 ± 4.5

The data shown in above Table 16 were also plotted graphically (see Figures 4 and 5).

Table 17: 100 Mouse β-Catenin-Targeting DsiRNAs (Rank Ordered by Inhibition)

Tested DsiRNA/Mouse β-catenin Target Location (in NM_007614.2)	Tested DsiRNA/Human β-catenin transcript variant 1 Target Location	% Remaining β-catenin mRNA ± % Error
2556	βc-2612	5.1 ± 4.1
3244	βc-3399	5.4 ± 9.6
1765	βc-1821	5.6 ± 13.9
2041	βc-2097	5.6 ± 10.2
3005	βc-3111	5.8 ± 6.9
3238	βc-3393	5.9 ± 14.7
3544	βc-3712	6 ± 9.4

3234	βc-3389	6.1 ± 16.4
3003	βc-3109	6.3 ± 9.2
2991	βc-3097	6.7 ± 4.3
3481	βc-3645	6.9 ± 8.9
1513	βc-1569	7 ± 12.8
3362	βc-3526	7 ± 7.7
3368	βc-3532	7.2 ± 15.4
1485	βc-1541	7.3 ± 7.1
1627	βc-1683	7.3 ± 11
1764	βc-1820	7.3 ± 37.9
2987	βc-3093	7.3 ± 6.4
1489	βc-1545	7.4 ± 10.1
2042	βc-2098	7.4 ± 6
2997	βc-3103	7.4 ± 9.7
2999	βc-3105	7.4 ± 3
3540	βc-3708	7.4 ± 7
3236	βc-3391	7.5 ± 12.1
3428	βc-3591	7.5 ± 4.2
βc-m3092		7.5 ± 29.8
3370	βc-3534	7.7 ± 13.4
βc-m1763		7.7 ± 14.2
3009	βc-3115	7.9 ± 8.8
βc-m3207		7.9 ± N/A
3007	βc-3113	8 ± 3.6
3338	βc-3502	8 ± 6.6
1488	βc-1544	8.2 ± 8.2
2019	βc-2075	8.2 ± 15.3
1512	βc-1568	8.3 ± 14.9
3232	βc-3387	8.3 ± 12.4
3356	βc-3520	8.5 ± 2.6
3001	βc-3107	8.6 ± 5.1
βc-m2806		8.6 ± 8
3424	βc-3587	8.7 ± 2.9
3495	βc-3659	8.7 ± 5
3542	βc-3710	8.7 ± 3.2
2981	βc-3087	8.9 ± 27.7
1510	βc-1566	9 ± 18.1
1740	βc-1796	9 ± 14.1
3340	βc-3504	9 ± 3
837	βc-893	9.2 ± 9.5
2386	βc-2442	9.2 ± 4
2564	βc-2620	9.2 ± 18.9
2555	βc-2611	9.4 ± 7.6
3246	βc-3401	9.4 ± 10.7
βc-m1515		9.4 ± 6.9
2293	βc-2349	9.6 ± 6.4
3240	βc-3395	9.6 ± 8.1
3372	βc-3536	9.7 ± 15.8
3426	βc-3589	9.7 ± 1.7
3477	βc-3641	9.7 ± 6.5
βc-m1354		9.7 ± 6.1
βc-m2568		9.7 ± 3.9
βc-m3444		9.7 ± 8.4
2020	βc-2076	9.8 ± 7.1

2389	βc-2445	9.8 ± 7.6
2561	βc-2617	9.8 ± 8.1
2825	βc-2929	9.8 ± 10
3475	βc-3639	9.8 ± 5.4
βc-m3449		9.9 ± 15.8
3493	βc-3657	10 ± 10.2
βc-m3533		10 ± 5.2
1596	βc-1652	10.1 ± 13.9
2798	βc-2902	10.1 ± 9.5
3350	βc-3514	10.1 ± 2
βc-m3538		10.1 ± 4.5
3336	βc-3500	10.2 ± 1.6
βc-m3522		10.3 ± 5.5
2294	βc-2350	10.4 ± 12.8
838	βc-894	10.5 ± 9.4
3364	βc-3528	10.5 ± 10.7
3422	βc-3585	10.6 ± 2.4
βc-m1106		10.6 ± 7.8
1511	βc-1567	10.7 ± 16.4
1625	βc-1681	10.7 ± 5
2470	βc-2526	10.7 ± 6.8
2563	βc-2619	10.7 ± 13.7
βc-m1705		10.7 ± 5.3
2942	βc-3048	10.8 ± 18.4
βc-m642		10.8 ± 8.5
1626	βc-1682	10.9 ± 21.3
2558	βc-2614	11 ± 8.5
3479	βc-3643	11 ± 5.2
1628	βc-1684	11.1 ± 3.3
3088	βc-3195	11.1 ± 14.2
3354	βc-3518	11.1 ± 5.4
βc-m1363		11.1 ± 3.3
2821	βc-2925	11.2 ± 6.3
2983	βc-3089	11.3 ± 3.5
βc-m1066		11.3 ± 8.6
2995	βc-3101	11.4 ± 3.3
3491	βc-3655	11.4 ± 14.1
2465	βc-2521	11.5 ± N/A
βc-m1508		11.5 ± 7.1

As shown in above Table 14, 348 of 440 asymmetric DsiRNAs examined in human HeLa cells showed greater than 70% reduction of human β-catenin levels in HeLa cells at 1 nM. Of these 348 DsiRNAs, 317 exhibited 80% or greater reduction of human β-catenin levels in HeLa cells at 1 nM, and 229 exhibited 90% or greater reduction of human β-catenin levels in HeLa cells cells at 1 nM. A number of these DsiRNAs uniquely targeted human β-catenin.

As shown in above Table 16, 295 of 416 asymmetric DsiRNAs examined in in mouse Hepa 1-6 cells showed greater than 70% reduction of mouse β-catenin levels in

Hepa 1-6 cells at 1 nM. Of these 295 DsiRNAs, 225 exhibited 80% or greater reduction of mouse β-catenin levels in Hepa 1-6 cells at 1 nM, and 68 exhibited 90% or greater reduction of mouse β-catenin levels in Hepa 1-6 cells at 1 nM. A number of these DsiRNAs uniquely targeted mouse β-catenin.

Example 3: β-Catenin Targeting DsiRNAs Effectively Reduced β-Catenin RNA Levels in Tumor Cells and Inhibited Tumor Cell Growth

Cell culture, RNA Transfection and Analysis

HCT116 cells were maintained in McCoy's 5a Medium with 10% Fetal Bovine Serum (FBS); HepG2 cells were maintained in MEM with 10% FBS (both media contained penicillin and streptomycin). For transfection, cells were seeded into 24-well plates at 40,000 cells per well the day before transfection, in antibiotic-free medium. To transfect, DsiRNAs were complexed with the lipid transfection reagent RNAiMAX, in OptiMem medium and then added to the cells in medium to yield the indicated final DsiRNA concentrations. Controls included Untransfected cells, Mock cells treated with RNAiMAX without DsiRNA, and Control DsiRNA #114 (with non-specific sequence). After six hours of exposure, the cell culture medium was removed, cells were washed, and fresh medium was added.

For RNA expression analysis, RNA was isolated one day after transfection, using the Promega SV96 RNA isolation kit. RNA was reverse-transcribed, and then Taqman quantitative PCR was performed on a BioRad CFX96, in multiplex using primer and probe sets specific for CTNNB1/B-catenin and the housekeeping gene HPRT1 for normalization.

Cell growth was assayed three days after transfection, using the Promega Cell Titer Blue (CTB) reagent. Briefly, culture medium was replaced with fresh medium containing CTB reagent; after one hour, fluorescence at the appropriate wavelength was measured one a plate reader. Cell number values were graphed relative to Mock treatments.

To examine whether human β-catenin targeting DsiRNAs identified as effective at reducing β-catenin transcript levels in HeLa cells were also effective inhibitors of β-catenin in colon cancer cells, four DsiRNAs (βc-1569, βc-1683, βc-2612 and βc-3393) were transfected into colon carcinoma cell line HCT116. As shown in Figure 6, βc-1569, βc-1683, βc-2612 and βc-3393 DsiRNAs dramatically

(>80%) reduced human β-catenin transcript levels in colon carcinoma cell line HCT116 cells at both 3 nM and 10 nM concentrations in the environment of these cells.

The effects of β-catenin targeting DsiRNAs βc-1569, βc-1683, βc-2612 and βc-3393 were also examined in hepatocarcinoma cell line HepG2, with the effect of DsiRNA treatment upon growth of the hepatocarcinoma cell line assessed. As shown in Figure 7, following three days of incubation at 3 nM concentration in the environment of HepG2 cells, all four assayed β-catenin targeting DsiRNAs showed significant reduction in tumor cell number (relative to mock-treated and control DsiRNA-treated cells, approximately 30% to 60% or greater cell growth inhibition was observed at day 3 post-transfection). Notably, the β-catenin targeting βc-1569 DsiRNA exhibited approximately 70% reduction in tumor cell numbers, demonstrating the remarkable efficacy of this β-catenin targeting DsiRNA upon a phenotype of therapeutic significance.

Example 4: DsiRNA Inhibition of β-Catenin – Secondary Screen

96 asymmetric DsiRNAs of the above experiment are examined in a secondary assay ("Phase 2"). Specifically, 96 asymmetric DsiRNAs (*e.g.*, βc-284, βc-288, βc-639, βc-830, βc-893, βc-894, βc-895, βc-900, βc-1306, βc-1310, βc-1314, βc-1541, βc-1545, βc-1566, βc-1567, βc-1568, βc-1569, βc-1652, βc-1662, βc-1667, βc-1681, βc-1682, βc-1683, βc-1820, βc-2097, βc-2144, βc-2151, βc-2277, βc-2350, βc-2442, βc-2445, βc-2517, βc-2521, βc-2525, βc-2611, βc-2612, βc-2620, βc-3111, βc-3195, βc-3389, βc-3393, βc-3399, βc-3500, βc-3534, βc-3589, βc-3591, βc-3653, βc-3659, βc-3708, βc-3712, βc-240, βc-244, βc-253, βc-259, βc-264, βc-496, βc-516, βc-540, βc-582, βc-686, βc-692, βc-697, βc-707, βc-753, βc-870, βc-889, βc-1060, βc-1070, βc-1154, βc-1180, βc-1412, βc-1418, βc-1579, βc-1620, βc-1816, βc-2282, βc-3203, βc-3333, βc-3354, βc-3426, βc-3431, βc-3605, βc-3615, βc-3674, βc-3686, βc-3691, βc-m1354, βc-m1515, βc-m1763, βc-m2568, βc-m2806, βc-m3092, βc-m3207, βc-m3444, βc-m3449 and βc-m3533) were assessed for inhibition of human β-catenin at 1 nM, 0.3 nM and 0.1 nM in the environment of human HeLa cells. These 96 asymmetric DsiRNAs are also assessed for inhibition of mouse β-catenin at 1 nM, 0.3 nM and 0.1 nM in the environment of mouse Hepa 1-6 cells. As shown in

Figures 8-11, a remarkable number of asymmetric DsiRNAs reproducibly exhibited robust human β-catenin inhibitory efficacies at sub-nanomolar concentrations when assayed in the environment of HeLa cells. In addition, as shown in Figures 12-15, a number of these asymmetric DsiRNAs also showed robust mouse HIF-1α inhibitory efficacies at 1 nM, 300 pM and 100 pM when assayed in the environment of mouse Hepa 1-6 cells. (Meanwhile, both human β-catenin-specific and mouse β-catenin-specific inhibitory asymmetric DsiRNAs were also identified.)

While IC_{50} values were not formally calculated during secondary screening, it is clear from Figures 8-11 that sub-nanomolar (and, indeed, sub-100 pM) IC_{50} values were observed for the vast majority of DsiRNAs. Thus, β-catenin-targeting DsiRNAs were demonstrated to be remarkably potent and effective inhibitors of β-catenin expression.

Example 5: Modified Forms of β-Catenin-Targeting DsiRNAs Reduce β-Catenin Levels *In Vitro*

32 β-catenin-targeting DsiRNAs (βc-1545, βc-1683, βc-2097, βc-2277, βc-2612, βc-3111, βc-3195, βc-3389, βc-3393, βc-3399, βc-3534, βc-3653, βc-3659, βc-3708, βc-3712, βc-253, βc-259, βc-686, βc-692, βc-697, βc-870, βc-889, βc-1154, βc-1180, βc-1412, βc-2282, βc-3203, βc-3431, βc-m1763, βc-m2806, βc-m3207 and βc-m3533) were prepared with 2'-O-methyl modification patterns as shown in schematic of Figure 16. For each of the 32 DsiRNA sequences, DsiRNAs possessing each of the six antisense (guide) strand modification patterns were assayed for β-catenin inhibition in human HeLa cells at 0.1 nM (in parallel assays) and 1.0 nM concentrations in the environment of the HeLa cells. Results of these experiments are presented as histograms in Figures 17 to 24. In general, the 32 DsiRNA sequences exhibited a trend towards somewhat reduced efficacy of β-catenin inhibition as the extent of 2'-O-methyl modification of the guide strand increased. However, for almost all DsiRNA sequences examined, a modification pattern could be identified that allowed the DsiRNA to retain significant β-catenin inhibitory efficacy *in vitro*. It was also notable that many DsiRNAs (*e.g.*, βc-1545, βc-1683, βc-3195, βc-3389, βc-3393, βc-3399, βc-3534, βc-3659, βc-3712, βc-253 and βc-3203) exhibited robust β-catenin inhibitory efficacy in even the most highly modified states examined. These data confirm that it is possible to identify highly effective β-catenin inhibitory

DsiRNAs that are robustly tolerant to modification, such that levels of modification sufficient to stabilize such DsiRNAs and/or reduce immunogenicity of such DsiRNAs when therapeutically administered to a subject *in vivo* can be applied to these DsiRNAs.

In certain embodiments, the invention provides a DsiRNA selected from among one or more of the following:

Table 18: Select β-Catenin-Targeting DsiRNAs

DsiRNA Name	27 nt Target Sequence	21 nt Target Sequence
βc-496	SEQ ID NO: 2231	SEQ ID NO: 4449
βc-540	SEQ ID NO: 2235	SEQ ID NO: 4453
βc-639	SEQ ID NO: 2325	SEQ ID NO: 4543
βc-900	SEQ ID NO: 2348	SEQ ID NO: 4566
βc-1545	SEQ ID NO: 2391	SEQ ID NO: 4609
βc-2151	SEQ ID NO: 2477	SEQ ID NO: 4695
βc-3203	SEQ ID NO: 2274	SEQ ID NO: 4492
βc-3399	SEQ ID NO: 2618	SEQ ID NO: 4836
βc-3591	SEQ ID NO: 2645	SEQ ID NO: 4863
βc-3708	SEQ ID NO: 2661	SEQ ID NO: 4879

Among the DsiRNAs of Table 18 that were tested in the above-described modified DsiRNA assays, βc-1545, βc-3203 and βc-3399 were shown to be robustly effective DsiRNA sequences even when modified (and βc-1545 and βc-3399 were observed to be highly effective inhibitors of β-catenin under all modification conditions examined).

Example 6: β-Catenin-Targeting DsiRNAs Reduced Axin-2 Levels *In Vitro*

The impact of β-catenin-targeting DsiRNAs upon Axin-2, a known downstream target of β-catenin was examined in both HCT116 (colon carcinoma) and HepG2 (hepatocellular carcinoma) cell lines. As shown in Figure 26, βcat-h1569, βcat-h1683, βcat-h2612 and βcat-h3393 were all robust inhibitors of Axin-2, with approximately 80%-90% knockdown observed for each of these DsiRNAs in both cell

lines. Cells were assayed at two days post-transfection at indicated concentrations (3 nM and 10 nM) with designated DsiRNAs. Thus, the effect of β-catenin knockdown was also observed in the mRNA levels of the downstream target of β-catenin, Axin-2.

Example 7: β-Catenin Targeting DsiRNAs Inhibited Tumor Cell Growth in Colorectal and Hepatocellular Carcinoma Cell Lines

As described above, Figure 7 shows the growth inhibitory impact of β-catenin-targeting DsiRNAs upon HepG2 hepatocellular carcinoma cells. To identify whether such cell growth inhibitory effects could also be observed in other cancer cell lines, the impact of β-catenin-targeting DsiRNAs upon growth of both HCT116 (colorectal carcinoma) and HuH7 (hepatocellular carcinoma) cell lines was also examined. As shown in Figure 26, transfection of human colorectal cancer cell line HCT116 cells with certain DsiRNAs targeting human β-catenin (βc-1683, βc-2612 and βc-3393) inhibited the growth of such cells at five days post-transfection, as compared to cells administered a control DsiRNA. Cell growth inhibition was assayed using a CellTiter-Blue® Cell Viability Assay (Promega) at five days post-transfection.

More robust inhibition of cancer cell line growth was observed following administration of βc-3393 DsiRNA to human hepatocellular carcinoma cell line HuH7 cells (Figure 27). At five days post-transfection, approximately 40% inhibition of HuH7 cell growth was observed, as compared to cells administered a control DsiRNA. Cell growth inhibition was assayed using a CellTiter-Blue® Cell Viability Assay (Promega) at five days post-transfection. Thus, the cancer cell line growth inhibitory effect of β-catenin-targeting DsiRNAs was observed to be generalizable across at least three distinct cell lines (and was surprisingly robust in the two distinct hepatocellular carcinoma cell lines examined, HepG2 and HuH7).

As shown in Figure 28, transfection of human hepatocellular carcinoma cell line HuH7 cells with a DsiRNA targeting human β-catenin (specifically, a βc-3393 25/27mer possessing an "M11" modified antisense (guide) strand consisting of 2'-O-methyl modifications at the following positions starting from the 5'-terminus (position 1) of the antisense strand: 1, 2, 3, 4, 11, 13, 25 and 27) produced knockdown of β-catenin mRNA levels of approximately 80% at two days post-transfection, when administered with a control DsiRNA, as compared to cells administered only the control DsiRNA. Thus, β-catenin-targeting DsiRNAs were potent inhibitors of both

β-catenin expression levels and of cell growth in hepatocellular carcinoma cell lines HepG2 and HuH7.

The expression of β-Catenin in human HeLa, HepG2 and HCT116 carcinoma cell lines was confirmed *in vitro*, with subcellular distribution of expressed β-Catenin protein also examined. Nuclear and cytoplasmic levels of β-catenin were identified for each cell line *via* Western blot (Figure 29), with β-actin levels assayed as an internal control. Cell extracts were obtained from confluent six well pates, using a NE-PER Nuclear and Cytoplasmic Extraction Reagents Kit (Thermo Fisher Scientific Inc). 75 ug of protein was loaded from each cell line. HeLa (cervical cancer), HepG2 (hepatocellular liver carcinoma) and HCT116 (colorectal carcinoma) cell lines each expressed β-Catenin protein at robust levels, with β-Catenin protein primarily found in the cytoplasm of each cell type (though significant nuclear fractions were also observed for each cell type). Notably, a known truncation mutant form of β-catenin protein was observed in HepG2 cells.

Example 8: β-Catenin-Targeting DsiRNAs Reduced β-Catenin mRNA and Protein Levels *In Vivo*

The impact of β-Catenin-targeting DsiRNAs upon β-Catenin expression levels was examined *in vivo*. Specifically, human β-catenin-targeting DsiRNAs βc-1683, βc-1820 and βc-3393 (previously noted as also being active inhibitors of mouse β-Catenin) were demonstrated to be remarkably effective inhibitors of mouse β-catenin expression *in vivo* in normal mouse liver, inhibiting both β-catenin mRNA (Figure 30, top panel) and protein (Figure 30, bottom panel) levels significantly (*e.g.*, for these DsiRNAs, approximately 70-90% knockdown was observed) when administered as a single dose intravenously to normal mice (n=5 mice per group) at 10 mg/kg and formulated in Invivofectamine® 2.0 (Invitrogen™, Carlsbad, CA). In such experiments, liver tissue was harvested at 72 hours post-administration. All DsiRNAs targeting β-catenin possessed "M11" modified antisense (guide) strands. Notably, βc-1563 also exhibited robust inhibition of β-catenin mRNA levels *in vivo*; however, corresponding β-catenin protein levels were not assessed for this DsiRNA. Meanwhile, βc-2612 was also observed to inhibit β-catenin mRNA levels, even if not to the extent observed for βc-1563, βc-1683, βc-1820 and βc-3393, or to the extent

observed for certain modified forms of βc-2612 in additional experiments described below.

The above *in vivo* results were confirmed and expanded upon under differing conditions in subsequent experiments that also employed modified forms of certain DsiRNAs. As shown in Figure 31, DsiRNAs targeting β-catenin were shown to be active *in vivo* inhibitors of both β-catenin and Axin-2 in normal mouse liver, inhibiting both β-catenin mRNA (top panel) and Axin-2 mRNA (bottom panel) levels significantly (*e.g.*, in many instances, approximately 70-90% knockdown was observed) when administered as a single dose intravenously to normal mice (n=5 mice per group) at 10 mg/kg and formulated in Invivofectamine® 2.0 (Invitrogen™, Carlsbad, CA). For such experiments, liver tissue was harvested at 72 hours post-administration. In these experiments, βc-3393 and βc-2612 DsiRNAs possessed varying modification patterns as indicated in Figure 31, with, *e.g.*, an "M0/M11" pattern corresponding to a 25/27mer DsiRNA possessing an unmodified sense (passenger) strand and a modified antisense (guide) strand having the "M11" pattern of 2'-O-methlyation. (Meanwhile, the "M14" modification pattern of the sense strand employed for βc-3393-M14/M12 corresponds to modification of the sense strand at the following positions, starting from the 5'-terminus (position 1) of the sense strand: 2, 4, 6, 8, 12, 14, 16 and 18. All three assayed DsiRNAs (βc-2612-M0/M11 and parallel differentially modified forms of βc-3393) showed greater than 80% inhibition of β-catenin levels *in vivo* in normal mouse liver, and at least 60% knockdown of Axin-2.

Modified forms of βc-3393 and βc-2612 DsiRNAs were also observed to be active inhibitors of β-catenin and Axin-2 expression at a 48 hour timepoint *in vivo* in normal mouse liver. Specifically, as shown in Figure 32, βc-3393-M0/M11 (MS), βc-3393-M0/M11 (LS), βc-3393-M14/M12 and βc-2612-M0/M11 DsiRNAs all robustly inhibited both β-catenin mRNA (top panel) and Axin-2 mRNA (bottom panel) levels significantly (*e.g.*, in all instances, approximately 70-90% knockdown was observed) when administered as a single dose intravenously to normal mice (n=5 mice per group) at 10 mg/kg and formulated in Invivofectamine® 2.0 (Invitrogen™, Carlsbad, CA). In these experiments, liver tissue was harvested at 48 hours post-administration. DsiRNAs targeting β-catenin possessed varying modification patterns as indicated in Figure 32 and as described above. Control DsiRNAs possessed similar patterns of modification of sense and antisense strands.

Thus, β-catenin DsiRNAs were observed to be surprisingly potent and effective inhibitors of β-catenin expression *in vivo*.

Example 9: Inhibition of β-Catenin by Additional Preferred DsiRNAs

The remaining DsiRNA molecules shown in Table 9, possessing sense and antisense strand sequences as shown and targeting β-catenin wild-type sequences (and variant sequences where applicable) are designed and synthesized as described above and tested in HeLa cells (and, optionally, in mouse Hepa 1-6 cells) for inhibitory efficacy as described in Examples 3 and 4 above. The ability of these DsiRNA agents to inhibit β-catenin expression is optionally assessed in comparison to corresponding β-catenin target sequence-directed 21mer siRNAs (21 nucleotide target sequences of β-catenin dsRNA agents described herein are presented in Tables 5 and 10 above). These additional DsiRNAs and the DsiRNAs tested herein are also examined for the ability to outperform cognate siRNAs, as determined *via* measurement of efficacy in decreasing levels of β-catenin target relative to a cognate 21mer siRNA agent. The duration of such inhibitory effects is also examined at both 24 hours and 48 hours post-administration, with concentrations of 0.1 nM, 0.3nM, 1 nM and 5 nM tested. DsiRNAs of the instant invention are examined for the ability to outperform their cognate 21mer siRNA, as determined *via* measurement of potency and/or duration of effect.

Optionally, the DsiRNA molecules shown in Tables 6-8 and 11-13 above are also similarly synthesized and tested.

Example 10: Indications

As described herein, the nucleic acid molecules of the present invention are used in assays to diagnose disease state related to β-catenin levels. In addition, the nucleic acid molecules can be used to treat disease state related to β-catenin misregulation, levels, etc.

Particular disorders and disease states that can be associated with β-catenin expression modulation include, but are not limited to cancer and/or proliferative diseases, conditions, or disorders and other diseases, conditions or disorders that are related to or will respond to the levels of β-catenin in a cell or tissue, alone or in combination with other therapies. Particular degenerative and disease states that are

associated with β-catenin expression modulation include but are not limited to, for example prostate cancer, lung cancer, colorectal cancer, bladder cancer, pancreatic cancer, and breast cancer.

In certain therapeutic embodiments, the disease or disorder to be treated is selected from the group consisting of a hyperproliferative disorder, such as cancer, such as a cancer selected from the group consisting of colorectal cancer, hepatocellular cancer, endometrial cancer, malignant melanoma, ovarian cancer, pancreatic cancer, pituitary cancer, oesophageal cancer, lung cancer, breast cancer, kidney cancer, haematopoetic system cancer, cervical cancer, CNS cancer, bone cancer, biliary tract cancer and adrenal gland cancer. Optionally, the disease or disorder is a cancer selected from the group consisting of colorectal cancer, hepatocellular cancer, endometrial cancer, and malignant melanoma. In certain embodiments, the disorder is a cancer selected from the group consisting of liver cancer and kidney cancer. In certain embodiments, the disease or disorder is associated with a mutation in the β-catenin gene or a gene whose protein product is associated with or interacts with β-catenin, such as the APC gene. Therefore, in various embodiments, the target mRNA is a mutated form of the β-catenin sequence, for example it may comprise one or more single point mutations, such as SNPs associated with cancer.

Examples of such diseases where mutations in the β-catenin or APC gene lead to abnormal levels of β-catenin activity are: (1) Colorectal cancer, APC and β-catenin are mutually mutated in more than 70% of all cases (Powell et al., Nature, 1992; Morin et al., Science, 1997; Sparks et al., Cancer Res, 1998); (2) Hepatocellular cancer, β-catenin are mutated in more than 25% of cases (de La Coste A, PNAS, 1998); (3) Endometrial cancer, β-catenin are mutated >10%; and (4) Malignant melanoma, β-catenin are mutated >10% (Rubinfeld et al., Science, 1997).

Further examples of such diseases are cancer of the ovary, pancreas, pituitary, oesophagus, lung, breast, kidney, haematopoetic system, cervix, CNS, bone, biliary tract and adrenal gland. It has been shown that mutations in the β-catenin or APC gene are associated with these diseases (Catalogue of Somatic Mutations in Cancer available from the Sanger Institute (United Kingdom) homepage http://www.sanger.ac.uk/).

In certain embodiments, the disease or disorder is associated with abnormal levels of a mutated form of β-catenin. In certain embodiments, the disease or disorder

is associated with abnormal levels of a wild-type form of β-catenin. One aspect of the invention is directed to a method of treating a mammal suffering from or susceptible to conditions associated with abnormal levels of β-catenin, comprising administering to the mammal a therapeutically effective amount of a DsiRNA of the invention targeted to β-catenin or various compositions or conjugates thereof.

Gemcytabine and cyclophosphamide are non-limiting examples of chemotherapeutic agents that can be combined with or used in conjunction with the nucleic acid molecules (*e.g.* DsiRNA molecules) of the instant invention. Those skilled in the art will recognize that other drugs such as anti-cancer compounds and therapies can be similarly be readily combined with the nucleic acid molecules of the instant invention (*e.g.* DsiRNA molecules) and are hence within the scope of the instant invention. Such compounds and therapies are well known in the art (see for example Cancer: Principles and Practice of Oncology, Volumes 1 and 2, eds Devita, V. T., Hellman, S., and Rosenberg, S. A., J.B. Lippincott Company, Philadelphia, USA) and include, without limitations, antifolates; fluoropyrimidines; cytarabine; purine analogs; adenosine analogs; amsacrine; topoisomerase I inhibitors; anthrapyrazoles; retinoids; antibiotics such as bleomycin, anthacyclins, mitomycin C, dactinomycin, and mithramycin; hexamethylmelamine; dacarbazine; 1-asperginase; platinum analogs; alkylating agents such as nitrogen mustard, melphalan, chlorambucil, busulfan, ifosfamide, 4-hydroperoxycyclophosphamide, nitrosoureas, thiotepa; plant derived compounds such as vinca alkaloids, epipodophyllotoxins, taxol; Tamoxifen; radiation therapy; surgery; nutritional supplements; gene therapy; radiotherapy such as 3D-CRT; immunotoxin therapy such as ricin, monoclonal antibodies Herceptin; and the like. For combination therapy, the nucleic acids of the invention are prepared in one of two ways. First, the agents are physically combined in a preparation of nucleic acid and chemotherapeutic agent, such as a mixture of a nucleic acid of the invention encapsulated in liposomes and ifosfamide in a solution for intravenous administration, wherein both agents are present in a therapeutically effective concentration (*e.g.*, ifosfamide in solution to deliver 1000-1250 mg/m2/day and liposome-associated nucleic acid of the invention in the same solution to deliver 0.1-100 mg/kg/day). Alternatively, the agents are administered separately but simultaneously in their respective effective doses (e.g., 1000-1250 mg/m2/d ifosfamide and 0.1 to 100 mg/kg/day nucleic acid of the invention).

Those skilled in the art will recognize that other compounds and therapies used to treat the diseases and conditions described herein can similarly be combined with the nucleic acid molecules of the instant invention (e.g. siNA molecules) and are hence within the scope of the instant invention.

Example 11: Serum Stability of DsiRNAs

Serum stability of DsiRNA agents is assessed *via* incubation of DsiRNA agents in 50% fetal bovine serum for various periods of time (up to 24 h) at 37°C. Serum is extracted and the nucleic acids are separated on a 20% non-denaturing PAGE and can be visualized with Gelstar stain. Relative levels of protection from nuclease degradation are assessed for DsiRNAs (with and without modifications).

Example 12: Use of Additional Cell Culture Models to Evaluate the Down-Regulation of β-Catenin gene Expression

A variety of endpoints have been used in cell culture models to look at β-catenin-mediated effects after treatment with anti-β-catenin agents. Phenotypic endpoints include inhibition of cell proliferation, RNA expression, and reduction of β-catenin protein expression. Because β-catenin mutations are directly associated with increased proliferation of certain tumor cells, a proliferation endpoint for cell culture assays can be used as a screen, e.g., as documented in the above examples. There are several methods by which this endpoint can be measured. Following treatment of cells with DsiRNA, cells are allowed to grow (typically 5 days), after which the cell viability, the incorporation of bromodeoxyuridine (BrdU) into cellular DNA and/or the cell density are measured. The assay of cell density can be done in a 96-well format, e.g. by using commercially available fluorescent nucleic acid stains (such as Syto® 13 or CyQuant®). As a secondary, confirmatory endpoint, a DsiRNA-mediated decrease in the level of β-catenin protein expression can be evaluated using a β-catenin-specific ELISA.

Example 13: Evaluation of Anti-β-catenin DsiRNA Efficacy in a Mouse Model of β-Catenin Misregulation

Anti-β-catenin DsiRNA chosen from *in vitro* assays can be further tested in mouse models, including, *e.g.*, xenograft and other animal models as recited above. In one example, mice possessing misregulated (*e.g.*, elevated) β-catenin levels are

administered a DsiRNA agent of the present invention *via* hydrodynamic tail vein injection. 3-4 mice per group (divided based upon specific DsiRNA agent tested) are injected with 50 μg or 200 μg of DsiRNA. Levels of β-catenin RNA are evaluated using RT-qPCR. Additionally or alternatively, levels of β-catenin (*e.g.*, β-catenin protein levels and/or cancer cell/tumor formation, growth or spread) can be evaluated using an art-recognized method, or phenotypes associated with misregulation of β-catenin (*e.g.*, tumor formation, growth, metastasis, etc.) are monitored (optionally as a proxy for measurement of β-catenin transcript or β-catenin protein levels). Active DsiRNA in such animal models can also be subsequently tested in combination with standard chemotherapies.

Example 14: Diagnostic Uses

The DsiRNA molecules of the invention can be used in a variety of diagnostic applications, such as in the identification of molecular targets (*e.g.*, RNA) in a variety of applications, for example, in clinical, industrial, environmental, agricultural and/or research settings. Such diagnostic use of DsiRNA molecules involves utilizing reconstituted RNAi systems, for example, using cellular lysates or partially purified cellular lysates. DsiRNA molecules of this invention can be used as diagnostic tools to examine genetic drift and mutations within diseased cells. The close relationship between DsiRNA activity and the structure of the target β-catenin RNA allows the detection of mutations in a region of the β-catenin molecule, which alters the base-pairing and three-dimensional structure of the target β-catenin RNA. By using multiple DsiRNA molecules described in this invention, one can map nucleotide changes, which are important to RNA structure and function *in vitro*, as well as in cells and tissues. Cleavage of target β-catenin RNAs with DsiRNA molecules can be used to inhibit gene expression and define the role of specified gene products in the progression of a β-catenin-associated disease or disorder. In this manner, other genetic targets can be defined as important mediators of the disease. These experiments will lead to better treatment of the disease progression by affording the possibility of combination therapies (*e.g.*, multiple DsiRNA molecules targeted to different genes, DsiRNA molecules coupled with known small molecule inhibitors, or intermittent treatment with combinations of DsiRNA molecules and/or other chemical or biological molecules). Other *in vitro* uses of DsiRNA molecules of this invention are well known in the art, and include detection of the presence of RNAs associated

with a disease or related condition. Such RNA is detected by determining the presence of a cleavage product after treatment with a DsiRNA using standard methodologies, for example, fluorescence resonance emission transfer (FRET).

In a specific example, DsiRNA molecules that cleave only wild-type or mutant or polymorphic forms of the target β-catenin RNA are used for the assay. The first DsiRNA molecules (i.e., those that cleave only wild-type forms of target β-catenin RNA) are used to identify wild-type β-catenin RNA present in the sample and the second DsiRNA molecules (*i.e.*, those that cleave only mutant or polymorphic forms of target RNA) are used to identify mutant or polymorphic β-catenin RNA in the sample. As reaction controls, synthetic substrates of both wild-type and mutant or polymorphic β-catenin RNA are cleaved by both DsiRNA molecules to demonstrate the relative DsiRNA efficiencies in the reactions and the absence of cleavage of the "non-targeted" β-catenin RNA species. The cleavage products from the synthetic substrates also serve to generate size markers for the analysis of wild-type and mutant β-catenin RNAs in the sample population. Thus, each analysis requires two DsiRNA molecules, two substrates and one unknown sample, which is combined into six reactions. The presence of cleavage products is determined using an RNase protection assay so that full-length and cleavage fragments of each β-catenin RNA can be analyzed in one lane of a polyacrylamide gel. It is not absolutely required to quantify the results to gain insight into the expression of mutant or polymorphic β-catenin RNAs and putative risk of β-catenin-associated phenotypic changes in target cells. The expression of β-catenin mRNA whose protein product is implicated in the development of the phenotype (*i.e.*, disease related/associated) is adequate to establish risk. If probes of comparable specific activity are used for both transcripts, then a qualitative comparison of β-catenin RNA levels is adequate and decreases the cost of the initial diagnosis. Higher mutant or polymorphic form to wild-type ratios are correlated with higher risk whether β-catenin RNA levels are compared qualitatively or quantitatively.

All patents and publications mentioned in the specification are indicative of the levels of skill of those skilled in the art to which the invention pertains. All references cited in this disclosure are incorporated by reference to the same extent as if each reference had been incorporated by reference in its entirety individually.

One skilled in the art would readily appreciate that the present invention is well adapted to carry out the objects and obtain the ends and advantages mentioned, as well as those inherent therein. The methods and compositions described herein as presently representative of preferred embodiments are exemplary and are not intended as limitations on the scope of the invention. Changes therein and other uses will occur to those skilled in the art, which are encompassed within the spirit of the invention, are defined by the scope of the claims.

It will be readily apparent to one skilled in the art that varying substitutions and modifications can be made to the invention disclosed herein without departing from the scope and spirit of the invention. Thus, such additional embodiments are within the scope of the present invention and the following claims. The present invention teaches one skilled in the art to test various combinations and/or substitutions of chemical modifications described herein toward generating nucleic acid constructs with improved activity for mediating RNAi activity. Such improved activity can comprise improved stability, improved bioavailability, and/or improved activation of cellular responses mediating RNAi. Therefore, the specific embodiments described herein are not limiting and one skilled in the art can readily appreciate that specific combinations of the modifications described herein can be tested without undue experimentation toward identifying DsiRNA molecules with improved RNAi activity.

The invention illustratively described herein suitably can be practiced in the absence of any element or elements, limitation or limitations that are not specifically disclosed herein. Thus, for example, in each instance herein any of the terms "comprising", "consisting essentially of", and "consisting of" may be replaced with either of the other two terms. The terms and expressions which have been employed are used as terms of description and not of limitation, and there is no intention that in the use of such terms and expressions of excluding any equivalents of the features shown and described or portions thereof, but it is recognized that various modifications are possible within the scope of the invention claimed. Thus, it should be understood that although the present invention has been specifically disclosed by preferred embodiments, optional features, modification and variation of the concepts herein disclosed may be resorted to by those skilled in the art, and that such modifications and variations are considered to be within the scope of this invention as defined by the description and the appended claims.

In addition, where features or aspects of the invention are described in terms of Markush groups or other grouping of alternatives, those skilled in the art will recognize that the invention is also thereby described in terms of any individual member or subgroup of members of the Markush group or other group.

The use of the terms "a" and "an" and "the" and similar referents in the context of describing the invention (especially in the context of the following claims) are to be construed to cover both the singular and the plural, unless otherwise indicated herein or clearly contradicted by context. The terms "comprising," "having," "including," and "containing" are to be construed as open-ended terms (i.e., meaning "including, but not limited to,") unless otherwise noted. Recitation of ranges of values herein are merely intended to serve as a shorthand method of referring individually to each separate value falling within the range, unless otherwise indicated herein, and each separate value is incorporated into the specification as if it were individually recited herein. All methods described herein can be performed in any suitable order unless otherwise indicated herein or otherwise clearly contradicted by context. The use of any and all examples, or exemplary language (e.g., "such as") provided herein, is intended merely to better illuminate the invention and does not pose a limitation on the scope of the invention unless otherwise claimed. No language in the specification should be construed as indicating any non-claimed element as essential to the practice of the invention.

Embodiments of this invention are described herein, including the best mode known to the inventors for carrying out the invention. Variations of those embodiments may become apparent to those of ordinary skill in the art upon reading the foregoing description.

The inventors expect skilled artisans to employ such variations as appropriate, and the inventors intend for the invention to be practiced otherwise than as specifically described herein. Accordingly, this invention includes all modifications and equivalents of the subject matter recited in the claims appended hereto as permitted by applicable law. Moreover, any combination of the above-described elements in all possible variations thereof is encompassed by the invention unless otherwise indicated herein or otherwise clearly contradicted by context. Those skilled in the art will recognize, or be able to ascertain using no more than routine experimentation, many equivalents to the specific embodiments of the invention

2011276365 06 Apr 2017

described herein. Such equivalents are intended to be encompassed by the following claims.

Throughout the specification and claims, unless the context requires otherwise, the word "comprise" or variations such as "comprises" or "comprising", will be understood to imply the inclusion of a stated integer or group of integers but not the exclusion of any other integer or group of integers

2011276365 13 Apr 2017

CLAIMS

We claim:

1. A non-naturally occurring double stranded ribonucleic acid (dsRNA) comprising first and second nucleic acid strands, wherein said first strand is 25-35 nucleotides in length, wherein said second nucleic acid strand comprises SEQ ID NO: 1239 and is 25-50 nucleotides in length, and wherein said dsRNA reduces β-catenin target gene expression when said double stranded nucleic acid is introduced into a mammalian cell.

2. A non-naturally occurring double-stranded RNA (dsRNA) comprising first and second nucleic acid strand and a duplex region of at least 25 base pairs, wherein said first strand is 25-35 nucleotides in length and said second strand of said dsRNA comprises SEQ ID NO: 1239 and is 25-50 nucleotides in length, wherein said dsRNA reduces β-catenin target gene expression when said double stranded nucleic acid is introduced into a mammalian cell.

3. The non-naturally occurring dsRNA of claim 1 or 2, wherein starting from the first nucleotide (position 1) at the 3' terminus of the first nucleic acid strand, position 1, 2 and/or 3 is substituted with a modified nucleotide.

4. The non-naturally occurring dsRNA of any one of claims 1-3, wherein said 3' terminus of said first strand and said 5' terminus of said second strand form a blunt end.

5. The non-naturally occurring dsRNA of any one of claims 1-4, wherein said first strand is 25 nucleotides in length and said second strand is 27 nucleotides in length.

6. The non-naturally occurring dsRNA of claim 3, wherein said modified nucleotide residue of said 3' terminus of said first strand is selected from the group consisting of a deoxyribonucleotide, an acyclonucleotide and a fluorescent molecule.

7. The non-naturally occurring dsRNA of claim 3, wherein position 1 of said 3' terminus of the first nucleic acid strand is a deoxyribonucleotide.

8. The dsRNA of claims 1 or claim 2, wherein said dsRNA possesses a modified nucleotide or backbone modification.

9. The dsRNA of any one of claims 3-8, wherein the dsRNA possesses one or more modifications selected from the group consisting of a 2′-O-methyl nucleotide, a 2′-methoxyethoxy nucleotide, a 2′-fluoro nucleotide, a 2′-allyl nucleotide, a 2′-O-[2-(methylamino)-2-oxoethyl] nucleotide, a 4′-thio nucleotide, a 4′-CH2-O-2′-bridge, a 4′-(CH2)2-O-2′-bridge, a locked nucleic acid (LNA), a 2′-amino, a 2′-O—(N-methlycarbamate), a 2′-O-alkyl ribonucleotide, a deoxyribonucleotide, a dideoxyribonucleotide, an acyclonucleotide, a 3′-deoxyadenosine (cordycepin), a 3′-azido-3′-deoxythymidine (AZT), a 2′,3′-dideoxyinosine (ddI), a 2′,3′-dideoxy-3′-thiacytidine (3TC), a 2′,3′-didehydro-2′,3′-dideoxythymidine (d4T), a monophosphate nucleotide of 3′-azido-3′-deoxythymidine (AZT), a 2′,3′-dideoxy-3′-thiacytidine (3TC) and a monophosphate nucleotide of 2′,3′-didehydro-2′,3′-dideoxythymidine (d4T), a 4-thiouracil, a 5-bromouracil, a 5-iodouracil, a 5-(3-aminoallyl)-uracil, a phosphonate backbone modification, a phosphorothioate backbone modification and a phosphotriesterphosphate backbone modification.

10. The non-naturally occurring dsRNA of claim 1 or claim 2, wherein said 3' overhang is 1-3 nucleotides in length, or wherein said 3' overhang is 1-2 nucleotides in length, or wherein said 3' overhang is two nucleotides in length and wherein said modified nucleotide of said 3' overhang is a 2'-O-methyl modified ribonucleotide.

11. The non-naturally occurring dsRNA of claims 1 or claim 2, wherein said second nucleic acid strand, starting from the nucleotide residue of said second strand that is complementary to the 5' terminal nucleotide residue of said first nucleic acid strand, comprises alternating modified and unmodified nucleotide residues, or wherein said second nucleic acid strand, starting from the nucleotide residue of said second strand that is complementary to the 5' terminal nucleotide residue of said first nucleic acid strand, comprises unmodified nucleotide residues at all positions from position 18 to the 5' terminus of said second oligonucleotide strand.

12. The non-naturally occurring dsRNA of any one of claims 1-11, wherein the amount of said non-naturally occurring double stranded nucleic acid sufficient to reduce expression of the target gene is selected from the group consisting of 1

nanomolar or less, 200 picomolar or less, 100 picomolar or less, 50 picomolar or less, 20 picomolar or less, 10 picomolar or less, 5 picomolar or less, 2, picomolar or less and 1 picomolar or less in the environment of said cell.

13. The non-naturally occurring dsRNA of any one of claims 1-12, wherein the first and second strands are joined by a chemical linker.

14. The non-naturally occurring double stranded nucleic acid of any one of claims 1-12, wherein said 3' terminus of said first strand and said 5' terminus of said second strand are joined by a chemical linker.

15. The non-naturally occurring double stranded nucleic acid of claim 1 or claim 2, wherein said first strand comprises SEQ ID NO: 130.

16. The non-naturally occurring double stranded nucleic acid of claim 1 or claim 2 comprising a phosphate backbone modification selected from the group consisting of a phosphonate, a phosphorothioate and a phosphotriester.

17. A method for reducing expression of a target β-catenin gene in a mammalian cell comprising contacting a mammalian cell *in vitro* with non-naturally occurring dsRNA of any one of claims 1-16 in an amount sufficient to reduce expression of a target β-catenin gene in said cell.

18. The method of claim 17, wherein target β-catenin gene expression is reduced by an amount (expressed by %) selected from the group consisting of at least 10%, at least 50% and at least 80-90%.

19. The method of claim 17, wherein β-catenin mRNA levels are reduced by an amount (expressed by %) of at least 90% at least 8 days after said cell is contacted with said dsRNA, or wherein β-catenin mRNA levels are reduced by an amount (expressed by %) of at least 70% at least 10 days after said cell is contacted with said dsRNA.

20. A method for reducing expression of a target β-catenin gene in a mammal comprising administering non-naturally occurring dsRNA of any one of claims 1-16

to a mammal in an amount sufficient to reduce expression of a target β-catenin gene in the mammal.

21. The method of claim 20, wherein said non-naturally occurring dsRNA is administered at a dosage selected from the group consisting of 1 microgram to 5 milligrams per kilogram of said mammal per day, 100 micrograms to 0.5 milligrams per kilogram, 0.001 to 0.25 milligrams per kilogram, 0.01 to 20 micrograms per kilogram, 0.01 to 10 micrograms per kilogram, 0.10 to 5 micrograms per kilogram, and 0.1 to 2.5 micrograms per kilogram.

22. The method of claim 20, wherein said administering step comprises a mode selected from the group consisting of intravenous injection, intramuscular injection, intraperitoneal injection, infusion, subcutaneous injection, transdermal, aerosol, rectal, vaginal, topical, oral and inhaled delivery.

23. A method for selectively inhibiting the growth of a cell comprising contacting a cell with an amount of non-naturally occurring dsRNA of any one of claims 1-16 sufficient to inhibit the growth of the cell.

24. The method of claim 23, wherein said cell is selected from the group comprising: a tumor cell of a subject, a tumour cell *in vitro,* and a human cell.

25. The method of claim 24, wherein said cell is a hepatocellular cancer cell selected from the group consisting of HepG2 and HuH7.

26. The method of claim 24, wherein said cell is a HCT116 colorectal cancer cell.

27. The method of claim 23, wherein said cell is a HeLa cell, a mammalian liver cell or a human cell.

28. A formulation comprising the non-naturally occurring dsRNA of any one of claims 1-16, wherein said dsRNA is present in an amount effective to reduce target β-catenin RNA levels when said dsRNA is introduced into a mammalian cell *in vitro* by an amount (expressed by %) selected from the group consisting of at least 10%, at least 50% and at least 80-90%

29. The formulation of claim 28, wherein said effective amount is selected from the group consisting of 1 nanomolar or less, 200 picomolar or less, 100 picomolar or less, 50 picomolar or less, 20 picomolar or less, 10 picomolar or less, 5 picomolar or less, 2, picomolar or less and 1 picomolar or less in the environment of said cell.

30. A formulation comprising the non-naturally occurring dsRNA of any one of claims 1-16, wherein said dsRNA is present in an amount effective to reduce target RNA levels when said dsRNA is introduced into a cell of a mammalian subject by an amount (expressed by %) selected from the group consisting of at least 10%, at least 50% and at least 80-90%.

31. The formulation of claim 30, wherein said effective amount is a dosage selected from the group consisting of 1 microgram to 5 milligrams per kilogram of said subject per day, 100 micrograms to 0.5 milligrams per kilogram, 0.001 to 0.25 milligrams per kilogram, 0.01 to 20 micrograms per kilogram, 0.01 to 10 micrograms per kilogram, 0.10 to 5 micrograms per kilogram, and 0.1 to 2.5 micrograms per kilogram.

32. A mammalian cell containing the non-naturally occurring dsRNA of any one of claims 1-16.

33. A pharmaceutical composition comprising the non-naturally occurring dsRNA of any one of claims 1-16 and a pharmaceutically acceptable carrier.

34. A composition possessing β-catenin inhibitory activity comprising a non-naturally occurring double stranded ribonucleic acid (dsRNA) comprising first and second nucleic acid strands, wherein said first strand is 25-35 nucleotides in length, wherein said second nucleic acid strand is comprises SEQ ID NO: 1239 and is 25-50 nucleotides in length, and wherein said dsRNA reduces β-catenin target gene expression when said double stranded nucleic acid is introduced into a mammalian cell.

35. A composition possessing β-catenin inhibitory activity comprising a non-naturally occurring double-stranded RNA (dsRNA) comprising first and second nucleic acid strand and a duplex region of at least 25 base pairs, wherein said first strand is 25-35 nucleotides in length and said second strand of said dsRNA comprises

SEQ ID NO: 1239 and is 25-50 nucleotides in length, wherein said dsRNA reduces β-catenin target gene expression when said double stranded nucleic acid is introduced into a mammalian cell.

36. A method when used for treating or preventing a β-catenin-associated disease or disorder in a subject comprising administering the non-naturally occurring dsRNA of any one of claims 1-16 and a pharmaceutically acceptable carrier to the subject in an amount sufficient to treat or prevent said β-catenin-associated disease or disorder in said subject, thereby treating or preventing said β-catenin-associated disease or disorder in said subject.

37. The method of claim 36, wherein said β-catenin-associated disease or disorder is colorectal cancer or hepatocellular cancer.

38. A kit comprising the non-naturally occurring dsRNA of any one of claims 1-16 and instructions for its use.

39. Use of a non-naturally occurring double stranded ribonucleic acid (dsRNA) according to any one of claims 1-16 in the preparation of a medicament for the treatment or prevention of a β-catenin-associated disease or disorder in a subject in need thereof.

Figure 1

Ago2 cleavage sites
aligned
1
9
DsiRNA 25/27mer
5′ -ACCUCACUUGCAAUAUUAUAAGAa-3′
3′ -AUUGGAGUGAACGUUAUUAAUAUUCUU-5′
SEQ ID NO: 178
SEQ ID NO: 1287
siRNA 21mer
5′ -ACCUCACUUGCAAUAUUAUA-3′ 1
3′ -AUUGGAGUGAACGUUAUUAAU-5′
SEQ ID NO: 7771
SEQ ID NO: 7772
DsiRNA 27/27
5′ -UAACCUCACUUGCAAUAUUAUAAGAA-3′
3′ -AUUGGAGUGAACGUUAUUAAUAUUCUU-5′
SEQ ID NO: 6832
SEQ ID NO: 1287
Blunt/Blunt
siRNA 21mer
5′ -UAACCUCACUUGCAAUAUUA-3′
3′ -AUUGGAGUGAACGUUAUUAAU-5′
SEQ ID NO: 7773
SEQ ID NO: 7772
Blunt-Blunt
DsiRNA 27/27
5′ -UAACCUCACUUGCAAUAUUAUAAGGCC-3′
3′ -AUUGGAGUGAACGUUAUUAAUAUUCUU-5′
SEQ ID NO: 5723
SEQ ID NO: 1287
Blunt/Fray-R
siRNA 21mer
5′ -UAACCUCACUUGCAAUAUUAUCC-3′
3′ -AUUGGAGUGAACGUUAUUAAU-5′
SEQ ID NO: 7774
SEQ ID NO: 7772
Blunt/Fray-R

Figure 2

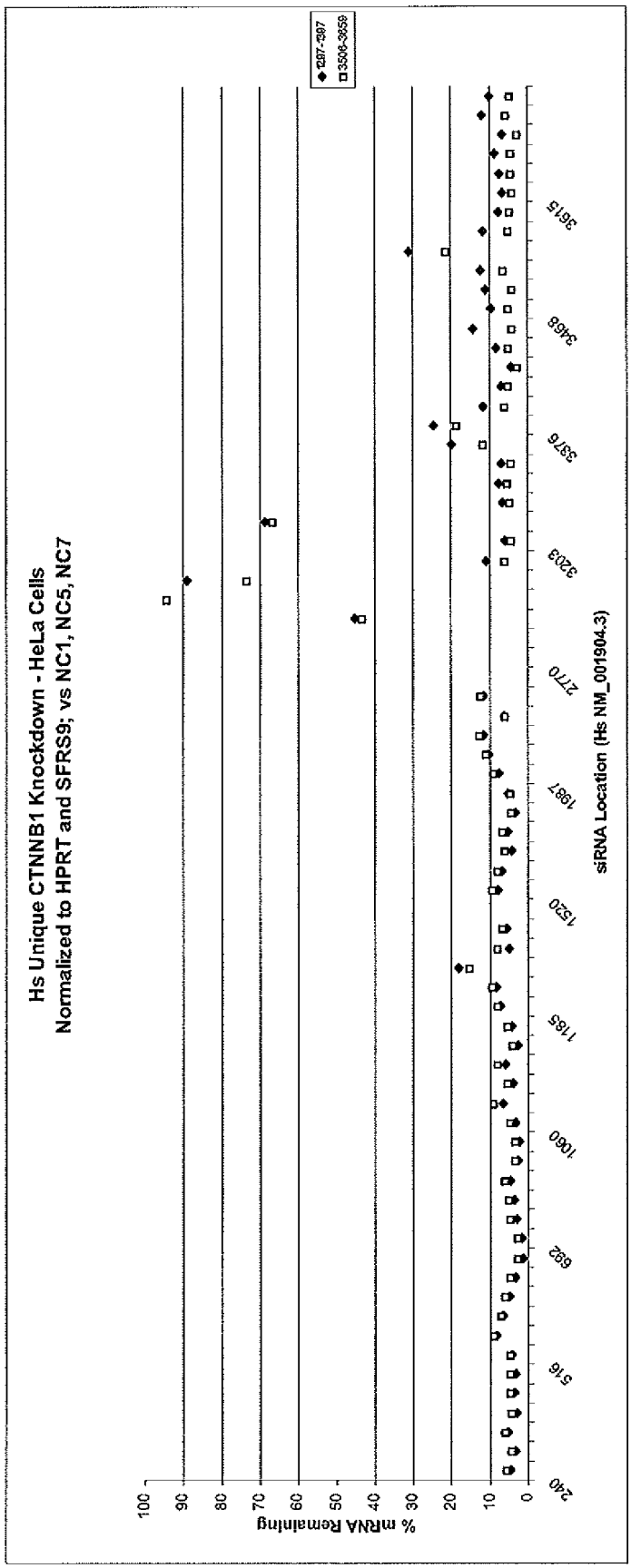

Hs Unique CTNNB1 Knockdown - HeLa Cells
Normalized to HPRT and SFRS9; vs NC1, NC5, NC7
297-397
3506-3658
% mRNA Remaining
siRNA Location (Hs NM_001904.3)
100
90
80
70
60
50
40
30
20
10
0
240
516
692
1060
1185
1520
1987
2770
3203
3376
3468
3615

Figure 3

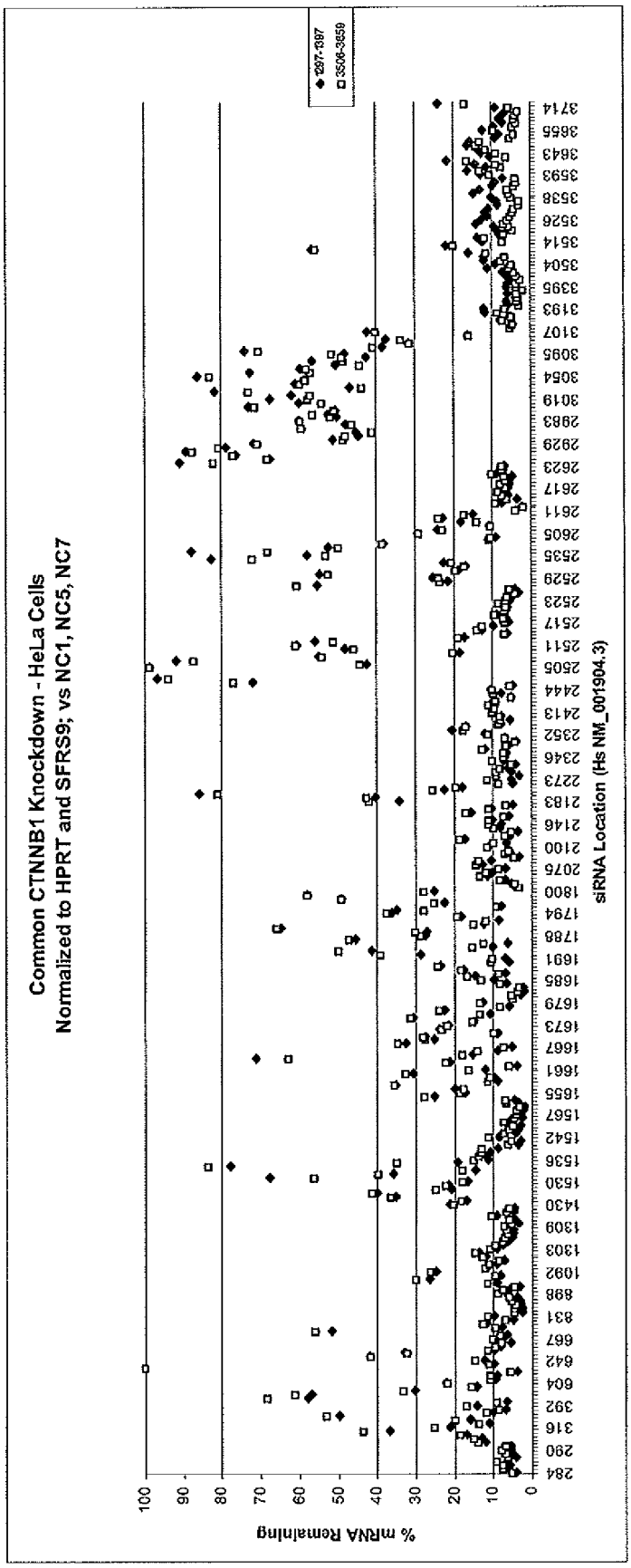

Common CTNNB1 Knockdown - HeLa Cells
Normalized to HPRT and SFRS9; vs NC1, NC5, NC7
1297-1987
3506-3659
% mRNA Remaining
siRNA Location (Hs NM_001904.3)

Figure 4

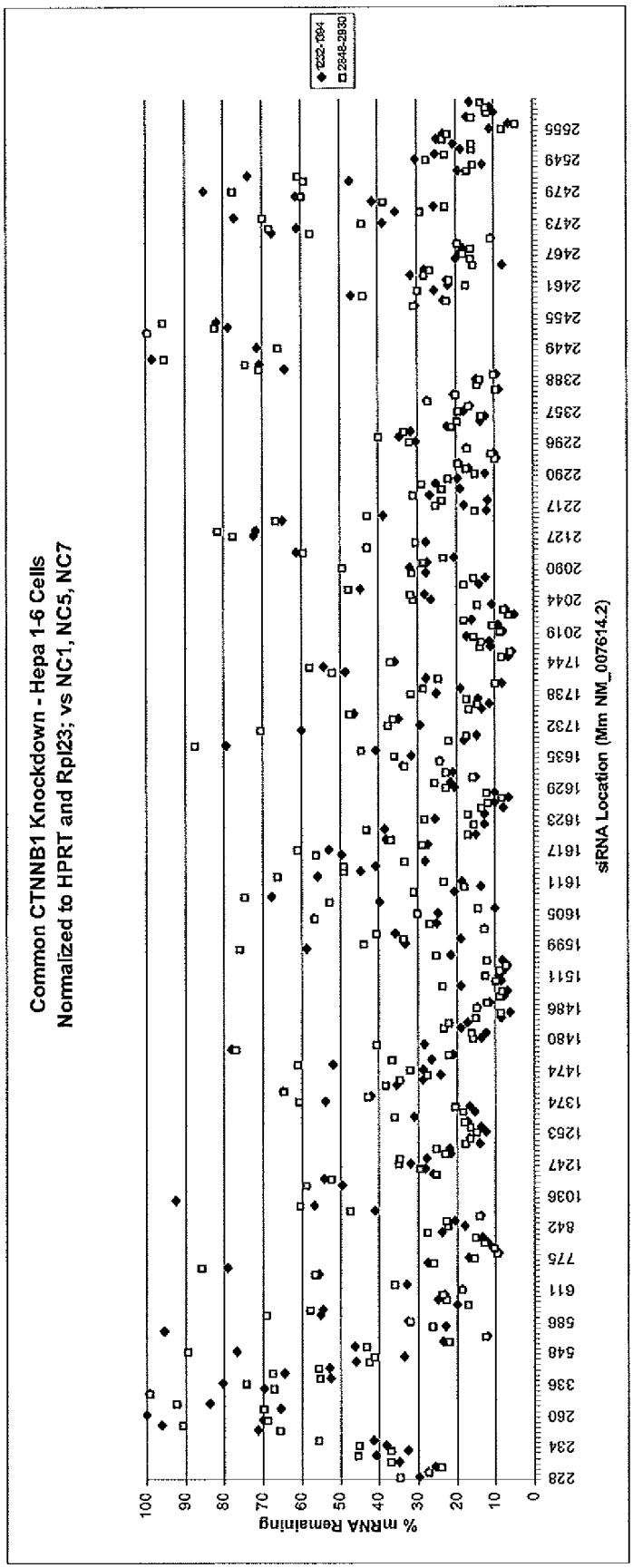

Common CTNNB1 Knockdown - Hepa 1-6 Cells
Normalized to HPRT and Rpl23; vs NC1, NC5, NC7
222-1694
2848-2930
% mRNA Remaining
siRNA Location (Mm NM_007614.2)

Figure 5

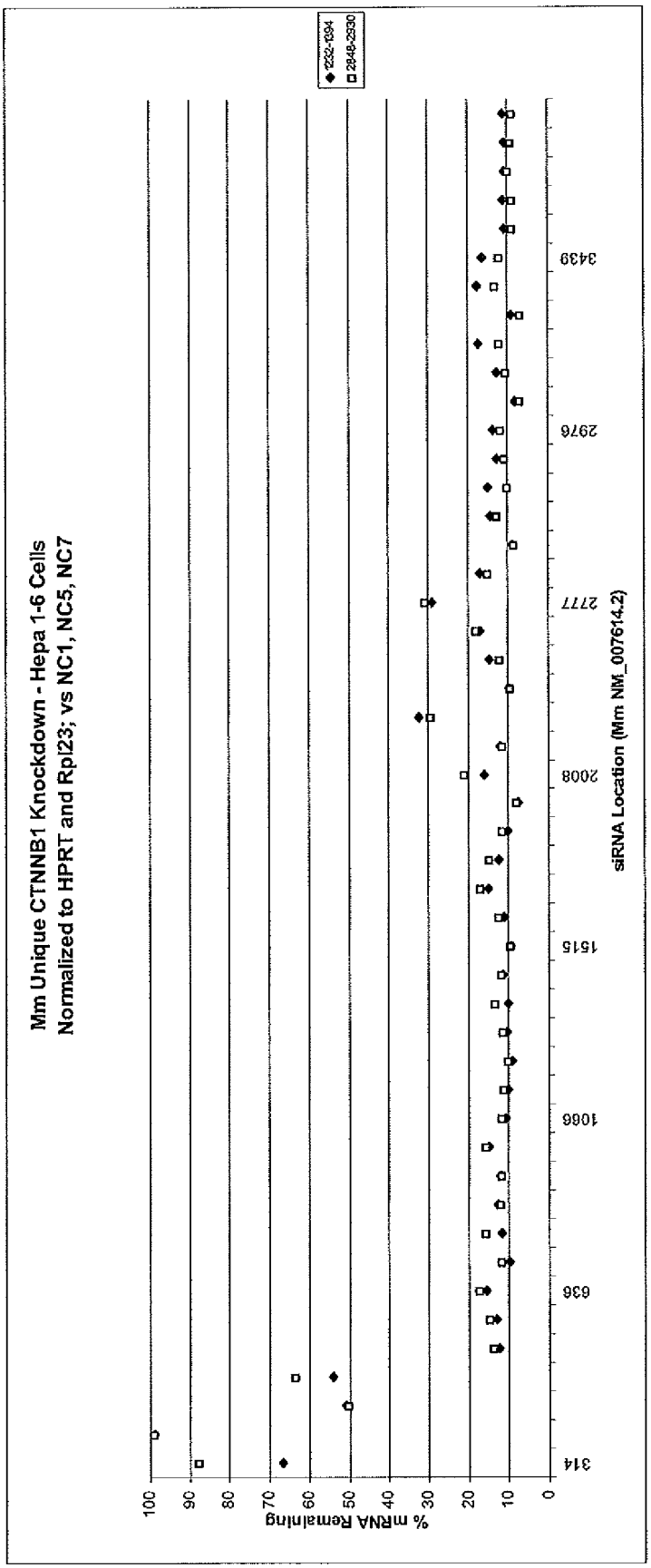

Mm Unique CTNNB1 Knockdown - Hepa 1-6 Cells
Normalized to HPRT and Rpl23; vs NC1, NC5, NC7
232-194
2848-2830
% mRNA Remaining
100
90
80
70
60
50
40
30
20
10
0
314
636
1066
1515
2008
2777
2976
3439
siRNA Location (Mm NM_007614.2)

Figure 6

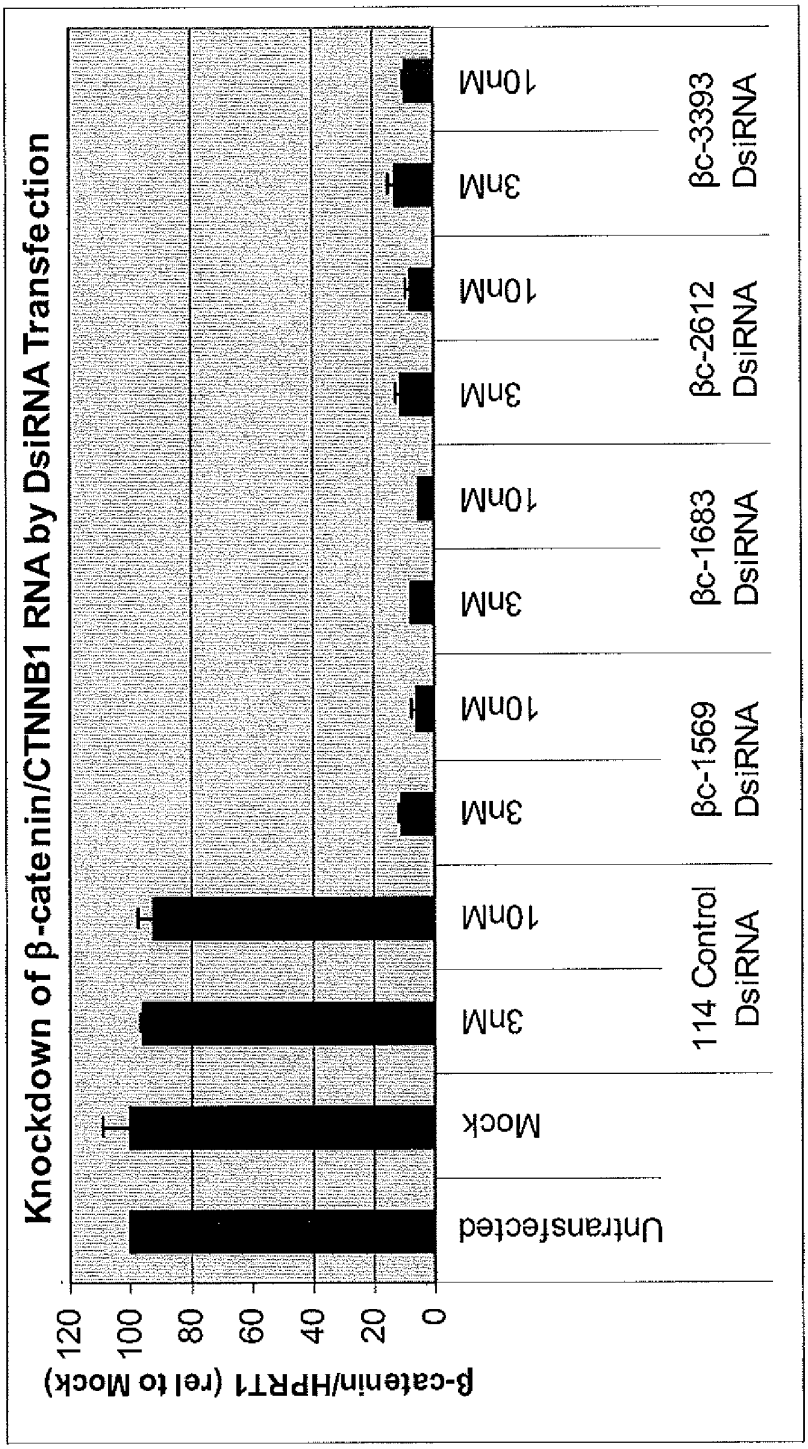

Knockdown of β-catenin/CTNNB1 RNA by DsiRNA Transfection
β-catenin/HPRT1 (rel to Mock)
120
100
80
60
40
20
0
Untransfected
Mock
3nM
10nM
3nM
10nM
3nM
10nM
3nM
10nM
3nM
10nM
114 Control DsiRNA
βc-1569 DsiRNA
βc-1683 DsiRNA
βc-2612 DsiRNA
βc-3393 DsiRNA

Figure 7

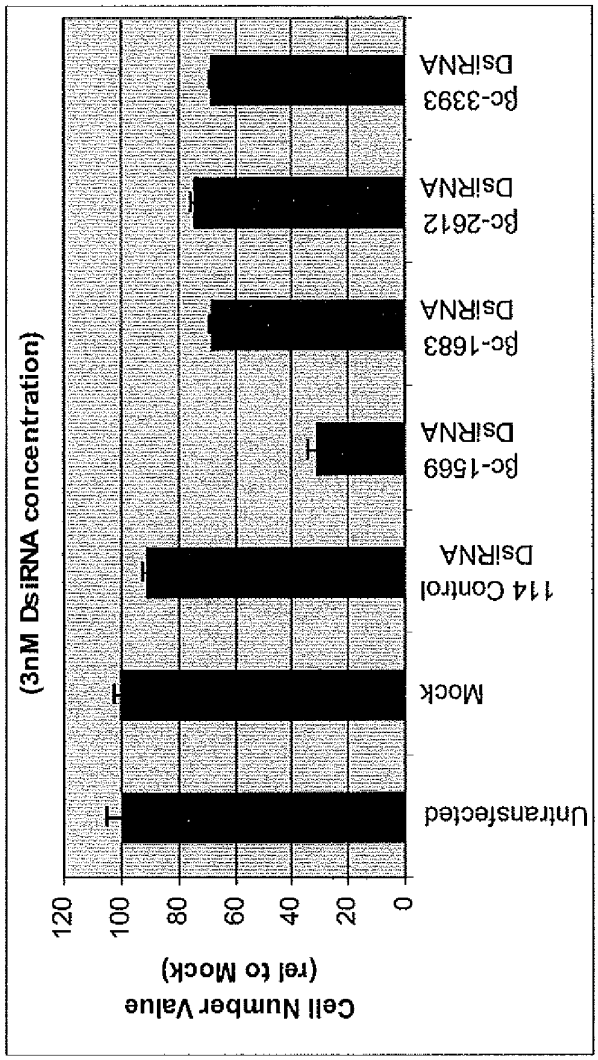

(3nM DsiRNA concentration)
Cell Number Value
(rel to Mock)
120
100
80
60
40
20
0
Untransfected
Mock
114 Control DsiRNA
Bc-1569 DsiRNA
Bc-1683 DsiRNA
Bc-2612 DsiRNA
Bc-3393 DsiRNA

Figure 8

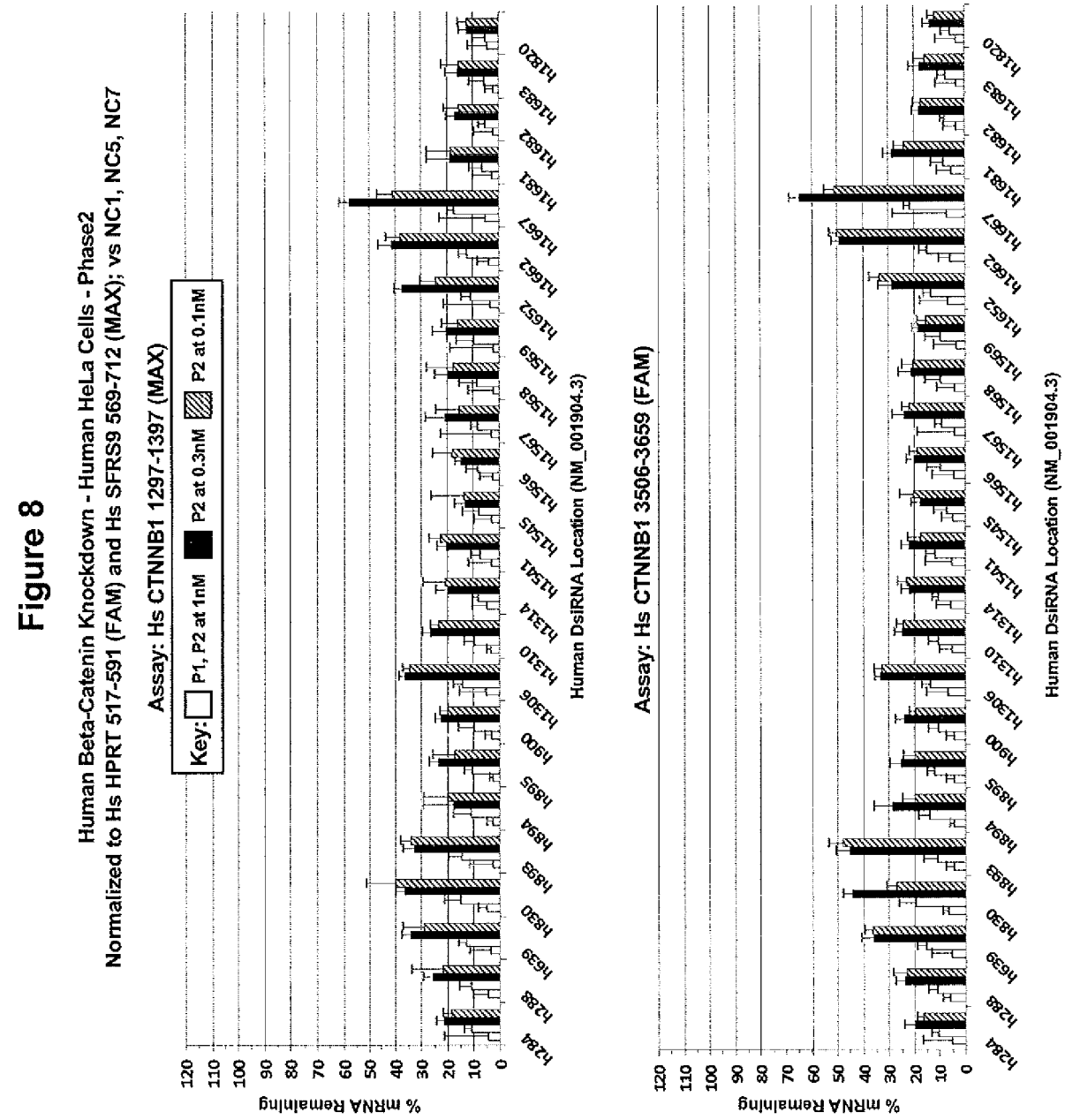

Human Beta-Catenin Knockdown - Human HeLa Cells - Phase2
Normalized to Hs HPRT 517-591 (FAM) and Hs SFRS9 569-712 (MAX); vs NC1, NC5, NC7
Assay: Hs CTNNB1 1297-1397 (MAX)
Key: P1, P2 at 1nM P2 at 0.3nM P2 at 0.1nM
% mRNA Remaining
Human DsiRNA Location (NM_001904.3)
Assay: Hs CTNNB1 3506-3659 (FAM)
% mRNA Remaining
Human DsiRNA Location (NM_001904.3)

Figure 9

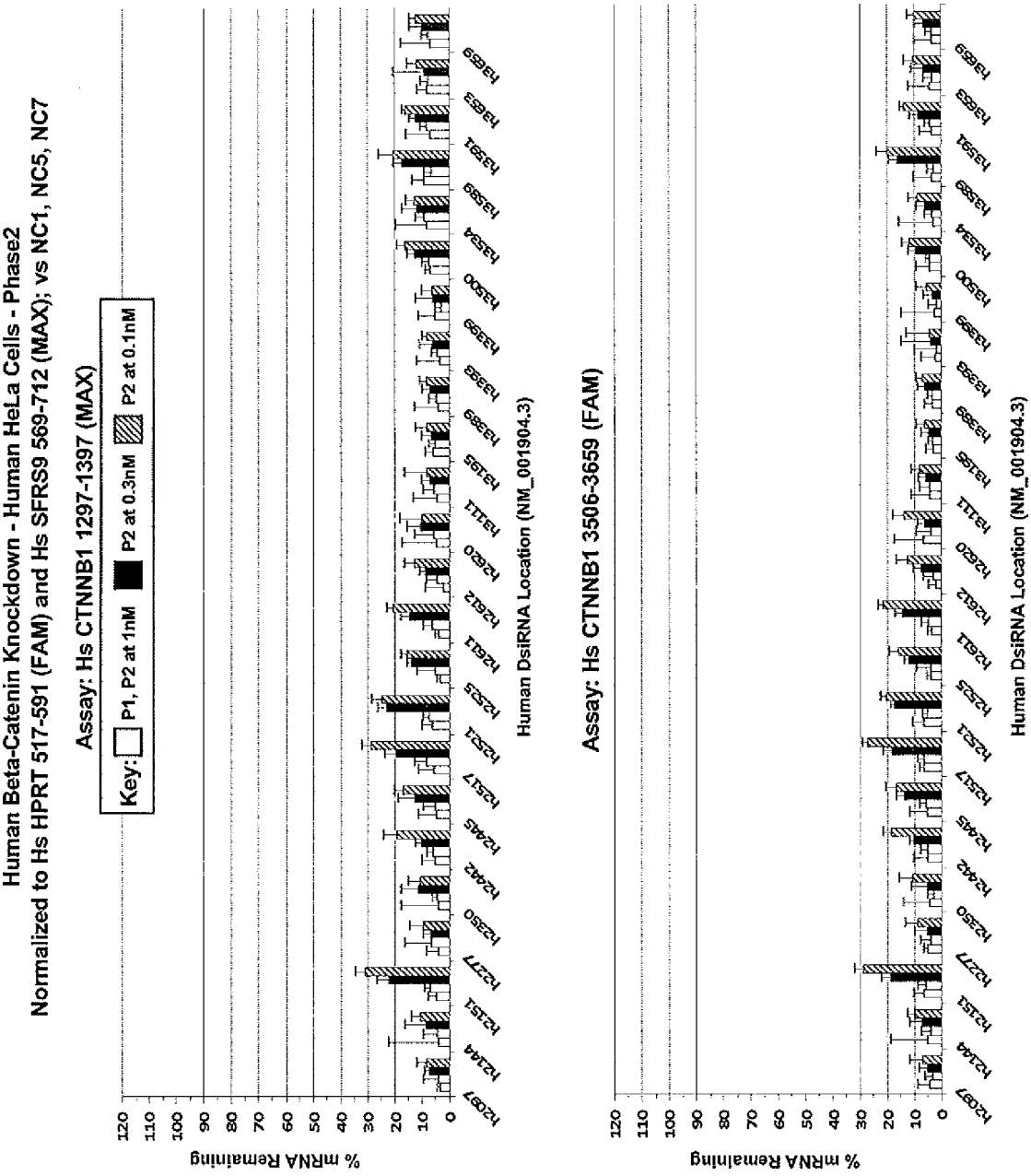

Human Beta-Catenin Knockdown - Human HeLa Cells - Phase2
Normalized to Hs HPRT 517-591 (FAM) and Hs SFRS9 569-712 (MAX); vs NC1, NC5, NC7
Assay: Hs CTNNB1 1297-1397 (MAX)
Key: P1, P2 at 1nM P2 at 0.3nM P2 at 0.1nM
% mRNA Remaining
Human DsiRNA Location (NM_001904.3)
Assay: Hs CTNNB1 3506-3659 (FAM)
% mRNA Remaining
Human DsiRNA Location (NM_001904.3)

Figure 10

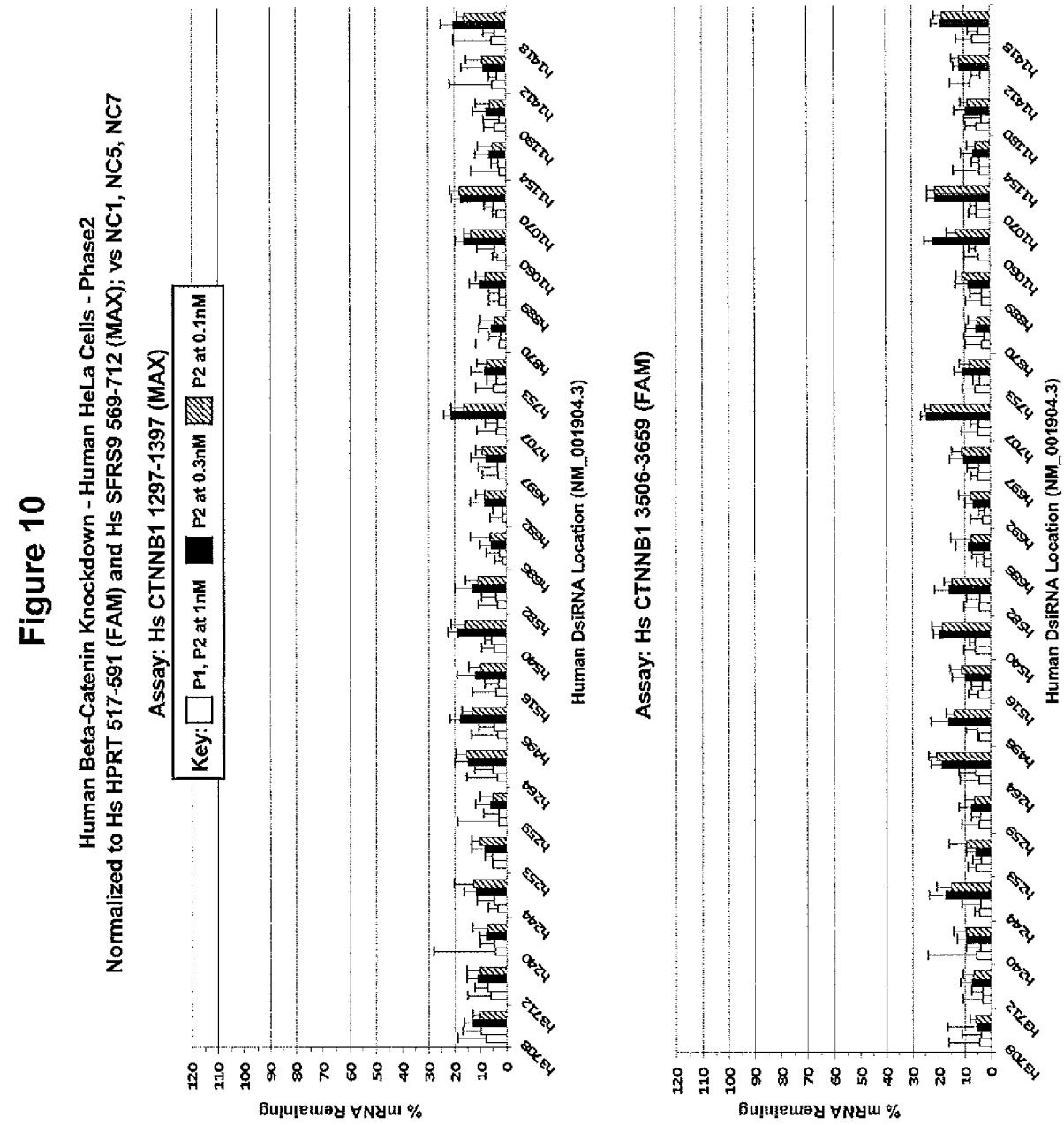

Human Beta-Catenin Knockdown - Human HeLa Cells - Phase2
Normalized to Hs HPRT 517-591 (FAM) and Hs SFRS9 569-712 (MAX); vs NC1, NC5, NC7
Assay: Hs CTNNB1 1297-1397 (MAX)
Key: P1, P2 at 1nM P2 at 0.3nM P2 at 0.1nM
% mRNA Remaining
Human DsiRNA Location (NM_001904.3)
Assay: Hs CTNNB1 3506-3659 (FAM)
% mRNA Remaining
Human DsiRNA Location (NM_001904.3)

Figure 11

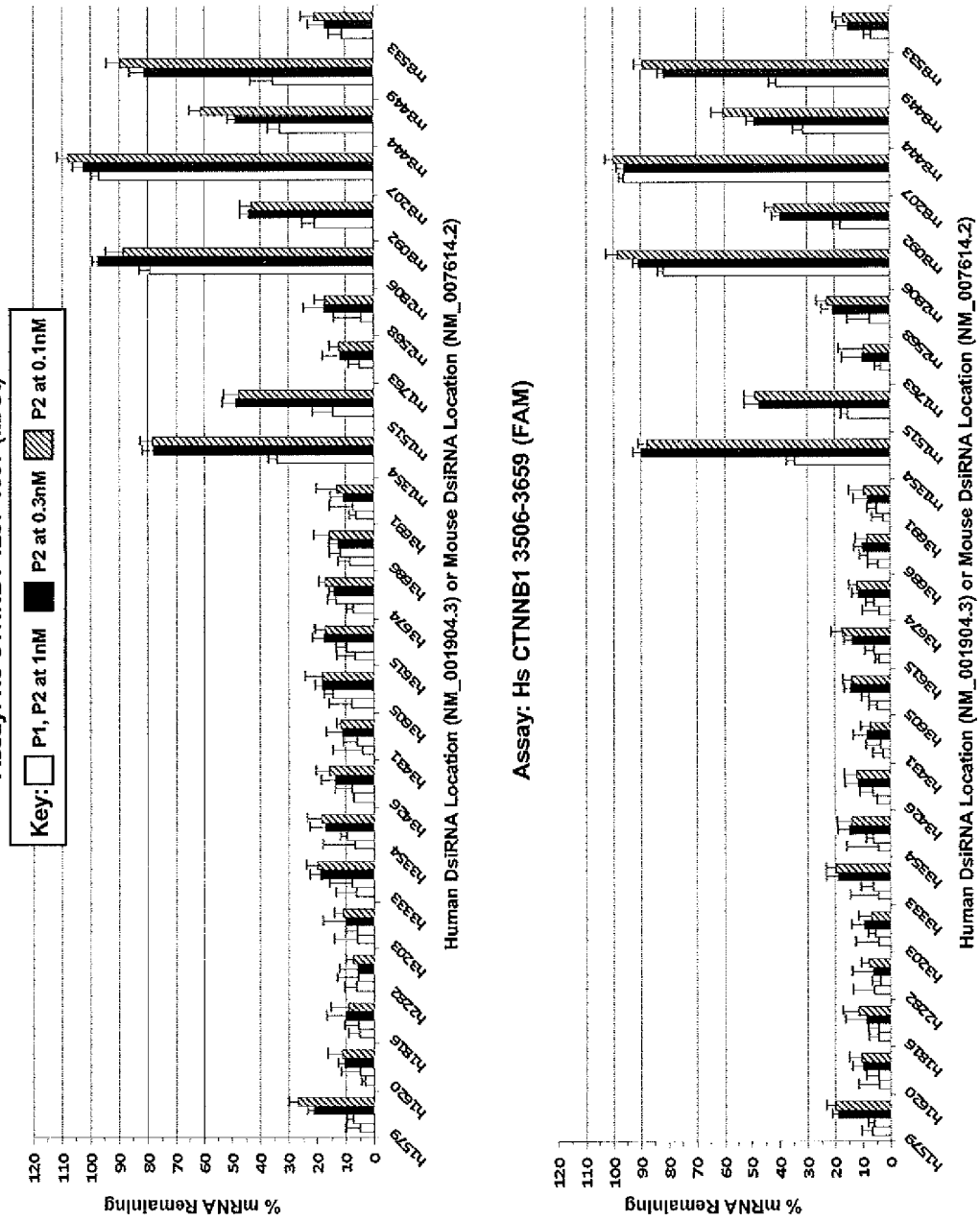

Human Beta-Catenin Knockdown - Human HeLa Cells - Phase2
Normalized to Hs HPRT 517-591 (FAM) and Hs SFRS9 569-712 (MAX); vs NC1, NC5, NC7
Assay: Hs CTNNB1 1297-1397 (MAX)
Key: P1, P2 at 1nM P2 at 0.3nM P2 at 0.1nM
% mRNA Remaining
Human DsiRNA Location (NM_001904.3) or Mouse DsiRNA Location (NM_007614.2)
Assay: Hs CTNNB1 3506-3659 (FAM)
% mRNA Remaining
Human DsiRNA Location (NM_001904.3) or Mouse DsiRNA Location (NM_007614.2)

Figure 12

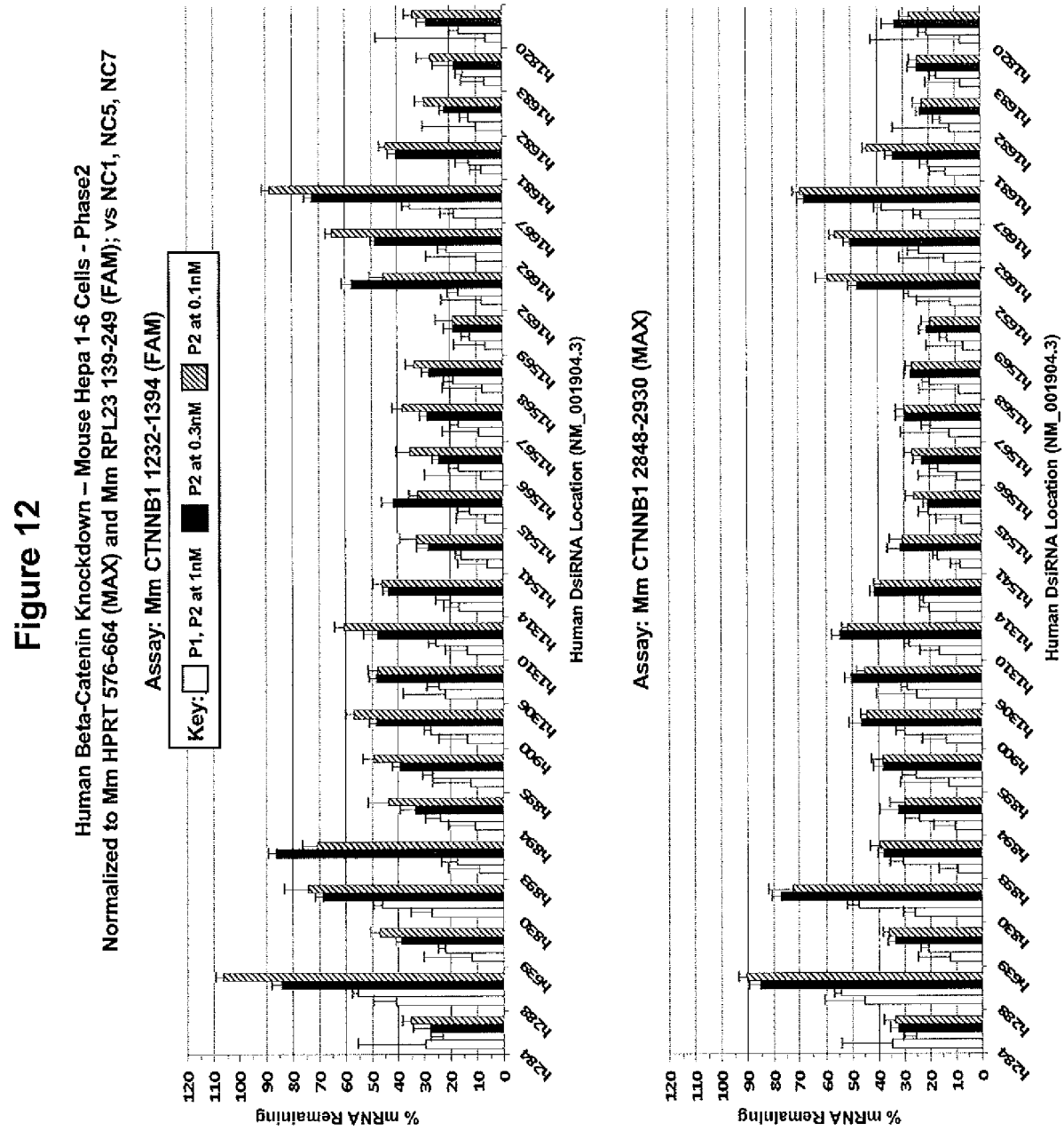

Human Beta-Catenin Knockdown – Mouse Hepa 1-6 Cells - Phase2
Normalized to Mm HPRT 576-664 (MAX) and Mm RPL23 139-249 (FAM); vs NC1, NC5, NC7
Assay: Mm CTNNB1 1232-1394 (FAM)
Key: P1, P2 at 1nM P2 at 0.3nM P2 at 0.1nM
% mRNA Remaining
Human DsiRNA Location (NM_001904.3)
Assay: Mm CTNNB1 2848-2930 (MAX)
% mRNA Remaining
Human DsiRNA Location (NM_001904.3)

Figure 13

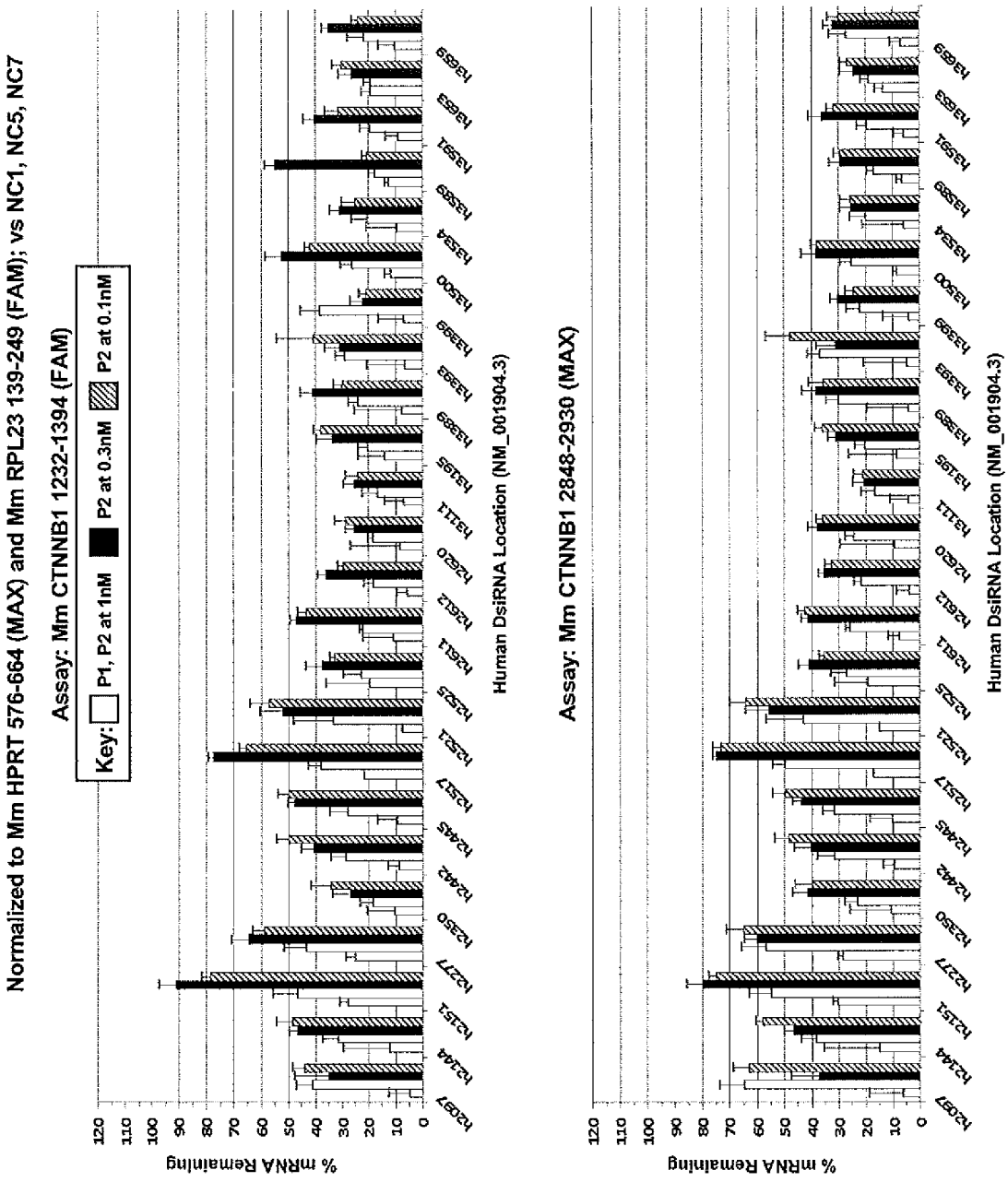

Human Beta-Catenin Knockdown – Mouse Hepa 1-6 Cells - Phase2
Normalized to Mm HPRT 576-664 (MAX) and Mm RPL23 139-249 (FAM); vs NC1, NC5, NC7
Assay: Mm CTNNB1 1232-1394 (FAM)
Key: P1, P2 at 1nM P2 at 0.3nM P2 at 0.1nM
% mRNA Remaining
Human DsiRNA Location (NM_001904.3)
Assay: Mm CTNNB1 2848-2930 (MAX)
% mRNA Remaining
Human DsiRNA Location (NM_001904.3)

Figure 14

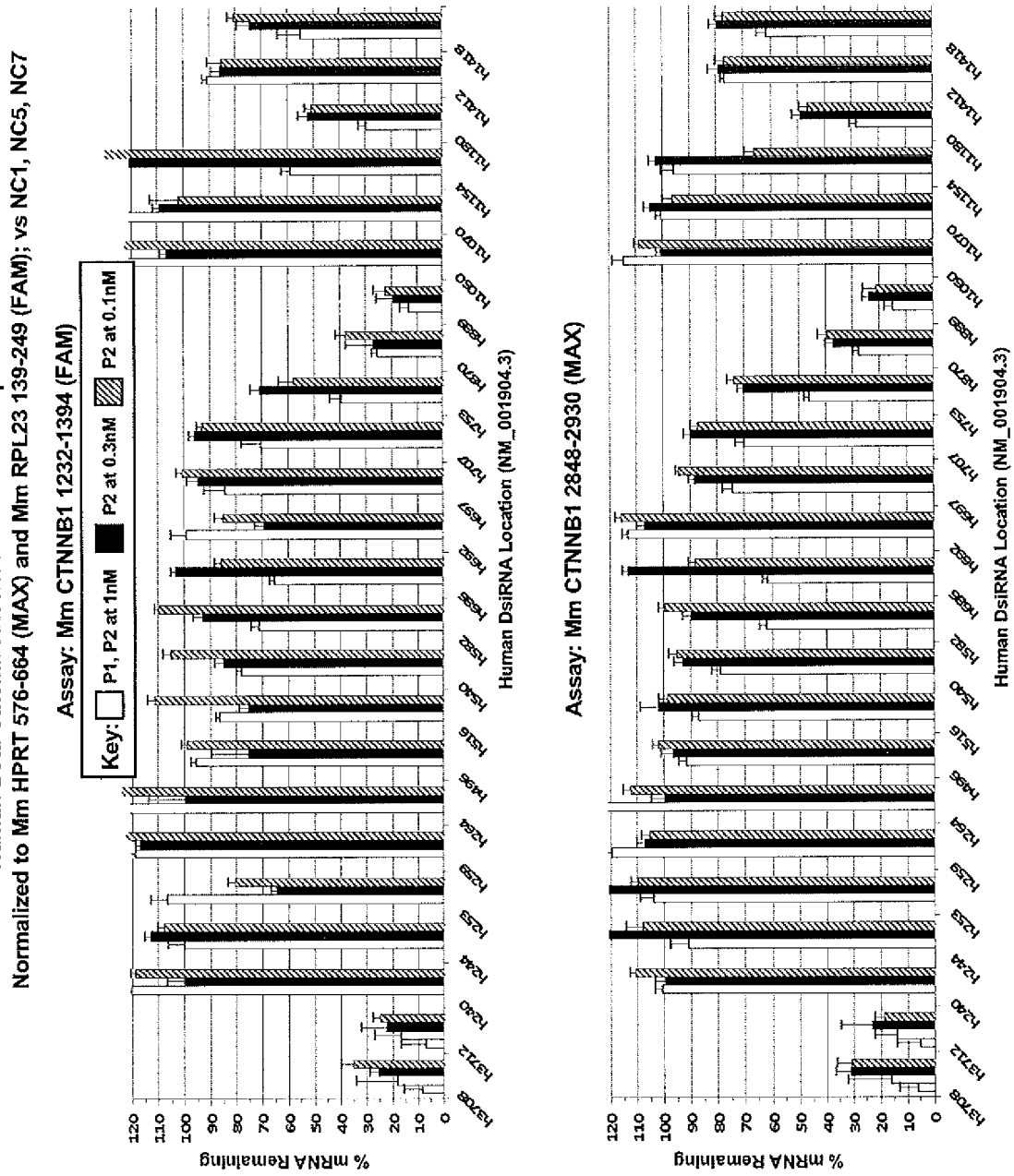

Human Beta-Catenin Knockdown – Mouse Hepa 1-6 Cells - Phase2
Normalized to Mm HPRT 576-664 (MAX) and Mm RPL23 139-249 (FAM); vs NC1, NC5, NC7
Assay: Mm CTNNB1 1232-1394 (FAM)
Key: P1, P2 at 1nM P2 at 0.3nM P2 at 0.1nM
% mRNA Remaining
Human DsiRNA Location (NM_001904.3)
Assay: Mm CTNNB1 2848-2930 (MAX)
% mRNA Remaining
Human DsiRNA Location (NM_001904.3)

Figure 15

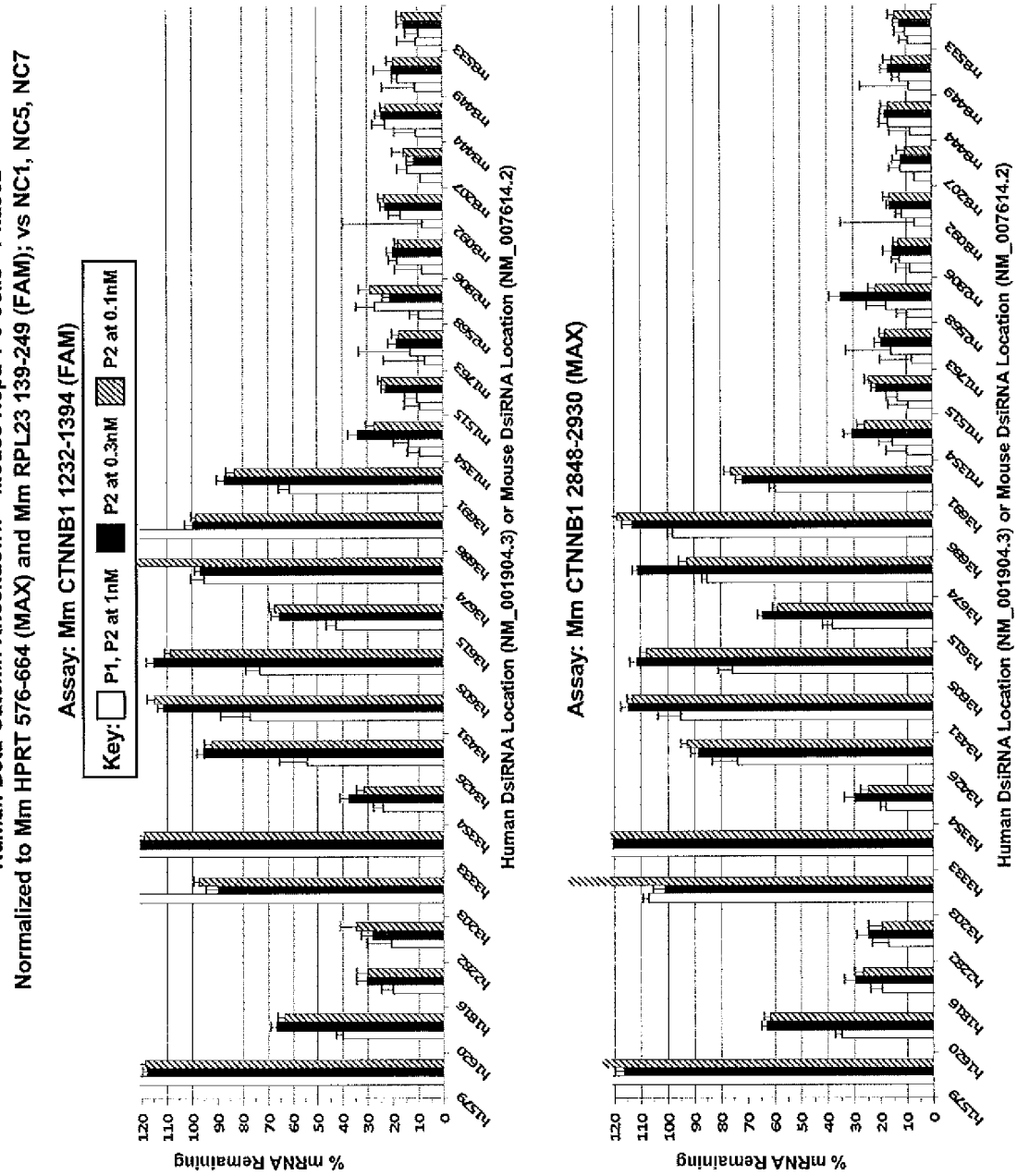

Human Beta-Catenin Knockdown – Mouse Hepa 1-6 Cells - Phase2
Normalized to Mm HPRT 576-664 (MAX) and Mm RPL23 139-249 (FAM); vs NC1, NC5, NC7
Assay: Mm CTNNB1 1232-1394 (FAM)
Key: P1, P2 at 1nM P2 at 0.3nM P2 at 0.1nM
% mRNA Remaining
Human DsiRNA Location (NM_001904.3) or Mouse DsiRNA Location (NM_007614.2)
Assay: Mm CTNNB1 2848-2930 (MAX)
% mRNA Remaining
Human DsiRNA Location (NM_001904.3) or Mouse DsiRNA Location (NM_007614.2)

Figure 16

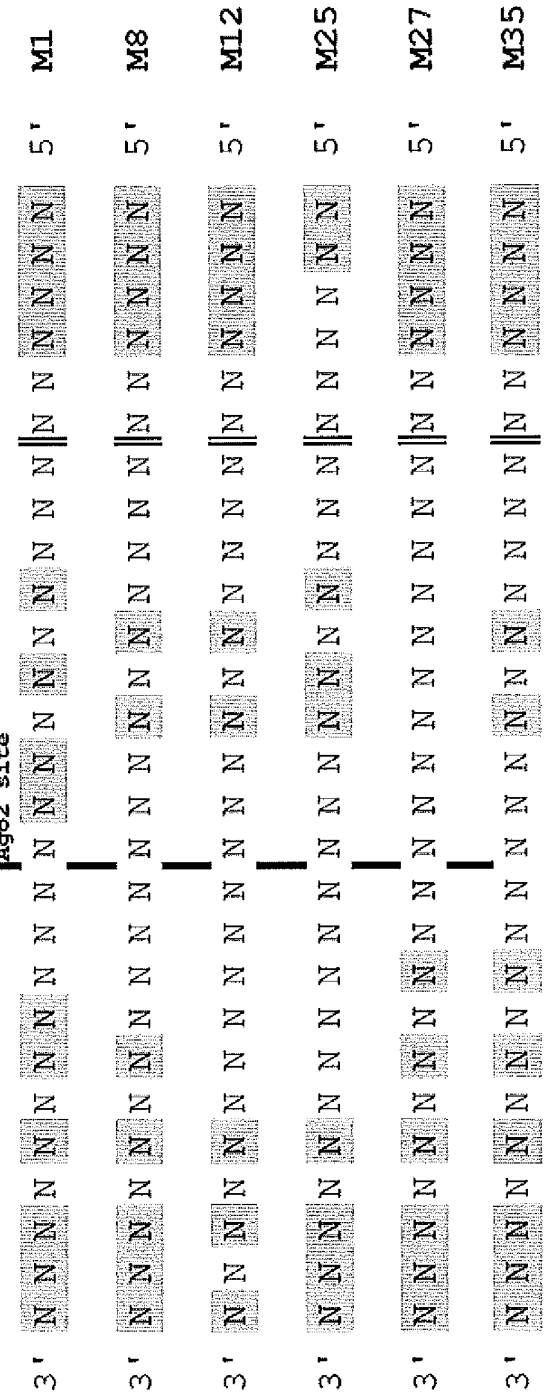

Antisense (Guide) Strand 2'-O-Methyl Modification Patterns
Ago2 site
3'
5'
M1
M8
M12
M25
M27
M35

Figure 17

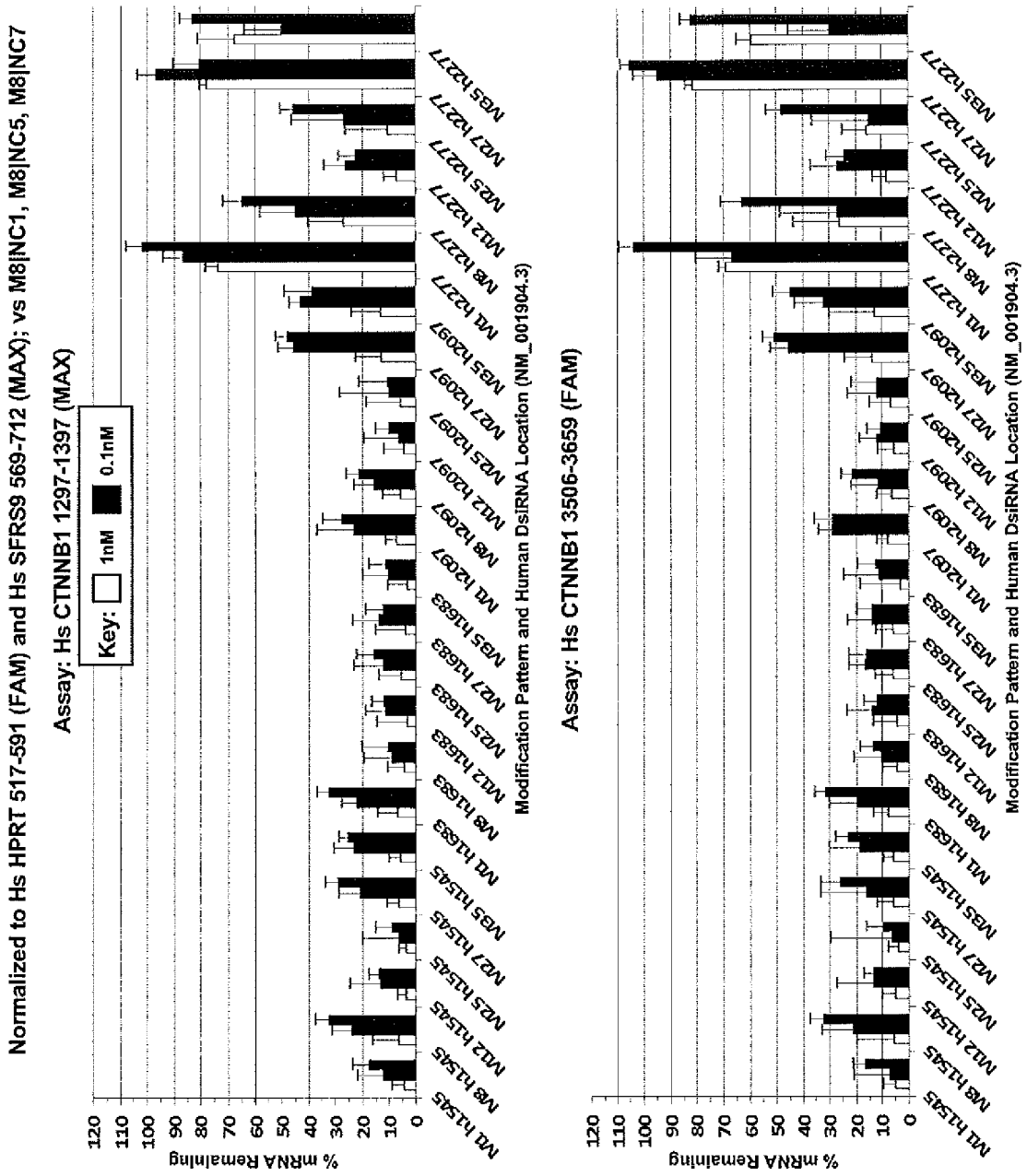

Human Beta-Catenin Knockdown – Human HeLa Cells – Phase 3
Normalized to Hs HPRT 517-591 (FAM) and Hs SFRS9 569-712 (MAX); vs M8|NC1, M8|NC5, M8|NC7
Assay: Hs CTNNB1 1297-1397 (MAX)
Key: 1nM 0.1nM
% mRNA Remaining
Modification Pattern and Human DsiRNA Location (NM_001904.3)
Assay: Hs CTNNB1 3506-3659 (FAM)
% mRNA Remaining
Modification Pattern and Human DsiRNA Location (NM_001904.3)

Figure 18

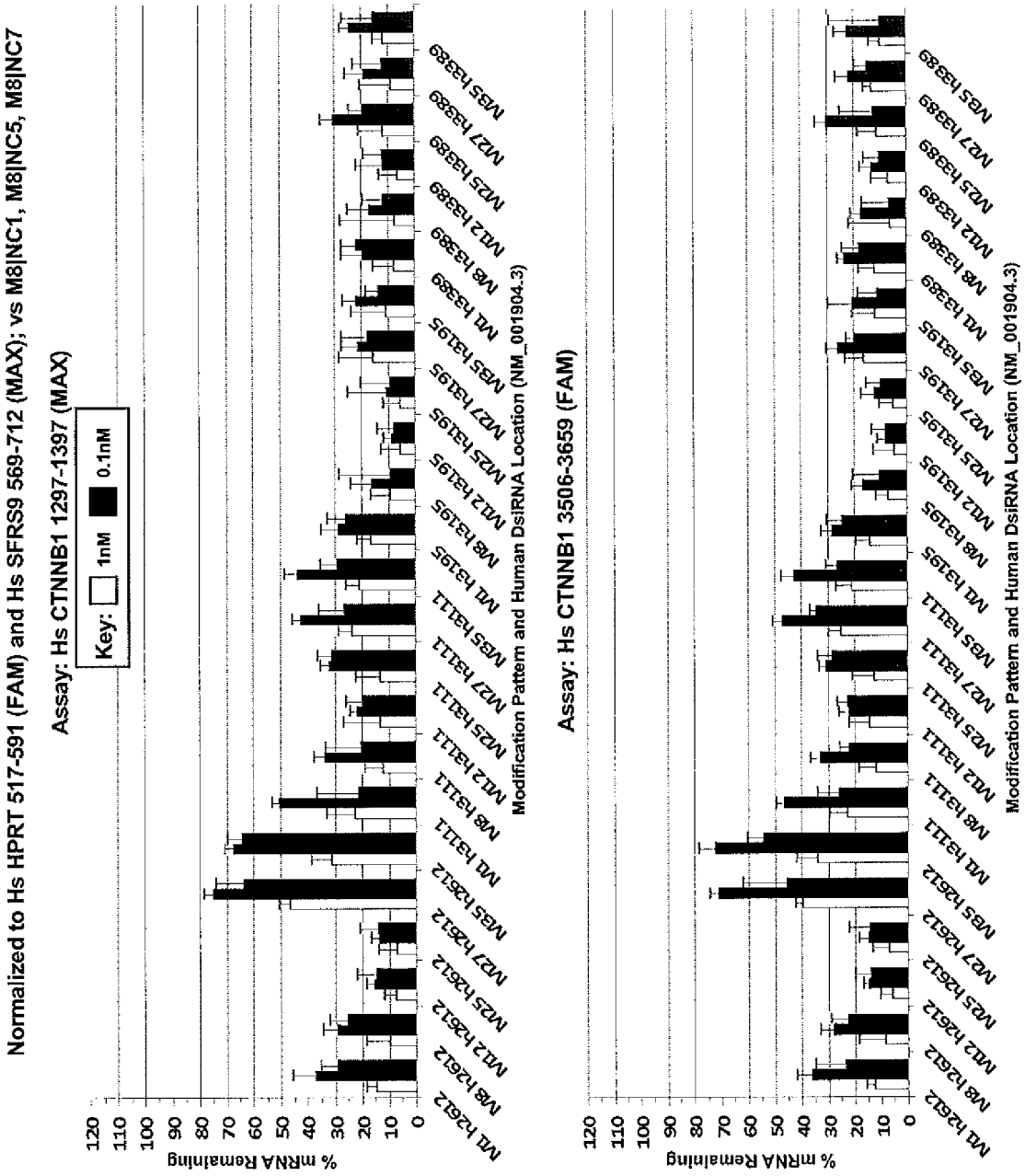

Human Beta-Catenin Knockdown – Human HeLa Cells – Phase 3
Normalized to Hs HPRT 517-591 (FAM) and Hs SFRS9 569-712 (MAX); vs M8|NC1, M8|NC5, M8|NC7
Assay: Hs CTNNB1 1297-1397 (MAX)
Key: 1nM 0.1nM
% mRNA Remaining
Modification Pattern and Human DsiRNA Location (NM_001904.3)
Assay: Hs CTNNB1 3506-3659 (FAM)
% mRNA Remaining
Modification Pattern and Human DsiRNA Location (NM_001904.3)

Figure 19

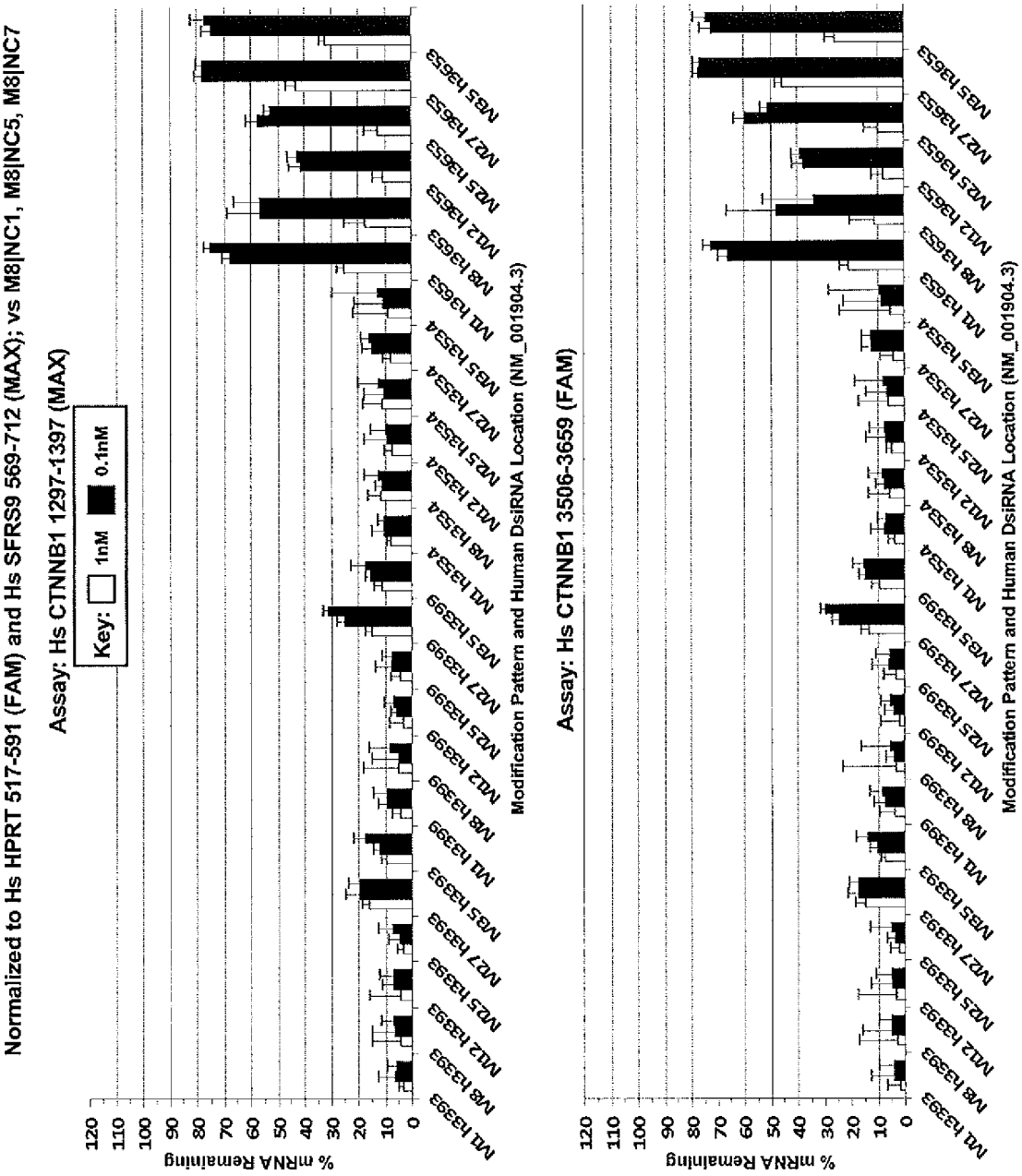

Human Beta-Catenin Knockdown – Human HeLa Cells – Phase 3
Normalized to Hs HPRT 517-591 (FAM) and Hs SFRS9 569-712 (MAX); vs M8|NC1, M8|NC5, M8|NC7
Assay: Hs CTNNB1 1297-1397 (MAX)
Key: 1nM 0.1nM
% mRNA Remaining
Modification Pattern and Human DsiRNA Location (NM_001904.3)
Assay: Hs CTNNB1 3506-3659 (FAM)
% mRNA Remaining
Modification Pattern and Human DsiRNA Location (NM_001904.3)

Figure 20

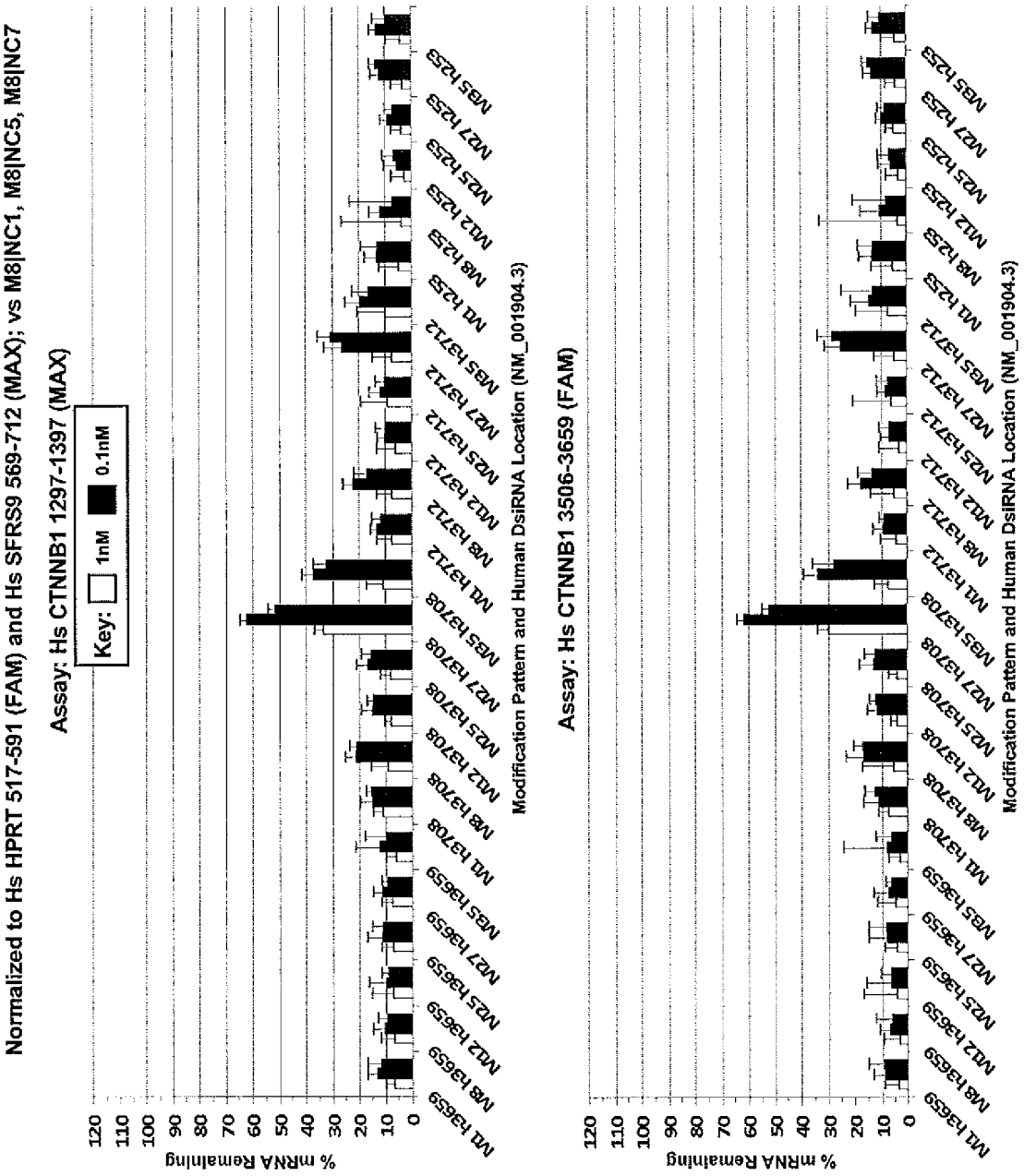

Human Beta-Catenin Knockdown – Human HeLa Cells – Phase 3
Normalized to Hs HPRT 517-591 (FAM) and Hs SFRS9 569-712 (MAX); vs M8|NC1, M8|NC5, M8|NC7
Assay: Hs CTNNB1 1297-1397 (MAX)
Key: 1nM 0.1nM
% mRNA Remaining
Modification Pattern and Human DsiRNA Location (NM_001904.3)
M1 h659
M8 h659
M12 h659
M25 h659
M27 h659
M35 h659
M1 h3708
M8 h3708
M12 h3708
M25 h3708
M27 h3708
M35 h3708
M1 h3712
M8 h3712
M12 h3712
M25 h3712
M27 h3712
M35 h3712
M1 h253
M8 h253
M12 h253
M25 h253
M27 h253
M35 h253
Assay: Hs CTNNB1 3506-3659 (FAM)
% mRNA Remaining
Modification Pattern and Human DsiRNA Location (NM_001904.3)
M1 h3659
M8 h3659
M12 h3659
M25 h3659
M27 h3659
M35 h3659
M1 h3708
M8 h3708
M12 h3708
M25 h3708
M27 h3708
M35 h3708
M1 h3712
M8 h3712
M12 h3712
M25 h3712
M27 h3712
M35 h3712
M1 h253
M8 h253
M12 h253
M25 h253
M27 h253
M35 h253

Figure 21

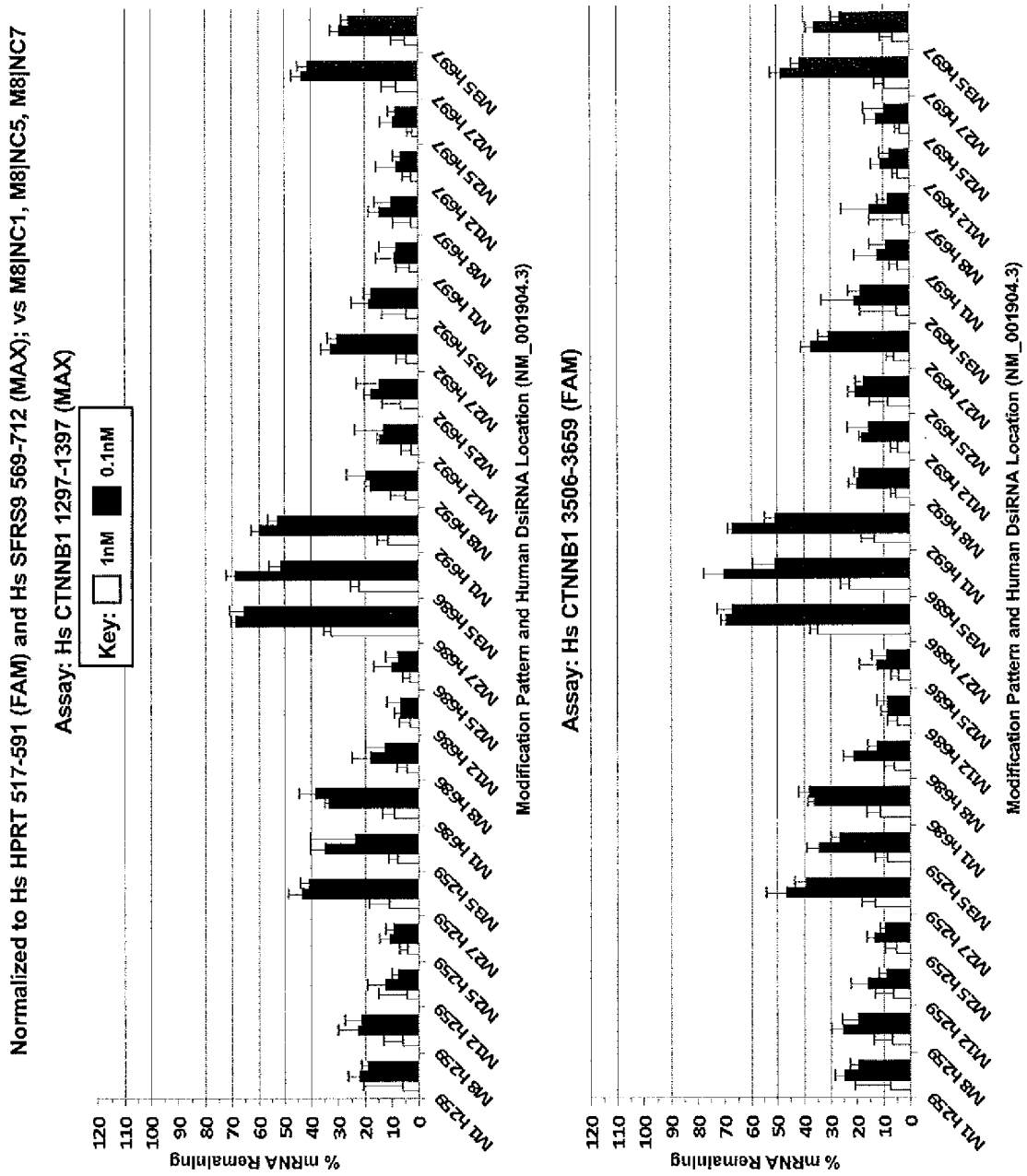

Human Beta-Catenin Knockdown – Human HeLa Cells – Phase 3
Normalized to Hs HPRT 517-591 (FAM) and Hs SFRS9 569-712 (MAX); vs M8|NC5, M8|NC1, M8|NC7
Assay: Hs CTNNB1 1297-1397 (MAX)
Key: 1nM 0.1nM
% mRNA Remaining
Modification Pattern and Human DsiRNA Location (NM_001904.3)
Assay: Hs CTNNB1 3506-3659 (FAM)
% mRNA Remaining
Modification Pattern and Human DsiRNA Location (NM_001904.3)

Figure 22

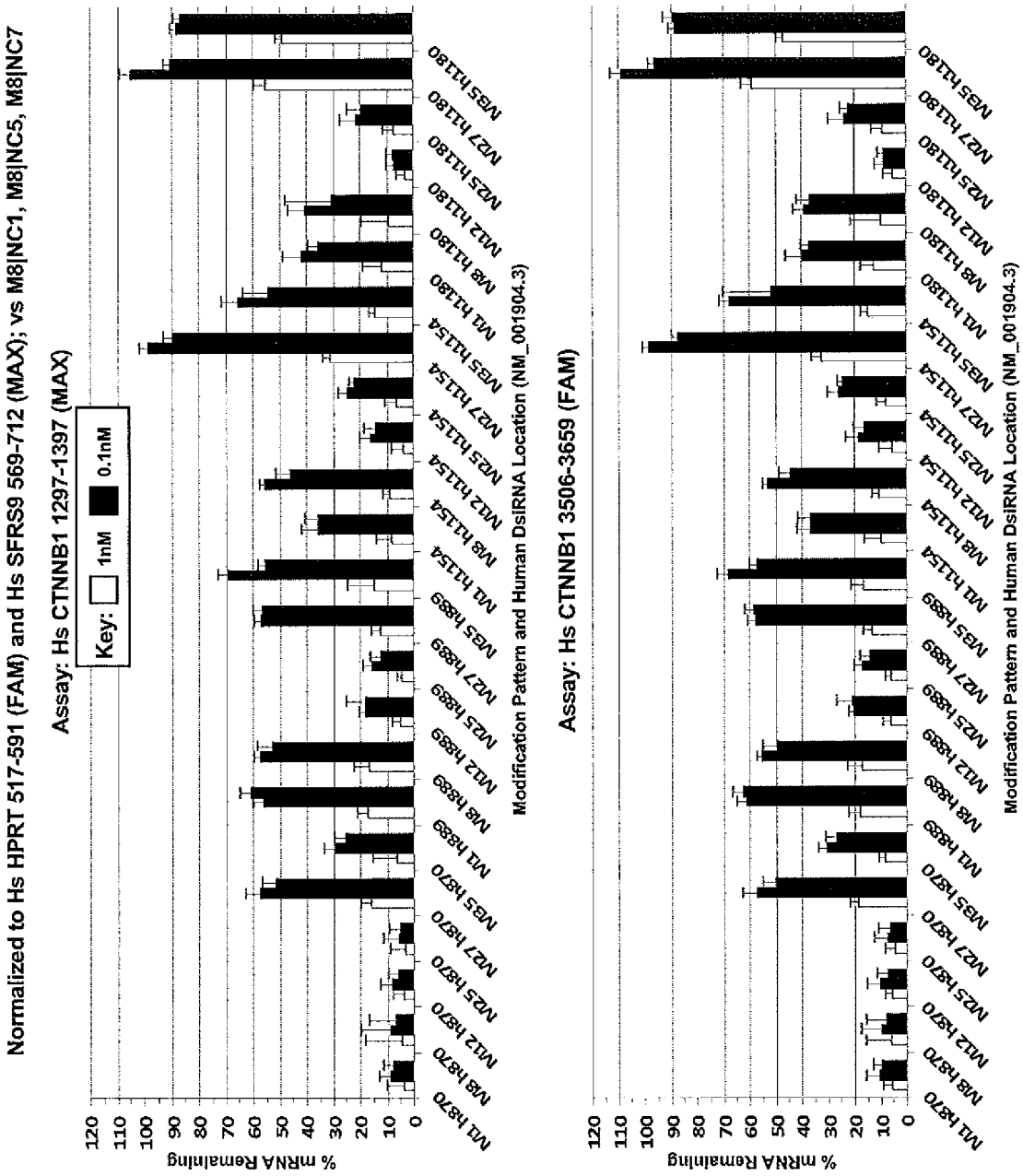

Human Beta-Catenin Knockdown – Human HeLa Cells – Phase 3
Normalized to Hs HPRT 517-591 (FAM) and Hs SFRS9 569-712 (MAX); vs M8|NC5, M8|NC1, M8|NC7
Assay: Hs CTNNB1 1297-1397 (MAX)
Key: 1nM 0.1nM
% mRNA Remaining
Modification Pattern and Human DsiRNA Location (NM_001904.3)
M1 h570
M8 h570
M2 h570
M25 h570
M27 h570
M3S h570
M1 h889
M8 h889
M2 h889
M25 h889
M27 h889
M3S h889
M1 h1154
M8 h1154
M2 h1154
M25 h1154
M27 h1154
M3S h1154
M1 h1180
M8 h1180
M2 h1180
M25 h1180
M27 h1180
M3S h1180
Assay: Hs CTNNB1 3506-3659 (FAM)
% mRNA Remaining
Modification Pattern and Human DsiRNA Location (NM_001904.3)

Figure 23

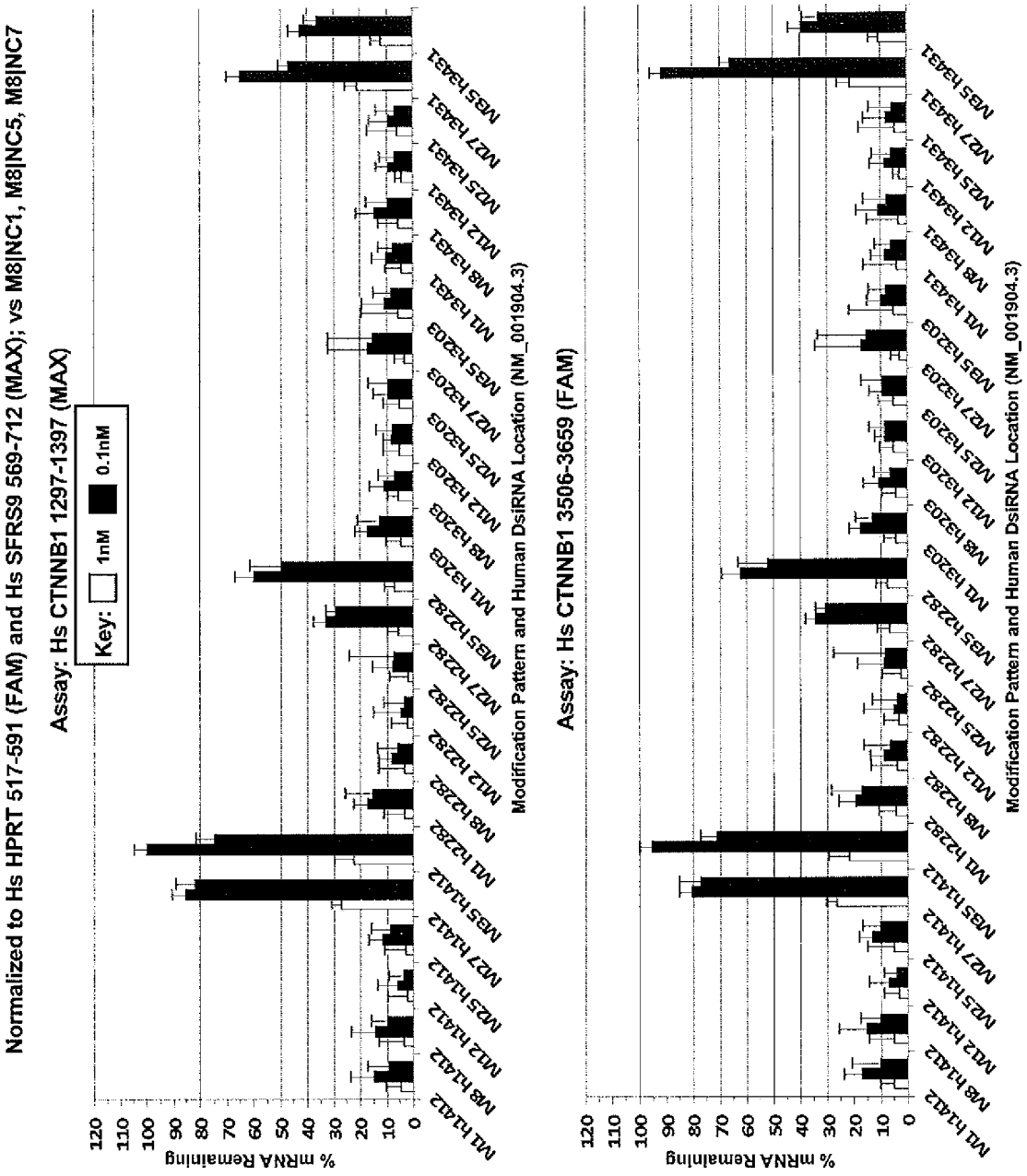

Human Beta-Catenin Knockdown – Human HeLa Cells – Phase 3
Normalized to Hs HPRT 517-591 (FAM) and Hs SFRS9 569-712 (MAX); vs M8|NC1, M8|NC5, M8|NC7
Assay: Hs CTNNB1 1297-1397 (MAX)
Key: 1nM 0.1nM
% mRNA Remaining
Modification Pattern and Human DsiRNA Location (NM_001904.3)
Assay: Hs CTNNB1 3506-3659 (FAM)
% mRNA Remaining
Modification Pattern and Human DsiRNA Location (NM_001904.3)

Figure 24

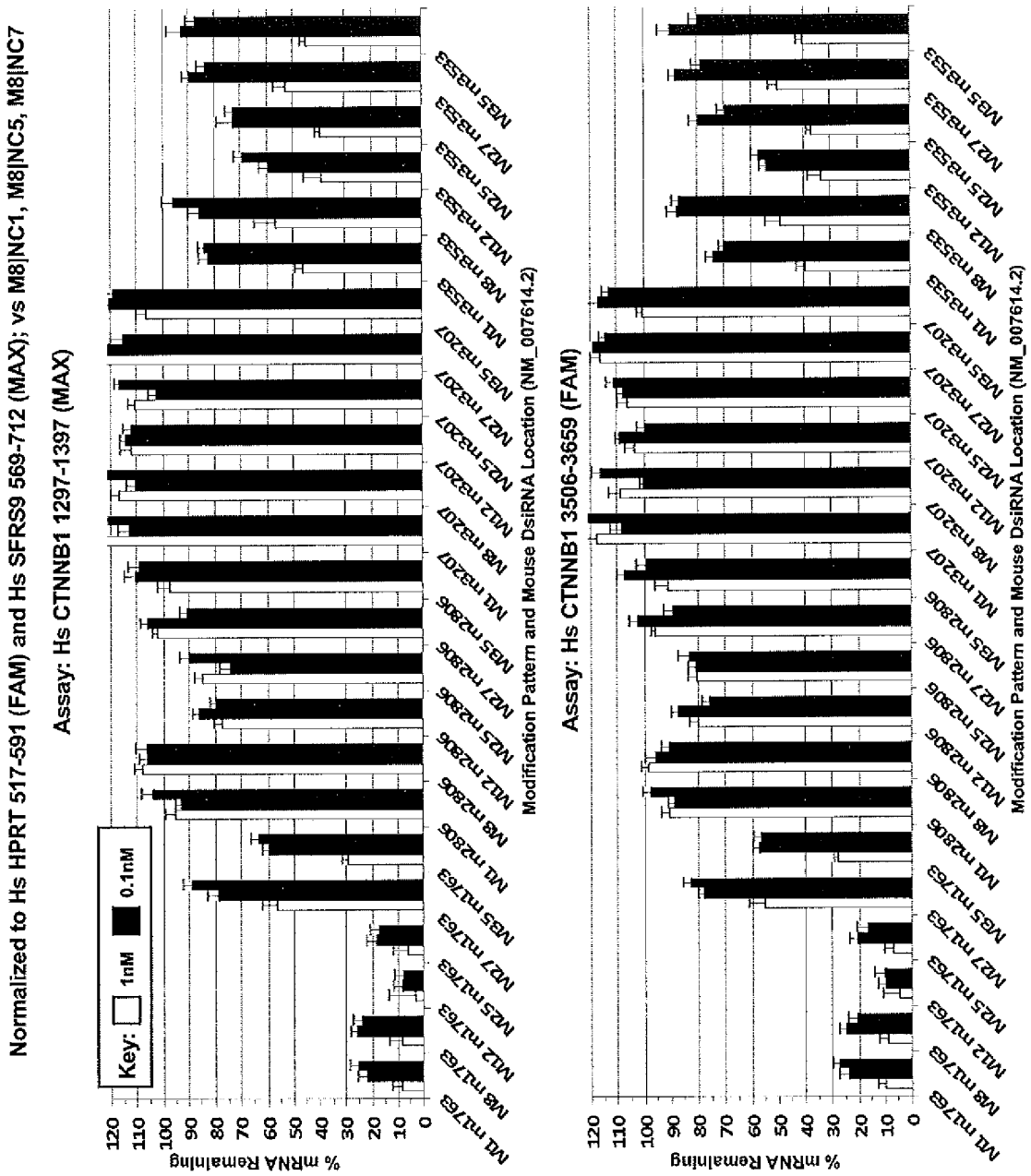

Human Beta-Catenin Knockdown – Human HeLa Cells – Phase 3
Normalized to Hs HPRT 517-591 (FAM) and Hs SFRS9 569-712 (MAX); vs M8|NC1, M8|NC5, M8|NC7
Assay: Hs CTNNB1 1297-1397 (MAX)
Key: 1nM 0.1nM
% mRNA Remaining
Modification Pattern and Mouse DsiRNA Location (NM_007614.2)
Assay: Hs CTNNB1 3506-3659 (FAM)
% mRNA Remaining
Modification Pattern and Mouse DsiRNA Location (NM_007614.2)

Figure 25

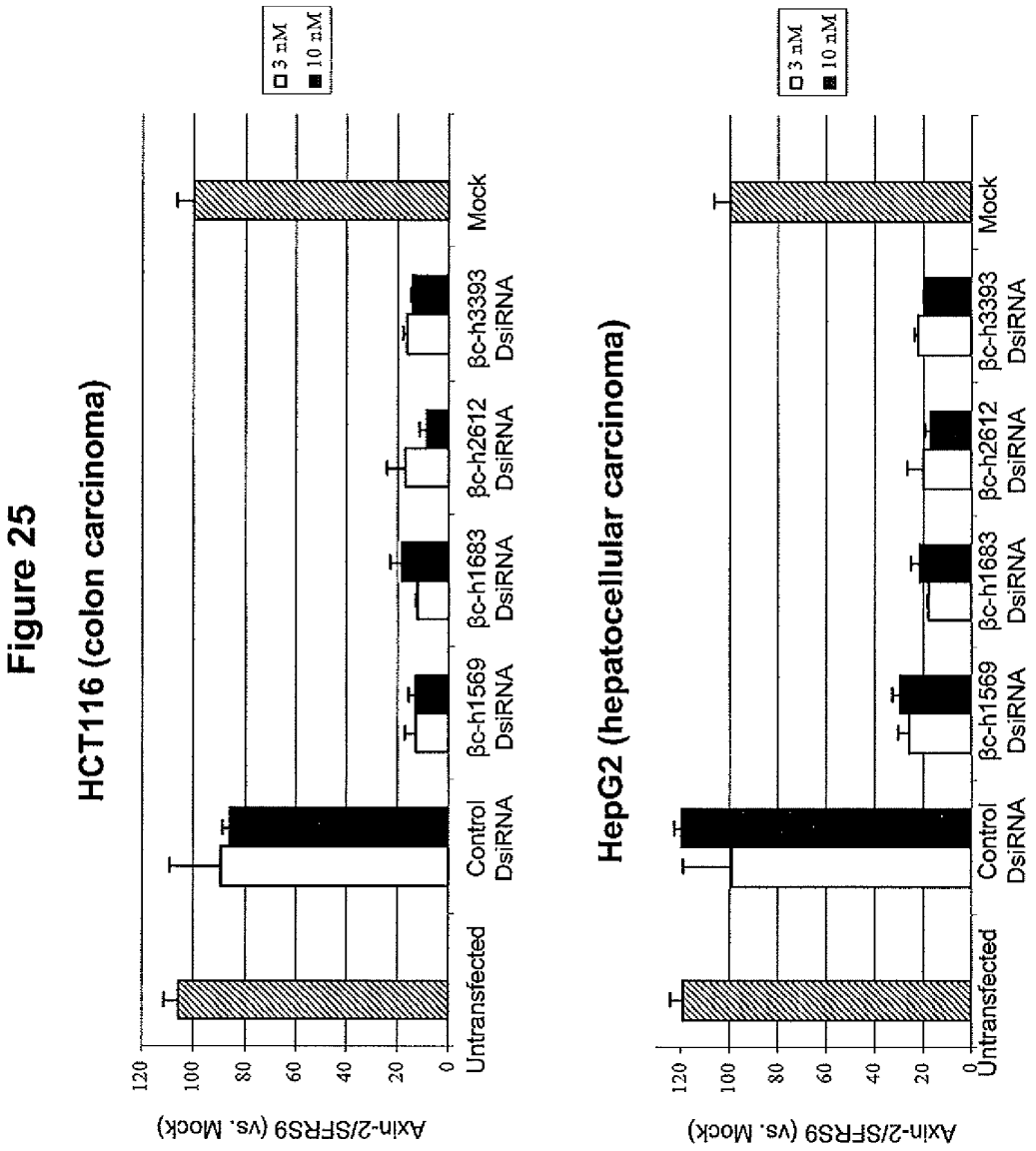

HCT116 (colon carcinoma)
HepG2 (hepatocellular carcinoma)
3 nM
10 nM
Axin-2/SFRS9 (vs. Mock)
0
20
40
60
80
100
120
Untransfected
Control DsiRNA
βc-h1569 DsiRNA
βc-h1683 DsiRNA
βc-h2612 DsiRNA
βc-h3393 DsiRNA
Mock

Figure 26

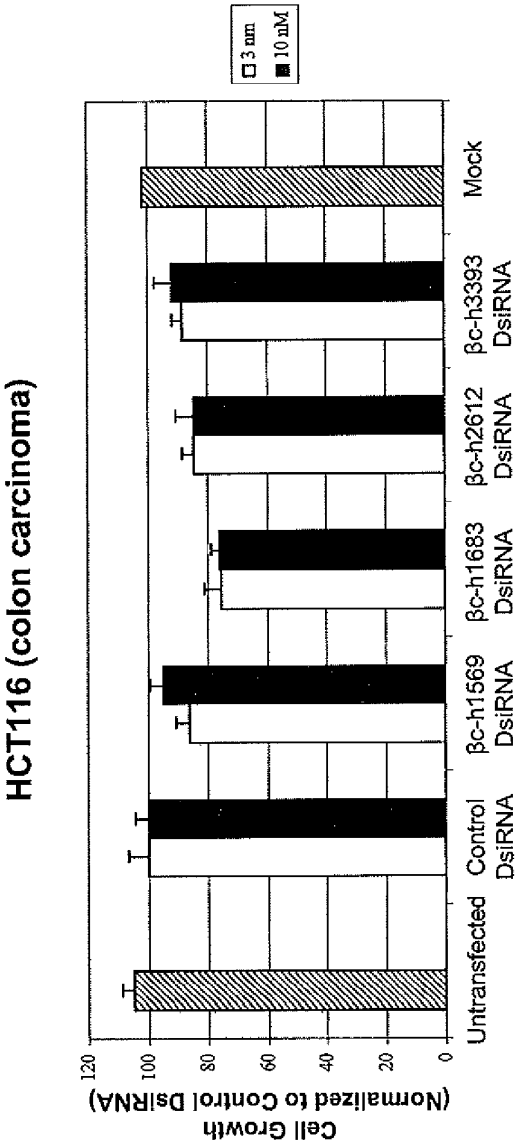

HCT116 (colon carcinoma)
3 nM
10 nM
Cell Growth
(Normalized to Control DsiRNA)
120
100
80
60
40
20
0
Untransfected
Control DsiRNA
βc-h1569 DsiRNA
βc-h1683 DsiRNA
βc-h2612 DsiRNA
βc-h3393 DsiRNA
Mock

Figure 27

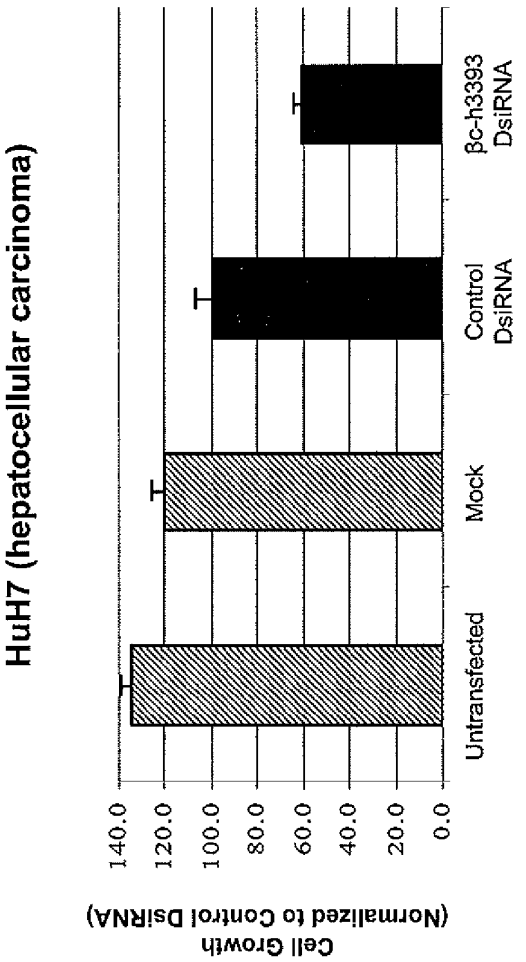

HuH7 (hepatocellular carcinoma)
Cell Growth
(Normalized to Control DsiRNA)
140.0
120.0
100.0
80.0
60.0
40.0
20.0
0.0
Untransfected
Mock
Control DsiRNA
βc-h3393 DsiRNA

Figure 28

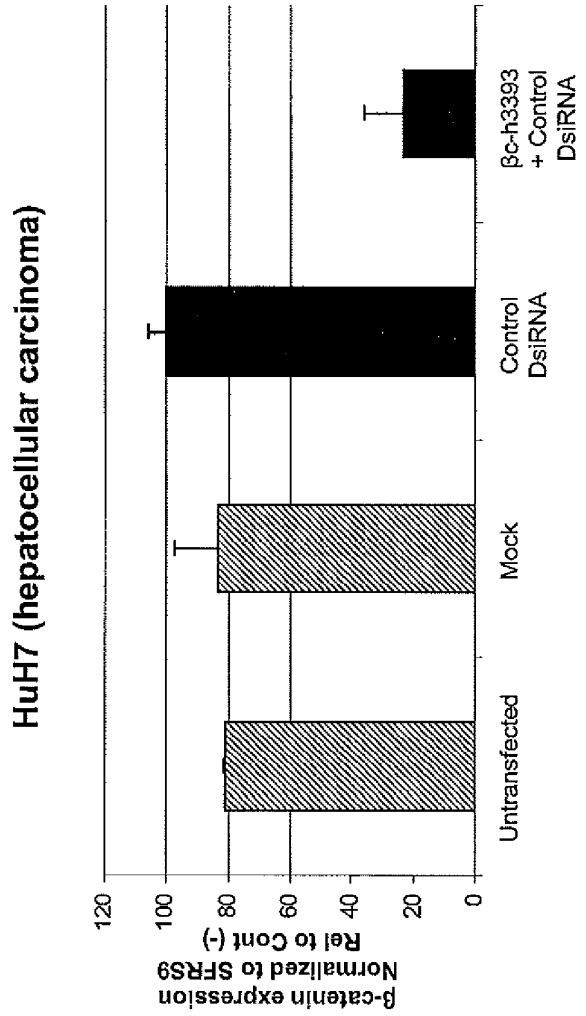

HuH7 (hepatocellular carcinoma)
β-catenin expression
Normalized to SFRS9
Rel to Cont (-)
120
100
80
60
40
20
0
Untransfected
Mock
Control DsiRNA
βc-h3393 + Control DsiRNA

Figure 29

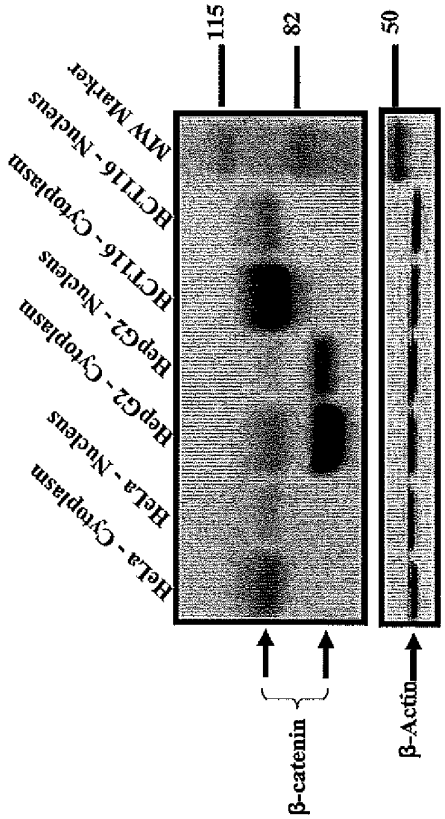
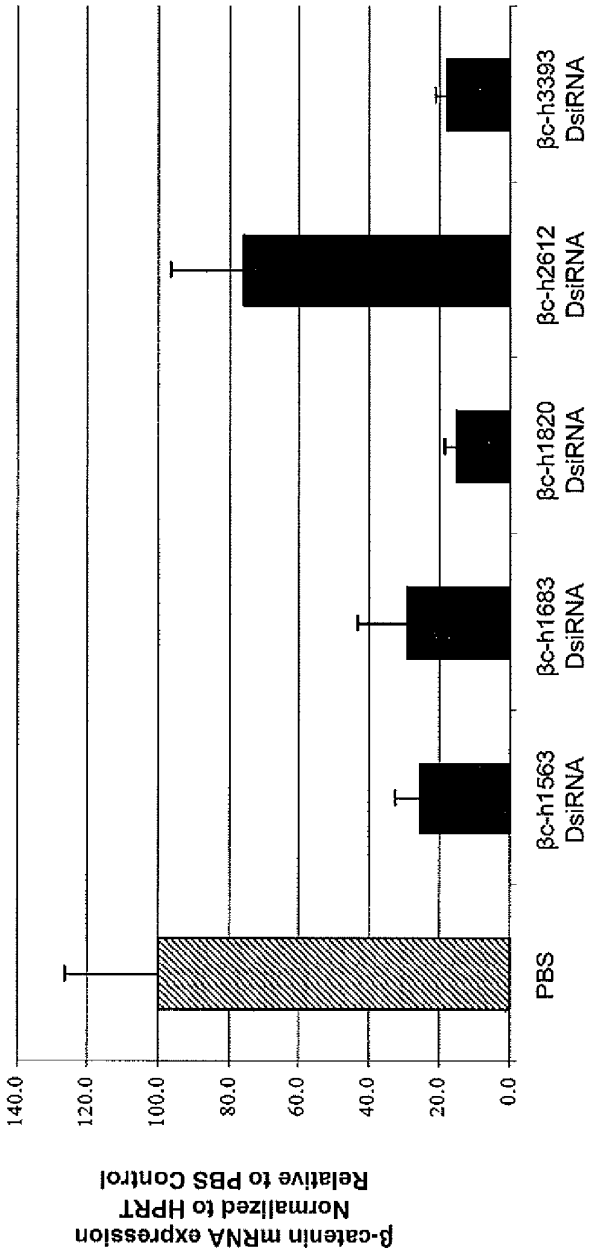

115
82
50
MW Marker
HCT116 - Nucleus
HCT116 - Cytoplasm
HepG2 - Nucleus
HepG2 - Cytoplasm
HeLa - Nucleus
HeLa - Cytoplasm
β-catenin
β-Actin

Figure 30


β-catenin mRNA expression
Normalized to HPRT
Relative to PBS Control
140.0
120.0
100.0
80.0
60.0
40.0
20.0
0.0
PBS
βc-h1563 DsiRNA
βc-h1683 DsiRNA
βc-h1820 DsiRNA
βc-h2612 DsiRNA
βc-h3393 DsiRNA

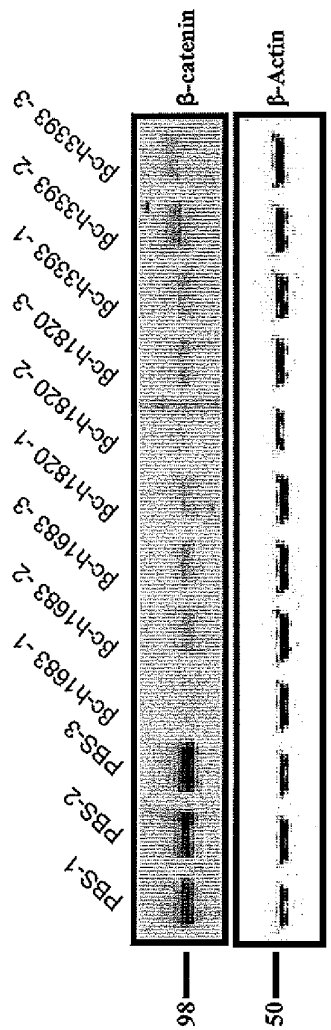

β-catenin
β-Actin
98
50
PBS-1
PBS-2
PBS-3
βc-h1683 -1
βc-h1683 -2
βc-h1683 -3
βc-h1820 -1
βc-h1820 -2
βc-h1820 -3
βc-h3393 -1
βc-h3393 -2
βc-h3393 -3

Figure 31

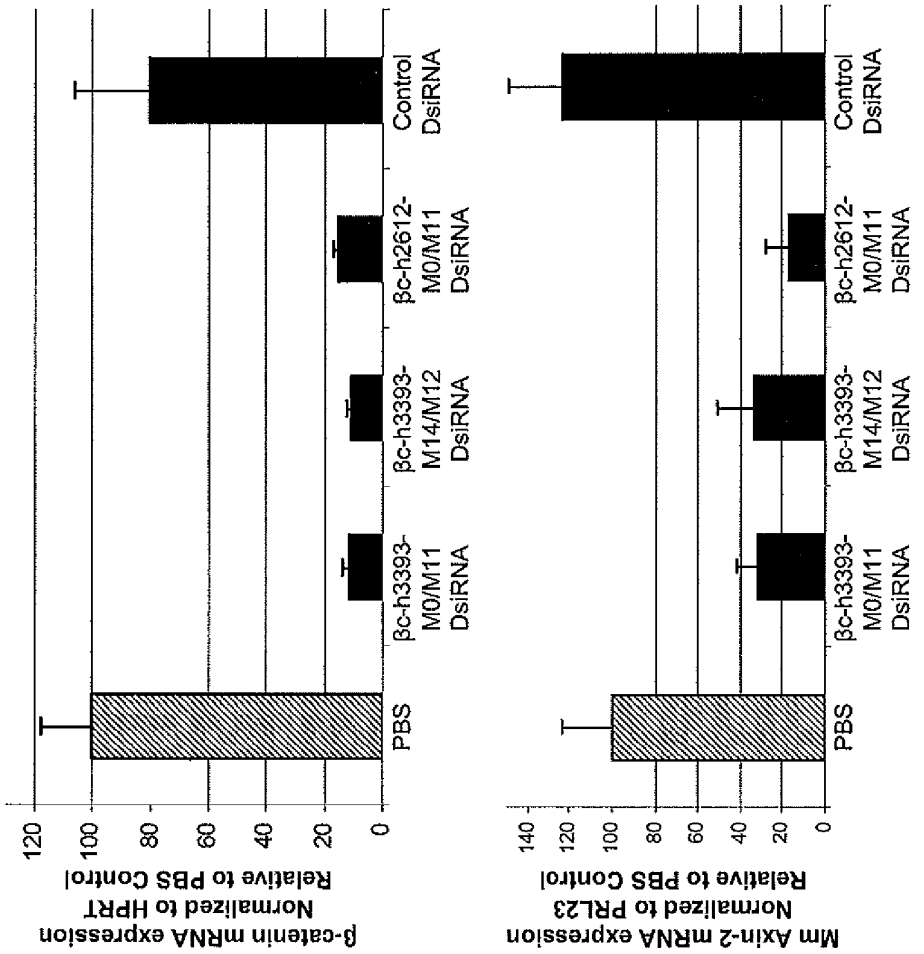
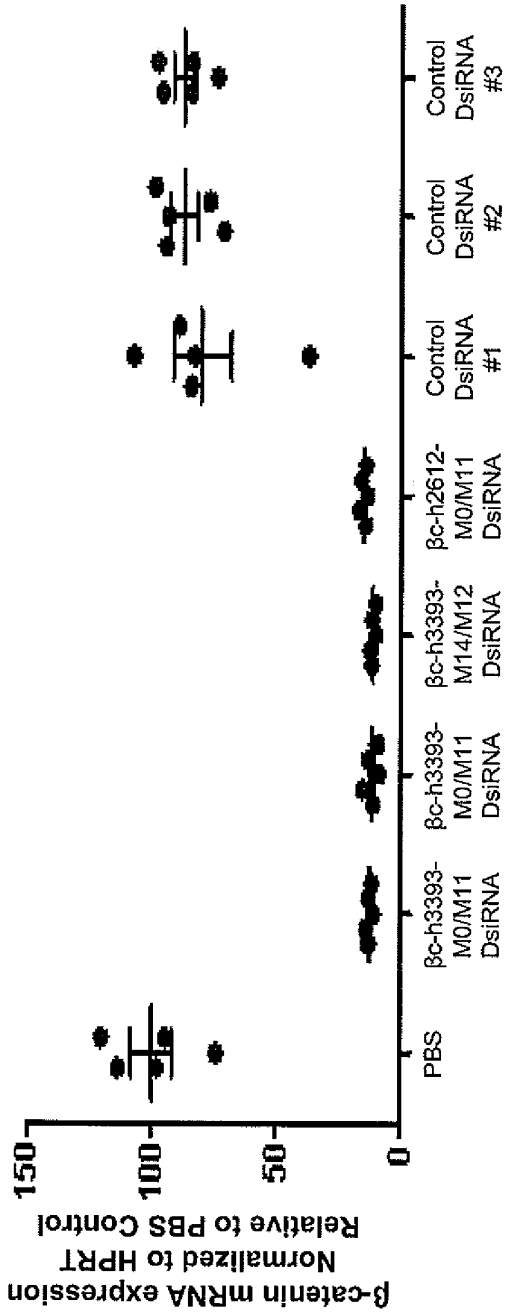
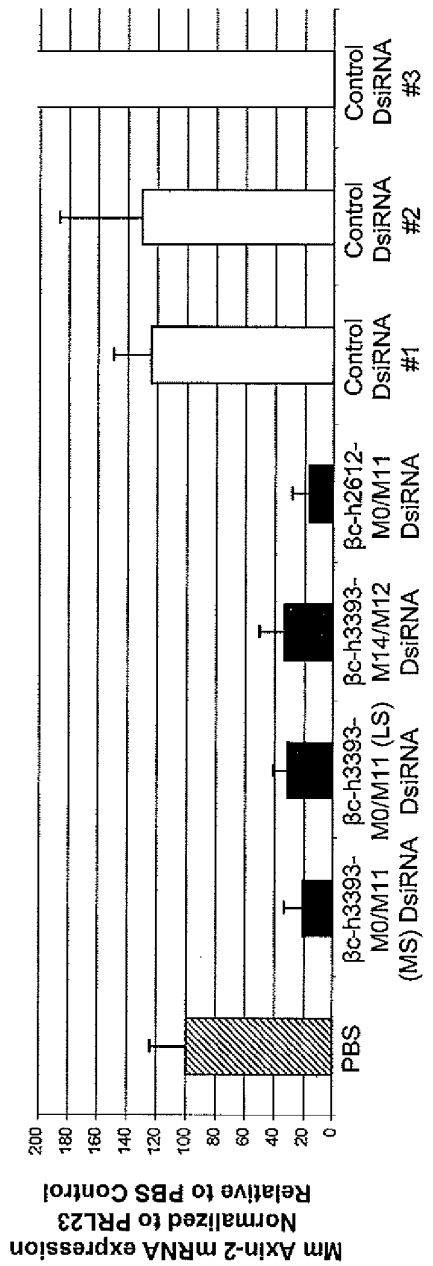

β-catenin mRNA expression
Normalized to HPRT
Relative to PBS Control
120
100
80
60
40
20
0
PBS
βc-h3393-M0/M11 DsiRNA
βc-h3393-M14/M12 DsiRNA
βc-h2612-M0/M11 DsiRNA
Control DsiRNA
Mm Axin-2 mRNA expression
Normalized to PRL23
Relative to PBS Control
140
120
100
80
60
40
20
0
PBS
βc-h3393-M0/M11 DsiRNA
βc-h3393-M14/M12 DsiRNA
βc-h2612-M0/M11 DsiRNA
Control DsiRNA

Figure 32


β-catenin mRNA expression
Normalized to HPRT
Relative to PBS Control
150
100
50
0
PBS
βc-h3393-M0/M11 DsiRNA
βc-h3393-M0/M11 DsiRNA
βc-h3393-M14/M12 DsiRNA
βc-h2612-M0/M11 DsiRNA
Control DsiRNA #1
Control DsiRNA #2
Control DsiRNA #3


Mm Axin-2 mRNA expression
Normalized to PRL23
Relative to PBS Control
200
180
160
140
120
100
80
60
40
20
0
PBS
βc-h3393-M0/M11 (MS) DsiRNA
βc-h3393-M0/M11 (LS) DsiRNA
βc-h3393-M14/M12 DsiRNA
βc-h2612-M0/M11 DsiRNA
Control DsiRNA #1
Control DsiRNA #2
Control DsiRNA #3

SEQUENCE LISTING

<110> DICERNA PHARMACEUTICALS, INC.

<120> METHODS AND COMPOSITIONS FOR THE SPECIFIC INHIBITION OF BETA-CATENIN BY DOUBLE-STRANDED RNA

<130> 86778WO(301937)

<140> PCT/US2011/042820
<141> 2011-07-01

<150> 61/361,776
<151> 2010-07-06

<160> 7794

<170> PatentIn version 3.5

<210> 1
<211> 3720
<212> DNA
<213> Homo sapiens

<400> 1
aggatacagc ggcttctgcg cgacttataa gagctccttg tgcggcgcca ttttaagcct 60

ctcggtctgt ggcagcagcg ttggcccggc cccgggagcg gagagcgagg ggaggcggag 120

acggaggaag gtctgaggag cagcttcagt ccccgccgag ccgccaccgc aggtcgagga 180

cggtcggact cccgcggcgg gaggagcctg ttcccctgag ggtatttgaa gtataccata 240

caactgtttt gaaaatccag cgtggacaat ggctactcaa gctgatttga tggagttgga 300

catggccatg gaaccagaca gaaaagcggc tgttagtcac tggcagcaac agtcttacct 360

ggactctgga atccattctg gtgccactac cacagctcct tctctgagtg gtaaaggcaa 420

tcctgaggaa gaggatgtgg atacctccca agtcctgtat gagtgggaac agggattttc 480

tcagtccttc actcaagaac aagtagctga tattgatgga cagtatgcaa tgactcgagc 540

tcagagggta cgagctgcta tgttccctga gacattagat gagggcatgc agatcccatc 600

tacacagttt gatgctgctc atcccactaa tgtccagcgt ttggctgaac catcacagat 660

gctgaaacat gcagttgtaa acttgattaa ctatcaagat gatgcagaac ttgccacacg 720

tgcaatccct gaactgacaa aactgctaaa tgacgaggac caggtggtgg ttaataaggc 780

tgcagttatg gtccatcagc tttctaaaaa ggaagcttcc agacacgcta tcatgcgttc 840

tcctcagatg gtgtctgcta ttgtacgtac catgcagaat acaaatgatg tagaaacagc 900

tcgttgtacc gctgggacct tgcataacct ttcccatcat cgtgagggct tactggccat 960

ctttaagtct ggaggcattc ctgccctggt gaaaatgctt ggttcaccag tggattctgt 1020

gttgttttat gccattacaa ctctccacaa ccttttatta catcaagaag gagctaaaat 1080

ggcagtgcgt ttagctggtg ggctgcagaa aatggttgcc ttgctcaaca aaacaaatgt 1140

taaattcttg gctattacga cagactgcct tcaaatttta gcttatggca accaagaaag 1200

caagctcatc atactggcta gtggtggacc ccaagcttta gtaaatataa tgaggaccta 1260

tacttacgaa aaactactgt ggaccacaag cagagtgctg aaggtgctat ctgtctgctc 1320

tagtaataag ccggctattg tagaagctgg tggaatgcaa gctttaggac ttcacctgac 1380

agatccaagt caacgtcttg ttcagaactg tctttggact ctcaggaatc tttcagatgc 1440

tgcaactaaa caggaaggga tggaaggtct ccttgggact cttgttcagc ttctgggttc 1500

agatgatata aatgtggtca cctgtgcagc tggaattctt tctaacctca cttgcaataa 1560

ttataagaac aagatgatgg tctgccaagt gggtggtata gaggctcttg tgcgtactgt 1620

ccttcgggct ggtgacaggg aagacatcac tgagcctgcc atctgtgctc ttcgtcatct 1680

gaccagccga caccaagaag cagagatggc ccagaatgca gttcgccttc actatggact 1740

accagttgtg gttaagctct tacacccacc atcccactgg cctctgataa aggctactgt 1800

tggattgatt cgaaatcttg ccctttgtcc cgcaaatcat gcacctttgc gtgagcaggg 1860

tgccattcca cgactagttc agttgcttgt tcgtgcacat caggataccc agcgccgtac 1920

gtccatgggt gggacacagc agcaatttgt ggagggggtc cgcatggaag aaatagttga 1980

aggttgtacc ggagcccttc acatcctagc tcgggatgtt cacaaccgaa ttgttatcag 2040

aggactaaat accattccat tgtttgtgca gctgctttat tctcccattg aaaacatcca 2100

aagagtagct gcaggggtcc tctgtgaact tgctcaggac aaggaagctg cagaagctat 2160

tgaagctgag ggagccacag ctcctctgac agagttactt cactctagga atgaaggtgt 2220

ggcgacatat gcagctgctg ttttgttccg aatgtctgag gacaagccac aagattacaa 2280

gaaacggctt tcagttgagc tgaccagctc tctcttcaga acagagccaa tggcttggaa 2340

tgagactgct gatcttggac ttgatattgg tgcccaggga gaacccttg gatatcgcca 2400

ggatgatcct agctatcgtt cttttcactc tggtggatat ggccaggatg ccttgggtat 2460

ggaccccatg atggaacatg agatgggtgg ccaccaccct ggtgctgact atccagttga 2520

tgggctgcca gatctggggc atgcccagga cctcatggat gggctgcctc caggtgacag 2580

caatcagctg gcctggtttg atactgacct gtaaatcatc ctttaggtaa gaagttttaa 2640

aaagccagtt tgggtaaaat acttttactc tgcctacaga acttcagaaa gacttggttg 2700

gtagggtggg agtggtttag gctatttgta aatctgccac aaaaacaggt atatactttg 2760

aaaggagatg tcttggaaca ttggaatgtt ctcagatttc tggttgttat gtgatcatgt 2820

gtggaagtta ttaactttaa tgtttttttgc cacagctttt gcaacttaat actcaaatga 2880

gtaacatttg ctgttttaaa cattaatagc agcctttctc tctttataca gctgtattgt 2940

ctgaacttgc attgtgattg gcctgtagag ttgctgagag ggctcgaggg gtgggctggt 3000

atctcagaaa gtgcctgaca cactaaccaa gctgagtttc ctatgggaac aattgaagta 3060

aacttttttgt tctggtcctt tttggtcgag gagtaacaat acaaatggat tttgggagtg 3120

actcaagaag tgaagaatgc acaagaatgg atcacaagat ggaatttatc aaaccctagc 3180

cttgcttgtt aaatttttttt ttttttttttt ttaagaatat ctgtaatggt actgactttg 3240

cttgctttga agtagctctt ttttttttttt ttttttttttt tttgcagtaa ctgtttttta 3300

agtctctcgt agtgttaagt tatagtgaat actgctacag caatttctaa tttttaagaa 3360

ttgagtaatg gtgtagaaca ctaattcata atcactctaa ttaattgtaa tctgaataaa 3420

gtgtaacaat tgtgtagcct ttttgtataa aatagacaaa tagaaaatgg tccaattagt 3480

ttccttttta atatgcttaa aataagcagg tggatctatt tcatgttttt gatcaaaaac 3540

tatttgggat atgtatgggt agggtaaatc agtaagaggt gttatttgga accttgtttt 3600

ggacagttta ccagttgcct tttatcccaa agttgttgta acctgctgtg atacgatgct 3660

tcaagagaaa atgcggttat aaaaaatggt tcagaattaa acttttaatt cattcgattg 3720

<210> 2
<211> 3415
<212> DNA
<213> Homo sapiens

<400> 2
aggatacagc ggcttctgcg cgacttataa gagctccttg tgcggcgcca ttttaagcct 60

ctcggtctgt ggcagcagcg ttggcccggc cccgggagcg gagagcgagg ggaggcggag 120

acggaggaag gtctgaggag cagcttcagt ccccgccgag ccgccaccgc aggtcgagga 180

cggtcggact cccgcggcgg gaggagcctg ttcccctgag ggtatttgaa gtataccata 240

caactgtttt gaaaatccag cgtggacaat ggctactcaa gctgatttga tggagttgga 300

catggccatg gaaccagaca gaaaagcggc tgttagtcac tggcagcaac agtcttacct 360

ggactctgga atccattctg gtgccactac cacagctcct tctctgagtg gtaaaggcaa 420

tcctgaggaa gaggatgtgg atacctccca agtcctgtat gagtgggaac agggattttc 480

tcagtccttc actcaagaac aagtagctga tattgatgga cagtatgcaa tgactcgagc 540

tcagagggta cgagctgcta tgttccctga gacattagat gagggcatgc agatcccatc 600

tacacagttt gatgctgctc atcccactaa tgtccagcgt ttggctgaac catcacagat 660

gctgaaacat gcagttgtaa acttgattaa ctatcaagat gatgcagaac ttgccacacg 720

tgcaatccct gaactgacaa aactgctaaa tgacgaggac caggtggtgg ttaataaggc 780

tgcagttatg gtccatcagc tttctaaaaa ggaagcttcc agacacgcta tcatgcgttc 840

tcctcagatg gtgtctgcta ttgtacgtac catgcagaat acaaatgatg tagaaacagc 900

tcgttgtacc gctgggacct tgcataacct ttcccatcat cgtgagggct tactggccat 960

ctttaagtct ggaggcattc ctgccctggt gaaaatgctt ggttcaccag tggattctgt 1020

gttgttttat gccattacaa ctctccacaa ccttttatta catcaagaag gagctaaaat 1080
ggcagtgcgt ttagctggtg ggctgcagaa aatggttgcc ttgctcaaca aaacaaatgt 1140
taaattcttg gctattacga cagactgcct tcaaatttta gcttatggca accaagaaag 1200
caagctcatc atactggcta gtggtggacc ccaagcttta gtaaatataa tgaggaccta 1260
tacttacgaa aaactactgt ggaccacaag cagagtgctg aaggtgctat ctgtctgctc 1320
tagtaataag ccggctattg tagaagctgg tggaatgcaa gctttaggac ttcacctgac 1380
agatccaagt caacgtcttg ttcagaactg tctttggact ctcaggaatc tttcagatgc 1440
tgcaactaaa caggaaggga tggaaggtct ccttgggact cttgttcagc ttctgggttc 1500
agatgatata aatgtggtca cctgtgcagc tggaattctt tctaacctca cttgcaataa 1560
ttataagaac aagatgatgg tctgccaagt gggtggtata gaggctcttg tgcgtactgt 1620
ccttcgggct ggtgacaggg aagacatcac tgagcctgcc atctgtgctc ttcgtcatct 1680
gaccagccga caccaagaag cagagatggc ccagaatgca gttcgccttc actatggact 1740
accagttgtg gttaagctct tacacccacc atcccactgg cctctgataa aggctactgt 1800
tggattgatt cgaaatcttg ccctttgtcc cgcaaatcat gcacctttgc gtgagcaggg 1860
tgccattcca cgactagttc agttgcttgt tcgtgcacat caggataccc agcgccgtac 1920
gtccatgggt gggacacagc agcaatttgt ggaggggtc cgcatggaag aaatagttga 1980
aggttgtacc ggagcccttc acatcctagc tcgggatgtt cacaaccgaa ttgttatcag 2040
aggactaaat accattccat tgtttgtgca gctgctttat tctcccattg aaaacatcca 2100
aagagtagct gcaggggtcc tctgtgaact tgctcaggac aaggaagctg cagaagctat 2160
tgaagctgag ggagccacag ctcctctgac agagttactt cactctagga atgaaggtgt 2220
ggcgacatat gcagctgctg ttttgttccg aatgtctgag gacaagccac aagattacaa 2280
gaaacggctt tcagttgagc tgaccagctc tctcttcaga acagagccaa tggcttggaa 2340
tgagactgct gatcttggac ttgatattgg tgcccaggga gaacccctg gatatcgcca 2400
ggatgatcct agctatcgtt cttttcactc tggtggatat ggccaggatg ccttgggtat 2460
ggaccccatg atggaacatg agatgggtgg ccaccaccct ggtgctgact atccagttga 2520
tgggctgcca gatctggggc atgcccagga cctcatggat gggctgcctc caggtgacag 2580
caatcagctg gcctggtttg atactgacct gtaaatcatc ctttagctgt attgtctgaa 2640
cttgcattgt gattggcctg tagagttgct gagagggctc gaggggtggg ctggtatctc 2700
agaaagtgcc tgacacacta accaagctga gtttcctatg ggaacaattg aagtaaactt 2760
tttgttctgg tccttttttgg tcgaggagta acaatacaaa tggattttgg gagtgactca 2820
agaagtgaag aatgcacaag aatggatcac aagatggaat ttatcaaacc ctagccttgc 2880

ttgttaaatt ttttttttt ttttttaag aatatctgta atggtactga ctttgcttgc 2940

tttgaagtag ctctttttt ttttttttt ttttttttgc agtaactgtt ttttaagtct 3000

ctcgtagtgt taagttatag tgaatactgc tacagcaatt tctaattttt aagaattgag 3060

taatggtgta gaacactaat tcataatcac tctaattaat tgtaatctga ataaagtgta 3120

acaattgtgt agccttttg tataaaatag acaaatagaa aatggtccaa ttagtttcct 3180

ttttaatatg cttaaaataa gcaggtggat ctatttcatg tttttgatca aaaactattt 3240

gggatatgta tgggtagggt aaatcagtaa gaggtgttat ttggaacctt gttttggaca 3300

gtttaccagt tgccttttat cccaaagttg ttgtaacctg ctgtgatacg atgcttcaag 3360

agaaaatgcg gttataaaaa atggttcaga attaaacttt taattcattc gattg 3415

<210> 3
<211> 3256
<212> DNA
<213> Homo sapiens

<400> 3
aggatacagc ggcttctgcg cgacttataa gagctccttg tgcggcgcca ttttaagcct 60

ctcggtctgt ggcagcagcg ttggcccggc cccgggagcg gagagcgagg ggaggcggag 120

acggaggaag gtctgaggag cagcttcagt ccccgccgag ccgccaccgc aggtcgagga 180

cggtcggact cccgcggcgg gaggagcctg ttcccctgag ggtatttgaa gtataccata 240

caactgtttt gaaaatccag cgtggacaat ggctactcaa gctgatttga tggagttgga 300

catggccatg gaaccagaca gaaaagcggc tgttagtcac tggcagcaac agtcttacct 360

ggactctgga atccattctg gtgccactac cacagctcct tctctgagtg gtaaaggcaa 420

tcctgaggaa gaggatgtgg atacctccca agtcctgtat gagtgggaac agggattttc 480

tcagtccttc actcaagaac aagtagctga tattgatgga cagtatgcaa tgactcgagc 540

tcagagggta cgagctgcta tgttccctga gacattagat gagggcatgc agatcccatc 600

tacacagttt gatgctgctc atcccactaa tgtccagcgt ttggctgaac catcacagat 660

gctgaaacat gcagttgtaa acttgattaa ctatcaagat gatgcagaac ttgccacacg 720

tgcaatccct gaactgacaa aactgctaaa tgacgaggac caggtggtgg ttaataaggc 780

tgcagttatg gtccatcagc tttctaaaaa ggaagcttcc agacacgcta tcatgcgttc 840

tcctcagatg gtgtctgcta ttgtacgtac catgcagaat acaaatgatg tagaaacagc 900

tcgttgtacc gctgggacct tgcataacct ttcccatcat cgtgagggct tactggccat 960

ctttaagtct ggaggcattc ctgccctggt gaaaatgctt ggttcaccag tggattctgt 1020

gttgttttat gccattacaa ctctccacaa ccttttatta catcaagaag gagctaaaat 1080

ggcagtgcgt ttagctggtg ggctgcagaa aatggttgcc ttgctcaaca aaacaaatgt 1140

taaattcttg gctattacga cagactgcct tcaaatttta gcttatggca accaagaaag 1200

caagctcatc atactggcta gtggtggacc ccaagcttta gtaaatataa tgaggaccta 1260

tacttacgaa aaactactgt ggaccacaag cagagtgctg aaggtgctat ctgtctgctc 1320

tagtaataag ccggctattg tagaagctgg tggaatgcaa gctttaggac ttcacctgac 1380

agatccaagt caacgtcttg ttcagaactg tctttggact ctcaggaatc tttcagatgc 1440

tgcaactaaa caggaaggga tggaaggtct ccttgggact cttgttcagc ttctgggttc 1500

agatgatata aatgtggtca cctgtgcagc tggaattctt tctaacctca cttgcaataa 1560

ttataagaac aagatgatgg tctgccaagt gggtggtata gaggctcttg tgcgtactgt 1620

ccttcgggct ggtgacaggg aagacatcac tgagcctgcc atctgtgctc ttcgtcatct 1680

gaccagccga caccaagaag cagagatggc ccagaatgca gttcgccttc actatggact 1740

accagttgtg gttaagctct tacacccacc atcccactgg cctctgataa aggctactgt 1800

tggattgatt cgaaatcttg ccctttgtcc cgcaaatcat gcacctttgc gtgagcaggg 1860

tgccattcca cgactagttc agttgcttgt tcgtgcacat caggataccc agcgccgtac 1920

gtccatgggt gggacacagc agcaatttgt ggagggggtc cgcatggaag aaatagttga 1980

aggttgtacc ggagcccttc acatcctagc tcgggatgtt cacaaccgaa ttgttatcag 2040

aggactaaat accattccat tgtttgtgca gctgctttat tctcccattg aaaacatcca 2100

aagagtagct gcaggggtcc tctgtgaact tgctcaggac aaggaagctg cagaagctat 2160

tgaagctgag ggagccacag ctcctctgac agagttactt cactctagga atgaaggtgt 2220

ggcgacatat gcagctgctg ttttgttccg aatgtctgag gacaagccac aagattacaa 2280

gaaacggctt tcagttgagc tgaccagctc tctcttcaga acagagccaa tggcttggaa 2340

tgagactgct gatcttggac ttgatattgg tgcccaggga gaacccctg gatatcgcca 2400

ggatgatcct agctatcgtt cttttcactc tggtggatat ggccaggatg ccttgggtat 2460

ggaccccatg atggaacatg agatgggtgg ccaccaccct ggtgctgact atccagttga 2520

tgggctgcca gatctggggc atgcccagga cctcatggat gggctgcctc caggtgacag 2580

caatcagctg gcctggtttg atactgacct gtaaatcatc ctttaggagt aacaatacaa 2640

atggattttg ggagtgactc aagaagtgaa gaatgcacaa gaatggatca caagatggaa 2700

tttatcaaac cctagccttg cttgttaaat ttttttttt ttttttttaa gaatatctgt 2760

aatggtactg actttgcttg ctttgaagta gctctttttt ttttttttt ttttttttg 2820

cagtaactgt tttttaagtc tctcgtagtg ttaagttata gtgaatactg ctacagcaat 2880

ttctaatttt taagaattga gtaatggtgt agaacactaa ttcataatca ctctaattaa 2940

ttgtaatctg aataaagtgt aacaattgtg tagccttttt gtataaaata gacaaataga 3000

aaatggtcca attagtttcc tttttaatat gcttaaaata agcaggtgga tctatttcat 3060

gtttttgatc aaaaactatt tgggatatgt atgggtaggg taaatcagta agaggtgtta 3120

tttggaacct tgttttggac agtttaccag ttgcctttta tcccaaagtt gttgtaacct 3180

gctgtgatac gatgcttcaa gagaaaatgc ggttataaaa aatggttcag aattaaactt 3240

ttaattcatt cgattg 3256

<210> 4
<211> 781
<212> PRT
<213> Homo sapiens

<400> 4

```
Met Ala Thr Gln Ala Asp Leu Met Glu Leu Asp Met Ala Met Glu Pro
1               5                  10                  15

Asp Arg Lys Ala Ala Val Ser His Trp Gln Gln Gln Ser Tyr Leu Asp
            20                  25                  30

Ser Gly Ile His Ser Gly Ala Thr Thr Thr Ala Pro Ser Leu Ser Gly
        35                  40                  45

Lys Gly Asn Pro Glu Glu Glu Asp Val Asp Thr Ser Gln Val Leu Tyr
    50                  55                  60

Glu Trp Glu Gln Gly Phe Ser Gln Ser Phe Thr Gln Glu Gln Val Ala
65                  70                  75                  80

Asp Ile Asp Gly Gln Tyr Ala Met Thr Arg Ala Gln Arg Val Arg Ala
                85                  90                  95

Ala Met Phe Pro Glu Thr Leu Asp Glu Gly Met Gln Ile Pro Ser Thr
            100                 105                 110

Gln Phe Asp Ala Ala His Pro Thr Asn Val Gln Arg Leu Ala Glu Pro
        115                 120                 125

Ser Gln Met Leu Lys His Ala Val Val Asn Leu Ile Asn Tyr Gln Asp
    130                 135                 140

Asp Ala Glu Leu Ala Thr Arg Ala Ile Pro Glu Leu Thr Lys Leu Leu
145                 150                 155                 160

Asn Asp Glu Asp Gln Val Val Val Asn Lys Ala Ala Val Met Val His
                165                 170                 175

Gln Leu Ser Lys Lys Glu Ala Ser Arg His Ala Ile Met Arg Ser Pro
            180                 185                 190
```

```
Gln Met Val Ser Ala Ile Val Arg Thr Met Gln Asn Thr Asn Asp Val
        195                 200                 205

Glu Thr Ala Arg Cys Thr Ala Gly Thr Leu His Asn Leu Ser His His
    210                 215                 220

Arg Glu Gly Leu Leu Ala Ile Phe Lys Ser Gly Gly Ile Pro Ala Leu
225                 230                 235                 240

Val Lys Met Leu Gly Ser Pro Val Asp Ser Val Leu Phe Tyr Ala Ile
                245                 250                 255

Thr Thr Leu His Asn Leu Leu Leu His Gln Glu Gly Ala Lys Met Ala
            260                 265                 270

Val Arg Leu Ala Gly Gly Leu Gln Lys Met Val Ala Leu Leu Asn Lys
        275                 280                 285

Thr Asn Val Lys Phe Leu Ala Ile Thr Thr Asp Cys Leu Gln Ile Leu
    290                 295                 300

Ala Tyr Gly Asn Gln Glu Ser Lys Leu Ile Ile Leu Ala Ser Gly Gly
305                 310                 315                 320

Pro Gln Ala Leu Val Asn Ile Met Arg Thr Tyr Thr Tyr Glu Lys Leu
                325                 330                 335

Leu Trp Thr Thr Ser Arg Val Leu Lys Val Leu Ser Val Cys Ser Ser
            340                 345                 350

Asn Lys Pro Ala Ile Val Glu Ala Gly Gly Met Gln Ala Leu Gly Leu
        355                 360                 365

His Leu Thr Asp Pro Ser Gln Arg Leu Val Gln Asn Cys Leu Trp Thr
    370                 375                 380

Leu Arg Asn Leu Ser Asp Ala Ala Thr Lys Gln Glu Gly Met Glu Gly
385                 390                 395                 400

Leu Leu Gly Thr Leu Val Gln Leu Leu Gly Ser Asp Asp Ile Asn Val
                405                 410                 415

Val Thr Cys Ala Ala Gly Ile Leu Ser Asn Leu Thr Cys Asn Asn Tyr
            420                 425                 430

Lys Asn Lys Met Met Val Cys Gln Val Gly Gly Ile Glu Ala Leu Val
        435                 440                 445
```

```
Arg Thr Val Leu Arg Ala Gly Asp Arg Glu Asp Ile Thr Glu Pro Ala
    450                 455                 460

Ile Cys Ala Leu Arg His Leu Thr Ser Arg His Gln Glu Ala Glu Met
465                 470                 475                 480

Ala Gln Asn Ala Val Arg Leu His Tyr Gly Leu Pro Val Val Val Lys
                485                 490                 495

Leu Leu His Pro Pro Ser His Trp Pro Leu Ile Lys Ala Thr Val Gly
            500                 505                 510

Leu Ile Arg Asn Leu Ala Leu Cys Pro Ala Asn His Ala Pro Leu Arg
        515                 520                 525

Glu Gln Gly Ala Ile Pro Arg Leu Val Gln Leu Leu Val Arg Ala His
    530                 535                 540

Gln Asp Thr Gln Arg Arg Thr Ser Met Gly Gly Thr Gln Gln Gln Phe
545                 550                 555                 560

Val Glu Gly Val Arg Met Glu Glu Ile Val Glu Gly Cys Thr Gly Ala
                565                 570                 575

Leu His Ile Leu Ala Arg Asp Val His Asn Arg Ile Val Ile Arg Gly
            580                 585                 590

Leu Asn Thr Ile Pro Leu Phe Val Gln Leu Leu Tyr Ser Pro Ile Glu
        595                 600                 605

Asn Ile Gln Arg Val Ala Ala Gly Val Leu Cys Glu Leu Ala Gln Asp
    610                 615                 620

Lys Glu Ala Ala Glu Ala Ile Glu Ala Glu Gly Ala Thr Ala Pro Leu
625                 630                 635                 640

Thr Glu Leu Leu His Ser Arg Asn Glu Gly Val Ala Thr Tyr Ala Ala
                645                 650                 655

Ala Val Leu Phe Arg Met Ser Glu Asp Lys Pro Gln Asp Tyr Lys Lys
            660                 665                 670

Arg Leu Ser Val Glu Leu Thr Ser Ser Leu Phe Arg Thr Glu Pro Met
        675                 680                 685

Ala Trp Asn Glu Thr Ala Asp Leu Gly Leu Asp Ile Gly Ala Gln Gly
```

690 695 700

Glu Pro Leu Gly Tyr Arg Gln Asp Asp Pro Ser Tyr Arg Ser Phe His
705 710 715 720

Ser Gly Gly Tyr Gly Gln Asp Ala Leu Gly Met Asp Pro Met Met Glu
725 730 735

His Glu Met Gly Gly His His Pro Gly Ala Asp Tyr Pro Val Asp Gly
740 745 750

Leu Pro Asp Leu Gly His Ala Gln Asp Leu Met Asp Gly Leu Pro Pro
755 760 765

Gly Asp Ser Asn Gln Leu Ala Trp Phe Asp Thr Asp Leu
770 775 780

<210> 5
<211> 3640
<212> DNA
<213> Mus musculus

<400> 5
gcgcggcgga acgctccgcg cggagcggca gcggcaggat acacggtgcc gcgccgctta 60

taaatcgctc cttgtgcggc gccatcttaa gccctcgctc ggtggcggcc gcgtcagctc 120

gtgtcctgtg aagcccgcgg cccggggagg cggagacgga gcacggtggg cgccgagccg 180

tcagtgcagg aggccgaggc cgagcgggcg gccgcgagtg agcagcgcgc gggcctgagg 240

gtacctgaag ctcagcgcac agctgctgtg acaccgctgc gtggacaatg gctactcaag 300

ctgacctgat ggagttggac atggccatgg agccggacag aaaagctgct gtcagccact 360

ggcagcagca gtcttacttg gattctggaa tccattctgg tgccaccacc acagctcctt 420

ccctgagtgg caagggcaac cctgaggaag aagatgttga cacctcccaa gtcctttatg 480

aatgggagca aggcttttcc cagtccttca cgcaagagca agtagctgat attgacgggc 540

agtatgcaat gactagggct cagagggtcc gagctgccat gttccctgag acgctagatg 600

agggcatgca gatcccatcc acgcagtttg acgctgctca tcccactaat gtccagcgct 660

tggctgaacc atcacagatg ttgaaacatg cagttgtcaa tttgattaac tatcaggatg 720

acgcggaact tgccacacgt gcaattcctg agctgacaaa actgctaaac gatgaggacc 780

aggtggtagt taataaagct gctgttatgg tccatcagct ttccaaaaag gaagcttcca 840

gacatgccat catgcgctcc cctcagatgg tgtctgccat tgtacgcacc atgcagaata 900

caaatgatgt agagacagct cgttgtactg ctgggactct gcacaacctt tctcaccacc 960

gcgagggctt gctggccatc tttaagtctg gtggcatccc agcgctggtg aaaatgcttg 1020

```
ggtcaccagt ggattctgta ctgttctacg ccatcacgac actgcataat ctcctgctcc     1080
atcaggaagg agctaaaatg gcagtgcgcc tagctggtgg actgcagaaa atggttgctt     1140
tgctcaacaa aacaaacgtg aaattcttgg ctattacaac agactgcctt cagatcttag     1200
cttatggcaa tcaagagagc aagctcatca ttctggccag tggtggaccc caagccttag     1260
taaacataat gaggacctac acttatgaga agcttctgtg gaccacaagc agagtgctga     1320
aggtgctgtc tgtctgctct agcaacaagc cggccattgt agaagctggt gggatgcagg     1380
cactggggct tcatctgaca gacccaagtc agcgacttgt tcaaaactgt ctttggactc     1440
tcagaaacct ttcagatgca gcgactaagc aggaagggat ggaaggcctc cttgggactc     1500
tagtgcagct tctgggttcc gatgatataa atgtggtcac ctgtgcagct ggaattctct     1560
ctaacctcac ttgcaataat tacaaaaaca agatgatggt gtgccaagtg ggtggcatag     1620
aggctcttgt acgcaccgtc cttcgtgctg gtgacaggga agacatcact gagcctgcca     1680
tctgtgctct tcgtcatctg accagccggc atcaggaagc cgagatggcc cagaatgccg     1740
ttcgccttca ttatggactg cctgttgtgg ttaaactcct gcacccacca tcccactggc     1800
ctctgataaa ggcaactgtt ggattgattc gaaaccttgc cctttgccca gcaaatcatg     1860
cgcctttgcg ggaacagggt gctattccac gactagttca gctgcttgta cgagcacatc     1920
aggacaccca acggcgcacc tccatgggtg gaacgcagca gcagtttgtg gagggcgtgc     1980
gcatggagga gatagtagaa gggtgtactg gagctctcca catccttgct cgggacgttc     2040
acaaccggat tgtaatccga ggactcaata ccattccatt gtttgtgcag ttgctttatt     2100
ctcccattga aaatatccaa agagtagctg caggggtcct ctgtgaactt gctcaggaca     2160
aggaggctgc agaggccatt gaagctgagg gagccacagc tcccctgaca gagttactcc     2220
actccaggaa tgaaggcgtg gcaacatacg cagctgctgt cctattccga atgtctgagg     2280
acaagccaca ggattacaag aagcggcttt cagtcgagct gaccagttcc ctcttcagga     2340
cagagccaat ggcttggaat gagactgcag atcttggact ggacattggt gcccagggag     2400
aagcccttgg atatcgccag gatgatccca gctaccgttc ttttcactct ggtggatacg     2460
gccaggatgc cttggggatg gaccctatga tggagcatga gatgggtggc caccaccctg     2520
gtgctgacta tccagttgat gggctgcctg atctgggaca cgcccaggac ctcatggatg     2580
ggctgccccc aggtgatagc aatcagctgg cctggtttga tactgacctg taaatcgtcc     2640
tttaggtaag aaagcttata aaagccagtg tgggtgaata ctttactctg cctgcagaac     2700
tccagaaaga cttggtaggg tgggaatggt tttaggcctg tttgtaaatc tgccaccaaa     2760
cagatacata ccttggaagg agatgttcat gtgtggaagt ttctcacgtt gatgtttttg     2820
ccacagcttt tgcagcgtta tactcagatg agtaacattt gctgttttca acattaatag     2880
cagcctttct ctctatacag ctgtagtgtc tgaacgtgca ttgtgattgg cctgtagagt     2940
```

tgctgagagg gctcgagggg tgggctggta tctcagaaag tgcctgacac actaaccaag 3000

ctgagtttcc tatgggaaca gtcgaagtac gctttttgtt ctggtccttt ttggtcgagg 3060

agtaacaata caaatggatt tggggagtga ctcacgcagt gaagaatgca cacgaatgga 3120

tcacaagatg gcgttatcaa accctagcct tgcttgttct ttgttttaat atctgtagtg 3180

gtgctgactt tgcttgcttt tatttttgc agtaactgtt agttttaag tagtgttatg 3240

ttctagtgaa cctgctacag caatttctga tttctaagaa ccgagtaatg gtgtagaaca 3300

ctaattcata atcacgctaa ttgtaatctg gagacgtgta acattgtgta gccttttgta 3360

taaatagaca gatagaaatg gtccgattag tttccttttt aatatgctta aaataagcag 3420

gtggatctat ttcatgtttt tgaacaaaaa ctttatcggg gatacgtgcg gtagggtaaa 3480

tcagtaagag gtgttatttg agccttgttt tggacagtat accagttgcc ttttatccca 3540

aagttgttgt aacctgctgt gatacaatgc ttcaacagat gcggttatag aaatggttca 3600

gaattaaact tttaattcat tcaaaaaaaa aaaaaaaaaa 3640

<210> 6
<211> 3565
<212> DNA
<213> Mus musculus

<400> 6
gcggcgccat cttaagccct cgctcggtgg cggccgcgtc agctcgtgtc ctgtgaagcc 60

cgcggcccgg ggaggcggag acggagcacg gtgggcgccg agccgtcagt gcaggaggcc 120

gaggccgagc gggcggccgc gagtgagcag cgcgcgggcc tgagggtacc tgaagctcag 180

cgcacagctg ctgtgacacc gctgcgtgga caatggctac tcaagctgac ctgatggagt 240

tggacatggc catggagccg gacagaaaag ctgctgtcag ccactggcag cagcagtctt 300

acttggattc tggaatccat tctggtgcca ccaccacagc tccttccctg agtggcaagg 360

gcaaccctga ggaagaagat gttgacacct cccaagtcct ttatgaatgg gagcaaggct 420

tttcccagtc cttcacgcaa gagcaagtag ctgatattga cgggcagtat gcaatgacta 480

gggctcagag ggtccgagct gccatgttcc ctgagacgct agatgagggc atgcagatcc 540

catccacgca gtttgacgct gctcatccca ctaatgtcca gcgcttggct gaaccatcac 600

agatgttgaa acatgcagtt gtcaatttga ttaactatca ggatgacgcg gaacttgcca 660

cacgtgcaat tcctgagctg acaaaactgc taaacgatga ggaccaggtg gtagttaata 720

aagctgctgt tatggtccat cagctttcca aaaaggaagc ttccagacat gccatcatgc 780

gctcccctca gatggtgtct gccattgtac gcaccatgca gaatacaaat gatgtagaga 840

cagctcgttg tactgctggg actctgcaca acctttctca ccaccgcgag ggcttgctgg 900

ccatctttaa gtctggtggc atcccagcgc tggtgaaaat gcttgggtca ccagtggatt 960

ctgtactgtt ctacgccatc acgacactgc ataatctcct gctccatcag gaaggagcta 1020

aaatggcagt gcgcctagct ggtggactgc agaaaatggt tgctttgctc aacaaaacaa 1080

acgtgaaatt cttggctatt acaacagact gccttcagat cttagcttat ggcaatcaag 1140

agagcaagct catcattctg gccagtggtg gaccccaagc cttagtaaac ataatgagga 1200

cctacactta tgagaagctt ctgtggacca caagcagagt gctgaaggtg ctgtctgtct 1260

gctctagcaa caagccggcc attgtagaag ctggtgggat gcaggcactg gggcttcatc 1320

tgacagaccc aagtcagcga cttgttcaaa actgtctttg gactctcaga aacctttcag 1380

atgcagcgac taagcaggaa gggatggaag gcctccttgg gactctagtg cagcttctgg 1440

gttccgatga tataaatgtg gtcacctgtg cagctggaat tctctctaac ctcacttgca 1500

ataattacaa aaacaagatg atggtgtgcc aagtgggtgg catagaggct cttgtacgca 1560

ccgtccttcg tgctggtgac agggaagaca tcactgagcc tgccatctgt gctcttcgtc 1620

atctgaccag ccggcatcag gaagccgaga tggcccagaa tgccgttcgc cttcattatg 1680

gactgcctgt tgtggttaaa ctcctgcacc caccatccca ctggcctctg ataaaggcaa 1740

ctgttggatt gattcgaaac cttgcccttt gcccagcaaa tcatgcgcct ttgcgggaac 1800

agggtgctat tccacgacta gttcagctgc ttgtacgagc acatcaggac acccaacggc 1860

gcacctccat gggtggaacg cagcagcagt ttgtggaggg cgtgcgcatg gaggagatag 1920

tagaagggtg tactggagct ctccacatcc ttgctcggga cgttcacaac cggattgtaa 1980

tccgaggact caataccatt ccattgtttg tgcagttgct ttattctccc attgaaaata 2040

tccaaagagt agctgcaggg gtcctctgtg aacttgctca ggacaaggag gctgcagagg 2100

ccattgaagc tgagggagcc acagctcccc tgacagagtt actccactcc aggaatgaag 2160

gcgtggcaac atacgcagct gctgtcctat tccgaatgtc tgaggacaag ccacaggatt 2220

acaagaagcg gctttcagtc gagctgacca gttccctctt caggacagag ccaatggctt 2280

ggaatgagac tgcagatctt ggactggaca ttggtgccca gggagaagcc cttggatatc 2340

gccaggatga tcccagctac cgttcttttc actctggtgg atacggccag gatgccttgg 2400

ggatggaccc tatgatggag catgagatgg gtggccacca ccctggtgct gactatccag 2460

ttgatgggct gcctgatctg ggacacgccc aggacctcat ggatgggctg cccccaggtg 2520

atagcaatca gctggcctgg tttgatactg acctgtaaat cgtcctttag gtaagaaagc 2580

ttataaaagc cagtgtgggt gaatacttta ctctgcctgc agaactccag aaagacttgg 2640

tagggtggga atggttttag gcctgtttgt aaatctgcca ccaaacagat acataccttg 2700

gaaggagatg ttcatgtgtg gaagtttctc acgttgatgt ttttgccaca gcttttgcag 2760

cgttatactc agatgagtaa catttgctgt tttcaacatt aatagcagcc tttctctcta 2820

tacagctgta gtgtctgaac gtgcattgtg attggcctgt agagttgctg agagggctcg 2880

aggggtgggc tggtatctca gaaagtgcct gacacactaa ccaagctgag tttcctatgg 2940

gaacagtcga agtacgcttt ttgttctggt ccttttggt cgaggagtaa caatacaaat 3000

ggatttgggg agtgactcac gcagtgaaga atgcacacga atggatcaca agatggcgtt 3060

atcaaaccct agccttgctt gttctttgtt ttaatatctg tagtggtgct gactttgctt 3120

gcttttattt tttgcagtaa ctgttagttt ttaagtagtg ttatgttcta gtgaacctgc 3180

tacagcaatt tctgatttct aagaaccgag taatggtgta gaacactaat tcataatcac 3240

gctaattgta atctggagac gtgtaacatt gtgtagcctt ttgtataaat agacagatag 3300

aaatggtccg attagtttcc tttttaatat gcttaaaata agcaggtgga tctatttcat 3360

gtttttgaac aaaaacttta tcggggatac gtgcggtagg gtaaatcagt aagaggtgtt 3420

atttgagcct tgttttggac agtataccag ttgcctttta tcccaaagtt gttgtaacct 3480

gctgtgatac aatgcttcaa cagatgcggt tatagaaatg gttcagaatt aaacttttaa 3540

ttcattcaaa aaaaaaaaaa aaaaa 3565

<210> 7
<211> 781
<212> PRT
<213> Mus musculus

<400> 7
Met Ala Thr Gln Ala Asp Leu Met Glu Leu Asp Met Ala Met Glu Pro
1 5 10 15

Asp Arg Lys Ala Ala Val Ser His Trp Gln Gln Gln Ser Tyr Leu Asp
20 25 30

Ser Gly Ile His Ser Gly Ala Thr Thr Thr Ala Pro Ser Leu Ser Gly
35 40 45

Lys Gly Asn Pro Glu Glu Glu Asp Val Asp Thr Ser Gln Val Leu Tyr
50 55 60

Glu Trp Glu Gln Gly Phe Ser Gln Ser Phe Thr Gln Glu Gln Val Ala
65 70 75 80

Asp Ile Asp Gly Gln Tyr Ala Met Thr Arg Ala Gln Arg Val Arg Ala
85 90 95

Ala Met Phe Pro Glu Thr Leu Asp Glu Gly Met Gln Ile Pro Ser Thr
100 105 110

Gln Phe Asp Ala Ala His Pro Thr Asn Val Gln Arg Leu Ala Glu Pro
115 120 125

```
Ser Gln Met Leu Lys His Ala Val Val Asn Leu Ile Asn Tyr Gln Asp
    130                 135                 140

Asp Ala Glu Leu Ala Thr Arg Ala Ile Pro Glu Leu Thr Lys Leu Leu
145                 150                 155                 160

Asn Asp Glu Asp Gln Val Val Val Asn Lys Ala Ala Val Met Val His
                165                 170                 175

Gln Leu Ser Lys Lys Glu Ala Ser Arg His Ala Ile Met Arg Ser Pro
            180                 185                 190

Gln Met Val Ser Ala Ile Val Arg Thr Met Gln Asn Thr Asn Asp Val
        195                 200                 205

Glu Thr Ala Arg Cys Thr Ala Gly Thr Leu His Asn Leu Ser His His
    210                 215                 220

Arg Glu Gly Leu Leu Ala Ile Phe Lys Ser Gly Gly Ile Pro Ala Leu
225                 230                 235                 240

Val Lys Met Leu Gly Ser Pro Val Asp Ser Val Leu Phe Tyr Ala Ile
                245                 250                 255

Thr Thr Leu His Asn Leu Leu Leu His Gln Glu Gly Ala Lys Met Ala
            260                 265                 270

Val Arg Leu Ala Gly Gly Leu Gln Lys Met Val Ala Leu Leu Asn Lys
        275                 280                 285

Thr Asn Val Lys Phe Leu Ala Ile Thr Thr Asp Cys Leu Gln Ile Leu
    290                 295                 300

Ala Tyr Gly Asn Gln Glu Ser Lys Leu Ile Ile Leu Ala Ser Gly Gly
305                 310                 315                 320

Pro Gln Ala Leu Val Asn Ile Met Arg Thr Tyr Thr Tyr Glu Lys Leu
                325                 330                 335

Leu Trp Thr Thr Ser Arg Val Leu Lys Val Leu Ser Val Cys Ser Ser
            340                 345                 350

Asn Lys Pro Ala Ile Val Glu Ala Gly Gly Met Gln Ala Leu Gly Leu
        355                 360                 365

His Leu Thr Asp Pro Ser Gln Arg Leu Val Gln Asn Cys Leu Trp Thr
```

370 375 380

Leu Arg Asn Leu Ser Asp Ala Ala Thr Lys Gln Glu Gly Met Glu Gly
385 390 395 400

Leu Leu Gly Thr Leu Val Gln Leu Leu Gly Ser Asp Asp Ile Asn Val
405 410 415

Val Thr Cys Ala Ala Gly Ile Leu Ser Asn Leu Thr Cys Asn Asn Tyr
420 425 430

Lys Asn Lys Met Met Val Cys Gln Val Gly Gly Ile Glu Ala Leu Val
435 440 445

Arg Thr Val Leu Arg Ala Gly Asp Arg Glu Asp Ile Thr Glu Pro Ala
450 455 460

Ile Cys Ala Leu Arg His Leu Thr Ser Arg His Gln Glu Ala Glu Met
465 470 475 480

Ala Gln Asn Ala Val Arg Leu His Tyr Gly Leu Pro Val Val Val Lys
485 490 495

Leu Leu His Pro Pro Ser His Trp Pro Leu Ile Lys Ala Thr Val Gly
500 505 510

Leu Ile Arg Asn Leu Ala Leu Cys Pro Ala Asn His Ala Pro Leu Arg
515 520 525

Glu Gln Gly Ala Ile Pro Arg Leu Val Gln Leu Leu Val Arg Ala His
530 535 540

Gln Asp Thr Gln Arg Arg Thr Ser Met Gly Gly Thr Gln Gln Gln Phe
545 550 555 560

Val Glu Gly Val Arg Met Glu Glu Ile Val Glu Gly Cys Thr Gly Ala
565 570 575

Leu His Ile Leu Ala Arg Asp Val His Asn Arg Ile Val Ile Arg Gly
580 585 590

Leu Asn Thr Ile Pro Leu Phe Val Gln Leu Leu Tyr Ser Pro Ile Glu
595 600 605

Asn Ile Gln Arg Val Ala Ala Gly Val Leu Cys Glu Leu Ala Gln Asp
610 615 620

Lys Glu Ala Ala Glu Ala Ile Glu Ala Glu Gly Ala Thr Ala Pro Leu
625 630 635 640

Thr Glu Leu Leu His Ser Arg Asn Glu Gly Val Ala Thr Tyr Ala Ala
645 650 655

Ala Val Leu Phe Arg Met Ser Glu Asp Lys Pro Gln Asp Tyr Lys Lys
660 665 670

Arg Leu Ser Val Glu Leu Thr Ser Ser Leu Phe Arg Thr Glu Pro Met
675 680 685

Ala Trp Asn Glu Thr Ala Asp Leu Gly Leu Asp Ile Gly Ala Gln Gly
690 695 700

Glu Ala Leu Gly Tyr Arg Gln Asp Asp Pro Ser Tyr Arg Ser Phe His
705 710 715 720

Ser Gly Gly Tyr Gly Gln Asp Ala Leu Gly Met Asp Pro Met Met Glu
725 730 735

His Glu Met Gly Gly His His Pro Gly Ala Asp Tyr Pro Val Asp Gly
740 745 750

Leu Pro Asp Leu Gly His Ala Gln Asp Leu Met Asp Gly Leu Pro Pro
755 760 765

Gly Asp Ser Asn Gln Leu Ala Trp Phe Asp Thr Asp Leu
770 775 780

<210> 8
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 8
cugaggguau uugaaguaua ccata 25

<210> 9
<211> 25
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 9
ggguauuuga aguauaccau acaac 25

<210> 10
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 10
aaguauacca uacaacuguu uugaa 25

<210> 11
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 11
accauacaac uguuuugaaa aucca 25

<210> 12
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 12
acaacuguuu ugaaaaucca gcgtg 25

<210> 13

<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 13
gggauuuucu caguccuuca cucaa 25

<210> 14
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 14
cucaagaaca aguagcugau auuga 25

<210> 15
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 15
aacaaguagc ugauauugau ggaca 25

<210> 16
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 16
caaguagcug auauugaugg acagt 25

<210> 17
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 17
auggacagua ugcaaugacu cgagc 25

<210> 18
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 18
cuauguuccc ugagacauua gauga 25

<210> 19
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 19
cugaaacaug caguuguaaa cuuga 25

<210> 20
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 20
caugcaguug uaaacuugau uaact 25

<210> 21
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 21
aguuguaaac uugauuaacu aucaa 25

<210> 22
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 22
uugauuaacu aucaagauga ugcag 25

<210> 23
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 23
cugaacugac aaaacugcua aauga 25

<210> 24
<211> 25
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 24
agaugguguc ugcuauugua cguac 25

<210> 25
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 25
acguaccaug cagaauacaa augat 25

<210> 26
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 26
uacaacucuc cacaaccuuu uauta 25

<210> 27
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 27
cucuccacaa ccuuuuauua cauca 25

<210> 28
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 28
cacaaccuuu uauuacauca agaag 25

<210> 29
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 29
cuuuuauuac aucaagaagg agcta 25

<210> 30
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 30
aaaacaaaug uuaaauucuu ggcta 25

<210> 31
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>

<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 31
uacgacagac ugccuucaaa uuuta 25

<210> 32
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 32
cagacugccu ucaaauuuua gcuta 25

<210> 33
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 33
cuuuaguaaa uauaaugagg accta 25

<210> 34
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 34
aaaacuacug uggaccacaa gcaga 25

<210> 35
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 35
agucaacguc uuguucagaa cugtc 25

<210> 36
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 36
cgucuuguuc agaacugucu uugga 25

<210> 37
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 37
uguucagaac ugucuuugga cuctc 25

<210> 38
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 38
gguucagaug auauaaaugu gguca 25

<210> 39
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 39
ucuuucuaac cucacuugca auaat 25

<210> 40
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 40
cucacuugca auaauuauaa gaaca 25

<210> 41
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 41
caauaauuau aagaacaaga ugatg 25

<210> 42
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 42
guauagaggc ucuugugcgu acugt 25

<210> 43
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 43
ggcuacuguu ggauugauuc gaaat 25

<210> 44
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 44
cauggaagaa auaguugaag guugt 25

<210> 45
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 45
uggaagaaau aguugaaggu uguac 25

<210> 46
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 46
auugaaaaca uccaaagagu agctg 25

<210> 47
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 47
gaggacaagc cacaagauua caaga 25

<210> 48
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 48
gauacugacc uguaaaucau ccutt 25

<210> 49
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 49
uuagguaaga aguuuuaaaa agcca 25

<210> 50
<211> 25

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 50
cagguauaua cuuugaaagg agatg 25

<210> 51
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 51
gaaguuauua acuuuaaugu uuutt 25

<210> 52
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 52
ccacagcuuu ugcaacuuaa uactc 25

<210> 53
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 53

cauuugcugu uuuaaacauu aauag 25

<210> 54
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 54
caauugaagu aaacuuuuug uuctg 25

<210> 55
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 55
acccuagccu ugcuuguuaa auutt 25

<210> 56
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 56
gccuugcuug uuaaauuuuu uuutt 25

<210> 57
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 57
gaaguagcuc uuuuuuuuuu uuutt 25

<210> 58
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 58
guaguguuaa guuauaguga auact 25

<210> 59
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 59
gugaauacug cuacagcaau uucta 25

<210> 60
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 60
uacugcuaca gcaauuucua auutt 25

<210> 61
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 61
cuaauuuuua agaauugagu aaugg 25

<210> 62
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 62
uuuuaagaau ugaguaaugg uguag 25

<210> 63
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 63
cauaaucacu cuaauuaauu guaat 25

<210> 64
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 64
uaauuguaau cugaauaaag uguaa 25

<210> 65
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 65
guaaucugaa uaaaguguaa caatt 25

<210> 66
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 66
ugaauaaagu guaacaauug uguag 25

<210> 67
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 67
guagccuuuu uguauaaaau agaca 25

<210> 68
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic

oligonucleotide

<400> 68
uguauaaaau agacaaauag aaaat 25

<210> 69
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 69
aaaaugguc aauuaguuuc cuutt 25

<210> 70
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 70
ccaauuaguu uccuuuuuaa uaugc 25

<210> 71
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 71
uuugaucaaa aacuauuugg gauat 25

<210> 72
<211> 25
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 72
gagguguuau uuggaaccuu guutt 25

<210> 73
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 73
guuauuugga accuuguuuu ggaca 25

<210> 74
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 74
accuuguuuu ggacaguuua ccagt 25

<210> 75
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 75
gauacgaugc uucaagagaa aaugc 25

<210> 76

<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 76
caagagaaaa ugcgguuaua aaaaa 25

<210> 77
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 77
gaaaaugcgg uuauaaaaaa uggtt 25

<210> 78
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 78
guuauaaaaa augguucaga auuaa 25

<210> 79
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 79
aaaaugguuc agaauuaaac uuuta 25

<210> 80
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 80
gcguggacaa uggcuacuca agctg 25

<210> 81
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 81
cguggacaau ggcuacucaa gcuga 25

<210> 82
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 82
guggacaaug gcuacucaag cugat 25

<210> 83
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 83
uggacaaugg cuacucaagc ugatt 25

<210> 84
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 84
ggacaauggc uacucaagcu gautt 25

<210> 85
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 85
gacaauggcu acucaagcug auutg 25

<210> 86
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 86
acaauggcua cucaagcuga uuuga 25

<210> 87
<211> 25
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 87
caauggcuac ucaagcugau uugat 25

<210> 88
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 88
ugauggaguu ggacauggcc augga 25

<210> 89
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 89
gauggaguug gacauggcca uggaa 25

<210> 90
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 90
auggaguugg acauggccau ggaac 25

<210> 91
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 91
uggaguugga cauggccaug gaacc 25

<210> 92
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 92
ggaguuggac auggccaugg aacca 25

<210> 93
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 93
gaguuggaca uggccaugga accag 25

<210> 94
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>

<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 94
aguuggacau ggccauggaa ccaga 25

<210> 95
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 95
ucuggaaucc auucuggugc cacta 25

<210> 96
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 96
cuggaaucca uucuggugcc acuac 25

<210> 97
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 97
uggaauccau ucuggugcca cuacc 25

<210> 98
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 98
ggaauccauu cuggugccac uacca 25

<210> 99
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 99
gaauccauuc uggugccacu accac 25

<210> 100
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 100
uagaugaggg caugcagauc ccatc 25

<210> 101
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 101
agaugagggc augcagaucc cauct 25

<210> 102
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 102
gaugagggca ugcagauccc aucta 25

<210> 103
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 103
augagggcau gcagauccca ucuac 25

<210> 104
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 104
ugagggcaug cagaucccau cuaca 25

<210> 105
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 105
gagggcaugc agaucccauc uacac 25

<210> 106
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 106
gcugcucauc ccacuaaugu ccagc 25

<210> 107
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 107
cugcucaucc cacuaauguc cagcg 25

<210> 108
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 108
ugcucauccc acuaaugucc agcgt 25

<210> 109
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 109
gcucauccca cuaaugucca gcgtt 25

<210> 110
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 110
cucaucccac uaauguccag cgutt 25

<210> 111
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 111
ucaucccacu aauguccagc guutg 25

<210> 112
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 112
caucccacua auguccagcg uuugg 25

<210> 113
<211> 25

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 113
aucccacuaa uguccagcgu uuggc 25

<210> 114
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 114
uuggcugaac caucacagau gcuga 25

<210> 115
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 115
uggcugaacc aucacagaug cugaa 25

<210> 116
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 116

ggcugaacca ucacagaugc ugaaa 25

<210> 117
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 117
gaacuugcca cacgugcaau ccctg 25

<210> 118
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 118
aacuugccac acgugcaauc ccuga 25

<210> 119
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 119
guuauggucc aucagcuuuc uaaaa 25

<210> 120
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 120
uuauggucca ucagcuuucu aaaaa 25

<210> 121
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 121
aaaaaggaag cuuccagaca cgcta 25

<210> 122
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 122
aaaaggaagc uuccagacac gcuat 25

<210> 123
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 123
accaugcaga auacaaauga uguag 25

<210> 124
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 124
ccaugcagaa uacaaaugau guaga 25

<210> 125
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 125
caugcagaau acaaaugaug uagaa 25

<210> 126
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 126
augcagaaua caaaugaugu agaaa 25

<210> 127
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 127
ugcagaauac aaaugaugua gaaac 25

<210> 128
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 128
gcagaauaca aaugauguag aaaca 25

<210> 129
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 129
cagaauacaa augauguaga aacag 25

<210> 130
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 130
agaauacaaa ugauguagaa acagc 25

<210> 131
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic

oligonucleotide

<400> 131
cuggccaucu uuaagucugg aggca 25

<210> 132
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 132
uggccaucuu uaagucugga ggcat 25

<210> 133
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 133
gaaggagcua aaauggcagu gcgtt 25

<210> 134
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 134
aaggagcuaa aauggcagug cgutt 25

<210> 135
<211> 25
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 135
aggagcuaaa auggcagugc guuta 25

<210> 136
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 136
ggagcuaaaa uggcagugcg uuuag 25

<210> 137
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 137
gagcuaaaau ggcagugcgu uuagc 25

<210> 138
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 138
cuguggacca caagcagagu gcuga 25

<210> 139

<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 139
uguggaccac aagcagagug cugaa 25

<210> 140
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 140
guggaccaca agcagagugc ugaag 25

<210> 141
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 141
uggaccacaa gcagagugcu gaagg 25

<210> 142
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 142
ggaccacaag cagagugcug aaggt 25

<210> 143
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 143
gaccacaagc agagugcuga aggtg 25

<210> 144
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 144
accacaagca gagugcugaa ggugc 25

<210> 145
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 145
ccacaagcag agugcugaag gugct 25

<210> 146
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 146
cacaagcaga gugcugaagg ugcta 25

<210> 147
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 147
acaagcagag ugcugaaggu gcuat 25

<210> 148
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 148
caagcagagu gcugaaggug cuatc 25

<210> 149
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 149
aagcagagug cugaaggugc uauct 25

<210> 150
<211> 25
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 150
agcagagugc ugaaggugcu auctg 25

<210> 151
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 151
gcagagugcu gaaggugcua ucugt 25

<210> 152
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 152
aacugucuuu ggacucucag gaatc 25

<210> 153
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 153
acugucuuug gacucucagg aauct 25

<210> 154
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 154
gaugauauaa auguggucac cugtg 25

<210> 155
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 155
augauauaaa uguggucacc ugugc 25

<210> 156
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 156
ugauauaaau guggucaccu gugca 25

<210> 157
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>

<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 157
gauauaaaug uggucaccug ugcag 25

<210> 158
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 158
auauaaaugu ggucaccugu gcagc 25

<210> 159
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 159
uauaaaugug gucaccugug cagct 25

<210> 160
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 160
auaaaugugg ucaccugugc agctg 25

<210> 161
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 161
uaaauguggu caccugugca gcugg 25

<210> 162
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 162
aaaugugguc accugugcag cugga 25

<210> 163
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 163
aaugugguca ccugugcagc uggaa 25

<210> 164
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 164
auguggucac cugugcagcu ggaat 25

<210> 165
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 165
uguggucacc ugugcagcug gaatt 25

<210> 166
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 166
guggucaccu gugcagcugg aautc 25

<210> 167
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 167
uggucaccug ugcagcugga auuct 25

<210> 168
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 168
ggucaccugu gcagcuggaa uuctt 25

<210> 169
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 169
gucaccugug cagcuggaau ucutt 25

<210> 170
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 170
ucaccugugc agcuggaauu cuutc 25

<210> 171
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 171
caccugugca gcuggaauuc uuuct 25

<210> 172
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 172
accugugcag cuggaauucu uucta 25

<210> 173
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 173
ccugugcagc uggaauucuu ucuaa 25

<210> 174
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 174
ucuaaccuca cuugcaauaa uuata 25

<210> 175
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 175
cuaaccucac uugcaauaau uauaa 25

<210> 176
<211> 25

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 176
uaaccucacu ugcaauaauu auaag 25

<210> 177
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 177
aaccucacuu gcaauaauua uaaga 25

<210> 178
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 178
accucacuug caauaauuau aagaa 25

<210> 179
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 179

gcuggugaca gggaagacau cactg 25

<210> 180
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 180
cuggugacag ggaagacauc acuga 25

<210> 181
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 181
uggugacagg gaagacauca cugag 25

<210> 182
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 182
ggugacaggg aagacaucac ugagc 25

<210> 183
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 183
gugacaggga agacaucacu gagcc 25

<210> 184
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 184
ugacagggaa gacaucacug agcct 25

<210> 185
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 185
gacagggaag acaucacuga gcctg 25

<210> 186
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 186
acagggaaga caucacugag ccugc 25

<210> 187
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 187
cagggaagac aucacugagc cugcc 25

<210> 188
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 188
agggaagaca ucacugagcc ugcca 25

<210> 189
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 189
gggaagacau cacugagccu gccat 25

<210> 190
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 190
ggaagacauc acugagccug ccatc 25

<210> 191
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 191
gaagacauca cugagccugc cauct 25

<210> 192
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 192
aagacaucac ugagccugcc auctg 25

<210> 193
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 193
agacaucacu gagccugcca ucugt 25

<210> 194
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic

oligonucleotide

<400> 194
gacaucacug agccugccau cugtg 25

<210> 195
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 195
acaucacuga gccugccauc ugugc 25

<210> 196
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 196
caucacugag ccugccaucu gugct 25

<210> 197
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 197
aucacugagc cugccaucug ugctc 25

<210> 198
<211> 25
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 198
ucacugagcc ugccaucugu gcuct 25

<210> 199
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 199
cacugagccu gccaucugug cuctt 25

<210> 200
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 200
acugagccug ccaucugugc ucutc 25

<210> 201
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 201
cugagccugc caucugugcu cuucg 25

<210> 202

<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 202
ugagccugcc aucugugcuc uucgt 25

<210> 203
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 203
gagccugcca ucugugcucu ucgtc 25

<210> 204
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 204
agccugccau cugugcucuu cguca 25

<210> 205
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 205
gccugccauc ugugcucuuc gucat 25

<210> 206
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 206
ccugccaucu gugcucuucg ucatc 25

<210> 207
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 207
cugccaucug ugcucuucgu cauct 25

<210> 208
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 208
ugccaucugu gcucuucguc auctg 25

<210> 209
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 209
gccaucugug cucuucguca ucuga 25

<210> 210
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 210
ccaucugugc ucuucgucau cugac 25

<210> 211
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 211
caucugugcu cuucgucauc ugacc 25

<210> 212
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 212
aucugugcuc uucgucaucu gacca 25

<210> 213
<211> 25
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 213
ucugugcucu ucgucaucug accag 25

<210> 214
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 214
cugugcucuu cgucaucuga ccagc 25

<210> 215
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 215
ugugcucuuc gucaucugac cagcc 25

<210> 216
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 216
gugcucuucg ucaucugacc agccg 25

<210> 217
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 217
ugcucuucgu caucugacca gccga 25

<210> 218
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 218
gcucuucguc aucugaccag ccgac 25

<210> 219
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 219
cucuucguca ucugaccagc cgaca 25

<210> 220
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>

<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 220
ucuucgucau cugaccagcc gacac 25

<210> 221
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 221
cuucgucauc ugaccagccg acacc 25

<210> 222
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 222
uucgucaucu gaccagccga cacca 25

<210> 223
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 223
cacccaccau cccacuggcc ucuga 25

<210> 224
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 224
acccaccauc ccacuggccu cugat 25

<210> 225
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 225
cccaccaucc cacuggccuc ugata 25

<210> 226
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 226
ccaccauccc acuggccucu gauaa 25

<210> 227
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 227
caccauccca cuggccucug auaaa 25

<210> 228
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 228
accaucccac uggccucuga uaaag 25

<210> 229
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 229
ccaucccacu ggccucugau aaagg 25

<210> 230
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 230
caucccacug gccucugaua aaggc 25

<210> 231
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 231
aucccacugg ccucugauaa aggct 25

<210> 232
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 232
ucccacuggc cucugauaaa ggcta 25

<210> 233
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 233
cccacuggcc ucugauaaag gcuac 25

<210> 234
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 234
ccacuggccu cugauaaagg cuact 25

<210> 235
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 235
cacuggccuc ugauaaaggc uactg 25

<210> 236
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 236
acuggccucu gauaaaggcu acugt 25

<210> 237
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 237
acuguuggau ugauucgaaa ucutg 25

<210> 238
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 238
cuguuggauu gauucgaaau cuugc 25

<210> 239
<211> 25

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 239
aauaccauuc cauuguuugu gcagc 25

<210> 240
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 240
auaccauucc auuguuugug cagct 25

<210> 241
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 241
uaccauucca uuguuugugc agctg 25

<210> 242
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 242

accauuccau uguuugugca gcugc 25

<210> 243
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 243
ccauuccauu guuugugcag cugct 25

<210> 244
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 244
cauuccauug uuugugcagc ugctt 25

<210> 245
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 245
ugcuuuauuc ucccauugaa aacat 25

<210> 246
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 246
gcuuuauucu cccauugaaa acatc 25

<210> 247
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 247
cuuuauucuc ccauugaaaa caucc 25

<210> 248
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 248
uuuauucucc cauugaaaac aucca 25

<210> 249
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 249
guccucugug aacuugcuca ggaca 25

<210> 250
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 250
uccucuguga acuugcucag gacaa 25

<210> 251
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 251
ccucugugaa cuugcucagg acaag 25

<210> 252
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 252
cucugugaac uugcucagga caagg 25

<210> 253
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 253
ucugugaacu ugcucaggac aagga 25

<210> 254
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 254
cugugaacuu gcucaggaca aggaa 25

<210> 255
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 255
ugugaacuug cucaggacaa ggaag 25

<210> 256
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 256
gugaacuugc ucaggacaag gaagc 25

<210> 257
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic

oligonucleotide

<400> 257
ugaacuugcu caggacaagg aagct 25

<210> 258
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 258
gaacuugcuc aggacaagga agctg 25

<210> 259
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 259
aacuugcuca ggacaaggaa gcugc 25

<210> 260
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 260
auugaagcug agggagccac agctc 25

<210> 261
<211> 25
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 261
uugaagcuga gggagccaca gcucc 25

<210> 262
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 262
ugaagcugag ggagccacag cucct 25

<210> 263
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 263
uuccgaaugu cugaggacaa gccac 25

<210> 264
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 264
uccgaauguc ugaggacaag ccaca 25

<210> 265

<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 265
ccgaaugucu gaggacaagc cacaa 25

<210> 266
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 266
cgaaugucug aggacaagcc acaag 25

<210> 267
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 267
gaaugucuga ggacaagcca caaga 25

<210> 268
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 268
aaugucugag gacaagccac aagat 25

<210> 269
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 269
augucugagg acaagccaca agatt 25

<210> 270
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 270
ugucugagga caagccacaa gauta 25

<210> 271
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 271
acagagccaa uggcuuggaa ugaga 25

<210> 272
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 272
cagagccaau ggcuuggaau gagac 25

<210> 273
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 273
agagccaaug gcuuggaaug agact 25

<210> 274
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 274
gagccaaugg cuuggaauga gactg 25

<210> 275
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 275
agccaauggc uuggaaugag acugc 25

<210> 276
<211> 25
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 276
gccaauggcu uggaaugaga cugct 25

<210> 277
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 277
ccaauggcuu ggaaugagac ugctg 25

<210> 278
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 278
caauggcuug gaaugagacu gcuga 25

<210> 279
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 279
aauggcuugg aaugagacug cugat 25

<210> 280
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 280
auggcuugga augagacugc ugatc 25

<210> 281
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 281
uggcuuggaa ugagacugcu gauct 25

<210> 282
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 282
cuuggauauc gccaggauga uccta 25

<210> 283
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>

<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 283
uuggauaucg ccaggaugau ccuag 25

<210> 284
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 284
uggauaucgc caggaugauc cuagc 25

<210> 285
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 285
ggauaucgcc aggaugaucc uagct 25

<210> 286
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 286
gauaucgcca ggaugauccu agcta 25

<210> 287
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 287
cguucuuuuc acucuggugg auatg 25

<210> 288
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 288
guucuuuuca cucuggugga uaugg 25

<210> 289
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 289
uucuuuucac ucugguggau auggc 25

<210> 290
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 290
ucuuuucacu cugguggaua uggcc 25

<210> 291
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 291
cuuuucacuc ugguggauau ggcca 25

<210> 292
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 292
caugagaugg guggccacca ccctg 25

<210> 293
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 293
augagauggg uggccaccac ccugg 25

<210> 294
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 294
ugagaugggu ggccaccacc cuggt 25

<210> 295
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 295
gagaugggug gccaccaccc uggtg 25

<210> 296
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 296
agaugggugg ccaccacccu ggugc 25

<210> 297
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 297
gauggguggc caccacccug gugct 25

<210> 298
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 298
auggguggcc accacccugg ugctg 25

<210> 299
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 299
uggguggcca ccacccuggu gcuga 25

<210> 300
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 300
ggguggccac cacccuggug cugac 25

<210> 301
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 301
gguggccacc acccuggugc ugact 25

<210> 302
<211> 25

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 302
guggccacca cccuggugcu gacta 25

<210> 303
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 303
uggccaccac ccuggugcug acuat 25

<210> 304
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 304
ggccaccacc cuggugcuga cuatc 25

<210> 305
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 305

gccaccaccc uggugcugac uaucc 25

<210> 306
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 306
ccaccacccu ggugcugacu aucca 25

<210> 307
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 307
caccacccug gugcugacua uccag 25

<210> 308
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 308
accacccugg ugcugacuau ccagt 25

<210> 309
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 309
ccacccuggu gcugacuauc cagtt 25

<210> 310
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 310
cacccuggug cugacuaucc agutg 25

<210> 311
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 311
acccuggugc ugacuaucca guuga 25

<210> 312
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 312
cccuggugcu gacuauccag uugat 25

<210> 313
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 313
ccuggugcug acuauccagu ugatg 25

<210> 314
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 314
cuggugcuga cuauccaguu gaugg 25

<210> 315
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 315
uggugcugac uauccaguug auggg 25

<210> 316
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 316
ggugcugacu auccaguuga ugggc 25

<210> 317
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 317
gugcugacua uccaguugau gggct 25

<210> 318
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 318
ugcugacuau ccaguugaug ggctg 25

<210> 319
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 319
gcugacuauc caguugaugg gcugc 25

<210> 320
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic

oligonucleotide

<400> 320
cugacuaucc aguugauggg cugcc 25

<210> 321
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 321
ugacuaucca guugaugggc ugcca 25

<210> 322
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 322
gacuauccag uugaugggcu gccag 25

<210> 323
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 323
acuauccagu ugaugggcug ccaga 25

<210> 324
<211> 25
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 324
cuauccaguu gaugggcugc cagat 25

<210> 325
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 325
uauccaguug augggcugcc agatc 25

<210> 326
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 326
auccaguuga ugggcugcca gauct 25

<210> 327
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 327
gcccaggacc ucauggaugg gcugc 25

<210> 328

<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 328
cccaggaccu cauggauggg cugcc 25

<210> 329
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 329
ccaggaccuc auggaugggc ugcct 25

<210> 330
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 330
agcaaucagc uggccugguu ugata 25

<210> 331
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 331
gcaaucagcu ggccugguuu gauac 25

<210> 332
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 332
caaucagcug gccugguuug auact 25

<210> 333
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 333
aaucagcugg ccugguuuga uactg 25

<210> 334
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 334
aucagcuggc cugguuugau acuga 25

<210> 335
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 335
ucagcuggcc ugguuugaua cugac 25

<210> 336
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 336
cagcuggccu gguuugauac ugacc 25

<210> 337
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 337
agcuggccug guuugauacu gacct 25

<210> 338
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 338
gcuggccugg uuugauacug acctg 25

<210> 339
<211> 25
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 339
cuggccuggu uugauacuga ccugt 25

<210> 340
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 340
uggccugguu ugauacugac cugta 25

<210> 341
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 341
ggccugguuu gauacugacc uguaa 25

<210> 342
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 342
gccugguuug auacugaccu guaaa 25

<210> 343
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 343
ccugguuuga uacugaccug uaaat 25

<210> 344
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 344
cugguuugau acugaccugu aaatc 25

<210> 345
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 345
ugguuugaua cugaccugua aauca 25

<210> 346
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>

<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 346
gguuugauac ugaccuguaa aucat 25

<210> 347
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 347
guuugauacu gaccuguaaa ucatc 25

<210> 348
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 348
uuugauacug accuguaaau caucc 25

<210> 349
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 349
uugauacuga ccuguaaauc aucct 25

<210> 350
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 350
ugauacugac cuguaaauca ucctt 25

<210> 351
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 351
uuuugccaca gcuuuugcaa cuuaa 25

<210> 352
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 352
ugaguaacau uugcuguuuu aaaca 25

<210> 353
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 353
aacauuaaua gcagccuuuc ucuct 25

<210> 354
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 354
cauuaauagc agccuuucuc ucutt 25

<210> 355
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 355
uuaauagcag ccuuucucuc uuuat 25

<210> 356
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 356
aauagcagcc uuucucucuu uauac 25

<210> 357
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 357
gcauugugau uggccuguag agutg 25

<210> 358
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 358
auugugauug gccuguagag uugct 25

<210> 359
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 359
ugugauuggc cuguagaguu gcuga 25

<210> 360
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 360
ugauuggccu guagaguugc ugaga 25

<210> 361
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 361
auuggccugu agaguugcug agagg 25

<210> 362
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 362
uggccuguag aguugcugag agggc 25

<210> 363
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 363
gccuguagag uugcugagag ggctc 25

<210> 364
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 364
cuguagaguu gcugagaggg cucga 25

<210> 365
<211> 25

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 365
guagaguugc ugagagggcu cgagg 25

<210> 366
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 366
gugggcuggu aucucagaaa gugcc 25

<210> 367
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 367
gggcugguau cucagaaagu gcctg 25

<210> 368
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 368

gcugguaucu cagaaagugc cugac 25

<210> 369
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 369
ugguaucuca gaaagugccu gacac 25

<210> 370
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 370
acuaaccaag cugaguuucc uaugg 25

<210> 371
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 371
uaaccaagcu gaguuuccua uggga 25

<210> 372
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 372
accaagcuga guuuccuaug ggaac 25

<210> 373
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 373
caagcugagu uuccuauggg aacaa 25

<210> 374
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 374
agcugaguuu ccuaugggaa caatt 25

<210> 375
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 375
cugaguuucc uaugggaaca auuga 25

<210> 376
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 376
cuuuuuguuc ugguccuuuu uggtc 25

<210> 377
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 377
uuuuguucug guccuuuuug gucga 25

<210> 378
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 378
uuguucuggu ccuuuuuggu cgagg 25

<210> 379
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 379
guucuggucc uuuuuggucg aggag 25

<210> 380
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 380
ucugguccuu uuuggucgag gagta 25

<210> 381
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 381
ugguccuuuu uggucgagga guaac 25

<210> 382
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 382
guccuuuuug gucgaggagu aacaa 25

<210> 383
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic

oligonucleotide

<400> 383
ccuuuuuggu cgaggaguaa caata 25

<210> 384
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 384
uuuuuggucg aggaguaaca auaca 25

<210> 385
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 385
uuuggucgag gaguaacaau acaaa 25

<210> 386
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 386
uggucgagga guaacaauac aaatg 25

<210> 387
<211> 25
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 387
gucgaggagu aacaauacaa augga 25

<210> 388
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 388
cgaggaguaa caauacaaau ggatt 25

<210> 389
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 389
aggaguaaca auacaaaugg auutt 25

<210> 390
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 390
gaguaacaau acaaauggau uuugg 25

<210> 391

<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 391
uaucaaaccc uagccuugcu uguta 25

<210> 392
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 392
ucaaacccua gccuugcuug uuaaa 25

<210> 393
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 393
aaacccuagc cuugcuuguu aaatt 25

<210> 394
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 394
gaguaauggu guagaacacu aautc 25

<210> 395
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 395
guaauggugu agaacacuaa uucat 25

<210> 396
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 396
aaugguguag aacacuaauu cauaa 25

<210> 397
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 397
ugguguagaa cacuaauuca uaatc 25

<210> 398
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 398
guguagaaca cuaauucaua aucac 25

<210> 399
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 399
guagaacacu aauucauaau cactc 25

<210> 400
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 400
agaacacuaa uucauaauca cucta 25

<210> 401
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 401
aacacuaauu cauaaucacu cuaat 25

<210> 402
<211> 25
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 402
uuaguuuccu uuuuaauaug cuuaa 25

<210> 403
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 403
aguuuccuuu uuaauaugcu uaaaa 25

<210> 404
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 404
uuuccuuuuu aauaugcuua aaata 25

<210> 405
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 405
uccuuuuuaa uaugcuuaaa auaag 25

<210> 406
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 406
cuuuuuaaua ugcuuaaaau aagca 25

<210> 407
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 407
uuuuuaauau gcuuaaaaua agcag 25

<210> 408
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 408
uuuuaauaug cuuaaaauaa gcagg 25

<210> 409
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>

<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 409
uuaauaugcu uaaaauaagc aggtg 25

<210> 410
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 410
aauaugcuua aaauaagcag gugga 25

<210> 411
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 411
uaugcuuaaa auaagcaggu ggatc 25

<210> 412
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 412
ugcuuaaaau aagcaggugg aucta 25

<210> 413
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 413
cuuaaaauaa gcagguggau cuatt 25

<210> 414
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 414
uaaaauaagc agguggaucu auutc 25

<210> 415
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 415
aaauaagcag guggaucuau uucat 25

<210> 416
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 416
auaagcaggu ggaucuauuu caugt 25

<210> 417
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 417
aagcaggugg aucuauuuca ugutt 25

<210> 418
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 418
gcagguggau cuauuucaug uuutt 25

<210> 419
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 419
agguggaucu auuucauguu uuuga 25

<210> 420
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 420
guggaucuau uucauguuuu ugatc 25

<210> 421
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 421
ggaucuauuu cauguuuuug aucaa 25

<210> 422
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 422
aucuauuuca uguuuuugau caaaa 25

<210> 423
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 423
guaggguaaa ucaguaagag gugtt 25

<210> 424
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 424
aggguaaauc aguaagaggu guuat 25

<210> 425
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 425
gguaaaucag uaagaggugu uautt 25

<210> 426
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 426
uaaaucagua agagguguua uuugg 25

<210> 427
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 427
aaucaguaag agguguuauu uggaa 25

<210> 428
<211> 25

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 428
ucaguaagag guguuauuug gaacc 25

<210> 429
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 429
uaccaguugc cuuuuauccc aaagt 25

<210> 430
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 430
ccaguugccu uuuaucccaa agutg 25

<210> 431
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 431

aguugccuuu uaucccaaag uugtt 25

<210> 432
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 432
uugccuuuua ucccaaaguu guugt 25

<210> 433
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 433
gccuuuuauc ccaaaguugu uguaa 25

<210> 434
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 434
cuuuuauccc aaaguuguug uaacc 25

<210> 435
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 435
uuuaucccaa aguuguugua acctg 25

<210> 436
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 436
uaucccaaag uuguuguaac cugct 25

<210> 437
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 437
ucccaaaguu guuguaaccu gcugt 25

<210> 438
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 438
ccaaaguugu uguaaccugc uguga 25

<210> 439
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 439
aaaguuguug uaaccugcug ugata 25

<210> 440
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 440
aguuguugua accugcugug auacg 25

<210> 441
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 441
uuguuguaac cugcugugau acgat 25

<210> 442
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 442
guuguaaccu gcugugauac gaugc 25

<210> 443
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 443
aaaugguuca gaauuaaacu uuuaa 25

<210> 444
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 444
augguucaga auuaaacuuu uaatt 25

<210> 445
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 445
gguucagaau uaaacuuuua auuca 25

<210> 446
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic

oligonucleotide

<400> 446
uucagaauua aacuuuuaau ucatt 25

<210> 447
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 447
cagaauuaaa cuuuuaauuc auucg 25

<210> 448
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 448
gcagcagucu uacuuggauu cugga 25

<210> 449
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 449
acuuggauuc uggaauccau ucugg 25

<210> 450
<211> 25
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 450
gacaccuccc aaguccuuua ugaat 25

<210> 451
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 451
cgcaagagca aguagcugau auuga 25

<210> 452
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 452
ccauguuccc ugagacgcua gauga 25

<210> 453
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 453
ugaaacaugc aguugucaau uugat 25

<210> 454

<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 454
caugcaguug ucaauuugau uaact 25

<210> 455
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 455
guugucaauu ugauuaacua ucagg 25

<210> 456
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 456
gaggaccagg ugguaguuaa uaaag 25

<210> 457
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 457
ggucaccagu ggauucugua cugtt 25

<210> 458
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 458
caguggauuc uguacuguuc uacgc 25

<210> 459
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 459
gauucuguac uguucuacgc cauca 25

<210> 460
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 460
guggacugca gaaaaugguu gcutt 25

<210> 461
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 461
cgugaaauuc uuggcuauua caaca 25

<210> 462
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 462
caagucagcg acuuguucaa aactg 25

<210> 463
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 463
gacuuguuca aaacugucuu uggac 25

<210> 464
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 464
aaacugucuu uggacucuca gaaac 25

<210> 465
<211> 25
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 465
cucuaaccuc acuugcaaua auuac 25

<210> 466
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 466
cucacuugca auaauuacaa aaaca 25

<210> 467
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 467
gaaugccguu cgccuucauu augga 25

<210> 468
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 468
gccuucauua uggacugccu guugt 25

<210> 469
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 469
cauuauggac ugccuguugu gguta 25

<210> 470
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 470
gacugccugu ugugguuaaa cucct 25

<210> 471
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 471
aacuguugga uugauucgaa acctt 25

<210> 472
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>

<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 472
gaggacucaa uaccauucca uugtt 25

<210> 473
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 473
gaggacaagc cacaggauua caaga 25

<210> 474
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 474
auggacccua ugauggagca ugaga 25

<210> 475
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 475
gauacugacc uguaaaucgu ccutt 25

<210> 476
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 476
ccaguguggg ugaauacuuu acuct 25

<210> 477
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 477
ccacagcuuu ugcagcguua uactc 25

<210> 478
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 478
uuuugcagcg uuauacucag augag 25

<210> 479
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 479
gcguuauacu cagaugagua acatt 25

<210> 480
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 480
auuugcuguu uucaacauua auagc 25

<210> 481
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 481
cuguaguguc ugaacgugca uugtg 25

<210> 482
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 482
gaacagucga aguacgcuuu uugtt 25

<210> 483
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 483
gucgaaguac gcuuuuuguu cuggt 25

<210> 484
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 484
guacgcuuuu uguucugguc cuutt 25

<210> 485
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 485
ccuagccuug cuuguucuuu guutt 25

<210> 486
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 486
ccuugcuugu ucuuuguuuu aauat 25

<210> 487
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 487
aaccugcuac agcaauuucu gautt 25

<210> 488
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 488
cagcaauuuc ugauuucuaa gaacc 25

<210> 489
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 489
guaagaggug uuauuugagc cuugt 25

<210> 490
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 490
gguguuauuu gagccuuguu uugga 25

<210> 491
<211> 25

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 491
uauuugagcc uuguuuugga cagta 25

<210> 492
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 492
gagccuuguu uuggacagua uacca 25

<210> 493
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 493
caacagaugc gguuauagaa auggt 25

<210> 494
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 494

guuauagaaa ugguucagaa uuaaa 25

<210> 495
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 495
agaaaugguu cagaauuaaa cuutt 25

<210> 496
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 496
uguaugguau acuucaaaua ccctc 25

<210> 497
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 497
aaacaguugu augguauacu ucaaa 25

<210> 498
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 498
aaaacaguug uaugguauac uucaa 25

<210> 499
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 499
ucaaaacagu uguaugguau acutc 25

<210> 500
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 500
uucaaaacag uuguauggua uactt 25

<210> 501
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 501
uuucaaaaca guuguauggu auact 25

<210> 502
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 502
guccacgcug gauuuucaaa acagt 25

<210> 503
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 503
uguccacgcu ggauuuucaa aacag 25

<210> 504
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 504
aucaaaucag cuugaguagc cautg 25

<210> 505
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 505
uccaacucca ucaaaucagc uugag 25

<210> 506
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 506
uccucaggau ugccuuuacc acuca 25

<210> 507
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 507
uuccucagga uugccuuuac cactc 25

<210> 508
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 508
ucaauaucag cuacuuguuc uugag 25

<210> 509
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic

oligonucleotide

<400> 509
aucaauauca gcuacuuguu cuuga 25

<210> 510
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 510
uguccaucaa uaucagcuac uugtt 25

<210> 511
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 511
ugcauacugu ccaucaauau cagct 25

<210> 512
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 512
agucauugca uacuguccau caata 25

<210> 513
<211> 25
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 513
ucaucuaaug ucucagggaa cauag 25

<210> 514
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 514
acaacugcau guuucagcau cugtg 25

<210> 515
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 515
uuacaacugc auguuucagc auctg 25

<210> 516
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 516
uuaaucaagu uuacaacugc augtt 25

<210> 517

<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 517
ugauaguuaa ucaaguuuac aactg 25

<210> 518
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 518
gcaucaucuu gauaguuaau caagt 25

<210> 519
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 519
ugcaucaucu ugauaguuaa ucaag 25

<210> 520
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 520
gguccucguc auuuagcagu uuugt 25

<210> 521
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 521
uaacugcagc cuuauuaacc accac 25

<210> 522
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 522
auaacugcag ccuuauuaac cacca 25

<210> 523
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 523
accauaacug cagccuuauu aacca 25

<210> 524
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 524
uuuuuagaaa gcugauggac cauaa 25

<210> 525
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 525
gguacguaca auagcagaca ccatc 25

<210> 526
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 526
ucauuuguau ucugcauggu acgta 25

<210> 527
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 527
guuucuacau cauuuguauu cugca 25

<210> 528
<211> 25
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 528
uguuucuaca ucauuuguau ucugc 25

<210> 529
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 529
acaacgagcu guuucuacau cautt 25

<210> 530
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 530
guacaacgag cuguuucuac aucat 25

<210> 531
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 531
gguacaacga gcuguuucua cauca 25

<210> 532
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 532
auaaaacaac acagaaucca cuggt 25

<210> 533
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 533
gcauaaaaca acacagaauc cactg 25

<210> 534
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 534
ggcauaaaac aacacagaau ccact 25

<210> 535
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>

<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 535
gcuccuucuu gauguaauaa aaggt 25

<210> 536
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 536
agcuccuucu ugauguaaua aaagg 25

<210> 537
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 537
uaacauuugu uuuguugagc aaggc 25

<210> 538
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 538
gccaagaauu uaacauuugu uuugt 25

<210> 539
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 539
uaauagccaa gaauuuaaca uuugt 25

<210> 540
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 540
guaauagcca agaauuuaac auutg 25

<210> 541
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 541
agcuaaaauu ugaaggcagu cugtc 25

<210> 542
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 542
gguccucauu auauuuacua aagct 25

<210> 543
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 543
guauaggucc ucauuauauu uacta 25

<210> 544
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 544
aguauagguc cucauuauau uuact 25

<210> 545
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 545
uuuucguaag uauagguccu cauta 25

<210> 546
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 546
uuuuucguaa guauaggucc ucatt 25

<210> 547
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 547
guuuuucgua aguauagguc cucat 25

<210> 548
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 548
aguuuuucgu aaguauaggu ccuca 25

<210> 549
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 549
gguccacagu aguuuuucgu aagta 25

<210> 550
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 550
uacaauagcc ggcuuauuac uagag 25

<210> 551
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 551
ucuacaauag ccggcuuauu acuag 25

<210> 552
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 552
uccuaaagcu ugcauuccac cagct 25

<210> 553
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 553
guccuaaagc uugcauucca ccagc 25

<210> 554
<211> 25

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 554
aguccuaaag cuugcauucc accag 25

<210> 555
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 555
guucugaaca agacguugac uugga 25

<210> 556
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 556
aguucugaac aagacguuga cuugg 25

<210> 557
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 557

guccaaagac aguucugaac aagac 25

<210> 558
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 558
uuccuguuua guugcagcau cugaa 25

<210> 559
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 559
acauuuauau caucugaacc cagaa 25

<210> 560
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 560
accacauuua uaucaucuga accca 25

<210> 561
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 561
gcacagguga ccacauuuau aucat 25

<210> 562
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 562
ugcacaggug accacauuua uauca 25

<210> 563
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 563
ugcaagugag guuagaaaga auucc 25

<210> 564
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 564
auaauuauug caagugaggu uagaa 25

<210> 565
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 565
ucaucuuguu cuuauaauua uugca 25

<210> 566
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 566
aucaucuugu ucuuauaauu auugc 25

<210> 567
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 567
accaucaucu uguucuuaua auuat 25

<210> 568
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 568
agaccaucau cuuguucuua uaatt 25

<210> 569
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 569
aauccaacag uagccuuuau cagag 25

<210> 570
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 570
gaaucaaucc aacaguagcc uuuat 25

<210> 571
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 571
uccacaaauu gcugcugugu cccac 25

<210> 572
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic

oligonucleotide

<400> 572
acaaccuuca acuauuucuu ccatg 25

<210> 573
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 573
uacaaccuuc aacuauuucu uccat 25

<210> 574
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 574
guacaaccuu caacuauuuc uucca 25

<210> 575
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 575
gguacaaccu ucaacuauuu cuucc 25

<210> 576
<211> 25
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 576
gcuccgguac aaccuucaac uautt 25

<210> 577
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 577
acaauucggu ugugaacauc ccgag 25

<210> 578
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 578
aacaauucgg uugugaacau cccga 25

<210> 579
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 579
uaacaauucg guugugaaca ucccg 25

<210> 580

<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 580
auaacaauuc gguugugaac auccc 25

<210> 581
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 581
gauaacaauu cgguugugaa caucc 25

<210> 582
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 582
ugauaacaau ucgguuguga acatc 25

<210> 583
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 583
auuuaguccu cugauaacaa uucgg 25

<210> 584
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 584
uauuuagucc ucugauaaca auucg 25

<210> 585
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 585
guauuuaguc cucugauaac aautc 25

<210> 586
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 586
gguauuuagu ccucugauaa caatt 25

<210> 587
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 587
acaauggaau gguauuuagu ccuct 25

<210> 588
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 588
acaaacaaug gaaugguauu uagtc 25

<210> 589
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 589
gcacaaacaa uggaauggua uuuag 25

<210> 590
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 590
ugcacaaaca auggaauggu auuta 25

<210> 591
<211> 25
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 591
gcuacucuuu ggauguuuuc aaugg 25

<210> 592
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 592
agcuacucuu uggauguuuu caatg 25

<210> 593
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 593
gcuucaauag cuucugcagc uucct 25

<210> 594
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 594
ucccucagcu ucaauagcuu cugca 25

<210> 595
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 595
gcucccucag cuucaauagc uuctg 25

<210> 596
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 596
auuccuagag ugaaguaacu cugtc 25

<210> 597
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 597
ucauuccuag agugaaguaa cuctg 25

<210> 598
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>

<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 598
uucauuccua gagugaagua acuct 25

<210> 599
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 599
uccucagaca uucggaacaa aacag 25

<210> 600
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 600
uguccucaga cauucggaac aaaac 25

<210> 601
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 601
guuucuugua aucuuguggc uugtc 25

<210> 602
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 602
ugaaagccgu uucuuguaau cuugt 25

<210> 603
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 603
gcucaacuga aagccguuuc uugta 25

<210> 604
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 604
aguccaagau cagcagucuc auucc 25

<210> 605
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 605
accaauauca aguccaagau cagca 25

<210> 606
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 606
agaacgauag cuaggaucau ccugg 25

<210> 607
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 607
uauccaccag agugaaaaga acgat 25

<210> 608
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 608
auuuacaggu caguaucaaa ccagg 25

<210> 609
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 609
gauuuacagg ucaguaucaa accag 25

<210> 610
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 610
ugauuuacag gucaguauca aacca 25

<210> 611
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 611
ucuuaccuaa aggaugauuu acagg 25

<210> 612
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 612
uucuuaccua aaggaugauu uacag 25

<210> 613
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 613
acuucuuacc uaaaggauga uuuac 25

<210> 614
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 614
uuuuuaaaac uucuuaccua aagga 25

<210> 615
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 615
gcuuuuuaaa acuucuuacc uaaag 25

<210> 616
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 616
aaacuggcuu uuuaaaacuu cuuac 25

<210> 617
<211> 25

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 617
acccaaacug gcuuuuuaaa acutc 25

<210> 618
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 618
uacccaaacu ggcuuuuuaa aactt 25

<210> 619
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 619
uuacccaaac uggcuuuuua aaact 25

<210> 620
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 620

uuuacccaaa cuggcuuuuu aaaac 25

<210> 621
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 621
aaccaagucu uucugaaguu cugta 25

<210> 622
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 622
acccuaccaa ccaagucuuu cugaa 25

<210> 623
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 623
uuacaaauag ccuaaaccac uccca 25

<210> 624
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 624
uuuacaaaua gccuaaacca cuccc 25

<210> 625
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 625
auuuacaaau agccuaaacc acucc 25

<210> 626
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 626
gauuuacaaa uagccuaaac cactc 25

<210> 627
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 627
uuuuuguggc agauuuacaa auagc 25

<210> 628
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 628
guuuuugugg cagauuuaca aauag 25

<210> 629
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 629
uguuuuugug gcagauuuac aaata 25

<210> 630
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 630
auaccuguuu uuguggcaga uuuac 25

<210> 631
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 631
uucaaaguau auaccuguuu uugtg 25

<210> 632
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 632
ucuccuuuca aaguauauac cugtt 25

<210> 633
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 633
aucuccuuuc aaaguauaua ccugt 25

<210> 634
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 634
acaucuccuu ucaaaguaua uacct 25

<210> 635
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic

oligonucleotide

<400> 635
gacaucuccu uucaaaguau auacc 25

<210> 636
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 636
agacaucucc uuucaaagua uauac 25

<210> 637
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 637
uuccaagaca ucuccuuuca aagta 25

<210> 638
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 638
uuccaauguu ccaagacauc ucctt 25

<210> 639
<211> 25
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 639
auuccaaugu uccaagacau cucct 25

<210> 640
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 640
acauuccaau guuccaagac auctc 25

<210> 641
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 641
agaaaucuga gaacauucca augtt 25

<210> 642
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 642
aaccagaaau cugagaacau uccaa 25

<210> 643

<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 643
acaaccagaa aucugagaac auucc 25

<210> 644
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 644
aacaaccaga aaucugagaa cautc 25

<210> 645
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 645
uaacaaccag aaaucugaga acatt 25

<210> 646
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 646
aucacauaac aaccagaaau cugag 25

<210> 647
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 647
gaucacauaa caaccagaaa ucuga 25

<210> 648
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 648
acacaugauc acauaacaac cagaa 25

<210> 649
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 649
uccacacaug aucacauaac aacca 25

<210> 650
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 650
uaacuuccac acaugaucac auaac 25

<210> 651
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 651
auaacuucca cacaugauca cauaa 25

<210> 652
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 652
aauaacuucc acacaugauc acata 25

<210> 653
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 653
uaauaacuuc cacacaugau cacat 25

<210> 654
<211> 25
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 654
uuaaaguuaa uaacuuccac acatg 25

<210> 655
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 655
auuaaaguua auaacuucca cacat 25

<210> 656
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 656
acauuaaagu uaauaacuuc cacac 25

<210> 657
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 657
aacauuaaag uuaauaacuu ccaca 25

<210> 658
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 658
aaacauuaaa guuaauaacu uccac 25

<210> 659
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 659
aaaacauuaa aguuaauaac uucca 25

<210> 660
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 660
aaaaacauua aaguuaauaa cuucc 25

<210> 661
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>

<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 661
aaaaaacauu aaaguuaaua acutc 25

<210> 662
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 662
gcaaaaaaca uuaaaguuaa uaact 25

<210> 663
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 663
ggcaaaaaac auuaaaguua auaac 25

<210> 664
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 664
gcaaaagcug uggcaaaaaa cauta 25

<210> 665
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 665
ugcaaaagcu guggcaaaaa acatt 25

<210> 666
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 666
ucauuugagu auuaaguugc aaaag 25

<210> 667
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 667
aaaacagcaa auguuacuca uuuga 25

<210> 668
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 668
uaaaacagca aauguuacuc auutg 25

<210> 669
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 669
uuaaaacagc aaauguuacu cautt 25

<210> 670
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 670
uuuaaaacag caaauguuac ucatt 25

<210> 671
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 671
guuuaaaaca gcaaauguua cucat 25

<210> 672
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 672
uguuuaaaac agcaaauguu acuca 25

<210> 673
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 673
auuaauguuu aaaacagcaa augtt 25

<210> 674
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 674
agaaaggcug cuauuaaugu uuaaa 25

<210> 675
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 675
aguucagaca auacagcugu auaaa 25

<210> 676
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 676
acaaugcaag uucagacaau acagc 25

<210> 677
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 677
ucacaaugca aguucagaca auaca 25

<210> 678
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 678
aaucacaaug caaguucaga caata 25

<210> 679
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 679
ggccaaucac aaugcaaguu cagac 25

<210> 680
<211> 25

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 680
guucccauag gaaacucagc uuggt 25

<210> 681
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 681
ucaauuguuc ccauaggaaa cucag 25

<210> 682
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 682
uucaauuguu cccauaggaa acuca 25

<210> 683
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 683

guuuacuuca auuguuccca uagga 25

<210> 684
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 684
aguuuacuuc aauuguuccc auagg 25

<210> 685
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 685
aaaaaguuua cuucaauugu uccca 25

<210> 686
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 686
gaacaaaaag uuuacuucaa uugtt 25

<210> 687
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 687
gaccagaaca aaaaguuuac uucaa 25

<210> 688
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 688
ggaccagaac aaaaaguuua cuuca 25

<210> 689
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 689
accaaaaagg accagaacaa aaagt 25

<210> 690
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 690
gaccaaaaag gaccagaaca aaaag 25

<210> 691
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 691
acuccucgac caaaaaggac cagaa 25

<210> 692
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 692
uccauuugua uuguuacucc ucgac 25

<210> 693
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 693
auccauuugu auuguuacuc cucga 25

<210> 694
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 694
aauccauuug uauuguuacu ccucg 25

<210> 695
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 695
aaauccauuu guauuguuac ucctc 25

<210> 696
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 696
aaaauccauu uguauuguua cucct 25

<210> 697
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 697
acucccaaaa uccauuugua uugtt 25

<210> 698
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic

oligonucleotide

<400> 698
uucacuucuu gagucacucc caaaa 25

<210> 699
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 699
ucuucacuuc uugagucacu cccaa 25

<210> 700
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 700
uucuucacuu cuugagucac uccca 25

<210> 701
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 701
auucuucacu ucuugaguca cuccc 25

<210> 702
<211> 25
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 702
gcauucuuca cuucuugagu cactc 25

<210> 703
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 703
auucuugugc auucuucacu ucutg 25

<210> 704
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 704
uccauucuug ugcauucuuc acutc 25

<210> 705
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 705
auccauucuu gugcauucuu cactt 25

<210> 706

<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 706
gauccauucu ugugcauucu ucact 25

<210> 707
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 707
aauuccaucu ugugauccau ucutg 25

<210> 708
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 708
uaaauuccau cuugugaucc auuct 25

<210> 709
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 709
auaaauucca ucuugugauc cautc 25

<210> 710
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 710
gauaaauucc aucuugugau ccatt 25

<210> 711
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 711
ugauaaauuc caucuuguga uccat 25

<210> 712
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 712
ggcuaggguu ugauaaauuc cauct 25

<210> 713
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 713
aaaaauuuaa caagcaaggc uaggg 25

<210> 714
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 714
aaaaaaaaaa aaaauuuaac aagca 25

<210> 715
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 715
aaaaaaaaaa aaaaauuuaa caagc 25

<210> 716
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 716
aaaaaaaaaa aaaaaauuua acaag 25

<210> 717
<211> 25
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 717
aaaaaaaaaa aaaaaaauuu aacaa 25

<210> 718
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 718
aaaaaaaaaa aaaaaaaauu uaaca 25

<210> 719
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 719
aaaaaaaaaa aaaaaaaaau uuaac 25

<210> 720
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 720
uaaaaaaaaa aaaaaaaaaa uuuaa 25

<210> 721
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 721
uuaaaaaaaa aaaaaaaaaa auuta 25

<210> 722
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 722
ucuuaaaaaa aaaaaaaaaa aaatt 25

<210> 723
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 723
uucuuaaaaa aaaaaaaaaa aaaat 25

<210> 724
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>

<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 724
auucuuaaaa aaaaaaaaaa aaaaa 25

<210> 725
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 725
uauucuuaaa aaaaaaaaaa aaaaa 25

<210> 726
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 726
auauucuuaa aaaaaaaaaa aaaaa 25

<210> 727
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 727
gauauucuua aaaaaaaaaa aaaaa 25

<210> 728
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 728
agauauucuu aaaaaaaaaa aaaaa 25

<210> 729
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 729
uuacagauau ucuuaaaaaa aaaaa 25

<210> 730
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 730
auuacagaua uucuuaaaaa aaaaa 25

<210> 731
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 731
uaccauuaca gauauucuua aaaaa 25

<210> 732
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 732
guaccauuac agauauucuu aaaaa 25

<210> 733
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 733
aguaccauua cagauauucu uaaaa 25

<210> 734
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 734
agucaguacc auuacagaua uuctt 25

<210> 735
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 735
uacuucaaag caagcaaagu cagta 25

<210> 736
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 736
aaaaagagcu acuucaaagc aagca 25

<210> 737
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 737
aaaaaaaaaa gagcuacuuc aaagc 25

<210> 738
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 738
aaaaaaaaaa agagcuacuu caaag 25

<210> 739
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 739
aaaaaaaaaa aaagagcuac uucaa 25

<210> 740
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 740
aaaaaaaaaa aaaagagcua cuuca 25

<210> 741
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 741
aaaaaaaaaa aaaaagagcu acutc 25

<210> 742
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 742
aaaaaaaaaa aaaaaagagc uactt 25

<210> 743
<211> 25

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 743
aaaaaaaaaa aaaaaaaaaa aagag 25

<210> 744
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 744
aaaaaaaaaa aaaaaaaaaa aaaga 25

<210> 745
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 745
aaaaaaaaaa aaaaaaaaaa aaaag 25

<210> 746
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 746

aaaaaaaaaa aaaaaaaaaa aaaaa 25

<210> 747
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 747
gcaaaaaaaa aaaaaaaaaa aaaaa 25

<210> 748
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 748
ugcaaaaaaa aaaaaaaaaa aaaaa 25

<210> 749
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 749
uuacugcaaa aaaaaaaaaa aaaaa 25

<210> 750
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 750
guuacugcaa aaaaaaaaaa aaaaa 25

<210> 751
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 751
aguuacugca aaaaaaaaaa aaaaa 25

<210> 752
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 752
aaacaguuac ugcaaaaaaa aaaaa 25

<210> 753
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 753
aaaacaguua cugcaaaaaa aaaaa 25

<210> 754
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 754
aaaaacaguu acugcaaaaa aaaaa 25

<210> 755
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 755
uaaaaaacag uuacugcaaa aaaaa 25

<210> 756
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 756
uuaaaaaaca guuacugcaa aaaaa 25

<210> 757
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 757
acuuaaaaaa caguuacugc aaaaa 25

<210> 758
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 758
acuacgagag acuuaaaaaa cagtt 25

<210> 759
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 759
acacuacgag agacuuaaaa aacag 25

<210> 760
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 760
aacacuacga gagacuuaaa aaaca 25

<210> 761
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic

oligonucleotide

<400> 761
uuaacacuac gagagacuua aaaaa 25

<210> 762
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 762
aacuuaacac uacgagagac uuaaa 25

<210> 763
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 763
uaacuuaaca cuacgagaga cuuaa 25

<210> 764
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 764
auucacuaua acuuaacacu acgag 25

<210> 765
<211> 25
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 765
uauucacuau aacuuaacac uacga 25

<210> 766
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 766
guauucacua uaacuuaaca cuacg 25

<210> 767
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 767
aguauucacu auaacuuaac acuac 25

<210> 768
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 768
aaauugcugu agcaguauuc acuat 25

<210> 769

<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 769
gaaauugcug uagcaguauu cacta 25

<210> 770
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 770
agaaauugcu guagcaguau ucact 25

<210> 771
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 771
ucaauucuua aaaauuagaa auugc 25

<210> 772
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 772
auuacucaau ucuuaaaaau uagaa 25

<210> 773
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 773
accauuacuc aauucuuaaa aauta 25

<210> 774
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 774
acaccauuac ucaauucuua aaaat 25

<210> 775
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 775
uacaccauua cucaauucuu aaaaa 25

<210> 776
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 776
ucuacaccau uacucaauuc uuaaa 25

<210> 777
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 777
guucuacacc auuacucaau ucuta 25

<210> 778
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 778
gaauuagugu ucuacaccau uactc 25

<210> 779
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 779
auuaugaauu aguguucuac accat 25

<210> 780
<211> 25
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 780
gauuaugaau uaguguucua cacca 25

<210> 781
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 781
ugauuaugaa uuaguguucu acacc 25

<210> 782
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 782
uaauuagagu gauuaugaau uagtg 25

<210> 783
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 783
uuaauuagag ugauuaugaa uuagt 25

<210> 784
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 784
auuaauuaga gugauuauga auuag 25

<210> 785
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 785
uacaauuaau uagagugauu augaa 25

<210> 786
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 786
uuacaauuaa uuagagugau uauga 25

<210> 787
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>

<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 787
auuacaauua auuagaguga uuatg 25

<210> 788
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 788
uuauucagau uacaauuaau uagag 25

<210> 789
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 789
uuuauucaga uuacaauuaa uuaga 25

<210> 790
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 790
acacuuuauu cagauuacaa uuaat 25

<210> 791
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 791
uacacuuuau ucagauuaca auuaa 25

<210> 792
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 792
uuacacuuua uucagauuac aauta 25

<210> 793
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 793
guuacacuuu auucagauua caatt 25

<210> 794
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 794
uguuacacuu uauucagauu acaat 25

<210> 795
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 795
acacaauugu uacacuuuau ucaga 25

<210> 796
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 796
ggcuacacaa uuguuacacu uuatt 25

<210> 797
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 797
aaaaaggcua cacaauuguu acact 25

<210> 798
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 798
uuauacaaaa aggcuacaca auugt 25

<210> 799
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 799
uuuauacaaa aaggcuacac aautg 25

<210> 800
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 800
auuuuauaca aaaaggcuac acaat 25

<210> 801
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 801
uauuuuauac aaaaaggcua cacaa 25

<210> 802
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 802
ucuauuuuau acaaaaaggc uacac 25

<210> 803
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 803
uauuugucua uuuuauacaa aaagg 25

<210> 804
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 804
ucuauuuguc uauuuuauac aaaaa 25

<210> 805
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 805
uucuauuugu cuauuuuaua caaaa 25

<210> 806
<211> 25

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 806
uuucuauuug ucuauuuuau acaaa 25

<210> 807
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 807
uuuucuauuu gucuauuuua uacaa 25

<210> 808
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 808
auuuucuauu ugucuauuuu auaca 25

<210> 809
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 809

accauuuucu auuugucuau uuuat 25

<210> 810
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 810
gaccauuuuc uauuugucua uuuta 25

<210> 811
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 811
ggaccauuuu cuauuugucu auutt 25

<210> 812
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 812
acuaauugga ccauuuucua uuugt 25

<210> 813
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 813
aacuaauugg accauuuucu auutg 25

<210> 814
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 814
aaacuaauug gaccauuuuc uautt 25

<210> 815
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 815
gaaacuaauu ggaccauuuu cuatt 25

<210> 816
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 816
aaaaaggaaa cuaauuggac cautt 25

<210> 817
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 817
uaaaaaggaa acuaauugga ccatt 25

<210> 818
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 818
gcauauuaaa aaggaaacua auugg 25

<210> 819
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 819
agcauauuaa aaaggaaacu aautg 25

<210> 820
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 820
uuuaagcaua uuaaaaagga aacta 25

<210> 821
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 821
gcuuauuuua agcauauuaa aaagg 25

<210> 822
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 822
ugcuuauuuu aagcauauua aaaag 25

<210> 823
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 823
uccaccugcu uauuuuaagc auatt 25

<210> 824
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic

oligonucleotide

<400> 824
aaaacaugaa auagauccac cugct 25

<210> 825
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 825
aaaaacauga aauagaucca ccugc 25

<210> 826
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 826
ucaaaaacau gaaauagauc cacct 25

<210> 827
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 827
aucaaaaaca ugaaauagau ccacc 25

<210> 828
<211> 25
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 828
gaucaaaaac augaaauaga uccac 25

<210> 829
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 829
uuuuugauca aaaacaugaa auaga 25

<210> 830
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 830
aaauaguuuu ugaucaaaaa cauga 25

<210> 831
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 831
ucccaaauag uuuuugauca aaaac 25

<210> 832

<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 832
aucccaaaua guuuuugauc aaaaa 25

<210> 833
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 833
uaucccaaau aguuuuugau caaaa 25

<210> 834
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 834
auaucccaaa uaguuuuuga ucaaa 25

<210> 835
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 835
auacauaucc caaauaguuu uugat 25

<210> 836
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 836
acccuaccca uacauauccc aaata 25

<210> 837
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 837
uacccuaccc auacauaucc caaat 25

<210> 838
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 838
uuacccuacc cauacauauc ccaaa 25

<210> 839
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 839
accucuuacu gauuuacccu accca 25

<210> 840
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 840
acaccucuua cugauuuacc cuacc 25

<210> 841
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 841
aacaccucuu acugauuuac ccuac 25

<210> 842
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 842
uaacaccucu uacugauuua cccta 25

<210> 843
<211> 25
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 843
auaacaccuc uuacugauuu accct 25

<210> 844
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 844
aauaacaccu cuuacugauu uaccc 25

<210> 845
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 845
guuccaaaua acaccucuua cugat 25

<210> 846
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 846
aacaagguuc caaauaacac cuctt 25

<210> 847
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 847
aaacaagguu ccaaauaaca ccuct 25

<210> 848
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 848
aaaacaaggu uccaaauaac acctc 25

<210> 849
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 849
uguccaaaac aagguuccaa auaac 25

<210> 850
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>

<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 850
aaacugucca aaacaagguu ccaaa 25

<210> 851
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 851
uaaacugucc aaaacaaggu uccaa 25

<210> 852
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 852
gcaacuggua aacuguccaa aacaa 25

<210> 853
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 853
gauaaaaggc aacugguaaa cugtc 25

<210> 854
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 854
ggauaaaagg caacugguaa acugt 25

<210> 855
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 855
aacuuuggga uaaaaggcaa cuggt 25

<210> 856
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 856
acaacuuugg gauaaaaggc aactg 25

<210> 857
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 857
uuacaacaac uuugggauaa aaggc 25

<210> 858
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 858
guuacaacaa cuuugggaua aaagg 25

<210> 859
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 859
gguuacaaca acuuugggau aaaag 25

<210> 860
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 860
ucacagcagg uuacaacaac uuugg 25

<210> 861
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 861
aucacagcag guuacaacaa cuutg 25

<210> 862
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 862
guaucacagc agguuacaac aactt 25

<210> 863
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 863
ucucuugaag caucguauca cagca 25

<210> 864
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 864
uucucuugaa gcaucguauc acagc 25

<210> 865
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 865
uuuucucuug aagcaucgua ucaca 25

<210> 866
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 866
uuuuauaacc gcauuuucuc uugaa 25

<210> 867
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 867
uuuuuauaac cgcauuuucu cuuga 25

<210> 868
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 868
uuuuuuauaa ccgcauuuuc ucutg 25

<210> 869
<211> 25

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 869
auuuuuuaua accgcauuuu cuctt 25

<210> 870
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 870
gaaccauuuu uuauaaccgc auutt 25

<210> 871
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 871
auucugaacc auuuuuuaua accgc 25

<210> 872
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 872

aauucugaac cauuuuuuau aaccg 25

<210> 873
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 873
uaauucugaa ccauuuuuua uaacc 25

<210> 874
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 874
uuaauucuga accauuuuuu auaac 25

<210> 875
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 875
uuuaauucug aaccauuuuu uauaa 25

<210> 876
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 876
guuuaauucu gaaccauuuu uuata 25

<210> 877
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 877
uaaaaguuua auucugaacc auutt 25

<210> 878
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 878
uuaaaaguuu aauucugaac cautt 25

<210> 879
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 879
aauuaaaagu uuaauucuga accat 25

<210> 880
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 880
auacagcuaa aggaugauuu acagg 25

<210> 881
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 881
aauacagcua aaggaugauu uacag 25

<210> 882
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 882
acaauacagc uaaaggauga uuuac 25

<210> 883
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 883
uacuccuaaa ggaugauuua caggt 25

<210> 884
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 884
uuacuccuaa aggaugauuu acagg 25

<210> 885
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 885
guuacuccua aaggaugauu uacag 25

<210> 886
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 886
uguuacuccu aaaggaugau uuaca 25

<210> 887
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic

oligonucleotide

<400> 887
auuccagaau ccaaguaaga cugct 25

<210> 888
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 888
ugcucccauu cauaaaggac uuggg 25

<210> 889
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 889
ucaauaucag cuacuugcuc uugcg 25

<210> 890
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 890
gucaauauca gcuacuugcu cuugc 25

<210> 891
<211> 25
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 891
ugcccgucaa uaucagcuac uugct 25

<210> 892
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 892
uuucaacauc ugugaugguu cagcc 25

<210> 893
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 893
guuucaacau cugugauggu ucagc 25

<210> 894
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 894
acaacugcau guuucaacau cugtg 25

<210> 895

<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 895
ugacaacugc auguuucaac auctg 25

<210> 896
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 896
aaauugacaa cugcauguuu caaca 25

<210> 897
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 897
uuaaucaaau ugacaacugc augtt 25

<210> 898
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 898
ugauaguuaa ucaaauugac aactg 25

<210> 899
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 899
ucauccugau aguuaaucaa auuga 25

<210> 900
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 900
gucauccuga uaguuaauca aautg 25

<210> 901
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 901
ucaucguuua gcaguuuugu cagct 25

<210> 902
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 902
gguccucauc guuuagcagu uuugt 25

<210> 903
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 903
uaacagcagc uuuauuaacu accac 25

<210> 904
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 904
auaacagcag cuuuauuaac uacca 25

<210> 905
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 905
accauaacag cagcuuuauu aacta 25

<210> 906
<211> 25
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 906
gaccauaaca gcagcuuuau uaact 25

<210> 907
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 907
gucucuacau cauuuguauu cugca 25

<210> 908
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 908
ugucucuaca ucauuuguau ucugc 25

<210> 909
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 909
aaccauuuuc ugcaguccac cagct 25

<210> 910
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 910
gcaaccauuu ucugcagucc accag 25

<210> 911
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 911
guuuuguuga gcaaagcaac cautt 25

<210> 912
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 912
uguuuuguug agcaaagcaa ccatt 25

<210> 913
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>

<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 913
gccaagaauu ucacguuugu uuugt 25

<210> 914
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 914
ugauugccau aagcuaagau cugaa 25

<210> 915
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 915
ucucuugauu gccauaagcu aagat 25

<210> 916
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 916
ucucauaagu guagguccuc auuat 25

<210> 917
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 917
uucucauaag uguagguccu cauta 25

<210> 918
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 918
gcuucucaua aguguagguc cucat 25

<210> 919
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 919
agcuucucau aaguguaggu ccuca 25

<210> 920
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 920
guccaaagac aguuuugaac aagtc 25

<210> 921
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 921
aguccaaaga caguuuugaa caagt 25

<210> 922
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 922
acauuuauau caucggaacc cagaa 25

<210> 923
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 923
accacauuua uaucaucgga accca 25

<210> 924
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 924
gcacagguga ccacauuuau aucat 25

<210> 925
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 925
ugcacaggug accacauuua uauca 25

<210> 926
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 926
guaauuauug caagugaggu uagag 25

<210> 927
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 927
ucaucuuguu uuuguaauua uugca 25

<210> 928
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 928
aucaucuugu uuuuguaauu auugc 25

<210> 929
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 929
accaucaucu uguuuuugua auuat 25

<210> 930
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 930
ggcacaccau caucuuguuu uugta 25

<210> 931
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 931
aauccaacag uugccuuuau cagag 25

<210> 932
<211> 25

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 932
gaaucaaucc aacaguugcc uuuat 25

<210> 933
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 933
ugaacuaguc guggaauagc accct 25

<210> 934
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 934
uacacccuuc uacuaucucc uccat 25

<210> 935
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 935

guacacccuu cuacuaucuc cucca 25

<210> 936
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 936
aguacacccu ucuacuaucu ccucc 25

<210> 937
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 937
gcuccaguac acccuucuac uauct 25

<210> 938
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 938
acaauggaau gguauugagu ccucg 25

<210> 939
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 939
gcacaaacaa uggaauggua uugag 25

<210> 940
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 940
ugcacaaaca auggaauggu auuga 25

<210> 941
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 941
gcaacugcac aaacaaugga auggt 25

<210> 942
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 942
gaauaaagca acugcacaaa caatg 25

<210> 943
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 943
ucaaugggag aauaaagcaa cugca 25

<210> 944
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 944
uucaauggga gaauaaagca acugc 25

<210> 945
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 945
uuucaauggg agaauaaagc aactg 25

<210> 946
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 946
auauuuucaa ugggagaaua aagca 25

<210> 947
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 947
gauauuuuca augggagaau aaagc 25

<210> 948
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 948
ggauauuuuc aaugggagaa uaaag 25

<210> 949
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 949
gcuacucuuu ggauauuuuc aaugg 25

<210> 950
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic

oligonucleotide

<400> 950
agcuacucuu uggauauuuu caatg 25

<210> 951
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 951
gcuucuugua auccuguggc uugtc 25

<210> 952
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 952
aguccaagau cugcagucuc auucc 25

<210> 953
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 953
uauccaccag agugaaaaga acggt 25

<210> 954
<211> 25
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 954
ggccagcuga uugcuaucac cuggg 25

<210> 955
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 955
auuuacaggu caguaucaaa ccagg 25

<210> 956
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 956
gauuuacagg ucaguaucaa accag 25

<210> 957
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 957
ucuuaccuaa aggacgauuu acagg 25

<210> 958

<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 958
uuucuuaccu aaaggacgau uuaca 25

<210> 959
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 959
uuuauaagcu uucuuaccua aagga 25

<210> 960
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 960
uuuuauaagc uuucuuaccu aaagg 25

<210> 961
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 961
ggcuuuuaua agcuuucuua ccuaa 25

<210> 962
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 962
acacuggcuu uuauaagcuu ucuta 25

<210> 963
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 963
ucacccacac uggcuuuuau aagct 25

<210> 964
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 964
uaccaagucu uucuggaguu cugca 25

<210> 965
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 965
uuacaaacag gccuaaaacc auucc 25

<210> 966
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 966
uuuacaaaca ggccuaaaac cautc 25

<210> 967
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 967
auuuacaaac aggccuaaaa ccatt 25

<210> 968
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 968
ucuccuucca agguauguau cugtt 25

<210> 969
<211> 25
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 969
aucuccuucc aagguaugua ucugt 25

<210> 970
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 970
uuccacacau gaacaucucc uucca 25

<210> 971
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 971
aacuuccaca caugaacauc ucctt 25

<210> 972
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 972
aaacuuccac acaugaacau cucct 25

<210> 973
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 973
gaaacuucca cacaugaaca ucucc 25

<210> 974
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 974
agaaacuucc acacaugaac auctc 25

<210> 975
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 975
ucaacgugag aaacuuccac acatg 25

<210> 976
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>

<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 976
acaucaacgu gagaaacuuc cacac 25

<210> 977
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 977
aacaucaacg ugagaaacuu ccaca 25

<210> 978
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 978
aaacaucaac gugagaaacu uccac 25

<210> 979
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 979
aaaacaucaa cgugagaaac uucca 25

<210> 980
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 980
aaaaacauca acgugagaaa cuucc 25

<210> 981
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 981
gcaaaaacau caacgugaga aactt 25

<210> 982
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 982
gcaaaagcug uggcaaaaac aucaa 25

<210> 983
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 983
ugcaaaagcu guggcaaaaa cauca 25

<210> 984
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 984
ucaucugagu auaacgcugc aaaag 25

<210> 985
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 985
aaaacagcaa auguuacuca ucuga 25

<210> 986
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 986
gaaaacagca aauguuacuc auctg 25

<210> 987
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 987
ugaaaacagc aaauguuacu cauct 25

<210> 988
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 988
auuaauguug aaaacagcaa augtt 25

<210> 989
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 989
acuacagcug uauagagaga aaggc 25

<210> 990
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 990
ggccaaucac aaugcacguu cagac 25

<210> 991
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 991
guucccauag gaaacucagc uuggt 25

<210> 992
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 992
gaacaaaaag cguacuucga cugtt 25

<210> 993
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 993
ggaccagaac aaaaagcgua cuucg 25

<210> 994
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 994
accaaaaagg accagaacaa aaagc 25

<210> 995
<211> 25

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 995
gaccaaaaag gaccagaaca aaaag 25

<210> 996
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 996
acuccucgac caaaaaggac cagaa 25

<210> 997
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 997
uccauuugua uuguuacucc ucgac 25

<210> 998
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 998

auccauuugu auuguuacuc cucga 25

<210> 999
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 999
aauccauuug uauuguuacu ccucg 25

<210> 1000
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 1000
aaauccauuu guauuguuac ucctc 25

<210> 1001
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 1001
acuccccaaa uccauuugua uugtt 25

<210> 1002
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1002
uccauucgug ugcauucuuc acugc 25

<210> 1003
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1003
auccauucgu gugcauucuu cactg 25

<210> 1004
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1004
gauccauucg ugugcauucu ucact 25

<210> 1005
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1005
aaacaaagaa caagcaaggc uaggg 25

<210> 1006
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1006
accacuacag auauuaaaac aaaga 25

<210> 1007
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1007
gcaccacuac agauauuaaa acaaa 25

<210> 1008
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1008
agcaccacua cagauauuaa aacaa 25

<210> 1009
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1009
aaaauaaaag caagcaaagu cagca 25

<210> 1010
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1010
gcaaaaaaua aaagcaagca aagtc 25

<210> 1011
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1011
uuacugcaaa aaauaaaagc aagca 25

<210> 1012
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1012
uaacaguuac ugcaaaaaau aaaag 25

<210> 1013
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic

oligonucleotide

<400> 1013
acuaacaguu acugcaaaaa auaaa 25

<210> 1014
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 1014
aaacuaacag uuacugcaaa aaata 25

<210> 1015
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 1015
aaaacuaaca guuacugcaa aaaat 25

<210> 1016
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 1016
uaaaaacuaa caguuacugc aaaaa 25

<210> 1017
<211> 25
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1017
uacuuaaaaa cuaacaguua cugca 25

<210> 1018
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1018
acuacuuaaa aacuaacagu uactg 25

<210> 1019
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1019
uaacacuacu uaaaaacuaa cagtt 25

<210> 1020
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1020
auaacacuac uuaaaaacua acagt 25

<210> 1021

<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1021
acauaacacu acuuaaaaac uaaca 25

<210> 1022
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1022
aacauaacac uacuuaaaaa cuaac 25

<210> 1023
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1023
gaacauaaca cuacuuaaaa acuaa 25

<210> 1024
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1024
agaacauaac acuacuuaaa aacta 25

<210> 1025
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 1025
ucacuagaac auaacacuac uuaaa 25

<210> 1026
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 1026
guucacuaga acauaacacu acuta 25

<210> 1027
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 1027
gguucacuag aacauaacac uactt 25

<210> 1028
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1028
auuacucggu ucuuagaaau cagaa 25

<210> 1029
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1029
accauuacuc gguucuuaga aauca 25

<210> 1030
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1030
ucuacaccau uacucgguuc uuaga 25

<210> 1031
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1031
gaauuagugu ucuacaccau uactc 25

<210> 1032
<211> 25
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1032
auuaugaauu aguguucuac accat 25

<210> 1033
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1033
gauuaugaau uaguguucua cacca 25

<210> 1034
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1034
ugauuaugaa uuaguguucu acacc 25

<210> 1035
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1035
acaauuagcg ugauuaugaa uuagt 25

<210> 1036
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1036
uacaauuagc gugauuauga auuag 25

<210> 1037
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1037
agauuacaau uagcgugauu augaa 25

<210> 1038
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1038
uacacgucuc cagauuacaa uuagc 25

<210> 1039
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>

<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1039
guuacacguc uccagauuac aauta 25

<210> 1040
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1040
uacacaaugu uacacgucuc cagat 25

<210> 1041
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1041
gcuacacaau guuacacguc uccag 25

<210> 1042
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1042
acaaaaggcu acacaauguu acacg 25

<210> 1043
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1043
uacaaaaggc uacacaaugu uacac 25

<210> 1044
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1044
uuuauacaaa aggcuacaca augtt 25

<210> 1045
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1045
auuuauacaa aaggcuacac aaugt 25

<210> 1046
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1046
ucuauuuaua caaaaggcua cacaa 25

<210> 1047
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1047
gucuauuuau acaaaaggcu acaca 25

<210> 1048
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1048
ugucuauuua uacaaaaggc uacac 25

<210> 1049
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1049
ucuaucuguc uauuuauaca aaagg 25

<210> 1050
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1050
uucuaucugu cuauuuauac aaaag 25

<210> 1051
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 1051
uuucuaucug ucuauuuaua caaaa 25

<210> 1052
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 1052
auuucuaucu gucuauuuau acaaa 25

<210> 1053
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 1053
gaccauuucu aucugucuau uuata 25

<210> 1054
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1054
ggaccauuuc uaucugucua uuuat 25

<210> 1055
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1055
acuaaucgga ccauuucuau cugtc 25

<210> 1056
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1056
aacuaaucgg accauuucua ucugt 25

<210> 1057
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1057
aaacuaaucg gaccauuucu auctg 25

<210> 1058
<211> 25

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1058
gaaacuaauc ggaccauuuc uauct 25

<210> 1059
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1059
uaaaaaggaa acuaaucgga ccatt 25

<210> 1060
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1060
gcauauuaaa aaggaaacua aucgg 25

<210> 1061
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1061

agcauauuaa aaaggaaacu aaucg 25

<210> 1062
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 1062
uuuaagcaua uuaaaaagga aacta 25

<210> 1063
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 1063
gcuuauuuua agcauauuaa aaagg 25

<210> 1064
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 1064
ugcuuauuuu aagcauauua aaaag 25

<210> 1065
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1065
uccaccugcu uauuuuaagc auatt 25

<210> 1066
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1066
aaaacaugaa auagauccac cugct 25

<210> 1067
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1067
aaaaacauga aauagaucca ccugc 25

<210> 1068
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1068
ucaaaaacau gaaauagauc cacct 25

<210> 1069
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1069
uucaaaaaca ugaaauagau ccacc 25

<210> 1070
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1070
guucaaaaac augaaauaga uccac 25

<210> 1071
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1071
uuuuguuca aaaacaugaa auaga 25

<210> 1072
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1072
auaaaguuuu uguucaaaaa cauga 25

<210> 1073
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1073
uccccgauaa aguuuuuguu caaaa 25

<210> 1074
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1074
aucccgaua aaguuuuugu ucaaa 25

<210> 1075
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1075
accucuuacu gauuuacccu accgc 25

<210> 1076
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic

oligonucleotide

<400> 1076
acaccucuua cugauuuacc cuacc 25

<210> 1077
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 1077
aacaccucuu acugauuuac ccuac 25

<210> 1078
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 1078
uaacaccucu uacugauuua cccta 25

<210> 1079
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 1079
auaacaccuc uuacugauuu accct 25

<210> 1080
<211> 25
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1080
aauaacaccu cuuacugauu uaccc 25

<210> 1081
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1081
ggcucaaaua acaccucuua cugat 25

<210> 1082
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1082
aacaaggcuc aaauaacacc ucuta 25

<210> 1083
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1083
aaacaaggcu caaauaacac cuctt 25

<210> 1084

<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1084
aaaacaaggc ucaaauaaca ccuct 25

<210> 1085
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1085
uccaaaacaa ggcucaaaua acacc 25

<210> 1086
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1086
uguccaaaac aaggcucaaa uaaca 25

<210> 1087
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1087
uauacugucc aaaacaaggc ucaaa 25

<210> 1088
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 1088
gcaacuggua uacuguccaa aacaa 25

<210> 1089
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 1089
gauaaaaggc aacugguaua cugtc 25

<210> 1090
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 1090
ggauaaaagg caacugguau acugt 25

<210> 1091
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1091
aacuuuggga uaaaaggcaa cuggt 25

<210> 1092
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1092
acaacuuugg gauaaaaggc aactg 25

<210> 1093
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1093
uuacaacaac uuugggauaa aaggc 25

<210> 1094
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1094
guuacaacaa cuuugggaua aaagg 25

<210> 1095
<211> 25
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1095
gguuacaaca acuuugggau aaaag 25

<210> 1096
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1096
ucacagcagg uuacaacaac uuugg 25

<210> 1097
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1097
aucacagcag guuacaacaa cuutg 25

<210> 1098
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1098
guaucacagc agguuacaac aactt 25

<210> 1099
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1099
gcaucuguug aagcauugua ucaca 25

<210> 1100
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1100
ugaaccauuu cuauaaccgc auctg 25

<210> 1101
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1101
auucugaacc auuucuauaa ccgca 25

<210> 1102
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>

<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1102
uaauucugaa ccauuucuau aaccg 25

<210> 1103
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1103
uuaauucuga accauuucua uaacc 25

<210> 1104
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1104
uuuaauucug aaccauuucu auaac 25

<210> 1105
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1105
guuuaauucu gaaccauuuc uauaa 25

<210> 1106
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1106
uaaaaguuua auucugaacc auutc 25

<210> 1107
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1107
uuaaaaguuu aauucugaac cautt 25

<210> 1108
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1108
aauuaaaagu uuaauucuga accat 25

<210> 1109
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1109
ugaaugaauu aaaaguuuaa uuctg 25

<210> 1110
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1110
uuuuugaaug aauuaaaagu uuaat 25

<210> 1111
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1111
uuuuuuuuug aaugaauuaa aagtt 25

<210> 1112
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1112
uuuuuuuuuu gaaugaauua aaagt 25

<210> 1113
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 1113
uuuuuuuuuu ugaaugaauu aaaag 25

<210> 1114
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 1114
uuuuuuuuuu uugaaugaau uaaaa 25

<210> 1115
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 1115
uuuuuuuuuu uuugaaugaa uuaaa 25

<210> 1116
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 1116
uuuuuuuuuu uuuugaauga auuaa 25

<210> 1117
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 1117
uaugguauac uucaaauacc cucaggg 27

<210> 1118
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1118
guuguauggu auacuucaaa uacccuc 27

<210> 1119
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1119
uucaaaacag uuguauggua uacuuca 27

<210> 1120
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1120
uggauuuuca aaacaguugu augguau 27

<210> 1121
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1121
cacgcuggau uuucaaaaca guuguau 27

<210> 1122
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1122
uugagugaag gacugagaaa aucccug 27

<210> 1123
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1123
ucaauaucag cuacuuguuc uugagug 27

<210> 1124
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1124
uguccaucaa uaucagcuac uuguucu 27

<210> 1125
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1125
acuguccauc aauaucagcu acuuguu 27

<210> 1126
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1126
gcucgaguca uugcauacug uccauca 27

<210> 1127
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1127
ucaucuaaug ucucagggaa cauagca 27

<210> 1128
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1128
ucaaguuuac aacugcaugu uucagca 27

<210> 1129
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1129
aguuaaucaa guuuacaacu gcauguu 27

<210> 1130
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1130
uugauaguua aucaaguuua caacugc 27

<210> 1131
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1131
cugcaucauc uugauaguua aucaagu 27

<210> 1132

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1132
ucauuuagca guuuugucag uucaggg 27

<210> 1133
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1133
guacguacaa uagcagacac caucuga 27

<210> 1134
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1134
aucauuugua uucugcaugg uacguac 27

<210> 1135
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1135
uaauaaaagg uuguggagag uuguaau 27

<210> 1136
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1136
ugauguaaua aaagguugug gagaguu 27

<210> 1137
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1137
cuucuugaug uaauaaaagg uugugga 27

<210> 1138
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1138
uagcuccuuc uugauguaau aaaaggu 27

<210> 1139
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1139
uagccaagaa uuuaacauuu guuuugu 27

<210> 1140
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1140
uaaaauuuga aggcagucug ucguaau 27

<210> 1141
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1141

uaagcuaaaa uuugaaggca gucuguc 27

<210> 1142
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1142
uagguccuca uuauauuuac uaaagcu 27

<210> 1143
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1143
ucugcuugug guccacagua guuuuuc 27

<210> 1144
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1144
gacaguucug aacaagacgu ugacuug 27

<210> 1145
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1145
uccaaagaca guucugaaca agacguu 27

<210> 1146
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1146
gagaguccaa agacaguucu gaacaag 27

<210> 1147
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1147
ugaccacauu uauaucaucu gaaccca 27

<210> 1148
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1148
auuauugcaa gugagguuag aaagaau 27

<210> 1149
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1149
uguucuuaua auuauugcaa gugaggu 27

<210> 1150
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1150
caucaucuug uucuuauaau uauugca 27

<210> 1151
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1151
acaguacgca caagagccuc uauacca 27

<210> 1152
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1152
auuucgaauc aauccaacag uagccuu 27

<210> 1153
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1153
acaaccuuca acuauuucuu ccaugcg 27

<210> 1154
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1154
guacaaccuu caacuauuuc uuccaug 27

<210> 1155
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1155
cagcuacucu uuggauguuu ucaaugg 27

<210> 1156
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1156
ucuuguaauc uuguggcuug uccucag 27

<210> 1157
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1157
aaaggaugau uuacagguca guaucaa 27

<210> 1158
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1158
uggcuuuuua aaacuucuua ccuaaag 27

<210> 1159
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1159
caucuccuuu caaaguauau accuguu 27

<210> 1160
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1160
aaaaaacauu aaaguuaaua acuucca 27

<210> 1161
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1161
gaguauuaag uugcaaaagc uguggca 27

<210> 1162
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1162
cuauuaaugu uuaaaacagc aaauguu 27

<210> 1163
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1163
cagaacaaaa aguuuacuuc aauuguu 27

<210> 1164
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1164
aaaauuuaac aagcaaggcu aggguuu 27

<210> 1165
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1165
aaaaaaaaaa uuuaacaagc aaggcua 27

<210> 1166
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1166
aaaaaaaaaa aaaaagagcu acuucaa 27

<210> 1167
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1167
aguauucacu auaacuuaac acuacga 27

<210> 1168
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1168
uagaaauugc uguagcagua uucacua 27

<210> 1169
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1169
aaaauuagaa auugcuguag caguauu 27

<210> 1170
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1170
ccauuacuca auucuuaaaa auuagaa 27

<210> 1171
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1171
cuacaccauu acucaauucu uaaaaau 27

<210> 1172
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1172
auuacaauua auuagaguga uuaugaa 27

<210> 1173
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1173
uuacacuuua uucagauuac aauuaau 27

<210> 1174
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1174
aauuguuaca cuuuauucag auuacaa 27

<210> 1175
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1175
cuacacaauu guuacacuuu auucaga 27

<210> 1176
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1176
ugucuauuuu auacaaaaag gcuacac 27

<210> 1177
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1177
auuuucuauu ugucuauuuu auacaaa 27

<210> 1178
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1178
aaaaggaaac uaauuggacc auuuucu 27

<210> 1179
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1179
gcauauuaaa aaggaaacua auuggac 27

<210> 1180
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 1180
auaucccaaa uaguuuuuga ucaaaaa 27

<210> 1181
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1181
aaaacaaggu uccaaauaac accucuu 27

<210> 1182
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1182
uguccaaaac aagguuccaa auaacac 27

<210> 1183
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1183
acugguaaac uguccaaaac aagguuc 27

<210> 1184
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1184
gcauuuucuc uugaagcauc guaucac 27

<210> 1185
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1185
uuuuuuauaa ccgcauuuuc ucuugaa 27

<210> 1186
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1186
aaccauuuuu uauaaccgca uuuucuc 27

<210> 1187
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1187
uuaauucuga accauuuuuu auaaccg 27

<210> 1188
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1188
uaaaaguuua auucugaacc auuuuuu 27

<210> 1189
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1189
cagcuugagu agccauuguc cacgcug 27

<210> 1190
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1190
ucagcuugag uagccauugu ccacgcu 27

<210> 1191
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1191
aucagcuuga guagccauug uccacgc 27

<210> 1192
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1192
aaucagcuug aguagccauu guccacg 27

<210> 1193
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1193
aaaucagcuu gaguagccau uguccac 27

<210> 1194
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1194
caaaucagcu ugaguagcca uugucca 27

<210> 1195

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1195
ucaaaucagc uugaguagcc auugucc 27

<210> 1196
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1196
aucaaaucag cuugaguagc cauuguc 27

<210> 1197
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1197
uccauggcca uguccaacuc caucaaa 27

<210> 1198
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1198
uuccauggcc auguccaacu ccaucaa 27

<210> 1199
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1199
guuccauggc cauguccaac uccauca 27

<210> 1200
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1200
gguuccaugg ccauguccaa cuccauc 27

<210> 1201
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1201
ugguuccaug gccaugucca acuccau 27

<210> 1202
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1202
cugguuccau ggccaugucc aacucca 27

<210> 1203
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1203
ucugguucca uggccauguc caacucc 27

<210> 1204
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1204

uaguggcacc agaauggauu ccagagu 27

<210> 1205
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1205
guaguggcac cagaauggau uccagag 27

<210> 1206
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1206
gguaguggca ccagaaugga uuccaga 27

<210> 1207
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1207
ugguaguggc accagaaugg auuccag 27

<210> 1208
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1208
gugguagugg caccagaaug gauucca 27

<210> 1209
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1209
gaugggaucu gcaugcccuc aucuaau 27

<210> 1210
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1210
agaugggauc ugcaugcccu caucuaa 27

<210> 1211
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1211
uagaugggau cugcaugccc ucaucua 27

<210> 1212
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1212
guagauggga ucugcaugcc cucaucu 27

<210> 1213
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1213
uguagauggg aucugcaugc ccucauc 27

<210> 1214
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1214
guguagaugg gaucugcaug cccucau 27

<210> 1215
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1215
gcuggacauu agugggauga gcagcau 27

<210> 1216
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1216
cgcuggacau uagugggaug agcagca 27

<210> 1217
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1217
acgcuggaca uuagugggau gagcagc 27

<210> 1218
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1218
aacgcuggac auuaguggga ugagcag 27

<210> 1219
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1219
aaacgcugga cauuaguggg augagca 27

<210> 1220
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1220
caaacgcugg acauuagugg gaugagc 27

<210> 1221
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1221
ccaaacgcug gacauuagug ggaugag 27

<210> 1222
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1222
gccaaacgcu ggacauuagu gggauga 27

<210> 1223
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1223
ucagcaucug ugaugguuca gccaaac 27

<210> 1224
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1224
uucagcaucu gugaugguuc agccaaa 27

<210> 1225
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1225
uuucagcauc ugugaugguu cagccaa 27

<210> 1226
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1226
cagggauugc acguguggca aguucug 27

<210> 1227
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1227
ucagggauug cacguguggc aaguucu 27

<210> 1228
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1228
uuuuagaaag cugauggacc auaacug 27

<210> 1229
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1229
uuuuuagaaa gcugauggac cauaacu 27

<210> 1230
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1230
uagcgugucu ggaagcuucc uuuuuag 27

<210> 1231
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1231
auagcguguc uggaagcuuc cuuuuua 27

<210> 1232
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1232
cuacaucauu uguauucugc augguac 27

<210> 1233
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1233
ucuacaucau uuguauucug cauggua 27

<210> 1234
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1234
uucuacauca uuuguauucu gcauggu 27

<210> 1235
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1235
uuucuacauc auuuguauuc ugcaugg 27

<210> 1236
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1236
guuucuacau cauuuguauu cugcaug 27

<210> 1237
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1237
uguuucuaca ucauuuguau ucugcau 27

<210> 1238
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1238
cuguuucuac aucauuugua uucugca 27

<210> 1239
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1239
gcuguuucua caucauuugu auucugc 27

<210> 1240
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1240
ugccuccaga cuuaaagaug gccagua 27

<210> 1241
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1241
augccuccag acuuaaagau ggccagu 27

<210> 1242
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1242
aacgcacugc cauuuuagcu ccuucuu 27

<210> 1243
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 1243
aaacgcacug ccauuuuagc uccuucu 27

<210> 1244
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1244
uaaacgcacu gccauuuuag cuccuuc 27

<210> 1245
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1245
cuaaacgcac ugccauuuua gcuccuu 27

<210> 1246
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1246
gcuaaacgca cugccauuuu agcuccu 27

<210> 1247
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1247
ucagcacucu gcuugugguc cacagua 27

<210> 1248
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1248
uucagcacuc ugcuuguggu ccacagu 27

<210> 1249
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1249
cuucagcacu cugcuugugg uccacag 27

<210> 1250
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1250
ccuucagcac ucugcuugug guccaca 27

<210> 1251
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1251
accuucagca cucugcuugu gguccac 27

<210> 1252
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1252
caccuucagc acucugcuug uggucca 27

<210> 1253
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1253
gcaccuucag cacucugcuu gugguc 27

<210> 1254
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1254
agcaccuuca gcacucugcu ugugguc 27

<210> 1255
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1255
uagcaccuuc agcacucugc uuguggu 27

<210> 1256
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1256
auagcaccuu cagcacucug cuugugg 27

<210> 1257
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1257
gauagcaccu ucagcacucu gcuugug 27

<210> 1258

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1258
agauagcacc uucagcacuc ugcuugu 27

<210> 1259
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1259
cagauagcac cuucagcacu cugcuug 27

<210> 1260
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1260
acagauagca ccuucagcac ucugcuu 27

<210> 1261
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1261
gauuccugag aguccaaaga caguucu 27

<210> 1262
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1262
agauuccuga gaguccaaag acaguuc 27

<210> 1263
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1263
cacaggugac cacauuuaua ucaucug 27

<210> 1264
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1264
gcacagguga ccacauuuau aucaucu 27

<210> 1265
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1265
ugcacaggug accacauuua uaucauc 27

<210> 1266
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1266
cugcacaggu gaccacauuu auaucau 27

<210> 1267
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1267

gcugcacagg ugaccacauu uauauca 27

<210> 1268
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1268
agcugcacag gugaccacau uuauauc 27

<210> 1269
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1269
cagcugcaca ggugaccaca uuuauau 27

<210> 1270
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1270
ccagcugcac aggugaccac auuuaua 27

<210> 1271
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1271
uccagcugca caggugacca cauuuau 27

<210> 1272
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1272
uuccagcugc acaggugacc acauuua 27

<210> 1273
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1273
auuccagcug cacaggugac cacauuu 27

<210> 1274
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1274
aauuccagcu gcacagguga ccacauu 27

<210> 1275
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1275
gaauuccagc ugcacaggug accacau 27

<210> 1276
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1276
agaauuccag cugcacaggu gaccaca 27

<210> 1277
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1277
aagaauucca gcugcacagg ugaccac 27

<210> 1278
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1278
aaagaauucc agcugcacag gugacca 27

<210> 1279
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1279
gaaagaauuc cagcugcaca ggugacc 27

<210> 1280
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1280
agaaagaauu ccagcugcac aggugac 27

<210> 1281
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1281
uagaaagaau uccagcugca cagguga 27

<210> 1282
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1282
uuagaaagaa uuccagcugc acaggug 27

<210> 1283
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1283
uauaauuauu gcaagugagg uuagaaa 27

<210> 1284
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1284
uuauaauuau ugcaagugag guuagaa 27

<210> 1285
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1285
cuuauaauua uugcaaguga gguuaga 27

<210> 1286
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1286
ucuuauaauu auugcaagug agguuag 27

<210> 1287
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1287
uucuuauaau uauugcaagu gagguua 27

<210> 1288
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1288
cagugauguc uucccuguca ccagccc 27

<210> 1289
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1289
ucagugaugu cuucccuguc accagcc 27

<210> 1290
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1290
cucagugaug ucuucccugu caccagc 27

<210> 1291
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1291
gcucagugau gucuucccug ucaccag 27

<210> 1292
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1292
ggcucaguga ugucuucccu gucacca 27

<210> 1293
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1293
aggcucagug augucuuccc ugucacc 27

<210> 1294
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1294
caggcucagu gaugucuucc cugucac 27

<210> 1295
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1295
gcaggcucag ugaugucuuc ccuguca 27

<210> 1296
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1296
ggcaggcuca gugaugucuu cccuguc 27

<210> 1297
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1297
uggcaggcuc agugaugucu ucccugu 27

<210> 1298
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1298
auggcaggcu cagugauguc uucccug 27

<210> 1299
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1299
gauggcaggc ucagugaugu cuucccu 27

<210> 1300
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1300
agauggcagg cucagugaug ucuuccc 27

<210> 1301
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1301
cagauggcag gcucagugau gucuucc 27

<210> 1302
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1302
acagauggca ggcucaguga ugucuuc 27

<210> 1303
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1303
cacagauggc aggcucagug augucuu 27

<210> 1304
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1304
gcacagaugg caggcucagu gaugucu 27

<210> 1305
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1305
agcacagaug gcaggcucag ugauguc 27

<210> 1306
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 1306
gagcacagau ggcaggcuca gugaugu 27

<210> 1307
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1307
agagcacaga uggcaggcuc agugaug 27

<210> 1308
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1308
aagagcacag auggcaggcu cagugau 27

<210> 1309
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1309
gaagagcaca gauggcaggc ucaguga 27

<210> 1310
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1310
cgaagagcac agauggcagg cucagug 27

<210> 1311
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1311
acgaagagca cagauggcag gcucagu 27

<210> 1312
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1312
gacgaagagc acagauggca ggcucag 27

<210> 1313
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1313
ugacgaagag cacagauggc aggcuca 27

<210> 1314
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1314
augacgaaga gcacagaugg caggcuc 27

<210> 1315
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1315
gaugacgaag agcacagaug gcaggcu 27

<210> 1316
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1316
agaugacgaa gagcacagau ggcaggc 27

<210> 1317
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1317
cagaugacga agagcacaga uggcagg 27

<210> 1318
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1318
ucagaugacg aagagcacag auggcag 27

<210> 1319
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1319
gucagaugac gaagagcaca gauggca 27

<210> 1320
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1320
ggucagauga cgaagagcac agauggc 27

<210> 1321

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1321
uggucagaug acgaagagca cagaugg 27

<210> 1322
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1322
cuggucagau gacgaagagc acagaug 27

<210> 1323
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1323
gcuggucaga ugacgaagag cacagau 27

<210> 1324
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1324
ggcuggucag augacgaaga gcacaga 27

<210> 1325
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1325
cggcugguca gaugacgaag agcacag 27

<210> 1326
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1326
ucggcugguc agaugacgaa gagcaca 27

<210> 1327
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1327
gucggcuggu cagaugacga agagcac 27

<210> 1328
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1328
ugucggcugg ucagaugacg aagagca 27

<210> 1329
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1329
gugucggcug gucagaugac gaagagc 27

<210> 1330
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1330

ggugucggcu ggucagauga cgaagag 27

<210> 1331
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1331
uggugucggc uggucagaug acgaaga 27

<210> 1332
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1332
ucagaggcca gugggauggu gggugua 27

<210> 1333
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1333
aucagaggcc agugggaugg ugggugu 27

<210> 1334
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1334
uaucagaggc cagugggaug gugggug 27

<210> 1335
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1335
uuaucagagg ccagugggau ggugggu 27

<210> 1336
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1336
uuuaucagag gccaguggga ugguggg 27

<210> 1337
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1337
cuuuaucaga ggccaguggg auggugg 27

<210> 1338
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1338
ccuuuaucag aggccagugg gauggug 27

<210> 1339
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1339
gccuuuauca gaggccagug ggauggu 27

<210> 1340
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1340
agccuuuauc agaggccagu gggaugg 27

<210> 1341
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1341
uagccuuuau cagaggccag ugggaug 27

<210> 1342
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1342
guagccuuua ucagaggcca gugggau 27

<210> 1343
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1343
aguagccuuu aucagaggcc aguggga 27

<210> 1344
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1344
caguagccuu uaucagaggc caguggg 27

<210> 1345
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1345
acaguagccu uuaucagagg ccagugg 27

<210> 1346
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1346
caagauuucg aaucaaucca acaguag 27

<210> 1347
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1347
gcaagauuuc gaaucaaucc aacagua 27

<210> 1348
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1348
gcugcacaaa caauggaaug guauuua 27

<210> 1349
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1349
agcugcacaa acaauggaau gguauuu 27

<210> 1350
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1350
cagcugcaca aacaauggaa ugguauu 27

<210> 1351
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1351
gcagcugcac aaacaaugga augguau 27

<210> 1352
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1352
agcagcugca caaacaaugg aauggua 27

<210> 1353
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1353
aagcagcugc acaaacaaug gaauggu 27

<210> 1354
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1354
auguuuucaa ugggagaaua aagcagc 27

<210> 1355
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1355
gauguuuuca augggagaau aaagcag 27

<210> 1356
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1356
ggauguuuuc aaugggagaa uaaagca 27

<210> 1357
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1357
uggauguuuu caaugggaga auaaagc 27

<210> 1358
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1358
uguccugagc aaguucacag aggaccc 27

<210> 1359
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1359
uuguccugag caaguucaca gaggacc 27

<210> 1360
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1360
cuuguccuga gcaaguucac agaggac 27

<210> 1361
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1361
ccuuguccug agcaaguuca cagagga 27

<210> 1362
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1362
uccuuguccu gagcaaguuc acagagg 27

<210> 1363
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1363
uuccuugucc ugagcaaguu cacagag 27

<210> 1364
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1364
cuuccuuguc cugagcaagu ucacaga 27

<210> 1365
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1365
gcuuccuugu ccugagcaag uucacag 27

<210> 1366
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1366
agcuuccuug uccugagcaa guucaca 27

<210> 1367
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1367
cagcuuccuu guccugagca aguucac 27

<210> 1368
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1368
gcagcuuccu uguccugagc aaguuca 27

<210> 1369
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 1369
gagcuguggc ucccucagcu ucaauag 27

<210> 1370
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1370
ggagcugugg cucccucagc uucaaua 27

<210> 1371
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1371
aggagcugug gcucccucag cuucaau 27

<210> 1372
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1372
guggcuuguc cucagacauu cggaaca 27

<210> 1373
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1373
uguggcuugu ccucagacau ucggaac 27

<210> 1374
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1374
uuguggcuug uccucagaca uucggaa 27

<210> 1375
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1375
cuuguggcuu guccucagac auucgga 27

<210> 1376
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1376
ucuuguggcu uguccucaga cauucgg 27

<210> 1377
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1377
aucuuguggc uuguccucag acauucg 27

<210> 1378
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1378
aaucuugugg cuuguccuca gacauuc 27

<210> 1379
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1379
uaaucuugug gcuuguccuc agacauu 27

<210> 1380
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1380
ucucauucca agccauuggc ucuguuc 27

<210> 1381
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1381
gucucauucc aagccauugg cucuguu 27

<210> 1382
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1382
agucucauuc caagccauug gcucugu 27

<210> 1383
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1383
cagucucauu ccaagccauu ggcucug 27

<210> 1384

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1384
gcagucucau uccaagccau uggcucu 27

<210> 1385
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1385
agcagucuca uuccaagcca uuggcuc 27

<210> 1386
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1386
cagcagucuc auuccaagcc auuggcu 27

<210> 1387
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1387
ucagcagucu cauuccaagc cauuggc 27

<210> 1388
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1388
aucagcaguc ucauuccaag ccauugg 27

<210> 1389
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1389
gaucagcagu cucauuccaa gccauug 27

<210> 1390
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1390
agaucagcag ucucauucca agccauu 27

<210> 1391
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1391
uaggaucauc cuggcgauau ccaaggg 27

<210> 1392
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1392
cuaggaucau ccuggcgaua uccaagg 27

<210> 1393
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1393

gcuaggauca uccuggcgau auccaag 27

<210> 1394
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1394
agcuaggauc auccuggcga uauccaa 27

<210> 1395
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1395
uagcuaggau cauccuggcg auaucca 27

<210> 1396
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1396
cauauccacc agagugaaaa gaacgau 27

<210> 1397
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1397
ccauauccac cagagugaaa agaacga 27

<210> 1398
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1398
gccauaucca ccagagugaa aagaacg 27

<210> 1399
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1399
ggccauaucc accagaguga aaagaac 27

<210> 1400
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1400
uggccauauc caccagagug aaaagaa 27

<210> 1401
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1401
caggguggug gccacccauc ucauguu 27

<210> 1402
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1402
ccaggguggu ggccacccau cucaugu 27

<210> 1403
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1403
accagggugg uggccaccca ucucaug 27

<210> 1404
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1404
caccagggug guggccaccc aucucau 27

<210> 1405
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1405
gcaccagggu gguggccacc caucuca 27

<210> 1406
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1406
agcaccaggg ugguggccac ccaucuc 27

<210> 1407
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1407
cagcaccagg gugguggcca cccaucu 27

<210> 1408
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1408
ucagcaccag ggugguggcc acccauc 27

<210> 1409
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1409
gucagcacca gggugguggc cacccau 27

<210> 1410
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1410
agucagcacc aggguggugg ccaccca 27

<210> 1411
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1411
uagucagcac caggguggug gccaccc 27

<210> 1412
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1412
auagucagca ccaggguggu ggccacc 27

<210> 1413
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1413
gauagucagc accagggugg uggccac 27

<210> 1414
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1414
ggauagucag caccagggug guggcca 27

<210> 1415
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1415
uggauaguca gcaccagggu gguggcc 27

<210> 1416
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1416
cuggauaguc agcaccaggg ugguggc 27

<210> 1417
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1417
acuggauagu cagcaccagg guggugg 27

<210> 1418
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1418
aacuggauag ucagcaccag gguggug 27

<210> 1419
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1419
caacuggaua gucagcacca ggguggu 27

<210> 1420
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1420
ucaacuggau agucagcacc agggugg 27

<210> 1421
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1421
aucaacugga uagucagcac cagggug 27

<210> 1422
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1422
caucaacugg auagucagca ccagggu 27

<210> 1423
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1423
ccaucaacug gauagucagc accaggg 27

<210> 1424
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1424
cccaucaacu ggauagucag caccagg 27

<210> 1425
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1425
gcccaucaac uggauaguca gcaccag 27

<210> 1426
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1426
agcccaucaa cuggauaguc agcacca 27

<210> 1427
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1427
cagcccauca acuggauagu cagcacc 27

<210> 1428
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1428
gcagcccauc aacuggauag ucagcac 27

<210> 1429
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1429
ggcagcccau caacuggaua gucagca 27

<210> 1430
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1430
uggcagccca ucaacuggau agucagc 27

<210> 1431
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1431
cuggcagccc aucaacugga uagucag 27

<210> 1432
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 1432
ucuggcagcc caucaacugg auaguca 27

<210> 1433
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1433
aucuggcagc ccaucaacug gauaguc 27

<210> 1434
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1434
gaucuggcag cccaucaacu ggauagu 27

<210> 1435
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1435
agaucuggca gcccaucaac uggauag 27

<210> 1436
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1436
gcagcccauc caugaggucc ugggcau 27

<210> 1437
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1437
ggcagcccau ccaugagguc cugggca 27

<210> 1438
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1438
aggcagccca uccaugaggu ccugggc 27

<210> 1439
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1439
uaucaaacca ggccagcuga uugcugu 27

<210> 1440
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1440
guaucaaacc aggccagcug auugcug 27

<210> 1441
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1441
aguaucaaac caggccagcu gauugcu 27

<210> 1442
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1442
caguaucaaa ccaggccagc ugauugc 27

<210> 1443
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1443
ucaguaucaa accaggccag cugauug 27

<210> 1444
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1444
gucaguauca aaccaggcca gcugauu 27

<210> 1445
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1445
ggucaguauc aaaccaggcc agcugau 27

<210> 1446
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1446
aggucaguau caaaccaggc cagcuga 27

<210> 1447

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1447
caggucagua ucaaaccagg ccagcug 27

<210> 1448
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1448
acaggucagu aucaaaccag gccagcu 27

<210> 1449
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1449
uacaggucag uaucaaacca ggccagc 27

<210> 1450
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1450
uuacagguca guaucaaacc aggccag 27

<210> 1451
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1451
uuuacagguc aguaucaaac caggcca 27

<210> 1452
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1452
auuuacaggu caguaucaaa ccaggcc 27

<210> 1453
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1453
gauuuacagg ucaguaucaa accaggc 27

<210> 1454
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1454
ugauuuacag gucaguauca aaccagg 27

<210> 1455
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1455
augauuuaca ggucaguauc aaaccag 27

<210> 1456
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1456

gaugauuuac aggucaguau caaacca 27

<210> 1457
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1457
ggaugauuua caggucagua ucaaacc 27

<210> 1458
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1458
aggaugauuu acaggucagu aucaaac 27

<210> 1459
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1459
aaggaugauu uacaggucag uaucaaa 27

<210> 1460
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1460
uuaaguugca aaagcugugg caaaaaa 27

<210> 1461
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1461
uguuuaaaac agcaaauguu acucauu 27

<210> 1462
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1462
agagagaaag gcugcuauua auguuua 27

<210> 1463
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1463
aaagagagaa aggcugcuau uaauguu 27

<210> 1464
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1464
auaaagagag aaaggcugcu auuaaug 27

<210> 1465
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1465
guauaaagag agaaaggcug cuauuaa 27

<210> 1466
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1466
caacucuaca ggccaaucac aaugcaa 27

<210> 1467
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1467
agcaacucua caggccaauc acaaugc 27

<210> 1468
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1468
ucagcaacuc uacaggccaa ucacaau 27

<210> 1469
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1469
ucucagcaac ucuacaggcc aaucaca 27

<210> 1470
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1470
ccucucagca acucuacagg ccaauca 27

<210> 1471
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1471
gcccucucag caacucuaca ggccaau 27

<210> 1472
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1472
gagcccucuc agcaacucua caggcca 27

<210> 1473
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1473
ucgagcccuc ucagcaacuc uacaggc 27

<210> 1474
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1474
ccucgagccc ucucagcaac ucuacag 27

<210> 1475
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1475
ggcacuuucu gagauaccag cccaccc 27

<210> 1476
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1476
caggcacuuu cugagauacc agcccac 27

<210> 1477
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1477
gucaggcacu uucugagaua ccagccc 27

<210> 1478
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1478
gugucaggca cuuucugaga uaccagc 27

<210> 1479
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1479
ccauaggaaa cucagcuugg uuagugu 27

<210> 1480
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1480
ucccauagga aacucagcuu gguuagu 27

<210> 1481
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1481
guucccauag gaaacucagc uugguua 27

<210> 1482
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1482
uuguucccau aggaaacuca gcuuggu 27

<210> 1483
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1483
aauuguuccc auaggaaacu cagcuug 27

<210> 1484
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1484
ucaauuguuc ccauaggaaa cucagcu 27

<210> 1485
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1485
gaccaaaaag gaccagaaca aaaaguu 27

<210> 1486
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1486
ucgaccaaaa aggaccagaa caaaaag 27

<210> 1487
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1487
ccucgaccaa aaaggaccag aacaaaa 27

<210> 1488
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1488
cuccucgacc aaaaaggacc agaacaa 27

<210> 1489
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1489
uacuccucga ccaaaaagga ccagaac 27

<210> 1490
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1490
guuacuccuc gaccaaaaag gaccaga 27

<210> 1491
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1491
uuguuacucc ucgaccaaaa aggacca 27

<210> 1492
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1492
uauuguuacu ccucgaccaa aaaggac 27

<210> 1493
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1493
uguauuguua cuccucgacc aaaaagg 27

<210> 1494
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1494
uuuguauugu uacuccucga ccaaaaa 27

<210> 1495
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 1495
cauuuguauu guuacuccuc gaccaaa 27

<210> 1496
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1496
uccauuugua uuguuacucc ucgacca 27

<210> 1497
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1497
aauccauuug uauuguuacu ccucgac 27

<210> 1498
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1498
aaaauccauu uguauuguua cuccucg 27

<210> 1499
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1499
ccaaaaucca uuuguauugu uacuccu 27

<210> 1500
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1500
uaacaagcaa ggcuaggguu ugauaaa 27

<210> 1501
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1501
uuuaacaagc aaggcuaggg uuugaua 27

<210> 1502
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1502
aauuuaacaa gcaaggcuag gguuuga 27

<210> 1503
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1503
gaauuagugu ucuacaccau uacucaa 27

<210> 1504
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1504
augaauuagu guucuacacc auuacuc 27

<210> 1505
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1505
uuaugaauua guguucuaca ccauuac 27

<210> 1506
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1506
gauuaugaau uaguguucua caccauu 27

<210> 1507
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1507
gugauuauga auuaguguuc uacacca 27

<210> 1508
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1508
gagugauuau gaauuagugu ucuacac 27

<210> 1509
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1509
uagagugauu augaauuagu guucuac 27

<210> 1510

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1510
auuagaguga uuaugaauua guguucu 27

<210> 1511
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1511
uuaagcauau uaaaaaggaa acuaauu 27

<210> 1512
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1512
uuuuaagcau auuaaaaagg aaacuaa 27

<210> 1513
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1513
uauuuuaagc auauuaaaaa ggaaacu 27

<210> 1514
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1514
cuuauuuuaa gcauauuaaa aaggaaa 27

<210> 1515
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1515
ugcuuauuuu aagcauauua aaaagga 27

<210> 1516
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1516
cugcuuauuu uaagcauauu aaaaagg 27

<210> 1517
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1517
ccugcuuauu uuaagcauau uaaaaag 27

<210> 1518
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1518
caccugcuua uuuuaagcau auuaaaa 27

<210> 1519
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1519

uccaccugcu uauuuuaagc auauuaa 27

<210> 1520
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1520
gauccaccug cuuauuuuaa gcauauu 27

<210> 1521
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1521
uagauccacc ugcuuauuuu aagcaua 27

<210> 1522
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1522
aauagaucca ccugcuuauu uuaagca 27

<210> 1523
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1523
gaaauagauc caccugcuua uuuuaag 27

<210> 1524
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1524
augaaauaga uccaccugcu uauuuua 27

<210> 1525
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1525
acaugaaaua gauccaccug cuuauuu 27

<210> 1526
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1526
aaacaugaaa uagauccacc ugcuuau 27

<210> 1527
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1527
aaaaacauga aauagaucca ccugcuu 27

<210> 1528
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1528
ucaaaaacau gaaauagauc caccugc 27

<210> 1529
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1529
gaucaaaaac augaaauaga uccaccu 27

<210> 1530
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1530
uugaucaaaa acaugaaaua gauccac 27

<210> 1531
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1531
uuuugaucaa aaacaugaaa uagaucc 27

<210> 1532
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1532
aacaccucuu acugauuuac ccuaccc 27

<210> 1533
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1533
auaacaccuc uuacugauuu acccuac 27

<210> 1534
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1534
aaauaacacc ucuuacugau uuacccu 27

<210> 1535
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1535
ccaaauaaca ccucuuacug auuuacc 27

<210> 1536
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1536
uuccaaauaa caccucuuac ugauuua 27

<210> 1537
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1537
gguuccaaau aacaccucuu acugauu 27

<210> 1538
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1538
acuuugggau aaaaggcaac ugguaaa 27

<210> 1539
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1539
caacuuuggg auaaaaggca acuggua 27

<210> 1540
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1540
aacaacuuug ggauaaaagg caacugg 27

<210> 1541
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1541
acaacaacuu ugggauaaaa ggcaacu 27

<210> 1542
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1542
uuacaacaac uuugggauaa aaggcaa 27

<210> 1543
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1543
gguuacaaca acuuugggau aaaaggc 27

<210> 1544
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1544
cagguuacaa caacuuuggg auaaaag 27

<210> 1545
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1545
agcagguuac aacaacuuug ggauaaa 27

<210> 1546
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1546
acagcagguu acaacaacuu ugggaua 27

<210> 1547
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1547
ucacagcagg uuacaacaac uuuggga 27

<210> 1548
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1548
uaucacagca gguuacaaca acuuugg 27

<210> 1549
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1549
cguaucacag cagguuacaa caacuuu 27

<210> 1550
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1550
aucguaucac agcagguuac aacaacu 27

<210> 1551
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1551
gcaucguauc acagcagguu acaacaa 27

<210> 1552
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1552
uuaaaaguuu aauucugaac cauuuuu 27

<210> 1553
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1553
aauuaaaagu uuaauucuga accauuu 27

<210> 1554
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1554
ugaauuaaaa guuuaauucu gaaccau 27

<210> 1555
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1555
aaugaauuaa aaguuuaauu cugaacc 27

<210> 1556
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1556
cgaaugaauu aaaaguuuaa uucugaa 27

<210> 1557
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1557
uccagaaucc aaguaagacu gcugcug 27

<210> 1558
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 1558
ccagaaugga uuccagaauc caaguaa 27

<210> 1559
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1559
auucauaaag gacuugggag gugucaa 27

<210> 1560
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1560
ucaauaucag cuacuugcuc uugcgug 27

<210> 1561
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1561
ucaucuagcg ucucagggaa cauggca 27

<210> 1562
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1562
aucaaauuga caacugcaug uuucaac 27

<210> 1563
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1563
aguuaaucaa auugacaacu gcauguu 27

<210> 1564
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1564
ccugauaguu aaucaaauug acaacug 27

<210> 1565
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1565
cuuuauuaac uaccaccugg uccucau 27

<210> 1566
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1566
aacaguacag aauccacugg ugaccca 27

<210> 1567
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1567
gcguagaaca guacagaauc cacuggu 27

<210> 1568
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1568
ugauggcgua gaacaguaca gaaucca 27

<210> 1569
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1569
aaagcaacca uuuucugcag uccacca 27

<210> 1570
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1570
uguuguaaua gccaagaauu ucacguu 27

<210> 1571
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1571
caguuuugaa caagucgcug acuuggg 27

<210> 1572
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1572
guccaaagac aguuuugaac aagucgc 27

<210> 1573

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1573
guuucugaga guccaaagac aguuuug 27

<210> 1574
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1574
guaauuauug caagugaggu uagagag 27

<210> 1575
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1575
uguuuuugua auuauugcaa gugaggu 27

<210> 1576
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1576
uccauaauga aggcgaacgg cauucug 27

<210> 1577
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1577
acaacaggca guccauaaug aaggcga 27

<210> 1578
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1578
uaaccacaac aggcagucca uaaugaa 27

<210> 1579
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1579
aggaguuuaa ccacaacagg cagucca 27

<210> 1580
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1580
aagguuucga aucaauccaa caguugc 27

<210> 1581
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1581
aacaauggaa ugguauugag uccucgg 27

<210> 1582
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1582

ucuuguaauc cuguggcuug uccucag 27

<210> 1583
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1583
ucucaugcuc caucauaggg uccaucc 27

<210> 1584
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1584
aaaggacgau uuacagguca guaucaa 27

<210> 1585
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1585
agaguaaagu auucacccac acuggcu 27

<210> 1586
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1586
gaguauaacg cugcaaaagc uguggca 27

<210> 1587
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1587
cucaucugag uauaacgcug caaaagc 27

<210> 1588
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1588
aauguuacuc aucugaguau aacgcug 27

<210> 1589
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1589
gcuauuaaug uugaaaacag caaaugu 27

<210> 1590
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1590
cacaaugcac guucagacac uacagcu 27

<210> 1591
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1591
aacaaaaagc guacuucgac uguuccc 27

<210> 1592
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1592
accagaacaa aaagcguacu ucgacug 27

<210> 1593
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1593
aaaaggacca gaacaaaaag cguacuu 27

<210> 1594
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1594
aaaacaaaga acaagcaagg cuagggu 27

<210> 1595
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1595
auauuaaaac aaagaacaag caaggcu 27

<210> 1596
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1596
aaaucagaaa uugcuguagc agguuca 27

<210> 1597
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1597
gguucuuaga aaucagaaau ugcugua 27

<210> 1598
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1598
acaaggcuca aauaacaccu cuuacug 27

<210> 1599
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1599
uccaaaacaa ggcucaaaua acaccuc 27

<210> 1600
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1600
uacuguccaa aacaaggcuc aaauaac 27

<210> 1601
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1601
ugguauacug uccaaaacaa ggcucaa 27

<210> 1602
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1602
accauuucua uaaccgcauc uguugaa 27

<210> 1603
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1603
uuuaauucug aaccauuucu auaaccg 27

<210> 1604
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1604
aaaaguuuaa uucugaacca uuucuau 27

<210> 1605
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1605
gaggguauuu gaaguauacc auacaac 27

<210> 1606
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1606
uuugaaguau accauacaac uguuuug 27

<210> 1607
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1607
uugaaguaua ccauacaacu guuuuga 27

<210> 1608
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1608
gaaguauacc auacaacugu uuugaaa 27

<210> 1609
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1609
aaguauacca uacaacuguu uugaaaa 27

<210> 1610
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1610
aguauaccau acaacuguuu ugaaaau 27

<210> 1611
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1611
acuguuuuga aaauccagcg uggacaa 27

<210> 1612
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1612
cuguuuugaa aauccagcgu ggacaau 27

<210> 1613
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1613
caauggcuac ucaagcugau uugaugg 27

<210> 1614
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1614
cucaagcuga uuugauggag uuggaca 27

<210> 1615
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1615
ugagugguaa aggcaauccu gaggaag 27

<210> 1616
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1616
gagugguaaa ggcaauccug aggaaga 27

<210> 1617
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1617
cucaagaaca aguagcugau auugaug 27

<210> 1618
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1618
ucaagaacaa guagcugaua uugaugg 27

<210> 1619
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1619
aacaaguagc ugauauugau ggacagu 27

<210> 1620
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1620
agcugauauu gauggacagu augcaau 27

<210> 1621
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 1621
uauugaugga caguaugcaa ugacucg 27

<210> 1622
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1622
cuauguuccc ugagacauua gaugagg 27

<210> 1623
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1623
cacagaugcu gaaacaugca guuguaa 27

<210> 1624
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1624
cagaugcuga aacaugcagu uguaaac 27

<210> 1625
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1625
aacaugcagu uguaaacuug auuaacu 27

<210> 1626
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1626
caguuguaaa cuugauuaac uaucaag 27

<210> 1627
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1627
acuugauuaa cuaucaagau gaugcag 27

<210> 1628
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1628
cuugauuaac uaucaagaug augcaga 27

<210> 1629
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1629
acaaaacugc uaaaugacga ggaccag 27

<210> 1630
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1630
gugugguua auaaggcugc aguuaug 27

<210> 1631
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1631
uggugguuaa uaaggcugca guuaugg 27

<210> 1632
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1632
ugguuaauaa ggcugcaguu auggucc 27

<210> 1633
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1633
uuauggucca ucagcuuucu aaaaagg 27

<210> 1634
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1634
gaugugucu gcuauuguac guaccau 27

<210> 1635
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1635
uacguaccau gcagaauaca aaugaug 27

<210> 1636

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1636
ugcagaauac aaaugaugua gaaacag 27

<210> 1637
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1637
gcagaauaca aaugauguag aaacagc 27

<210> 1638
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1638
aaaugaugua gaaacagcuc guuguac 27

<210> 1639
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1639
augauguaga aacagcucgu uguaccg 27

<210> 1640
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1640
ugauguagaa acagcucguu guaccgc 27

<210> 1641
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1641
accaguggau ucuguguugu uuuaugc 27

<210> 1642
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1642
caguggauuc uguguuguuu uaugcca 27

<210> 1643
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1643
aguggauucu guguuguuuu augccau 27

<210> 1644
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1644
accuuuuauu acaucaagaa ggagcua 27

<210> 1645
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1645

ccuuuuauua caucaagaag gagcuaa 27

<210> 1646
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1646
gccuugcuca acaaaacaaa uguuaaa 27

<210> 1647
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1647
acaaaacaaa uguuaaaauuc uuggcua 27

<210> 1648
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1648
acaaauguua aauucuuggc uauuacg 27

<210> 1649
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1649
caaauguuaa auucuuggcu auuacga 27

<210> 1650
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1650
gacagacugc cuucaaauuu uagcuua 27

<210> 1651
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1651
agcuuuagua aauauaauga ggaccua 27

<210> 1652
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1652
uaguaaauau aaugaggacc uauacuu 27

<210> 1653
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1653
aguaaauaua augaggaccu auacuua 27

<210> 1654
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1654
uaaugaggac cuauacuuac gaaaaac 27

<210> 1655
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1655
aaugaggacc uauacuuacg aaaaacu 27

<210> 1656
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1656
augaggaccu auacuuacga aaaacua 27

<210> 1657
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1657
ugaggaccua uacuuacgaa aaacuac 27

<210> 1658
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1658
uacuuacgaa aaacuacugu ggaccac 27

<210> 1659
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1659
cucuaguaau aagccggcua uuguaga 27

<210> 1660
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1660
cuaguaauaa gccggcuauu guagaag 27

<210> 1661
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1661
agcuggugga augcaagcuu uaggacu 27

<210> 1662
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1662
gcugguggaa ugcaagcuuu aggacuu 27

<210> 1663
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1663
cugguggaau gcaagcuuua ggacuuc 27

<210> 1664
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1664
uccaagucaa cgucuuguuc agaacug 27

<210> 1665
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1665
ccaagucaac gucuuguuca gaacugu 27

<210> 1666
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1666
gucuuguuca gaacugucuu uggacuc 27

<210> 1667
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1667
uucagaugcu gcaacuaaac aggaagg 27

<210> 1668
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1668
uucuggguuc agaugauaua aaugugg 27

<210> 1669
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1669
uggguucaga ugauauaaau gugguca 27

<210> 1670
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1670
augauauaaa uguggucacc ugugcag 27

<210> 1671
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1671
ugauauaaau guggucaccu gugcagc 27

<210> 1672
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1672
ggaauucuuu cuaaccucac uugcaau 27

<210> 1673
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1673
uucuaaccuc acuugcaaua auuauaa 27

<210> 1674
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1674
ugcaauaauu auaagaacaa gaugaug 27

<210> 1675
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1675
gcaauaauua uaagaacaag augaugg 27

<210> 1676
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1676
auaauuauaa gaacaagaug auggucu 27

<210> 1677
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1677
aauuauaaga acaagaugau ggucugc 27

<210> 1678
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1678
cucugauaaa ggcuacuguu ggauuga 27

<210> 1679
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1679
auaaaggcua cuguuggauu gauucga 27

<210> 1680
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1680
gugggacaca gcagcaauuu guggagg 27

<210> 1681
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1681
cauggaagaa auaguugaag guuguac 27

<210> 1682
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1682
auggaagaaa uaguugaagg uuguacc 27

<210> 1683
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1683
uggaagaaau aguugaaggu uguaccg 27

<210> 1684
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 1684
ggaagaaaua guugaagguu guaccgg 27

<210> 1685
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1685
aaauaguuga agguuguacc ggagccc 27

<210> 1686
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1686
cucgggaugu ucacaaccga auuguua 27

<210> 1687
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1687
ucgggauguu cacaaccgaa uuguuau 27

<210> 1688
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1688
cgggauguuc acaaccgaau uguuauc 27

<210> 1689
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1689
gggauguuca caaccgaauu guuauca 27

<210> 1690
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1690
ggauguucac aaccgaauug uuaucag 27

<210> 1691
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1691
gauguucaca accgaauugu uaucaga 27

<210> 1692
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1692
ccgaauuguu aucagaggac uaaauac 27

<210> 1693
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1693
cgaauuguua ucagaggacu aaauacc 27

<210> 1694
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1694
gaauuguuau cagaggacua aauacca 27

<210> 1695
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1695
aauuguuauc agaggacuaa auaccau 27

<210> 1696
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1696
agaggacuaa auaccauucc auuguuu 27

<210> 1697
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1697
gacuaaauac cauuccauug uuugugc 27

<210> 1698
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1698
cuaaauacca uuccauuguu ugugcag 27

<210> 1699

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1699
uaaauaccau uccauuguuu gugcagc 27

<210> 1700
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1700
ccauugaaaa cauccaaaga guagcug 27

<210> 1701
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1701
cauugaaaac auccaaagag uagcugc 27

<210> 1702
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1702
aggaagcugc agaagcuauu gaagcug 27

<210> 1703
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1703
ugcagaagcu auugaagcug agggagc 27

<210> 1704
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1704
cagaagcuau ugaagcugag ggagcca 27

<210> 1705
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1705
gacagaguua cuucacucua ggaauga 27

<210> 1706
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1706
cagaguuacu ucacucuagg aaugaag 27

<210> 1707
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1707
agaguuacuu cacucuagga augaagg 27

<210> 1708
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1708

cuguuuuguu ccgaaugucu gaggaca 27

<210> 1709
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1709
guuuuguucc gaaugucuga ggacaag 27

<210> 1710
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1710
gacaagccac aagauuacaa gaaacgg 27

<210> 1711
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1711
acaagauuac aagaaacggc uuucagu 27

<210> 1712
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1712
uacaagaaac ggcuuucagu ugagcug 27

<210> 1713
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1713
ggaaugagac ugcugaucuu ggacuug 27

<210> 1714
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1714
ugcugaucuu ggacuugaua uuggugc 27

<210> 1715
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1715
ccaggaugau ccuagcuauc guucuuu 27

<210> 1716
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1716
aucguucuuu ucacucuggu ggauaug 27

<210> 1717
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1717
ccugguuuga uacugaccug uaaauca 27

<210> 1718
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1718
cugguuugau acugaccugu aaaucau 27

<210> 1719
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1719
ugguuugaua cugaccugua aaucauc 27

<210> 1720
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1720
ccuguaaauc auccuuuagg uaagaag 27

<210> 1721
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1721
cuguaaauca uccuuuaggu aagaagu 27

<210> 1722
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1722
guaaaucauc cuuuagguaa gaaguuu 27

<210> 1723
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1723
uccuuuaggu aagaaguuuu aaaaagc 27

<210> 1724
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1724
cuuuagguaa gaaguuuuaa aaagcca 27

<210> 1725
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1725
guaagaaguu uuaaaaagcc aguuugg 27

<210> 1726
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1726
gaaguuuuaa aaagccaguu uggguaa 27

<210> 1727
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1727
aaguuuuaaa aagccaguuu ggguaaa 27

<210> 1728
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1728
aguuuuaaaa agccaguuug gguaaaa 27

<210> 1729
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1729
guuuuaaaaa gccaguuugg guaaaau 27

<210> 1730
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1730
uacagaacuu cagaaagacu ugguugg 27

<210> 1731
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1731
uucagaaaga cuugguuggu agggugg 27

<210> 1732
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1732
ugggaguggu uuaggcuauu uguaaau 27

<210> 1733
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1733
gggagugguu uaggcuauuu guaaauc 27

<210> 1734
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1734
ggagugguuu aggcuauuug uaaaucu 27

<210> 1735
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1735
gagugguuua ggcuauuugu aaaucug 27

<210> 1736
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1736
gcuauuugua aaucugccac aaaaaca 27

<210> 1737
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1737
cuauuuguaa aucugccaca aaaacag 27

<210> 1738
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1738
uauuuguaaa ucugccacaa aaacagg 27

<210> 1739
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1739
guaaaucugc cacaaaaaca gguauau 27

<210> 1740
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1740
cacaaaaaca gguauauacu uugaaag 27

<210> 1741
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1741
aacagguaua uacuuugaaa ggagaug 27

<210> 1742
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1742
acagguauau acuuugaaag gagaugu 27

<210> 1743
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1743
agguauauac uuugaaagga gaugucu 27

<210> 1744
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1744
gguauauacu uugaaaggag augucuu 27

<210> 1745
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1745
guauauacuu ugaaaggaga ugucuug 27

<210> 1746
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1746
uacuuugaaa ggagaugucu uggaaca 27

<210> 1747
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 1747
aaggagaugu cuuggaacau uggaaug 27

<210> 1748
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1748
aggagauguc uuggaacauu ggaaugu 27

<210> 1749
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1749
gagaugucuu ggaacauugg aauguuc 27

<210> 1750
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1750
aacauuggaa uguucucaga uuucugg 27

<210> 1751
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1751
uuggaauguu cucagauuuc ugguugu 27

<210> 1752
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1752
ggaauguucu cagauuucug guuguua 27

<210> 1753
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1753
gaauguucuc agauuucugg uuguuau 27

<210> 1754
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1754
aauguucuca gauuucuggu uguuaug 27

<210> 1755
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1755
cucagauuuc uggguguuau gugauca 27

<210> 1756
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1756
ucagauuucu gguuguuaug ugaucau 27

<210> 1757
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1757
uucugguugu uaugugauca ugugugg 27

<210> 1758
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1758
ugguuguuau gugaucaugu guggaag 27

<210> 1759
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1759
guuaugugau caugugugga aguuauu 27

<210> 1760
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1760
uuaugugauc auguguggaa guuauua 27

<210> 1761
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1761
uaugugauca uguguggaag uuauuaa 27

<210> 1762

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1762
augugaucau guguggaagu uauuaac 27

<210> 1763
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1763
caugugugga aguuauuaac uuuaaug 27

<210> 1764
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1764
augugguggaa guuauuaacu uuaaugu 27

<210> 1765
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1765
gugguggaagu uauuaacuuu aauguuu 27

<210> 1766
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1766
uguggaaguu auuaacuuua auguuuu 27

<210> 1767
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1767
guggaaguua uuaacuuuaa uguuuuu 27

<210> 1768
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1768
uggaaguuau uaacuuuaau guuuuuu 27

<210> 1769
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1769
ggaaguuauu aacuuuaaug uuuuuug 27

<210> 1770
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1770
gaaguuauua acuuuaaugu uuuuugc 27

<210> 1771
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1771

aguuauuaac uuuaauguuu uuugcca 27

<210> 1772
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1772
guuauuaacu uuaauguuuu uugccac 27

<210> 1773
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1773
uaauguuuuu ugccacagcu uuugcaa 27

<210> 1774
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1774
aauguuuuuu gccacagcuu uugcaac 27

<210> 1775
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1775
cuuuugcaac uuaauacuca aaugagu 27

<210> 1776
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1776
ucaaaugagu aacauuugcu guuuuaa 27

<210> 1777
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1777
caaaugagua acauuugcug uuuuaaa 27

<210> 1778
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1778
aaaugaguaa cauuugcugu uuuaaac 27

<210> 1779
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1779
aaugaguaac auuugcuguu uuaaaca 27

<210> 1780
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1780
augaguaaca uuugcuguuu uaaacau 27

<210> 1781
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1781
ugaguaacau uugcuguuuu aaacauu 27

<210> 1782
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1782
aacauuugcu guuuuaaaca uuaauag 27

<210> 1783
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1783
uuuaaacauu aauagcagcc uuucucu 27

<210> 1784
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1784
uuuauacagc uguauugucu gaacuug 27

<210> 1785
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1785
gcuguauugu cugaacuugc auuguga 27

<210> 1786
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1786
uguauugucu gaacuugcau ugugauu 27

<210> 1787
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1787
uauugucuga acuugcauug ugauugg 27

<210> 1788
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1788
gucugaacuu gcauugugau uggccug 27

<210> 1789
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1789
accaagcuga guuuccuaug ggaacaa 27

<210> 1790
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1790
cugaguuucc uaugggaaca auugaag 27

<210> 1791
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1791
ugaguuuccu augggaacaa uugaagu 27

<210> 1792
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1792
uccuauggga acaauugaag uaaacuu 27

<210> 1793
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1793
ccuaugggaa caauugaagu aaacuuu 27

<210> 1794
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1794
ugggaacaau ugaaguaaac uuuuugu 27

<210> 1795
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1795
aacaauugaa guaaacuuuu uguucug 27

<210> 1796
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1796
uugaaguaaa cuuuuuguuc ugguccu 27

<210> 1797
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1797
ugaaguaaac uuuuuguucu gguccuu 27

<210> 1798
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1798
acuuuuuguu cugguccuuu uuggucg 27

<210> 1799
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1799
cuuuuuguuc ugguccuuuu uggucga 27

<210> 1800
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1800
uucugguccu uuuuggucga ggaguaa 27

<210> 1801
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1801
gucgaggagu aacaauacaa auggauu 27

<210> 1802
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1802
ucgaggagua acaauacaaa uggauuu 27

<210> 1803
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1803
cgaggaguaa caauacaaau ggauuuu 27

<210> 1804
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1804
gaggaguaac aauacaaaug gauuuug 27

<210> 1805
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1805
aggaguaaca auacaaaugg auuuugg 27

<210> 1806
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1806
aacaauacaa auggauuuug ggaguga 27

<210> 1807
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1807
uuuugggagu gacucaagaa gugaaga 27

<210> 1808
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1808
uugggaguga cucaagaagu gaagaau 27

<210> 1809
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1809
ugggagugac ucaagaagug aagaaug 27

<210> 1810
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 1810
gggagugacu caagaaguga agaaugc 27

<210> 1811
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1811
gagugacuca agaagugaag aaugcac 27

<210> 1812
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1812
caagaaguga agaaugcaca agaaugg 27

<210> 1813
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1813
gaagugaaga augcacaaga auggauc 27

<210> 1814
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1814
aagugaagaa ugcacaagaa uggauca 27

<210> 1815
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1815
agugaagaau gcacaagaau ggaucac 27

<210> 1816
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1816
caagaaugga ucacaagaug gaauuua 27

<210> 1817
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1817
agaauggauc acaagaugga auuuauc 27

<210> 1818
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1818
gaauggauca caagauggaa uuuauca 27

<210> 1819
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1819
aauggaucac aagauggaau uuaucaa 27

<210> 1820
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1820
auggaucaca agauggaauu uaucaaa 27

<210> 1821
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1821
agauggaauu uaucaaaccc uagccuu 27

<210> 1822
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1822
cccuagccuu gcuuguuaaa uuuuuuu 27

<210> 1823
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1823
ugcuuguuaa auuuuuuuuu uuuuuuu 27

<210> 1824
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1824
gcuuguuaaa uuuuuuuuuu uuuuuuu 27

<210> 1825

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1825
cuuguuaaau uuuuuuuuuu uuuuuuu 27

<210> 1826
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1826
uuguuaaauu uuuuuuuuuu uuuuuuu 27

<210> 1827
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1827
uguuaaauuu uuuuuuuuuu uuuuuua 27

<210> 1828
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1828
guuaaauuuu uuuuuuuuuu uuuuuaa 27

<210> 1829
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1829
uuaaauuuuu uuuuuuuuuu uuuuaag 27

<210> 1830
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1830
uaaauuuuuu uuuuuuuuuu uuuaaga 27

<210> 1831
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1831
aauuuuuuuu uuuuuuuuuu uaagaau 27

<210> 1832
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1832
auuuuuuuuu uuuuuuuuuu aagaaua 27

<210> 1833
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1833
uuuuuuuuuu uuuuuuuuua agaauau 27

<210> 1834
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1834

uuuuuuuuuu uuuuuuuuaa gaauauc 27

<210> 1835
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1835
uuuuuuuuuu uuuuuuuaag aauaucu 27

<210> 1836
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1836
uuuuuuuuuu uuuuuuaaga auaucug 27

<210> 1837
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1837
uuuuuuuuuu uuuuuaagaa uaucugu 27

<210> 1838
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1838
uuuuuuuuuu uaagaauauc uguaaug 27

<210> 1839
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1839
uuuuuuuuuu aagaauaucu guaaugg 27

<210> 1840
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1840
uuuuuuaaga auaucuguaa ugguacu 27

<210> 1841
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1841
uuuuuaagaa uaucuguaau gguacug 27

<210> 1842
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1842
uuuuaagaau aucuguaaug guacuga 27

<210> 1843
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1843
aagaauaucu guaaugguac ugacuuu 27

<210> 1844
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1844
uacugacuuu gcuugcuuug aaguagc 27

<210> 1845
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1845
ugcuugcuuu gaaguagcuc uuuuuuu 27

<210> 1846
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1846
gcuuugaagu agcucuuuuu uuuuuuu 27

<210> 1847
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1847
cuuugaagua gcucuuuuuu uuuuuuu 27

<210> 1848
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1848
uugaaguagc ucuuuuuuuu uuuuuuu 27

<210> 1849
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1849
ugaaguagcu cuuuuuuuuu uuuuuuu 27

<210> 1850
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1850
gaaguagcuc uuuuuuuuuu uuuuuuu 27

<210> 1851
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1851
aaguagcucu uuuuuuuuuu uuuuuuu 27

<210> 1852
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1852
cucuuuuuuu uuuuuuuuuu uuuuuuu 27

<210> 1853
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1853
ucuuuuuuuu uuuuuuuuuu uuuuuuu 27

<210> 1854
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1854
cuuuuuuuuu uuuuuuuuuu uuuuuug 27

<210> 1855
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1855
uuuuuuuuuu uuuuuuuuuu uuuuugc 27

<210> 1856
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1856
uuuuuuuuuu uuuuuuuuuu uuugcag 27

<210> 1857
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1857
uuuuuuuuuu uuuuuuuuuu uugcagu 27

<210> 1858
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1858
uuuuuuuuuu uuuuuuuugc aguaacu 27

<210> 1859
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1859
uuuuuuuuuu uuuuuuugca guaacug 27

<210> 1860
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1860
uuuuuuuuuu uuuuuugcag uaacugu 27

<210> 1861
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1861
uuuuuuuuuu uugcaguaac uguuuuu 27

<210> 1862
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1862
uuuuuuuuuu ugcaguaacu guuuuuu 27

<210> 1863
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1863
uuuuuuuuuu gcaguaacug uuuuuua 27

<210> 1864
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1864
uuuuuuuugc aguaacuguu uuuuaag 27

<210> 1865
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1865
uuuuuuugca guaacuguuu uuuaagu 27

<210> 1866
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1866
uuuuugcagu aacuguuuuu uaagucu 27

<210> 1867
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1867
aacuguuuuu uaagucucuc guagugu 27

<210> 1868
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1868
cuguuuuuua agucucucgu aguguua 27

<210> 1869
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1869
uguuuuuuaa gucucucgua guguuaa 27

<210> 1870
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1870
uuuuuuaagu cucucguagu guuaagu 27

<210> 1871
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1871
uuuaagucuc ucguaguguu aaguuau 27

<210> 1872
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1872
uuaagucucu cguaguguua aguuaua 27

<210> 1873
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 1873
cucguagugu uaaguuauag ugaauac 27

<210> 1874
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1874
ucguaguguu aaguuauagu gaauacu 27

<210> 1875
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1875
cguaguguua aguuauagug aauacug 27

<210> 1876
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1876
guaguguuaa guuauaguga auacugc 27

<210> 1877
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1877
auagugaaua cugcuacagc aauuucu 27

<210> 1878
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1878
uagugaauac ugcuacagca auuucua 27

<210> 1879
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1879
agugaauacu gcuacagcaa uuucuaa 27

<210> 1880
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1880
gcaauuucua auuuuuaaga auugagu 27

<210> 1881
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1881
uucuaauuuu uaagaauuga guaaugg 27

<210> 1882
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1882
uaauuuuuaa gaauugagua auggugu 27

<210> 1883
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1883
auuuuuaaga auugaguaau gguguag 27

<210> 1884
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1884
uuuuuaagaa uugaguaaug guguaga 27

<210> 1885
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1885
uuuaagaauu gaguaauggu guagaac 27

<210> 1886
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1886
uaagaauuga guaauggugu agaacac 27

<210> 1887
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1887
gaguaauggu guagaacacu aauucau 27

<210> 1888

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1888
augguguaga acacuaauuc auaauca 27

<210> 1889
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1889
ugguguagaa cacuaauuca uaaucac 27

<210> 1890
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1890
gguguagaac acuaauucau aaucacu 27

<210> 1891
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1891
cacuaauuca uaaucacucu aauuaau 27

<210> 1892
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1892
acuaauucau aaucacucua auuaauu 27

<210> 1893
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1893
cuaauucaua aucacucuaa uuaauug 27

<210> 1894
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1894
uucauaauca cucuaauuaa uuguaau 27

<210> 1895
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1895
ucauaaucac ucuaauuaau uguaauc 27

<210> 1896
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1896
cauaaucacu cuaauuaauu guaaucu 27

<210> 1897
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1897

cucuaauuaa uuguaaucug aauaaag 27

<210> 1898
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1898
ucuaauuaau uguaaucuga auaaagu 27

<210> 1899
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1899
auuaauugua aucugaauaa aguguaa 27

<210> 1900
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1900
uuaauuguaa ucugaauaaa guguaac 27

<210> 1901
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1901
uaauuguaau cugaauaaag uguaaca 27

<210> 1902
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1902
aauuguaauc ugaauaaagu guaacaa 27

<210> 1903
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1903
auuguaaucu gaauaaagug uaacaau 27

<210> 1904
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1904
ucugaauaaa guguaacaau uguguag 27

<210> 1905
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1905
aauaaagugu aacaauugug uagccuu 27

<210> 1906
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1906
aguguaacaa uuguguagcc uuuuugu 27

<210> 1907
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1907
acaauugugu agccuuuuug uauaaaa 27

<210> 1908
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1908
caauugugua gccuuuuugu auaaaau 27

<210> 1909
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1909
auuguguagc cuuuuuguau aaaauag 27

<210> 1910
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1910
uuguguagcc uuuuuguaua aaauaga 27

<210> 1911
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1911
guguagccuu uuuguauaaa auagaca 27

<210> 1912
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1912
ccuuuuugua uaaaauagac aaauaga 27

<210> 1913
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1913
uuuuuguaua aaauagacaa auagaaa 27

<210> 1914
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1914
uuuuguauaa aauagacaaa uagaaaa 27

<210> 1915
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1915
uuuguauaaa auagacaaau agaaaau 27

<210> 1916
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1916
uuguauaaaa uagacaaaua gaaaaug 27

<210> 1917
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1917
uguauaaaau agacaaauag aaaaugg 27

<210> 1918
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1918
auaaaauaga caaauagaaa auggucc 27

<210> 1919
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1919
uaaaauagac aaauagaaaa uggucca 27

<210> 1920
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1920
aaaauagaca aauagaaaau gguccaa 27

<210> 1921
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1921
acaaauagaa aaugguccaa uuaguuu 27

<210> 1922
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1922
caaauagaaa augguccaau uaguuuc 27

<210> 1923
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1923
aaauagaaaa ugguccaauu aguuucc 27

<210> 1924
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1924
aauagaaaau gguccaauua guuuccu 27

<210> 1925
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1925
aaauggucca auuaguuucc uuuuuaa 27

<210> 1926
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1926
aaugguccaa uuaguuuccu uuuuaau 27

<210> 1927
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1927
ccaauuaguu uccuuuuuaa uaugcuu 27

<210> 1928
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1928
caauuaguuu ccuuuuuaau augcuua 27

<210> 1929
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1929
uaguuuccuu uuuaauaugc uuaaaau 27

<210> 1930
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1930
ccuuuuuaau augcuuaaaa uaagcag 27

<210> 1931
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1931
cuuuuuaaua ugcuuaaaau aagcagg 27

<210> 1932
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1932
aauaugcuua aaauaagcag guggauc 27

<210> 1933
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1933
agcaggugga ucuauuucau guuuuug 27

<210> 1934
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1934
gcagguggau cuauuucaug uuuuuga 27

<210> 1935
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1935
agguggaucu auuucauguu uuugauc 27

<210> 1936
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 1936
gguggaucua uuucauguuu uugauca 27

<210> 1937
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1937
guggaucuau uucauguuuu ugaucaa 27

<210> 1938
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1938
ucuauuucau guuuuugauc aaaaacu 27

<210> 1939
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1939
ucauguuuuu gaucaaaaac uauuugg 27

<210> 1940
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1940
guuuuugauc aaaaacuauu ugggaua 27

<210> 1941
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1941
uuuuugauca aaaacuauuu gggauau 27

<210> 1942
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1942
uuuugaucaa aaacuauuug ggauaug 27

<210> 1943
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1943
uuugaucaaa aacuauuugg gauaugu 27

<210> 1944
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1944
aucaaaaacu auuugggaua uguaugg 27

<210> 1945
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1945
uauuugggau auguaugggu aggguaa 27

<210> 1946
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1946
auuugggaua uguaugggua ggguaaa 27

<210> 1947
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1947
uuugggauau guauggguag gguaaau 27

<210> 1948
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1948
uggguagggu aaaucaguaa gaggugu 27

<210> 1949
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1949
gguaggguaa aucaguaaga gguguua 27

<210> 1950
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1950
guaggguaaa ucaguaagag guguuau 27

<210> 1951

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1951
uaggguaaau caguaagagg uguuauu 27

<210> 1952
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1952
aggguaaauc aguaagaggu guuauuu 27

<210> 1953
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1953
ggguaaauca guaagaggug uuauuug 27

<210> 1954
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1954
aucaguaaga gguguuauuu ggaaccu 27

<210> 1955
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1955
aagagguguu auuuggaacc uuguuuu 27

<210> 1956
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1956
agagguguua uuuggaaccu uguuuug 27

<210> 1957
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1957
gagguguuau uuggaaccuu guuuugg 27

<210> 1958
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1958
guuauuugga accuuguuuu ggacagu 27

<210> 1959
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1959
uuuggaaccu uguuuuggac aguuuac 27

<210> 1960
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1960

uuggaaccuu guuuuggaca guuuacc 27

<210> 1961
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1961
uuguuuugga caguuuacca guugccu 27

<210> 1962
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1962
gacaguuuac caguugccuu uuauccc 27

<210> 1963
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1963
acaguuuacc aguugccuuu uauccca 27

<210> 1964
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1964
accaguugcc uuuuauccca aaguugu 27

<210> 1965
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1965
caguugccuu uuaucccaaa guuguug 27

<210> 1966
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1966
gccuuuuauc ccaaaguugu uguaacc 27

<210> 1967
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1967
ccuuuuaucc caaaguuguu guaaccu 27

<210> 1968
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1968
cuuuuauccc aaaguuguug uaaccug 27

<210> 1969
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1969
ccaaaguugu uguaaccugc ugugaua 27

<210> 1970
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1970
caaaguuguu guaaccugcu gugauac 27

<210> 1971
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1971
aaguuguugu aaccugcugu gauacga 27

<210> 1972
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1972
ugcugugaua cgaugcuuca agagaaa 27

<210> 1973
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1973
gcugugauac gaugcuucaa gagaaaa 27

<210> 1974
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1974
ugugauacga ugcuucaaga gaaaaug 27

<210> 1975
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1975
uucaagagaa aaugcgguua uaaaaaa 27

<210> 1976
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1976
ucaagagaaa augcgguuau aaaaaau 27

<210> 1977
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1977
caagagaaaa ugcgguuaua aaaaaug 27

<210> 1978
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1978
aagagaaaau gcgguuauaa aaaaugg 27

<210> 1979
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1979
aaaaugcggu uauaaaaaau gguucag 27

<210> 1980
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1980
gcgguuauaa aaaaugguuc agaauua 27

<210> 1981
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1981
cgguuauaaa aaaugguuca gaauuaa 27

<210> 1982
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1982
gguuauaaaa aaugguucag aauuaaa 27

<210> 1983
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1983
guuauaaaaa augguucaga auuaaac 27

<210> 1984
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1984
uuauaaaaaa ugguucagaa uuaaacu 27

<210> 1985
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1985
uauaaaaaau gguucagaau uaaacuu 27

<210> 1986
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1986
aaaaugguuc agaauuaaac uuuuaau 27

<210> 1987
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1987
aaaugguuca gaauuaaacu uuuaauu 27

<210> 1988
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1988
augguucaga auuaaacuuu uaauuca 27

<210> 1989
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1989
ccuguaaauc auccuuuagc uguauug 27

<210> 1990
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1990
cuguaaauca uccuuuagcu guauugu 27

<210> 1991
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1991
guaaaucauc cuuuagcugu auugucu 27

<210> 1992
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1992
accuguaaau cauccuuuag gaguaac 27

<210> 1993
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1993
ccuguaaauc auccuuuagg aguaaca 27

<210> 1994
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1994
cuguaaauca uccuuuagga guaacaa 27

<210> 1995
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1995
uguaaaucau ccuuuaggag uaacaau 27

<210> 1996
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1996
agcagucuua cuuggauucu ggaaucc 27

<210> 1997
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1997
cccaaguccu uuaugaaugg gagcaag 27

<210> 1998
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 1998
cgcaagagca aguagcugau auugacg 27

<210> 1999
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 1999
gcaagagcaa guagcugaua uugacgg 27

<210> 2000
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2000
agcaaguagc ugauauugac gggcagu 27

<210> 2001
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2001
ggcugaacca ucacagaugu ugaaaca 27

<210> 2002
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2002
gcugaaccau cacagauguu gaaacau 27

<210> 2003
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2003
cacagauguu gaaacaugca guuguca 27

<210> 2004
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2004
cagauguuga aacaugcagu ugucaau 27

<210> 2005
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2005
uguugaaaca ugcaguuguc aauuuga 27

<210> 2006
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2006
aacaugcagu ugucaauuug auuaacu 27

<210> 2007
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2007
caguugucaa uuugauuaac uaucagg 27

<210> 2008
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2008
ucaauuugau uaacuaucag gaugacg 27

<210> 2009
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2009
caauuugauu aacuaucagg augacgc 27

<210> 2010
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2010
agcugacaaa acugcuaaac gaugagg 27

<210> 2011
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2011
acaaaacugc uaaacgauga ggaccag 27

<210> 2012
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2012
gugguaguua auaaagcugc uguuaug 27

<210> 2013
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2013
ugguaguuaa uaaagcugcu guuaugg 27

<210> 2014

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2014
uaguuaauaa agcugcuguu auggucc 27

<210> 2015
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2015
aguuaauaaa gcugcuguua uggucca 27

<210> 2016
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2016
ugcagaauac aaaugaugua gagacag 27

<210> 2017
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2017
gcagaauaca aaugauguag agacagc 27

<210> 2018
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2018
agcuggugga cugcagaaaa ugguugc 27

<210> 2019
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2019
cugguggacu gcagaaaaug guugcuu 27

<210> 2020
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2020
aaaugguugc uuugcucaac aaaacaa 27

<210> 2021
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2021
aaugguugcu uugcucaaca aaacaaa 27

<210> 2022
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2022
acaaaacaaa cgugaaauuc uuggcua 27

<210> 2023
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2023

uucagaucuu agcuuauggc aaucaag 27

<210> 2024
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2024
aucuuagcuu auggcaauca agagagc 27

<210> 2025
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2025
auaaugagga ccuacacuua ugagaag 27

<210> 2026
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2026
uaaugaggac cuacacuuau gagaagc 27

<210> 2027
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2027
augaggaccu acacuuauga gaagcuu 27

<210> 2028
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2028
ugaggaccua cacuuaugag aagcuuc 27

<210> 2029
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2029
gacuuguuca aaacugucuu uggacuc 27

<210> 2030
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2030
acuuguucaa aacugucuuu ggacucu 27

<210> 2031
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2031
uucuggguuc cgaugauaua aaugugg 27

<210> 2032
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2032
uggguuccga ugauauaaau gugguca 27

<210> 2033
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2033
augauauaaa uguggucacc ugugcag 27

<210> 2034
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2034
ugauauaaau guggucaccu gugcagc 27

<210> 2035
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2035
cucuaaccuc acuugcaaua auuacaa 27

<210> 2036
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2036
ugcaauaauu acaaaaacaa gaugaug 27

<210> 2037
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2037
gcaauaauua caaaaacaag augaugg 27

<210> 2038
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2038
auaauuacaa aaacaagaug auggugu 27

<210> 2039
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2039
uacaaaaaca agaugauggu gugccaa 27

<210> 2040
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2040
cucugauaaa ggcaacuguu ggauuga 27

<210> 2041
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2041
auaaaggcaa cuguuggauu gauucga 27

<210> 2042
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2042
agggugcuau uccacgacua guucagc 27

<210> 2043
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2043
auggaggaga uaguagaagg guguacu 27

<210> 2044
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2044
uggaggagau aguagaaggg uguacug 27

<210> 2045
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2045
ggaggagaua guagaagggu guacugg 27

<210> 2046
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2046
agauaguaga aggguguacu ggagcuc 27

<210> 2047
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2047
cgaggacuca auaccauucc auuguuu 27

<210> 2048
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2048
cucaauacca uuccauuguu ugugcag 27

<210> 2049
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2049
ucaauaccau uccauuguuu gugcagu 27

<210> 2050
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2050
accauuccau uguuugugca guugcuu 27

<210> 2051
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2051
cauuguuugu gcaguugcuu uauucuc 27

<210> 2052
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2052
ugcaguugcu uuauucuccc auugaaa 27

<210> 2053
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2053
gcaguugcuu uauucuccca uugaaaa 27

<210> 2054
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2054
caguugcuuu auucucccau ugaaaau 27

<210> 2055
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2055
ugcuuuauuc ucccauugaa aauaucc 27

<210> 2056
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2056
gcuuuauucu cccauugaaa auaucca 27

<210> 2057
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2057
cuuuauucuc ccauugaaaa uauccaa 27

<210> 2058
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2058
ccauugaaaa uauccaaaga guagcug 27

<210> 2059
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2059
cauugaaaau auccaaagag uagcugc 27

<210> 2060
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2060
gacaagccac aggauuacaa gaagcgg 27

<210> 2061
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2061
ggaaugagac ugcagaucuu ggacugg 27

<210> 2062
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 2062
accguucuuu ucacucuggu ggauacg 27

<210> 2063
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2063
cccaggugau agcaaucagc uggccug 27

<210> 2064
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2064
ccuggguuuga uacugaccug uaaaucg 27

<210> 2065
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2065
cugguuugau acugaccugu aaaucgu 27

<210> 2066
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2066
ccuguaaauc guccuuuagg uaagaaa 27

<210> 2067
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2067
uguaaaucgu ccuuuaggua agaaagc 27

<210> 2068
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2068
uccuuuaggu aagaaagcuu auaaaag 27

<210> 2069
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2069
ccuuuaggua agaaagcuua uaaaagc 27

<210> 2070
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2070
uuagguaaga aagcuuauaa aagccag 27

<210> 2071
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2071
uaagaaagcu uauaaaagcc agugugg 27

<210> 2072
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2072
agcuuauaaa agccagugug ggugaau 27

<210> 2073
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2073
ugcagaacuc cagaaagacu ugguagg 27

<210> 2074
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2074
ggaaugguuu uaggccuguu uguaaau 27

<210> 2075
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2075
gaaugguuuu aggccuguuu guaaauc 27

<210> 2076
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2076
aaugguuuua ggccuguuug uaaaucu 27

<210> 2077

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2077
aacagauaca uaccuuggaa ggagaug 27

<210> 2078
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2078
acagauacau accuuggaag gagaugu 27

<210> 2079
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2079
uggaaggaga uguucaugug uggaagu 27

<210> 2080
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2080
aaggagaugu ucaugugugg aaguuuc 27

<210> 2081
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2081
aggagauguu caugugugga aguuucu 27

<210> 2082
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2082
ggagauguuc augugguggaa guuucuc 27

<210> 2083
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2083
gagauguuca ugugguggaag uuucuca 27

<210> 2084
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2084
caugugugga aguuucucac guugaug 27

<210> 2085
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2085
guguggaagu uucucacguu gauguuu 27

<210> 2086
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2086

uguggaaguu ucucacguug auguuuu 27

<210> 2087
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2087
guggaaguuu cucacguuga uguuuuu 27

<210> 2088
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2088
uggaaguuuc ucacguugau guuuuug 27

<210> 2089
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2089
ggaaguuucu cacguugaug uuuuugc 27

<210> 2090
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2090
aaguuucuca cguugauguu uuugcca 27

<210> 2091
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2091
uugauguuuu ugccacagcu uuugcag 27

<210> 2092
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2092
ugauguuuuu gccacagcuu uugcagc 27

<210> 2093
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2093
cuuuugcagc guuauacuca gaugagu 27

<210> 2094
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2094
ucagaugagu aacauuugcu guuuuca 27

<210> 2095
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2095
cagaugagua acauuugcug uuuucaa 27

<210> 2096
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2096
agaugaguaa cauuugcugu uuucaac 27

<210> 2097
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2097
aacauuugcu guuuucaaca uuaauag 27

<210> 2098
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2098
gccuuucucu cuauacagcu guagugu 27

<210> 2099
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2099
gucugaacgu gcauugugau uggccug 27

<210> 2100
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2100
accaagcuga guuuccuaug ggaacag 27

<210> 2101
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2101
aacagucgaa guacgcuuuu uguucug 27

<210> 2102
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2102
cgaaguacgc uuuuuguucu gguccuu 27

<210> 2103
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2103
gcuuuuuguu cugguccuuu uuggucg 27

<210> 2104
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2104
cuuuuuguuc ugguccuuuu uggucga 27

<210> 2105
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2105
uucugguccu uuuuggucga ggaguaa 27

<210> 2106
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2106
gucgaggagu aacaauacaa auggauu 27

<210> 2107
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2107
ucgaggagua acaauacaaa uggauuu 27

<210> 2108
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2108
cgaggaguaa caauacaaau ggauuug 27

<210> 2109
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2109
gaggaguaac aauacaaaug gauuugg 27

<210> 2110
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2110
aacaauacaa auggauuugg ggaguga 27

<210> 2111
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2111
gcagugaaga augcacacga auggauc 27

<210> 2112
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2112
cagugaagaa ugcacacgaa uggauca 27

<210> 2113
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2113
agugaagaau gcacacgaau ggaucac 27

<210> 2114
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2114
cccuagccuu gcuuguucuu uguuuua 27

<210> 2115
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2115
ucuuuguuuu aauaucugua guggugc 27

<210> 2116
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2116
uuuguuuuaa uaucuguagu ggugcug 27

<210> 2117
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2117
uuguuuuaau aucuguagug gugcuga 27

<210> 2118
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2118
ugcugacuuu gcuugcuuuu auuuuuu 27

<210> 2119
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2119
gacuuugcuu gcuuuuauuu uuugcag 27

<210> 2120
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2120
ugcuugcuuu uauuuuuugc aguaacu 27

<210> 2121
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2121
cuuuuauuuu uugcaguaac uguuagu 27

<210> 2122
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2122
uuuauuuuuu gcaguaacug uuaguuu 27

<210> 2123
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2123
uauuuuuugc aguaacuguu aguuuuu 27

<210> 2124
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2124
auuuuuugca guaacuguua guuuuua 27

<210> 2125
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 2125
uuuuugcagu aacuguuagu uuuuaag 27

<210> 2126
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2126
ugcaguaacu guuaguuuuu aaguagu 27

<210> 2127
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2127
caguaacugu uaguuuuuaa guagugu 27

<210> 2128
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2128
aacuguuagu uuuuaaguag uguuaug 27

<210> 2129
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2129
acuguuaguu uuuaaguagu guuaugu 27

<210> 2130
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2130
uguuaguuuu uaaguagugu uauguuc 27

<210> 2131
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2131
guuaguuuuu aaguaguguu auguucu 27

<210> 2132
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2132
uuaguuuuua aguaguguua uguucua 27

<210> 2133
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2133
uaguuuuuaa guaguguuau guucuag 27

<210> 2134
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2134
uuuaaguagu guuauguucu agugaac 27

<210> 2135
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2135
uaaguagugu uauguucuag ugaaccu 27

<210> 2136
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2136
aaguaguguu auguucuagu gaaccug 27

<210> 2137
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2137
uucugauuuc uaagaaccga guaaugg 27

<210> 2138
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2138
ugauuucuaa gaaccgagua auggugu 27

<210> 2139
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2139
ucuaagaacc gaguaauggu guagaac 27

<210> 2140

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2140
gaguaauggu guagaacacu aauucau 27

<210> 2141
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2141
augguguaga acacuaauuc auaauca 27

<210> 2142
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2142
ugguguagaa cacuaauuca uaaucac 27

<210> 2143
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2143
gguguagaac acuaauucau aaucacg 27

<210> 2144
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2144
acuaauucau aaucacgcua auuguaa 27

<210> 2145
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2145
cuaauucaua aucacgcuaa uuguaau 27

<210> 2146
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2146
uucauaauca cgcuaauugu aaucugg 27

<210> 2147
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2147
gcuaauugua aucuggagac guguaac 27

<210> 2148
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2148
uaauuguaau cuggagacgu guaacau 27

<210> 2149
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2149

aucuggagac guguaacauu guguagc 27

<210> 2150
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2150
cuggagacgu guaacauugu guagccu 27

<210> 2151
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2151
cguguaacau uguguagccu uuuguau 27

<210> 2152
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2152
guguaacauu guguagccuu uuguaua 27

<210> 2153
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2153
aacauugugu agccuuuugu auaaaua 27

<210> 2154
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2154
acauugugua gccuuuugua uaaauag 27

<210> 2155
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2155
uuguguagcc uuuuguauaa auagaca 27

<210> 2156
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2156
uguguagccu uuuguauaaa uagacag 27

<210> 2157
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2157
guguagccuu uuguauaaau agacaga 27

<210> 2158
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2158
ccuuuuguau aaauagacag auagaaa 27

<210> 2159
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2159
cuuuuguaua aauagacaga uagaaau 27

<210> 2160
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2160
uuuuguauaa auagacagau agaaaug 27

<210> 2161
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2161
uuuguauaaa uagacagaua gaaaugg 27

<210> 2162
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2162
uauaaauaga cagauagaaa ugguccg 27

<210> 2163
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2163
auaaauagac agauagaaau gguccga 27

<210> 2164
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2164
gacagauaga aaugguccga uuaguuu 27

<210> 2165
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2165
acagauagaa augguccgau uaguuuc 27

<210> 2166
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2166
cagauagaaa ugguccgauu aguuucc 27

<210> 2167
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2167
agauagaaau gguccgauua guuuccu 27

<210> 2168
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2168
aaugguccga uuaguuuccu uuuuaau 27

<210> 2169
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2169
ccgauuaguu uccuuuuuaa uaugcuu 27

<210> 2170
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2170
cgauuaguuu ccuuuuuaau augcuua 27

<210> 2171
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2171
uaguuuccuu uuuaauaugc uuaaaau 27

<210> 2172
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2172
ccuuuuuaau augcuuaaaa uaagcag 27

<210> 2173
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2173
cuuuuuaaua ugcuuaaaau aagcagg 27

<210> 2174
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2174
aauaugcuua aaauaagcag guggauc 27

<210> 2175
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2175
agcaggugga ucuauuucau guuuuug 27

<210> 2176
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2176
gcagguggau cuauuucaug uuuuuga 27

<210> 2177
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2177
agguggaucu auuucauguu uuugaac 27

<210> 2178
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2178
gguggaucua uuucauguuu uugaaca 27

<210> 2179
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2179
guggaucuau uucauguuuu ugaacaa 27

<210> 2180
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2180
ucuauuucau guuuuugaac aaaaacu 27

<210> 2181
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2181
ucauguuuuu gaacaaaaac uuuaucg 27

<210> 2182
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2182
uuuugaacaa aaacuuuauc ggggaua 27

<210> 2183
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2183
uuugaacaaa aacuuuaucg gggauac 27

<210> 2184
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2184
gcgguagggu aaaucaguaa gaggugu 27

<210> 2185
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2185
gguaggguaa aucaguaaga gguguua 27

<210> 2186
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2186
guaggguaaa ucaguaagag guguuau 27

<210> 2187
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2187
uaggguaaau caguaagagg uguuauu 27

<210> 2188
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 2188
aggguaaauc aguaagaggu guuauuu 27

<210> 2189
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2189
ggguaaauca guaagaggug uuauuug 27

<210> 2190
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2190
aucaguaaga gguguuauuu gagccuu 27

<210> 2191
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2191
uaagaggugu uauuugagcc uuguuuu 27

<210> 2192
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2192
aagagguguu auuugagccu uguuuug 27

<210> 2193
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2193
agagguguua uuugagccuu guuuugg 27

<210> 2194
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2194
gguguuauuu gagccuuguu uuggaca 27

<210> 2195
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2195
uguuauuuga gccuuguuuu ggacagu 27

<210> 2196
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2196
uuugagccuu guuuuggaca guauacc 27

<210> 2197
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2197
uuguuuugga caguauacca guugccu 27

<210> 2198
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2198
gacaguauac caguugccuu uuauccc 27

<210> 2199
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2199
acaguauacc aguugccuuu uauccca 27

<210> 2200
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2200
accaguugcc uuuuauccca aaguugu 27

<210> 2201
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2201
caguugccuu uuaucccaaa guuguug 27

<210> 2202
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2202
gccuuuuauc ccaaaguugu uguaacc 27

<210> 2203

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2203
ccuuuuaucc caaaguuguu guaaccu 27

<210> 2204
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2204
cuuuuauccc aaaguuguug uaaccug 27

<210> 2205
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2205
ccaaaguugu uguaaccugc ugugaua 27

<210> 2206
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2206
caaaguuguu guaaccugcu gugauac 27

<210> 2207
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2207
aaguuguugu aaccugcugu gauacaa 27

<210> 2208
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2208
ugugauacaa ugcuucaaca gaugcgg 27

<210> 2209
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2209
cagaugcggu uauagaaaug guucaga 27

<210> 2210
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2210
ugcgguuaua gaaaugguuc agaauua 27

<210> 2211
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2211
cgguuauaga aaugguucag aauuaaa 27

<210> 2212
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2212

gguuauagaa augguucaga auuaaac 27

<210> 2213
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2213
guuauagaaa ugguucagaa uuaaacu 27

<210> 2214
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2214
uuauagaaau gguucagaau uaaacuu 27

<210> 2215
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2215
gaaaugguuc agaauuaaac uuuuaau 27

<210> 2216
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2216
aaaugguuca gaauuaaacu uuuaauu 27

<210> 2217
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2217
augguucaga auuaaacuuu uaauuca 27

<210> 2218
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2218
cagaauuaaa cuuuuaauuc auucaaa 27

<210> 2219
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2219
auuaaacuuu uaauucauuc aaaaaaa 27

<210> 2220
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2220
aacuuuuaau ucauucaaaa aaaaaaa 27

<210> 2221
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2221
acuuuuaauu cauucaaaaa aaaaaaa 27

<210> 2222
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2222
cuuuuaauuc auucaaaaaa aaaaaaa 27

<210> 2223
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2223
uuuuaauuca uucaaaaaaa aaaaaaa 27

<210> 2224
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2224
uuuaauucau ucaaaaaaaa aaaaaaa 27

<210> 2225
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2225
uuaauucauu caaaaaaaaa aaaaaaa 27

<210> 2226
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2226
ccctgagggt atttgaagta taccata 27

<210> 2227
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2227
gagggtattt gaagtatacc atacaac 27

<210> 2228
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2228
tgaagtatac catacaactg ttttgaa 27

<210> 2229
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2229
ataccataca actgttttga aaatcca 27

<210> 2230
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2230
atacaactgt tttgaaaatc cagcgtg 27

<210> 2231
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2231
cagggatttt ctcagtcctt cactcaa 27

<210> 2232
<211> 27

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2232
cactcaagaa caagtagctg atattga 27

<210> 2233
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2233
agaacaagta gctgatattg atggaca 27

<210> 2234
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2234
aacaagtagc tgatattgat ggacagt 27

<210> 2235
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2235
tgatggacag tatgcaatga ctcgagc 27

<210> 2236
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2236
tgctatgttc cctgagacat tagatga 27

<210> 2237
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2237
tgctgaaaca tgcagttgta aacttga 27

<210> 2238
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2238
aacatgcagt tgtaaacttg attaact 27

<210> 2239
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2239
gcagttgtaa acttgattaa ctatcaa 27

<210> 2240
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2240
acttgattaa ctatcaagat gatgcag 27

<210> 2241
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2241
ccctgaactg acaaaactgc taaatga 27

<210> 2242
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2242
tcagatggtg tctgctattg tacgtac 27

<210> 2243
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2243
gtacgtacca tgcagaatac aaatgat 27

<210> 2244
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2244
attacaactc tccacaacct tttatta 27

<210> 2245
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2245
aactctccac aacctttat tacatca 27

<210> 2246
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2246
tccacaacct tttattacat caagaag 27

<210> 2247
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2247
acctttttatt acatcaagaa ggagcta 27

<210> 2248
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2248
acaaaacaaa tgttaaattc ttggcta 27

<210> 2249
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2249
attacgacag actgccttca aatttta 27

<210> 2250
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2250
gacagactgc cttcaaattt tagctta 27

<210> 2251
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 2251
agctttagta aatataatga ggaccta 27

<210> 2252
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2252
gaaaaactac tgtggaccac aagcaga 27

<210> 2253
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2253
caagtcaacg tcttgttcag aactgtc 27

<210> 2254
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2254
aacgtcttgt tcagaactgt ctttgga 27

<210> 2255
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2255
cttgttcaga actgtctttg gactctc 27

<210> 2256
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2256
tgggttcaga tgatataaat gtggtca 27

<210> 2257
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2257
attctttcta acctcacttg caataat 27

<210> 2258
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2258
acctcacttg caataattat aagaaca 27

<210> 2259
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2259
tgcaataatt ataagaacaa gatgatg 27

<210> 2260
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2260
tggtatagag gctcttgtgc gtactgt 27

<210> 2261
<211> 27
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2261
aaggctactg ttggattgat tcgaaat 27

<210> 2262
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2262
cgcatggaag aaatagttga aggttgt 27

<210> 2263
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2263
catggaagaa atagttgaag gttgtac 27

<210> 2264
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2264
ccattgaaaa catccaaaga gtagctg 27

<210> 2265
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2265
ctgaggacaa gccacaagat tacaaga 27

<210> 2266

<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2266
ttgatactga cctgtaaatc atccttt 27

<210> 2267
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2267
ctttaggtaa gaagttttaa aaagcca 27

<210> 2268
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2268
aacaggtata tactttgaaa ggagatg 27

<210> 2269
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2269
tggaagttat taactttaat gtttttt 27

<210> 2270
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2270
tgccacagct tttgcaactt aatactc 27

<210> 2271
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2271
aacatttgct gttttaaaca ttaatag 27

<210> 2272
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2272
aacaattgaa gtaaactttt tgttctg 27

<210> 2273
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2273
aaaccctagc cttgcttgtt aaatttt 27

<210> 2274
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2274
tagccttgct tgttaaattt ttttttt 27

<210> 2275
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2275

ttgaagtagc tcttttttt ttttttt 27

<210> 2276
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2276
tcgtagtgtt aagttatagt gaatact 27

<210> 2277
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2277
tagtgaatac tgctacagca atttcta 27

<210> 2278
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2278
aatactgcta cagcaatttc taatttt 27

<210> 2279
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2279
ttctaatttt taagaattga gtaatgg 27

<210> 2280
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2280
atttttaaga attgagtaat ggtgtag 27

<210> 2281
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2281
ttcataatca ctctaattaa ttgtaat 27

<210> 2282
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2282
attaattgta atctgaataa agtgtaa 27

<210> 2283
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2283
ttgtaatctg aataaagtgt aacaatt 27

<210> 2284
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2284
tctgaataaa gtgtaacaat tgtgtag 27

<210> 2285
<211> 27
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2285
gtgtagcctt tttgtataaa atagaca 27

<210> 2286
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2286
tttgtataaa atagacaaat agaaaat 27

<210> 2287
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2287
agaaaatggt ccaattagtt tcctttt 27

<210> 2288
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2288
gtccaattag tttccttttt aatatgc 27

<210> 2289
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2289
tttttgatca aaaactattt gggatat 27

<210> 2290
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2290
aagaggtgtt atttggaacc ttgtttt 27

<210> 2291
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2291
gtgttatttg gaaccttgtt ttggaca 27

<210> 2292
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2292
gaaccttgtt ttggacagtt taccagt 27

<210> 2293
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2293
gtgatacgat gcttcaagag aaaatgc 27

<210> 2294
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2294
ttcaagagaa aatgcggtta taaaaaa 27

<210> 2295
<211> 27

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2295
gagaaaatgc ggttataaaa aatggtt 27

<210> 2296
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2296
cggttataaa aaatggttca gaattaa 27

<210> 2297
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2297
aaaaaatggt tcagaattaa actttta 27

<210> 2298
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2298
cagcgtggac aatggctact caagctg 27

<210> 2299
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2299
agcgtggaca atggctactc aagctga 27

<210> 2300
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2300
gcgtggacaa tggctactca agctgat 27

<210> 2301
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2301
cgtggacaat ggctactcaa gctgatt 27

<210> 2302
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2302
gtggacaatg gctactcaag ctgattt 27

<210> 2303
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2303
tggacaatgg ctactcaagc tgatttg 27

<210> 2304
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2304
ggacaatggc tactcaagct gatttga 27

<210> 2305
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2305
gacaatggct actcaagctg atttgat 27

<210> 2306
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2306
tttgatggag ttggacatgg ccatgga 27

<210> 2307
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2307
ttgatggagt tggacatggc catggaa 27

<210> 2308
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2308
tgatggagtt ggacatggcc atggaac 27

<210> 2309
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2309
gatggagttg gacatggcca tggaacc 27

<210> 2310
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2310
atggagttgg acatggccat ggaacca 27

<210> 2311
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2311
tggagttgga catggccatg gaaccag 27

<210> 2312
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2312
ggagttggac atggccatgg aaccaga 27

<210> 2313
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2313
actctggaat ccattctggt gccacta 27

<210> 2314
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 2314
ctctggaatc cattctggtg ccactac 27

<210> 2315
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2315
tctggaatcc attctggtgc cactacc 27

<210> 2316
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2316
ctggaatcca ttctggtgcc actacca 27

<210> 2317
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2317
tggaatccat tctggtgcca ctaccac 27

<210> 2318
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2318
attagatgag ggcatgcaga tcccatc 27

<210> 2319
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2319
ttagatgagg gcatgcagat cccatct 27

<210> 2320
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2320
tagatgaggg catgcagatc ccatcta 27

<210> 2321
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2321
agatgagggc atgcagatcc catctac 27

<210> 2322
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2322
gatgagggca tgcagatccc atctaca 27

<210> 2323
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2323
atgagggcat gcagatccca tctacac 27

<210> 2324
<211> 27
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2324
atgctgctca tcccactaat gtccagc 27

<210> 2325
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2325
tgctgctcat cccactaatg tccagcg 27

<210> 2326
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2326
gctgctcatc ccactaatgt ccagcgt 27

<210> 2327
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2327
ctgctcatcc cactaatgtc cagcgtt 27

<210> 2328
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2328
tgctcatccc actaatgtcc agcgttt 27

<210> 2329

<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2329
gctcatccca ctaatgtcca gcgtttg 27

<210> 2330
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2330
ctcatcccac taatgtccag cgtttgg 27

<210> 2331
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2331
tcatcccact aatgtccagc gtttggc 27

<210> 2332
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2332
gtttggctga accatcacag atgctga 27

<210> 2333
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2333
tttggctgaa ccatcacaga tgctgaa 27

<210> 2334
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2334
ttggctgaac catcacagat gctgaaa 27

<210> 2335
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2335
cagaacttgc cacacgtgca atccctg 27

<210> 2336
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2336
agaacttgcc acacgtgcaa tccctga 27

<210> 2337
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2337
cagttatggt ccatcagctt tctaaaa 27

<210> 2338
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2338

agttatggtc catcagcttt ctaaaaa 27

<210> 2339
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2339
ctaaaaagga agcttccaga cacgcta 27

<210> 2340
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2340
taaaaaggaa gcttccagac acgctat 27

<210> 2341
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2341
gtaccatgca gaatacaaat gatgtag 27

<210> 2342
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2342
taccatgcag aatacaaatg atgtaga 27

<210> 2343
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2343
accatgcaga atacaaatga tgtagaa 27

<210> 2344
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2344
ccatgcagaa tacaaatgat gtagaaa 27

<210> 2345
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2345
catgcagaat acaaatgatg tagaaac 27

<210> 2346
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2346
atgcagaata caaatgatgt agaaaca 27

<210> 2347
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2347
tgcagaatac aaatgatgta gaaacag 27

<210> 2348
<211> 27
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2348
gcagaataca aatgatgtag aaacagc 27

<210> 2349
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2349
tactggccat ctttaagtct ggaggca 27

<210> 2350
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2350
actggccatc tttaagtctg gaggc 25

<210> 2351
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2351
aagaaggagc taaaatggca gtgcgtt 27

<210> 2352
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2352
agaaggagct aaaatggcag tgcgttt 27

<210> 2353
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2353
gaaggagcta aaatggcagt gcgttta 27

<210> 2354
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2354
aaggagctaa aatggcagtg cgtttag 27

<210> 2355
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2355
aggagctaaa atggcagtgc gtttagc 27

<210> 2356
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2356
tactgtggac cacaagcaga gtgctga 27

<210> 2357
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2357
actgtggacc acaagcagag tgctgaa 27

<210> 2358
<211> 27

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2358
ctgtggacca caagcagagt gctgaag 27

<210> 2359
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2359
tgtggaccac aagcagagtg ctgaagg 27

<210> 2360
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2360
gtggaccaca agcagagtgc tgaaggt 27

<210> 2361
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2361
tggaccacaa gcagagtgct gaaggtg 27

<210> 2362
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2362
ggaccacaag cagagtgctg aaggtgc 27

<210> 2363
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2363
gaccacaagc agagtgctga aggtgct 27

<210> 2364
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2364
accacaagca gagtgctgaa ggtgcta 27

<210> 2365
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2365
ccacaagcag agtgctgaag gtgctat 27

<210> 2366
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2366
cacaagcaga gtgctgaagg tgctatc 27

<210> 2367
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2367
acaagcagag tgctgaaggt gctatct 27

<210> 2368
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2368
caagcagagt gctgaaggtg ctatctg 27

<210> 2369
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2369
aagcagagtg ctgaaggtgc tatctgt 27

<210> 2370
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2370
agaactgtct ttggactctc aggaatc 27

<210> 2371
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2371
gaactgtctt tggactctca ggaatct 27

<210> 2372
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2372
cagatgatat aaatgtggtc acctgtg 27

<210> 2373
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2373
agatgatata aatgtggtca cctgtgc 27

<210> 2374
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2374
gatgatataa atgtggtcac ctgtgca 27

<210> 2375
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2375
atgatataaa tgtggtcacc tgtgcag 27

<210> 2376
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2376
tgatataaat gtggtcacct gtgcagc 27

<210> 2377
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 2377
gatataaatg tggtcacctg tgcagct 27

<210> 2378
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2378
atataaatgt ggtcacctgt gcagctg 27

<210> 2379
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2379
tataaatgtg gtcacctgtg cagctgg 27

<210> 2380
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2380
ataaatgtgg tcacctgtgc agctgga 27

<210> 2381
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2381
taaatgtggt cacctgtgca gctggaa 27

<210> 2382
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2382
aaatgtggtc acctgtgcag ctggaat 27

<210> 2383
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2383
aatgtggtca cctgtgcagc tggaatt 27

<210> 2384
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2384
atgtggtcac ctgtgcagct ggaattc 27

<210> 2385
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2385
tgtggtcacc tgtgcagctg gaattct 27

<210> 2386
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2386
gtggtcacct gtgcagctgg aattctt 27

<210> 2387
<211> 27
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2387
tggtcacctg tgcagctgga attcttt 27

<210> 2388
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2388
ggtcacctgt gcagctggaa ttctttc 27

<210> 2389
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2389
gtcacctgtg cagctggaat tctttct 27

<210> 2390
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2390
tcacctgtgc agctggaatt ctttcta 27

<210> 2391
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2391
cacctgtgca gctggaattc tttctaa 27

<210> 2392

<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2392
tttctaacct cacttgcaat aattata 27

<210> 2393
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2393
ttctaacctc acttgcaata attataa 27

<210> 2394
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2394
tctaacctca cttgcaataa ttataag 27

<210> 2395
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2395
ctaacctcac ttgcaataat tataaga 27

<210> 2396
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2396
taacctcact tgcaataatt ataagaa 27

<210> 2397
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2397
gggctggtga cagggaagac atcactg 27

<210> 2398
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2398
ggctggtgac agggaagaca tcactga 27

<210> 2399
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2399
gctggtgaca gggaagacat cactgag 27

<210> 2400
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2400
ctggtgacag ggaagacatc actgagc 27

<210> 2401
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2401

tggtgacagg gaagacatca ctgagcc 27

<210> 2402
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2402
ggtgacaggg aagacatcac tgagcct 27

<210> 2403
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2403
gtgacaggga agacatcact gagcctg 27

<210> 2404
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2404
tgacagggaa gacatcactg agcctgc 27

<210> 2405
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2405
gacagggaag acatcactga gcctgcc 27

<210> 2406
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2406
acagggaaga catcactgag cctgcca 27

<210> 2407
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2407
cagggaagac atcactgagc ctgcc 25

<210> 2408
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2408
agggaagaca tcactgagcc tgccatc 27

<210> 2409
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2409
gggaagacat cactgagcct gccatct 27

<210> 2410
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2410
ggaagacatc actgagcctg ccatctg 27

<210> 2411
<211> 27
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2411
gaagacatca ctgagcctgc catctgt 27

<210> 2412
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2412
aagacatcac tgagcctgcc atctgtg 27

<210> 2413
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2413
agacatcact gagcctgcca tctgtgc 27

<210> 2414
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2414
gacatcactg agcctgccat ctgtgct 27

<210> 2415
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2415
acatcactga gcctgccatc tgtgctc 27

<210> 2416
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2416
catcactgag cctgccatct gtgctct 27

<210> 2417
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2417
atcactgagc ctgccatctg tgctctt 27

<210> 2418
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2418
tcactgagcc tgccatctgt gctcttc 27

<210> 2419
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2419
cactgagcct gccatctgtg ctcttcg 27

<210> 2420
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2420
actgagcctg ccatctgtgc tcttcgt 27

<210> 2421
<211> 27

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2421
ctgagcctgc catctgtgct cttcgtc 27

<210> 2422
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2422
tgagcctgcc atctgtgctc ttcgtca 27

<210> 2423
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2423
gagcctgcca tctgtgctct tcgtc 25

<210> 2424
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2424
agcctgccat ctgtgctctt cgtcatc 27

<210> 2425
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2425
gcctgccatc tgtgctcttc gtcatct 27

<210> 2426
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2426
cctgccatct gtgctcttcg tcatctg 27

<210> 2427
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2427
ctgccatctg tgctcttcgt catctga 27

<210> 2428
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2428
tgccatctgt gctcttcgtc atctgac 27

<210> 2429
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2429
gccatctgtg ctcttcgtca tctgacc 27

<210> 2430
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2430
ccatctgtgc tcttcgtcat ctgacca 27

<210> 2431
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2431
catctgtgct cttcgtcatc tgaccag 27

<210> 2432
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2432
atctgtgctc ttcgtcatct gaccagc 27

<210> 2433
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2433
tctgtgctct tcgtcatctg accagcc 27

<210> 2434
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2434
ctgtgctctt cgtcatctga ccagccg 27

<210> 2435
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2435
tgtgctcttc gtcatctgac cagccga 27

<210> 2436
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2436
gtgctcttcg tcatctgacc agccgac 27

<210> 2437
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2437
tgctcttcgt catctgacca gccgaca 27

<210> 2438
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2438
gctcttcgtc atctgaccag ccgacac 27

<210> 2439
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2439
ctcttcgtca tctgaccagc cgacacc 27

<210> 2440
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 2440
tcttcgtcat ctgaccagcc gacacca 27

<210> 2441
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2441
tacacccacc atcccactgg cctctga 27

<210> 2442
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2442
acacccacca tcccactggc ctctgat 27

<210> 2443
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2443
cacccaccat cccactggcc tctgata 27

<210> 2444
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2444
acccaccatc ccactggcct ctgataa 27

<210> 2445
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2445
cccaccatcc cactggcctc tgataaa 27

<210> 2446
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2446
ccaccatccc actggcctct gataaag 27

<210> 2447
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2447
caccatccca ctggcctctg ataaagg 27

<210> 2448
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2448
accatcccac tggcctctga taaaggc 27

<210> 2449
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2449
ccatcccact ggcctctgat aaaggct 27

<210> 2450
<211> 27
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2450
catcccactg gcctctgata aaggcta 27

<210> 2451
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2451
atcccactgg cctctgataa aggctac 27

<210> 2452
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2452
tcccactggc ctctgataaa ggctact 27

<210> 2453
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2453
cccactggcc tctgataaag gctactg 27

<210> 2454
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2454
ccactggcct ctgataaagg ctactgt 27

<210> 2455

<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2455
ctactgttgg attgattcga aatcttg 27

<210> 2456
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2456
tactgttgga ttgattcgaa atcttgc 27

<210> 2457
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2457
taaataccat tccattgttt gtgcagc 27

<210> 2458
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2458
aaataccatt ccattgtttg tgcagct 27

<210> 2459
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2459
aataccattc cattgtttgt gcagctg 27

<210> 2460
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2460
ataccattcc attgtttgtg cagctgc 27

<210> 2461
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2461
taccattcca ttgtttgtgc agctgct 27

<210> 2462
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2462
accattccat tgtttgtgca gctgctt 27

<210> 2463
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2463
gctgctttat tctcccattg aaaac 25

<210> 2464
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2464

ctgctttatt ctcccattga aaacatc 27

<210> 2465
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2465
tgctttattc tcccattgaa aacatcc 27

<210> 2466
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2466
gctttattct cccattgaaa acatcca 27

<210> 2467
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2467
gggtcctctg tgaacttgct caggaca 27

<210> 2468
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2468
ggtcctctgt gaacttgctc aggacaa 27

<210> 2469
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2469
gtcctctgtg aacttgctca ggacaag 27

<210> 2470
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2470
tcctctgtga acttgctcag gacaagg 27

<210> 2471
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2471
cctctgtgaa cttgctcagg acaagga 27

<210> 2472
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2472
ctctgtgaac ttgctcagga caaggaa 27

<210> 2473
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2473
tctgtgaact tgctcaggac aaggaag 27

<210> 2474
<211> 27
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2474
ctgtgaactt gctcaggaca aggaagc 27

<210> 2475
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2475
tgtgaacttg ctcaggacaa ggaagct 27

<210> 2476
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2476
gtgaacttgc tcaggacaag gaagctg 27

<210> 2477
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2477
tgaacttgct caggacaagg aagctgc 27

<210> 2478
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2478
ctattgaagc tgagggagcc acagctc 27

<210> 2479
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2479
tattgaagct gagggagcca cagctcc 27

<210> 2480
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2480
attgaagctg agggagccac agctcct 27

<210> 2481
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2481
tgttccgaat gtctgaggac aagccac 27

<210> 2482
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2482
gttccgaatg tctgaggaca agccaca 27

<210> 2483
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2483
ttccgaatgt ctgaggacaa gccacaa 27

<210> 2484
<211> 27

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2484
tccgaatgtc tgaggacaag ccacaag 27

<210> 2485
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2485
ccgaatgtct gaggacaagc cacaaga 27

<210> 2486
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2486
cgaatgtctg aggacaagcc acaagat 27

<210> 2487
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2487
gaatgtctga ggacaagcca caagatt 27

<210> 2488
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2488
aatgtctgag gacaagccac aagatta 27

<210> 2489
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2489
gaacagagcc aatggcttgg aatgaga 27

<210> 2490
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2490
aacagagcca atggcttgga atgagac 27

<210> 2491
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2491
acagagccaa tggcttggaa tgagact 27

<210> 2492
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2492
cagagccaat ggcttggaat gagactg 27

<210> 2493
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2493
agagccaatg gcttggaatg agactgc 27

<210> 2494
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2494
gagccaatgg cttggaatga gactgct 27

<210> 2495
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2495
agccaatggc ttggaatgag actgctg 27

<210> 2496
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2496
gccaatggct tggaatgaga ctgctga 27

<210> 2497
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2497
ccaatggctt ggaatgagac tgctgat 27

<210> 2498
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2498
caatggcttg gaatgagact gctgatc 27

<210> 2499
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2499
aatggcttgg aatgagactg ctgatct 27

<210> 2500
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2500
cccttggata tcgccaggat gatccta 27

<210> 2501
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2501
ccttggatat cgccaggatg atcctag 27

<210> 2502
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2502
cttggatatc gccaggatga tcctagc 27

<210> 2503
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 2503
ttggatatcg ccaggatgat cctagct 27

<210> 2504
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2504
tggatatcgc caggatgatc ctagcta 27

<210> 2505
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2505
atcgttcttt tcactctggt ggatatg 27

<210> 2506
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2506
tcgttctttt cactctggtg gatatgg 27

<210> 2507
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2507
cgttcttttc actctggtgg atatggc 27

<210> 2508
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2508
gttcttttca ctctggtgga tatggcc 27

<210> 2509
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2509
ttcttttcac tctggtggat atggcca 27

<210> 2510
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2510
aacatgagat gggtggccac caccctg 27

<210> 2511
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2511
acatgagatg ggtggccacc accctgg 27

<210> 2512
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2512
catgagatgg gtggccacca ccctggt 27

<210> 2513
<211> 27
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2513
atgagatggg tggccaccac cctggtg 27

<210> 2514
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2514
tgagatgggt ggccaccacc ctggtgc 27

<210> 2515
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2515
gagatgggtg gccaccaccc tggtgct 27

<210> 2516
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2516
agatgggtgg ccaccaccct ggtgctg 27

<210> 2517
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2517
gatgggtggc caccaccctg gtgctga 27

<210> 2518

<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2518
atgggtggcc accaccctgg tgctgac 27

<210> 2519
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2519
tgggtggcca ccaccctggt gctgact 27

<210> 2520
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2520
gggtggccac caccctggtg ctgacta 27

<210> 2521
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2521
ggtggccacc accctggtgc tgactat 27

<210> 2522
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2522
gtggccacca ccctggtgct gactatc 27

<210> 2523
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2523
tggccaccac cctggtgctg actatcc 27

<210> 2524
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2524
ggccaccacc ctggtgctga ctatcca 27

<210> 2525
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2525
gccaccaccc tggtgctgac tatccag 27

<210> 2526
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2526
ccaccaccct ggtgctgact atccagt 27

<210> 2527
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2527

caccaccctg gtgctgacta tccagtt 27

<210> 2528
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2528
accaccctgg tgctgactat ccagttg 27

<210> 2529
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2529
ccaccctggt gctgactatc cagttga 27

<210> 2530
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2530
caccctggtg ctgactatcc agttgat 27

<210> 2531
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2531
accctggtgc tgactatcca gttgatg 27

<210> 2532
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2532
ccctggtgct gactatccag ttgatgg 27

<210> 2533
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2533
cctggtgctg actatccagt tgatggg 27

<210> 2534
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2534
ctggtgctga ctatccagtt gatgggc 27

<210> 2535
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2535
tggtgctgac tatccagttg atgggct 27

<210> 2536
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2536
ggtgctgact atccagttga tgggctg 27

<210> 2537
<211> 27
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2537
gtgctgacta tccagttgat gggctgc 27

<210> 2538
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2538
tgctgactat ccagttgatg ggctgcc 27

<210> 2539
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2539
gctgactatc cagttgatgg gctgcca 27

<210> 2540
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2540
ctgactatcc agttgatggg ctgccag 27

<210> 2541
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2541
tgactatcca gttgatgggc tgccaga 27

<210> 2542
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2542
gactatccag ttgatgggct gccagat 27

<210> 2543
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2543
actatccagt tgatgggctg ccagatc 27

<210> 2544
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2544
ctatccagtt gatgggctgc cagatct 27

<210> 2545
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2545
atgcccagga cctcatggat gggctgc 27

<210> 2546
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2546
tgcccaggac ctcatggatg ggctgcc 27

<210> 2547
<211> 27

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2547
gcccaggacc tcatggatgg gctgcct 27

<210> 2548
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2548
acagcaatca gctggcctgg tttgata 27

<210> 2549
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2549
cagcaatcag ctggcctggt ttgatac 27

<210> 2550
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2550
agcaatcagc tggcctggtt tgatact 27

<210> 2551
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2551
gcaatcagct ggcctggttt gatactg 27

<210> 2552
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2552
caatcagctg gcctggtttg atactga 27

<210> 2553
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2553
aatcagctgg cctggtttga tactgac 27

<210> 2554
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2554
atcagctggc ctggtttgat actgacc 27

<210> 2555
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2555
tcagctggcc tggtttgata ctgacct 27

<210> 2556
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2556
cagctggcct ggtttgatac tgacctg 27

<210> 2557
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2557
agctggcctg gtttgatact gacctgt 27

<210> 2558
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2558
gctggcctgg tttgatactg acctgta 27

<210> 2559
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2559
ctggcctggt ttgatactga cctgtaa 27

<210> 2560
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2560
tggcctggtt tgatactgac ctgtaaa 27

<210> 2561
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2561
ggcctggttt gatactgacc tgtaaat 27

<210> 2562
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2562
gcctggtttg atactgacct gtaaatc 27

<210> 2563
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2563
cctggtttga tactgacctg taaatca 27

<210> 2564
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2564
ctggtttgat actgacctgt aaatc 25

<210> 2565
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2565
tggtttgata ctgacctgta aatcatc 27

<210> 2566
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 2566
ggtttgatac tgacctgtaa atcatcc 27

<210> 2567
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2567
gtttgatact gacctgtaaa tcatcct 27

<210> 2568
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2568
tttgatactg acctgtaaat catcctt 27

<210> 2569
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2569
ttttttgcca cagcttttgc aacttaa 27

<210> 2570
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2570
aatgagtaac atttgctgtt ttaaaca 27

<210> 2571
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2571
taaacattaa tagcagcctt tctctct 27

<210> 2572
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2572
aacattaata gcagcctttc tctcttt 27

<210> 2573
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2573
cattaatagc agcctttctc tctttat 27

<210> 2574
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2574
ttaatagcag cctttctctc tttatac 27

<210> 2575
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2575
ttgcattgtg attggcctgt agagttg 27

<210> 2576
<211> 27
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2576
gcattgtgat tggcctgtag agttgct 27

<210> 2577
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2577
attgtgattg gcctgtagag ttgctga 27

<210> 2578
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2578
tgtgattggc ctgtagagtt gctgaga 27

<210> 2579
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2579
tgattggcct gtagagttgc tgagagg 27

<210> 2580
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2580
attggcctgt agagttgctg agagggc 27

<210> 2581

<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2581
tggcctgtag agttgctgag agggctc 27

<210> 2582
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2582
gcctgtagag ttgctgagag ggctcga 27

<210> 2583
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2583
ctgtagagtt gctgagaggg ctcgagg 27

<210> 2584
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2584
gggtgggctg gtatctcaga aagtgcc 27

<210> 2585
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2585
gtgggctggt atctcagaaa gtgcctg 27

<210> 2586
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2586
gggctggtat ctcagaaagt gcctgac 27

<210> 2587
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2587
gctggtatct cagaaagtgc ctgacac 27

<210> 2588
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2588
acactaacca agctgagttt cctatgg 27

<210> 2589
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2589
actaaccaag ctgagtttcc tatggga 27

<210> 2590
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2590

taaccaagct gagtttccta tgggaac 27

<210> 2591
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2591
accaagctga gtttcctatg ggaacaa 27

<210> 2592
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2592
caagctgagt ttcctatggg aacaatt 27

<210> 2593
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2593
agctgagttt cctatgggaa caattga 27

<210> 2594
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2594
aacttttgt tctggtcctt tttggtc 27

<210> 2595
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2595
cttttttgttc tggtcctttt tggtcga 27

<210> 2596
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2596
ttttgttctg gtccttttttg gtcgagg 27

<210> 2597
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2597
ttgttctggt ccttttttggt cgaggag 27

<210> 2598
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2598
gttctggtcc tttttggtcg aggagta 27

<210> 2599
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2599
tctggtcctt tttggtcgag gagtaac 27

<210> 2600
<211> 27
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2600
tggtcctttt tggtcgagga gtaacaa 27

<210> 2601
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2601
gtccttttttg gtcgaggagt aacaata 27

<210> 2602
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2602
ccttttttggt cgaggagtaa caataca 27

<210> 2603
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2603
tttttggtcg aggagtaaca atacaaa 27

<210> 2604
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2604
tttggtcgag gagtaacaat acaaatg 27

<210> 2605
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2605
tggtcgagga gtaacaatac aaatgga 27

<210> 2606
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2606
gtcgaggagt aacaatacaa atggatt 27

<210> 2607
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2607
cgaggagtaa caatacaaat ggatttt 27

<210> 2608
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2608
aggagtaaca atacaaatgg attttgg 27

<210> 2609
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2609
tttatcaaac cctagccttg cttgtta 27

<210> 2610
<211> 27

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2610
tatcaaaccc tagccttgct tgttaaa 27

<210> 2611
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2611
tcaaacccta gccttgcttg ttaaatt 27

<210> 2612
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2612
ttgagtaatg gtgtagaaca ctaattc 27

<210> 2613
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2613
gagtaatggt gtagaacact aattc 25

<210> 2614
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2614
gtaatggtgt agaacactaa ttcataa 27

<210> 2615
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2615
aatggtgtag aacactaatt cataatc 27

<210> 2616
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2616
tggtgtagaa cactaattca taatcac 27

<210> 2617
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2617
gtgtagaaca ctaattcata atcactc 27

<210> 2618
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2618
gtagaacact aattcataat cactcta 27

<210> 2619
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2619
agaacactaa ttcataatca ctctaat 27

<210> 2620
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2620
aattagtttc ctttttaata tgcttaa 27

<210> 2621
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2621
ttagtttcct ttttaatatg cttaaaa 27

<210> 2622
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2622
agtttccttt ttaatatgct taaaata 27

<210> 2623
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2623
tttccttttt aatatgctta aaataag 27

<210> 2624
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2624
tccttttaa tatgcttaaa ataagca 27

<210> 2625
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2625
ccttttaat atgcttaaaa taagcag 27

<210> 2626
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2626
cttttaata tgcttaaaat aagcagg 27

<210> 2627
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2627
ttttaatatg cttaaaataa gcaggtg 27

<210> 2628
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2628
ttaatatgct taaaataagc aggtgga 27

<210> 2629
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 2629
aatatgctta aaataagcag gtggatc 27

<210> 2630
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2630
tatgcttaaa ataagcaggt ggatcta 27

<210> 2631
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2631
tgcttaaaat aagcaggtgg atctatt 27

<210> 2632
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2632
cttaaaataa gcaggtggat ctatttc 27

<210> 2633
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2633
taaaataagc aggtggatct atttc 25

<210> 2634
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2634
aaataagcag gtggatctat ttcatgt 27

<210> 2635
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2635
ataagcaggt ggatctattt catgttt 27

<210> 2636
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2636
aagcaggtgg atctatttca tgttttt 27

<210> 2637
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2637
gcaggtggat ctatttcatg tttttga 27

<210> 2638
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2638
aggtggatct atttcatgtt tttgatc 27

<210> 2639
<211> 27
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2639
gtggatctat ttcatgtttt tgatcaa 27

<210> 2640
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2640
ggatctattt catgtttttg atcaaaa 27

<210> 2641
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2641
gggtagggta aatcagtaag aggtgtt 27

<210> 2642
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2642
gtagggtaaa tcagtaagag gtgttat 27

<210> 2643
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2643
agggtaaatc agtaagaggt gttattt 27

<210> 2644

<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2644
ggtaaatcag taagaggtgt tatttgg 27

<210> 2645
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2645
taaatcagta agaggtgtta tttggaa 27

<210> 2646
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2646
aatcagtaag aggtgttatt tggaacc 27

<210> 2647
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2647
tttaccagtt gccttttatc ccaaagt 27

<210> 2648
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2648
taccagttgc cttttatccc aaagttg 27

<210> 2649
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2649
ccagttgcct tttatcccaa agttgtt 27

<210> 2650
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2650
agttgccttt tatcccaaag ttgttgt 27

<210> 2651
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2651
ttgcctttta tcccaaagtt gttgtaa 27

<210> 2652
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2652
gccttttatc ccaaagttgt tgtaacc 27

<210> 2653
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2653

cttttatccc aaagttgttg taacctg 27

<210> 2654
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2654
tttatcccaa agttgttgta acctgct 27

<210> 2655
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2655
tatcccaaag ttgttgtaac ctgctgt 27

<210> 2656
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2656
tcccaaagtt gttgtaacct gctgtga 27

<210> 2657
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2657
ccaaagttgt tgtaacctgc tgtgata 27

<210> 2658
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2658
aaagttgttg taacctgctg tgatacg 27

<210> 2659
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2659
agttgttgta acctgctgtg atacgat 27

<210> 2660
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2660
ttgttgtaac ctgctgtgat acgatgc 27

<210> 2661
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2661
aaaaatggtt cagaattaaa cttttaa 27

<210> 2662
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2662
aaatggttca gaattaaact tttaatt 27

<210> 2663
<211> 27
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2663
atggttcaga attaaacttt taattca 27

<210> 2664
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2664
ggttcagaat taaactttta attcatt 27

<210> 2665
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2665
ttcagaatta aacttttaat tcattcg 27

<210> 2666
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2666
cagcagcagt cttacttgga ttctgga 27

<210> 2667
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2667
ttacttggat tctggaatcc attctgg 27

<210> 2668
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2668
ttgacacctc ccaagtcctt tatgaat 27

<210> 2669
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2669
cacgcaagag caagtagctg atattga 27

<210> 2670
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2670
tgccatgttc cctgagacgc tagatga 27

<210> 2671
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2671
gttgaaacat gcagttgtca atttgat 27

<210> 2672
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2672
aacatgcagt tgtcaatttg attaact 27

<210> 2673
<211> 27

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2673
cagttgtcaa tttgattaac tatcagg 27

<210> 2674
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2674
atgaggacca ggtggtagtt aataaag 27

<210> 2675
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2675
tgggtcacca gtggattctg tactgtt 27

<210> 2676
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2676
accagtggat tctgtactgt tctacgc 27

<210> 2677
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2677
tggattctgt actgttctac gccatca 27

<210> 2678
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2678
tggtggactg cagaaaatgg ttgcttt 27

<210> 2679
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2679
aacgtgaaat tcttggctat tacaaca 27

<210> 2680
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2680
cccaagtcag cgacttgttc aaaactg 27

<210> 2681
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2681
gcgacttgtt caaaactgtc tttggac 27

<210> 2682
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2682
caaaactgtc tttggactct cagaaac 27

<210> 2683
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2683
ctctctaacc tcacttgcaa taattac 27

<210> 2684
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2684
acctcacttg caataattac aaaaaca 27

<210> 2685
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2685
cagaatgccg ttcgccttca ttatgga 27

<210> 2686
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2686
tcgccttcat tatggactgc ctgttgt 27

<210> 2687
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2687
ttcattatgg actgcctgtt gtggtta 27

<210> 2688
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2688
tggactgcct gttgtggtta aactcct 27

<210> 2689
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2689
gcaactgttg gattgattcg aaacctt 27

<210> 2690
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2690
ccgaggactc aataccattc cattgtt 27

<210> 2691
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2691
ctgaggacaa gccacaggat tacaaga 27

<210> 2692
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 2692
ggatggaccc tatgatggag catgaga 27

<210> 2693
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2693
ttgatactga cctgtaaatc gtccttt 27

<210> 2694
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2694
agccagtgtg ggtgaatact ttactct 27

<210> 2695
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2695
tgccacagct tttgcagcgt tatactc 27

<210> 2696
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2696
gcttttgcag cgttatactc agatgag 27

<210> 2697
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2697
cagcgttata ctcagatgag taacatt 27

<210> 2698
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2698
acatttgctg ttttcaacat taatagc 27

<210> 2699
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2699
agctgtagtg tctgaacgtg cattgtg 27

<210> 2700
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2700
gggaacagtc gaagtacgct ttttgtt 27

<210> 2701
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2701
cagtcgaagt acgctttttg ttctggt 27

<210> 2702
<211> 27
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2702
aagtacgctt tttgttctgg tcctttt 27

<210> 2703
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2703
accctagcct tgcttgttct ttgtttt 27

<210> 2704
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2704
agccttgctt gttctttgtt ttaatat 27

<210> 2705
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2705
tgaacctgct acagcaattt ctgattt 27

<210> 2706
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2706
tacagcaatt tctgatttct aagaacc 27

<210> 2707

<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2707
cagtaagagg tgttatttga gccttgt 27

<210> 2708
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2708
gaggtgttat ttgagccttg ttttgga 27

<210> 2709
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2709
gttatttgag ccttgttttg gacagta 27

<210> 2710
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2710
ttgagccttg ttttggacag tatacca 27

<210> 2711
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2711
ttcaacagat gcggttatag aaatggt 27

<210> 2712
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2712
cggttataga aatggttcag aattaaa 27

<210> 2713
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2713
atagaaatgg ttcagaatta aactttt 27

<210> 2714
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2714
gttgtatggt atacttcaaa taccctc 27

<210> 2715
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2715
caaaacagtt gtatggtata cttcaaa 27

<210> 2716
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2716

tcaaaacagt tgtatggtat acttcaa 27

<210> 2717
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2717
tttcaaaaca gttgtatggt atacttc 27

<210> 2718
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2718
ttttcaaaac agttgtatgg tatactt 27

<210> 2719
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2719
attttcaaaa cagttgtatg gtatact 27

<210> 2720
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2720
ttgtccacgc tggattttca aaacagt 27

<210> 2721
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2721
attgtccacg ctggattttc aaaacag 27

<210> 2722
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2722
ccatcaaatc agcttgagta gccattg 27

<210> 2723
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2723
tgtccaactc catcaaatca gcttgag 27

<210> 2724
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2724
cttcctcagg attgccttta ccactca 27

<210> 2725
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2725
tcttcctcag gattgccttt accactc 27

<210> 2726
<211> 27
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2726
catcaatatc agctacttgt tcttgag 27

<210> 2727
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2727
ccatcaatat cagctacttg ttcttga 27

<210> 2728
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2728
actgtccatc aatatcagct acttgtt 27

<210> 2729
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2729
attgcatact gtccatcaat atcagct 27

<210> 2730
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2730
cgagtcattg catactgtcc atcaata 27

<210> 2731
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2731
cctcatctaa tgtctcaggg aacatag 27

<210> 2732
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2732
ttacaactgc atgtttcagc atctgtg 27

<210> 2733
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2733
gtttacaact gcatgtttca gcatctg 27

<210> 2734
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2734
agttaatcaa gtttacaact gcatgtt 27

<210> 2735
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2735
cttgatagtt aatcaagttt acaactg 27

<210> 2736
<211> 27

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2736
ctgcatcatc ttgatagtta atcaagt 27

<210> 2737
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2737
tctgcatcat cttgatagtt aatcaag 27

<210> 2738
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2738
ctggtcctcg tcatttagca gttttgt 27

<210> 2739
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2739
cataactgca gccttattaa ccaccac 27

<210> 2740
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2740
ccataactgc agccttatta accacca 27

<210> 2741
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2741
ggaccataac tgcagcctta ttaacca 27

<210> 2742
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2742
ccttttaga aagctgatgg accataa 27

<210> 2743
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2743
atggtacgta caatagcaga caccatc 27

<210> 2744
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2744
catcatttgt attctgcatg gtacgta 27

<210> 2745
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2745
ctgtttctac atcatttgta ttctgca 27

<210> 2746
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2746
gctgtttcta catcatttgt attctgc 27

<210> 2747
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2747
gtacaacgag ctgtttctac atcattt 27

<210> 2748
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2748
cggtacaacg agctgtttct acatc 25

<210> 2749
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2749
gcggtacaac gagctgtttc tacatca 27

<210> 2750
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2750
gcataaaaca acacagaatc cactggt 27

<210> 2751
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2751
tggcataaaa caacacagaa tccactg 27

<210> 2752
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2752
atggcataaa acaacacaga atccact 27

<210> 2753
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2753
tagctccttc ttgatgtaat aaaaggt 27

<210> 2754
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2754
ttagctcctt cttgatgtaa taaaagg 27

<210> 2755
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 2755
tttaacattt gttttgttga gcaaggc 27

<210> 2756
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2756
tagccaagaa tttaacattt gttttgt 27

<210> 2757
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2757
cgtaatagcc aagaatttaa catttgt 27

<210> 2758
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2758
tcgtaatagc caagaattta acatttg 27

<210> 2759
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2759
taagctaaaa tttgaaggca gtctgtc 27

<210> 2760
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2760
taggtcctca ttatatttac taaagct 27

<210> 2761
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2761
aagtataggt cctcattata tttacta 27

<210> 2762
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2762
taagtatagg tcctcattat atttact 27

<210> 2763
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2763
gtttttcgta agtataggtc ctcatta 27

<210> 2764
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2764
agtttttcgt aagtataggt cctcatt 27

<210> 2765
<211> 25
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2765
tagtttttcg taagtatagg tcctc 25

<210> 2766
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2766
gtagtttttc gtaagtatag gtcctca 27

<210> 2767
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2767
gtggtccaca gtagtttttc gtaagta 27

<210> 2768
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2768
tctacaatag ccggcttatt actagag 27

<210> 2769
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2769
cttctacaat agccggctta ttactag 27

<210> 2770

<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2770
agtcctaaag cttgcattcc accagct 27

<210> 2771
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2771
aagtcctaaa gcttgcattc caccagc 27

<210> 2772
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2772
gaagtcctaa agcttgcatt ccaccag 27

<210> 2773
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2773
cagttctgaa caagacgttg acttgga 27

<210> 2774
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2774
acagttctga acaagacgtt gacttgg 27

<210> 2775
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2775
gagtccaaag acagttctga acaagac 27

<210> 2776
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2776
ccttcctgtt tagttgcagc atctgaa 27

<210> 2777
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2777
ccacatttat atcatctgaa cccagaa 27

<210> 2778
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2778
tgaccacatt tatatcatct gaaccca 27

<210> 2779
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2779

ctgcacaggt gaccacattt atatc 25

<210> 2780
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2780
gctgcacagg tgaccacatt tatatca 27

<210> 2781
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2781
attgcaagtg aggttagaaa gaattcc 27

<210> 2782
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2782
ttataattat tgcaagtgag gttagaa 27

<210> 2783
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2783
catcatcttg ttcttataat tattgca 27

<210> 2784
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2784
ccatcatctt gttcttataa ttattgc 27

<210> 2785
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2785
agaccatcat cttgttctta taattat 27

<210> 2786
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2786
gcagaccatc atcttgttct tataatt 27

<210> 2787
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2787
tcaatccaac agtagccttt atcagag 27

<210> 2788
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2788
tcgaatcaat ccaacagtag cctttat 27

<210> 2789
<211> 27
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2789
cctccacaaa ttgctgctgt gtcccac 27

<210> 2790
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2790
gtacaacctt caactatttc ttccatg 27

<210> 2791
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2791
ggtacaacct tcaactattt cttcc 25

<210> 2792
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2792
cggtacaacc ttcaactatt tcttcca 27

<210> 2793
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2793
ccggtacaac cttcaactat ttcttcc 27

<210> 2794
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2794
gggctccggt acaaccttca actattt 27

<210> 2795
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2795
taacaattcg gttgtgaaca tcccgag 27

<210> 2796
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2796
ataacaattc ggttgtgaac atcccga 27

<210> 2797
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2797
gataacaatt cggttgtgaa catcccg 27

<210> 2798
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2798
tgataacaat tcggttgtga acatccc 27

<210> 2799
<211> 27

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2799
ctgataacaa ttcggttgtg aacatcc 27

<210> 2800
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2800
tctgataaca attcggttgt gaacatc 27

<210> 2801
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2801
gtatttagtc ctctgataac aattcgg 27

<210> 2802
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2802
ggtatttagt cctctgataa caattcg 27

<210> 2803
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2803
tggtatttag tcctctgata acaattc 27

<210> 2804
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2804
atggtattta gtcctctgat aacaatt 27

<210> 2805
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2805
aaacaatgga atggtattta gtcctct 27

<210> 2806
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2806
gcacaaacaa tggaatggta tttagtc 27

<210> 2807
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2807
ctgcacaaac aatggaatgg tatttag 27

<210> 2808
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2808
gctgcacaaa caatggaatg gtattta 27

<210> 2809
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2809
cagctactct ttggatgttt tcaatgg 27

<210> 2810
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2810
gcagctactc tttggatgtt ttcaatg 27

<210> 2811
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2811
cagcttcaat agcttctgca gcttcct 27

<210> 2812
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2812
gctccctcag cttcaatagc ttctgca 27

<210> 2813
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2813
tggctccctc agcttcaata gcttctg 27

<210> 2814
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2814
tcattcctag agtgaagtaa ctctgtc 27

<210> 2815
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2815
cttcattcct agagtgaagt aactctg 27

<210> 2816
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2816
ccttcattcc tagagtgaag taactct 27

<210> 2817
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2817
tgtcctcaga cattcggaac aaaacag 27

<210> 2818
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 2818
cttgtcctca gacattcgga acaaaac 27

<210> 2819
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2819
ccgtttcttg taatcttgtg gcttgtc 27

<210> 2820
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2820
actgaaagcc gtttcttgta atcttgt 27

<210> 2821
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2821
cagctcaact gaaagccgtt tcttgta 27

<210> 2822
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2822
caagtccaag atcagcagtc tcattcc 27

<210> 2823
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2823
gcaccaatat caagtccaag atcagca 27

<210> 2824
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2824
aaagaacgat agctaggatc atcctgg 27

<210> 2825
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2825
catatccacc agagtgaaaa gaacgat 27

<210> 2826
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2826
tgatttacag gtcagtatca aaccagg 27

<210> 2827
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2827
atgatttaca ggtcagtatc aaaccag 27

<210> 2828
<211> 27
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2828
gatgatttac aggtcagtat caaacca 27

<210> 2829
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2829
cttcttacct aaaggatgat ttacagg 27

<210> 2830
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2830
acttcttacc taaaggatga tttacag 27

<210> 2831
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2831
aaacttctta cctaaaggat gatttac 27

<210> 2832
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2832
gctttttaaa acttcttacc taaagga 27

<210> 2833

<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2833
tggcttttta aaacttctta cctaaag 27

<210> 2834
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2834
ccaaactggc tttttaaaac ttcttac 27

<210> 2835
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2835
ttacccaaac tggcttttta aaacttc 27

<210> 2836
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2836
tttacccaaa ctggcttttt aaaactt 27

<210> 2837
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2837
ttttacccaa actggctttt taaaact 27

<210> 2838
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2838
attttaccca aactggcttt ttaaaac 27

<210> 2839
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2839
ccaaccaagt ctttctgaag ttctgta 27

<210> 2840
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2840
ccaccctacc aaccaagtct ttctgaa 27

<210> 2841
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2841
atttacaaat agcctaaacc actccca 27

<210> 2842
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2842

gatttacaaa tagcctaaac cactccc 27

<210> 2843
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2843
agatttacaa atagcctaaa ccactcc 27

<210> 2844
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2844
cagatttaca aatagcctaa accactc 27

<210> 2845
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2845
tgtttttgtg gcagatttac aaatagc 27

<210> 2846
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2846
ctgtttttgt ggcagattta caaatag 27

<210> 2847
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2847
cctgtttttg tggcagattt acaaata 27

<210> 2848
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2848
atatacctgt ttttgtggca gatttac 27

<210> 2849
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2849
ctttcaaagt atatacctgt ttttgtg 27

<210> 2850
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2850
catctccttt caaagtatat acctgtt 27

<210> 2851
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2851
acatctcctt tcaaagtata tacctgt 27

<210> 2852
<211> 27
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2852
agacatctcc tttcaaagta tatacct 27

<210> 2853
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2853
aagacatctc ctttcaaagt atatacc 27

<210> 2854
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2854
caagacatct cctttcaaag tatatac 27

<210> 2855
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2855
tgttccaaga catctccttt caaagta 27

<210> 2856
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2856
cattccaatg ttccaagaca tctcctt 27

<210> 2857
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2857
acattccaat gttccaagac atctcct 27

<210> 2858
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2858
gaacattcca atgttccaag acatctc 27

<210> 2859
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2859
ccagaaatct gagaacattc caatgtt 27

<210> 2860
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2860
acaaccagaa atctgagaac attccaa 27

<210> 2861
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2861
taacaaccag aaatctgaga acattcc 27

<210> 2862
<211> 27

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2862
ataacaacca gaaatctgag aacattc 27

<210> 2863
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2863
cataacaacc agaaatctga gaacatt 27

<210> 2864
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2864
tgatcacata acaaccagaa atctgag 27

<210> 2865
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2865
atgatcacat aacaaccaga aatctga 27

<210> 2866
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2866
ccacacatga tcacataaca accagaa 27

<210> 2867
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2867
cttccacaca tgatcacata acaacca 27

<210> 2868
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2868
aataacttcc acacatgatc acataac 27

<210> 2869
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2869
taataacttc cacacatgat cacataa 27

<210> 2870
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2870
ttaataactt ccacacatga tcacata 27

<210> 2871
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2871
gttaataact tccacacatg atcac 25

<210> 2872
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2872
cattaaagtt aataacttcc acacatg 27

<210> 2873
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2873
acattaaagt taataacttc cacac 25

<210> 2874
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2874
aaacattaaa gttaataact tccacac 27

<210> 2875
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2875
aaaacattaa agttaataac ttccaca 27

<210> 2876
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2876
aaaaacatta aagttaataa cttccac 27

<210> 2877
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2877
aaaaaacatt aaagttaata acttcca 27

<210> 2878
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2878
caaaaaacat taaagttaat aacttcc 27

<210> 2879
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2879
gcaaaaaaca ttaaagttaa taacttc 27

<210> 2880
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2880
tggcaaaaaa cattaaagtt aataact 27

<210> 2881
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 2881
gtggcaaaaa acattaaagt taataac 27

<210> 2882
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2882
ttgcaaaagc tgtggcaaaa aacatta 27

<210> 2883
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2883
gttgcaaaag ctgtggcaaa aaacatt 27

<210> 2884
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2884
actcatttga gtattaagtt gcaaaag 27

<210> 2885
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2885
ttaaaacagc aaatgttact catttga 27

<210> 2886
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2886
tttaaaacag caaatgttac tcatttg 27

<210> 2887
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2887
gtttaaaaca gcaaatgtta ctcattt 27

<210> 2888
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2888
tgtttaaaac agcaaatgtt actcatt 27

<210> 2889
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2889
atgtttaaaa cagcaaatgt tactc 25

<210> 2890
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2890
aatgtttaaa acagcaaatg ttactca 27

<210> 2891
<211> 27
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2891
ctattaatgt ttaaaacagc aaatgtt 27

<210> 2892
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2892
agagaaaggc tgctattaat gtttaaa 27

<210> 2893
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2893
caagttcaga caatacagct gtataaa 27

<210> 2894
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2894
tcacaatgca agttcagaca atacagc 27

<210> 2895
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2895
aatcacaatg caagttcaga caataca 27

<210> 2896

<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2896
ccaatcacaa tgcaagttca gacaata 27

<210> 2897
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2897
caggccaatc acaatgcaag ttcagac 27

<210> 2898
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2898
ttgttcccat aggaaactca gcttggt 27

<210> 2899
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2899
cttcaattgt tcccatagga aactcag 27

<210> 2900
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2900
acttcaattg ttcccatagg aaactca 27

<210> 2901
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2901
aagtttactt caattgttcc catagga 27

<210> 2902
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2902
aaagtttact tcaattgttc ccatagg 27

<210> 2903
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2903
acaaaaagtt tacttcaatt gttccca 27

<210> 2904
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2904
cagaacaaaa agtttacttc aattgtt 27

<210> 2905
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2905

aggaccagaa caaaaagttt acttcaa 27

<210> 2906
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2906
aaggaccaga acaaaaagtt tacttca 27

<210> 2907
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2907
cgaccaaaaa ggaccagaac aaaaagt 27

<210> 2908
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2908
tcgaccaaaa aggaccagaa caaaaag 27

<210> 2909
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2909
ttactcctcg accaaaaagg accagaa 27

<210> 2910
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2910
aatccatttg tattgttact cctcgac 27

<210> 2911
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2911
aaatccattt gtattgttac tcctcga 27

<210> 2912
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2912
aaaatccatt tgtattgtta ctcctcg 27

<210> 2913
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2913
caaaatccat ttgtattgtt actcctc 27

<210> 2914
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2914
ccaaaatcca tttgtattgt tactcct 27

<210> 2915
<211> 27
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2915
tcactcccaa aatccatttg tattgtt 27

<210> 2916
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2916
tcttcacttc ttgagtcact cccaaaa 27

<210> 2917
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2917
attcttcact tcttgagtca ctcccaa 27

<210> 2918
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2918
cattcttcac ttcttgagtc actccca 27

<210> 2919
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2919
gcattcttca cttcttgagt cactccc 27

<210> 2920
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2920
gtgcattctt cacttcttga gtcactc 27

<210> 2921
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2921
ccattcttgt gcattcttca cttcttg 27

<210> 2922
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2922
gatccattct tgtgcattct tcacttc 27

<210> 2923
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2923
tgatccattc ttgtgcattc ttcactt 27

<210> 2924
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2924
gtgatccatt cttgtgcatt cttcact 27

<210> 2925
<211> 27

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2925
taaattccat cttgtgatcc attcttg 27

<210> 2926
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2926
gataaattcc atcttgtgat ccattct 27

<210> 2927
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2927
tgataaattc catcttgtga tccattc 27

<210> 2928
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2928
ttgataaatt ccatcttgtg atccatt 27

<210> 2929
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2929
tttgataaat tccatcttgt gatcc 25

<210> 2930
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2930
aaggctaggg tttgataaat tccatct 27

<210> 2931
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2931
aaaaaaattt aacaagcaag gctaggg 27

<210> 2932
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2932
aaaaaaaaaa aaaaaattta acaagca 27

<210> 2933
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2933
aaaaaaaaaa aaaaaaattt aacaagc 27

<210> 2934
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2934
aaaaaaaaaa aaaaaaaatt taacaag 27

<210> 2935
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2935
aaaaaaaaaa aaaaaaaaat ttaacaa 27

<210> 2936
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2936
taaaaaaaaa aaaaaaaaaa tttaaca 27

<210> 2937
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2937
ttaaaaaaaa aaaaaaaaaa atttaac 27

<210> 2938
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2938
cttaaaaaaa aaaaaaaaaa aatttaa 27

<210> 2939
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2939
tcttaaaaaa aaaaaaaaaa aaattta 27

<210> 2940
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2940
attcttaaaa aaaaaaaaaa aaaaatt 27

<210> 2941
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2941
tattcttaaa aaaaaaaaaa aaaaaat 27

<210> 2942
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2942
atattcttaa aaaaaaaaaa aaaaaaa 27

<210> 2943
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2943
gatattctta aaaaaaaaaa aaaaaaa 27

<210> 2944
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 2944
agatattctt aaaaaaaaaa aaaaaaa 27

<210> 2945
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2945
cagatattct taaaaaaaaa aaaaaaa 27

<210> 2946
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2946
acagatattc ttaaaaaaaa aaaaaaa 27

<210> 2947
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2947
cattacagat attcttaaaa aaaaaaa 27

<210> 2948
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2948
ccattacaga tattcttaaa aaaaaaa 27

<210> 2949
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2949
agtaccatta cagatattct taaaaaa 27

<210> 2950
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2950
cagtaccatt acagatattc ttaaaaa 27

<210> 2951
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2951
tcagtaccat tacagatatt cttaaaa 27

<210> 2952
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2952
aaagtcagta ccattacaga tattctt 27

<210> 2953
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2953
gctacttcaa agcaagcaaa gtcagta 27

<210> 2954
<211> 27
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2954
aaaaaaagag ctacttcaaa gcaagca 27

<210> 2955
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2955
aaaaaaaaaa aagagctact tcaaagc 27

<210> 2956
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2956
aaaaaaaaaa aaagagctac ttcaaag 27

<210> 2957
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2957
aaaaaaaaaa aaaaagagct acttcaa 27

<210> 2958
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2958
aaaaaaaaaa aaaaaagagc tacttca 27

<210> 2959

<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2959
aaaaaaaaaa aaaaaaagag ctacttc 27

<210> 2960
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2960
aaaaaaaaaa aaaaaaaaga gctactt 27

<210> 2961
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2961
aaaaaaaaaa aaaaaaaaaa aaaagag 27

<210> 2962
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2962
aaaaaaaaaa aaaaaaaaaa aaaaaga 27

<210> 2963
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2963
caaaaaaaaa aaaaaaaaaa aaaaaag 27

<210> 2964
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2964
gcaaaaaaaa aaaaaaaaaa aaaaaaa 27

<210> 2965
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2965
ctgcaaaaaa aaaaaaaaaa aaaaaaa 27

<210> 2966
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2966
actgcaaaaa aaaaaaaaaa aaaaaaa 27

<210> 2967
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2967
agttactgca aaaaaaaaaa aaaaaaa 27

<210> 2968
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2968

cagttactgc aaaaaaaaaa aaaaaaa 27

<210> 2969
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2969
acagttactg caaaaaaaaa aaaaaaa 27

<210> 2970
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2970
aaaaacagtt actgcaaaaa aaaaaaa 27

<210> 2971
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2971
aaaaaacagt tactgcaaaa aaaaaaa 27

<210> 2972
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2972
taaaaaacag ttactgcaaa aaaaaaa 27

<210> 2973
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2973
cttaaaaaac agttactgca aaaaaaa 27

<210> 2974
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2974
acttaaaaaa cagttactgc aaaaaaa 27

<210> 2975
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2975
agacttaaaa aacagttact gcaaaaa 27

<210> 2976
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2976
acactacgag agacttaaaa aacagtt 27

<210> 2977
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2977
taacactacg agagacttaa aaaacag 27

<210> 2978
<211> 27
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2978
ttaacactac gagagactta aaaaaca 27

<210> 2979
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2979
acttaacact acgagagact taaaaaa 27

<210> 2980
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2980
ataacttaac actacgagag acttaaa 27

<210> 2981
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2981
tataacttaa cactacgaga gacttaa 27

<210> 2982
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2982
gtattcacta taacttaaca ctacgag 27

<210> 2983
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2983
agtattcact ataacttaac actacga 27

<210> 2984
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2984
cagtattcac tataacttaa cactacg 27

<210> 2985
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2985
gcagtattca ctataactta acactac 27

<210> 2986
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2986
agaaattgct gtagcagtat tcactat 27

<210> 2987
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2987
tagaaattgc tgtagcagta ttcacta 27

<210> 2988
<211> 27

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2988
ttagaaattg ctgtagcagt attcact 27

<210> 2989
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2989
actcaattct taaaaattag aaattgc 27

<210> 2990
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2990
ccattactca attcttaaaa attagaa 27

<210> 2991
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2991
acaccattac tcaattctta aaaatta 27

<210> 2992
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2992
ctacaccatt actcaattct taaaaat 27

<210> 2993
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2993
tctacaccat tactcaattc ttaaaaa 27

<210> 2994
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2994
gttctacacc attactcaat tcttaaa 27

<210> 2995
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2995
gtgttctaca ccattactca attctta 27

<210> 2996
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2996
atgaattagt gttctacacc attactc 27

<210> 2997
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 2997
tgattatgaa ttagtgttct acacc 25

<210> 2998
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2998
gtgattatga attagtgttc tacacca 27

<210> 2999
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2999
agtgattatg aattagtgtt ctacacc 27

<210> 3000
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3000
attaattaga gtgattatga attagtg 27

<210> 3001
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3001
aattaattag agtgattatg aattagt 27

<210> 3002
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3002
caattaatta gagtgattat gaattag 27

<210> 3003
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3003
attacaatta attagagtga ttatgaa 27

<210> 3004
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3004
gattacaatt aattagagtg attatga 27

<210> 3005
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3005
agattacaat taattagagt gattatg 27

<210> 3006
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3006
ctttattcag attacaatta attagag 27

<210> 3007
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 3007
actttattca gattacaatt aattaga 27

<210> 3008
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3008
ttacacttta ttcagattac aattaat 27

<210> 3009
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3009
gttacacttt attcagatta caattaa 27

<210> 3010
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3010
tgttacactt tattcagatt acaatta 27

<210> 3011
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3011
ttgttacact ttattcagat tacaatt 27

<210> 3012
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3012
attgttacac tttattcaga ttacaat 27

<210> 3013
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3013
ctacacaatt gttacacttt attcaga 27

<210> 3014
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3014
aaggctacac aattgttaca ctttatt 27

<210> 3015
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3015
acaaaaaggc tacacaattg ttacact 27

<210> 3016
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3016
ttttatacaa aaaggctaca caattgt 27

<210> 3017
<211> 27
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3017
attttataca aaaaggctac acaattg 27

<210> 3018
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3018
ctattttata caaaaaggct acacaat 27

<210> 3019
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3019
tctattttat acaaaaaggc tacacaa 27

<210> 3020
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3020
tgtctatttt atacaaaaag gctacac 27

<210> 3021
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3021
tctatttgtc tattttatac aaaaagg 27

<210> 3022

<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3022
tttctatttg tctattttat acaaaaa 27

<210> 3023
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3023
ttttctattt gtctatttta tacaaaa 27

<210> 3024
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3024
attttctatt tgtctatttt atacaaa 27

<210> 3025
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3025
cattttctat ttgtctattt tatacaa 27

<210> 3026
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3026
ccattttcta tttgtctatt ttataca 27

<210> 3027
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3027
ggaccatttt ctatttgtct attttat 27

<210> 3028
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3028
tggaccattt tctatttgtc tatttta 27

<210> 3029
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3029
ttggaccatt ttctatttgt ctatttt 27

<210> 3030
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3030
aaactaattg gaccattttc tatttgt 27

<210> 3031
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3031

gaaactaatt ggaccatttt ctatttg 27

<210> 3032
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3032
ggaaactaat tggaccattt tctattt 27

<210> 3033
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3033
aggaaactaa ttggaccatt ttctatt 27

<210> 3034
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3034
ttaaaaagga aactaattgg accattt 27

<210> 3035
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3035
attaaaaagg aaactaattg gaccatt 27

<210> 3036
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3036
aagcatatta aaaaggaaac taattgg 27

<210> 3037
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3037
taagcatatt aaaaaggaaa ctaattg 27

<210> 3038
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3038
attttaagca tattaaaaag gaaacta 27

<210> 3039
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3039
ctgcttattt taagcatatt aaaaagg 27

<210> 3040
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3040
cctgcttatt ttaagcatat taaaaag 27

<210> 3041
<211> 27
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3041
gatccacctg cttattttaa gcatatt 27

<210> 3042
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3042
caaaaacatg aaatagatcc acctgct 27

<210> 3043
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3043
tcaaaaacat gaaatagatc cacctgc 27

<210> 3044
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3044
gatcaaaaac atgaaataga tccacct 27

<210> 3045
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3045
tgatcaaaaa catgaaatag atccacc 27

<210> 3046
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3046
ttgatcaaaa acatgaaata gatccac 27

<210> 3047
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3047
agtttttgat caaaaacatg aaataga 27

<210> 3048
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3048
ccaaatagtt tttgatcaaa aacatga 27

<210> 3049
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3049
tatcccaaat agtttttgat caaaaac 27

<210> 3050
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3050
atatcccaaa tagtttttga tcaaaaa 27

<210> 3051
<211> 27

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3051
catatcccaa atagtttttg atcaaaa 27

<210> 3052
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3052
acatatccca aatagttttt gatcaaa 27

<210> 3053
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3053
ccatacatat cccaaatagt ttttgat 27

<210> 3054
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3054
ttaccctacc catacatatc ccaaata 27

<210> 3055
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3055
tttaccctac ccatacatat cccaaat 27

<210> 3056
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3056
atttacccta cccatacata tcccaaa 27

<210> 3057
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3057
acacctctta ctgatttacc ctaccca 27

<210> 3058
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3058
taacacctct tactgattta ccctacc 27

<210> 3059
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3059
ataacacctc ttactgattt accctac 27

<210> 3060
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3060
aataacacct cttactgatt tacccta 27

<210> 3061
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3061
aaataacacc tcttactgat ttaccct 27

<210> 3062
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3062
caaataacac ctcttactga tttaccc 27

<210> 3063
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3063
aggttccaaa taacacctct tactgat 27

<210> 3064
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3064
aaaacaaggt tccaaataac acctctt 27

<210> 3065
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3065
caaaacaagg ttccaaataa cacctct 27

<210> 3066
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3066
ccaaaacaag gttccaaata acacctc 27

<210> 3067
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3067
actgtccaaa acaaggttcc aaataac 27

<210> 3068
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3068
gtaaactgtc caaaacaagg ttccaaa 27

<210> 3069
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3069
ggtaaactgt ccaaaacaag gttccaa 27

<210> 3070
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 3070
aggcaactgg taaactgtcc aaaacaa 27

<210> 3071
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3071
gggataaaag gcaactggta aactgtc 27

<210> 3072
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3072
tgggataaaa ggcaactggt aaactgt 27

<210> 3073
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3073
acaactttgg gataaaaggc aactggt 27

<210> 3074
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3074
caacaacttt gggataaaag gcaactg 27

<210> 3075
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3075
ggttacaaca actttgggat aaaaggc 27

<210> 3076
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3076
aggttacaac aactttggga taaaagg 27

<210> 3077
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3077
caggttacaa caactttggg ataaaag 27

<210> 3078
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3078
tatcacagca ggttacaaca actttgg 27

<210> 3079
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3079
gtatcacagc aggttacaac aactttg 27

<210> 3080
<211> 27
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3080
tcgtatcaca gcaggttaca acaactt 27

<210> 3081
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3081
tttctcttga agcatcgtat cacagca 27

<210> 3082
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3082
ttttctcttg aagcatcgta tcacagc 27

<210> 3083
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3083
cattttctct tgaagcatcg tatcaca 27

<210> 3084
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3084
ttttttataa ccgcattttc tcttgaa 27

<210> 3085

<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3085
atttttata accgcatttt ctcttga 27

<210> 3086
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3086
catttttat aaccgcattt tctcttg 27

<210> 3087
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3087
ccatttttta taaccgcatt ttctctt 27

<210> 3088
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3088
ctgaaccatt ttttataacc gcatttt 27

<210> 3089
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3089
taattctgaa ccatttttta taaccgc 27

<210> 3090
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3090
ttaattctga accatttttt ataaccg 27

<210> 3091
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3091
tttaattctg aaccattttt tataacc 27

<210> 3092
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3092
gtttaattct gaaccatttt ttataac 27

<210> 3093
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3093
agtttaattc tgaaccattt tttataa 27

<210> 3094
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3094

aagtttaatt ctgaaccatt ttttata 27

<210> 3095
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3095
attaaaagtt taattctgaa ccatttt 27

<210> 3096
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3096
aattaaaagt ttaattctga accattt 27

<210> 3097
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3097
tgaattaaaa gtttaattct gaacc 25

<210> 3098
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3098
caatacagct aaaggatgat ttacagg 27

<210> 3099
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3099
acaatacagc taaaggatga tttacag 27

<210> 3100
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3100
agacaataca gctaaaggat gatttac 27

<210> 3101
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3101
gttactccta aaggatgatt tacaggt 27

<210> 3102
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3102
tgttactcct aaaggatgat ttacagg 27

<210> 3103
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3103
ttgttactcc taaaggatga tttacag 27

<210> 3104
<211> 27
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3104
attgttactc ctaaaggatg atttaca 27

<210> 3105
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3105
ggattccaga atccaagtaa gactgct 27

<210> 3106
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3106
cttgctccca ttcataaagg acttggg 27

<210> 3107
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3107
cgtcaatatc agctacttgc tcttgcg 27

<210> 3108
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3108
ccgtcaatat cagctacttg ctcttgc 27

<210> 3109
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3109
actgcccgtc aatatcagct acttgct 27

<210> 3110
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3110
tgtttcaaca tctgtgatgg ttcagcc 27

<210> 3111
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3111
atgtttcaac atctgtgatg gttcagc 27

<210> 3112
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3112
tgacaactgc atgtttcaac atctgtg 27

<210> 3113
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3113
attgacaact gcatgtttca acatctg 27

<210> 3114
<211> 27

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3114
tcaaattgac aactgcatgt ttcaaca 27

<210> 3115
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3115
agttaatcaa attgacaact gcatgtt 27

<210> 3116
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3116
cctgatagtt aatcaaattg acaactg 27

<210> 3117
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3117
cgtcatcctg atagttaatc aaattga 27

<210> 3118
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3118
gcgtcatcct gatagttaat caaattg 27

<210> 3119
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3119
cctcatcgtt tagcagtttt gtcagct 27

<210> 3120
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3120
ctggtcctca tcgtttagca gttttgt 27

<210> 3121
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3121
cataacagca gctttattaa ctaccac 27

<210> 3122
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3122
ccataacagc agctttatta actacca 27

<210> 3123
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3123
ggaccataac agcagcttta ttaacta 27

<210> 3124
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3124
tggaccataa cagcagcttt attaact 27

<210> 3125
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3125
ctgtctctac atcatttgta ttctgca 27

<210> 3126
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3126
gctgtctcta catcatttgt attctgc 27

<210> 3127
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3127
gcaaccattt tctgcagtcc accagct 27

<210> 3128
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3128
aagcaaccat tttctgcagt ccaccag 27

<210> 3129
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3129
ttgttttgtt gagcaaagca accattt 27

<210> 3130
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3130
tttgttttgt tgagcaaagc aaccatt 27

<210> 3131
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3131
tagccaagaa tttcacgttt gttttgt 27

<210> 3132
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3132
cttgattgcc ataagctaag atctgaa 27

<210> 3133
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 3133
gctctcttga ttgccataag ctaagat 27

<210> 3134
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3134
cttctcataa gtgtaggtcc tcattat 27

<210> 3135
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3135
gcttctcata agtgtaggtc ctcatta 27

<210> 3136
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3136
aagcttctca taagtgtagg tcctc 25

<210> 3137
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3137
gaagcttctc ataagtgtag gtcctca 27

<210> 3138
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3138
gagtccaaag acagttttga acaagtc 27

<210> 3139
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3139
agagtccaaa gacagttttg aacaagt 27

<210> 3140
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3140
ccacatttat atcatcggaa cccagaa 27

<210> 3141
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3141
tgaccacatt tatatcatcg gaaccca 27

<210> 3142
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3142
ctgcacaggt gaccacattt atatc 25

<210> 3143
<211> 27
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3143
gctgcacagg tgaccacatt tatatca 27

<210> 3144
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3144
ttgtaattat tgcaagtgag gttagag 27

<210> 3145
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3145
catcatcttg tttttgtaat tattgca 27

<210> 3146
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3146
ccatcatctt gtttttgtaa ttattgc 27

<210> 3147
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3147
acaccatcat cttgtttttg taattat 27

<210> 3148

<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3148
ttggcacacc atcatcttgt ttttgta 27

<210> 3149
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3149
tcaatccaac agttgccttt atcagag 27

<210> 3150
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3150
tcgaatcaat ccaacagttg cctttat 27

<210> 3151
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3151
gctgaactag tcgtggaata gcaccct 27

<210> 3152
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3152
agtacaccct tctactatct cctcc 25

<210> 3153
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3153
cagtacaccc ttctactatc tcctcca 27

<210> 3154
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3154
ccagtacacc cttctactat ctcctcc 27

<210> 3155
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3155
gagctccagt acacccttct actatct 27

<210> 3156
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3156
aaacaatgga atggtattga gtcctcg 27

<210> 3157
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3157

ctgcacaaac aatggaatgg tattgag 27

<210> 3158
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3158
actgcacaaa caatggaatg gtattga 27

<210> 3159
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3159
aagcaactgc acaaacaatg gaatggt 27

<210> 3160
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3160
gagaataaag caactgcaca aacaatg 27

<210> 3161
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3161
tttcaatggg agaataaagc aactgca 27

<210> 3162
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3162
ttttcaatgg gagaataaag caactgc 27

<210> 3163
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3163
attttcaatg ggagaataaa gcaactg 27

<210> 3164
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3164
ggatattttc aatgggagaa taaagca 27

<210> 3165
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3165
tggatatttt caatgggaga ataaagc 27

<210> 3166
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3166
ttggatattt tcaatgggag aataaag 27

<210> 3167
<211> 27
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3167
cagctactct ttggatattt tcaatgg 27

<210> 3168
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3168
gcagctactc tttggatatt ttcaatg 27

<210> 3169
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3169
ccgcttcttg taatcctgtg gcttgtc 27

<210> 3170
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3170
ccagtccaag atctgcagtc tcattcc 27

<210> 3171
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3171
cgtatccacc agagtgaaaa gaacggt 27

<210> 3172
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3172
caggccagct gattgctatc acctggg 27

<210> 3173
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3173
cgatttacag gtcagtatca aaccagg 27

<210> 3174
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3174
acgatttaca ggtcagtatc aaaccag 27

<210> 3175
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3175
tttcttacct aaaggacgat ttacagg 27

<210> 3176
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3176
gctttcttac ctaaaggacg atttaca 27

<210> 3177
<211> 27

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3177
cttttataag ctttcttacc taaagga 27

<210> 3178
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3178
gcttttataa gctttcttac ctaaagg 27

<210> 3179
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3179
ctggctttta taagctttct tacctaa 27

<210> 3180
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3180
ccacactggc ttttataagc tttctta 27

<210> 3181
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3181
attcacccac actggctttt ataagct 27

<210> 3182
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3182
cctaccaagt ctttctggag ttctgca 27

<210> 3183
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3183
atttacaaac aggcctaaaa ccattcc 27

<210> 3184
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3184
gatttacaaa caggcctaaa accattc 27

<210> 3185
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3185
agatttacaa acaggcctaa aaccatt 27

<210> 3186
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3186
catctccttc caaggtatgt atctgtt 27

<210> 3187
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3187
acatctcctt ccaaggtatg tatctgt 27

<210> 3188
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3188
acttccacac atgaacatct ccttcca 27

<210> 3189
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3189
gaaacttcca cacatgaaca tctcctt 27

<210> 3190
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3190
agaaacttcc acacatgaac atctcct 27

<210> 3191
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3191
gagaaacttc cacacatgaa catctcc 27

<210> 3192
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3192
tgagaaactt ccacacatga acatctc 27

<210> 3193
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3193
catcaacgtg agaaacttcc acacatg 27

<210> 3194
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3194
aaacatcaac gtgagaaact tccacac 27

<210> 3195
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3195
aaaacatcaa cgtgagaaac ttccaca 27

<210> 3196
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 3196
aaaaacatca acgtgagaaa cttccac 27

<210> 3197
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3197
caaaaacatc aacgtgagaa acttcca 27

<210> 3198
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3198
gcaaaaacat caacgtgaga aacttcc 27

<210> 3199
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3199
tggcaaaaac atcaacgtga gaaactt 27

<210> 3200
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3200
ctgcaaaagc tgtggcaaaa acatcaa 27

<210> 3201
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3201
gctgcaaaag ctgtggcaaa aacatca 27

<210> 3202
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3202
actcatctga gtataacgct gcaaaag 27

<210> 3203
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3203
tgaaaacagc aaatgttact catctga 27

<210> 3204
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3204
ttgaaaacag caaatgttac tcatctg 27

<210> 3205
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3205
gttgaaaaca gcaaatgtta ctcatct 27

<210> 3206
<211> 27
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3206
ctattaatgt tgaaaacagc aaatgtt 27

<210> 3207
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3207
acactacagc tgtatagaga gaaaggc 27

<210> 3208
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3208
caggccaatc acaatgcacg ttcagac 27

<210> 3209
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3209
ctgttcccat aggaaactca gcttggt 27

<210> 3210
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3210
cagaacaaaa agcgtacttc gactgtt 27

<210> 3211

<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3211
aaggaccaga acaaaaagcg tacttcg 27

<210> 3212
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3212
cgaccaaaaa ggaccagaac aaaaagc 27

<210> 3213
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3213
tcgaccaaaa aggaccagaa caaaaag 27

<210> 3214
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3214
ttactcctcg accaaaaagg accagaa 27

<210> 3215
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3215
aatccatttg tattgttact cctcgac 27

<210> 3216
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3216
aaatccattt gtattgttac tcctcga 27

<210> 3217
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3217
caaatccatt tgtattgtta ctcctcg 27

<210> 3218
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3218
ccaaatccat ttgtattgtt actcctc 27

<210> 3219
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3219
tcactcccca aatccatttg tattgtt 27

<210> 3220
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3220

gatccattcg tgtgcattct tcactgc 27

<210> 3221
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3221
tgatccattc gtgtgcattc ttcactg 27

<210> 3222
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3222
gtgatccatt cgtgtgcatt cttcact 27

<210> 3223
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3223
taaaacaaag aacaagcaag gctaggg 27

<210> 3224
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3224
gcaccactac agatattaaa acaaaga 27

<210> 3225
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3225
cagcaccact acagatatta aaacaaa 27

<210> 3226
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3226
tcagcaccac tacagatatt aaaacaa 27

<210> 3227
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3227
aaaaaataaa agcaagcaaa gtcagca 27

<210> 3228
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3228
ctgcaaaaaa taaaagcaag caaagtc 27

<210> 3229
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3229
agttactgca aaaaataaaa gcaagca 27

<210> 3230
<211> 27
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3230
actaacagtt actgcaaaaa ataaaag 27

<210> 3231
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3231
aaactaacag ttactgcaaa aaataaa 27

<210> 3232
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3232
aaaaactaac agttactgca aaaaata 27

<210> 3233
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3233
taaaaactaa cagttactgc aaaaaat 27

<210> 3234
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3234
cttaaaaact aacagttact gcaaaaa 27

<210> 3235
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3235
actacttaaa aactaacagt tactgca 27

<210> 3236
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3236
acactactta aaaactaaca gttactg 27

<210> 3237
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3237
cataacacta cttaaaaact aacagtt 27

<210> 3238
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3238
acataacact acttaaaaac taacagt 27

<210> 3239
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3239
gaacataaca ctacttaaaa actaaca 27

<210> 3240
<211> 27

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3240
agaacataac actacttaaa aactaac 27

<210> 3241
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3241
tagaacataa cactacttaa aaactaa 27

<210> 3242
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3242
ctagaacata acactactta aaaacta 27

<210> 3243
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3243
gttcactaga acataacact acttaaa 27

<210> 3244
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3244
aggttcacta gaacataaca ctactta 27

<210> 3245
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3245
caggttcact agaacataac actactt 27

<210> 3246
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3246
ccattactcg gttcttagaa atcagaa 27

<210> 3247
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3247
acaccattac tcggttctta gaaatca 27

<210> 3248
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3248
gttctacacc attactcggt tcttaga 27

<210> 3249
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3249
atgaattagt gttctacacc attactc 27

<210> 3250
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3250
tgattatgaa ttagtgttct acacc 25

<210> 3251
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3251
gtgattatga attagtgttc tacacca 27

<210> 3252
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3252
cgtgattatg aattagtgtt ctacacc 27

<210> 3253
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3253
ttacaattag cgtgattatg aattagt 27

<210> 3254
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3254
attacaatta gcgtgattat gaattag 27

<210> 3255
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3255
ccagattaca attagcgtga ttatgaa 27

<210> 3256
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3256
gttacacgtc tccagattac aattagc 27

<210> 3257
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3257
atgttacacg tctccagatt acaatta 27

<210> 3258
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3258
gctacacaat gttacacgtc tccagat 27

<210> 3259
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 3259
aggctacaca atgttacacg tctccag 27

<210> 3260
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3260
atacaaaagg ctacacaatg ttacacg 27

<210> 3261
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3261
tatacaaaag gctacacaat gttacac 27

<210> 3262
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3262
tatttataca aaaggctaca caatgtt 27

<210> 3263
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3263
ctatttatac aaaaggctac acaatgt 27

<210> 3264
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3264
tgtctattta tacaaaaggc tacacaa 27

<210> 3265
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3265
ctgtctattt atacaaaagg ctacaca 27

<210> 3266
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3266
tctgtctatt tatacaaaag gctacac 27

<210> 3267
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3267
tttctatctg tctatttata caaaagg 27

<210> 3268
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3268
atttctatct gtctatttat acaaaag 27

<210> 3269
<211> 27
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3269
catttctatc tgtctattta tacaaaa 27

<210> 3270
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3270
ccatttctat ctgtctattt atacaaa 27

<210> 3271
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3271
cggaccattt ctatctgtct atttata 27

<210> 3272
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3272
tcggaccatt tctatctgtc tatttat 27

<210> 3273
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3273
aaactaatcg gaccatttct atctgtc 27

<210> 3274

<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3274
gaaactaatc ggaccatttc tatctgt 27

<210> 3275
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3275
ggaaactaat cggaccattt ctatctg 27

<210> 3276
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3276
aggaaactaa tcggaccatt tctatct 27

<210> 3277
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3277
attaaaaagg aaactaatcg gaccatt 27

<210> 3278
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3278
aagcatatta aaaaggaaac taatcgg 27

<210> 3279
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3279
taagcatatt aaaaaggaaa ctaatcg 27

<210> 3280
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3280
attttaagca tattaaaaag gaaacta 27

<210> 3281
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3281
ctgcttattt taagcatatt aaaaagg 27

<210> 3282
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3282
cctgcttatt ttaagcatat taaaaag 27

<210> 3283
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3283

gatccacctg cttattttaa gcatatt 27

<210> 3284
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3284
caaaaacatg aaatagatcc acctgct 27

<210> 3285
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3285
tcaaaaacat gaaatagatc cacctgc 27

<210> 3286
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3286
gttcaaaaac atgaaataga tccacct 27

<210> 3287
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3287
tgttcaaaaa catgaaatag atccacc 27

<210> 3288
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3288
ttgttcaaaa acatgaaata gatccac 27

<210> 3289
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3289
agtttttgtt caaaaacatg aaataga 27

<210> 3290
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3290
cgataaagtt tttgttcaaa aacatga 27

<210> 3291
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3291
tatccccgat aaagtttttg ttcaaaa 27

<210> 3292
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3292
gtatccccga taaagttttt gttcaaa 27

<210> 3293
<211> 27
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3293
acacctctta ctgatttacc ctaccgc 27

<210> 3294
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3294
taacacctct tactgattta ccctacc 27

<210> 3295
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3295
ataacacctc ttactgattt accctac 27

<210> 3296
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3296
aataacacct cttactgatt tacccta 27

<210> 3297
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3297
aaataacacc tcttactgat ttaccct 27

<210> 3298
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3298
caaataacac ctcttactga tttaccc 27

<210> 3299
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3299
aaggctcaaa taacacctct tactgat 27

<210> 3300
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3300
aaaacaaggc tcaaataaca cctctta 27

<210> 3301
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3301
caaaacaagg ctcaaataac acctctt 27

<210> 3302
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3302
ccaaaacaag gctcaaataa cacctct 27

<210> 3303
<211> 27

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3303
tgtccaaaac aaggctcaaa taacacc 27

<210> 3304
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3304
actgtccaaa acaaggctca aataaca 27

<210> 3305
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3305
ggtatactgt ccaaaacaag gctcaaa 27

<210> 3306
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3306
aggcaactgg tatactgtcc aaaacaa 27

<210> 3307
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3307
gggataaaag gcaactggta tactgtc 27

<210> 3308
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3308
tgggataaaa ggcaactggt atactgt 27

<210> 3309
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3309
acaactttgg gataaaaggc aactggt 27

<210> 3310
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3310
caacaacttt gggataaaag gcaactg 27

<210> 3311
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3311
ggttacaaca actttgggat aaaaggc 27

<210> 3312
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3312
aggttacaac aactttggga taaaagg 27

<210> 3313
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3313
caggttacaa caactttggg ataaaag 27

<210> 3314
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3314
tatcacagca ggttacaaca actttgg 27

<210> 3315
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3315
gtatcacagc aggttacaac aactttg 27

<210> 3316
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3316
ttgtatcaca gcaggttaca acaactt 27

<210> 3317
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3317
ccgcatctgt tgaagcattg tatcaca 27

<210> 3318
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3318
tctgaaccat ttctataacc gcatctg 27

<210> 3319
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3319
taattctgaa ccatttctat aaccgca 27

<210> 3320
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3320
tttaattctg aaccatttct ataaccg 27

<210> 3321
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3321
gtttaattct gaaccatttc tataacc 27

<210> 3322
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 3322
agtttaattc tgaaccattt ctataac 27

<210> 3323
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3323
aagtttaatt ctgaaccatt tctataa 27

<210> 3324
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3324
attaaaagtt taattctgaa ccatttc 27

<210> 3325
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3325
aattaaaagt ttaattctga accattt 27

<210> 3326
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3326
tgaattaaaa gtttaattct gaacc 25

<210> 3327
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3327
tttgaatgaa ttaaaagttt aattctg 27

<210> 3328
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3328
ttttttgaa tgaattaaaa gtttaat 27

<210> 3329
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3329
ttttttttt tgaatgaatt aaaagtt 27

<210> 3330
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3330
ttttttttt ttgaatgaat taaaagt 27

<210> 3331
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3331
ttttttttt tttgaatgaa ttaaaag 27

<210> 3332
<211> 27
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3332
ttttttttt ttttgaatga attaaaa 27

<210> 3333
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3333
ttttttttt tttttgaatg aattaaa 27

<210> 3334
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3334
ttttttttt ttttttgaat gaattaa 27

<210> 3335
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3335
cugaggguau uugaaguaua ccaua 25

<210> 3336
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3336
ggguauuuga aguauaccau acaac 25

<210> 3337

<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3337
aaguauacca uacaacuguu uugaa 25

<210> 3338
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3338
accauacaac uguuuugaaa aucca 25

<210> 3339
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3339
acaacuguuu ugaaaaucca gcgug 25

<210> 3340
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3340
gggauuuucu caguccuuca cucaa 25

<210> 3341
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3341
cucaagaaca aguagcugau auuga 25

<210> 3342
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3342
aacaaguagc ugauauugau ggaca 25

<210> 3343
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3343
caaguagcug auauugaugg acagu 25

<210> 3344
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3344
auggacagua ugcaaugacu cgagc 25

<210> 3345
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3345
cuauguuccc ugagacauua gauga 25

<210> 3346
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3346

cugaaacaug caguuguaaa cuuga 25

<210> 3347
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3347
caugcaguug uaaacuugau uaacu 25

<210> 3348
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3348
aguuguaaac uugauuaacu aucaa 25

<210> 3349
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3349
uugauuaacu aucaagauga ugcag 25

<210> 3350
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3350
cugaacugac aaaacugcua aauga 25

<210> 3351
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3351
agaugguguc ugcuauugua cguac 25

<210> 3352
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3352
acguaccaug cagaauacaa augau 25

<210> 3353
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3353
uacaacucuc cacaaccuuu uauua 25

<210> 3354
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3354
cucuccacaa ccuuuuauua cauca 25

<210> 3355
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3355
cacaaccuuu uauuacauca agaag 25

<210> 3356
<211> 25
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3356
cuuuuauuac aucaagaagg agcua 25

<210> 3357
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3357
aaaacaaaug uuaaauucuu ggcua 25

<210> 3358
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3358
uacgacagac ugccuucaaa uuuua 25

<210> 3359
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3359
cagacugccu ucaaauuuua gcuua 25

<210> 3360
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3360
cuuuaguaaa uauaaugagg accua 25

<210> 3361
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3361
aaaacuacug uggaccacaa gcaga 25

<210> 3362
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3362
agucaacguc uuguucagaa cuguc 25

<210> 3363
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3363
cgucuuguuc agaacugucu uugga 25

<210> 3364
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3364
uguucagaac ugucuuugga cucuc 25

<210> 3365
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3365
gguucagaug auauaaaugu gguca 25

<210> 3366
<211> 25

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3366
ucuuucuaac cucacuugca auaau 25

<210> 3367
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3367
cucacuugca auaauuauaa gaaca 25

<210> 3368
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3368
caauaauuau aagaacaaga ugaug 25

<210> 3369
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3369
guauagaggc ucuugugcgu acugu 25

<210> 3370
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3370
ggcuacuguu ggauugauuc gaaau 25

<210> 3371
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3371
cauggaagaa auaguugaag guugu 25

<210> 3372
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3372
uggaagaaau aguugaaggu uguac 25

<210> 3373
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3373
auugaaaaca uccaaagagu agcug 25

<210> 3374
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3374
gaggacaagc cacaagauua caaga 25

<210> 3375
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3375
gauacugacc uguaaaucau ccuuu 25

<210> 3376
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3376
uuagguaaga aguuuuaaaa agcca 25

<210> 3377
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3377
cagguauaua cuuugaaagg agaug 25

<210> 3378
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3378
gaaguuauua acuuuaaugu uuuuu 25

<210> 3379
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3379
ccacagcuuu ugcaacuuaa uacuc 25

<210> 3380
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3380
cauuugcugu uuuaaacauu aauag 25

<210> 3381
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3381
caauugaagu aaacuuuuug uucug 25

<210> 3382
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3382
acccuagccu ugcuuguuaa auuuu 25

<210> 3383
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3383
gccuugcuug uuaaauuuuu uuuuu 25

<210> 3384
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3384
gaaguagcuc uuuuuuuuuu uuuuu 25

<210> 3385
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 3385
guaguguuaa guuauaguga auacu 25

<210> 3386
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3386
gugaauacug cuacagcaau uucua 25

<210> 3387
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3387
uacugcuaca gcaauuucua auuuu 25

<210> 3388
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3388
cuaauuuuua agaauugagu aaugg 25

<210> 3389
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3389
uuuuaagaau ugaguaaugg uguag 25

<210> 3390
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3390
cauaaucacu cuaauuaauu guaau 25

<210> 3391
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3391
uaauuguaau cugaauaaag uguaa 25

<210> 3392
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3392
guaaucugaa uaaaguguaa caauu 25

<210> 3393
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3393
ugaauaaagu guaacaauug uguag 25

<210> 3394
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3394
guagccuuuu uguauaaaau agaca 25

<210> 3395
<211> 25
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3395
uguauaaaau agacaaauag aaaau 25

<210> 3396
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3396
aaaauggucc aauuaguuuc cuuuu 25

<210> 3397
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3397
ccaauuaguu uccuuuuuaa uaugc 25

<210> 3398
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3398
uuugaucaaa aacuauuugg gauau 25

<210> 3399
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3399
gagguguuau uuggaaccuu guuuu 25

<210> 3400

<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3400
guuauuugga accuuguuuu ggaca 25

<210> 3401
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3401
accuuguuuu ggacaguuua ccagu 25

<210> 3402
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3402
gauacgaugc uucaagagaa aaugc 25

<210> 3403
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3403
caagagaaaa ugcgguuaua aaaaa 25

<210> 3404
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3404
gaaaaugcgg uuauaaaaaa ugguu 25

<210> 3405
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3405
guuauaaaaa augguucaga auuaa 25

<210> 3406
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3406
aaaaugguuc agaauuaaac uuuua 25

<210> 3407
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3407
gcguggacaa uggcuacuca agcug 25

<210> 3408
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3408
cguggacaau ggcuacucaa gcuga 25

<210> 3409
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3409

guggacaaug gcuacucaag cugau 25

<210> 3410
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3410
uggacaaugg cuacucaagc ugauu 25

<210> 3411
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3411
ggacaauggc uacucaagcu gauuu 25

<210> 3412
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3412
gacaauggcu acucaagcug auuug 25

<210> 3413
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3413
acaauggcua cucaagcuga uuuga 25

<210> 3414
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3414
caauggcuac ucaagcugau uugau 25

<210> 3415
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3415
ugauggaguu ggacauggcc augga 25

<210> 3416
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3416
gauggaguug gacauggcca uggaa 25

<210> 3417
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3417
auggaguugg acauggccau ggaac 25

<210> 3418
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3418
uggaguugga cauggccaug gaacc 25

<210> 3419
<211> 25
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3419
ggaguuggac auggccaugg aacca 25

<210> 3420
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3420
gaguuggaca uggccaugga accag 25

<210> 3421
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3421
aguuggacau ggccauggaa ccaga 25

<210> 3422
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3422
ucuggaaucc auucuggugc cacua 25

<210> 3423
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3423
cuggaaucca uucuggugcc acuac 25

<210> 3424
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3424
uggaauccau ucuggugcca cuacc 25

<210> 3425
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3425
ggaauccauu cuggugccac uacca 25

<210> 3426
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3426
gaauccauuc uggugccacu accac 25

<210> 3427
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3427
uagaugaggg caugcagauc ccauc 25

<210> 3428
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3428
agaugagggc augcagaucc caucu 25

<210> 3429
<211> 25

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3429
gaugagggca ugcagauccc aucua 25

<210> 3430
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3430
augagggcau gcagauccca ucuac 25

<210> 3431
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3431
ugagggcaug cagaucccau cuaca 25

<210> 3432
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3432
gagggcaugc agaucccauc uacac 25

<210> 3433
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3433
gcugcucauc ccacuaaugu ccagc 25

<210> 3434
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3434
cugcucaucc cacuaauguc cagcg 25

<210> 3435
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3435
ugcucauccc acuaaugucc agcgu 25

<210> 3436
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3436
gcucauccca cuaaugucca gcguu 25

<210> 3437
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3437
cucaucccac uaauguccag cguuu 25

<210> 3438
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3438
ucaucccacu aauguccagc guuug 25

<210> 3439
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3439
caucccacua auguccagcg uuugg 25

<210> 3440
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3440
aucccacuaa uguccagcgu uuggc 25

<210> 3441
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3441
uuggcugaac caucacagau gcuga 25

<210> 3442
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3442
uggcugaacc aucacagaug cugaa 25

<210> 3443
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3443
ggcugaacca ucacagaugc ugaaa 25

<210> 3444
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3444
gaacuugcca cacgugcaau cccug 25

<210> 3445
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3445
aacuugccac acgugcaauc ccuga 25

<210> 3446
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3446
guuauggucc aucagcuuuc uaaaa 25

<210> 3447
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3447
uuauggucca ucagcuuucu aaaaa 25

<210> 3448
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 3448
aaaaaggaag cuuccagaca cgcua 25

<210> 3449
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3449
aaaaggaagc uuccagacac gcuau 25

<210> 3450
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3450
accaugcaga auacaaauga uguag 25

<210> 3451
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3451
ccaugcagaa uacaaaugau guaga 25

<210> 3452
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3452
caugcagaau acaaaugaug uagaa 25

<210> 3453
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3453
augcagaaua caaaugaugu agaaa 25

<210> 3454
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3454
ugcagaauac aaaugaugua gaaac 25

<210> 3455
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3455
gcagaauaca aaugauguag aaaca 25

<210> 3456
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3456
cagaauacaa augauguaga aacag 25

<210> 3457
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3457
agaauacaaa ugauguagaa acagc 25

<210> 3458
<211> 25
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3458
cuggccaucu uuaagucugg aggca 25

<210> 3459
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3459
uggccaucuu uaagucugga ggcau 25

<210> 3460
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3460
gaaggagcua aaauggcagu gcguu 25

<210> 3461
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3461
aaggagcuaa aauggcagug cguuu 25

<210> 3462
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3462
aggagcuaaa auggcagugc guuua 25

<210> 3463

<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3463
ggagcuaaaa uggcagugcg uuuag 25

<210> 3464
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3464
gagcuaaaau ggcagugcgu uuagc 25

<210> 3465
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3465
cuguggacca caagcagagu gcuga 25

<210> 3466
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3466
uguggaccac aagcagagug cugaa 25

<210> 3467
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3467
guggaccaca agcagagugc ugaag 25

<210> 3468
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3468
uggaccacaa gcagagugcu gaagg 25

<210> 3469
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3469
ggaccacaag cagagugcug aaggu 25

<210> 3470
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3470
gaccacaagc agagugcuga aggug 25

<210> 3471
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3471
accacaagca gagugcugaa ggugc 25

<210> 3472
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3472

ccacaagcag agugcugaag gugcu 25

<210> 3473
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3473
cacaagcaga gugcugaagg ugcua 25

<210> 3474
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3474
acaagcagag ugcugaaggu gcuau 25

<210> 3475
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3475
caagcagagu gcugaaggug cuauc 25

<210> 3476
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3476
aagcagagug cugaaggugc uaucu 25

<210> 3477
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3477
agcagagugc ugaaggugcu aucug 25

<210> 3478
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3478
gcagagugcu gaaggugcua ucugu 25

<210> 3479
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3479
aacugucuuu ggacucucag gaauc 25

<210> 3480
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3480
acugucuuug gacucucagg aaucu 25

<210> 3481
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3481
gaugauauaa auguggucac cugug 25

<210> 3482
<211> 25
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3482
augauauaaa uguggucacc ugugc 25

<210> 3483
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3483
ugauauaaau guggucaccu gugca 25

<210> 3484
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3484
gauauaaaug uggucaccug ugcag 25

<210> 3485
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3485
auauaaaugu ggucaccugu gcagc 25

<210> 3486
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3486
uauaaaugug gucaccugug cagcu 25

<210> 3487
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3487
auaaaugugg ucaccugugc agcug 25

<210> 3488
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3488
uaaauguggu caccugugca gcugg 25

<210> 3489
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3489
aaaugugguc accugugcag cugga 25

<210> 3490
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3490
aaugugguca ccugugcagc uggaa 25

<210> 3491
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3491
auguggucac cugugcagcu ggaau 25

<210> 3492
<211> 25

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3492
uguggucacc ugugcagcug gaauu 25

<210> 3493
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3493
guggucaccu gugcagcugg aauuc 25

<210> 3494
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3494
uggucaccug ugcagcugga auucu 25

<210> 3495
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3495
ggucaccugu gcagcuggaa uucuu 25

<210> 3496
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3496
gucaccugug cagcuggaau ucuuu 25

<210> 3497
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3497
ucaccugugc agcuggaauu cuuuc 25

<210> 3498
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3498
caccugugca gcuggaauuc uuucu 25

<210> 3499
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3499
accugugcag cuggaauucu uucua 25

<210> 3500
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3500
ccugugcagc uggaauucuu ucuaa 25

<210> 3501
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3501
ucuaaccuca cuugcaauaa uuaua 25

<210> 3502
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3502
cuaaccucac uugcaauaau uauaa 25

<210> 3503
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3503
uaaccucacu ugcaauaauu auaag 25

<210> 3504
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3504
aaccucacuu gcaauaauua uaaga 25

<210> 3505
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3505
accucacuug caauaauuau aagaa 25

<210> 3506
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3506
gcuggugaca gggaagacau cacug 25

<210> 3507
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3507
cuggugacag ggaagacauc acuga 25

<210> 3508
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3508
uggugacagg gaagacauca cugag 25

<210> 3509
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3509
ggugacaggg aagacaucac ugagc 25

<210> 3510
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3510
gugacaggga agacaucacu gagcc 25

<210> 3511
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 3511
ugacagggaa gacaucacug agccu 25

<210> 3512
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3512
gacagggaag acaucacuga gccug 25

<210> 3513
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3513
acagggaaga caucacugag ccugc 25

<210> 3514
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3514
cagggaagac aucacugagc cugcc 25

<210> 3515
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3515
agggaagaca ucacugagcc ugcca 25

<210> 3516
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3516
gggaagacau cacugagccu gccau 25

<210> 3517
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3517
ggaagacauc acugagccug ccauc 25

<210> 3518
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3518
gaagacauca cugagccugc caucu 25

<210> 3519
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3519
aagacaucac ugagccugcc aucug 25

<210> 3520
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3520
agacaucacu gagccugcca ucugu 25

<210> 3521
<211> 25
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3521
gacaucacug agccugccau cugug 25

<210> 3522
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3522
acaucacuga gccugccauc ugugc 25

<210> 3523
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3523
caucacugag ccugccaucu gugcu 25

<210> 3524
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3524
aucacugagc cugccaucug ugcuc 25

<210> 3525
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3525
ucacugagcc ugccaucugu gcucu 25

<210> 3526

<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3526
cacugagccu gccaucugug cucuu 25

<210> 3527
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3527
acugagccug ccaucugugc ucuuc 25

<210> 3528
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3528
cugagccugc caucugugcu cuucg 25

<210> 3529
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3529
ugagccugcc aucugugcuc uucgu 25

<210> 3530
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3530
gagccugcca ucugugcucu ucguc 25

<210> 3531
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3531
agccugccau cugugcucuu cguca 25

<210> 3532
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3532
gccugccauc ugugcucuuc gucau 25

<210> 3533
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3533
ccugccaucu gugcucuucg ucauc 25

<210> 3534
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3534
cugccaucug ugcucuucgu caucu 25

<210> 3535
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3535

ugccaucugu gcucuucguc aucug 25

<210> 3536
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3536
gccaucugug cucuucguca ucuga 25

<210> 3537
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3537
ccaucugugc ucuucgucau cugac 25

<210> 3538
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3538
caucugugcu cuucgucauc ugacc 25

<210> 3539
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3539
aucugugcuc uucgucaucu gacca 25

<210> 3540
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3540
ucugugcucu ucgucaucug accag 25

<210> 3541
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3541
cugugcucuu cgucaucuga ccagc 25

<210> 3542
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3542
ugugcucuuc gucaucugac cagcc 25

<210> 3543
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3543
gugcucuucg ucaucugacc agccg 25

<210> 3544
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3544
ugcucuucgu caucugacca gccga 25

<210> 3545
<211> 25
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3545
gcucuucguc aucugaccag ccgac 25

<210> 3546
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3546
cucuucguca ucugaccagc cgaca 25

<210> 3547
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3547
ucuucgucau cugaccagcc gacac 25

<210> 3548
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3548
cuucgucauc ugaccagccg acacc 25

<210> 3549
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3549
uucgucaucu gaccagccga cacca 25

<210> 3550
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3550
cacccaccau cccacuggcc ucuga 25

<210> 3551
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3551
acccaccauc ccacuggccu cugau 25

<210> 3552
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3552
cccaccaucc cacuggccuc ugaua 25

<210> 3553
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3553
ccaccauccc acuggccucu gauaa 25

<210> 3554
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3554
caccauccca cuggccucug auaaa 25

<210> 3555
<211> 25

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3555
accaucccac uggccucuga uaaag 25

<210> 3556
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3556
ccaucccacu ggccucugau aaagg 25

<210> 3557
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3557
caucccacug gccucugaua aaggc 25

<210> 3558
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3558
aucccacugg ccucugauaa aggcu 25

<210> 3559
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3559
ucccacuggc cucugauaaa ggcua 25

<210> 3560
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3560
cccacuggcc ucugauaaag gcuac 25

<210> 3561
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3561
ccacuggccu cugauaaagg cuacu 25

<210> 3562
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3562
cacuggccuc ugauaaaggc uacug 25

<210> 3563
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3563
acuggccucu gauaaaggcu acugu 25

<210> 3564
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3564
acuguuggau ugauucgaaa ucuug 25

<210> 3565
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3565
cuguuggauu gauucgaaau cuugc 25

<210> 3566
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3566
aauaccauuc cauuguuugu gcagc 25

<210> 3567
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3567
auaccauucc auuguuugug cagcu 25

<210> 3568
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3568
uaccauucca uuguuugugc agcug 25

<210> 3569
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3569
accauuccau uguuugugca gcugc 25

<210> 3570
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3570
ccauuccauu guuugugcag cugcu 25

<210> 3571
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3571
cauuccauug uuugugcagc ugcuu 25

<210> 3572
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3572
ugcuuuauuc ucccauugaa aacau 25

<210> 3573
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3573
gcuuuauucu cccauugaaa acauc 25

<210> 3574
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 3574
cuuuauucuc ccauugaaaa caucc 25

<210> 3575
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3575
uuuauucucc cauugaaaac aucca 25

<210> 3576
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3576
guccucugug aacuugcuca ggaca 25

<210> 3577
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3577
uccucuguga acuugcucag gacaa 25

<210> 3578
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3578
ccucugugaa cuugcucagg acaag 25

<210> 3579
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3579
cucugugaac uugcucagga caagg 25

<210> 3580
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3580
ucugugaacu ugcucaggac aagga 25

<210> 3581
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3581
cugugaacuu gcucaggaca aggaa 25

<210> 3582
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3582
ugugaacuug cucaggacaa ggaag 25

<210> 3583
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3583
gugaacuugc ucaggacaag gaagc 25

<210> 3584
<211> 25
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3584
ugaacuugcu caggacaagg aagcu 25

<210> 3585
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3585
gaacuugcuc aggacaagga agcug 25

<210> 3586
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3586
aacuugcuca ggacaaggaa gcugc 25

<210> 3587
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3587
auugaagcug agggagccac agcuc 25

<210> 3588
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3588
uugaagcuga gggagccaca gcucc 25

<210> 3589

<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3589
ugaagcugag ggagccacag cuccu 25

<210> 3590
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3590
uuccgaaugu cugaggacaa gccac 25

<210> 3591
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3591
uccgaauguc ugaggacaag ccaca 25

<210> 3592
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3592
ccgaaugucu gaggacaagc cacaa 25

<210> 3593
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3593
cgaaugucug aggacaagcc acaag 25

<210> 3594
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3594
gaaugucuga ggacaagcca caaga 25

<210> 3595
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3595
aaugucugag gacaagccac aagau 25

<210> 3596
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3596
augucugagg acaagccaca agauu 25

<210> 3597
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3597
ugucugagga caagccacaa gauua 25

<210> 3598
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3598

acagagccaa uggcuuggaa ugaga 25

<210> 3599
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3599
cagagccaau ggcuuggaau gagac 25

<210> 3600
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3600
agagccaaug gcuuggaaug agacu 25

<210> 3601
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3601
gagccaaugg cuuggaauga gacug 25

<210> 3602
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3602
agccaauggc uuggaaugag acugc 25

<210> 3603
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3603
gccaauggcu uggaaugaga cugcu 25

<210> 3604
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3604
ccaauggcuu ggaaugagac ugcug 25

<210> 3605
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3605
caauggcuug gaaugagacu gcuga 25

<210> 3606
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3606
aauggcuugg aaugagacug cugau 25

<210> 3607
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3607
auggcuugga augagacugc ugauc 25

<210> 3608
<211> 25
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3608
uggcuuggaa ugagacugcu gaucu 25

<210> 3609
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3609
cuuggauauc gccaggauga uccua 25

<210> 3610
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3610
uuggauaucg ccaggaugau ccuag 25

<210> 3611
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3611
uggauaucgc caggaugauc cuagc 25

<210> 3612
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3612
ggauaucgcc aggaugaucc uagcu 25

<210> 3613
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3613
gauaucgcca ggaugauccu agcua 25

<210> 3614
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3614
cguucuuuuc acucuggugg auaug 25

<210> 3615
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3615
guucuuuuca cucuggugga uaugg 25

<210> 3616
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3616
uucuuuucac ucugguggau auggc 25

<210> 3617
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3617
ucuuuucacu cugguggaua uggcc 25

<210> 3618
<211> 25

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3618
cuuuucacuc ugguggauau ggcca 25

<210> 3619
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3619
caugagaugg guggccacca cccug 25

<210> 3620
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3620
augagauggg uggccaccac ccugg 25

<210> 3621
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3621
ugagaugggu ggccaccacc cuggu 25

<210> 3622
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3622
gagaugggug gccaccaccc uggug 25

<210> 3623
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3623
agaugggugg ccaccacccu ggugc 25

<210> 3624
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3624
gauggguggc caccacccug gugcu 25

<210> 3625
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3625
auggguggcc accacccugg ugcug 25

<210> 3626
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3626
uggguggcca ccacccuggu gcuga 25

<210> 3627
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3627
ggguggccac cacccuggug cugac 25

<210> 3628
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3628
gguggccacc acccuggugc ugacu 25

<210> 3629
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3629
guggccacca cccuggugcu gacua 25

<210> 3630
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3630
uggccaccac ccuggugcug acuau 25

<210> 3631
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3631
ggccaccacc cuggugcuga cuauc 25

<210> 3632
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3632
gccaccaccc uggugcugac uaucc 25

<210> 3633
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3633
ccaccacccu ggugcugacu aucca 25

<210> 3634
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3634
caccacccug gugcugacua uccag 25

<210> 3635
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3635
accacccugg ugcugacuau ccagu 25

<210> 3636
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3636
ccacccuggu gcugacuauc caguu 25

<210> 3637
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 3637
cacccuggug cugacuaucc aguug 25

<210> 3638
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3638
acccuggugc ugacuaucca guuga 25

<210> 3639
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3639
cccuggugcu gacuauccag uugau 25

<210> 3640
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3640
ccuggugcug acuauccagu ugaug 25

<210> 3641
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3641
cuggugcuga cuauccaguu gaugg 25

<210> 3642
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3642
uggugcugac uauccaguug auggg 25

<210> 3643
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3643
ggugcugacu auccaguuga ugggc 25

<210> 3644
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3644
gugcugacua uccaguugau gggcu 25

<210> 3645
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3645
ugcugacuau ccaguugaug ggcug 25

<210> 3646
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3646
gcugacuauc caguugaugg gcugc 25

<210> 3647
<211> 25
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3647
cugacuaucc aguugauggg cugcc 25

<210> 3648
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3648
ugacuaucca guugaugggc ugcca 25

<210> 3649
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3649
gacuauccag uugaugggcu gccag 25

<210> 3650
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3650
acuauccagu ugaugggcug ccaga 25

<210> 3651
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3651
cuauccaguu gaugggcugc cagau 25

<210> 3652

<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3652
uauccaguug augggcugcc agauc 25

<210> 3653
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3653
auccaguuga ugggcugcca gaucu 25

<210> 3654
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3654
gcccaggacc ucauggaugg gcugc 25

<210> 3655
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3655
cccaggaccu cauggauggg cugcc 25

<210> 3656
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3656
ccaggaccuc auggaugggc ugccu 25

<210> 3657
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3657
agcaaucagc uggccugguu ugaua 25

<210> 3658
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3658
gcaaucagcu ggccugguuu gauac 25

<210> 3659
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3659
caaucagcug gccugguuug auacu 25

<210> 3660
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3660
aaucagcugg ccugguuuga uacug 25

<210> 3661
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3661

aucagcuggc cugguuugau acuga 25

<210> 3662
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3662
ucagcuggcc ugguuugaua cugac 25

<210> 3663
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3663
cagcuggccu gguuugauac ugacc 25

<210> 3664
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3664
agcuggccug guuugauacu gaccu 25

<210> 3665
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3665
gcuggccugg uuugauacug accug 25

<210> 3666
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3666
cuggccuggu uugauacuga ccugu 25

<210> 3667
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3667
uggccugguu ugauacugac cugua 25

<210> 3668
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3668
ggccugguuu gauacugacc uguaa 25

<210> 3669
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3669
gccugguuug auacugaccu guaaa 25

<210> 3670
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3670
ccugguuuga uacugaccug uaaau 25

<210> 3671
<211> 25
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3671
cugguuugau acugaccugu aaauc 25

<210> 3672
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3672
ugguuugaua cugaccugua aauca 25

<210> 3673
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3673
gguuugauac ugaccuguaa aucau 25

<210> 3674
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3674
guuugauacu gaccuguaaa ucauc 25

<210> 3675
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3675
uuugauacug accuguaaau caucc 25

<210> 3676
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3676
uugauacuga ccuguaaauc auccu 25

<210> 3677
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3677
ugauacugac cuguaaauca uccuu 25

<210> 3678
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3678
uuuugccaca gcuuuugcaa cuuaa 25

<210> 3679
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3679
ugaguaacau uugcuguuuu aaaca 25

<210> 3680
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3680
aacauuaaua gcagccuuuc ucucu 25

<210> 3681
<211> 25

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3681
cauuaauagc agccuuucuc ucuuu 25

<210> 3682
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3682
uuaauagcag ccuuucucuc uuuau 25

<210> 3683
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3683
aauagcagcc uuucucucuu uauac 25

<210> 3684
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3684
gcauugugau uggccuguag aguug 25

<210> 3685
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3685
auugugauug gccuguagag uugcu 25

<210> 3686
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3686
ugugauuggc cuguagaguu gcuga 25

<210> 3687
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3687
ugauuggccu guagaguugc ugaga 25

<210> 3688
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3688
auuggccugu agaguugcug agagg 25

<210> 3689
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3689
uggccuguag aguugcugag agggc 25

<210> 3690
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3690
gccuguagag uugcugagag ggcuc 25

<210> 3691
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3691
cuguagaguu gcugagaggg cucga 25

<210> 3692
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3692
guagaguugc ugagagggcu cgagg 25

<210> 3693
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3693
gugggcuggu aucucagaaa gugcc 25

<210> 3694
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3694
gggcugguau cucagaaagu gccug 25

<210> 3695
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3695
gcugguaucu cagaaagugc cugac 25

<210> 3696
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3696
ugguaucuca gaaagugccu gacac 25

<210> 3697
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3697
acuaaccaag cugaguuucc uaugg 25

<210> 3698
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3698
uaaccaagcu gaguuuccua uggga 25

<210> 3699
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3699
accaagcuga guuuccuaug ggaac 25

<210> 3700
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 3700
caagcugagu uuccuauggg aacaa 25

<210> 3701
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3701
agcugaguuu ccuaugggaa caauu 25

<210> 3702
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3702
cugaguuucc uaugggaaca auuga 25

<210> 3703
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3703
cuuuuuguuc ugguccuuuu ugguc 25

<210> 3704
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3704
uuuuguucug guccuuuuug gucga 25

<210> 3705
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3705
uuguucuggu ccuuuuuggu cgagg 25

<210> 3706
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3706
guucuggucc uuuuuggucg aggag 25

<210> 3707
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3707
ucugguccuu uuuggucgag gagua 25

<210> 3708
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3708
ugguccuuuu uggucgagga guaac 25

<210> 3709
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3709
guccuuuuug gucgaggagu aacaa 25

<210> 3710
<211> 25
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3710
ccuuuuuggu cgaggaguaa caaua 25

<210> 3711
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3711
uuuuuggucg aggaguaaca auaca 25

<210> 3712
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3712
uuuggucgag gaguaacaau acaaa 25

<210> 3713
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3713
uggucgagga guaacaauac aaaug 25

<210> 3714
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3714
gucgaggagu aacaauacaa augga 25

<210> 3715

<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3715
cgaggaguaa caauacaaau ggauu 25

<210> 3716
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3716
aggaguaaca auacaaaugg auuuu 25

<210> 3717
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3717
gaguaacaau acaaauggau uuugg 25

<210> 3718
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3718
uaucaaaccc uagccuugcu uguua 25

<210> 3719
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3719
ucaaacccua gccuugcuug uuaaa 25

<210> 3720
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3720
aaacccuagc cuugcuuguu aaauu 25

<210> 3721
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3721
gaguaauggu guagaacacu aauuc 25

<210> 3722
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3722
guaauggugu agaacacuaa uucau 25

<210> 3723
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3723
aaugguguag aacacuaauu cauaa 25

<210> 3724
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3724

ugguguagaa cacuaauuca uaauc 25

<210> 3725
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3725
guguagaaca cuaauucaua aucac 25

<210> 3726
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3726
guagaacacu aauucauaau cacuc 25

<210> 3727
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3727
agaacacuaa uucauaauca cucua 25

<210> 3728
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3728
aacacuaauu cauaaucacu cuaau 25

<210> 3729
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3729
uuaguuuccu uuuuaauaug cuuaa 25

<210> 3730
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3730
aguuuccuuu uuaauaugcu uaaaa 25

<210> 3731
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3731
uuuccuuuuu aauaugcuua aaaua 25

<210> 3732
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3732
uccuuuuuaa uaugcuuaaa auaag 25

<210> 3733
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3733
cuuuuuaaua ugcuuaaaau aagca 25

<210> 3734
<211> 25
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3734
uuuuuaauau gcuuaaaaua agcag 25

<210> 3735
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3735
uuuuaauaug cuuaaaauaa gcagg 25

<210> 3736
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3736
uuaauaugcu uaaaauaagc aggug 25

<210> 3737
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3737
aauaugcuua aaauaagcag gugga 25

<210> 3738
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3738
uaugcuuaaa auaagcaggu ggauc 25

<210> 3739
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3739
ugcuuaaaau aagcaggugg aucua 25

<210> 3740
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3740
cuuaaaauaa gcagguggau cuauu 25

<210> 3741
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3741
uaaaauaagc agguggaucu auuuc 25

<210> 3742
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3742
aaauaagcag guggaucuau uucau 25

<210> 3743
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3743
auaagcaggu ggaucuauuu caugu 25

<210> 3744
<211> 25

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3744
aagcaggugg aucuauuuca uguuu 25

<210> 3745
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3745
gcagguggau cuauuucaug uuuuu 25

<210> 3746
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3746
agguggaucu auuucauguu uuuga 25

<210> 3747
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3747
guggaucuau uucauguuuu ugauc 25

<210> 3748
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3748
ggaucuauuu cauguuuuug aucaa 25

<210> 3749
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3749
aucuauuuca uguuuuugau caaaa 25

<210> 3750
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3750
guaggguaaa ucaguaagag guguu 25

<210> 3751
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3751
aggguaaauc aguaagaggu guuau 25

<210> 3752
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3752
gguaaaucag uaagaggugu uauuu 25

<210> 3753
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3753
uaaaucagua agagguguua uuugg 25

<210> 3754
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3754
aaucaguaag agguguuauu uggaa 25

<210> 3755
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3755
ucaguaagag guguuauuug gaacc 25

<210> 3756
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3756
uaccaguugc cuuuuauccc aaagu 25

<210> 3757
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3757
ccaguugccu uuuaucccaa aguug 25

<210> 3758
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3758
aguugccuuu uaucccaaag uuguu 25

<210> 3759
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3759
uugccuuuua ucccaaaguu guugu 25

<210> 3760
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3760
gccuuuuauc ccaaaguugu uguaa 25

<210> 3761
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3761
cuuuuauccc aaaguuguug uaacc 25

<210> 3762
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3762
uuuaucccaa aguuguugua accug 25

<210> 3763
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 3763
uaucccaaag uuguuguaac cugcu 25

<210> 3764
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3764
ucccaaaguu guuguaaccu gcugu 25

<210> 3765
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3765
ccaaaguugu uguaaccugc uguga 25

<210> 3766
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3766
aaaguuguug uaaccugcug ugaua 25

<210> 3767
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3767
aguuguugua accugcugug auacg 25

<210> 3768
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3768
uuguuguaac cugcugugau acgau 25

<210> 3769
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3769
guuguaaccu gcugugauac gaugc 25

<210> 3770
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3770
aaaugguuca gaauuaaacu uuuaa 25

<210> 3771
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3771
augguucaga auuaaacuuu uaauu 25

<210> 3772
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3772
gguucagaau uaaacuuuua auuca 25

<210> 3773
<211> 25
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3773
uucagaauua aacuuuuaau ucauu 25

<210> 3774
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3774
cagaauuaaa cuuuuaauuc auucg 25

<210> 3775
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3775
gcagcagucu uacuuggauu cugga 25

<210> 3776
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3776
acuuggauuc uggaauccau ucugg 25

<210> 3777
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3777
gacaccuccc aaguccuuua ugaau 25

<210> 3778

<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3778
cgcaagagca aguagcugau auuga 25

<210> 3779
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3779
ccauguuccc ugagacgcua gauga 25

<210> 3780
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3780
ugaaacaugc aguugucaau uugau 25

<210> 3781
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3781
caugcaguug ucaauuugau uaacu 25

<210> 3782
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3782
guugucaauu ugauuaacua ucagg 25

<210> 3783
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3783
gaggaccagg ugguaguuaa uaaag 25

<210> 3784
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3784
ggucaccagu ggauucugua cuguu 25

<210> 3785
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3785
caguggauuc uguacuguuc uacgc 25

<210> 3786
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3786
gauucuguac uguucuacgc cauca 25

<210> 3787
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3787

guggacugca gaaaaugguu gcuuu 25

<210> 3788
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3788
cgugaaauuc uuggcuauua caaca 25

<210> 3789
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3789
caagucagcg acuuguucaa aacug 25

<210> 3790
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3790
gacuuguuca aaacugucuu uggac 25

<210> 3791
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3791
aaacugucuu uggacucuca gaaac 25

<210> 3792
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3792
cucuaaccuc acuugcaaua auuac 25

<210> 3793
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3793
cucacuugca auaauuacaa aaaca 25

<210> 3794
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3794
gaaugccguu cgccuucauu augga 25

<210> 3795
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3795
gccuucauua uggacugccu guugu 25

<210> 3796
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3796
cauuauggac ugccuguugu gguua 25

<210> 3797
<211> 25
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3797
gacugccugu ugugguuaaa cuccu 25

<210> 3798
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3798
aacuguugga uugauucgaa accuu 25

<210> 3799
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3799
gaggacucaa uaccauucca uuguu 25

<210> 3800
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3800
gaggacaagc cacaggauua caaga 25

<210> 3801
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3801
auggacccua ugauggagca ugaga 25

<210> 3802
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3802
gauacugacc uguaaaucgu ccuuu 25

<210> 3803
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3803
ccaguguggg ugaauacuuu acucu 25

<210> 3804
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3804
ccacagcuuu ugcagcguua uacuc 25

<210> 3805
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3805
uuuugcagcg uuauacucag augag 25

<210> 3806
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3806
gcguuauacu cagaugagua acauu 25

<210> 3807
<211> 25

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3807
auuugcuguu uucaacauua auagc 25

<210> 3808
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3808
cuguaguguc ugaacgugca uugug 25

<210> 3809
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3809
gaacagucga aguacgcuuu uuguu 25

<210> 3810
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3810
gucgaaguac gcuuuuuguu cuggu 25

<210> 3811
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3811
guacgcuuuu uguucugguc cuuuu 25

<210> 3812
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3812
ccuagccuug cuuguucuuu guuuu 25

<210> 3813
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3813
ccuugcuugu ucuuuguuuu aauau 25

<210> 3814
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3814
aaccugcuac agcaauuucu gauuu 25

<210> 3815
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3815
cagcaauuuc ugauuucuaa gaacc 25

<210> 3816
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3816
guaagaggug uuauuugagc cuugu 25

<210> 3817
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3817
gguguuauuu gagccuuguu uugga 25

<210> 3818
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3818
uauuugagcc uuguuuugga cagua 25

<210> 3819
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3819
gagccuuguu uuggacagua uacca 25

<210> 3820
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3820
caacagaugc gguuauagaa auggu 25

<210> 3821
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3821
guuauagaaa ugguucagaa uuaaa 25

<210> 3822
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3822
agaaaugguu cagaauuaaa cuuuu 25

<210> 3823
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3823
uguaugguau acuucaaaua cccuc 25

<210> 3824
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3824
aaacaguugu augguauacu ucaaa 25

<210> 3825
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3825
aaaacaguug uaugguauac uucaa 25

<210> 3826
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 3826
ucaaaacagu uguaugguau acuuc 25

<210> 3827
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3827
uucaaaacag uuguauggua uacuu 25

<210> 3828
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3828
uuucaaaaca guuguauggu auacu 25

<210> 3829
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3829
guccacgcug gauuuucaaa acagu 25

<210> 3830
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3830
uguccacgcu ggauuuucaa aacag 25

<210> 3831
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3831
aucaaaucag cuugaguagc cauug 25

<210> 3832
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3832
uccaacucca ucaaaucagc uugag 25

<210> 3833
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3833
uccucaggau ugccuuuacc acuca 25

<210> 3834
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3834
uuccucagga uugccuuuac cacuc 25

<210> 3835
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3835
ucaauaucag cuacuuguuc uugag 25

<210> 3836
<211> 25
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3836
aucaauauca gcuacuuguu cuuga 25

<210> 3837
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3837
uguccaucaa uaucagcuac uuguu 25

<210> 3838
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3838
ugcauacugu ccaucaauau cagcu 25

<210> 3839
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3839
agucauugca uacuguccau caaua 25

<210> 3840
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3840
ucaucuaaug ucucagggaa cauag 25

<210> 3841

<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3841
acaacugcau guuucagcau cugug 25

<210> 3842
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3842
uuacaacugc auguuucagc aucug 25

<210> 3843
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3843
uuaaucaagu uuacaacugc auguu 25

<210> 3844
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3844
ugauaguuaa ucaaguuuac aacug 25

<210> 3845
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3845
gcaucaucuu gauaguuaau caagu 25

<210> 3846
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3846
ugcaucaucu ugauaguuaa ucaag 25

<210> 3847
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3847
gguccucguc auuuagcagu uuugu 25

<210> 3848
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3848
uaacugcagc cuuauuaacc accac 25

<210> 3849
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3849
auaacugcag ccuuauuaac cacca 25

<210> 3850
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3850

accauaacug cagccuuauu aacca 25

<210> 3851
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3851
uuuuuagaaa gcugauggac cauaa 25

<210> 3852
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3852
gguacguaca auagcagaca ccauc 25

<210> 3853
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3853
ucauuuguau ucugcauggu acgua 25

<210> 3854
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3854
guuucuacau cauuuguauu cugca 25

<210> 3855
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3855
uguuucuaca ucauuuguau ucugc 25

<210> 3856
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3856
acaacgagcu guuucuacau cauuu 25

<210> 3857
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3857
guacaacgag cuguuucuac aucau 25

<210> 3858
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3858
gguacaacga gcuguuucua cauca 25

<210> 3859
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3859
auaaaacaac acagaaucca cuggu 25

<210> 3860
<211> 25
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3860
gcauaaaaca acacagaauc cacug 25

<210> 3861
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3861
ggcauaaaac aacacagaau ccacu 25

<210> 3862
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3862
gcuccuucuu gauguaauaa aaggu 25

<210> 3863
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3863
agcuccuucu ugauguaaua aaagg 25

<210> 3864
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3864
uaacauuugu uuuguugagc aaggc 25

<210> 3865
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3865
gccaagaauu uaacauuugu uuugu 25

<210> 3866
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3866
uaauagccaa gaauuuaaca uuugu 25

<210> 3867
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3867
guaauagcca agaauuuaac auuug 25

<210> 3868
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3868
agcuaaaauu ugaaggcagu cuguc 25

<210> 3869
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3869
gguccucauu auauuuacua aagcu 25

<210> 3870
<211> 25

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3870
guauaggucc ucauuauauu uacua 25

<210> 3871
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3871
aguauagguc cucauuauau uuacu 25

<210> 3872
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3872
uuuucguaag uauagguccu cauua 25

<210> 3873
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3873
uuuuucguaa guauaggucc ucauu 25

<210> 3874
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3874
guuuuucgua aguauagguc cucau 25

<210> 3875
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3875
aguuuuucgu aaguauaggu ccuca 25

<210> 3876
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3876
gguccacagu aguuuuucgu aagua 25

<210> 3877
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3877
uacaauagcc ggcuuauuac uagag 25

<210> 3878
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3878
ucuacaauag ccggcuuauu acuag 25

<210> 3879
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3879
uccuaaagcu ugcauuccac cagcu 25

<210> 3880
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3880
guccuaaagc uugcauucca ccagc 25

<210> 3881
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3881
aguccuaaag cuugcauucc accag 25

<210> 3882
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3882
guucugaaca agacguugac uugga 25

<210> 3883
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3883
aguucugaac aagacguuga cuugg 25

<210> 3884
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3884
guccaaagac aguucugaac aagac 25

<210> 3885
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3885
uuccuguuua guugcagcau cugaa 25

<210> 3886
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3886
acauuuauau caucugaacc cagaa 25

<210> 3887
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3887
accacauuua uaucaucuga accca 25

<210> 3888
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3888
gcacagguga ccacauuuau aucau 25

<210> 3889
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 3889
ugcacaggug accacauuua uauca 25

<210> 3890
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3890
ugcaagugag guuagaaaga auucc 25

<210> 3891
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3891
auaauuauug caagugaggu uagaa 25

<210> 3892
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3892
ucaucuuguu cuuauaauua uugca 25

<210> 3893
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3893
aucaucuugu ucuuauaauu auugc 25

<210> 3894
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3894
accaucaucu uguucuuaua auuau 25

<210> 3895
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3895
agaccaucau cuuguucuua uaauu 25

<210> 3896
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3896
aauccaacag uagccuuuau cagag 25

<210> 3897
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3897
gaaucaaucc aacaguagcc uuuau 25

<210> 3898
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3898
uccacaaauu gcugcugugu cccac 25

<210> 3899
<211> 25
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3899
acaaccuuca acuauuucuu ccaug 25

<210> 3900
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3900
uacaaccuuc aacuauuucu uccau 25

<210> 3901
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3901
guacaaccuu caacuauuuc uucca 25

<210> 3902
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3902
gguacaaccu ucaacuauuu cuucc 25

<210> 3903
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3903
gcuccgguac aaccuucaac uauuu 25

<210> 3904

<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3904
acaauucggu ugugaacauc ccgag 25

<210> 3905
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3905
aacaauucgg uugugaacau cccga 25

<210> 3906
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3906
uaacaauucg guugugaaca ucccg 25

<210> 3907
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3907
auaacaauuc gguugugaac auccc 25

<210> 3908
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3908
gauaacaauu cgguugugaa caucc 25

<210> 3909
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3909
ugauaacaau ucgguuguga acauc 25

<210> 3910
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3910
auuuaguccu cugauaacaa uucgg 25

<210> 3911
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3911
uauuuagucc ucugauaaca auucg 25

<210> 3912
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3912
guauuuaguc cucugauaac aauuc 25

<210> 3913
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3913

gguauuuagu ccucugauaa caauu 25

<210> 3914
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3914
acaauggaau gguauuuagu ccucu 25

<210> 3915
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3915
acaaacaaug gaaugguauu uaguc 25

<210> 3916
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3916
gcacaaacaa uggaauggua uuuag 25

<210> 3917
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3917
ugcacaaaca auggaauggu auuua 25

<210> 3918
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3918
gcuacucuuu ggauguuuuc aaugg 25

<210> 3919
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3919
agcuacucuu uggauguuuu caaug 25

<210> 3920
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3920
gcuucaauag cuucugcagc uuccu 25

<210> 3921
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3921
ucccucagcu ucaauagcuu cugca 25

<210> 3922
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3922
gcucccucag cuucaauagc uucug 25

<210> 3923
<211> 25
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3923
auuccuagag ugaaguaacu cuguc 25

<210> 3924
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3924
ucauuccuag agugaaguaa cucug 25

<210> 3925
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3925
uucauuccua gagugaagua acucu 25

<210> 3926
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3926
uccucagaca uucggaacaa aacag 25

<210> 3927
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3927
uguccucaga cauucggaac aaaac 25

<210> 3928
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3928
guuucuugua aucuuguggc uuguc 25

<210> 3929
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3929
ugaaagccgu uucuuguaau cuugu 25

<210> 3930
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3930
gcucaacuga aagccguuuc uugua 25

<210> 3931
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3931
aguccaagau cagcagucuc auucc 25

<210> 3932
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3932
accaauauca aguccaagau cagca 25

<210> 3933
<211> 25

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3933
agaacgauag cuaggaucau ccugg 25

<210> 3934
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3934
uauccaccag agugaaaaga acgau 25

<210> 3935
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3935
auuuacaggu caguaucaaa ccagg 25

<210> 3936
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3936
gauuuacagg ucaguaucaa accag 25

<210> 3937
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3937
ugauuuacag gucaguauca aacca 25

<210> 3938
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3938
ucuuaccuaa aggaugauuu acagg 25

<210> 3939
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3939
uucuuaccua aaggaugauu uacag 25

<210> 3940
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3940
acuucuuacc uaaaggauga uuuac 25

<210> 3941
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3941
uuuuuaaaac uucuuaccua aagga 25

<210> 3942
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3942
gcuuuuuaaa acuucuuacc uaaag 25

<210> 3943
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3943
aaacuggcuu uuuaaaacuu cuuac 25

<210> 3944
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3944
acccaaacug gcuuuuuaaa acuuc 25

<210> 3945
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3945
uacccaaacu ggcuuuuuaa aacuu 25

<210> 3946
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3946
uuacccaaac uggcuuuuua aaacu 25

<210> 3947
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3947
uuuacccaaa cuggcuuuuu aaaac 25

<210> 3948
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3948
aaccaagucu uucugaaguu cugua 25

<210> 3949
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3949
acccuaccaa ccaagucuuu cugaa 25

<210> 3950
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3950
uuacaaauag ccuaaaccac uccca 25

<210> 3951
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3951
uuuacaaaua gccuaaacca cuccc 25

<210> 3952
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 3952
auuuacaaau agccuaaacc acucc 25

<210> 3953
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3953
gauuuacaaa uagccuaaac cacuc 25

<210> 3954
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3954
uuuuuguggc agauuuacaa auagc 25

<210> 3955
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3955
guuuuugugg cagauuuaca aauag 25

<210> 3956
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3956
uguuuuugug gcagauuuac aaaua 25

<210> 3957
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3957
auaccuguuu uuguggcaga uuuac 25

<210> 3958
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3958
uucaaaguau auaccuguuu uugug 25

<210> 3959
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3959
ucuccuuuca aaguauauac cuguu 25

<210> 3960
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3960
aucuccuuuc aaaguauaua ccugu 25

<210> 3961
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3961
acaucuccuu ucaaaguaua uaccu 25

<210> 3962
<211> 25
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3962
gacaucuccu uucaaaguau auacc 25

<210> 3963
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3963
agacaucucc uuucaaagua uauac 25

<210> 3964
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3964
uuccaagaca ucuccuuuca aagua 25

<210> 3965
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3965
uuccaauguu ccaagacauc uccuu 25

<210> 3966
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3966
auuccaaugu uccaagacau cuccu 25

<210> 3967

<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3967
acauuccaau guuccaagac aucuc 25

<210> 3968
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3968
agaaaucuga gaacauucca auguu 25

<210> 3969
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3969
aaccagaaau cugagaacau uccaa 25

<210> 3970
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3970
acaaccagaa aucugagaac auucc 25

<210> 3971
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3971
aacaaccaga aaucugagaa cauuc 25

<210> 3972
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3972
uaacaaccag aaaucugaga acauu 25

<210> 3973
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3973
aucacauaac aaccagaaau cugag 25

<210> 3974
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3974
gaucacauaa caaccagaaa ucuga 25

<210> 3975
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3975
acacaugauc acauaacaac cagaa 25

<210> 3976
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3976

uccacacaug aucacauaac aacca 25

<210> 3977
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3977
uaacuuccac acaugaucac auaac 25

<210> 3978
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3978
auaacuucca cacaugauca cauaa 25

<210> 3979
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3979
aauaacuucc acacaugauc acaua 25

<210> 3980
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3980
uaauaacuuc cacacaugau cacau 25

<210> 3981
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3981
uuaaaguuaa uaacuuccac acaug 25

<210> 3982
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3982
auuaaaguua auaacuucca cacau 25

<210> 3983
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3983
acauuaaagu uaauaacuuc cacac 25

<210> 3984
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3984
aacauuaaag uuaauaacuu ccaca 25

<210> 3985
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 3985
aaacauuaaa guuaauaacu uccac 25

<210> 3986
<211> 25
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3986
aaaacauuaa aguuaauaac uucca 25

<210> 3987
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3987
aaaaacauua aaguuaauaa cuucc 25

<210> 3988
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3988
aaaaaacauu aaaguuaaua acuuc 25

<210> 3989
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3989
gcaaaaaaca uuaaaguuaa uaacu 25

<210> 3990
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3990
ggcaaaaaac auuaaaguua auaac 25

<210> 3991
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3991
gcaaaagcug uggcaaaaaa cauua 25

<210> 3992
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3992
ugcaaaagcu guggcaaaaa acauu 25

<210> 3993
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3993
ucauuugagu auuaaguugc aaaag 25

<210> 3994
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3994
aaaacagcaa auguuacuca uuuga 25

<210> 3995
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3995
uaaaacagca aauguuacuc auuug 25

<210> 3996
<211> 25

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3996
uuaaaacagc aaauguuacu cauuu 25

<210> 3997
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3997
uuuaaaacag caaauguuac ucauu 25

<210> 3998
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3998
guuuaaaaca gcaaauguua cucau 25

<210> 3999
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3999
uguuuaaaac agcaaauguu acuca 25

<210> 4000
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4000
auuaauguuu aaaacagcaa auguu 25

<210> 4001
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4001
agaaaggcug cuauuaaugu uuaaa 25

<210> 4002
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4002
aguucagaca auacagcugu auaaa 25

<210> 4003
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4003
acaaugcaag uucagacaau acagc 25

<210> 4004
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4004
ucacaaugca aguucagaca auaca 25

<210> 4005
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4005
aaucacaaug caaguucaga caaua 25

<210> 4006
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4006
ggccaaucac aaugcaaguu cagac 25

<210> 4007
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4007
guucccauag gaaacucagc uuggu 25

<210> 4008
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4008
ucaauuguuc ccauaggaaa cucag 25

<210> 4009
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4009
uucaauuguu cccauaggaa acuca 25

<210> 4010
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4010
guuuacuuca auuguuccca uagga 25

<210> 4011
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4011
aguuuacuuc aauuguuccc auagg 25

<210> 4012
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4012
aaaaaguuua cuucaauugu uccca 25

<210> 4013
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4013
gaacaaaaag uuuacuucaa uuguu 25

<210> 4014
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4014
gaccagaaca aaaaguuuac uucaa 25

<210> 4015
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 4015
ggaccagaac aaaaaguuua cuuca 25

<210> 4016
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4016
accaaaaagg accagaacaa aaagu 25

<210> 4017
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4017
gaccaaaaag gaccagaaca aaaag 25

<210> 4018
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4018
acuccucgac caaaaaggac cagaa 25

<210> 4019
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4019
uccauuugua uuguuacucc ucgac 25

<210> 4020
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4020
auccauuugu auuguuacuc cucga 25

<210> 4021
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4021
aauccauuug uauuguuacu ccucg 25

<210> 4022
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4022
aaauccauuu guauuguuac uccuc 25

<210> 4023
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4023
aaaauccauu uguauuguua cuccu 25

<210> 4024
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4024
acucccaaaa uccauuugua uuguu 25

<210> 4025
<211> 25
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4025
uucacuucuu gagucacucc caaaa 25

<210> 4026
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4026
ucuucacuuc uugagucacu cccaa 25

<210> 4027
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4027
uucuucacuu cuugagucac uccca 25

<210> 4028
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4028
auucuucacu ucuugaguca cuccc 25

<210> 4029
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4029
gcauucuuca cuucuugagu cacuc 25

<210> 4030

<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4030
auucuugugc auucuucacu ucuug 25

<210> 4031
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4031
uccauucuug ugcauucuuc acuuc 25

<210> 4032
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4032
auccauucuu gugcauucuu cacuu 25

<210> 4033
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4033
gauccauucu ugugcauucu ucacu 25

<210> 4034
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4034
aauuccaucu ugugauccau ucuug 25

<210> 4035
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4035
uaaauuccau cuugugaucc auucu 25

<210> 4036
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4036
auaaauucca ucuugugauc cauuc 25

<210> 4037
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4037
gauaaauucc aucuugugau ccauu 25

<210> 4038
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4038
ugauaaauuc caucuuguga uccau 25

<210> 4039
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4039

ggcuaggguu ugauaaauuc caucu 25

<210> 4040
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4040
aaaaauuuaa caagcaaggc uaggg 25

<210> 4041
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4041
aaaaaaaaaa aaaauuuaac aagca 25

<210> 4042
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4042
aaaaaaaaaa aaaaauuuaa caagc 25

<210> 4043
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4043
aaaaaaaaaa aaaaaauuua acaag 25

<210> 4044
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4044
aaaaaaaaaa aaaaaaauuu aacaa 25

<210> 4045
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4045
aaaaaaaaaa aaaaaaauu uaaca 25

<210> 4046
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4046
aaaaaaaaaa aaaaaaaau uuaac 25

<210> 4047
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4047
uaaaaaaaaa aaaaaaaaa uuuaa 25

<210> 4048
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4048
uuaaaaaaaa aaaaaaaaa auuua 25

<210> 4049
<211> 25
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4049
ucuuaaaaaa aaaaaaaaaa aaauu 25

<210> 4050
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4050
uucuuaaaaa aaaaaaaaaa aaaau 25

<210> 4051
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4051
auucuuaaaa aaaaaaaaaa aaaaa 25

<210> 4052
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4052
uauucuuaaa aaaaaaaaaa aaaaa 25

<210> 4053
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4053
auauucuuaa aaaaaaaaaa aaaaa 25

<210> 4054
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4054
gauauucuua aaaaaaaaaa aaaaa 25

<210> 4055
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4055
agauauucuu aaaaaaaaaa aaaaa 25

<210> 4056
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4056
uuacagauau ucuuaaaaaa aaaaa 25

<210> 4057
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4057
auuacagaua uucuuaaaaa aaaaa 25

<210> 4058
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4058
uaccauuaca gauauucuua aaaaa 25

<210> 4059
<211> 25

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4059
guaccauuac agauauucuu aaaaa 25

<210> 4060
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4060
aguaccauua cagauauucu uaaaa 25

<210> 4061
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4061
agucaguacc auuacagaua uucuu 25

<210> 4062
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4062
uacuucaaag caagcaaagu cagua 25

<210> 4063
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4063
aaaaagagcu acuucaaagc aagca 25

<210> 4064
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4064
aaaaaaaaaa gagcuacuuc aaagc 25

<210> 4065
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4065
aaaaaaaaaa agagcuacuu caaag 25

<210> 4066
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4066
aaaaaaaaaa aaagagcuac uucaa 25

<210> 4067
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4067
aaaaaaaaaa aaaagagcua cuuca 25

<210> 4068
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4068
aaaaaaaaaa aaaaagagcu acuuc 25

<210> 4069
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4069
aaaaaaaaaa aaaaaagagc uacuu 25

<210> 4070
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4070
aaaaaaaaaa aaaaaaaaaa aagag 25

<210> 4071
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4071
aaaaaaaaaa aaaaaaaaaa aaaga 25

<210> 4072
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4072
aaaaaaaaaa aaaaaaaaaa aaaag 25

<210> 4073
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4073
aaaaaaaaaa aaaaaaaaaa aaaaa 25

<210> 4074
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4074
gcaaaaaaaa aaaaaaaaaa aaaaa 25

<210> 4075
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4075
ugcaaaaaaa aaaaaaaaaa aaaaa 25

<210> 4076
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4076
uuacugcaaa aaaaaaaaaa aaaaa 25

<210> 4077
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4077
guuacugcaa aaaaaaaaaa aaaaa 25

<210> 4078
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 4078
aguuacugca aaaaaaaaaa aaaaa 25

<210> 4079
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4079
aaacaguuac ugcaaaaaaa aaaaa 25

<210> 4080
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4080
aaaacaguua cugcaaaaaa aaaaa 25

<210> 4081
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4081
aaaaacaguu acugcaaaaa aaaaa 25

<210> 4082
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4082
uaaaaaacag uuacugcaaa aaaaa 25

<210> 4083
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4083
uuaaaaaaca guuacugcaa aaaaa 25

<210> 4084
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4084
acuuaaaaaa caguuacugc aaaaa 25

<210> 4085
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4085
acuacgagag acuuaaaaaa caguu 25

<210> 4086
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4086
acacuacgag agacuuaaaa aacag 25

<210> 4087
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4087
aacacuacga gagacuuaaa aaaca 25

<210> 4088
<211> 25
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4088
uuaacacuac gagagacuua aaaaa 25

<210> 4089
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4089
aacuuaacac uacgagagac uuaaa 25

<210> 4090
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4090
uaacuuaaca cuacgagaga cuuaa 25

<210> 4091
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4091
auucacuaua acuuaacacu acgag 25

<210> 4092
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4092
uauucacuau aacuuaacac uacga 25

<210> 4093

<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4093
guauucacua uaacuuaaca cuacg 25

<210> 4094
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4094
aguauucacu auaacuuaac acuac 25

<210> 4095
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4095
aaauugcugu agcaguauuc acuau 25

<210> 4096
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4096
gaaauugcug uagcaguauu cacua 25

<210> 4097
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4097
agaaauugcu guagcaguau ucacu 25

<210> 4098
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4098
ucaauucuua aaaauuagaa auugc 25

<210> 4099
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4099
auuacucaau ucuuaaaaau uagaa 25

<210> 4100
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4100
accauuacuc aauucuuaaa aauua 25

<210> 4101
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4101
acaccauuac ucaauucuua aaaau 25

<210> 4102
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4102

uacaccauua cucaauucuu aaaaa 25

<210> 4103
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4103
ucuacaccau uacucaauuc uuaaa 25

<210> 4104
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4104
guucuacacc auuacucaau ucuua 25

<210> 4105
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4105
gaauuagugu ucuacaccau uacuc 25

<210> 4106
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4106
auuaugaauu aguguucuac accau 25

<210> 4107
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4107
gauuaugaau uaguguucua cacca 25

<210> 4108
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4108
ugauuaugaa uuaguguucu acacc 25

<210> 4109
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4109
uaauuagagu gauuaugaau uagug 25

<210> 4110
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4110
uuaauuagag ugauuaugaa uuagu 25

<210> 4111
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4111
auuaauuaga gugauuauga auuag 25

<210> 4112
<211> 25
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4112
uacaauuaau uagagugauu augaa 25

<210> 4113
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4113
uuacaauuaa uuagagugau uauga 25

<210> 4114
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4114
auuacaauua auuagaguga uuaug 25

<210> 4115
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4115
uuauucagau uacaauuaau uagag 25

<210> 4116
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4116
uuuauucaga uuacaauuaa uuaga 25

<210> 4117
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4117
acacuuuauu cagauuacaa uuaau 25

<210> 4118
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4118
uacacuuuau ucagauuaca auuaa 25

<210> 4119
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4119
uuacacuuua uucagauuac aauua 25

<210> 4120
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4120
guuacacuuu auucagauua caauu 25

<210> 4121
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4121
uguuacacuu uauucagauu acaau 25

<210> 4122
<211> 25

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4122
acacaauugu uacacuuuau ucaga 25

<210> 4123
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4123
ggcuacacaa uuguuacacu uuauu 25

<210> 4124
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4124
aaaaaggcua cacaauuguu acacu 25

<210> 4125
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4125
uuauacaaaa aggcuacaca auugu 25

<210> 4126
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4126
uuuauacaaa aaggcuacac aauug 25

<210> 4127
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4127
auuuuauaca aaaaggcuac acaau 25

<210> 4128
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4128
uauuuuauac aaaaaggcua cacaa 25

<210> 4129
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4129
ucuauuuuau acaaaaaggc uacac 25

<210> 4130
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4130
uauuugucua uuuuauacaa aaagg 25

<210> 4131
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4131
ucuauuuguc uauuuuauac aaaaa 25

<210> 4132
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4132
uucuauuugu cuauuuuaua caaaa 25

<210> 4133
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4133
uuucuauuug ucuauuuuau acaaa 25

<210> 4134
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4134
uuuucuauuu gucuauuuua uacaa 25

<210> 4135
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4135
auuuucuauu ugucuauuuu auaca 25

<210> 4136
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4136
accauuuucu auuugucuau uuuau 25

<210> 4137
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4137
gaccauuuuc uauuugucua uuuua 25

<210> 4138
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4138
ggaccauuuu cuauuugucu auuuu 25

<210> 4139
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4139
acuaauugga ccauuuucua uuugu 25

<210> 4140
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4140
aacuaauugg accauuuucu auuug 25

<210> 4141
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 4141
aaacuaauug gaccauuuuc uauuu 25

<210> 4142
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4142
gaaacuaauu ggaccauuuu cuauu 25

<210> 4143
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4143
aaaaaggaaa cuaauuggac cauuu 25

<210> 4144
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4144
uaaaaaggaa acuaauugga ccauu 25

<210> 4145
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4145
gcauauuaaa aaggaaacua auugg 25

<210> 4146
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4146
agcauauuaa aaaggaaacu aauug 25

<210> 4147
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4147
uuuaagcaua uuaaaaagga aacua 25

<210> 4148
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4148
gcuuauuuua agcauauuaa aaagg 25

<210> 4149
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4149
ugcuuauuuu aagcauauua aaaag 25

<210> 4150
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4150
uccaccugcu uauuuuaagc auauu 25

<210> 4151
<211> 25
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4151
aaaacaugaa auagauccac cugcu 25

<210> 4152
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4152
aaaaacauga aauagaucca ccugc 25

<210> 4153
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4153
ucaaaaacau gaaauagauc caccu 25

<210> 4154
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4154
aucaaaaaca ugaaauagau ccacc 25

<210> 4155
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4155
gaucaaaaac augaaauaga uccac 25

<210> 4156

<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4156
uuuuugauca aaaacaugaa auaga 25

<210> 4157
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4157
aaauaguuuu ugaucaaaaa cauga 25

<210> 4158
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4158
ucccaaauag uuuuugauca aaaac 25

<210> 4159
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4159
aucccaaaua guuuuugauc aaaaa 25

<210> 4160
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4160
uaucccaaau aguuuuugau caaaa 25

<210> 4161
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4161
auaucccaaa uaguuuuuga ucaaa 25

<210> 4162
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4162
auacauaucc caaauaguuu uugau 25

<210> 4163
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4163
acccuaccca uacauauccc aaaua 25

<210> 4164
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4164
uacccuaccc auacauaucc caaau 25

<210> 4165
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4165

uuacccuacc cauacauauc ccaaa 25

<210> 4166
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4166
accucuuacu gauuuacccu accca 25

<210> 4167
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4167
acaccucuua cugauuuacc cuacc 25

<210> 4168
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4168
aacaccucuu acugauuuac ccuac 25

<210> 4169
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4169
uaacaccucu uacugauuua cccua 25

<210> 4170
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4170
auaacaccuc uuacugauuu acccu 25

<210> 4171
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4171
aauaacaccu cuuacugauu uaccc 25

<210> 4172
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4172
guuccaaaua acaccucuua cugau 25

<210> 4173
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4173
aacaagguuc caaauaacac cucuu 25

<210> 4174
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4174
aaacaagguu ccaaauaaca ccucu 25

<210> 4175
<211> 25
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4175
aaaacaaggu uccaaauaac accuc 25

<210> 4176
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4176
uguccaaaac aagguuccaa auaac 25

<210> 4177
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4177
aaacugucca aaacaagguu ccaaa 25

<210> 4178
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4178
uaaacugucc aaaacaaggu uccaa 25

<210> 4179
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4179
gcaacuggua aacuguccaa aacaa 25

<210> 4180
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4180
gauaaaaggc aacugguaaa cuguc 25

<210> 4181
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4181
ggauaaaagg caacugguaa acugu 25

<210> 4182
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4182
aacuuuggga uaaaaggcaa cuggu 25

<210> 4183
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4183
acaacuuugg gauaaaaggc aacug 25

<210> 4184
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4184
uuacaacaac uuugggauaa aaggc 25

<210> 4185
<211> 25

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4185
guuacaacaa cuuugggaua aaagg 25

<210> 4186
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4186
gguuacaaca acuuugggau aaaag 25

<210> 4187
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4187
ucacagcagg uuacaacaac uuugg 25

<210> 4188
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4188
aucacagcag guuacaacaa cuuug 25

<210> 4189
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4189
guaucacagc agguuacaac aacuu 25

<210> 4190
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4190
ucucuugaag caucguauca cagca 25

<210> 4191
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4191
uucucuugaa gcaucguauc acagc 25

<210> 4192
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4192
uuuucucuug aagcaucgua ucaca 25

<210> 4193
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4193
uuuuauaacc gcauuuucuc uugaa 25

<210> 4194
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4194
uuuuuauaac cgcauuuucu cuuga 25

<210> 4195
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4195
uuuuuuauaa ccgcauuuuc ucuug 25

<210> 4196
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4196
auuuuuuaua accgcauuuu cucuu 25

<210> 4197
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4197
gaaccauuuu uuauaaccgc auuuu 25

<210> 4198
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4198
auucugaacc auuuuuuaua accgc 25

<210> 4199
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4199
aauucugaac cauuuuuuau aaccg 25

<210> 4200
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4200
uaauucugaa ccauuuuuua uaacc 25

<210> 4201
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4201
uuaauucuga accauuuuuu auaac 25

<210> 4202
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4202
uuuaauucug aaccauuuuu uauaa 25

<210> 4203
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4203
guuuaauucu gaaccauuuu uuaua 25

<210> 4204
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 4204
uaaaaguuua auucugaacc auuuu 25

<210> 4205
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4205
uuaaaaguuu aauucugaac cauuu 25

<210> 4206
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4206
aauuaaaagu uuaauucuga accau 25

<210> 4207
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4207
auacagcuaa aggaugauuu acagg 25

<210> 4208
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4208
aauacagcua aaggaugauu uacag 25

<210> 4209
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4209
acaauacagc uaaaggauga uuuac 25

<210> 4210
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4210
uacuccuaaa ggaugauuua caggu 25

<210> 4211
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4211
uuacuccuaa aggaugauuu acagg 25

<210> 4212
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4212
guuacuccua aaggaugauu uacag 25

<210> 4213
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4213
uguuacuccu aaaggaugau uuaca 25

<210> 4214
<211> 25
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4214
auuccagaau ccaaguaaga cugcu 25

<210> 4215
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4215
ugcucccauu cauaaaggac uuggg 25

<210> 4216
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4216
ucaauaucag cuacuugcuc uugcg 25

<210> 4217
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4217
gucaauauca gcuacuugcu cuugc 25

<210> 4218
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4218
ugcccgucaa uaucagcuac uugcu 25

<210> 4219

<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4219
uuucaacauc ugugaugguu cagcc 25

<210> 4220
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4220
guuucaacau cugugauggu ucagc 25

<210> 4221
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4221
acaacugcau guuucaacau cugug 25

<210> 4222
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4222
ugacaacugc auguuucaac aucug 25

<210> 4223
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4223
aaauugacaa cugcauguuu caaca 25

<210> 4224
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4224
uuaaucaaau ugacaacugc auguu 25

<210> 4225
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4225
ugauaguuaa ucaaauugac aacug 25

<210> 4226
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4226
ucauccugau aguuaaucaa auuga 25

<210> 4227
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4227
gucauccuga uaguuaauca aauug 25

<210> 4228
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4228

ucaucguuua gcaguuuugu cagcu 25

<210> 4229
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4229
gguccucauc guuuagcagu uuugu 25

<210> 4230
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4230
uaacagcagc uuuauuaacu accac 25

<210> 4231
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4231
auaacagcag cuuuauuaac uacca 25

<210> 4232
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4232
accauaacag cagcuuuauu aacua 25

<210> 4233
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4233
gaccauaaca gcagcuuuau uaacu 25

<210> 4234
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4234
gucucuacau cauuuguauu cugca 25

<210> 4235
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4235
ugucucuaca ucauuuguau ucugc 25

<210> 4236
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4236
aaccauuuuc ugcaguccac cagcu 25

<210> 4237
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4237
gcaaccauuu ucugcagucc accag 25

<210> 4238
<211> 25
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4238
guuuuguuga gcaaagcaac cauuu 25

<210> 4239
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4239
uguuuuguug agcaaagcaa ccauu 25

<210> 4240
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4240
gccaagaauu ucacguuugu uuugu 25

<210> 4241
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4241
ugauugccau aagcuaagau cugaa 25

<210> 4242
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4242
ucucuugauu gccauaagcu aagau 25

<210> 4243
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4243
ucucauaagu guagguccuc auuau 25

<210> 4244
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4244
uucucauaag uguagguccu cauua 25

<210> 4245
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4245
gcuucucaua aguguagguc cucau 25

<210> 4246
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4246
agcuucucau aaguguaggu ccuca 25

<210> 4247
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4247
guccaaagac aguuuugaac aaguc 25

<210> 4248
<211> 25

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4248
aguccaaaga caguuuugaa caagu 25

<210> 4249
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4249
acauuuauau caucggaacc cagaa 25

<210> 4250
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4250
accacauuua uaucaucgga accca 25

<210> 4251
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4251
gcacagguga ccacauuuau aucau 25

<210> 4252
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4252
ugcacaggug accacauuua uauca 25

<210> 4253
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4253
guaauuauug caagugaggu uagag 25

<210> 4254
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4254
ucaucuuguu uuuguaauua uugca 25

<210> 4255
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4255
aucaucuugu uuuuguaauu auugc 25

<210> 4256
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4256
accaucaucu uguuuuugua auuau 25

<210> 4257
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4257
ggcacaccau caucuuguuu uugua 25

<210> 4258
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4258
aauccaacag uugccuuuau cagag 25

<210> 4259
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4259
gaaucaaucc aacaguugcc uuuau 25

<210> 4260
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4260
ugaacuaguc guggaauagc acccu 25

<210> 4261
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4261
uacacccuuc uacuaucucc uccau 25

<210> 4262
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4262
guacacccuu cuacuaucuc cucca 25

<210> 4263
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4263
aguacacccu ucuacuaucu ccucc 25

<210> 4264
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4264
gcuccaguac acccuucuac uaucu 25

<210> 4265
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4265
acaauggaau gguauugagu ccucg 25

<210> 4266
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4266
gcacaaacaa uggaauggua uugag 25

<210> 4267
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 4267
ugcacaaaca auggaauggu auuga 25

<210> 4268
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4268
gcaacugcac aaacaaugga auggu 25

<210> 4269
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4269
gaauaaagca acugcacaaa caaug 25

<210> 4270
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4270
ucaaugggag aauaaagcaa cugca 25

<210> 4271
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4271
uucaauggga gaauaaagca acugc 25

<210> 4272
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4272
uuucaauggg agaauaaagc aacug 25

<210> 4273
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4273
auauuuucaa ugggagaaua aagca 25

<210> 4274
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4274
gauauuuuca augggagaau aaagc 25

<210> 4275
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4275
ggauauuuuc aaugggagaa uaaag 25

<210> 4276
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4276
gcuacucuuu ggauauuuuc aaugg 25

<210> 4277
<211> 25
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4277
agcuacucuu uggauauuuu caaug 25

<210> 4278
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4278
gcuucuugua auccuguggc uuguc 25

<210> 4279
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4279
aguccaagau cugcagucuc auucc 25

<210> 4280
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4280
uauccaccag agugaaaaga acggu 25

<210> 4281
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4281
ggccagcuga uugcuaucac cuggg 25

<210> 4282

<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4282
auuuacaggu caguaucaaa ccagg 25

<210> 4283
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4283
gauuuacagg ucaguaucaa accag 25

<210> 4284
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4284
ucuuaccuaa aggacgauuu acagg 25

<210> 4285
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4285
uuucuuaccu aaaggacgau uuaca 25

<210> 4286
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4286
uuuauaagcu uucuuaccua aagga 25

<210> 4287
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4287
uuuuauaagc uuucuuaccu aaagg 25

<210> 4288
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4288
ggcuuuuaua agcuuucuua ccuaa 25

<210> 4289
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4289
acacuggcuu uuauaagcuu ucuua 25

<210> 4290
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4290
ucacccacac uggcuuuuau aagcu 25

<210> 4291
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4291

uaccaagucu uucuggaguu cugca 25

<210> 4292
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4292
uuacaaacag gccuaaaacc auucc 25

<210> 4293
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4293
uuuacaaaca ggccuaaaac cauuc 25

<210> 4294
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4294
auuuacaaac aggccuaaaa ccauu 25

<210> 4295
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4295
ucuccuucca agguauguau cuguu 25

<210> 4296
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4296
aucuccuucc aagguaugua ucugu 25

<210> 4297
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4297
uuccacacau gaacaucucc uucca 25

<210> 4298
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4298
aacuuccaca caugaacauc uccuu 25

<210> 4299
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4299
aaacuuccac acaugaacau cuccu 25

<210> 4300
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4300
gaaacuucca cacaugaaca ucucc 25

<210> 4301
<211> 25
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4301
agaaacuucc acacaugaac aucuc 25

<210> 4302
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4302
ucaacgugag aaacuuccac acaug 25

<210> 4303
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4303
acaucaacgu gagaaacuuc cacac 25

<210> 4304
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4304
aacaucaacg ugagaaacuu ccaca 25

<210> 4305
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4305
aaacaucaac gugagaaacu uccac 25

<210> 4306
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4306
aaaacaucaa cgugagaaac uucca 25

<210> 4307
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4307
aaaaacauca acgugagaaa cuucc 25

<210> 4308
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4308
gcaaaaacau caacgugaga aacuu 25

<210> 4309
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4309
gcaaaagcug uggcaaaaac aucaa 25

<210> 4310
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4310
ugcaaaagcu guggcaaaaa cauca 25

<210> 4311
<211> 25

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4311
ucaucugagu auaacgcugc aaaag 25

<210> 4312
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4312
aaaacagcaa auguuacuca ucuga 25

<210> 4313
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4313
gaaaacagca aauguuacuc aucug 25

<210> 4314
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4314
ugaaaacagc aaauguuacu caucu 25

<210> 4315
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4315
auuaauguug aaaacagcaa auguu 25

<210> 4316
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4316
acuacagcug uauagagaga aaggc 25

<210> 4317
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4317
ggccaaucac aaugcacguu cagac 25

<210> 4318
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4318
guucccauag gaaacucagc uuggu 25

<210> 4319
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4319
gaacaaaaag cguacuucga cuguu 25

<210> 4320
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4320
ggaccagaac aaaaagcgua cuucg 25

<210> 4321
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4321
accaaaaagg accagaacaa aaagc 25

<210> 4322
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4322
gaccaaaaag gaccagaaca aaaag 25

<210> 4323
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4323
acuccucgac caaaaaggac cagaa 25

<210> 4324
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4324
uccauuugua uuguuacucc ucgac 25

<210> 4325
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4325
auccauuugu auuguuacuc cucga 25

<210> 4326
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4326
aauccauuug uauuguuacu ccucg 25

<210> 4327
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4327
aaauccauuu guauuguuac uccuc 25

<210> 4328
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4328
acuccccaaa uccauuugua uuguu 25

<210> 4329
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4329
uccauucgug ugcauucuuc acugc 25

<210> 4330
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 4330
auccauucgu gugcauucuu cacug 25

<210> 4331
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4331
gauccauucg ugugcauucu ucacu 25

<210> 4332
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4332
aaacaaagaa caagcaaggc uaggg 25

<210> 4333
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4333
accacuacag auauuaaaac aaaga 25

<210> 4334
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4334
gcaccacuac agauauuaaa acaaa 25

<210> 4335
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4335
agcaccacua cagauauuaa aacaa 25

<210> 4336
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4336
aaaauaaaag caagcaaagu cagca 25

<210> 4337
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4337
gcaaaaaaua aaagcaagca aaguc 25

<210> 4338
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4338
uuacugcaaa aaauaaaagc aagca 25

<210> 4339
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4339
uaacaguuac ugcaaaaaau aaaag 25

<210> 4340
<211> 25
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4340
acuaacaguu acugcaaaaa auaaa 25

<210> 4341
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4341
aaacuaacag uuacugcaaa aaaua 25

<210> 4342
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4342
aaaacuaaca guuacugcaa aaaau 25

<210> 4343
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4343
uaaaaacuaa caguuacugc aaaaa 25

<210> 4344
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4344
uacuuaaaaa cuaacaguua cugca 25

<210> 4345

<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4345
acuacuuaaa aacuaacagu uacug 25

<210> 4346
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4346
uaacacuacu uaaaaacuaa caguu 25

<210> 4347
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4347
auaacacuac uuaaaaacua acagu 25

<210> 4348
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4348
acauaacacu acuuaaaaac uaaca 25

<210> 4349
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4349
aacauaacac uacuuaaaaa cuaac 25

<210> 4350
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4350
gaacauaaca cuacuuaaaa acuaa 25

<210> 4351
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4351
agaacauaac acuacuuaaa aacua 25

<210> 4352
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4352
ucacuagaac auaacacuac uuaaa 25

<210> 4353
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4353
guucacuaga acauaacacu acuua 25

<210> 4354
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4354

gguucacuag aacauaacac uacuu 25

<210> 4355
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4355
auuacucggu ucuuagaaau cagaa 25

<210> 4356
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4356
accauuacuc gguucuuaga aauca 25

<210> 4357
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4357
ucuacaccau uacucgguuc uuaga 25

<210> 4358
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4358
gaauuagugu ucuacaccau uacuc 25

<210> 4359
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4359
auuaugaauu aguguucuac accau 25

<210> 4360
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4360
gauuaugaau uaguguucua cacca 25

<210> 4361
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4361
ugauuaugaa uuaguguucu acacc 25

<210> 4362
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4362
acaauuagcg ugauuaugaa uuagu 25

<210> 4363
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4363
uacaauuagc gugauuauga auuag 25

<210> 4364
<211> 25
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4364
agauuacaau uagcgugauu augaa 25

<210> 4365
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4365
uacacgucuc cagauuacaa uuagc 25

<210> 4366
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4366
guuacacguc uccagauuac aauua 25

<210> 4367
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4367
uacacaaugu uacacgucuc cagau 25

<210> 4368
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4368
gcuacacaau guuacacguc uccag 25

<210> 4369
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4369
acaaaaggcu acacaauguu acacg 25

<210> 4370
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4370
uacaaaaggc uacacaaugu uacac 25

<210> 4371
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4371
uuuauacaaa aggcuacaca auguu 25

<210> 4372
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4372
auuuauacaa aaggcuacac aaugu 25

<210> 4373
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4373
ucuauuuaua caaaaggcua cacaa 25

<210> 4374
<211> 25

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4374
gucuauuuau acaaaaggcu acaca 25

<210> 4375
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4375
ugucuauuua uacaaaaggc uacac 25

<210> 4376
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4376
ucuaucuguc uauuuauaca aaagg 25

<210> 4377
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4377
uucuaucugu cuauuuauac aaaag 25

<210> 4378
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4378
uuucuaucug ucuauuuaua caaaa 25

<210> 4379
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4379
auuucuaucu gucuauuuau acaaa 25

<210> 4380
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4380
gaccauuucu aucugucuau uuaua 25

<210> 4381
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4381
ggaccauuuc uaucugucua uuuau 25

<210> 4382
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4382
acuaaucgga ccauuucuau cuguc 25

<210> 4383
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4383
aacuaaucgg accauuucua ucugu 25

<210> 4384
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4384
aaacuaaucg gaccauuucu aucug 25

<210> 4385
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4385
gaaacuaauc ggaccauuuc uaucu 25

<210> 4386
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4386
uaaaaaggaa acuaaucgga ccauu 25

<210> 4387
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4387
gcauauuaaa aaggaaacua aucgg 25

<210> 4388
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4388
agcauauuaa aaaggaaacu aaucg 25

<210> 4389
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4389
uuuaagcaua uuaaaaagga aacua 25

<210> 4390
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4390
gcuuauuuua agcauauuaa aaagg 25

<210> 4391
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4391
ugcuuauuuu aagcauauua aaaag 25

<210> 4392
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4392
uccaccugcu uauuuuaagc auauu 25

<210> 4393
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 4393
aaaacaugaa auagauccac cugcu 25

<210> 4394
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4394
aaaaacauga aauagaucca ccugc 25

<210> 4395
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4395
ucaaaaacau gaaauagauc caccu 25

<210> 4396
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4396
uucaaaaaca ugaaauagau ccacc 25

<210> 4397
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4397
guucaaaaac augaaauaga uccac 25

<210> 4398
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4398
uuuuuguuca aaaacaugaa auaga 25

<210> 4399
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4399
auaaaguuuu uguucaaaaa cauga 25

<210> 4400
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4400
uccccgauaa aguuuuuguu caaaa 25

<210> 4401
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4401
aucccgaua aaguuuuugu ucaaa 25

<210> 4402
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4402
accucuuacu gauuuacccu accgc 25

<210> 4403
<211> 25
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4403
acaccucuua cugauuuacc cuacc 25

<210> 4404
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4404
aacaccucuu acugauuuac ccuac 25

<210> 4405
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4405
uaacaccucu uacugauuua cccua 25

<210> 4406
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4406
auaacaccuc uuacugauuu acccu 25

<210> 4407
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4407
aauaacaccu cuuacugauu uaccc 25

<210> 4408

<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4408
ggcucaaaua acaccucuua cugau 25

<210> 4409
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4409
aacaaggcuc aaauaacacc ucuua 25

<210> 4410
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4410
aaacaaggcu caaauaacac cucuu 25

<210> 4411
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4411
aaaacaaggc ucaaauaaca ccucu 25

<210> 4412
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4412
uccaaaacaa ggcucaaaua acacc 25

<210> 4413
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4413
uguccaaaac aaggcucaaa uaaca 25

<210> 4414
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4414
uauacugucc aaaacaaggc ucaaa 25

<210> 4415
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4415
gcaacuggua uacuguccaa aacaa 25

<210> 4416
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4416
gauaaaaggc aacugguaua cuguc 25

<210> 4417
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4417

ggauaaaagg caacugguau acugu 25

<210> 4418
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4418
aacuuuggga uaaaaggcaa cuggu 25

<210> 4419
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4419
acaacuuugg gauaaaaggc aacug 25

<210> 4420
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4420
uuacaacaac uuugggauaa aaggc 25

<210> 4421
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4421
guuacaacaa cuuugggaua aaagg 25

<210> 4422
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4422
gguuacaaca acuuugggau aaaag 25

<210> 4423
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4423
ucacagcagg uuacaacaac uuugg 25

<210> 4424
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4424
aucacagcag guuacaacaa cuuug 25

<210> 4425
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4425
guaucacagc agguuacaac aacuu 25

<210> 4426
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4426
gcaucuguug aagcauugua ucaca 25

<210> 4427
<211> 25
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4427
ugaaccauuu cuauaaccgc aucug 25

<210> 4428
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4428
auucugaacc auuucuauaa ccgca 25

<210> 4429
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4429
uaauucugaa ccauuucuau aaccg 25

<210> 4430
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4430
uuaauucuga accauuucua uaacc 25

<210> 4431
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4431
uuuaauucug aaccauuucu auaac 25

<210> 4432
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4432
guuuaauucu gaaccauuuc uauaa 25

<210> 4433
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4433
uaaaaguuua auucugaacc auuuc 25

<210> 4434
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4434
uuaaaaguuu aauucugaac cauuu 25

<210> 4435
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4435
aauuaaaagu uuaauucuga accau 25

<210> 4436
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4436
ugaaugaauu aaaaguuuaa uucug 25

<210> 4437
<211> 25

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4437
uuuuugaaug aauuaaaagu uuaau 25

<210> 4438
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4438
uuuuuuuuug aaugaauuaa aaguu 25

<210> 4439
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4439
uuuuuuuuuu gaaugaauua aaagu 25

<210> 4440
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4440
uuuuuuuuuu ugaaugaauu aaaag 25

<210> 4441
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4441
uuuuuuuuuu uugaaugaau uaaaa 25

<210> 4442
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4442
uuuuuuuuuu uuugaaugaa uuaaa 25

<210> 4443
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4443
uuuuuuuuuu uuuugaauga auuaa 25

<210> 4444
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4444
ccctgagggt atttgaagta t 21

<210> 4445
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4445
gagggtattt gaagtatacc a 21

<210> 4446
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4446
tgaagtatac catacaactg t 21

<210> 4447
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4447
ataccataca actgttttga a 21

<210> 4448
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4448
atacaactgt tttgaaaatc c 21

<210> 4449
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4449
cagggatttt ctcagtcctt c 21

<210> 4450
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4450
cactcaagaa caagtagctg a 21

<210> 4451
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4451
agaacaagta gctgatattg a 21

<210> 4452
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4452
aacaagtagc tgatattgat g 21

<210> 4453
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4453
tgatggacag tatgcaatga c 21

<210> 4454
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4454
tgctatgttc cctgagacat t 21

<210> 4455
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4455
tgctgaaaca tgcagttgta a 21

<210> 4456
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 4456
aacatgcagt tgtaaacttg a 21

<210> 4457
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4457
gcagttgtaa acttgattaa c 21

<210> 4458
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4458
acttgattaa ctatcaagat g 21

<210> 4459
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4459
ccctgaactg acaaaactgc t 21

<210> 4460
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4460
tcagatggtg tctgctattg t 21

<210> 4461
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4461
gtacgtacca tgcagaatac a 21

<210> 4462
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4462
attacaactc tccacaacct t 21

<210> 4463
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4463
aactctccac aacctttat t 21

<210> 4464
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4464
tccacaacct tttattacat c 21

<210> 4465
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4465
acctttatt acatcaagaa g 21

<210> 4466
<211> 21
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4466
acaaaacaaa tgttaaattc t 21

<210> 4467
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4467
attacgacag actgccttca a 21

<210> 4468
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4468
gacagactgc cttcaaattt t 21

<210> 4469
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4469
agctttagta aatataatga g 21

<210> 4470
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4470
gaaaaactac tgtggaccac a 21

<210> 4471

<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4471
caagtcaacg tcttgttcag a 21

<210> 4472
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4472
aacgtcttgt tcagaactgt c 21

<210> 4473
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4473
cttgttcaga actgtctttg g 21

<210> 4474
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4474
tgggttcaga tgatataaat g 21

<210> 4475
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4475
attctttcta acctcacttg c 21

<210> 4476
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4476
acctcacttg caataattat a 21

<210> 4477
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4477
tgcaataatt ataagaacaa g 21

<210> 4478
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4478
tggtatagag gctcttgtgc g 21

<210> 4479
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4479
aaggctactg ttggattgat t 21

<210> 4480
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4480

cgcatggaag aaatagttga a 21

<210> 4481
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4481
catggaagaa atagttgaag g 21

<210> 4482
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4482
ccattgaaaa catccaaaga g 21

<210> 4483
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4483
ctgaggacaa gccacaagat t 21

<210> 4484
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4484
ttgatactga cctgtaaatc a 21

<210> 4485
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4485
ctttaggtaa gaagttttaa a 21

<210> 4486
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4486
aacaggtata tactttgaaa g 21

<210> 4487
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4487
tggaagttat taactttaat g 21

<210> 4488
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4488
tgccacagct tttgcaactt a 21

<210> 4489
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4489
aacatttgct gttttaaaca t 21

<210> 4490
<211> 21
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4490
aacaattgaa gtaaactttt t 21

<210> 4491
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4491
aaaccctagc cttgcttgtt a 21

<210> 4492
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4492
tagccttgct tgttaaattt t 21

<210> 4493
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4493
ttgaagtagc tctttttttt t 21

<210> 4494
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4494
tcgtagtgtt aagttatagt g 21

<210> 4495
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4495
tagtgaatac tgctacagca a 21

<210> 4496
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4496
aatactgcta cagcaatttc t 21

<210> 4497
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4497
ttctaatttt taagaattga g 21

<210> 4498
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4498
atttttaaga attgagtaat g 21

<210> 4499
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4499
ttcataatca ctctaattaa t 21

<210> 4500
<211> 21

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4500
attaattgta atctgaataa a 21

<210> 4501
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4501
ttgtaatctg aataaagtgt a 21

<210> 4502
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4502
tctgaataaa gtgtaacaat t 21

<210> 4503
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4503
gtgtagcctt tttgtataaa a 21

<210> 4504
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4504
tttgtataaa atagacaaat a 21

<210> 4505
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4505
agaaaatggt ccaattagtt t 21

<210> 4506
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4506
gtccaattag tttccttttt a 21

<210> 4507
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4507
tttttgatca aaaactattt g 21

<210> 4508
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4508
aagaggtgtt atttggaacc t 21

<210> 4509
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4509
gtgttatttg gaaccttgtt t 21

<210> 4510
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4510
gaaccttgtt ttggacagtt t 21

<210> 4511
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4511
gtgatacgat gcttcaagag a 21

<210> 4512
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4512
ttcaagagaa aatgcggtta t 21

<210> 4513
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4513
gagaaaatgc ggttataaaa a 21

<210> 4514
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4514
cggttataaa aaatggttca g 21

<210> 4515
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4515
aaaaaatggt tcagaattaa a 21

<210> 4516
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4516
cagcgtggac aatggctact c 21

<210> 4517
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4517
agcgtggaca atggctactc a 21

<210> 4518
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4518
gcgtggacaa tggctactca a 21

<210> 4519
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 4519
cgtggacaat ggctactcaa g 21

<210> 4520
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4520
gtggacaatg gctactcaag c 21

<210> 4521
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4521
tggacaatgg ctactcaagc t 21

<210> 4522
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4522
ggacaatggc tactcaagct g 21

<210> 4523
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4523
gacaatggct actcaagctg a 21

<210> 4524
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4524
tttgatggag ttggacatgg c 21

<210> 4525
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4525
ttgatggagt tggacatggc c 21

<210> 4526
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4526
tgatggagtt ggacatggcc a 21

<210> 4527
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4527
gatggagttg gacatggcca t 21

<210> 4528
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4528
atggagttgg acatggccat g 21

<210> 4529
<211> 21
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4529
tggagttgga catggccatg g 21

<210> 4530
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4530
ggagttggac atggccatgg a 21

<210> 4531
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4531
actctggaat ccattctggt g 21

<210> 4532
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4532
ctctggaatc cattctggtg c 21

<210> 4533
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4533
tctggaatcc attctggtgc c 21

<210> 4534

<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4534
ctggaatcca ttctggtgcc a 21

<210> 4535
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4535
tggaatccat tctggtgcca c 21

<210> 4536
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4536
attagatgag ggcatgcaga t 21

<210> 4537
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4537
ttagatgagg gcatgcagat c 21

<210> 4538
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4538
tagatgaggg catgcagatc c 21

<210> 4539
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4539
agatgagggc atgcagatcc c 21

<210> 4540
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4540
gatgagggca tgcagatccc a 21

<210> 4541
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4541
atgagggcat gcagatccca t 21

<210> 4542
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4542
atgctgctca tcccactaat g 21

<210> 4543
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4543

tgctgctcat cccactaatg t 21

<210> 4544
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4544
gctgctcatc ccactaatgt c 21

<210> 4545
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4545
ctgctcatcc cactaatgtc c 21

<210> 4546
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4546
tgctcatccc actaatgtcc a 21

<210> 4547
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4547
gctcatccca ctaatgtcca g 21

<210> 4548
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4548
ctcatcccac taatgtccag c 21

<210> 4549
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4549
tcatcccact aatgtccagc g 21

<210> 4550
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4550
gtttggctga accatcacag a 21

<210> 4551
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4551
tttggctgaa ccatcacaga t 21

<210> 4552
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4552
ttggctgaac catcacagat g 21

<210> 4553
<211> 21
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4553
cagaacttgc cacacgtgca a 21

<210> 4554
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4554
agaacttgcc acacgtgcaa t 21

<210> 4555
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4555
cagttatggt ccatcagctt t 21

<210> 4556
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4556
agttatggtc catcagcttt c 21

<210> 4557
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4557
ctaaaaagga agcttccaga c 21

<210> 4558
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4558
taaaaaggaa gcttccagac a 21

<210> 4559
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4559
gtaccatgca gaatacaaat g 21

<210> 4560
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4560
taccatgcag aatacaaatg a 21

<210> 4561
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4561
accatgcaga atacaaatga t 21

<210> 4562
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4562
ccatgcagaa tacaaatgat g 21

<210> 4563
<211> 21

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4563
catgcagaat acaaatgatg t 21

<210> 4564
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4564
atgcagaata caaatgatgt a 21

<210> 4565
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4565
tgcagaatac aaatgatgta g 21

<210> 4566
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4566
gcagaataca aatgatgtag a 21

<210> 4567
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4567
tactggccat ctttaagtct g 21

<210> 4568
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4568
actggccatc tttaagtctg g 21

<210> 4569
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4569
aagaaggagc taaaatggca g 21

<210> 4570
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4570
agaaggagct aaaatggcag t 21

<210> 4571
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4571
gaaggagcta aaatggcagt g 21

<210> 4572
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4572
aaggagctaa aatggcagtg c 21

<210> 4573
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4573
aggagctaaa atggcagtgc g 21

<210> 4574
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4574
tactgtggac cacaagcaga g 21

<210> 4575
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4575
actgtggacc acaagcagag t 21

<210> 4576
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4576
ctgtggacca caagcagagt g 21

<210> 4577
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4577
tgtggaccac aagcagagtg c 21

<210> 4578
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4578
gtggaccaca agcagagtgc t 21

<210> 4579
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4579
tggaccacaa gcagagtgct g 21

<210> 4580
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4580
ggaccacaag cagagtgctg a 21

<210> 4581
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4581
gaccacaagc agagtgctga a 21

<210> 4582
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 4582
accacaagca gagtgctgaa g 21

<210> 4583
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4583
ccacaagcag agtgctgaag g 21

<210> 4584
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4584
cacaagcaga gtgctgaagg t 21

<210> 4585
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4585
acaagcagag tgctgaaggt g 21

<210> 4586
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4586
caagcagagt gctgaaggtg c 21

<210> 4587
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4587
aagcagagtg ctgaaggtgc t 21

<210> 4588
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4588
agaactgtct ttggactctc a 21

<210> 4589
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4589
gaactgtctt tggactctca g 21

<210> 4590
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4590
cagatgatat aaatgtggtc a 21

<210> 4591
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4591
agatgatata aatgtggtca c 21

<210> 4592
<211> 21
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4592
gatgatataa atgtggtcac c 21

<210> 4593
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4593
atgatataaa tgtggtcacc t 21

<210> 4594
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4594
tgatataaat gtggtcacct g 21

<210> 4595
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4595
gatataaatg tggtcacctg t 21

<210> 4596
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4596
atataaatgt ggtcacctgt g 21

<210> 4597

<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4597
tataaatgtg gtcacctgtg c 21

<210> 4598
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4598
ataaatgtgg tcacctgtgc a 21

<210> 4599
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4599
taaatgtggt cacctgtgca g 21

<210> 4600
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4600
aaatgtggtc acctgtgcag c 21

<210> 4601
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4601
aatgtggtca cctgtgcagc t 21

<210> 4602
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4602
atgtggtcac ctgtgcagct g 21

<210> 4603
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4603
tgtggtcacc tgtgcagctg g 21

<210> 4604
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4604
gtggtcacct gtgcagctgg a 21

<210> 4605
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4605
tggtcacctg tgcagctgga a 21

<210> 4606
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4606

ggtcacctgt gcagctggaa t 21

<210> 4607
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4607
gtcacctgtg cagctggaat t 21

<210> 4608
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4608
tcacctgtgc agctggaatt c 21

<210> 4609
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4609
cacctgtgca gctggaattc t 21

<210> 4610
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4610
tttctaacct cacttgcaat a 21

<210> 4611
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4611
ttctaacctc acttgcaata a 21

<210> 4612
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4612
tctaacctca cttgcaataa t 21

<210> 4613
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4613
ctaacctcac ttgcaataat t 21

<210> 4614
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4614
taacctcact tgcaataatt a 21

<210> 4615
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4615
gggctggtga cagggaagac a 21

<210> 4616
<211> 21
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4616
ggctggtgac agggaagaca t 21

<210> 4617
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4617
gctggtgaca gggaagacat c 21

<210> 4618
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4618
ctggtgacag ggaagacatc a 21

<210> 4619
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4619
tggtgacagg gaagacatca c 21

<210> 4620
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4620
ggtgacaggg aagacatcac t 21

<210> 4621
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4621
gtgacaggga agacatcact g 21

<210> 4622
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4622
tgacagggaa gacatcactg a 21

<210> 4623
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4623
gacagggaag acatcactga g 21

<210> 4624
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4624
acagggaaga catcactgag c 21

<210> 4625
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4625
cagggaagac atcactgagc c 21

<210> 4626
<211> 21

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4626
agggaagaca tcactgagcc t 21

<210> 4627
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4627
gggaagacat cactgagcct g 21

<210> 4628
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4628
ggaagacatc actgagcctg c 21

<210> 4629
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4629
gaagacatca ctgagcctgc c 21

<210> 4630
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4630
aagacatcac tgagcctgcc a 21

<210> 4631
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4631
agacatcact gagcctgcca t 21

<210> 4632
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4632
gacatcactg agcctgccat c 21

<210> 4633
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4633
acatcactga gcctgccatc t 21

<210> 4634
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4634
catcactgag cctgccatct g 21

<210> 4635
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4635
atcactgagc ctgccatctg t 21

<210> 4636
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4636
tcactgagcc tgccatctgt g 21

<210> 4637
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4637
cactgagcct gccatctgtg c 21

<210> 4638
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4638
actgagcctg ccatctgtgc t 21

<210> 4639
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4639
ctgagcctgc catctgtgct c 21

<210> 4640
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4640
tgagcctgcc atctgtgctc t 21

<210> 4641
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4641
gagcctgcca tctgtgctct t 21

<210> 4642
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4642
agcctgccat ctgtgctctt c 21

<210> 4643
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4643
gcctgccatc tgtgctcttc g 21

<210> 4644
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4644
cctgccatct gtgctcttcg t 21

<210> 4645
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 4645
ctgccatctg tgctcttcgt c 21

<210> 4646
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4646
tgccatctgt gctcttcgtc a 21

<210> 4647
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4647
gccatctgtg ctcttcgtca t 21

<210> 4648
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4648
ccatctgtgc tcttcgtcat c 21

<210> 4649
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4649
catctgtgct cttcgtcatc t 21

<210> 4650
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4650
atctgtgctc ttcgtcatct g 21

<210> 4651
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4651
tctgtgctct tcgtcatctg a 21

<210> 4652
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4652
ctgtgctctt cgtcatctga c 21

<210> 4653
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4653
tgtgctcttc gtcatctgac c 21

<210> 4654
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4654
gtgctcttcg tcatctgacc a 21

<210> 4655
<211> 21
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4655
tgctcttcgt catctgacca g 21

<210> 4656
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4656
gctcttcgtc atctgaccag c 21

<210> 4657
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4657
ctcttcgtca tctgaccagc c 21

<210> 4658
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4658
tcttcgtcat ctgaccagcc g 21

<210> 4659
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4659
tacacccacc atcccactgg c 21

<210> 4660

<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4660
acacccacca tcccactggc c 21

<210> 4661
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4661
cacccaccat cccactggcc t 21

<210> 4662
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4662
acccaccatc ccactggcct c 21

<210> 4663
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4663
cccaccatcc cactggcctc t 21

<210> 4664
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4664
ccaccatccc actggcctct g 21

<210> 4665
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4665
caccatccca ctggcctctg a 21

<210> 4666
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4666
accatcccac tggcctctga t 21

<210> 4667
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4667
ccatcccact ggcctctgat a 21

<210> 4668
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4668
catcccactg gcctctgata a 21

<210> 4669
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4669

atcccactgg cctctgataa a 21

<210> 4670
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4670
tcccactggc ctctgataaa g 21

<210> 4671
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4671
cccactggcc tctgataaag g 21

<210> 4672
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4672
ccactggcct ctgataaagg c 21

<210> 4673
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4673
ctactgttgg attgattcga a 21

<210> 4674
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4674
tactgttgga ttgattcgaa a 21

<210> 4675
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4675
taaataccat tccattgttt g 21

<210> 4676
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4676
aaataccatt ccattgtttg t 21

<210> 4677
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4677
aataccattc cattgtttgt g 21

<210> 4678
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4678
ataccattcc attgtttgtg c 21

<210> 4679
<211> 21
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4679
taccattcca ttgtttgtgc a 21

<210> 4680
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4680
accattccat tgtttgtgca g 21

<210> 4681
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4681
gctgctttat tctcccattg a 21

<210> 4682
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4682
ctgctttatt ctcccattga a 21

<210> 4683
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4683
tgctttattc tcccattgaa a 21

<210> 4684
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4684
gctttattct cccattgaaa a 21

<210> 4685
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4685
gggtcctctg tgaacttgct c 21

<210> 4686
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4686
ggtcctctgt gaacttgctc a 21

<210> 4687
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4687
gtcctctgtg aacttgctca g 21

<210> 4688
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4688
tcctctgtga acttgctcag g 21

<210> 4689
<211> 21

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4689
cctctgtgaa cttgctcagg a 21

<210> 4690
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4690
ctctgtgaac ttgctcagga c 21

<210> 4691
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4691
tctgtgaact tgctcaggac a 21

<210> 4692
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4692
ctgtgaactt gctcaggaca a 21

<210> 4693
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4693
tgtgaacttg ctcaggacaa g 21

<210> 4694
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4694
gtgaacttgc tcaggacaag g 21

<210> 4695
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4695
tgaacttgct caggacaagg a 21

<210> 4696
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4696
ctattgaagc tgagggagcc a 21

<210> 4697
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4697
tattgaagct gagggagcca c 21

<210> 4698
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4698
attgaagctg agggagccac a 21

<210> 4699
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4699
tgttccgaat gtctgaggac a 21

<210> 4700
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4700
gttccgaatg tctgaggaca a 21

<210> 4701
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4701
ttccgaatgt ctgaggacaa g 21

<210> 4702
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4702
tccgaatgtc tgaggacaag c 21

<210> 4703
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4703
ccgaatgtct gaggacaagc c 21

<210> 4704
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4704
cgaatgtctg aggacaagcc a 21

<210> 4705
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4705
gaatgtctga ggacaagcca c 21

<210> 4706
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4706
aatgtctgag gacaagccac a 21

<210> 4707
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4707
gaacagagcc aatggcttgg a 21

<210> 4708
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 4708
aacagagcca atggcttgga a 21

<210> 4709
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4709
acagagccaa tggcttggaa t 21

<210> 4710
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4710
cagagccaat ggcttggaat g 21

<210> 4711
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4711
agagccaatg gcttggaatg a 21

<210> 4712
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4712
gagccaatgg cttggaatga g 21

<210> 4713
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4713
agccaatggc ttggaatgag a 21

<210> 4714
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4714
gccaatggct tggaatgaga c 21

<210> 4715
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4715
ccaatggctt ggaatgagac t 21

<210> 4716
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4716
caatggcttg gaatgagact g 21

<210> 4717
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4717
aatggcttgg aatgagactg c 21

<210> 4718
<211> 21
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4718
cccttggata tcgccaggat g 21

<210> 4719
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4719
ccttggatat cgccaggatg a 21

<210> 4720
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4720
cttggatatc gccaggatga t 21

<210> 4721
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4721
ttggatatcg ccaggatgat c 21

<210> 4722
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4722
tggatatcgc caggatgatc c 21

<210> 4723

<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4723
atcgttcttt tcactctggt g 21

<210> 4724
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4724
tcgttctttt cactctggtg g 21

<210> 4725
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4725
cgttcttttc actctggtgg a 21

<210> 4726
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4726
gttcttttca ctctggtgga t 21

<210> 4727
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4727
ttcttttcac tctggtggat a 21

<210> 4728
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4728
aacatgagat gggtggccac c 21

<210> 4729
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4729
acatgagatg ggtggccacc a 21

<210> 4730
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4730
catgagatgg gtggccacca c 21

<210> 4731
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4731
atgagatggg tggccaccac c 21

<210> 4732
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4732

tgagatgggt ggccaccacc c 21

<210> 4733
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4733
gagatgggtg gccaccaccc t 21

<210> 4734
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4734
agatgggtgg ccaccaccct g 21

<210> 4735
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4735
gatgggtggc caccaccctg g 21

<210> 4736
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4736
atgggtggcc accaccctgg t 21

<210> 4737
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4737
tgggtggcca ccaccctggt g 21

<210> 4738
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4738
gggtggccac caccctggtg c 21

<210> 4739
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4739
ggtggccacc accctggtgc t 21

<210> 4740
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4740
gtggccacca ccctggtgct g 21

<210> 4741
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4741
tggccaccac cctggtgctg a 21

<210> 4742
<211> 21
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4742
ggccaccacc ctggtgctga c 21

<210> 4743
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4743
gccaccaccc tggtgctgac t 21

<210> 4744
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4744
ccaccaccct ggtgctgact a 21

<210> 4745
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4745
caccaccctg gtgctgacta t 21

<210> 4746
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4746
accaccctgg tgctgactat c 21

<210> 4747
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4747
ccaccctggt gctgactatc c 21

<210> 4748
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4748
caccctggtg ctgactatcc a 21

<210> 4749
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4749
accctggtgc tgactatcca g 21

<210> 4750
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4750
ccctggtgct gactatccag t 21

<210> 4751
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4751
cctggtgctg actatccagt t 21

<210> 4752
<211> 21

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4752
ctggtgctga ctatccagtt g 21

<210> 4753
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4753
tggtgctgac tatccagttg a 21

<210> 4754
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4754
ggtgctgact atccagttga t 21

<210> 4755
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4755
gtgctgacta tccagttgat g 21

<210> 4756
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4756
tgctgactat ccagttgatg g 21

<210> 4757
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4757
gctgactatc cagttgatgg g 21

<210> 4758
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4758
ctgactatcc agttgatggg c 21

<210> 4759
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4759
tgactatcca gttgatgggc t 21

<210> 4760
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4760
gactatccag ttgatgggct g 21

<210> 4761
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4761
actatccagt tgatgggctg c 21

<210> 4762
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4762
ctatccagtt gatgggctgc c 21

<210> 4763
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4763
atgcccagga cctcatggat g 21

<210> 4764
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4764
tgcccaggac ctcatggatg g 21

<210> 4765
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4765
gcccaggacc tcatggatgg g 21

<210> 4766
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4766
acagcaatca gctggcctgg t 21

<210> 4767
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4767
cagcaatcag ctggcctggt t 21

<210> 4768
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4768
agcaatcagc tggcctggtt t 21

<210> 4769
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4769
gcaatcagct ggcctggttt g 21

<210> 4770
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4770
caatcagctg gcctggtttg a 21

<210> 4771
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 4771
aatcagctgg cctggtttga t 21

<210> 4772
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4772
atcagctggc ctggtttgat a 21

<210> 4773
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4773
tcagctggcc tggtttgata c 21

<210> 4774
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4774
cagctggcct ggtttgatac t 21

<210> 4775
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4775
agctggcctg gtttgatact g 21

<210> 4776
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4776
gctggcctgg tttgatactg a 21

<210> 4777
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4777
ctggcctggt ttgatactga c 21

<210> 4778
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4778
tggcctggtt tgatactgac c 21

<210> 4779
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4779
ggcctggttt gatactgacc t 21

<210> 4780
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4780
gcctggtttg atactgacct g 21

<210> 4781
<211> 21
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4781
cctggtttga tactgacctg t 21

<210> 4782
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4782
ctggtttgat actgacctgt a 21

<210> 4783
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4783
tggtttgata ctgacctgta a 21

<210> 4784
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4784
ggtttgatac tgacctgtaa a 21

<210> 4785
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4785
gtttgatact gacctgtaaa t 21

<210> 4786

<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4786
tttgatactg acctgtaaat c 21

<210> 4787
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4787
ttttttgcca cagcttttgc a 21

<210> 4788
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4788
aatgagtaac atttgctgtt t 21

<210> 4789
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4789
taaacattaa tagcagcctt t 21

<210> 4790
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4790
aacattaata gcagcctttc t 21

<210> 4791
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4791
cattaatagc agcctttctc t 21

<210> 4792
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4792
ttaatagcag cctttctctc t 21

<210> 4793
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4793
ttgcattgtg attggcctgt a 21

<210> 4794
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4794
gcattgtgat tggcctgtag a 21

<210> 4795
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4795

attgtgattg gcctgtagag t 21

<210> 4796
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4796
tgtgattggc ctgtagagtt g 21

<210> 4797
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4797
tgattggcct gtagagttgc t 21

<210> 4798
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4798
attggcctgt agagttgctg a 21

<210> 4799
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4799
tggcctgtag agttgctgag a 21

<210> 4800
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4800
gcctgtagag ttgctgagag g 21

<210> 4801
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4801
ctgtagagtt gctgagaggg c 21

<210> 4802
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4802
gggtgggctg gtatctcaga a 21

<210> 4803
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4803
gtgggctggt atctcagaaa g 21

<210> 4804
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4804
gggctggtat ctcagaaagt g 21

<210> 4805
<211> 21
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4805
gctggtatct cagaaagtgc c 21

<210> 4806
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4806
acactaacca agctgagttt c 21

<210> 4807
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4807
actaaccaag ctgagtttcc t 21

<210> 4808
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4808
taaccaagct gagtttccta t 21

<210> 4809
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4809
accaagctga gtttcctatg g 21

<210> 4810
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4810
caagctgagt ttcctatggg a 21

<210> 4811
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4811
agctgagttt cctatgggaa c 21

<210> 4812
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4812
aacttttgt tctggtcctt t 21

<210> 4813
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4813
ctttttgttc tggtcctttt t 21

<210> 4814
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4814
ttttgttctg gtccttttg g 21

<210> 4815
<211> 21

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4815
ttgttctggt ccttttttggt c 21

<210> 4816
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4816
gttctggtcc tttttggtcg a 21

<210> 4817
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4817
tctggtcctt tttggtcgag g 21

<210> 4818
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4818
tggtcctttt tggtcgagga g 21

<210> 4819
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4819
gtccttttttg gtcgaggagt a 21

<210> 4820
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4820
ccttttggt cgaggagtaa c 21

<210> 4821
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4821
tttttggtcg aggagtaaca a 21

<210> 4822
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4822
tttggtcgag gagtaacaat a 21

<210> 4823
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4823
tggtcgagga gtaacaatac a 21

<210> 4824
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4824
gtcgaggagt aacaatacaa a 21

<210> 4825
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4825
cgaggagtaa caatacaaat g 21

<210> 4826
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4826
aggagtaaca atacaaatgg a 21

<210> 4827
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4827
tttatcaaac cctagccttg c 21

<210> 4828
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4828
tatcaaaccc tagccttgct t 21

<210> 4829
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4829
tcaaacccta gccttgcttg t 21

<210> 4830
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4830
ttgagtaatg gtgtagaaca c 21

<210> 4831
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4831
gagtaatggt gtagaacact a 21

<210> 4832
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4832
gtaatggtgt agaacactaa t 21

<210> 4833
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4833
aatggtgtag aacactaatt c 21

<210> 4834
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 4834
tggtgtagaa cactaattca t 21

<210> 4835
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4835
gtgtagaaca ctaattcata a 21

<210> 4836
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4836
gtagaacact aattcataat c 21

<210> 4837
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4837
agaacactaa ttcataatca c 21

<210> 4838
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4838
aattagtttc ctttttaata t 21

<210> 4839
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4839
ttagtttcct ttttaatatg c 21

<210> 4840
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4840
agtttccttt ttaatatgct t 21

<210> 4841
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4841
tttccttttt aatatgctta a 21

<210> 4842
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4842
tccttttttaa tatgcttaaa a 21

<210> 4843
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4843
ccttttttaat atgcttaaaa t 21

<210> 4844
<211> 21
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4844
cttttaata tgcttaaaat a 21

<210> 4845
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4845
ttttaatatg cttaaaataa g 21

<210> 4846
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4846
ttaatatgct taaaataagc a 21

<210> 4847
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4847
aatatgctta aaataagcag g 21

<210> 4848
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4848
tatgcttaaa ataagcaggt g 21

<210> 4849

<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4849
tgcttaaaat aagcaggtgg a 21

<210> 4850
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4850
cttaaaataa gcaggtggat c 21

<210> 4851
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4851
taaaataagc aggtggatct a 21

<210> 4852
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4852
aaataagcag gtggatctat t 21

<210> 4853
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4853
ataagcaggt ggatctattt c 21

<210> 4854
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4854
aagcaggtgg atctatttca t 21

<210> 4855
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4855
gcaggtggat ctatttcatg t 21

<210> 4856
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4856
aggtggatct atttcatgtt t 21

<210> 4857
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4857
gtggatctat ttcatgtttt t 21

<210> 4858
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4858

ggatctattt catgtttttg a 21

<210> 4859
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4859
gggtagggta aatcagtaag a 21

<210> 4860
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4860
gtagggtaaa tcagtaagag g 21

<210> 4861
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4861
agggtaaatc agtaagaggt g 21

<210> 4862
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4862
ggtaaatcag taagaggtgt t 21

<210> 4863
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4863
taaatcagta agaggtgtta t 21

<210> 4864
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4864
aatcagtaag aggtgttatt t 21

<210> 4865
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4865
tttaccagtt gccttttatc c 21

<210> 4866
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4866
taccagttgc cttttatccc a 21

<210> 4867
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4867
ccagttgcct tttatcccaa a 21

<210> 4868
<211> 21
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4868
agttgccttt tatcccaaag t 21

<210> 4869
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4869
ttgcctttta tcccaaagtt g 21

<210> 4870
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4870
gccttttatc ccaaagttgt t 21

<210> 4871
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4871
cttttatccc aaagttgttg t 21

<210> 4872
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4872
tttatcccaa agttgttgta a 21

<210> 4873
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4873
tatcccaaag ttgttgtaac c 21

<210> 4874
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4874
tcccaaagtt gttgtaacct g 21

<210> 4875
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4875
ccaaagttgt tgtaacctgc t 21

<210> 4876
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4876
aaagttgttg taacctgctg t 21

<210> 4877
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4877
agttgttgta acctgctgtg a 21

<210> 4878
<211> 21

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4878
ttgttgtaac ctgctgtgat a 21

<210> 4879
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4879
aaaaatggtt cagaattaaa c 21

<210> 4880
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4880
aaatggttca gaattaaact t 21

<210> 4881
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4881
atggttcaga attaaacttt t 21

<210> 4882
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4882
ggttcagaat taaactttta a 21

<210> 4883
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4883
ttcagaatta aacttttaat t 21

<210> 4884
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4884
cagcagcagt cttacttgga t 21

<210> 4885
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4885
ttacttggat tctggaatcc a 21

<210> 4886
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4886
ttgacacctc ccaagtcctt t 21

<210> 4887
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4887
cacgcaagag caagtagctg a 21

<210> 4888
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4888
tgccatgttc cctgagacgc t 21

<210> 4889
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4889
gttgaaacat gcagttgtca a 21

<210> 4890
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4890
aacatgcagt tgtcaatttg a 21

<210> 4891
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4891
cagttgtcaa tttgattaac t 21

<210> 4892
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4892
atgaggacca ggtggtagtt a 21

<210> 4893
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4893
tgggtcacca gtggattctg t 21

<210> 4894
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4894
accagtggat tctgtactgt t 21

<210> 4895
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4895
tggattctgt actgttctac g 21

<210> 4896
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4896
tggtggactg cagaaaatgg t 21

<210> 4897
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 4897
aacgtgaaat tcttggctat t 21

<210> 4898
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4898
cccaagtcag cgacttgttc a 21

<210> 4899
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4899
gcgacttgtt caaaactgtc t 21

<210> 4900
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4900
caaaactgtc tttggactct c 21

<210> 4901
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4901
ctctctaacc tcacttgcaa t 21

<210> 4902
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4902
acctcacttg caataattac a 21

<210> 4903
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4903
cagaatgccg ttcgccttca t 21

<210> 4904
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4904
tcgccttcat tatggactgc c 21

<210> 4905
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4905
ttcattatgg actgcctgtt g 21

<210> 4906
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4906
tggactgcct gttgtggtta a 21

<210> 4907
<211> 21
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4907
gcaactgttg gattgattcg a 21

<210> 4908
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4908
ccgaggactc aataccattc c 21

<210> 4909
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4909
ctgaggacaa gccacaggat t 21

<210> 4910
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4910
ggatggaccc tatgatggag c 21

<210> 4911
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4911
ttgatactga cctgtaaatc g 21

<210> 4912

<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4912
agccagtgtg ggtgaatact t 21

<210> 4913
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4913
tgccacagct tttgcagcgt t 21

<210> 4914
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4914
gcttttgcag cgttatactc a 21

<210> 4915
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4915
cagcgttata ctcagatgag t 21

<210> 4916
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4916
acatttgctg ttttcaacat t 21

<210> 4917
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4917
agctgtagtg tctgaacgtg c 21

<210> 4918
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4918
gggaacagtc gaagtacgct t 21

<210> 4919
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4919
cagtcgaagt acgcttttg t 21

<210> 4920
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4920
aagtacgctt tttgttctgg t 21

<210> 4921
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4921

accctagcct tgcttgttct t 21

<210> 4922
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4922
agccttgctt gttctttgtt t 21

<210> 4923
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4923
tgaacctgct acagcaattt c 21

<210> 4924
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4924
tacagcaatt tctgatttct a 21

<210> 4925
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4925
cagtaagagg tgttatttga g 21

<210> 4926
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4926
gaggtgttat ttgagccttg t 21

<210> 4927
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4927
gttatttgag ccttgttttg g 21

<210> 4928
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4928
ttgagccttg ttttggacag t 21

<210> 4929
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4929
ttcaacagat gcggttatag a 21

<210> 4930
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4930
cggttataga aatggttcag a 21

<210> 4931
<211> 21
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4931
atagaaatgg ttcagaatta a 21

<210> 4932
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4932
gttgtatggt atacttcaaa t 21

<210> 4933
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4933
caaaacagtt gtatggtata c 21

<210> 4934
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4934
tcaaaacagt tgtatggtat a 21

<210> 4935
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4935
tttcaaaaca gttgtatggt a 21

<210> 4936
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4936
ttttcaaaac agttgtatgg t 21

<210> 4937
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4937
attttcaaaa cagttgtatg g 21

<210> 4938
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4938
ttgtccacgc tggattttca a 21

<210> 4939
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4939
attgtccacg ctggattttc a 21

<210> 4940
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4940
ccatcaaatc agcttgagta g 21

<210> 4941
<211> 21

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4941
tgtccaactc catcaaatca g 21

<210> 4942
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4942
cttcctcagg attgccttta c 21

<210> 4943
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4943
tcttcctcag gattgccttt a 21

<210> 4944
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4944
catcaatatc agctacttgt t 21

<210> 4945
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4945
ccatcaatat cagctacttg t 21

<210> 4946
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4946
actgtccatc aatatcagct a 21

<210> 4947
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4947
attgcatact gtccatcaat a 21

<210> 4948
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4948
cgagtcattg catactgtcc a 21

<210> 4949
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4949
cctcatctaa tgtctcaggg a 21

<210> 4950
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4950
ttacaactgc atgtttcagc a 21

<210> 4951
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4951
gtttacaact gcatgtttca g 21

<210> 4952
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4952
agttaatcaa gtttacaact g 21

<210> 4953
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4953
cttgatagtt aatcaagttt a 21

<210> 4954
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4954
ctgcatcatc ttgatagtta a 21

<210> 4955
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4955
tctgcatcat cttgatagtt a 21

<210> 4956
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4956
ctggtcctcg tcatttagca g 21

<210> 4957
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4957
cataactgca gccttattaa c 21

<210> 4958
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4958
ccataactgc agccttatta a 21

<210> 4959
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4959
ggaccataac tgcagcctta t 21

<210> 4960
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 4960
ccttttaga aagctgatgg a 21

<210> 4961
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4961
atggtacgta caatagcaga c 21

<210> 4962
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4962
catcatttgt attctgcatg g 21

<210> 4963
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4963
ctgtttctac atcatttgta t 21

<210> 4964
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4964
gctgtttcta catcatttgt a 21

<210> 4965
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4965
gtacaacgag ctgtttctac a 21

<210> 4966
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4966
cggtacaacg agctgtttct a 21

<210> 4967
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4967
gcggtacaac gagctgtttc t 21

<210> 4968
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4968
gcataaaaca acacagaatc c 21

<210> 4969
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4969
tggcataaaa caacacagaa t 21

<210> 4970
<211> 21
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4970
atggcataaa acaacacaga a 21

<210> 4971
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4971
tagctccttc ttgatgtaat a 21

<210> 4972
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4972
ttagctcctt cttgatgtaa t 21

<210> 4973
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4973
tttaacattt gttttgttga g 21

<210> 4974
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4974
tagccaagaa tttaacattt g 21

<210> 4975

<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4975
cgtaatagcc aagaatttaa c 21

<210> 4976
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4976
tcgtaatagc caagaattta a 21

<210> 4977
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4977
taagctaaaa tttgaaggca g 21

<210> 4978
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4978
taggtcctca ttatatttac t 21

<210> 4979
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4979
aagtataggt cctcattata t 21

<210> 4980
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4980
taagtatagg tcctcattat a 21

<210> 4981
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4981
gtttttcgta agtataggtc c 21

<210> 4982
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4982
agtttttcgt aagtataggt c 21

<210> 4983
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4983
tagtttttcg taagtatagg t 21

<210> 4984
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4984

gtagtttttc gtaagtatag g 21

<210> 4985
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4985
gtggtccaca gtagtttttc g 21

<210> 4986
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4986
tctacaatag ccggcttatt a 21

<210> 4987
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4987
cttctacaat agccggctta t 21

<210> 4988
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4988
agtcctaaag cttgcattcc a 21

<210> 4989
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4989
aagtcctaaa gcttgcattc c 21

<210> 4990
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4990
gaagtcctaa agcttgcatt c 21

<210> 4991
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4991
cagttctgaa caagacgttg a 21

<210> 4992
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4992
acagttctga acaagacgtt g 21

<210> 4993
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4993
gagtccaaag acagttctga a 21

<210> 4994
<211> 21
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4994
ccttcctgtt tagttgcagc a 21

<210> 4995
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4995
ccacatttat atcatctgaa c 21

<210> 4996
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4996
tgaccacatt tatatcatct g 21

<210> 4997
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4997
ctgcacaggt gaccacattt a 21

<210> 4998
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4998
gctgcacagg tgaccacatt t 21

<210> 4999
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4999
attgcaagtg aggttagaaa g 21

<210> 5000
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5000
ttataattat tgcaagtgag g 21

<210> 5001
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5001
catcatcttg ttcttataat t 21

<210> 5002
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5002
ccatcatctt gttcttataa t 21

<210> 5003
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5003
agaccatcat cttgttctta t 21

<210> 5004
<211> 21

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5004
gcagaccatc atcttgttct t 21

<210> 5005
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5005
tcaatccaac agtagccttt a 21

<210> 5006
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5006
tcgaatcaat ccaacagtag c 21

<210> 5007
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5007
cctccacaaa ttgctgctgt g 21

<210> 5008
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5008
gtacaacctt caactatttc t 21

<210> 5009
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5009
ggtacaacct tcaactattt c 21

<210> 5010
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5010
cggtacaacc ttcaactatt t 21

<210> 5011
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5011
ccggtacaac cttcaactat t 21

<210> 5012
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5012
gggctccggt acaaccttca a 21

<210> 5013
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5013
taacaattcg gttgtgaaca t 21

<210> 5014
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5014
ataacaattc ggttgtgaac a 21

<210> 5015
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5015
gataacaatt cggttgtgaa c 21

<210> 5016
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5016
tgataacaat tcggttgtga a 21

<210> 5017
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5017
ctgataacaa ttcggttgtg a 21

<210> 5018
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5018
tctgataaca attcggttgt g 21

<210> 5019
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5019
gtatttagtc ctctgataac a 21

<210> 5020
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5020
ggtatttagt cctctgataa c 21

<210> 5021
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5021
tggtatttag tcctctgata a 21

<210> 5022
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5022
atggtattta gtcctctgat a 21

<210> 5023
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 5023
aaacaatgga atggtattta g 21

<210> 5024
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5024
gcacaaacaa tggaatggta t 21

<210> 5025
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5025
ctgcacaaac aatggaatgg t 21

<210> 5026
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5026
gctgcacaaa caatggaatg g 21

<210> 5027
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5027
cagctactct ttggatgttt t 21

<210> 5028
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5028
gcagctactc tttggatgtt t 21

<210> 5029
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5029
cagcttcaat agcttctgca g 21

<210> 5030
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5030
gctccctcag cttcaatagc t 21

<210> 5031
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5031
tggctccctc agcttcaata g 21

<210> 5032
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5032
tcattcctag agtgaagtaa c 21

<210> 5033
<211> 21
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5033
cttcattcct agagtgaagt a 21

<210> 5034
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5034
ccttcattcc tagagtgaag t 21

<210> 5035
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5035
tgtcctcaga cattcggaac a 21

<210> 5036
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5036
cttgtcctca gacattcgga a 21

<210> 5037
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5037
ccgtttcttg taatcttgtg g 21

<210> 5038

<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5038
actgaaagcc gtttcttgta a 21

<210> 5039
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5039
cagctcaact gaaagccgtt t 21

<210> 5040
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5040
caagtccaag atcagcagtc t 21

<210> 5041
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5041
gcaccaatat caagtccaag a 21

<210> 5042
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5042
aaagaacgat agctaggatc a 21

<210> 5043
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5043
catatccacc agagtgaaaa g 21

<210> 5044
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5044
tgatttacag gtcagtatca a 21

<210> 5045
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5045
atgatttaca ggtcagtatc a 21

<210> 5046
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5046
gatgatttac aggtcagtat c 21

<210> 5047
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5047

cttcttacct aaaggatgat t 21

<210> 5048
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5048
acttcttacc taaaggatga t 21

<210> 5049
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5049
aaacttctta cctaaaggat g 21

<210> 5050
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5050
gctttttaaa acttcttacc t 21

<210> 5051
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5051
tggcttttta aaacttctta c 21

<210> 5052
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5052
ccaaactggc tttttaaaac t 21

<210> 5053
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5053
ttacccaaac tggcttttta a 21

<210> 5054
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5054
tttacccaaa ctggcttttt a 21

<210> 5055
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5055
ttttacccaa actggctttt t 21

<210> 5056
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5056
attttaccca aactggcttt t 21

<210> 5057
<211> 21
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5057
ccaaccaagt ctttctgaag t 21

<210> 5058
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5058
ccaccctacc aaccaagtct t 21

<210> 5059
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5059
atttacaaat agcctaaacc a 21

<210> 5060
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5060
gatttacaaa tagcctaaac c 21

<210> 5061
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5061
agatttacaa atagcctaaa c 21

<210> 5062
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5062
cagatttaca aatagcctaa a 21

<210> 5063
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5063
tgtttttgtg gcagatttac a 21

<210> 5064
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5064
ctgtttttgt ggcagattta c 21

<210> 5065
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5065
cctgtttttg tggcagattt a 21

<210> 5066
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5066
atatacctgt ttttgtggca g 21

<210> 5067
<211> 21

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5067
ctttcaaagt atatacctgt t 21

<210> 5068
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5068
catctccttt caaagtatat a 21

<210> 5069
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5069
acatctcctt tcaaagtata t 21

<210> 5070
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5070
agacatctcc tttcaaagta t 21

<210> 5071
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5071
aagacatctc ctttcaaagt a 21

<210> 5072
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5072
caagacatct cctttcaaag t 21

<210> 5073
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5073
tgttccaaga catctccttt c 21

<210> 5074
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5074
cattccaatg ttccaagaca t 21

<210> 5075
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5075
acattccaat gttccaagac a 21

<210> 5076
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5076
gaacattcca atgttccaag a 21

<210> 5077
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5077
ccagaaatct gagaacattc c 21

<210> 5078
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5078
acaaccagaa atctgagaac a 21

<210> 5079
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5079
taacaaccag aaatctgaga a 21

<210> 5080
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5080
ataacaacca gaaatctgag a 21

<210> 5081
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5081
cataacaacc agaaatctga g 21

<210> 5082
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5082
tgatcacata acaaccagaa a 21

<210> 5083
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5083
atgatcacat aacaaccaga a 21

<210> 5084
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5084
ccacacatga tcacataaca a 21

<210> 5085
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5085
cttccacaca tgatcacata a 21

<210> 5086
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 5086
aataacttcc acacatgatc a 21

<210> 5087
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5087
taataacttc cacacatgat c 21

<210> 5088
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5088
ttaataactt ccacacatga t 21

<210> 5089
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5089
gttaataact tccacacatg a 21

<210> 5090
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5090
cattaaagtt aataacttcc a 21

<210> 5091
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5091
acattaaagt taataacttc c 21

<210> 5092
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5092
aaacattaaa gttaataact t 21

<210> 5093
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5093
aaaacattaa agttaataac t 21

<210> 5094
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5094
aaaaacatta aagttaataa c 21

<210> 5095
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5095
aaaaaacatt aaagttaata a 21

<210> 5096
<211> 21
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5096
caaaaaacat taaagttaat a 21

<210> 5097
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5097
gcaaaaaaca ttaaagttaa t 21

<210> 5098
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5098
tggcaaaaaa cattaaagtt a 21

<210> 5099
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5099
gtggcaaaaa acattaaagt t 21

<210> 5100
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5100
ttgcaaaagc tgtggcaaaa a 21

<210> 5101

<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5101
gttgcaaaag ctgtggcaaa a 21

<210> 5102
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5102
actcatttga gtattaagtt g 21

<210> 5103
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5103
ttaaaacagc aaatgttact c 21

<210> 5104
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5104
tttaaaacag caaatgttac t 21

<210> 5105
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5105
gtttaaaaca gcaaatgtta c 21

<210> 5106
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5106
tgtttaaaac agcaaatgtt a 21

<210> 5107
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5107
atgtttaaaa cagcaaatgt t 21

<210> 5108
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5108
aatgtttaaa acagcaaatg t 21

<210> 5109
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5109
ctattaatgt ttaaaacagc a 21

<210> 5110
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5110

agagaaaggc tgctattaat g 21

<210> 5111
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5111
caagttcaga caatacagct g 21

<210> 5112
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5112
tcacaatgca agttcagaca a 21

<210> 5113
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5113
aatcacaatg caagttcaga c 21

<210> 5114
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5114
ccaatcacaa tgcaagttca g 21

<210> 5115
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5115
caggccaatc acaatgcaag t 21

<210> 5116
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5116
ttgttcccat aggaaactca g 21

<210> 5117
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5117
cttcaattgt tcccatagga a 21

<210> 5118
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5118
acttcaattg ttcccatagg a 21

<210> 5119
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5119
aagtttactt caattgttcc c 21

<210> 5120
<211> 21
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5120
aaagtttact tcaattgttc c 21

<210> 5121
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5121
acaaaaagtt tacttcaatt g 21

<210> 5122
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5122
cagaacaaaa agtttacttc a 21

<210> 5123
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5123
aggaccagaa caaaaagttt a 21

<210> 5124
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5124
aaggaccaga acaaaaagtt t 21

<210> 5125
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5125
cgaccaaaaa ggaccagaac a 21

<210> 5126
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5126
tcgaccaaaa aggaccagaa c 21

<210> 5127
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5127
ttactcctcg accaaaaagg a 21

<210> 5128
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5128
aatccatttg tattgttact c 21

<210> 5129
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5129
aaatccattt gtattgttac t 21

<210> 5130
<211> 21

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5130
aaaatccatt tgtattgtta c 21

<210> 5131
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5131
caaaatccat ttgtattgtt a 21

<210> 5132
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5132
ccaaaatcca tttgtattgt t 21

<210> 5133
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5133
tcactcccaa aatccatttg t 21

<210> 5134
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5134
tcttcacttc ttgagtcact c 21

<210> 5135
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5135
attcttcact tcttgagtca c 21

<210> 5136
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5136
cattcttcac ttcttgagtc a 21

<210> 5137
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5137
gcattcttca cttcttgagt c 21

<210> 5138
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5138
gtgcattctt cacttcttga g 21

<210> 5139
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5139
ccattcttgt gcattcttca c 21

<210> 5140
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5140
gatccattct tgtgcattct t 21

<210> 5141
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5141
tgatccattc ttgtgcattc t 21

<210> 5142
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5142
gtgatccatt cttgtgcatt c 21

<210> 5143
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5143
taaattccat cttgtgatcc a 21

<210> 5144
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5144
gataaattcc atcttgtgat c 21

<210> 5145
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5145
tgataaattc catcttgtga t 21

<210> 5146
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5146
ttgataaatt ccatcttgtg a 21

<210> 5147
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5147
tttgataaat tccatcttgt g 21

<210> 5148
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5148
aaggctaggg tttgataaat t 21

<210> 5149
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 5149
aaaaaaattt aacaagcaag g 21

<210> 5150
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5150
aaaaaaaaaa aaaaaattta a 21

<210> 5151
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5151
aaaaaaaaaa aaaaaaattt a 21

<210> 5152
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5152
aaaaaaaaaa aaaaaaaatt t 21

<210> 5153
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5153
aaaaaaaaaa aaaaaaaaat t 21

<210> 5154
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5154
taaaaaaaaa aaaaaaaaaa t 21

<210> 5155
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5155
ttaaaaaaaa aaaaaaaaaa a 21

<210> 5156
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5156
cttaaaaaaa aaaaaaaaaa a 21

<210> 5157
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5157
tcttaaaaaa aaaaaaaaaa a 21

<210> 5158
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5158
attcttaaaa aaaaaaaaaa a 21

<210> 5159
<211> 21
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5159
tattcttaaa aaaaaaaaaa a 21

<210> 5160
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5160
atattcttaa aaaaaaaaaa a 21

<210> 5161
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5161
gatattctta aaaaaaaaaa a 21

<210> 5162
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5162
agatattctt aaaaaaaaaa a 21

<210> 5163
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5163
cagatattct taaaaaaaaa a 21

<210> 5164

<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5164
acagatattc ttaaaaaaaa a 21

<210> 5165
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5165
cattacagat attcttaaaa a 21

<210> 5166
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5166
ccattacaga tattcttaaa a 21

<210> 5167
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5167
agtaccatta cagatattct t 21

<210> 5168
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5168
cagtaccatt acagatattc t 21

<210> 5169
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5169
tcagtaccat tacagatatt c 21

<210> 5170
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5170
aaagtcagta ccattacaga t 21

<210> 5171
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5171
gctacttcaa agcaagcaaa g 21

<210> 5172
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5172
aaaaaaagag ctacttcaaa g 21

<210> 5173
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5173

aaaaaaaaaa aagagctact t 21

<210> 5174
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5174
aaaaaaaaaa aaagagctac t 21

<210> 5175
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5175
aaaaaaaaaa aaaaagagct a 21

<210> 5176
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5176
aaaaaaaaaa aaaaaagagc t 21

<210> 5177
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5177
aaaaaaaaaa aaaaaaagag c 21

<210> 5178
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5178
aaaaaaaaaa aaaaaaaaga g 21

<210> 5179
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5179
aaaaaaaaaa aaaaaaaaaa a 21

<210> 5180
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5180
aaaaaaaaaa aaaaaaaaaa a 21

<210> 5181
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5181
caaaaaaaaa aaaaaaaaaa a 21

<210> 5182
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5182
gcaaaaaaaa aaaaaaaaaa a 21

<210> 5183
<211> 21
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5183
ctgcaaaaaa aaaaaaaaaa a 21

<210> 5184
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5184
actgcaaaaa aaaaaaaaaa a 21

<210> 5185
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5185
agttactgca aaaaaaaaaa a 21

<210> 5186
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5186
cagttactgc aaaaaaaaaa a 21

<210> 5187
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5187
acagttactg caaaaaaaaa a 21

<210> 5188
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5188
aaaaacagtt actgcaaaaa a 21

<210> 5189
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5189
aaaaaacagt tactgcaaaa a 21

<210> 5190
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5190
taaaaaacag ttactgcaaa a 21

<210> 5191
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5191
cttaaaaaac agttactgca a 21

<210> 5192
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5192
acttaaaaaa cagttactgc a 21

<210> 5193
<211> 21

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5193
agacttaaaa aacagttact g 21

<210> 5194
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5194
acactacgag agacttaaaa a 21

<210> 5195
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5195
taacactacg agagacttaa a 21

<210> 5196
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5196
ttaacactac gagagactta a 21

<210> 5197
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5197
acttaacact acgagagact t 21

<210> 5198
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5198
ataacttaac actacgagag a 21

<210> 5199
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5199
tataacttaa cactacgaga g 21

<210> 5200
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5200
gtattcacta taacttaaca c 21

<210> 5201
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5201
agtattcact ataacttaac a 21

<210> 5202
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5202
cagtattcac tataacttaa c 21

<210> 5203
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5203
gcagtattca ctataactta a 21

<210> 5204
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5204
agaaattgct gtagcagtat t 21

<210> 5205
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5205
tagaaattgc tgtagcagta t 21

<210> 5206
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5206
ttagaaattg ctgtagcagt a 21

<210> 5207
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5207
actcaattct taaaaattag a 21

<210> 5208
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5208
ccattactca attcttaaaa a 21

<210> 5209
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5209
acaccattac tcaattctta a 21

<210> 5210
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5210
ctacaccatt actcaattct t 21

<210> 5211
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5211
tctacaccat tactcaattc t 21

<210> 5212
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 5212
gttctacacc attactcaat t 21

<210> 5213
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5213
gtgttctaca ccattactca a 21

<210> 5214
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5214
atgaattagt gttctacacc a 21

<210> 5215
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5215
tgattatgaa ttagtgttct a 21

<210> 5216
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5216
gtgattatga attagtgttc t 21

<210> 5217
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5217
agtgattatg aattagtgtt c 21

<210> 5218
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5218
attaattaga gtgattatga a 21

<210> 5219
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5219
aattaattag agtgattatg a 21

<210> 5220
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5220
caattaatta gagtgattat g 21

<210> 5221
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5221
attacaatta attagagtga t 21

<210> 5222
<211> 21
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5222
gattacaatt aattagagtg a 21

<210> 5223
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5223
agattacaat taattagagt g 21

<210> 5224
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5224
ctttattcag attacaatta a 21

<210> 5225
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5225
actttattca gattacaatt a 21

<210> 5226
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5226
ttacacttta ttcagattac a 21

<210> 5227

<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5227
gttacacttt attcagatta c 21

<210> 5228
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5228
tgttacactt tattcagatt a 21

<210> 5229
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5229
ttgttacact ttattcagat t 21

<210> 5230
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5230
attgttacac tttattcaga t 21

<210> 5231
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5231
ctacacaatt gttacacttt a 21

<210> 5232
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5232
aaggctacac aattgttaca c 21

<210> 5233
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5233
acaaaaaggc tacacaattg t 21

<210> 5234
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5234
ttttatacaa aaaggctaca c 21

<210> 5235
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5235
attttataca aaaaggctac a 21

<210> 5236
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5236

ctattttata caaaaaggct a 21

<210> 5237
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5237
tctattttat acaaaaaggc t 21

<210> 5238
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5238
tgtctatttt atacaaaaag g 21

<210> 5239
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5239
tctatttgtc tattttatac a 21

<210> 5240
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5240
tttctatttg tctattttat a 21

<210> 5241
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5241
ttttctattt gtctatttta t 21

<210> 5242
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5242
attttctatt tgtctatttt a 21

<210> 5243
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5243
catttctat ttgtctattt t 21

<210> 5244
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5244
ccattttcta tttgtctatt t 21

<210> 5245
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5245
ggaccatttt ctatttgtct a 21

<210> 5246
<211> 21
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5246
tggaccattt tctatttgtc t 21

<210> 5247
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5247
ttggaccatt ttctatttgt c 21

<210> 5248
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5248
aaactaattg gaccattttc t 21

<210> 5249
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5249
gaaactaatt ggaccatttt c 21

<210> 5250
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5250
ggaaactaat tggaccattt t 21

<210> 5251
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5251
aggaaactaa ttggaccatt t 21

<210> 5252
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5252
ttaaaaagga aactaattgg a 21

<210> 5253
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5253
attaaaaagg aaactaattg g 21

<210> 5254
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5254
aagcatatta aaaaggaaac t 21

<210> 5255
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5255
taagcatatt aaaaaggaaa c 21

<210> 5256
<211> 21

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5256
attttaagca tattaaaaag g 21

<210> 5257
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5257
ctgcttattt taagcatatt a 21

<210> 5258
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5258
cctgcttatt ttaagcatat t 21

<210> 5259
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5259
gatccacctg cttattttaa g 21

<210> 5260
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5260
caaaaacatg aaatagatcc a 21

<210> 5261
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5261
tcaaaaacat gaaatagatc c 21

<210> 5262
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5262
gatcaaaaac atgaaataga t 21

<210> 5263
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5263
tgatcaaaaa catgaaatag a 21

<210> 5264
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5264
ttgatcaaaa acatgaaata g 21

<210> 5265
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5265
agtttttgat caaaaacatg a 21

<210> 5266
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5266
ccaaatagtt tttgatcaaa a 21

<210> 5267
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5267
tatcccaaat agtttttgat c 21

<210> 5268
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5268
atatcccaaa tagtttttga t 21

<210> 5269
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5269
catatcccaa atagtttttg a 21

<210> 5270
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5270
acatatccca aatagttttt g 21

<210> 5271
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5271
ccatacatat cccaaatagt t 21

<210> 5272
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5272
ttaccctacc catacatatc c 21

<210> 5273
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5273
tttaccctac ccatacatat c 21

<210> 5274
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5274
atttacccta cccatacata t 21

<210> 5275
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 5275
acacctctta ctgatttacc c 21

<210> 5276
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5276
taacacctct tactgattta c 21

<210> 5277
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5277
ataacacctc ttactgattt a 21

<210> 5278
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5278
aataacacct cttactgatt t 21

<210> 5279
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5279
aaataacacc tcttactgat t 21

<210> 5280
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5280
caaataacac ctcttactga t 21

<210> 5281
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5281
aggttccaaa taacacctct t 21

<210> 5282
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5282
aaaacaaggt tccaaataac a 21

<210> 5283
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5283
caaaacaagg ttccaaataa c 21

<210> 5284
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5284
ccaaaacaag gttccaaata a 21

<210> 5285
<211> 21
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5285
actgtccaaa acaaggttcc a 21

<210> 5286
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5286
gtaaactgtc caaaacaagg t 21

<210> 5287
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5287
ggtaaactgt ccaaaacaag g 21

<210> 5288
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5288
aggcaactgg taaactgtcc a 21

<210> 5289
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5289
gggataaaag gcaactggta a 21

<210> 5290

<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5290
tgggataaaa ggcaactggt a 21

<210> 5291
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5291
acaactttgg gataaaaggc a 21

<210> 5292
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5292
caacaacttt gggataaaag g 21

<210> 5293
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5293
ggttacaaca actttgggat a 21

<210> 5294
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5294
aggttacaac aactttggga t 21

<210> 5295
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5295
caggttacaa caactttggg a 21

<210> 5296
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5296
tatcacagca ggttacaaca a 21

<210> 5297
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5297
gtatcacagc aggttacaac a 21

<210> 5298
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5298
tcgtatcaca gcaggttaca a 21

<210> 5299
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5299

tttctcttga agcatcgtat c 21

<210> 5300
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5300
ttttctcttg aagcatcgta t 21

<210> 5301
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5301
cattttctct tgaagcatcg t 21

<210> 5302
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5302
ttttttataa ccgcattttc t 21

<210> 5303
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5303
atttttata accgcatttt c 21

<210> 5304
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5304
catttttat aaccgcattt t 21

<210> 5305
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5305
ccatttttta taaccgcatt t 21

<210> 5306
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5306
ctgaaccatt ttttataacc g 21

<210> 5307
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5307
taattctgaa ccatttttta t 21

<210> 5308
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5308
ttaattctga accatttttt a 21

<210> 5309
<211> 21
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5309
tttaattctg aaccattttt t 21

<210> 5310
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5310
gtttaattct gaaccatttt t 21

<210> 5311
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5311
agtttaattc tgaaccattt t 21

<210> 5312
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5312
aagtttaatt ctgaaccatt t 21

<210> 5313
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5313
attaaaagtt taattctgaa c 21

<210> 5314
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5314
aattaaaagt ttaattctga a 21

<210> 5315
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5315
tgaattaaaa gtttaattct g 21

<210> 5316
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5316
caatacagct aaaggatgat t 21

<210> 5317
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5317
acaatacagc taaaggatga t 21

<210> 5318
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5318
agacaataca gctaaaggat g 21

<210> 5319
<211> 21

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5319
gttactccta aaggatgatt t 21

<210> 5320
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5320
tgttactcct aaaggatgat t 21

<210> 5321
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5321
ttgttactcc taaaggatga t 21

<210> 5322
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5322
attgttactc ctaaaggatg a 21

<210> 5323
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5323
ggattccaga atccaagtaa g 21

<210> 5324
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5324
cttgctccca ttcataaagg a 21

<210> 5325
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5325
cgtcaatatc agctacttgc t 21

<210> 5326
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5326
ccgtcaatat cagctacttg c 21

<210> 5327
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5327
actgcccgtc aatatcagct a 21

<210> 5328
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5328
tgtttcaaca tctgtgatgg t 21

<210> 5329
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5329
atgtttcaac atctgtgatg g 21

<210> 5330
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5330
tgacaactgc atgtttcaac a 21

<210> 5331
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5331
attgacaact gcatgtttca a 21

<210> 5332
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5332
tcaaattgac aactgcatgt t 21

<210> 5333
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5333
agttaatcaa attgacaact g 21

<210> 5334
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5334
cctgatagtt aatcaaattg a 21

<210> 5335
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5335
cgtcatcctg atagttaatc a 21

<210> 5336
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5336
gcgtcatcct gatagttaat c 21

<210> 5337
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5337
cctcatcgtt tagcagtttt g 21

<210> 5338
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 5338
ctggtcctca tcgtttagca g 21

<210> 5339
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5339
cataacagca gctttattaa c 21

<210> 5340
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5340
ccataacagc agctttatta a 21

<210> 5341
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5341
ggaccataac agcagcttta t 21

<210> 5342
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5342
tggaccataa cagcagcttt a 21

<210> 5343
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5343
ctgtctctac atcatttgta t 21

<210> 5344
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5344
gctgtctcta catcatttgt a 21

<210> 5345
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5345
gcaaccattt tctgcagtcc a 21

<210> 5346
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5346
aagcaaccat tttctgcagt c 21

<210> 5347
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5347
ttgttttgtt gagcaaagca a 21

<210> 5348
<211> 21
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5348
tttgttttgt tgagcaaagc a 21

<210> 5349
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5349
tagccaagaa tttcacgttt g 21

<210> 5350
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5350
cttgattgcc ataagctaag a 21

<210> 5351
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5351
gctctcttga ttgccataag c 21

<210> 5352
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5352
cttctcataa gtgtaggtcc t 21

<210> 5353

<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5353
gcttctcata agtgtaggtc c 21

<210> 5354
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5354
aagcttctca taagtgtagg t 21

<210> 5355
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5355
gaagcttctc ataagtgtag g 21

<210> 5356
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5356
gagtccaaag acagttttga a 21

<210> 5357
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5357
agagtccaaa gacagttttg a 21

<210> 5358
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5358
ccacatttat atcatcggaa c 21

<210> 5359
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5359
tgaccacatt tatatcatcg g 21

<210> 5360
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5360
ctgcacaggt gaccacattt a 21

<210> 5361
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5361
gctgcacagg tgaccacatt t 21

<210> 5362
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5362

ttgtaattat tgcaagtgag g 21

<210> 5363
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5363
catcatcttg tttttgtaat t 21

<210> 5364
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5364
ccatcatctt gtttttgtaa t 21

<210> 5365
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5365
acaccatcat cttgtttttg t 21

<210> 5366
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5366
ttggcacacc atcatcttgt t 21

<210> 5367
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5367
tcaatccaac agttgccttt a 21

<210> 5368
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5368
tcgaatcaat ccaacagttg c 21

<210> 5369
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5369
gctgaactag tcgtggaata g 21

<210> 5370
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5370
agtacaccct tctactatct c 21

<210> 5371
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5371
cagtacaccc ttctactatc t 21

<210> 5372
<211> 21
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5372
ccagtacacc cttctactat c 21

<210> 5373
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5373
gagctccagt acacccttct a 21

<210> 5374
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5374
aaacaatgga atggtattga g 21

<210> 5375
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5375
ctgcacaaac aatggaatgg t 21

<210> 5376
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5376
actgcacaaa caatggaatg g 21

<210> 5377
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5377
aagcaactgc acaaacaatg g 21

<210> 5378
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5378
gagaataaag caactgcaca a 21

<210> 5379
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5379
tttcaatggg agaataaagc a 21

<210> 5380
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5380
ttttcaatgg gagaataaag c 21

<210> 5381
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5381
attttcaatg ggagaataaa g 21

<210> 5382
<211> 21

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5382
ggatattttc aatgggagaa t 21

<210> 5383
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5383
tggatatttt caatgggaga a 21

<210> 5384
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5384
ttggatattt tcaatgggag a 21

<210> 5385
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5385
cagctactct ttggatattt t 21

<210> 5386
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5386
gcagctactc tttggatatt t 21

<210> 5387
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5387
ccgcttcttg taatcctgtg g 21

<210> 5388
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5388
ccagtccaag atctgcagtc t 21

<210> 5389
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5389
cgtatccacc agagtgaaaa g 21

<210> 5390
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5390
caggccagct gattgctatc a 21

<210> 5391
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5391
cgatttacag gtcagtatca a 21

<210> 5392
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5392
acgatttaca ggtcagtatc a 21

<210> 5393
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5393
tttcttacct aaaggacgat t 21

<210> 5394
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5394
gctttcttac ctaaaggacg a 21

<210> 5395
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5395
cttttataag ctttcttacc t 21

<210> 5396
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5396
gcttttataa gctttcttac c 21

<210> 5397
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5397
ctggctttta taagctttct t 21

<210> 5398
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5398
ccacactggc ttttataagc t 21

<210> 5399
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5399
attcacccac actggctttt a 21

<210> 5400
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5400
cctaccaagt ctttctggag t 21

<210> 5401
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 5401
atttacaaac aggcctaaaa c 21

<210> 5402
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5402
gatttacaaa caggcctaaa a 21

<210> 5403
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5403
agatttacaa acaggcctaa a 21

<210> 5404
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5404
catctccttc caaggtatgt a 21

<210> 5405
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5405
acatctcctt ccaaggtatg t 21

<210> 5406
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5406
acttccacac atgaacatct c 21

<210> 5407
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5407
gaaacttcca cacatgaaca t 21

<210> 5408
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5408
agaaacttcc acacatgaac a 21

<210> 5409
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5409
gagaaacttc cacacatgaa c 21

<210> 5410
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5410
tgagaaactt ccacacatga a 21

<210> 5411
<211> 21
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5411
catcaacgtg agaaacttcc a 21

<210> 5412
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5412
aaacatcaac gtgagaaact t 21

<210> 5413
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5413
aaaacatcaa cgtgagaaac t 21

<210> 5414
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5414
aaaaacatca acgtgagaaa c 21

<210> 5415
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5415
caaaaacatc aacgtgagaa a 21

<210> 5416

<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5416
gcaaaaacat caacgtgaga a 21

<210> 5417
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5417
tggcaaaaac atcaacgtga g 21

<210> 5418
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5418
ctgcaaaagc tgtggcaaaa a 21

<210> 5419
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5419
gctgcaaaag ctgtggcaaa a 21

<210> 5420
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5420
actcatctga gtataacgct g 21

<210> 5421
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5421
tgaaaacagc aaatgttact c 21

<210> 5422
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5422
ttgaaaacag caaatgttac t 21

<210> 5423
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5423
gttgaaaaca gcaaatgtta c 21

<210> 5424
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5424
ctattaatgt tgaaaacagc a 21

<210> 5425
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5425

acactacagc tgtatagaga g 21

<210> 5426
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5426
caggccaatc acaatgcacg t 21

<210> 5427
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5427
ctgttcccat aggaaactca g 21

<210> 5428
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5428
cagaacaaaa agcgtacttc g 21

<210> 5429
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5429
aaggaccaga acaaaaagcg t 21

<210> 5430
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5430
cgaccaaaaa ggaccagaac a 21

<210> 5431
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5431
tcgaccaaaa aggaccagaa c 21

<210> 5432
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5432
ttactcctcg accaaaaagg a 21

<210> 5433
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5433
aatccatttg tattgttact c 21

<210> 5434
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5434
aaatccattt gtattgttac t 21

<210> 5435
<211> 21
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5435
caaatccatt tgtattgtta c 21

<210> 5436
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5436
ccaaatccat ttgtattgtt a 21

<210> 5437
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5437
tcactcccca aatccatttg t 21

<210> 5438
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5438
gatccattcg tgtgcattct t 21

<210> 5439
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5439
tgatccattc gtgtgcattc t 21

<210> 5440
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5440
gtgatccatt cgtgtgcatt c 21

<210> 5441
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5441
taaaacaaag aacaagcaag g 21

<210> 5442
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5442
gcaccactac agatattaaa a 21

<210> 5443
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5443
cagcaccact acagatatta a 21

<210> 5444
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5444
tcagcaccac tacagatatt a 21

<210> 5445
<211> 21

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5445
aaaaaataaa agcaagcaaa g 21

<210> 5446
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5446
ctgcaaaaaa taaaagcaag c 21

<210> 5447
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5447
agttactgca aaaaataaaa g 21

<210> 5448
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5448
actaacagtt actgcaaaaa a 21

<210> 5449
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5449
aaactaacag ttactgcaaa a 21

<210> 5450
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5450
aaaaactaac agttactgca a 21

<210> 5451
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5451
taaaaactaa cagttactgc a 21

<210> 5452
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5452
cttaaaaact aacagttact g 21

<210> 5453
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5453
actacttaaa aactaacagt t 21

<210> 5454
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5454
acactactta aaaactaaca g 21

<210> 5455
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5455
cataacacta cttaaaaact a 21

<210> 5456
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5456
acataacact acttaaaaac t 21

<210> 5457
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5457
gaacataaca ctacttaaaa a 21

<210> 5458
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5458
agaacataac actacttaaa a 21

<210> 5459
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5459
tagaacataa cactacttaa a 21

<210> 5460
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5460
ctagaacata acactactta a 21

<210> 5461
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5461
gttcactaga acataacact a 21

<210> 5462
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5462
aggttcacta gaacataaca c 21

<210> 5463
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5463
caggttcact agaacataac a 21

<210> 5464
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 5464
ccattactcg gttcttagaa a 21

<210> 5465
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5465
acaccattac tcggttctta g 21

<210> 5466
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5466
gttctacacc attactcggt t 21

<210> 5467
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5467
atgaattagt gttctacacc a 21

<210> 5468
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5468
tgattatgaa ttagtgttct a 21

<210> 5469
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5469
gtgattatga attagtgttc t 21

<210> 5470
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5470
cgtgattatg aattagtgtt c 21

<210> 5471
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5471
ttacaattag cgtgattatg a 21

<210> 5472
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5472
attacaatta gcgtgattat g 21

<210> 5473
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5473
ccagattaca attagcgtga t 21

<210> 5474
<211> 21
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5474
gttacacgtc tccagattac a 21

<210> 5475
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5475
atgttacacg tctccagatt a 21

<210> 5476
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5476
gctacacaat gttacacgtc t 21

<210> 5477
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5477
aggctacaca atgttacacg t 21

<210> 5478
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5478
atacaaaagg ctacacaatg t 21

<210> 5479

<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5479
tatacaaaag gctacacaat g 21

<210> 5480
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5480
tatttataca aaaggctaca c 21

<210> 5481
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5481
ctatttatac aaaaggctac a 21

<210> 5482
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5482
tgtctattta tacaaaaggc t 21

<210> 5483
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5483
ctgtctattt atacaaaagg c 21

<210> 5484
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5484
tctgtctatt tatacaaaag g 21

<210> 5485
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5485
tttctatctg tctatttata c 21

<210> 5486
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5486
atttctatct gtctatttat a 21

<210> 5487
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5487
catttctatc tgtctattta t 21

<210> 5488
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5488

ccatttctat ctgtctattt a 21

<210> 5489
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5489
cggaccattt ctatctgtct a 21

<210> 5490
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5490
tcggaccatt tctatctgtc t 21

<210> 5491
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5491
aaactaatcg gaccatttct a 21

<210> 5492
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5492
gaaactaatc ggaccatttc t 21

<210> 5493
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5493
ggaaactaat cggaccattt c 21

<210> 5494
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5494
aggaaactaa tcggaccatt t 21

<210> 5495
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5495
attaaaaagg aaactaatcg g 21

<210> 5496
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5496
aagcatatta aaaaggaaac t 21

<210> 5497
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5497
taagcatatt aaaaaggaaa c 21

<210> 5498
<211> 21
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5498
attttaagca tattaaaaag g 21

<210> 5499
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5499
ctgcttattt taagcatatt a 21

<210> 5500
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5500
cctgcttatt ttaagcatat t 21

<210> 5501
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5501
gatccacctg cttattttaa g 21

<210> 5502
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5502
caaaaacatg aaatagatcc a 21

<210> 5503
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5503
tcaaaaacat gaaatagatc c 21

<210> 5504
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5504
gttcaaaaac atgaaataga t 21

<210> 5505
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5505
tgttcaaaaa catgaaatag a 21

<210> 5506
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5506
ttgttcaaaa acatgaaata g 21

<210> 5507
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5507
agtttttgtt caaaaacatg a 21

<210> 5508
<211> 21

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5508
cgataaagtt tttgttcaaa a 21

<210> 5509
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5509
tatccccgat aaagtttttg t 21

<210> 5510
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5510
gtatccccga taaagttttt g 21

<210> 5511
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5511
acacctctta ctgatttacc c 21

<210> 5512
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5512
taacacctct tactgattta c 21

<210> 5513
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5513
ataacacctc ttactgattt a 21

<210> 5514
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5514
aataacacct cttactgatt t 21

<210> 5515
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5515
aaataacacc tcttactgat t 21

<210> 5516
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5516
caaataacac ctcttactga t 21

<210> 5517
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5517
aaggctcaaa taacacctct t 21

<210> 5518
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5518
aaaacaaggc tcaaataaca c 21

<210> 5519
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5519
caaaacaagg ctcaaataac a 21

<210> 5520
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5520
ccaaaacaag gctcaaataa c 21

<210> 5521
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5521
tgtccaaaac aaggctcaaa t 21

<210> 5522
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5522
actgtccaaa acaaggctca a 21

<210> 5523
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5523
ggtatactgt ccaaaacaag g 21

<210> 5524
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5524
aggcaactgg tatactgtcc a 21

<210> 5525
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5525
gggataaaag gcaactggta t 21

<210> 5526
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5526
tgggataaaa ggcaactggt a 21

<210> 5527
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 5527
acaactttgg gataaaaggc a 21

<210> 5528
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5528
caacaacttt gggataaaag g 21

<210> 5529
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5529
ggttacaaca actttgggat a 21

<210> 5530
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5530
aggttacaac aactttggga t 21

<210> 5531
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5531
caggttacaa caactttggg a 21

<210> 5532
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5532
tatcacagca ggttacaaca a 21

<210> 5533
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5533
gtatcacagc aggttacaac a 21

<210> 5534
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5534
ttgtatcaca gcaggttaca a 21

<210> 5535
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5535
ccgcatctgt tgaagcattg t 21

<210> 5536
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5536
tctgaaccat ttctataacc g 21

<210> 5537
<211> 21
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5537
taattctgaa ccatttctat a 21

<210> 5538
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5538
tttaattctg aaccatttct a 21

<210> 5539
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5539
gtttaattct gaaccatttc t 21

<210> 5540
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5540
agtttaattc tgaaccattt c 21

<210> 5541
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5541
aagtttaatt ctgaaccatt t 21

<210> 5542

<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5542
attaaaagtt taattctgaa c 21

<210> 5543
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5543
aattaaaagt ttaattctga a 21

<210> 5544
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5544
tgaattaaaa gtttaattct g 21

<210> 5545
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5545
tttgaatgaa ttaaaagttt a 21

<210> 5546
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5546
ttttttgaa tgaattaaaa g 21

<210> 5547
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5547
ttttttttt tgaatgaatt a 21

<210> 5548
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5548
ttttttttt ttgaatgaat t 21

<210> 5549
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5549
ttttttttt tttgaatgaa t 21

<210> 5550
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5550
ttttttttt ttttgaatga a 21

<210> 5551
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5551

ttttttttttt tttttgaatg a 21

<210> 5552
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5552
ttttttttttt ttttttgaat g 21

<210> 5553
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5553
cccugagggu auuugaagua uaccacc 27

<210> 5554
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5554
gaggguauuu gaaguauacc auacaca 27

<210> 5555
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5555
ugaaguauac cauacaacug uuuugcc 27

<210> 5556
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5556
auaccauaca acuguuuuga aaaucac 27

<210> 5557
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5557
auacaacugu uuugaaaauc cagcgca 27

<210> 5558
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5558
cagggauuuu cucaguccuu cacuccc 27

<210> 5559
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5559
cacucaagaa caaguagcug auauuac 27

<210> 5560
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5560
agaacaagua gcugauauug auggaac 27

<210> 5561
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5561
aacaaguagc ugauauugau ggacaac 27

<210> 5562
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5562
ugauggacag uaugcaauga cucgaaa 27

<210> 5563
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5563
ugcuauguuc ccugagacau uagauac 27

<210> 5564
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5564
ugcugaaaca ugcaguugua aacuuac 27

<210> 5565
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5565
aacaugcagu uguaaacuug auuaaac 27

<210> 5566
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5566
gcaguuguaa acuugauuaa cuauccc 27

<210> 5567
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5567
acuugauuaa cuaucaagau gaugcca 27

<210> 5568
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5568
cccugaacug acaaaacugc uaaauac 27

<210> 5569
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5569
ucagauggug ucugcuauug uacguca 27

<210> 5570
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5570
guacguacca ugcagaauac aaaugcc 27

<210> 5571
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5571
auuacaacuc uccacaaccu uuuaucc 27

<210> 5572
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5572
aacucuccac aaccuuuuau uacauac 27

<210> 5573
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5573
uccacaaccu uuuauuacau caagaca 27

<210> 5574
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5574
accuuuuauu acaucaagaa ggagccc 27

<210> 5575
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5575
acaaaacaaa uguuaaauuc uuggccc 27

<210> 5576
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5576
auuacgacag acugccuuca aauuucc 27

<210> 5577
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5577
gacagacugc cuucaaauuu uagcucc 27

<210> 5578
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5578
agcuuuagua aauauaauga ggacccc 27

<210> 5579
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5579
gaaaaacuac uguggaccac aagcaac 27

<210> 5580
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5580
caagucaacg ucuuguucag aacugca 27

<210> 5581
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5581
aacgucuugu ucagaacugu cuuugac 27

<210> 5582
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5582
cuuguucaga acugucuuug gacucca 27

<210> 5583
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5583
uggguucaga ugauauaaau gugguac 27

<210> 5584
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5584
auucuuucua accucacuug caauacc 27

<210> 5585
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5585
accucacuug caauaauuau aagaaac 27

<210> 5586
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5586
ugcaauaauu auaagaacaa gaugaca 27

<210> 5587
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5587
ugguauagag gcucuugugc guacuac 27

<210> 5588
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5588
aaggcuacug uuggauugau ucgaacc 27

<210> 5589
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5589
cgcauggaag aaauaguuga agguuac 27

<210> 5590
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 5590
cauggaagaa auaguugaag guuguca 27

<210> 5591
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5591
ccauugaaaa cauccaaaga guagcca 27

<210> 5592
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5592
cugaggacaa gccacaagau uacaaac 27

<210> 5593
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5593
uugauacuga ccuguaaauc auccucc 27

<210> 5594
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5594
cuuuagguaa gaaguuuuaa aaagcac 27

<210> 5595
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5595
aacagguaua uacuuugaaa ggagaca 27

<210> 5596
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5596
uggaaguuau uaacuuuaau guuuucc 27

<210> 5597
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5597
ugccacagcu uuugcaacuu aauacca 27

<210> 5598
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5598
aacauuugcu guuuuaaaca uuaauca 27

<210> 5599
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5599
aacaauugaa guaaacuuuu uguucca 27

<210> 5600
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5600
aaacccuagc cuugcuuguu aaauucc 27

<210> 5601
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5601
uagccuugcu uguuaaauuu uuuuucc 27

<210> 5602
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5602
uugaaguagc ucuuuuuuuu uuuuucc 27

<210> 5603
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5603
ucguaguguu aaguuauagu gaauaac 27

<210> 5604
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5604
uagugaauac ugcuacagca auuuccc 27

<210> 5605

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5605
aauacugcua cagcaauuuc uaauucc 27

<210> 5606
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5606
uucuaauuuu uaagaauuga guaauaa 27

<210> 5607
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5607
auuuuuaaga auugaguaau gguguca 27

<210> 5608
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5608
uucauaauca cucuaauuaa uuguacc 27

<210> 5609
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5609
auuaauugua aucugaauaa agugucc 27

<210> 5610
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5610
uuguaaucug aauaaagugu aacaacc 27

<210> 5611
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5611
ucugaauaaa guguaacaau uguguca 27

<210> 5612
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5612
guguagccuu uuuguauaaa auagaac 27

<210> 5613
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5613
uuuguauaaa auagacaaau agaaacc 27

<210> 5614
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5614

agaaaauggu ccaauuaguu uccuucc 27

<210> 5615
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5615
guccaauuag uuuccuuuuu aauauaa 27

<210> 5616
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5616
uuuuugauca aaaacuauuu gggaucc 27

<210> 5617
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5617
aagagguguu auuuggaacc uuguucc 27

<210> 5618
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5618
guguuauuug gaaccuuguu uuggaac 27

<210> 5619
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5619
gaaccuuguu uuggacaguu uaccaac 27

<210> 5620
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5620
gugauacgau gcuucaagag aaaauaa 27

<210> 5621
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5621
uucaagagaa aaugcgguua uaaaacc 27

<210> 5622
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5622
gagaaaaugc gguuauaaaa aauggcc 27

<210> 5623
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5623
cgguuauaaa aaaugguuca gaauucc 27

<210> 5624
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5624
aaaaaauggu ucagaauuaa acuuucc 27

<210> 5625
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5625
cagcguggac aauggcuacu caagcca 27

<210> 5626
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5626
agcguggaca auggcuacuc aagcuac 27

<210> 5627
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5627
gcguggacaa uggcuacuca agcugcc 27

<210> 5628
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5628
cguggacaau ggcuacucaa gcugacc 27

<210> 5629
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5629
guggacaaug gcuacucaag cugaucc 27

<210> 5630
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5630
uggacaaugg cuacucaagc ugauuca 27

<210> 5631
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5631
ggacaauggc uacucaagcu gauuuac 27

<210> 5632
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5632
gacaauggcu acucaagcug auuugcc 27

<210> 5633
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5633
uuugauggag uuggacaugg ccaugac 27

<210> 5634
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5634
uugauggagu uggacauggc cauggcc 27

<210> 5635
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5635
ugauggaguu ggacauggcc auggaca 27

<210> 5636
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5636
gauggaguug gacauggcca uggaaaa 27

<210> 5637
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5637
auggaguugg acauggccau ggaacac 27

<210> 5638
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5638
uggaguugga cauggccaug gaaccca 27

<210> 5639
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5639
ggaguuggac auggccaugg aaccaac 27

<210> 5640
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5640
acucuggaau ccauucuggu gccaccc 27

<210> 5641
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5641
cucuggaauc cauucuggug ccacuca 27

<210> 5642
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5642
ucuggaaucc auucuggugc cacuaaa 27

<210> 5643
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5643
cuggaaucca uucuggugcc acuacac 27

<210> 5644
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5644
uggaauccau ucuggugcca cuaccca 27

<210> 5645
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5645
auuagaugag ggcaugcaga ucccaca 27

<210> 5646
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5646
uuagaugagg gcaugcagau cccauac 27

<210> 5647
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5647
uagaugaggg caugcagauc ccauccc 27

<210> 5648
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5648
agaugagggc augcagaucc caucuca 27

<210> 5649
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5649
gaugagggca ugcagauccc aucuaac 27

<210> 5650
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5650
augagggcau gcagauccca ucuacca 27

<210> 5651
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5651
augcugcuca ucccacuaau guccaaa 27

<210> 5652
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5652
ugcugcucau cccacuaaug uccagaa 27

<210> 5653
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 5653
gcugcucauc ccacuaaugu ccagcac 27

<210> 5654
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5654
cugcucaucc cacuaauguc cagcgcc 27

<210> 5655
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5655
ugcucauccc acuaaugucc agcgucc 27

<210> 5656
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5656
gcucauccca cuaaugucca gcguuca 27

<210> 5657
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5657
cucaucccac uaauguccag cguuuaa 27

<210> 5658
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5658
ucaucccacu aauguccagc guuugaa 27

<210> 5659
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5659
guuuggcuga accaucacag augcuac 27

<210> 5660
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5660
uuuggcugaa ccaucacaga ugcugcc 27

<210> 5661
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5661
uuggcugaac caucacagau gcugacc 27

<210> 5662
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5662
cagaacuugc cacacgugca aucccca 27

<210> 5663
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5663
agaacuugcc acacgugcaa ucccuac 27

<210> 5664
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5664
caguuauggu ccaucagcuu ucuaacc 27

<210> 5665
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5665
aguuaugguc caucagcuuu cuaaacc 27

<210> 5666
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5666
cuaaaaagga agcuuccaga cacgccc 27

<210> 5667
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5667
uaaaaaggaa gcuuccagac acgcucc 27

<210> 5668

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5668
guaccaugca gaauacaaau gauguca 27

<210> 5669
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5669
uaccaugcag aauacaaaug auguaac 27

<210> 5670
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5670
accaugcaga auacaaauga uguagcc 27

<210> 5671
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5671
ccaugcagaa uacaaaugau guagacc 27

<210> 5672
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5672
caugcagaau acaaaugaug uagaaca 27

<210> 5673
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5673
augcagaaua caaaugaugu agaaaac 27

<210> 5674
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5674
ugcagaauac aaaugaugua gaaacca 27

<210> 5675
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5675
gcagaauaca aaugauguag aaacaaa 27

<210> 5676
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5676
uacuggccau cuuuaagucu ggaggac 27

<210> 5677
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5677

acuggccauc uuuaagucug gaggccc 27

<210> 5678
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5678
aagaaggagc uaaaauggca gugcgcc 27

<210> 5679
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5679
agaaggagcu aaaauggcag ugcgucc 27

<210> 5680
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5680
gaaggagcua aaauggcagu gcguucc 27

<210> 5681
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5681
aaggagcuaa aauggcagug cguuuca 27

<210> 5682
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5682
aggagcuaaa auggcagugc guuuaaa 27

<210> 5683
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5683
uacuguggac cacaagcaga gugcuac 27

<210> 5684
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5684
acuguggacc acaagcagag ugcugcc 27

<210> 5685
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5685
cuguggacca caagcagagu gcugaca 27

<210> 5686
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5686
uguggaccac aagcagagug cugaaaa 27

<210> 5687
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5687
guggaccaca agcagagugc ugaagac 27

<210> 5688
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5688
uggaccacaa gcagagugcu gaaggca 27

<210> 5689
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5689
ggaccacaag cagagugcug aagguaa 27

<210> 5690
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5690
gaccacaagc agagugcuga aggugac 27

<210> 5691
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5691
accacaagca gagugcugaa ggugccc 27

<210> 5692
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5692
ccacaagcag agugcugaag gugcucc 27

<210> 5693
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5693
cacaagcaga gugcugaagg ugcuaca 27

<210> 5694
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5694
acaagcagag ugcugaaggu gcuauac 27

<210> 5695
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5695
caagcagagu gcugaaggug cuaucca 27

<210> 5696
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5696
aagcagagug cugaaggugc uaucuac 27

<210> 5697
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5697
agaacugucu uuggacucuc aggaaca 27

<210> 5698
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5698
gaacugucuu uggacucuca ggaauac 27

<210> 5699
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5699
cagaugauau aaaaugugguc accugca 27

<210> 5700
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5700
agaugauaua aaaugugguca ccuguaa 27

<210> 5701
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5701
gaugauauaa auguggucac cugugac 27

<210> 5702
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5702
augauauaaa uguggucacc ugugcca 27

<210> 5703
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5703
ugauauaaau guggucaccu gugcaaa 27

<210> 5704
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5704
gauauaaaug uggucaccug ugcagac 27

<210> 5705
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5705
auauaaaugu ggucaccugu gcagcca 27

<210> 5706
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5706
uauaaaugug gucaccugug cagcuaa 27

<210> 5707
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5707
auaaaugugg ucaccugugc agcugac 27

<210> 5708
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5708
uaaauguggu caccugugca gcuggcc 27

<210> 5709
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5709
aaaugugguc accugugcag cuggacc 27

<210> 5710
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5710
aaugugguca ccugugcagc uggaacc 27

<210> 5711
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5711
augugucac cugugcagcu ggaauca 27

<210> 5712
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5712
uguggucacc ugugcagcug gaauuac 27

<210> 5713
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5713
guggucaccu gugcagcugg aauuccc 27

<210> 5714
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5714
uggucaccug ugcagcugga auucucc 27

<210> 5715
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5715
ggucaccugu gcagcuggaa uucuuca 27

<210> 5716
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 5716
gucaccugug cagcuggaau ucuuuac 27

<210> 5717
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5717
ucaccugugc agcuggaauu cuuuccc 27

<210> 5718
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5718
caccugugca gcuggaauuc uuucucc 27

<210> 5719
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5719
uuucuaaccu cacuugcaau aauuacc 27

<210> 5720
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5720
uucuaaccuc acuugcaaua auuaucc 27

<210> 5721
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5721
ucuaaccuca cuugcaauaa uuauaca 27

<210> 5722
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5722
cuaaccucac uugcaauaau uauaaac 27

<210> 5723
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5723
uaaccucacu ugcaauaauu auaagcc 27

<210> 5724
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5724
gggcugguga cagggaagac aucacca 27

<210> 5725
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5725
ggcuggugac agggaagaca ucacuac 27

<210> 5726
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5726
gcuggugaca gggaagacau cacugca 27

<210> 5727
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5727
cuggugacag ggaagacauc acugaaa 27

<210> 5728
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5728
uggugacagg gaagacauca cugagaa 27

<210> 5729
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5729
ggugacaggg aagacaucac ugagcac 27

<210> 5730
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5730
gugacaggga agacaucacu gagccca 27

<210> 5731

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5731
ugacagggaa gacaucacug agccuaa 27

<210> 5732
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5732
gacagggaag acaucacuga gccugaa 27

<210> 5733
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5733
acagggaaga caucacugag ccugcac 27

<210> 5734
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5734
cagggaagac aucacugagc cugcccc 27

<210> 5735
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5735
agggaagaca ucacugagcc ugccaca 27

<210> 5736
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5736
gggaagacau cacugagccu gccauac 27

<210> 5737
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5737
ggaagacauc acugagccug ccaucca 27

<210> 5738
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5738
gaagacauca cugagccugc caucuac 27

<210> 5739
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5739
aagacaucac ugagccugcc aucugca 27

<210> 5740
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5740

agacaucacu gagccugcca ucuguaa 27

<210> 5741
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5741
gacaucacug agccugccau cugugac 27

<210> 5742
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5742
acaucacuga gccugccauc ugugcca 27

<210> 5743
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5743
caucacugag ccugccaucu gugcuac 27

<210> 5744
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5744
aucacugagc cugccaucug ugcuccc 27

<210> 5745
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5745
ucacugagcc ugccaucugu gcucuca 27

<210> 5746
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5746
cacugagccu gccaucugug cucuuaa 27

<210> 5747
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5747
acugagccug ccaucugugc ucuucac 27

<210> 5748
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5748
cugagccugc caucugugcu cuucgca 27

<210> 5749
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5749
ugagccugcc aucugugcuc uucguac 27

<210> 5750
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5750
gagccugcca ucugugcucu ucguccc 27

<210> 5751
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5751
agccugccau cugugcucuu cgucaca 27

<210> 5752
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5752
gccugccauc ugugcucuuc gucauac 27

<210> 5753
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5753
ccugccaucu gugcucuucg ucaucca 27

<210> 5754
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5754
cugccaucug ugcucuucgu caucuac 27

<210> 5755
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5755
ugccaucugu gcucuucguc aucugca 27

<210> 5756
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5756
gccaucugug cucuucguca ucugaaa 27

<210> 5757
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5757
ccaucugugc ucuucgucau cugacac 27

<210> 5758
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5758
caucugugcu cuucgucauc ugaccca 27

<210> 5759
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5759
aucugugcuc uucgucaucu gaccaaa 27

<210> 5760
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5760
ucugugcucu ucgucaucug accagaa 27

<210> 5761
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5761
cugugcucuu cgucaucuga ccagcaa 27

<210> 5762
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5762
ugugcucuuc gucaucugac cagccac 27

<210> 5763
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5763
gugcucuucg ucaucugacc agccgca 27

<210> 5764
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5764
ugcucuucgu caucugacca gccgaac 27

<210> 5765
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5765
gcucuucguc aucugaccag ccgacca 27

<210> 5766
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5766
cucuucguca ucugaccagc cgacaaa 27

<210> 5767
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5767
ucuucgucau cugaccagcc gacacac 27

<210> 5768
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5768
uacacccacc aucccacugg ccucuac 27

<210> 5769
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5769
acacccacca ucccacuggc cucugcc 27

<210> 5770
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5770
cacccaccau cccacuggcc ucugacc 27

<210> 5771
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5771
acccaccauc ccacuggccu cugaucc 27

<210> 5772
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5772
cccaccaucc cacuggccuc ugauacc 27

<210> 5773
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5773
ccaccauccc acuggccucu gauaaca 27

<210> 5774
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5774
caccauccca cuggccucug auaaaaa 27

<210> 5775
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5775
accaucccac uggccucuga uaaagaa 27

<210> 5776
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5776
ccaucccacu ggccucugau aaaggac 27

<210> 5777
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5777
caucccacug gccucugaua aaggccc 27

<210> 5778
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5778
aucccacugg ccucugauaa aggcuca 27

<210> 5779
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 5779
ucccacuggc cucugauaaa ggcuaac 27

<210> 5780
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5780
cccacuggcc ucugauaaag gcuacca 27

<210> 5781
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5781
ccacuggccu cugauaaagg cuacuac 27

<210> 5782
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5782
cuacuguugg auugauucga aaucuca 27

<210> 5783
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5783
uacuguugga uugauucgaa aucuuaa 27

<210> 5784
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5784
uaaauaccau uccauuguuu gugcaaa 27

<210> 5785
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5785
aaauaccauu ccauuguuug ugcagac 27

<210> 5786
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5786
aauaccauuc cauuguuugu gcagcca 27

<210> 5787
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5787
auaccauucc auuguuugug cagcuaa 27

<210> 5788
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5788
uaccauucca uuguuugugc agcugac 27

<210> 5789
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5789
accauuccau uguuugugca gcugccc 27

<210> 5790
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5790
gcugcuuuau ucucccauug aaaaccc 27

<210> 5791
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5791
cugcuuuauu cucccauuga aaacaca 27

<210> 5792
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5792
ugcuuuauuc ucccauugaa aacauaa 27

<210> 5793
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5793
gcuuuauucu cccauugaaa acaucac 27

<210> 5794

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5794
ggguccucug ugaacuugcu caggaac 27

<210> 5795
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5795
gguccucugu gaacuugcuc aggaccc 27

<210> 5796
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5796
guccucugug aacuugcuca ggacaca 27

<210> 5797
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5797
uccucuguga acuugcucag gacaaaa 27

<210> 5798
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5798
ccucugugaa cuugcucagg acaagac 27

<210> 5799
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5799
cucugugaac uugcucagga caaggcc 27

<210> 5800
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5800
ucugugaacu ugcucaggac aaggaca 27

<210> 5801
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5801
cugugaacuu gcucaggaca aggaaaa 27

<210> 5802
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5802
ugugaacuug cucaggacaa ggaagac 27

<210> 5803
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5803

gugaacuugc ucaggacaag gaagcca 27

<210> 5804
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5804
ugaacuugcu caggacaagg aagcuaa 27

<210> 5805
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5805
cuauugaagc ugagggagcc acagcca 27

<210> 5806
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5806
uauugaagcu gagggagcca cagcuaa 27

<210> 5807
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5807
auugaagcug agggagccac agcucac 27

<210> 5808
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5808
uguuccgaau gucugaggac aagccca 27

<210> 5809
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5809
guuccgaaug ucugaggaca agccaac 27

<210> 5810
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5810
uuccgaaugu cugaggacaa gccaccc 27

<210> 5811
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5811
uccgaauguc ugaggacaag ccacaca 27

<210> 5812
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5812
ccgaaugucu gaggacaagc cacaaac 27

<210> 5813
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5813
cgaaugucug aggacaagcc acaagcc 27

<210> 5814
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5814
gaaugucuga ggacaagcca caagacc 27

<210> 5815
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5815
aaugucugag gacaagccac aagaucc 27

<210> 5816
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5816
gaacagagcc aauggcuugg aaugaac 27

<210> 5817
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5817
aacagagcca auggcuugga augagca 27

<210> 5818
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5818
acagagccaa uggcuuggaa ugagaac 27

<210> 5819
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5819
cagagccaau ggcuuggaau gagacca 27

<210> 5820
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5820
agagccaaug gcuuggaaug agacuaa 27

<210> 5821
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5821
gagccaaugg cuuggaauga gacugac 27

<210> 5822
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5822
agccaauggc uuggaaugag acugcca 27

<210> 5823
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5823
gccaauggcu uggaaugaga cugcuac 27

<210> 5824
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5824
ccaauggcuu ggaaugagac ugcugcc 27

<210> 5825
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5825
caauggcuug gaaugagacu gcugaca 27

<210> 5826
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5826
aauggcuugg aaugagacug cugauac 27

<210> 5827
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5827
cccuuggaua ucgccaggau gaucccc 27

<210> 5828
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5828
ccuuggauau cgccaggaug auccuca 27

<210> 5829
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5829
cuuggauauc gccaggauga uccuaaa 27

<210> 5830
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5830
uuggauaucg ccaggaugau ccuagac 27

<210> 5831
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5831
uggauaucgc caggaugauc cuagccc 27

<210> 5832
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5832
aucguucuuu ucacucuggu ggauaca 27

<210> 5833
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5833
ucguucuuuu cacucuggug gauauaa 27

<210> 5834
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5834
cguucuuuuc acucuggugg auaugaa 27

<210> 5835
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5835
guucuuuuca cucuggugga uauggaa 27

<210> 5836
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5836
uucuuuucac ucugguggau auggcac 27

<210> 5837
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5837
aacaugagau ggguggccac cacccca 27

<210> 5838
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5838
acaugagaug gguggccacc acccuaa 27

<210> 5839
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5839
caugagaugg guggccacca cccugac 27

<210> 5840
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5840
augagauggg uggccaccac ccuggca 27

<210> 5841
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5841
ugagaugggu ggccaccacc cugguaa 27

<210> 5842
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 5842
gagaugggug gccaccaccc uggugac 27

<210> 5843
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5843
agaugggugg ccaccacccu ggugcca 27

<210> 5844
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5844
gauggguggc caccacccug gugcuac 27

<210> 5845
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5845
auggguggcc accacccugg ugcugca 27

<210> 5846
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5846
uggguggcca ccacccuggu gcugaac 27

<210> 5847
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5847
ggguggccac cacccuggug cugaccc 27

<210> 5848
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5848
gguggccacc acccuggugc ugacucc 27

<210> 5849
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5849
guggccacca cccuggugcu gacuaca 27

<210> 5850
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5850
uggccaccac ccuggugcug acuauaa 27

<210> 5851
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5851
ggccaccacc cuggugcuga cuaucac 27

<210> 5852
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5852
gccaccaccc uggugcugac uauccca 27

<210> 5853
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5853
ccaccacccu ggugcugacu auccaac 27

<210> 5854
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5854
caccacccug gugcugacua uccagcc 27

<210> 5855
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5855
accacccugg ugcugacuau ccaguca 27

<210> 5856
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5856
ccacccuggu gcugacuauc caguuac 27

<210> 5857

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5857
cacccuggug cugacuaucc aguugcc 27

<210> 5858
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5858
acccuggugc ugacuaucca guugaca 27

<210> 5859
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5859
cccuggugcu gacuauccag uugauaa 27

<210> 5860
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5860
ccuggugcug acuauccagu ugaugaa 27

<210> 5861
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5861
cuggugcuga cuauccaguu gauggaa 27

<210> 5862
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5862
uggugcugac uauccaguug augggac 27

<210> 5863
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5863
ggugcugacu auccaguuga ugggcca 27

<210> 5864
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5864
gugcugacua uccaguugau gggcuaa 27

<210> 5865
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5865
ugcugacuau ccaguugaug ggcugaa 27

<210> 5866
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5866

gcugacuauc caguugaugg gcugcac 27

<210> 5867
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5867
cugacuaucc aguugauggg cugccca 27

<210> 5868
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5868
ugacuaucca guugaugggc ugccaac 27

<210> 5869
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5869
gacuauccag uugaugggcu gccagcc 27

<210> 5870
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5870
acuauccagu ugaugggcug ccagaca 27

<210> 5871
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5871
cuauccaguu gaugggcugc cagauac 27

<210> 5872
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5872
augcccagga ccucauggau gggcuaa 27

<210> 5873
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5873
ugcccaggac cucauggaug ggcugaa 27

<210> 5874
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5874
gcccaggacc ucauggaugg gcugcac 27

<210> 5875
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5875
acagcaauca gcuggccugg uuugacc 27

<210> 5876
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5876
cagcaaucag cuggccuggu uugauca 27

<210> 5877
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5877
agcaaucagc uggccugguu ugauaac 27

<210> 5878
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5878
gcaaucagcu ggccugguuu gauacca 27

<210> 5879
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5879
caaucagcug gccugguuug auacuac 27

<210> 5880
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5880
aaucagcugg ccugguuuga uacugca 27

<210> 5881
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5881
aucagcuggc cugguuugau acugaaa 27

<210> 5882
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5882
ucagcuggcc ugguuugaua cugacac 27

<210> 5883
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5883
cagcuggccu gguuugauac ugaccca 27

<210> 5884
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5884
agcuggccug guuugauacu gaccuac 27

<210> 5885
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5885
gcuggccugg uuugauacug accugcc 27

<210> 5886
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5886
cuggccuggu uugauacuga ccugucc 27

<210> 5887
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5887
uggccugguu ugauacugac cuguacc 27

<210> 5888
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5888
ggccugguuu gauacugacc uguaacc 27

<210> 5889
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5889
gccugguuug auacugaccu guaaaca 27

<210> 5890
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5890
ccugguuuga uacugaccug uaaauac 27

<210> 5891
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5891
cugguuugau acugaccugu aaauccc 27

<210> 5892
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5892
ugguuugaua cugaccugua aaucaca 27

<210> 5893
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5893
gguuugauac ugaccuguaa aucauaa 27

<210> 5894
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5894
guuugauacu gaccuguaaa ucaucac 27

<210> 5895
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5895
uuugauacug accuguaaau caucccc 27

<210> 5896
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5896
uuuuuugcca cagcuuuugc aacuucc 27

<210> 5897
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5897
aaugaguaac auuugcuguu uuaaaac 27

<210> 5898
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5898
uaaacauuaa uagcagccuu ucucuac 27

<210> 5899
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5899
aacauuaaua gcagccuuuc ucucucc 27

<210> 5900
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5900
cauuaauagc agccuuucuc ucuuucc 27

<210> 5901
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5901
uuaauagcag ccuuucucuc uuuauca 27

<210> 5902
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5902
uugcauugug auuggccugu agaguca 27

<210> 5903
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5903
gcauugugau uggccuguag aguugac 27

<210> 5904
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5904
auugugauug gccuguagag uugcuac 27

<210> 5905
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 5905
ugugauuggc cuguagaguu gcugaac 27

<210> 5906
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5906
ugauuggccu guagaguugc ugagaaa 27

<210> 5907
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5907
auuggccugu agaguugcug agaggaa 27

<210> 5908
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5908
uggccuguag aguugcugag agggcca 27

<210> 5909
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5909
gccuguagag uugcugagag ggcucac 27

<210> 5910
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5910
cuguagaguu gcugagaggg cucgaaa 27

<210> 5911
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5911
gggugggcug guaucucaga aagugaa 27

<210> 5912
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5912
gugggcuggu aucucagaaa gugccca 27

<210> 5913
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5913
gggcugguau cucagaaagu gccugca 27

<210> 5914
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5914
gcugguaucu cagaaagugc cugacca 27

<210> 5915
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5915
acacuaacca agcugaguuu ccuauaa 27

<210> 5916
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5916
acuaaccaag cugaguuucc uauggac 27

<210> 5917
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5917
uaaccaagcu gaguuuccua ugggaca 27

<210> 5918
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5918
accaagcuga guuuccuaug ggaaccc 27

<210> 5919
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5919
caagcugagu uuccuauggg aacaacc 27

<210> 5920

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5920
agcugaguuu ccuaugggaa caauuac 27

<210> 5921
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5921
aacuuuuugu ucugguccuu uuuggca 27

<210> 5922
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5922
cuuuuuguuc ugguccuuuu uggucac 27

<210> 5923
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5923
uuuuguucug guccuuuuug gucgaaa 27

<210> 5924
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5924
uuguucuggu ccuuuuuggu cgaggca 27

<210> 5925
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5925
guucuggucc uuuuuggucg aggagcc 27

<210> 5926
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5926
ucugguccuu uuuggucgag gaguaca 27

<210> 5927
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5927
uggucccuuuu uggucgagga guaaccc 27

<210> 5928
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5928
guccuuuuug gucgaggagu aacaacc 27

<210> 5929
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5929

ccuuuuuggu cgaggaguaa caauaac 27

<210> 5930
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5930
uuuuuggucg aggaguaaca auacacc 27

<210> 5931
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5931
uuuggucgag gaguaacaau acaaaca 27

<210> 5932
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5932
uggucgagga guaacaauac aaaugac 27

<210> 5933
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5933
gucgaggagu aacaauacaa auggacc 27

<210> 5934
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5934
cgaggaguaa caauacaaau ggauucc 27

<210> 5935
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5935
aggaguaaca auacaaaugg auuuuaa 27

<210> 5936
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5936
uuuaucaaac ccuagccuug cuugucc 27

<210> 5937
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5937
uaucaaaccc uagccuugcu uguuacc 27

<210> 5938
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5938
ucaaacccua gccuugcuug uuaaacc 27

<210> 5939
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5939
uugaguaaug guguagaaca cuaauca 27

<210> 5940
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5940
gaguaauggu guagaacacu aauuccc 27

<210> 5941
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5941
guaauggugu agaacacuaa uucaucc 27

<210> 5942
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5942
aaugguguag aacacuaauu cauaaca 27

<210> 5943
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5943
ugguguagaa cacuaauuca uaaucca 27

<210> 5944
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5944
guguagaaca cuaauucaua aucacca 27

<210> 5945
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5945
guagaacacu aauucauaau cacuccc 27

<210> 5946
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5946
agaacacuaa uucauaauca cucuacc 27

<210> 5947
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5947
aauuaguuuc cuuuuuaaua ugcuucc 27

<210> 5948
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5948
uuaguuuccu uuuuaauaug cuuaacc 27

<210> 5949
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5949
aguuuccuuu uuaauaugcu uaaaacc 27

<210> 5950
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5950
uuuccuuuuu aauaugcuua aaauaca 27

<210> 5951
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5951
uccuuuuuaa uaugcuuaaa auaagac 27

<210> 5952
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5952
ccuuuuuaau augcuuaaaa uaagcca 27

<210> 5953
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5953
cuuuuuaaua ugcuuaaaau aagcaaa 27

<210> 5954
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5954
uuuuaauaug cuuaaaauaa gcaggca 27

<210> 5955
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5955
uuaauaugcu uaaaauaagc aggugac 27

<210> 5956
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5956
aauaugcuua aaauaagcag guggaca 27

<210> 5957
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5957
uaugcuuaaa auaagcaggu ggauccc 27

<210> 5958
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5958
ugcuuaaaau aagcaggugg aucuacc 27

<210> 5959
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5959
cuuaaaauaa gcagguggau cuauuca 27

<210> 5960
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5960
uaaaauaagc agguggaucu auuuccc 27

<210> 5961
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5961
aaauaagcag guggaucuau uucauac 27

<210> 5962
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5962
auaagcaggu ggaucuauuu caugucc 27

<210> 5963
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5963
aagcaggugg aucuauuuca uguuucc 27

<210> 5964
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5964
gcagguggau cuauuucaug uuuuuac 27

<210> 5965
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5965
agguggaucu auuucauguu uuugaca 27

<210> 5966
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5966
guggaucuau uucauguuuu ugauccc 27

<210> 5967
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5967
ggaucuauuu cauguuuuug aucaacc 27

<210> 5968
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 5968
ggguagggua aaucaguaag aggugcc 27

<210> 5969
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5969
guaggguaaa ucaguaagag guguucc 27

<210> 5970
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5970
aggguaaauc aguaagaggu guuaucc 27

<210> 5971
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5971
gguaaaucag uaagaggugu uauuuaa 27

<210> 5972
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5972
uaaaucagua agagguguua uuuggcc 27

<210> 5973
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5973
aaucaguaag agguguuauu uggaaaa 27

<210> 5974
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5974
uuuaccaguu gccuuuuauc ccaaaac 27

<210> 5975
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5975
uaccaguugc cuuuuauccc aaaguca 27

<210> 5976
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5976
ccaguugccu uuuaucccaa aguugcc 27

<210> 5977
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5977
aguugccuuu uaucccaaag uuguuac 27

<210> 5978
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5978
uugccuuuua ucccaaaguu guugucc 27

<210> 5979
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5979
gccuuuuauc ccaaaguugu uguaaaa 27

<210> 5980
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5980
cuuuuauccc aaaguuguug uaaccca 27

<210> 5981
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5981
uuuaucccaa aguuguugua accugac 27

<210> 5982
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5982
uaucccaaag uuguuguaac cugcuac 27

<210> 5983

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5983
ucccaaaguu guuguaaccu gcuguac 27

<210> 5984
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5984
ccaaaguugu uguaaccugc ugugacc 27

<210> 5985
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5985
aaaguuguug uaaccugcug ugauaaa 27

<210> 5986
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5986
aguuguugua accugcugug auacgcc 27

<210> 5987
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5987
uuguuguaac cugcugugau acgauaa 27

<210> 5988
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5988
aaaaaugguu cagaauuaaa cuuuucc 27

<210> 5989
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5989
aaaugguuca gaauuaaacu uuuaacc 27

<210> 5990
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5990
augguucaga auuaaacuuu uaauuac 27

<210> 5991
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5991
gguucagaau uaaacuuuua auucacc 27

<210> 5992
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5992

uucagaauua aacuuuuaau ucauuaa 27

<210> 5993
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5993
cagcagcagu cuuacuugga uucugac 27

<210> 5994
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5994
uuacuuggau ucuggaaucc auucuaa 27

<210> 5995
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5995
uugacaccuc ccaaguccuu uaugacc 27

<210> 5996
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5996
cacgcaagag caaguagcug auauuac 27

<210> 5997
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5997
ugccauguuc ccugagacgc uagauac 27

<210> 5998
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5998
guugaaacau gcaguuguca auuugcc 27

<210> 5999
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 5999
aacaugcagu ugucaauuug auuaaac 27

<210> 6000
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6000
caguugucaa uuugauuaac uaucaaa 27

<210> 6001
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6001
augaggacca ggugguaguu aauaaca 27

<210> 6002
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6002
ugggucacca guggauucug uacugcc 27

<210> 6003
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6003
accaguggau ucuguacugu ucuacaa 27

<210> 6004
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6004
uggauucugu acuguucuac gccauac 27

<210> 6005
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6005
ugguggacug cagaaaaugg uugcucc 27

<210> 6006
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6006
aacgugaaau ucuuggcuau uacaaac 27

<210> 6007
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6007
cccaagucag cgacuuguuc aaaacca 27

<210> 6008
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6008
gcgacuuguu caaaacuguc uuuggca 27

<210> 6009
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6009
caaaacuguc uuuggacucu cagaaca 27

<210> 6010
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6010
cucucuaacc ucacuugcaa uaauuca 27

<210> 6011
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6011
accucacuug caauaauuac aaaaaac 27

<210> 6012
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6012
cagaaugccg uucgccuuca uuaugac 27

<210> 6013
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6013
ucgccuucau uauggacugc cuguuac 27

<210> 6014
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6014
uucauuaugg acugccuguu guggucc 27

<210> 6015
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6015
uggacugccu guugugguua aacucac 27

<210> 6016
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6016
gcaacuguug gauugauucg aaacccc 27

<210> 6017
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6017
ccgaggacuc aauaccauuc cauugcc 27

<210> 6018
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6018
cugaggacaa gccacaggau uacaaac 27

<210> 6019
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6019
ggauggaccc uaugauggag caugaac 27

<210> 6020
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6020
uugauacuga ccuguaaauc guccucc 27

<210> 6021
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6021
agccagugug ggugaauacu uuacuac 27

<210> 6022
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6022
ugccacagcu uuugcagcgu uauacca 27

<210> 6023
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6023
gcuuuugcag cguuauacuc agaugca 27

<210> 6024
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6024
cagcguuaua cucagaugag uaacacc 27

<210> 6025
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6025
acauuugcug uuuucaacau uaauaaa 27

<210> 6026
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6026
agcuguagug ucugaacgug cauugca 27

<210> 6027
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6027
gggaacaguc gaaguacgcu uuuugcc 27

<210> 6028
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6028
cagucgaagu acgcuuuuug uucugac 27

<210> 6029
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6029
aaguacgcuu uuguucugg uccuucc 27

<210> 6030
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6030
acccuagccu ugcuuguucu uuguucc 27

<210> 6031
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 6031
agccuugcuu guucuuuguu uuaaucc 27

<210> 6032
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6032
ugaaccugcu acagcaauuu cugaucc 27

<210> 6033
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6033
uacagcaauu ucugauuucu aagaaaa 27

<210> 6034
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6034
caguaagagg uguuauuuga gccuuac 27

<210> 6035
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6035
gagguguuau uugagccuug uuuugac 27

<210> 6036
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6036
guuauuugag ccuuguuuug gacagcc 27

<210> 6037
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6037
uugagccuug uuuuggacag uauacac 27

<210> 6038
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6038
uucaacagau gcgguuauag aaaugac 27

<210> 6039
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6039
cgguuauaga aaugguucag aauuacc 27

<210> 6040
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6040
auagaaaugg uucagaauua aacuucc 27

<210> 6041
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6041
guuguauggu auacuucaaa uacccca 27

<210> 6042
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6042
caaaacaguu guaugguaua cuucacc 27

<210> 6043
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6043
ucaaaacagu uguaugguau acuuccc 27

<210> 6044
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6044
uuucaaaaca guuguauggu auacuca 27

<210> 6045
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6045
uuuucaaaac aguuguaugg uauaccc 27

<210> 6046

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6046
auuuucaaaa caguuguaug guauaac 27

<210> 6047
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6047
uuguccacgc uggauuuuca aaacaac 27

<210> 6048
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6048
auuguccacg cuggauuuuc aaaacca 27

<210> 6049
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6049
ccaucaaauc agcuugagua gccauca 27

<210> 6050
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6050
uguccaacuc caucaaauca gcuugca 27

<210> 6051
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6051
cuuccucagg auugccuuua ccacuac 27

<210> 6052
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6052
ucuuccucag gauugccuuu accacca 27

<210> 6053
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6053
caucaauauc agcuacuugu ucuugca 27

<210> 6054
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6054
ccaucaauau cagcuacuug uucuuac 27

<210> 6055
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6055

acuguccauc aauaucagcu acuugcc 27

<210> 6056
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6056
auugcauacu guccaucaau aucagac 27

<210> 6057
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6057
cgagucauug cauacugucc aucaacc 27

<210> 6058
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6058
ccucaucuaa ugucucaggg aacauca 27

<210> 6059
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6059
uuacaacugc auguuucagc aucugca 27

<210> 6060
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6060
guuuacaacu gcauguuuca gcaucca 27

<210> 6061
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6061
aguuaaucaa guuuacaacu gcaugcc 27

<210> 6062
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6062
cuugauaguu aaucaaguuu acaacca 27

<210> 6063
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6063
cugcaucauc uugauaguua aucaaac 27

<210> 6064
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6064
ucugcaucau cuugauaguu aaucaca 27

<210> 6065
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6065
cugguccucg ucauuuagca guuuuac 27

<210> 6066
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6066
cauaacugca gccuuauuaa ccaccca 27

<210> 6067
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6067
ccauaacugc agccuuauua accacac 27

<210> 6068
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6068
ggaccauaac ugcagccuua uuaacac 27

<210> 6069
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6069
ccuuuuuaga aagcugaugg accaucc 27

<210> 6070
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6070
augguacgua caauagcaga caccaca 27

<210> 6071
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6071
caucauuugu auucugcaug guacgcc 27

<210> 6072
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6072
cuguuucuac aucauuugua uucugac 27

<210> 6073
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6073
gcuguuucua caucauuugu auucuaa 27

<210> 6074
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6074
guacaacgag cuguuucuac aucaucc 27

<210> 6075
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6075
cgguacaacg agcuguuucu acauccc 27

<210> 6076
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6076
gcgguacaac gagcuguuuc uacauac 27

<210> 6077
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6077
gcauaaaaca acacagaauc cacugac 27

<210> 6078
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6078
uggcauaaaa caacacagaa uccacca 27

<210> 6079
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6079
auggcauaaa acaacacaga auccaac 27

<210> 6080
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6080
uagcuccuuc uugauguaau aaaagac 27

<210> 6081
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6081
uuagcuccuu cuugauguaa uaaaaaa 27

<210> 6082
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6082
uuuaacauuu guuuuguuga gcaagaa 27

<210> 6083
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6083
uagccaagaa uuuaacauuu guuuuac 27

<210> 6084
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6084
cguaauagcc aagaauuuaa cauuuac 27

<210> 6085
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6085
ucguaauagc caagaauuua acauuca 27

<210> 6086
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6086
uaagcuaaaa uuugaaggca gucugca 27

<210> 6087
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6087
uaggуccuca uuauauuuac uaaagac 27

<210> 6088
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6088
aaguauaggu ccucauuaua uuuaccc 27

<210> 6089
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6089
uaaguauagg uccucauuau auuuaac 27

<210> 6090
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6090
guuuuucgua aguauagguc cucaucc 27

<210> 6091
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6091
aguuuuucgu aaguauaggu ccucacc 27

<210> 6092
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6092
uaguuuuucg uaaguauagg uccuccc 27

<210> 6093
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6093
guaguuuuuc guaaguauag guccuac 27

<210> 6094
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 6094
gugguccaca guaguuuuuc guaagcc 27

<210> 6095
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6095
ucuacaauag ccggcuuauu acuagca 27

<210> 6096
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6096
cuucuacaau agccggcuua uuacuca 27

<210> 6097
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6097
aguccuaaag cuugcauucc accagac 27

<210> 6098
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6098
aaguccuaaa gcuugcauuc caccaaa 27

<210> 6099
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6099
gaaguccuaa agcuugcauu ccaccca 27

<210> 6100
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6100
caguucugaa caagacguug acuugac 27

<210> 6101
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6101
acaguucuga acaagacguu gacuuaa 27

<210> 6102
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6102
gaguccaaag acaguucuga acaagca 27

<210> 6103
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6103
ccuuccuguu uaguugcagc aucugcc 27

<210> 6104
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6104
ccacauuuau aucaucugaa cccagcc 27

<210> 6105
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6105
ugaccacauu uauaucaucu gaaccac 27

<210> 6106
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6106
cugcacaggu gaccacauuu auauccc 27

<210> 6107
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6107
gcugcacagg ugaccacauu uauauac 27

<210> 6108
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6108
auugcaagug agguuagaaa gaauuaa 27

<210> 6109

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6109
uuauaauuau ugcaagugag guuagcc 27

<210> 6110
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6110
caucaucuug uucuuauaau uauugac 27

<210> 6111
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6111
ccaucaucuu guucuuauaa uuauuaa 27

<210> 6112
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6112
agaccaucau cuuguucuua uaauucc 27

<210> 6113
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6113
gcagaccauc aucuuguucu uauaacc 27

<210> 6114
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6114
ucaauccaac aguagccuuu aucagca 27

<210> 6115
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6115
ucgaaucaau ccaacaguag ccuuucc 27

<210> 6116
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6116
ccuccacaaa uugcugcugu gucccca 27

<210> 6117
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6117
guacaaccuu caacuauuuc uuccaca 27

<210> 6118
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6118

gguacaaccu ucaacuauuu cuucccc 27

<210> 6119
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6119
cgguacaacc uucaacuauu ucuucac 27

<210> 6120
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6120
ccgguacaac cuucaacuau uucuuaa 27

<210> 6121
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6121
gggcuccggu acaaccuuca acuaucc 27

<210> 6122
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6122
uaacaauucg guugugaaca ucccgca 27

<210> 6123
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6123
auaacaauuc gguugugaac aucccac 27

<210> 6124
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6124
gauaacaauu cgguugugaa cauccaa 27

<210> 6125
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6125
ugauaacaau ucgguuguga acaucaa 27

<210> 6126
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6126
cugauaacaa uucgguugug aacauaa 27

<210> 6127
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6127
ucugauaaca auucgguugu gaacaca 27

<210> 6128
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6128
guauuuaguc cucugauaac aauucaa 27

<210> 6129
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6129
gguauuuagu ccucugauaa caauuaa 27

<210> 6130
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6130
ugguauuuag uccucugaua acaauca 27

<210> 6131
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6131
augguauuua guccucugau aacaacc 27

<210> 6132
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6132
aaacaaugga augguauuua guccuac 27

<210> 6133
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6133
gcacaaacaa uggaauggua uuuagca 27

<210> 6134
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6134
cugcacaaac aauggaaugg uauuuca 27

<210> 6135
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6135
gcugcacaaa caauggaaug guauucc 27

<210> 6136
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6136
cagcuacucu uuggauguuu ucaauaa 27

<210> 6137
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6137
gcagcuacuc uuuggauguu uucaaca 27

<210> 6138
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6138
cagcuucaau agcuucugca gcuucac 27

<210> 6139
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6139
gcucccucag cuucaauagc uucugac 27

<210> 6140
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6140
uggcucccuc agcuucaaua gcuucca 27

<210> 6141
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6141
ucauuccuag agugaaguaa cucugca 27

<210> 6142
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6142
cuucauuccu agagugaagu aacucca 27

<210> 6143
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6143
ccuucauucc uagagugaag uaacuac 27

<210> 6144
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6144
uguccucaga cauucggaac aaaacca 27

<210> 6145
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6145
cuuguccuca gacauucgga acaaaca 27

<210> 6146
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6146
ccguuucuug uaaucuugug gcuugca 27

<210> 6147
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6147
acugaaagcc guuucuugua aucuuac 27

<210> 6148
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6148
cagcucaacu gaaagccguu ucuugcc 27

<210> 6149
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6149
caaguccaag aucagcaguc ucauuaa 27

<210> 6150
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6150
gcaccaauau caaguccaag aucagac 27

<210> 6151
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6151
aaagaacgau agcuaggauc auccuaa 27

<210> 6152
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6152
cauauccacc agagugaaaa gaacgcc 27

<210> 6153
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6153
ugauuuacag gucaguauca aaccaaa 27

<210> 6154
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6154
augauuuaca ggucaguauc aaaccca 27

<210> 6155
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6155
gaugauuuac aggucaguau caaacac 27

<210> 6156
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6156
cuucuuaccu aaaggaugau uuacaaa 27

<210> 6157
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 6157
acuucuuacc uaaaggauga uuuacca 27

<210> 6158
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6158
aaacuucuua ccuaaaggau gauuuca 27

<210> 6159
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6159
gcuuuuuaaa acuucuuacc uaaagac 27

<210> 6160
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6160
uggcuuuuua aaacuucuua ccuaaca 27

<210> 6161
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6161
ccaaacuggc uuuuuaaaac uucuuca 27

<210> 6162
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6162
uuacccaaac uggcuuuuua aaacuca 27

<210> 6163
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6163
uuuacccaaa cuggcuuuuu aaaaccc 27

<210> 6164
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6164
uuuuacccaa acuggcuuuu uaaaaac 27

<210> 6165
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6165
auuuuaccca aacuggcuuu uuaaaca 27

<210> 6166
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6166
ccaaccaagu cuuucugaag uucugcc 27

<210> 6167
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6167
ccacccuacc aaccaagucu uucugcc 27

<210> 6168
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6168
auuuacaaau agccuaaacc acuccac 27

<210> 6169
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6169
gauuuacaaa uagccuaaac cacucaa 27

<210> 6170
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6170
agauuuacaa auagccuaaa ccacuaa 27

<210> 6171
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6171
cagauuuaca aauagccuaa accacca 27

<210> 6172

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6172
uguuuuugug gcagauuuac aaauaaa 27

<210> 6173
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6173
cuguuuuugu ggcagauuua caaauca 27

<210> 6174
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6174
ccuguuuuug uggcagauuu acaaacc 27

<210> 6175
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6175
auauaccugu uuuuguggca gauuuca 27

<210> 6176
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6176
cuuucaaagu auauaccugu uuuugca 27

<210> 6177
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6177
caucuccuuu caaaguauau accugcc 27

<210> 6178
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6178
acaucuccuu ucaaaguaua uaccuac 27

<210> 6179
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6179
agacaucucc uuucaaagua uauacac 27

<210> 6180
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6180
aagacaucuc cuuucaaagu auauaaa 27

<210> 6181
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6181

caagacaucu ccuuucaaag uauauca 27

<210> 6182
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6182
uguuccaaga caucuccuuu caaagcc 27

<210> 6183
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6183
cauuccaaug uuccaagaca ucucccc 27

<210> 6184
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6184
acauuccaau guuccaagac aucucac 27

<210> 6185
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6185
gaacauucca auguuccaag acaucca 27

<210> 6186
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6186
ccagaaaucu gagaacauuc caaugcc 27

<210> 6187
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6187
acaaccagaa aucugagaac auucccc 27

<210> 6188
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6188
uaacaaccag aaaucugaga acauuaa 27

<210> 6189
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6189
auaacaacca gaaaucugag aacauca 27

<210> 6190
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6190
cauaacaacc agaaaucuga gaacacc 27

<210> 6191
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6191
ugaucacaua acaaccagaa aucugca 27

<210> 6192
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6192
augaucacau aacaaccaga aaucuac 27

<210> 6193
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6193
ccacacauga ucacauaaca accagcc 27

<210> 6194
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6194
cuuccacaca ugaucacaua acaacac 27

<210> 6195
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6195
aauaacuucc acacaugauc acauaca 27

<210> 6196
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6196
uaauaacuuc cacacaugau cacaucc 27

<210> 6197
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6197
uuaauaacuu ccacacauga ucacacc 27

<210> 6198
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6198
guuaauaacu uccacacaug aucaccc 27

<210> 6199
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6199
cauuaaaguu aauaacuucc acacaca 27

<210> 6200
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6200
acauuaaagu uaauaacuuc cacaccc 27

<210> 6201
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6201
aaacauuaaa guuaauaacu uccacca 27

<210> 6202
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6202
aaaacauuaa aguuaauaac uuccaac 27

<210> 6203
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6203
aaaaacauua aaguuaauaa cuuccca 27

<210> 6204
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6204
aaaaaacauu aaaguuaaua acuucac 27

<210> 6205
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6205
caaaaaacau uaaaguuaau aacuuaa 27

<210> 6206
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6206
gcaaaaaaca uuaaaguuaa uaacuca 27

<210> 6207
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6207
uggcaaaaaa cauuaaaguu aauaaac 27

<210> 6208
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6208
guggcaaaaa acauuaaagu uaauaca 27

<210> 6209
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6209
uugcaaaagc uguggcaaaa aacaucc 27

<210> 6210
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6210
guugcaaaag cuguggcaaa aaacacc 27

<210> 6211
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6211
acucauuuga guauuaaguu gcaaaca 27

<210> 6212
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6212
uuaaaacagc aaauguuacu cauuuac 27

<210> 6213
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6213
uuuaaaacag caaauguuac ucauuca 27

<210> 6214
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6214
guuuaaaaca gcaaauguua cucaucc 27

<210> 6215
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6215
uguuuaaaac agcaaauguu acucacc 27

<210> 6216
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6216
auguuuaaaa cagcaaaugu uacuccc 27

<210> 6217
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6217
aauguuuaaa acagcaaaug uuacuac 27

<210> 6218
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6218
cuauuaaugu uuaaaacagc aaaugcc 27

<210> 6219
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6219
agagaaaggc ugcuauuaau guuuacc 27

<210> 6220
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 6220
caaguucaga caauacagcu guauacc 27

<210> 6221
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6221
ucacaaugca aguucagaca auacaaa 27

<210> 6222
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6222
aaucacaaug caaguucaga caauaac 27

<210> 6223
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6223
ccaaucacaa ugcaaguuca gacaacc 27

<210> 6224
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6224
caggccaauc acaaugcaag uucagca 27

<210> 6225
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6225
uuguucccau aggaaacuca gcuugac 27

<210> 6226
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6226
cuucaauugu ucccauagga aacucca 27

<210> 6227
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6227
acuucaauug uucccauagg aaacuac 27

<210> 6228
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6228
aaguuuacuu caauuguucc cauagac 27

<210> 6229
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6229
aaaguuuacu ucaauuguuc ccauaaa 27

<210> 6230
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6230
acaaaaaguu uacuucaauu guuccac 27

<210> 6231
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6231
cagaacaaaa aguuuacuuc aauugcc 27

<210> 6232
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6232
aggaccagaa caaaaaguuu acuuccc 27

<210> 6233
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6233
aaggaccaga acaaaaaguu uacuuac 27

<210> 6234
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6234
cgaccaaaaa ggaccagaac aaaaaac 27

<210> 6235

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6235
ucgaccaaaa aggaccagaa caaaaca 27

<210> 6236
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6236
uuacuccucg accaaaaagg accagcc 27

<210> 6237
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6237
aauccauuug uauuguuacu ccucgca 27

<210> 6238
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6238
aaauccauuu guauuguuac uccucac 27

<210> 6239
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6239
aaaauccauu uguauuguua cuccuaa 27

<210> 6240
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6240
caaaauccau uuguauuguu acuccca 27

<210> 6241
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6241
ccaaaaucca uuuguauugu uacucac 27

<210> 6242
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6242
ucacucccaa aauccauuug uauugcc 27

<210> 6243
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6243
ucuucacuuc uugagucacu cccaacc 27

<210> 6244
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6244

auucuucacu ucuugaguca cucccccc 27

<210> 6245
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6245
cauucuucac uucuugaguc acuccac 27

<210> 6246
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6246
gcauucuuca cuucuugagu cacucaa 27

<210> 6247
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6247
gugcauucuu cacuucuuga gucacca 27

<210> 6248
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6248
ccauucuugu gcauucuuca cuucuca 27

<210> 6249
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6249
gauccauucu ugugcauucu ucacuca 27

<210> 6250
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6250
ugauccauuc uugugcauuc uucaccc 27

<210> 6251
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6251
gugauccauu cuugugcauu cuucaac 27

<210> 6252
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6252
uaaauuccau cuugugaucc auucuca 27

<210> 6253
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6253
gauaaauucc aucuugugau ccauuac 27

<210> 6254
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6254
ugauaaauuc caucuuguga uccauca 27

<210> 6255
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6255
uugauaaauu ccaucuugug auccacc 27

<210> 6256
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6256
uuugauaaau uccaucuugu gaucccc 27

<210> 6257
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6257
aaggcuaggg uuugauaaau uccauac 27

<210> 6258
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6258
aaaaaaauuu aacaagcaag gcuagaa 27

<210> 6259
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6259
aaaaaaaaaa aaaaaauuua acaagac 27

<210> 6260
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6260
aaaaaaaaaa aaaaaaauuu aacaaaa 27

<210> 6261
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6261
aaaaaaaaaa aaaaaaaauu uaacaca 27

<210> 6262
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6262
aaaaaaaaaa aaaaaaaaau uuaaccc 27

<210> 6263
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6263
uaaaaaaaaa aaaaaaaaaa uuuaaac 27

<210> 6264
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6264
uuaaaaaaaa aaaaaaaaaa auuuaca 27

<210> 6265
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6265
cuuaaaaaaa aaaaaaaaaa aauuucc 27

<210> 6266
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6266
ucuuaaaaaa aaaaaaaaaa aaauucc 27

<210> 6267
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6267
auucuuaaaa aaaaaaaaaa aaaaacc 27

<210> 6268
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6268
uauucuuaaa aaaaaaaaaa aaaaacc 27

<210> 6269
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6269
auauucuuaa aaaaaaaaaa aaaaacc 27

<210> 6270
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6270
gauauucuua aaaaaaaaaa aaaaacc 27

<210> 6271
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6271
agauauucuu aaaaaaaaaa aaaaacc 27

<210> 6272
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6272
cagauauucu uaaaaaaaaa aaaaacc 27

<210> 6273
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6273
acagauauuc uuaaaaaaaa aaaaacc 27

<210> 6274
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6274
cauuacagau auucuuaaaa aaaaacc 27

<210> 6275
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6275
ccauuacaga uauucuuaaa aaaaacc 27

<210> 6276
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6276
aguaccauua cagauauucu uaaaacc 27

<210> 6277
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6277
caguaccauu acagauauuc uuaaacc 27

<210> 6278
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6278
ucaguaccau uacagauauu cuuaacc 27

<210> 6279
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6279
aaagucagua ccauuacaga uauuccc 27

<210> 6280
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6280
gcuacuucaa agcaagcaaa gucagcc 27

<210> 6281
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6281
aaaaaaagag cuacuucaaa gcaagac 27

<210> 6282
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6282
aaaaaaaaaa aagagcuacu ucaaaaa 27

<210> 6283
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 6283
aaaaaaaaaa aaagagcuac uucaaca 27

<210> 6284
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6284
aaaaaaaaaa aaaaagagcu acuuccc 27

<210> 6285
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6285
aaaaaaaaaa aaaaaagagc uacuuac 27

<210> 6286
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6286
aaaaaaaaaa aaaaaaagag cuacuca 27

<210> 6287
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6287
aaaaaaaaaa aaaaaaaaga gcuaccc 27

<210> 6288
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6288
aaaaaaaaaa aaaaaaaaaa aaaagca 27

<210> 6289
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6289
aaaaaaaaaa aaaaaaaaaa aaaaaac 27

<210> 6290
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6290
caaaaaaaaa aaaaaaaaaa aaaaaca 27

<210> 6291
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6291
gcaaaaaaaa aaaaaaaaaa aaaaacc 27

<210> 6292
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6292
cugcaaaaaa aaaaaaaaaa aaaaacc 27

<210> 6293
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6293
acugcaaaaa aaaaaaaaaa aaaaacc 27

<210> 6294
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6294
aguuacugca aaaaaaaaaa aaaaacc 27

<210> 6295
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6295
caguuacugc aaaaaaaaaa aaaaacc 27

<210> 6296
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6296
acaguuacug caaaaaaaaa aaaaacc 27

<210> 6297
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6297
aaaaacaguu acugcaaaaa aaaaacc 27

<210> 6298

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6298
aaaaaacagu uacugcaaaa aaaaacc 27

<210> 6299
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6299
uaaaaaacag uuacugcaaa aaaaacc 27

<210> 6300
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6300
cuuaaaaaac aguuacugca aaaaacc 27

<210> 6301
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6301
acuuaaaaaa caguuacugc aaaaacc 27

<210> 6302
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6302
agacuuaaaa aacaguuacu gcaaacc 27

<210> 6303
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6303
acacuacgag agacuuaaaa aacagcc 27

<210> 6304
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6304
uaacacuacg agagacuuaa aaaacca 27

<210> 6305
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6305
uuaacacuac gagagacuua aaaaaac 27

<210> 6306
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6306
acuuaacacu acgagagacu uaaaacc 27

<210> 6307
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6307

auaacuuaac acuacgagag acuuacc 27

<210> 6308
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6308
uauaacuuaa cacuacgaga gacuucc 27

<210> 6309
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6309
guauucacua uaacuuaaca cuacgca 27

<210> 6310
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6310
aguauucacu auaacuuaac acuacac 27

<210> 6311
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6311
caguauucac uauaacuuaa cacuaaa 27

<210> 6312
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6312
gcaguauuca cuauaacuua acacuca 27

<210> 6313
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6313
agaaauugcu guagcaguau ucacucc 27

<210> 6314
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6314
uagaaauugc uguagcagua uucaccc 27

<210> 6315
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6315
uuagaaauug cuguagcagu auucaac 27

<210> 6316
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6316
acucaauucu uaaaaauuag aaauuaa 27

<210> 6317
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6317
ccauuacuca auucuuaaaa auuagcc 27

<210> 6318
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6318
acaccauuac ucaauucuua aaaaucc 27

<210> 6319
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6319
cuacaccauu acucaauucu uaaaacc 27

<210> 6320
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6320
ucuacaccau uacucaauuc uuaaacc 27

<210> 6321
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6321
guucuacacc auuacucaau ucuuacc 27

<210> 6322
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6322
guguucuaca ccauuacuca auucucc 27

<210> 6323
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6323
augaauuagu guucuacacc auuacca 27

<210> 6324
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6324
ugauuaugaa uuaguguucu acacccc 27

<210> 6325
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6325
gugauuauga auuaguguuc uacacac 27

<210> 6326
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6326
agugauuaug aauuaguguu cuacaaa 27

<210> 6327
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6327
auuaauuaga gugauuauga auuagca 27

<210> 6328
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6328
aauuaauuag agugauuaug aauuaac 27

<210> 6329
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6329
caauuaauua gagugauuau gaauuca 27

<210> 6330
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6330
auuacaauua auuagaguga uuaugcc 27

<210> 6331
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6331
gauuacaauu aauuagagug auuauac 27

<210> 6332
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6332
agauuacaau uaauuagagu gauuaca 27

<210> 6333
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6333
cuuuauucag auuacaauua auuagca 27

<210> 6334
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6334
acuuuauuca gauuacaauu aauuaac 27

<210> 6335
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6335
uuacacuuua uucagauuac aauuacc 27

<210> 6336
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6336
guuacacuuu auucagauua caauucc 27

<210> 6337
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6337
uguuacacuu uauucagauu acaaucc 27

<210> 6338
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6338
uuguuacacu uuauucagau uacaacc 27

<210> 6339
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6339
auuguuacac uuuauucaga uuacacc 27

<210> 6340
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6340
cuacacaauu guuacacuuu auucaac 27

<210> 6341
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6341
aaggcuacac aauuguuaca cuuuacc 27

<210> 6342
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6342
acaaaaaggc uacacaauug uuacaac 27

<210> 6343
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6343
uuuuauacaa aaaggcuaca caauuac 27

<210> 6344
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6344
auuuuauaca aaaaggcuac acaauca 27

<210> 6345
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6345
cuauuuuaua caaaaaggcu acacacc 27

<210> 6346
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 6346
ucuauuuuau acaaaaaggc uacaccc 27

<210> 6347
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6347
ugucuauuuu auacaaaaag gcuacca 27

<210> 6348
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6348
ucuauuuguc uauuuuauac aaaaaaa 27

<210> 6349
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6349
uuucuauuug ucuauuuuau acaaacc 27

<210> 6350
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6350
uuuucuauuu gucuauuuua uacaacc 27

<210> 6351
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6351
auuuucuauu ugucuauuuu auacacc 27

<210> 6352
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6352
cauuuucuau uugucuauuu uauaccc 27

<210> 6353
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6353
ccauuuucua uuugucuauu uuauaac 27

<210> 6354
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6354
ggaccauuuu cuauuugucu auuuucc 27

<210> 6355
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6355
uggaccauuu ucuauuuguc uauuucc 27

<210> 6356
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6356
uuggaccauu uucuauuugu cuauucc 27

<210> 6357
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6357
aaacuaauug gaccauuuuc uauuuac 27

<210> 6358
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6358
gaaacuaauu ggaccauuuu cuauuca 27

<210> 6359
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6359
ggaaacuaau uggaccauuu ucuaucc 27

<210> 6360
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6360
aggaaacuaa uuggaccauu uucuacc 27

<210> 6361

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6361
uuaaaaagga aacuaauugg accaucc 27

<210> 6362
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6362
auuaaaaagg aaacuaauug gaccacc 27

<210> 6363
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6363
aagcauauua aaaaggaaac uaauuaa 27

<210> 6364
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6364
uaagcauauu aaaaaggaaa cuaauca 27

<210> 6365
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6365
auuuuaagca uauuaaaaag gaaaccc 27

<210> 6366
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6366
cugcuuauuu uaagcauauu aaaaaaa 27

<210> 6367
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6367
ccugcuuauu uuaagcauau uaaaaca 27

<210> 6368
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6368
gauccaccug cuuauuuuaa gcauacc 27

<210> 6369
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6369
caaaaacaug aaauagaucc accugac 27

<210> 6370
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6370

ucaaaaacau gaaauagauc caccuaa 27

<210> 6371
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6371
gaucaaaaac augaaauaga uccacac 27

<210> 6372
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6372
ugaucaaaaa caugaaauag auccaaa 27

<210> 6373
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6373
uugaucaaaa acaugaaaua gauccca 27

<210> 6374
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6374
aguuuuugau caaaaacaug aaauaac 27

<210> 6375
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6375
ccaaauaguu uuugaucaaa aacauac 27

<210> 6376
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6376
uaucccaaau aguuuuugau caaaaca 27

<210> 6377
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6377
auaucccaaa uaguuuuuga ucaaacc 27

<210> 6378
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6378
cauaucccaa auaguuuuug aucaacc 27

<210> 6379
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6379
acauauccca aauaguuuuu gaucacc 27

<210> 6380
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6380
ccauacauau cccaaauagu uuuugcc 27

<210> 6381
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6381
uuacccuacc cauacauauc ccaaacc 27

<210> 6382
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6382
uuuacccuac ccauacauau cccaacc 27

<210> 6383
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6383
auuuacccua cccauacaua ucccacc 27

<210> 6384
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6384
acaccucuua cugauuuacc cuaccac 27

<210> 6385
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6385
uaacaccucu uacugauuua cccuaaa 27

<210> 6386
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6386
auaacaccuc uuacugauuu acccuca 27

<210> 6387
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6387
aauaacaccu cuuacugauu uaccccc 27

<210> 6388
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6388
aaauaacacc ucuuacugau uuaccac 27

<210> 6389
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6389
caaauaacac cucuuacuga uuuacaa 27

<210> 6390
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6390
agguuccaaa uaacaccucu uacugcc 27

<210> 6391
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6391
aaaacaaggu uccaaauaac accuccc 27

<210> 6392
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6392
caaaacaagg uuccaaauaa caccuac 27

<210> 6393
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6393
ccaaaacaag guuccaaaua acaccca 27

<210> 6394
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6394
acuguccaaa acaagguucc aaauaca 27

<210> 6395
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6395
guaaacuguc caaaacaagg uuccacc 27

<210> 6396
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6396
gguaaacugu ccaaaacaag guucccc 27

<210> 6397
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6397
aggcaacugg uaaacugucc aaaaccc 27

<210> 6398
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6398
gggauaaaag gcaacuggua aacugca 27

<210> 6399
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6399
ugggauaaaa ggcaacuggu aaacuac 27

<210> 6400
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6400
acaacuuugg gauaaaaggc aacugac 27

<210> 6401
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6401
caacaacuuu gggauaaaag gcaacca 27

<210> 6402
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6402
gguuacaaca acuuugggau aaaagaa 27

<210> 6403
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6403
agguuacaac aacuuuggga uaaaaaa 27

<210> 6404
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6404
cagguuacaa caacuuuggg auaaaca 27

<210> 6405
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6405
uaucacagca gguuacaaca acuuuaa 27

<210> 6406
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6406
guaucacagc agguuacaac aacuuca 27

<210> 6407
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6407
ucguaucaca gcagguuaca acaaccc 27

<210> 6408
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6408
uuucucuuga agcaucguau cacagac 27

<210> 6409
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 6409
uuuucucuug aagcaucgua ucacaaa 27

<210> 6410
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6410
cauuuucucu ugaagcaucg uaucaac 27

<210> 6411
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6411
uuuuuuauaa ccgcauuuuc ucuugcc 27

<210> 6412
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6412
auuuuuuaua accgcauuuu cucuuac 27

<210> 6413
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6413
cauuuuuuau aaccgcauuu ucucuca 27

<210> 6414
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6414
ccauuuuuua uaaccgcauu uucuccc 27

<210> 6415
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6415
cugaaccauu uuuuauaacc gcauucc 27

<210> 6416
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6416
uaauucugaa ccauuuuuua uaaccaa 27

<210> 6417
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6417
uuaauucuga accauuuuuu auaacaa 27

<210> 6418
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6418
uuuaauucug aaccauuuuu uauaaaa 27

<210> 6419
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6419
guuuaauucu gaaccauuuu uuauaca 27

<210> 6420
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6420
aguuuaauuc ugaaccauuu uuuaucc 27

<210> 6421
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6421
aaguuuaauu cugaaccauu uuuuacc 27

<210> 6422
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6422
auuaaaaguu uaauucugaa ccauucc 27

<210> 6423
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6423
aauuaaaagu uuaauucuga accaucc 27

<210> 6424

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6424
ugaauuaaaa guuuaauucu gaacccc 27

<210> 6425
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6425
caauacagcu aaaggaugau uuacaaa 27

<210> 6426
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6426
acaauacagc uaaaggauga uuuacca 27

<210> 6427
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6427
agacaauaca gcuaaaggau gauuuca 27

<210> 6428
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6428
guuacuccua aaggaugauu uacagac 27

<210> 6429
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6429
uguuacuccu aaaggaugau uuacaaa 27

<210> 6430
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6430
uuguuacucc uaaaggauga uuuacca 27

<210> 6431
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6431
auuguuacuc cuaaaggaug auuuaac 27

<210> 6432
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6432
ggauuccaga auccaaguaa gacugac 27

<210> 6433
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6433

cuugcuccca uucauaaagg acuugaa 27

<210> 6434
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6434
cgucaauauc agcuacuugc ucuugaa 27

<210> 6435
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6435
ccgucaauau cagcuacuug cucuuaa 27

<210> 6436
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6436
acugcccguc aauaucagcu acuugac 27

<210> 6437
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6437
uguuucaaca ucugugaugg uucagaa 27

<210> 6438
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6438
auguuucaac aucugugaug guucaaa 27

<210> 6439
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6439
ugacaacugc auguuucaac aucugca 27

<210> 6440
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6440
auugacaacu gcauguuuca acaucca 27

<210> 6441
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6441
ucaaauugac aacugcaugu uucaaac 27

<210> 6442
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6442
aguuaaucaa auugacaacu gcaugcc 27

<210> 6443
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6443
ccugauaguu aaucaaaauug acaacca 27

<210> 6444
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6444
cgucauccug auaguuaauc aaauuac 27

<210> 6445
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6445
gcgucauccu gauaguuaau caaauca 27

<210> 6446
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6446
ccucaucguu uagcaguuuu gucagac 27

<210> 6447
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6447
cugguccuca ucguuuagca guuuuac 27

<210> 6448
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6448
cauaacagca gcuuuauuaa cuaccca 27

<210> 6449
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6449
ccauaacagc agcuuuauua acuacac 27

<210> 6450
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6450
ggaccauaac agcagcuuua uuaaccc 27

<210> 6451
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6451
uggaccauaa cagcagcuuu auuaaac 27

<210> 6452
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6452
cugucucuac aucauuugua uucugac 27

<210> 6453
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6453
gcugucucua caucauuugu auucuaa 27

<210> 6454
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6454
gcaaccauuu ucugcagucc accagac 27

<210> 6455
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6455
aagcaaccau uuucugcagu ccaccca 27

<210> 6456
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6456
uuguuuuguu gagcaaagca accaucc 27

<210> 6457
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6457
uuuguuuugu ugagcaaagc aaccacc 27

<210> 6458
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6458
uagccaagaa uuucacguuu guuuuac 27

<210> 6459
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6459
cuugauugcc auaagcuaag aucugcc 27

<210> 6460
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6460
gcucucuuga uugccauaag cuaagcc 27

<210> 6461
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6461
cuucucauaa guguaggucc ucauucc 27

<210> 6462
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6462
gcuucucaua aguguagguc cucaucc 27

<210> 6463
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6463
aagcuucuca uaaguguagg uccuccc 27

<210> 6464
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6464
gaagcuucuc auaaguguag guccuac 27

<210> 6465
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6465
gaguccaaag acaguuuuga acaagca 27

<210> 6466
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6466
agaguccaaa gacaguuuug aacaaac 27

<210> 6467
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6467
ccacauuuau aucaucggaa cccagcc 27

<210> 6468
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6468
ugaccacauu uauaucaucg gaaccac 27

<210> 6469
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6469
cugcacaggu gaccacauuu auauccc 27

<210> 6470
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6470
gcugcacagg ugaccacauu uauauac 27

<210> 6471
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6471
uuguaauuau ugcaagugag guuagca 27

<210> 6472
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 6472
caucaucuug uuuuuguaau uauugac 27

<210> 6473
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6473
ccaucaucuu guuuuuguaa uuauuaa 27

<210> 6474
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6474
acaccaucau cuuguuuuug uaauucc 27

<210> 6475
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6475
uuggcacacc aucaucuugu uuuugcc 27

<210> 6476
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6476
ucaauccaac aguugccuuu aucagca 27

<210> 6477
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6477
ucgaaucaau ccaacaguug ccuuucc 27

<210> 6478
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6478
gcugaacuag ucguggaaua gcaccac 27

<210> 6479
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6479
aguacacccu ucuacuaucu ccucccc 27

<210> 6480
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6480
caguacaccc uucuacuauc uccucac 27

<210> 6481
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6481
ccaguacacc cuucuacuau cuccuaa 27

<210> 6482
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6482
gagcuccagu acacccuucu acuauac 27

<210> 6483
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6483
aaacaaugga augguauuga guccuaa 27

<210> 6484
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6484
cugcacaaac aauggaaugg uauugca 27

<210> 6485
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6485
acugcacaaa caauggaaug guauuac 27

<210> 6486
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6486
aagcaacugc acaaacaaug gaaugac 27

<210> 6487

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6487
gagaauaaag caacugcaca aacaaca 27

<210> 6488
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6488
uuucaauggg agaauaaagc aacugac 27

<210> 6489
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6489
uuuucaaugg gagaauaaag caacuaa 27

<210> 6490
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6490
auuuucaaug ggagaauaaa gcaacca 27

<210> 6491
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6491
ggauauuuuc aaugggagaa uaaagac 27

<210> 6492
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6492
uggauauuuu caaugggaga auaaaaa 27

<210> 6493
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6493
uuggauauuu ucaaugggag aauaaca 27

<210> 6494
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6494
cagcuacucu uuggauauuu ucaauaa 27

<210> 6495
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6495
gcagcuacuc uuuggauauu uucaaca 27

<210> 6496
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6496

ccgcuucuug uaauccugug gcuugca 27

<210> 6497
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6497
ccaguccaag aucugcaguc ucauuaa 27

<210> 6498
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6498
cguauccacc agagugaaaa gaacgac 27

<210> 6499
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6499
caggccagcu gauugcuauc accugaa 27

<210> 6500
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6500
cgauuuacag gucaguauca aaccaaa 27

<210> 6501
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6501
acgauuuaca ggucaguauc aaaccca 27

<210> 6502
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6502
uuucuuaccu aaaggacgau uuacaaa 27

<210> 6503
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6503
gcuuucuuac cuaaaggacg auuuaac 27

<210> 6504
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6504
cuuuuauaag cuuucuuacc uaaagac 27

<210> 6505
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6505
gcuuuuauaa gcuuucuuac cuaaaaa 27

<210> 6506
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6506
cuggcuuuua uaagcuuucu uaccucc 27

<210> 6507
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6507
ccacacuggc uuuuauaagc uuucucc 27

<210> 6508
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6508
auucacccac acuggcuuuu auaagac 27

<210> 6509
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6509
ccuaccaagu cuuucuggag uucugac 27

<210> 6510
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6510
auuuacaaac aggccuaaaa ccauuaa 27

<210> 6511
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6511
gauuuacaaa caggccuaaa accauca 27

<210> 6512
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6512
agauuuacaa acaggccuaa aaccacc 27

<210> 6513
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6513
caucuccuuc caagguaugu aucugcc 27

<210> 6514
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6514
acaucuccuu ccaagguaug uaucuac 27

<210> 6515
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6515
acuuccacac augaacaucu ccuucac 27

<210> 6516
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6516
gaaacuucca cacaugaaca ucucccc 27

<210> 6517
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6517
agaaacuucc acacaugaac aucucac 27

<210> 6518
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6518
gagaaacuuc cacacaugaa caucuaa 27

<210> 6519
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6519
ugagaaacuu ccacacauga acaucca 27

<210> 6520
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6520
caucaacgug agaaacuucc acacaca 27

<210> 6521
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6521
aaacaucaac gugagaaacu uccacca 27

<210> 6522
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6522
aaaacaucaa cgugagaaac uuccaac 27

<210> 6523
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6523
aaaaacauca acgugagaaa cuuccca 27

<210> 6524
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6524
caaaaacauc aacgugagaa acuucac 27

<210> 6525
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6525
gcaaaaacau caacgugaga aacuuaa 27

<210> 6526
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6526
uggcaaaaac aucaacguga gaaaccc 27

<210> 6527
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6527
cugcaaaagc uguggcaaaa acauccc 27

<210> 6528
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6528
gcugcaaaag cuguggcaaa aacauac 27

<210> 6529
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6529
acucaucuga guauaacgcu gcaaaca 27

<210> 6530
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6530
ugaaaacagc aaauguuacu caucuac 27

<210> 6531
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6531
uugaaaacag caaauguuac ucaucca 27

<210> 6532
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6532
guugaaaaca gcaaauguua cucauac 27

<210> 6533
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6533
cuauuaaugu ugaaaacagc aaaugcc 27

<210> 6534
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6534
acacuacagc uguauagaga gaaagaa 27

<210> 6535
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 6535
caggccaauc acaaugcacg uucagca 27

<210> 6536
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6536
cuguucccau aggaaacuca gcuugac 27

<210> 6537
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6537
cagaacaaaa agcguacuuc gacugcc 27

<210> 6538
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6538
aaggaccaga acaaaaagcg uacuuaa 27

<210> 6539
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6539
cgaccaaaaa ggaccagaac aaaaaaa 27

<210> 6540
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6540
ucgaccaaaa aggaccagaa caaaaca 27

<210> 6541
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6541
uuacuccucg accaaaaagg accagcc 27

<210> 6542
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6542
aauccauuug uauuguuacu ccucgca 27

<210> 6543
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6543
aaauccauuu guauuguuac uccucac 27

<210> 6544
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6544
caaauccauu uguauuguua cuccuaa 27

<210> 6545
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6545
ccaaauccau uuguauuguu acuccca 27

<210> 6546
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6546
ucacucccca aauccauuug uauugcc 27

<210> 6547
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6547
gauccauucg ugugcauucu ucacuaa 27

<210> 6548
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6548
ugauccauuc gugugcauuc uucacca 27

<210> 6549
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6549
gugauccauu cgugugcauu cuucaac 27

<210> 6550

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6550
uaaaacaaag aacaagcaag gcuagaa 27

<210> 6551
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6551
gcaccacuac agauauuaaa acaaaac 27

<210> 6552
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6552
cagcaccacu acagauauua aaacacc 27

<210> 6553
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6553
ucagcaccac uacagauauu aaaaccc 27

<210> 6554
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6554
aaaaaauaaa agcaagcaaa gucagac 27

<210> 6555
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6555
cugcaaaaaa uaaaagcaag caaagca 27

<210> 6556
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6556
aguuacugca aaaaauaaaa gcaagac 27

<210> 6557
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6557
acuaacaguu acugcaaaaa auaaaca 27

<210> 6558
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6558
aaacuaacag uuacugcaaa aaauacc 27

<210> 6559
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6559

aaaaacuaac aguuacugca aaaaacc 27

<210> 6560
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6560
uaaaaacuaa caguuacugc aaaaacc 27

<210> 6561
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6561
cuuaaaaacu aacaguuacu gcaaacc 27

<210> 6562
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6562
acuacuuaaa aacuaacagu uacugac 27

<210> 6563
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6563
acacuacuua aaaacuaaca guuacca 27

<210> 6564
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6564
cauaacacua cuuaaaaacu aacagcc 27

<210> 6565
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6565
acauaacacu acuuaaaaac uaacaac 27

<210> 6566
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6566
gaacauaaca cuacuuaaaa acuaaac 27

<210> 6567
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6567
agaacauaac acuacuuaaa aacuaca 27

<210> 6568
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6568
uagaacauaa cacuacuuaa aaacucc 27

<210> 6569
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6569
cuagaacaua acacuacuua aaaaccc 27

<210> 6570
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6570
guucacuaga acauaacacu acuuacc 27

<210> 6571
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6571
agguucacua gaacauaaca cuacucc 27

<210> 6572
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6572
cagguucacu agaacauaac acuaccc 27

<210> 6573
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6573
ccauuacucg guucuuagaa aucagcc 27

<210> 6574
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6574
acaccauuac ucgguucuua gaaauac 27

<210> 6575
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6575
guucuacacc auuacucggu ucuuaac 27

<210> 6576
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6576
augaauuagu guucuacacc auuacca 27

<210> 6577
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6577
ugauuaugaa uuaguguucu acacccc 27

<210> 6578
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6578
gugauuauga auuaguguuc uacacac 27

<210> 6579
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6579
cgugauuaug aauuaguguu cuacaaa 27

<210> 6580
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6580
uuacaauuag cgugauuaug aauuaac 27

<210> 6581
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6581
auuacaauua gcgugauuau gaauuca 27

<210> 6582
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6582
ccagauuaca auuagcguga uuaugcc 27

<210> 6583
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6583
guuacacguc uccagauuac aauuaaa 27

<210> 6584
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6584
auguuacacg ucuccagauu acaaucc 27

<210> 6585
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6585
gcuacacaau guuacacguc uccagcc 27

<210> 6586
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6586
aggcuacaca auguuacacg ucuccca 27

<210> 6587
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6587
auacaaaagg cuacacaaug uuacaaa 27

<210> 6588
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6588
uauacaaaag gcuacacaau guuacca 27

<210> 6589
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6589
uauuuauaca aaaggcuaca caaugcc 27

<210> 6590
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6590
cuauuuauac aaaaggcuac acaauac 27

<210> 6591
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6591
ugucuauuua uacaaaaggc uacaccc 27

<210> 6592
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6592
cugucuauuu auacaaaagg cuacaac 27

<210> 6593
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6593
ucugucuauu uauacaaaag gcuacca 27

<210> 6594
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6594
uuucuaucug ucuauuuaua caaaaaa 27

<210> 6595
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6595
auuucuaucu gucuauuuau acaaaca 27

<210> 6596
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6596
cauuucuauc ugucuauuua uacaacc 27

<210> 6597
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6597
ccauuucuau cugucuauuu auacacc 27

<210> 6598
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 6598
cggaccauuu cuaucugucu auuuacc 27

<210> 6599
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6599
ucggaccauu ucuaucuguc uauuucc 27

<210> 6600
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6600
aaacuaaucg gaccauuucu aucugca 27

<210> 6601
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6601
gaaacuaauc ggaccauuuc uaucuac 27

<210> 6602
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6602
ggaaacuaau cggaccauuu cuaucca 27

<210> 6603
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6603
aggaaacuaa ucggaccauu ucuauac 27

<210> 6604
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6604
auuaaaaagg aaacuaaucg gaccacc 27

<210> 6605
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6605
aagcauauua aaaaggaaac uaaucaa 27

<210> 6606
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6606
uaagcauauu aaaaaggaaa cuaauaa 27

<210> 6607
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6607
auuuuaagca uauuaaaaag gaaaccc 27

<210> 6608
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6608
cugcuuauuu uaagcauauu aaaaaaa 27

<210> 6609
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6609
ccugcuuauu uuaagcauau uaaaaca 27

<210> 6610
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6610
gauccaccug cuuauuuuaa gcauacc 27

<210> 6611
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6611
caaaaacaug aaauagaucc accugac 27

<210> 6612
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6612
ucaaaaacau gaaauagauc caccuaa 27

<210> 6613

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6613
guucaaaaac augaaauaga uccacac 27

<210> 6614
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6614
uguucaaaaa caugaaauag auccaaa 27

<210> 6615
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6615
uuguucaaaa acaugaaaua gauccca 27

<210> 6616
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6616
aguuuuuguu caaaaacaug aaauaac 27

<210> 6617
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6617
cgauaaaguu uuuguucaaa aacauac 27

<210> 6618
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6618
uaucccgau aaaguuuuug uucaacc 27

<210> 6619
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6619
guaucccga uaaaguuuuu guucacc 27

<210> 6620
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6620
acaccucuua cugauuuacc cuaccaa 27

<210> 6621
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6621
uaacaccucu uacugauuua cccuaaa 27

<210> 6622
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6622

auaacaccuc uuacugauuu acccuca 27

<210> 6623
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6623
aauaacaccu cuuacugauu uaccccc 27

<210> 6624
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6624
aaauaacacc ucuuacugau uuaccac 27

<210> 6625
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6625
caaauaacac cucuuacuga uuuacaa 27

<210> 6626
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6626
aaggcucaaa uaacaccucu uacugcc 27

<210> 6627
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6627
aaaacaaggc ucaaauaaca ccucucc 27

<210> 6628
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6628
caaaacaagg cucaaauaac accuccc 27

<210> 6629
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6629
ccaaaacaag gcucaaauaa caccuac 27

<210> 6630
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6630
uguccaaaac aaggcucaaa uaacaaa 27

<210> 6631
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6631
acuguccaaa acaaggcuca aauaaac 27

<210> 6632
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6632
gguauacugu ccaaaacaag gcucacc 27

<210> 6633
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6633
aggcaacugg uauacugucc aaaaccc 27

<210> 6634
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6634
gggauaaaag gcaacuggua uacugca 27

<210> 6635
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6635
ugggauaaaa ggcaacuggu auacuac 27

<210> 6636
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6636
acaacuuugg gauaaaaggc aacugac 27

<210> 6637
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6637
caacaacuuu gggauaaaag gcaacca 27

<210> 6638
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6638
gguuacaaca acuuugggau aaaagaa 27

<210> 6639
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6639
agguuacaac aacuuuggga uaaaaaa 27

<210> 6640
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6640
cagguuacaa caacuuuggg auaaaca 27

<210> 6641
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6641
uaucacagca gguuacaaca acuuuaa 27

<210> 6642
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6642
guaucacagc agguuacaac aacuuca 27

<210> 6643
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6643
uuguaucaca gcagguuaca acaaccc 27

<210> 6644
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6644
ccgcaucugu ugaagcauug uaucaac 27

<210> 6645
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6645
ucugaaccau uucuauaacc gcaucca 27

<210> 6646
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6646
uaauucugaa ccauuucuau aaccgac 27

<210> 6647
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6647
uuuaauucug aaccauuucu auaacaa 27

<210> 6648
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6648
guuuaauucu gaaccauuuc uauaaaa 27

<210> 6649
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6649
aguuuaauuc ugaaccauuu cuauaca 27

<210> 6650
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6650
aaguuuaauu cugaaccauu ucuaucc 27

<210> 6651
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6651
auuaaaaguu uaauucugaa ccauuca 27

<210> 6652
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6652
aauuaaaagu uuaauucuga accaucc 27

<210> 6653
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6653
ugaauuaaaa guuuaauucu gaacccc 27

<210> 6654
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6654
uuugaaugaa uuaaaaguuu aauucca 27

<210> 6655
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6655
uuuuuuugaa ugaauuaaaa guuuacc 27

<210> 6656
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6656
uuuuuuuuuu ugaaugaauu aaaagcc 27

<210> 6657
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6657
uuuuuuuuuu uugaaugaau uaaaaac 27

<210> 6658
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6658
uuuuuuuuuu uuugaaugaa uuaaaca 27

<210> 6659
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6659
uuuuuuuuuu uuuugaauga auuaacc 27

<210> 6660
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6660
uuuuuuuuuu uuuuugaaug aauuacc 27

<210> 6661
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 6661
uuuuuuuuuu uuuuuugaau gaauucc 27

<210> 6662
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6662
cccugagggu auuugaagua uaccaua 27

<210> 6663
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6663
gaggguauuu gaaguauacc auacaac 27

<210> 6664
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6664
ugaaguauac cauacaacug uuuugaa 27

<210> 6665
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6665
auaccauaca acuguuuuga aaaucca 27

<210> 6666
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6666
auacaacugu uuugaaaauc cagcgug 27

<210> 6667
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6667
cagggauuuu cucaguccuu cacucaa 27

<210> 6668
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6668
cacucaagaa caaguagcug auauuga 27

<210> 6669
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6669
agaacaagua gcugauauug auggaca 27

<210> 6670
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6670
aacaaguagc ugauauugau ggacagu 27

<210> 6671
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6671
ugauggacag uaugcaauga cucgagc 27

<210> 6672
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6672
ugcuauguuc ccugagacau uagauga 27

<210> 6673
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6673
ugcugaaaca ugcaguugua aacuuga 27

<210> 6674
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6674
aacaugcagu uguaaacuug auuaacu 27

<210> 6675
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6675
gcaguuguaa acuugauuaa cuaucaa 27

<210> 6676

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6676
acuugauuaa cuaucaagau gaugcag 27

<210> 6677
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6677
cccugaacug acaaaacugc uaaauga 27

<210> 6678
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6678
ucagauggug ucugcuauug uacguac 27

<210> 6679
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6679
guacguacca ugcagaauac aaaugau 27

<210> 6680
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6680
auuacaacuc uccacaaccu uuuauua 27

<210> 6681
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6681
aacucuccac aaccuuuuau uacauca 27

<210> 6682
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6682
uccacaaccu uuuauuacau caagaag 27

<210> 6683
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6683
accuuuuauu acaucaagaa ggagcua 27

<210> 6684
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6684
acaaaacaaa uguuaaauuc uuggcua 27

<210> 6685
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6685

auuacgacag acugccuuca aauuuua 27

<210> 6686
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6686
gacagacugc cuucaaauuu uagcuua 27

<210> 6687
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6687
agcuuuagua aauauaauga ggaccua 27

<210> 6688
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6688
gaaaaacuac uguggaccac aagcaga 27

<210> 6689
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6689
caagucaacg ucuuguucag aacuguc 27

<210> 6690
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6690
aacgucuugu ucagaacugu cuuugga 27

<210> 6691
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6691
cuuguucaga acugucuuug gacucuc 27

<210> 6692
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6692
uggguucaga ugauauaaau gugguca 27

<210> 6693
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6693
auucuuucua accucacuug caauaau 27

<210> 6694
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6694
accucacuug caauaauuau aagaaca 27

<210> 6695
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6695
ugcaauaauu auaagaacaa gaugaug 27

<210> 6696
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6696
ugguauagag gcucuugugc guacugu 27

<210> 6697
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6697
aaggcuacug uuggauugau ucgaaau 27

<210> 6698
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6698
cgcauggaag aaauaguuga agguugu 27

<210> 6699
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6699
cauggaagaa auaguugaag guuguac 27

<210> 6700
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6700
ccauugaaaa cauccaaaga guagcug 27

<210> 6701
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6701
cugaggacaa gccacaagau uacaaga 27

<210> 6702
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6702
uugauacuga ccuguaaauc auccuuu 27

<210> 6703
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6703
cuuuagguaa gaaguuuuaa aaagcca 27

<210> 6704
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6704
aacagguaua uacuuugaaa ggagaug 27

<210> 6705
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6705
uggaaguuau uaacuuuaau guuuuuu 27

<210> 6706
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6706
ugccacagcu uuugcaacuu aauacuc 27

<210> 6707
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6707
aacauuugcu guuuuaaaca uuaauag 27

<210> 6708
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6708
aacaauugaa guaaacuuuu uguucug 27

<210> 6709
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6709
aaacccuagc cuugcuuguu aaauuuu 27

<210> 6710
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6710
uagccuugcu uguuaaauuu uuuuuuu 27

<210> 6711
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6711
uugaaguagc ucuuuuuuuu uuuuuuu 27

<210> 6712
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6712
ucguaguguu aaguuauagu gaauacu 27

<210> 6713
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6713
uagugaauac ugcuacagca auuucua 27

<210> 6714
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6714
aauacugcua cagcaauuuc uaauuuu 27

<210> 6715
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6715
uucuaauuuu uaagaauuga guaaugg 27

<210> 6716
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6716
auuuuuaaga auugaguaau gguguag 27

<210> 6717
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6717
uucauaaauca cucuaauuaa uuguaau 27

<210> 6718
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6718
auuaauugua aucugaauaa aguguaa 27

<210> 6719
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6719
uuguaaucug aauaaagugu aacaauu 27

<210> 6720
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6720
ucugaauaaa guguaacaau uguguag 27

<210> 6721
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6721
guguagccuu uuuguauaaa auagaca 27

<210> 6722
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6722
uuuguauaaa auagacaaau agaaaau 27

<210> 6723
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6723
agaaaauggu ccaauuaguu uccuuuu 27

<210> 6724
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 6724
guccaauuag uuuccuuuuu aauaugc 27

<210> 6725
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6725
uuuuugauca aaaacuauuu gggauau 27

<210> 6726
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6726
aagagguguu auuuggaacc uuguuuu 27

<210> 6727
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6727
guguuauuug gaaccuuguu uuggaca 27

<210> 6728
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6728
gaaccuuguu uuggacaguu uaccagu 27

<210> 6729
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6729
gugauacgau gcuucaagag aaaaugc 27

<210> 6730
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6730
uucaagagaa aaugcgguua uaaaaaa 27

<210> 6731
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6731
gagaaaaugc gguuauaaaa aaugguu 27

<210> 6732
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6732
cgguuauaaa aaaugguuca gaauuaa 27

<210> 6733
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6733
aaaaaauggu ucagaauuaa acuuuua 27

<210> 6734
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6734
cagcguggac aauggcuacu caagcug 27

<210> 6735
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6735
agcguggaca auggcuacuc aagcuga 27

<210> 6736
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6736
gcguggacaa uggcuacuca agcugau 27

<210> 6737
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6737
cguggacaau ggcuacucaa gcugauu 27

<210> 6738
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6738
guggacaaug gcuacucaag cugauuu 27

<210> 6739

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6739
uggacaaugg cuacucaagc ugauuug 27

<210> 6740
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6740
ggacaauggc uacucaagcu gauuuga 27

<210> 6741
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6741
gacaauggcu acucaagcug auuugau 27

<210> 6742
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6742
uuugauggag uuggacaugg ccaugga 27

<210> 6743
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6743
uugauggagu uggacauggc cauggaa 27

<210> 6744
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6744
ugauggaguu ggacauggcc auggaac 27

<210> 6745
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6745
gauggaguug gacauggcca uggaacc 27

<210> 6746
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6746
auggaguugg acauggccau ggaacca 27

<210> 6747
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6747
uggaguugga cauggccaug gaaccag 27

<210> 6748
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6748

ggaguuggac auggccaugg aaccaga 27

<210> 6749
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6749
acucuggaau ccauucuggu gccacua 27

<210> 6750
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6750
cucuggaauc cauucuggug ccacuac 27

<210> 6751
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6751
ucuggaaucc auucuggugc cacuacc 27

<210> 6752
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6752
cuggaaucca uucuggugcc acuacca 27

<210> 6753
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6753
uggaauccau ucuggugcca cuaccac 27

<210> 6754
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6754
auuagaugag ggcaugcaga ucccauc 27

<210> 6755
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6755
uuagaugagg gcaugcagau cccaucu 27

<210> 6756
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6756
uagaugaggg caugcagauc ccaucua 27

<210> 6757
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6757
agaugagggc augcagaucc caucuac 27

<210> 6758
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6758
gaugagggca ugcagauccc aucuaca 27

<210> 6759
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6759
augagggcau gcagauccca ucuacac 27

<210> 6760
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6760
augcugcuca ucccacuaau guccagc 27

<210> 6761
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6761
ugcugcucau cccacuaaug uccagcg 27

<210> 6762
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6762
gcugcucauc ccacuaaugu ccagcgu 27

<210> 6763
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6763
cugcucaucc cacuaauguc cagcguu 27

<210> 6764
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6764
ugcucauccc acuaaugucc agcguuu 27

<210> 6765
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6765
gcucauccca cuaaugucca gcguuug 27

<210> 6766
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6766
cucaucccac uaauguccag cguuugg 27

<210> 6767
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6767
ucaucccacu aauguccagc guuuggc 27

<210> 6768
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6768
guuuggcuga accaucacag augcuga 27

<210> 6769
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6769
uuuggcugaa ccaucacaga ugcugaa 27

<210> 6770
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6770
uuggcugaac caucacagau gcugaaa 27

<210> 6771
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6771
cagaacuugc cacacgugca aucccug 27

<210> 6772
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6772
agaacuugcc acacgugcaa ucccuga 27

<210> 6773
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6773
caguuauggu ccaucagcuu ucuaaaa 27

<210> 6774
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6774
aguuaugguc caucagcuuu cuaaaaa 27

<210> 6775
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6775
cuaaaaagga agcuuccaga cacgcua 27

<210> 6776
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6776
uaaaaaggaa gcuuccagac acgcuau 27

<210> 6777
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6777
guaccaugca gaauacaaau gauguag 27

<210> 6778
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6778
uaccaugcag aauacaaaug auguaga 27

<210> 6779
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6779
accaugcaga auacaaauga uguagaa 27

<210> 6780
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6780
ccaugcagaa uacaaaugau guagaaa 27

<210> 6781
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6781
caugcagaau acaaaugaug uagaaac 27

<210> 6782
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6782
augcagaaua caaaugaugu agaaaca 27

<210> 6783
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6783
ugcagaauac aaaugaugua gaaacag 27

<210> 6784
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6784
gcagaauaca aaugauguag aaacagc 27

<210> 6785
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6785
uacuggccau cuuuaagucu ggaggca 27

<210> 6786
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6786
acuggccauc uuuaagucug gaggcau 27

<210> 6787
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 6787
aagaaggagc uaaaauggca gugcguu 27

<210> 6788
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6788
agaaggagcu aaaauggcag ugcguuu 27

<210> 6789
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6789
gaaggagcua aaauggcagu gcguuua 27

<210> 6790
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6790
aaggagcuaa aauggcagug cguuuag 27

<210> 6791
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6791
aggagcuaaa auggcagugc guuuagc 27

<210> 6792
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6792
uacuguggac cacaagcaga gugcuga 27

<210> 6793
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6793
acuguggacc acaagcagag ugcugaa 27

<210> 6794
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6794
cuguggacca caagcagagu gcugaag 27

<210> 6795
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6795
uguggaccac aagcagagug cugaagg 27

<210> 6796
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6796
guggaccaca agcagagugc ugaaggu 27

<210> 6797
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6797
uggaccacaa gcagagugcu gaaggug 27

<210> 6798
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6798
ggaccacaag cagagugcug aaggugc 27

<210> 6799
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6799
gaccacaagc agagugcuga aggugcu 27

<210> 6800
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6800
accacaagca gagugcugaa ggugcua 27

<210> 6801
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6801
ccacaagcag agugcugaag gugcuau 27

<210> 6802

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6802
cacaagcaga gugcugaagg ugcuauc 27

<210> 6803
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6803
acaagcagag ugcugaaggu gcuaucu 27

<210> 6804
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6804
caagcagagu gcugaaggug cuaucug 27

<210> 6805
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6805
aagcagagug cugaaggugc uaucugu 27

<210> 6806
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6806
agaacugucu uuggacucuc aggaauc 27

<210> 6807
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6807
gaacugucuu uggacucuca ggaaucu 27

<210> 6808
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6808
cagaugauau aaaugugguc accugug 27

<210> 6809
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6809
agaugauaua aaugugguca ccugugc 27

<210> 6810
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6810
gaugauauaa auguggucac cugugca 27

<210> 6811
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6811

augauauaaa uguggucacc ugugcag 27

<210> 6812
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6812
ugauauaaau guggucaccu gugcagc 27

<210> 6813
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6813
gauauaaaug uggucaccug ugcagcu 27

<210> 6814
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6814
auauaaaugu ggucaccugu gcagcug 27

<210> 6815
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6815
uauaaaugug gucaccugug cagcugg 27

<210> 6816
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6816
auaaaugugg ucaccugugc agcugga 27

<210> 6817
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6817
uaaauguggu caccugugca gcuggaa 27

<210> 6818
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6818
aaaugugguc accugugcag cuggaau 27

<210> 6819
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6819
aaugugguca ccugugcagc uggaauu 27

<210> 6820
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6820
auguggucac cugugcagcu ggaauuc 27

<210> 6821
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6821
uguggucacc ugugcagcug gaauucu 27

<210> 6822
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6822
guggucaccu gugcagcugg aauucuu 27

<210> 6823
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6823
uggucaccug ugcagcugga auucuuu 27

<210> 6824
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6824
ggucaccugu gcagcuggaa uucuuuc 27

<210> 6825
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6825
gucaccugug cagcuggaau ucuuucu 27

<210> 6826
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6826
ucaccugugc agcuggaauu cuuucua 27

<210> 6827
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6827
caccugugca gcuggaauuc uuucuaa 27

<210> 6828
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6828
uuucuaaccu cacuugcaau aauuaua 27

<210> 6829
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6829
uucuaaccuc acuugcaaua auuauaa 27

<210> 6830
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6830
ucuaaccuca cuugcaauaa uuauaag 27

<210> 6831
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6831
cuaaccucac uugcaauaau uauaaga 27

<210> 6832
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6832
uaaccucacu ugcaauaauu auaagaa 27

<210> 6833
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6833
gggcugguga cagggaagac aucacug 27

<210> 6834
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6834
ggcuggugac agggaagaca ucacuga 27

<210> 6835
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6835
gcuggugaca gggaagacau cacugag 27

<210> 6836
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6836
cuggugacag ggaagacauc acugagc 27

<210> 6837
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6837
uggugacagg gaagacauca cugagcc 27

<210> 6838
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6838
ggugacaggg aagacaucac ugagccu 27

<210> 6839
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6839
gugacaggga agacaucacu gagccug 27

<210> 6840
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6840
ugacagggaa gacaucacug agccugc 27

<210> 6841
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6841
gacagggaag acaucacuga gccugcc 27

<210> 6842
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6842
acagggaaga caucacugag ccugcca 27

<210> 6843
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6843
cagggaagac aucacugagc cugccau 27

<210> 6844
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6844
agggaagaca ucacugagcc ugccauc 27

<210> 6845
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6845
gggaagacau cacugagccu gccaucu 27

<210> 6846
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6846
ggaagacauc acugagccug ccaucug 27

<210> 6847
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6847
gaagacauca cugagccugc caucugu 27

<210> 6848
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6848
aagacaucac ugagccugcc aucugug 27

<210> 6849
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6849
agacaucacu gagccugcca ucugugc 27

<210> 6850
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 6850
gacaucacug agccugccau cugugcu 27

<210> 6851
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6851
acaucacuga gccugccauc ugugcuc 27

<210> 6852
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6852
caucacugag ccugccaucu gugcucu 27

<210> 6853
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6853
aucacugagc cugccaucug ugcucuu 27

<210> 6854
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6854
ucacugagcc ugccaucugu gcucuuc 27

<210> 6855
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6855
cacugagccu gccaucugug cucuucg 27

<210> 6856
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6856
acugagccug ccaucugugc ucuucgu 27

<210> 6857
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6857
cugagccugc caucugugcu cuucguc 27

<210> 6858
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6858
ugagccugcc aucugugcuc uucguca 27

<210> 6859
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6859
gagccugcca ucugugcucu ucgucau 27

<210> 6860
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6860
agccugccau cugugcucuu cgucauc 27

<210> 6861
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6861
gccugccauc ugugcucuuc gucaucu 27

<210> 6862
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6862
ccugccaucu gugcucuucg ucaucug 27

<210> 6863
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6863
cugccaucug ugcucuucgu caucuga 27

<210> 6864
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6864
ugccaucugu gcucuucguc aucugac 27

<210> 6865

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6865
gccaucugug cucuucguca ucugacc 27

<210> 6866
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6866
ccaucugugc ucuucgucau cugacca 27

<210> 6867
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6867
caucugugcu cuucgucauc ugaccag 27

<210> 6868
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6868
aucugugcuc uucgucaucu gaccagc 27

<210> 6869
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6869
ucugugcucu ucgucaucug accagcc 27

<210> 6870
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6870
cugugcucuu cgucaucuga ccagccg 27

<210> 6871
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6871
ugugcucuuc gucaucugac cagccga 27

<210> 6872
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6872
gugcucuucg ucaucugacc agccgac 27

<210> 6873
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6873
ugcucuucgu caucugacca gccgaca 27

<210> 6874
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6874

gcucuucguc aucugaccag ccgacac 27

<210> 6875
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6875
cucuucguca ucugaccagc cgacacc 27

<210> 6876
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6876
ucuucgucau cugaccagcc gacacca 27

<210> 6877
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6877
uacacccacc aucccacugg ccucuga 27

<210> 6878
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6878
acacccacca ucccacuggc cucugau 27

<210> 6879
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6879
cacccaccau cccacuggcc ucugaua 27

<210> 6880
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6880
acccaccauc ccacuggccu cugauaa 27

<210> 6881
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6881
cccaccaucc cacuggccuc ugauaaa 27

<210> 6882
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6882
ccaccauccc acuggccucu gauaaag 27

<210> 6883
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6883
caccauccca cuggccucug auaaagg 27

<210> 6884
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6884
accaucccac uggccucuga uaaaggc 27

<210> 6885
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6885
ccaucccacu ggccucugau aaaggcu 27

<210> 6886
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6886
caucccacug gccucugaua aaggcua 27

<210> 6887
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6887
aucccacugg ccucugauaa aggcuac 27

<210> 6888
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6888
ucccacuggc cucugauaaa ggcuacu 27

<210> 6889
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6889
cccacuggcc ucugauaaag gcuacug 27

<210> 6890
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6890
ccacuggccu cugauaaagg cuacugu 27

<210> 6891
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6891
cuacuguugg auugauucga aaucuug 27

<210> 6892
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6892
uacuguugga uugauucgaa aucuugc 27

<210> 6893
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6893
uaaauaccau uccauuguuu gugcagc 27

<210> 6894
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6894
aaauaccauu ccauuguuug ugcagcu 27

<210> 6895
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6895
aauaccauuc cauuguuugu gcagcug 27

<210> 6896
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6896
auaccauucc auuguuugug cagcugc 27

<210> 6897
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6897
uaccauucca uuguuugugc agcugcu 27

<210> 6898
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6898
accauuccau uguuugugca gcugcuu 27

<210> 6899
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6899
gcugcuuuau ucucccauug aaaacau 27

<210> 6900
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6900
cugcuuuauu cucccauuga aaacauc 27

<210> 6901
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6901
ugcuuuauuc ucccauugaa aacaucc 27

<210> 6902
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6902
gcuuuauucu cccauugaaa acaucca 27

<210> 6903
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6903
ggguccucug ugaacuugcu caggaca 27

<210> 6904
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6904
gguccucugu gaacuugcuc aggacaa 27

<210> 6905
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6905
guccucugug aacuugcuca ggacaag 27

<210> 6906
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6906
uccucuguga acuugcucag gacaagg 27

<210> 6907
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6907
ccucugugaa cuugcucagg acaagga 27

<210> 6908
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6908
cucugugaac uugcucagga caaggaa 27

<210> 6909
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6909
ucugugaacu ugcucaggac aaggaag 27

<210> 6910
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6910
cugugaacuu gcucaggaca aggaagc 27

<210> 6911
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6911
ugugaacuug cucaggacaa ggaagcu 27

<210> 6912
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6912
gugaacuugc ucaggacaag gaagcug 27

<210> 6913
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 6913
ugaacuugcu caggacaagg aagcugc 27

<210> 6914
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6914
cuauugaagc ugagggagcc acagcuc 27

<210> 6915
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6915
uauugaagcu gagggagcca cagcucc 27

<210> 6916
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6916
auugaagcug agggagccac agcuccu 27

<210> 6917
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6917
uguuccgaau gucugaggac aagccac 27

<210> 6918
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6918
guuccgaaug ucugaggaca agccaca 27

<210> 6919
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6919
uuccgaaugu cugaggacaa gccacaa 27

<210> 6920
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6920
uccgaauguc ugaggacaag ccacaag 27

<210> 6921
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6921
ccgaaugucu gaggacaagc cacaaga 27

<210> 6922
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6922
cgaaugucug aggacaagcc acaagau 27

<210> 6923
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6923
gaaugucuga ggacaagcca caagauu 27

<210> 6924
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6924
aaugucugag gacaagccac aagauua 27

<210> 6925
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6925
gaacagagcc aauggcuugg aaugaga 27

<210> 6926
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6926
aacagagcca auggcuugga augagac 27

<210> 6927
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6927
acagagccaa uggcuuggaa ugagacu 27

<210> 6928

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6928
cagagccaau ggcuuggaau gagacug 27

<210> 6929
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6929
agagccaaug gcuuggaaug agacugc 27

<210> 6930
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6930
gagccaaugg cuuggaauga gacugcu 27

<210> 6931
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6931
agccaauggc uuggaaugag acugcug 27

<210> 6932
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6932
gccaauggcu uggaaugaga cugcuga 27

<210> 6933
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6933
ccaauggcuu ggaaugagac ugcugau 27

<210> 6934
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6934
caauggcuug gaaugagacu gcugauc 27

<210> 6935
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6935
aauggcuugg aaugagacug cugaucu 27

<210> 6936
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6936
cccuuggaua ucgccaggau gauccua 27

<210> 6937
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6937

ccuuggauau cgccaggaug auccuag 27

<210> 6938
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6938
cuuggauauc gccaggauga uccuagc 27

<210> 6939
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6939
uuggauaucg ccaggaugau ccuagcu 27

<210> 6940
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6940
uggauaucgc caggaugauc cuagcua 27

<210> 6941
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6941
aucguucuuu ucacucuggu ggauaug 27

<210> 6942
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6942
ucguucuuuu cacucuggug gauaugg 27

<210> 6943
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6943
cguucuuuuc acucuggugg auauggc 27

<210> 6944
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6944
guucuuuuca cucuggugga uauggcc 27

<210> 6945
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6945
uucuuuucac ucugguggau auggcca 27

<210> 6946
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6946
aacaugagau ggguggccac cacccug 27

<210> 6947
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6947
acaugagaug gguggccacc acccugg 27

<210> 6948
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6948
caugagaugg guggccacca cccuggu 27

<210> 6949
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6949
augagauggg uggccaccac ccuggug 27

<210> 6950
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6950
ugagaugggu ggccaccacc cuggugc 27

<210> 6951
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6951
gagaugggug gccaccaccc uggugcu 27

<210> 6952
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6952
agaugggugg ccaccacccu ggugcug 27

<210> 6953
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6953
gauggguggc caccacccug gugcuga 27

<210> 6954
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6954
auggguggcc accacccugg ugcugac 27

<210> 6955
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6955
uggguggcca ccacccuggu gcugacu 27

<210> 6956
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6956
ggguggccac cacccuggug cugacua 27

<210> 6957
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6957
gguggccacc acccuggugc ugacuau 27

<210> 6958
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6958
guggccacca cccuggugcu gacuauc 27

<210> 6959
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6959
uggccaccac ccuggugcug acuaucc 27

<210> 6960
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6960
ggccaccacc cuggugcuga cuaucca 27

<210> 6961
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6961
gccaccaccc uggugcugac uauccag 27

<210> 6962
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6962
ccaccacccu ggugcugacu auccagu 27

<210> 6963
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6963
caccacccug gugcugacua uccaguu 27

<210> 6964
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6964
accacccugg ugcugacuau ccaguug 27

<210> 6965
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6965
ccacccuggu gcugacuauc caguuga 27

<210> 6966
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6966
cacccuggug cugacuaucc aguugau 27

<210> 6967
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6967
acccuggugc ugacuaucca guugaug 27

<210> 6968
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6968
cccuggugcu gacuauccag uugaugg 27

<210> 6969
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6969
ccuggugcug acuauccagu ugauggg 27

<210> 6970
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6970
cuggugcuga cuauccaguu gaugggc 27

<210> 6971
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6971
uggugcugac uauccaguug augggcu 27

<210> 6972
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6972
ggugcugacu auccaguuga ugggcug 27

<210> 6973
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6973
gugcugacua uccaguugau gggcugc 27

<210> 6974
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6974
ugcugacuau ccaguugaug ggcugcc 27

<210> 6975
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6975
gcugacuauc caguugaugg gcugcca 27

<210> 6976
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 6976
cugacuaucc aguugauggg cugccag 27

<210> 6977
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6977
ugacuaucca guugaugggc ugccaga 27

<210> 6978
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6978
gacuauccag uugaugggcu gccagau 27

<210> 6979
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6979
acuauccagu ugaugggcug ccagauc 27

<210> 6980
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6980
cuauccaguu gaugggcugc cagaucu 27

<210> 6981
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6981
augcccagga ccucauggau gggcugc 27

<210> 6982
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6982
ugcccaggac cucauggaug ggcugcc 27

<210> 6983
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6983
gcccaggacc ucauggaugg gcugccu 27

<210> 6984
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6984
acagcaauca gcuggccugg uuugaua 27

<210> 6985
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6985
cagcaaucag cuggccuggu uugauac 27

<210> 6986
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6986
agcaaucagc uggccugguu ugauacu 27

<210> 6987
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6987
gcaaucagcu ggccugguuu gauacug 27

<210> 6988
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6988
caaucagcug gccugguuug auacuga 27

<210> 6989
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6989
aaucagcugg ccugguuuga uacugac 27

<210> 6990
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6990
aucagcuggc cugguuugau acugacc 27

<210> 6991

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6991
ucagcuggcc ugguuugaua cugaccu 27

<210> 6992
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6992
cagcuggccu gguuugauac ugaccug 27

<210> 6993
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6993
agcuggccug guuugauacu gaccugu 27

<210> 6994
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6994
gcuggccugg uuugauacug accugua 27

<210> 6995
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6995
cuggccuggu uugauacuga ccuguaa 27

<210> 6996
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6996
uggccugguu ugauacugac cuguaaa 27

<210> 6997
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6997
ggccugguuu gauacugacc uguaaau 27

<210> 6998
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6998
gccugguuug auacugaccu guaaauc 27

<210> 6999
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 6999
ccugguuuga uacugaccug uaaauca 27

<210> 7000
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7000

cugguuugau acugaccugu aaaucau 27

<210> 7001
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7001
ugguuugaua cugaccugua aaucauc 27

<210> 7002
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7002
gguuugauac ugaccuguaa aucaucc 27

<210> 7003
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7003
guuugauacu gaccuguaaa ucauccu 27

<210> 7004
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7004
uuugauacug accuguaaau cauccuu 27

<210> 7005
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7005
uuuuuugcca cagcuuuugc aacuuaa 27

<210> 7006
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7006
aaugaguaac auuugcuguu uuaaaca 27

<210> 7007
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7007
uaaacauuaa uagcagccuu ucucucu 27

<210> 7008
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7008
aacauuaaua gcagccuuuc ucucuuu 27

<210> 7009
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7009
cauuaauagc agccuuucuc ucuuuau 27

<210> 7010
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7010
uuaauagcag ccuuucucuc uuuauac 27

<210> 7011
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7011
uugcauugug auuggccugu agaguug 27

<210> 7012
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7012
gcauugugau uggccuguag aguugcu 27

<210> 7013
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7013
auugugauug gccuguagag uugcuga 27

<210> 7014
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7014
ugugauuggc cuguagaguu gcugaga 27

<210> 7015
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7015
ugauuggccu guagaguugc ugagagg 27

<210> 7016
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7016
auuggccugu agaguugcug agagggc 27

<210> 7017
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7017
uggccuguag aguugcugag agggcuc 27

<210> 7018
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7018
gccuguagag uugcugagag ggcucga 27

<210> 7019
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7019
cuguagaguu gcugagaggg cucgagg 27

<210> 7020
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7020
gggugggcug guaucucaga aagugcc 27

<210> 7021
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7021
gugggcuggu aucucagaaa gugccug 27

<210> 7022
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7022
gggcugguau cucagaaagu gccugac 27

<210> 7023
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7023
gcugguaucu cagaaagugc cugacac 27

<210> 7024
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7024
acacuaacca agcugaguuu ccuaugg 27

<210> 7025
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7025
acuaaccaag cugaguuucc uauggga 27

<210> 7026
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7026
uaaccaagcu gaguuuccua ugggaac 27

<210> 7027
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7027
accaagcuga guuuccuaug ggaacaa 27

<210> 7028
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7028
caagcugagu uuccuauggg aacaauu 27

<210> 7029
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7029
agcugaguuu ccuaugggaa caauuga 27

<210> 7030
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7030
aacuuuuugu ucugguccuu uuugguc 27

<210> 7031
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7031
cuuuuuguuc ugguccuuuu uggucga 27

<210> 7032
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7032
uuuuguucug guccuuuuug gucgagg 27

<210> 7033
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7033
uuguucuggu ccuuuuuggu cgaggag 27

<210> 7034
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7034
guucuggucc uuuuuggucg aggagua 27

<210> 7035
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7035
ucugguccuu uuuggucgag gaguaac 27

<210> 7036
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7036
uggucccuuuu uggucgagga guaacaa 27

<210> 7037
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7037
guccuuuuug gucgaggagu aacaaua 27

<210> 7038
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7038
ccuuuuuggu cgaggaguaa caauaca 27

<210> 7039
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 7039
uuuuuggucg aggaguaaca auacaaa 27

<210> 7040
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7040
uuuggucgag gaguaacaau acaaaug 27

<210> 7041
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7041
uggucgagga guaacaauac aaaugga 27

<210> 7042
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7042
gucgaggagu aacaauacaa auggauu 27

<210> 7043
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7043
cgaggaguaa caauacaaau ggauuuu 27

<210> 7044
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7044
aggaguaaca auacaaaugg auuuugg 27

<210> 7045
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7045
uuuaucaaac ccuagccuug cuuguua 27

<210> 7046
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7046
uaucaaaccc uagccuugcu uguuaaa 27

<210> 7047
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7047
ucaaacccua gccuugcuug uuaaauu 27

<210> 7048
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7048
uugaguaaug guguagaaca cuaauuc 27

<210> 7049
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7049
gaguaauggu guagaacacu aauucau 27

<210> 7050
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7050
guaauggugu agaacacuaa uucauaa 27

<210> 7051
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7051
aaugguguag aacacuaauu cauaauc 27

<210> 7052
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7052
ugguguagaa cacuaauuca uaaucac 27

<210> 7053
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7053
guguagaaca cuaauucaua aucacuc 27

<210> 7054

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7054
guagaacacu aauucauaau cacucua 27

<210> 7055
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7055
agaacacuaa uucauaauca cucuaau 27

<210> 7056
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7056
aauuaguuuc cuuuuuaaua ugcuuaa 27

<210> 7057
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7057
uuaguuuccu uuuuaauaug cuuaaaa 27

<210> 7058
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7058
aguuuccuuu uuaauaugcu uaaaaua 27

<210> 7059
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7059
uuuccuuuuu aauaugcuua aaauaag 27

<210> 7060
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7060
uccuuuuuaa uaugcuuaaa auaagca 27

<210> 7061
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7061
ccuuuuuaau augcuuaaaa uaagcag 27

<210> 7062
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7062
cuuuuuaaua ugcuuaaaau aagcagg 27

<210> 7063
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7063

uuuuaauaug cuuaaaauaa gcaggug 27

<210> 7064
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7064
uuaauaugcu uaaaauaagc aggugga 27

<210> 7065
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7065
aauaugcuua aaauaagcag guggauc 27

<210> 7066
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7066
uaugcuuaaa auaagcaggu ggaucua 27

<210> 7067
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7067
ugcuuaaaau aagcaggugg aucuauu 27

<210> 7068
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7068
cuuaaaauaa gcagguggau cuauuuc 27

<210> 7069
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7069
uaaaauaagc agguggaucu auuucau 27

<210> 7070
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7070
aaauaagcag guggaucuau uucaugu 27

<210> 7071
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7071
auaagcaggu ggaucuauuu cauguuu 27

<210> 7072
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7072
aagcaggugg aucuauuuca uguuuuu 27

<210> 7073
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7073
gcagguggau cuauuucaug uuuuuga 27

<210> 7074
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7074
agguggaucu auuucauguu uuugauc 27

<210> 7075
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7075
guggaucuau uucauguuuu ugaucaa 27

<210> 7076
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7076
ggaucuauuu cauguuuuug aucaaaa 27

<210> 7077
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7077
ggguagggua aaucaguaag agguguu 27

<210> 7078
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7078
guaggguaaa ucaguaagag guguuau 27

<210> 7079
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7079
aggguaaauc aguaagaggu guuauuu 27

<210> 7080
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7080
gguaaaucag uaagaggugu uauuugg 27

<210> 7081
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7081
uaaaucagua agagguguua uuuggaa 27

<210> 7082
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7082
aaucaguaag agguguuauu uggaacc 27

<210> 7083
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7083
uuuaccaguu gccuuuuauc ccaaagu 27

<210> 7084
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7084
uaccaguugc cuuuuauccc aaaguug 27

<210> 7085
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7085
ccaguugccu uuuaucccaa aguuguu 27

<210> 7086
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7086
aguugccuuu uaucccaaag uuguugu 27

<210> 7087
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7087
uugccuuuua ucccaaaguu guuguaa 27

<210> 7088
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7088
gccuuuuauc ccaaaguugu uguaacc 27

<210> 7089
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7089
cuuuuauccc aaaguuguug uaaccug 27

<210> 7090
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7090
uuuaucccaa aguuguugua accugcu 27

<210> 7091
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7091
uaucccaaag uuguuguaac cugcugu 27

<210> 7092
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7092
ucccaaaguu guuguaaccu gcuguga 27

<210> 7093
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7093
ccaaaguugu uguaaccugc ugugaua 27

<210> 7094
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7094
aaaguuguug uaaccugcug ugauacg 27

<210> 7095
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7095
aguuguugua accugcugug auacgau 27

<210> 7096
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7096
uuguuguaac cugcugugau acgaugc 27

<210> 7097
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7097
aaaaaugguu cagaauuaaa cuuuuaa 27

<210> 7098
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7098
aaaugguuca gaauuaaacu uuuaauu 27

<210> 7099
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7099
augguucaga auuaaacuuu uaauuca 27

<210> 7100
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7100
gguucagaau uaaacuuuua auucauu 27

<210> 7101
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7101
uucagaauua aacuuuuaau ucauucg 27

<210> 7102
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 7102
cagcagcagu cuuacuugga uucugga 27

<210> 7103
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7103
uuacuuggau ucuggaaucc auucugg 27

<210> 7104
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7104
uugacaccuc ccaaguccuu uaugaau 27

<210> 7105
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7105
cacgcaagag caaguagcug auauuga 27

<210> 7106
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7106
ugccauguuc ccugagacgc uagauga 27

<210> 7107
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7107
guugaaacau gcaguuguca auuugau 27

<210> 7108
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7108
aacaugcagu ugucaauuug auuaacu 27

<210> 7109
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7109
caguugucaa uuugauuaac uaucagg 27

<210> 7110
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7110
augaggacca ggugguaguu aauaaag 27

<210> 7111
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7111
ugggucacca guggauucug uacuguu 27

<210> 7112
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7112
accaguggau ucuguacugu ucuacgc 27

<210> 7113
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7113
uggauucugu acuguucuac gccauca 27

<210> 7114
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7114
ugguggacug cagaaaaugg uugcuuu 27

<210> 7115
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7115
aacgugaaau ucuuggcuau uacaaca 27

<210> 7116
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7116
cccaagucag cgacuuguuc aaaacug 27

<210> 7117

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7117
gcgacuuguu caaaacuguc uuuggac 27

<210> 7118
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7118
caaaacuguc uuuggacucu cagaaac 27

<210> 7119
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7119
cucucuaacc ucacuugcaa uaauuac 27

<210> 7120
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7120
accucacuug caauaauuac aaaaaca 27

<210> 7121
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7121
cagaaugccg uucgccuuca uuaugga 27

<210> 7122
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7122
ucgccuucau uauggacugc cuguugu 27

<210> 7123
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7123
uucauuaugg acugccuguu gugguua 27

<210> 7124
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7124
uggacugccu guugugguua aacuccu 27

<210> 7125
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7125
gcaacuguug gauugauucg aaaccuu 27

<210> 7126
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7126

ccgaggacuc aauaccauuc cauuguu 27

<210> 7127
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7127
cugaggacaa gccacaggau uacaaga 27

<210> 7128
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7128
ggauggaccc uaugauggag caugaga 27

<210> 7129
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7129
uugauacuga ccuguaaauc guccuuu 27

<210> 7130
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7130
agccagugug ggugaauacu uuacucu 27

<210> 7131
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7131
ugccacagcu uuugcagcgu uauacuc 27

<210> 7132
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7132
gcuuuugcag cguuauacuc agaugag 27

<210> 7133
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7133
cagcguuaua cucagaugag uaacauu 27

<210> 7134
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7134
acauuugcug uuuucaacau uaauagc 27

<210> 7135
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7135
agcuguagug ucugaacgug cauugug 27

<210> 7136
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7136
gggaacaguc gaaguacgcu uuuuguu 27

<210> 7137
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7137
cagucgaagu acgcuuuuug uucuggu 27

<210> 7138
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7138
aaguacgcuu uuuguucugg uccuuuu 27

<210> 7139
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7139
acccuagccu ugcuuguucu uuguuuu 27

<210> 7140
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7140
agccuugcuu guucuuuguu uuaauau 27

<210> 7141
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7141
ugaaccugcu acagcaauuu cugauuu 27

<210> 7142
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7142
uacagcaauu ucugauuucu aagaacc 27

<210> 7143
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7143
caguaagagg uguuauuuga gccuugu 27

<210> 7144
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7144
gagguguuau uugagccuug uuuugga 27

<210> 7145
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7145
guuauuugag ccuuguuuug gacagua 27

<210> 7146
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7146
uugagccuug uuuuggacag uauacca 27

<210> 7147
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7147
uucaacagau gcgguuauag aaauggu 27

<210> 7148
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7148
cgguuauaga aaugguucag aauuaaa 27

<210> 7149
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7149
auagaaaugg uucagaauua aacuuuu 27

<210> 7150
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7150
guuguauggu auacuucaaa uacccuc 27

<210> 7151
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7151
caaaacaguu guaugguaua cuucaaa 27

<210> 7152
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7152
ucaaaacagu uguaugguau acuucaa 27

<210> 7153
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7153
uuucaaaaca guuguauggu auacuuc 27

<210> 7154
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7154
uuuucaaaac aguuguaugg uauacuu 27

<210> 7155
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7155
auuuucaaaa caguuguaug guauacu 27

<210> 7156
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7156
uuguccacgc uggauuuuca aaacagu 27

<210> 7157
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7157
auuguccacg cuggauuuuc aaaacag 27

<210> 7158
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7158
ccaucaaauc agcuugagua gccauug 27

<210> 7159
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7159
uguccaacuc caucaaauca gcuugag 27

<210> 7160
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7160
cuuccucagg auugccuuua ccacuca 27

<210> 7161
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7161
ucuuccucag gauugccuuu accacuc 27

<210> 7162
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7162
caucaauauc agcuacuugu ucuugag 27

<210> 7163
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7163
ccaucaauau cagcuacuug uucuuga 27

<210> 7164
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7164
acuguccauc aauaucagcu acuuguu 27

<210> 7165
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 7165
auugcauacu guccaucaau aucagcu 27

<210> 7166
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7166
cgagucauug cauacugucc aucaaua 27

<210> 7167
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7167
ccucaucuaa ugucucaggg aacauag 27

<210> 7168
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7168
uuacaacugc auguuucagc aucugug 27

<210> 7169
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7169
guuuacaacu gcauguuuca gcaucug 27

<210> 7170
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7170
aguuaaucaa guuuacaacu gcauguu 27

<210> 7171
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7171
cuugauaguu aaucaaguuu acaacug 27

<210> 7172
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7172
cugcaucauc uugauaguua aucaagu 27

<210> 7173
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7173
ucugcaucau cuugauaguu aaucaag 27

<210> 7174
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7174
cugguccucg ucauuuagca guuuugu 27

<210> 7175
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7175
cauaacugca gccuuauuaa ccaccac 27

<210> 7176
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7176
ccauaacugc agccuuauua accacca 27

<210> 7177
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7177
ggaccauaac ugcagccuua uuaacca 27

<210> 7178
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7178
ccuuuuuaga aagcugaugg accauaa 27

<210> 7179
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7179
augguacgua caauagcaga caccauc 27

<210> 7180

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7180
caucauuugu auucugcaug guacgua 27

<210> 7181
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7181
cuguuucuac aucauuugua uucugca 27

<210> 7182
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7182
gcuguuucua caucauuugu auucugc 27

<210> 7183
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7183
guacaacgag cuguuucuac aucauuu 27

<210> 7184
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7184
cgguacaacg agcuguuucu acaucau 27

<210> 7185
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7185
gcgguacaac gagcuguuuc uacauca 27

<210> 7186
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7186
gcauaaaaca acacagaauc cacuggu 27

<210> 7187
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7187
uggcauaaaa caacacagaa uccacug 27

<210> 7188
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7188
auggcauaaa acaacacaga auccacu 27

<210> 7189
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7189

uagcuccuuc uugauguaau aaaaggu 27

<210> 7190
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7190
uuagcuccuu cuugauguaa uaaaagg 27

<210> 7191
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7191
uuuaacauuu guuuuguuga gcaaggc 27

<210> 7192
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7192
uagccaagaa uuuaacauuu guuuugu 27

<210> 7193
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7193
cguaauagcc aagaauuuaa cauuugu 27

<210> 7194
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7194
ucguaauagc caagaauuua acauuug 27

<210> 7195
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7195
uaagcuaaaa uuugaaggca gucuguc 27

<210> 7196
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7196
uagguccuca uuauauuuac uaaagcu 27

<210> 7197
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7197
aaguauaggu ccucauuaua uuuacua 27

<210> 7198
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7198
uaaguauagg uccucauuau auuuacu 27

<210> 7199
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7199
guuuuucgua aguauagguc cucauua 27

<210> 7200
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7200
aguuuuucgu aaguauaggu ccucauu 27

<210> 7201
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7201
uaguuuuucg uaaguauagg uccucau 27

<210> 7202
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7202
guaguuuuuc guaaguauag guccuca 27

<210> 7203
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7203
gugguccaca guaguuuuuc guaagua 27

<210> 7204
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7204
ucuacaauag ccggcuuauu acuagag 27

<210> 7205
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7205
cuucuacaau agccggcuua uuacuag 27

<210> 7206
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7206
aguccuaaag cuugcauucc accagcu 27

<210> 7207
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7207
aaguccuaaa gcuugcauuc caccagc 27

<210> 7208
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7208
gaaguccuaa agcuugcauu ccaccag 27

<210> 7209
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7209
caguucugaa caagacguug acuugga 27

<210> 7210
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7210
acaguucuga acaagacguu gacuugg 27

<210> 7211
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7211
gaguccaaag acaguucuga acaagac 27

<210> 7212
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7212
ccuuccuguu uaguugcagc aucugaa 27

<210> 7213
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7213
ccacauuuau aucaucugaa cccagaa 27

<210> 7214
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7214
ugaccacauu uauaucaucu gaaccca 27

<210> 7215
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7215
cugcacaggu gaccacauuu auaucau 27

<210> 7216
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7216
gcugcacagg ugaccacauu uauauca 27

<210> 7217
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7217
auugcaagug agguuagaaa gaauucc 27

<210> 7218
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7218
uuauaauuau ugcaagugag guuagaa 27

<210> 7219
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7219
caucaucuug uucuuauaau uauugca 27

<210> 7220
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7220
ccaucaucuu guucuuauaa uuauugc 27

<210> 7221
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7221
agaccaucau cuuguucuua uaauuau 27

<210> 7222
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7222
gcagaccauc aucuuguucu uauaauu 27

<210> 7223
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7223
ucaauccaac aguagccuuu aucagag 27

<210> 7224
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7224
ucgaaucaau ccaacaguag ccuuuau 27

<210> 7225
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7225
ccuccacaaa uugcugcugu gucccac 27

<210> 7226
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7226
guacaaccuu caacuauuuc uuccaug 27

<210> 7227
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7227
gguacaaccu ucaacuauuu cuuccau 27

<210> 7228
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 7228
cgguacaacc uucaacuauu ucuucca 27

<210> 7229
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7229
ccgguacaac cuucaacuau uucuucc 27

<210> 7230
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7230
gggcuccggu acaaccuuca acuauuu 27

<210> 7231
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7231
uaacaauucg guugugaaca ucccgag 27

<210> 7232
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7232
auaacaauuc gguugugaac aucccga 27

<210> 7233
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7233
gauaacaauu cgguugugaa caucccg 27

<210> 7234
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7234
ugauaacaau ucgguuguga acauccc 27

<210> 7235
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7235
cugauaacaa uucgguugug aacaucc 27

<210> 7236
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7236
ucugauaaca auucgguugu gaacauc 27

<210> 7237
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7237
guauuuaguc cucugauaac aauucgg 27

<210> 7238
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7238
gguauuuagu ccucugauaa caauucg 27

<210> 7239
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7239
ugguauuuag uccucugaua acaauuc 27

<210> 7240
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7240
augguauuua guccucugau aacaauu 27

<210> 7241
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7241
aaacaaugga augguauuua guccucu 27

<210> 7242
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7242
gcacaaacaa uggaauggua uuuaguc 27

<210> 7243

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7243
cugcacaaac aauggaaugg uauuuag 27

<210> 7244
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7244
gcugcacaaa caauggaaug guauuua 27

<210> 7245
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7245
cagcuacucu uuggauguuu ucaaugg 27

<210> 7246
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7246
gcagcuacuc uuuggauguu uucaaug 27

<210> 7247
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7247
cagcuucaau agcuucugca gcuuccu 27

<210> 7248
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7248
gcucccucag cuucaauagc uucugca 27

<210> 7249
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7249
uggcucccuc agcuucaaua gcuucug 27

<210> 7250
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7250
ucauuccuag agugaaguaa cucuguc 27

<210> 7251
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7251
cuucauuccu agagugaagu aacucug 27

<210> 7252
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7252

ccuucauucc uagagugaag uaacucu 27

<210> 7253
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7253
uguccucaga cauucggaac aaaacag 27

<210> 7254
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7254
cuuguccuca gacauucgga acaaaac 27

<210> 7255
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7255
ccguuucuug uaaucuugug gcuuguc 27

<210> 7256
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7256
acugaaagcc guuucuugua aucuugu 27

<210> 7257
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7257
cagcucaacu gaaagccguu ucuugua 27

<210> 7258
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7258
caaguccaag aucagcaguc ucauucc 27

<210> 7259
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7259
gcaccaauau caaguccaag aucagca 27

<210> 7260
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7260
aaagaacgau agcuaggauc auccugg 27

<210> 7261
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7261
cauauccacc agagugaaaa gaacgau 27

<210> 7262
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7262
ugauuuacag gucaguauca aaccagg 27

<210> 7263
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7263
augauuuaca ggucaguauc aaaccag 27

<210> 7264
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7264
gaugauuuac aggucaguau caaacca 27

<210> 7265
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7265
cuucuuaccu aaaggaugau uuacagg 27

<210> 7266
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7266
acuucuuacc uaaaggauga uuuacag 27

<210> 7267
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7267
aaacuucuua ccuaaaggau gauuuac 27

<210> 7268
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7268
gcuuuuuaaa acuucuuacc uaaagga 27

<210> 7269
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7269
uggcuuuuua aaacuucuua ccuaaag 27

<210> 7270
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7270
ccaaacuggc uuuuuaaaac uucuuac 27

<210> 7271
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7271
uuacccaaac uggcuuuuua aaacuuc 27

<210> 7272
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7272
uuuacccaaa cuggcuuuuu aaaacuu 27

<210> 7273
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7273
uuuuacccaa acuggcuuuu uaaaacu 27

<210> 7274
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7274
auuuuaccca aacuggcuuu uuaaaac 27

<210> 7275
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7275
ccaaccaagu cuuucugaag uucugua 27

<210> 7276
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7276
ccacccuacc aaccaagucu uucugaa 27

<210> 7277
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7277
auuuacaaau agccuaaacc acuccca 27

<210> 7278
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7278
gauuuacaaa uagccuaaac cacuccc 27

<210> 7279
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7279
agauuuacaa auagccuaaa ccacucc 27

<210> 7280
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7280
cagauuuaca aauagccuaa accacuc 27

<210> 7281
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7281
uguuuuugug gcagauuuac aaauagc 27

<210> 7282
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7282
cuguuuuugu ggcagauuua caaauag 27

<210> 7283
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7283
ccuguuuuug uggcagauuu acaaaua 27

<210> 7284
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7284
auauaccugu uuuuguggca gauuuac 27

<210> 7285
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7285
cuuucaaagu auauaccugu uuuugug 27

<210> 7286
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7286
caucuccuuu caaaguauau accuguu 27

<210> 7287
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7287
acaucuccuu ucaaaguaua uaccugu 27

<210> 7288
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7288
agacaucucc uuucaaagua uauaccu 27

<210> 7289
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7289
aagacaucuc cuuucaaagu auauacc 27

<210> 7290
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7290
caagacaucu ccuuucaaag uauauac 27

<210> 7291
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 7291
uguuccaaga caucuccuuu caaagua 27

<210> 7292
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7292
cauuccaaug uuccaagaca ucuccuu 27

<210> 7293
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7293
acauuccaau guuccaagac aucuccu 27

<210> 7294
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7294
gaacauucca auguuccaag acaucuc 27

<210> 7295
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7295
ccagaaaucu gagaacauuc caauguu 27

<210> 7296
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7296
acaaccagaa aucugagaac auuccaa 27

<210> 7297
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7297
uaacaaccag aaaucugaga acauucc 27

<210> 7298
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7298
auaacaacca gaaaucugag aacauuc 27

<210> 7299
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7299
cauaacaacc agaaaucuga gaacauu 27

<210> 7300
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7300
ugaucacaua acaaccagaa aucugag 27

<210> 7301
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7301
augaucacau aacaaccaga aaucuga 27

<210> 7302
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7302
ccacacauga ucacauaaca accagaa 27

<210> 7303
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7303
cuuccacaca ugaucacaua acaacca 27

<210> 7304
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7304
aauaacuucc acacaugauc acauaac 27

<210> 7305
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7305
uaauaacuuc cacacaugau cacauaa 27

<210> 7306

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7306
uuaauaacuu ccacacauga ucacaua 27

<210> 7307
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7307
guuaauaacu uccacacaug aucacau 27

<210> 7308
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7308
cauuaaaguu aauaacuucc acacaug 27

<210> 7309
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7309
acauuaaagu uaauaacuuc cacacau 27

<210> 7310
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7310
aaacauuaaa guuaauaacu uccacac 27

<210> 7311
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7311
aaaacauuaa aguuaauaac uuccaca 27

<210> 7312
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7312
aaaaacauua aaguuaauaa cuuccac 27

<210> 7313
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7313
aaaaaacauu aaaguuaaua acuucca 27

<210> 7314
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7314
caaaaaacau uaaaguuaau aacuucc 27

<210> 7315
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7315

gcaaaaaaca uuaaaguuaa uaacuuc 27

<210> 7316
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7316
uggcaaaaaa cauuaaaguu aauaacu 27

<210> 7317
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7317
guggcaaaaa acauuaaagu uaauaac 27

<210> 7318
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7318
uugcaaaagc uguggcaaaa aacauua 27

<210> 7319
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7319
guugcaaaag cuguggcaaa aaacauu 27

<210> 7320
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7320
acucauuuga guauuaaguu gcaaaag 27

<210> 7321
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7321
uuaaaacagc aaauguuacu cauuuga 27

<210> 7322
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7322
uuuaaaacag caaauguuac ucauuug 27

<210> 7323
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7323
guuuaaaaca gcaaauguua cucauuu 27

<210> 7324
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7324
uguuuaaaac agcaaauguu acucauu 27

<210> 7325
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7325
auguuuaaaa cagcaaaugu uacucau 27

<210> 7326
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7326
aauguuuaaa acagcaaaug uuacuca 27

<210> 7327
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7327
cuauuaaugu uuaaaacagc aaauguu 27

<210> 7328
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7328
agagaaaggc ugcuauuaau guuuaaa 27

<210> 7329
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7329
caaguucaga caauacagcu guauaaa 27

<210> 7330
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7330
ucacaaugca aguucagaca auacagc 27

<210> 7331
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7331
aaucacaaug caaguucaga caauaca 27

<210> 7332
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7332
ccaaucacaa ugcaaguuca gacaaua 27

<210> 7333
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7333
caggccaauc acaaugcaag uucagac 27

<210> 7334
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7334
uuguucccau aggaaacuca gcuuggu 27

<210> 7335
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7335
cuucaauugu ucccauagga aacucag 27

<210> 7336
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7336
acuucaauug uucccauagg aaacuca 27

<210> 7337
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7337
aaguuuacuu caauuguucc cauagga 27

<210> 7338
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7338
aaaguuuacu ucaauuguuc ccauagg 27

<210> 7339
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7339
acaaaaaguu uacuucaauu guuccca 27

<210> 7340
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7340
cagaacaaaa aguuuacuuc aauuguu 27

<210> 7341
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7341
aggaccagaa caaaaaguuu acuucaa 27

<210> 7342
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7342
aaggaccaga acaaaaaguu uacuuca 27

<210> 7343
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7343
cgaccaaaaa ggaccagaac aaaaagu 27

<210> 7344
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7344
ucgaccaaaa aggaccagaa caaaaag 27

<210> 7345
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7345
uuacuccucg accaaaaagg accagaa 27

<210> 7346
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7346
aauccauuug uauuguuacu ccucgac 27

<210> 7347
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7347
aaauccauuu guauuguuac uccucga 27

<210> 7348
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7348
aaaauccauu uguauuguua cuccucg 27

<210> 7349
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7349
caaaauccau uuguauuguu acuccuc 27

<210> 7350
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7350
ccaaaaucca uuuguauugu uacuccu 27

<210> 7351
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7351
ucacucccaa aauccauuug uauuguu 27

<210> 7352
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7352
ucuucacuuc uugagucacu cccaaaa 27

<210> 7353
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7353
auucuucacu ucuugaguca cucccaa 27

<210> 7354
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 7354
cauucuucac uucuugaguc acuccca 27

<210> 7355
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7355
gcauucuuca cuucuugagu cacuccc 27

<210> 7356
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7356
gugcauucuu cacuucuuga gucacuc 27

<210> 7357
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7357
ccauucuugu gcauucuuca cuucuug 27

<210> 7358
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7358
gauccauucu ugugcauucu ucacuuc 27

<210> 7359
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7359
ugauccauuc uugugcauuc uucacuu 27

<210> 7360
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7360
gugauccauu cuugugcauu cuucacu 27

<210> 7361
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7361
uaaauuccau cuugugaucc auucuug 27

<210> 7362
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7362
gauaaauucc aucuugugau ccauucu 27

<210> 7363
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7363
ugauaaauuc caucuuguga uccauuc 27

<210> 7364
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7364
uugauaaaau ccaucuugug auccauu 27

<210> 7365
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7365
uuugauaaau uccaucuugu gauccau 27

<210> 7366
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7366
aaggcuaggg uuugauaaau uccaucu 27

<210> 7367
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7367
aaaaaaauuu aacaagcaag gcuaggg 27

<210> 7368
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7368
aaaaaaaaaa aaaaaauuua acaagca 27

<210> 7369

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7369
aaaaaaaaaa aaaaaaauuu aacaagc 27

<210> 7370
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7370
aaaaaaaaaa aaaaaaauu uaacaag 27

<210> 7371
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7371
aaaaaaaaaa aaaaaaaau uuaacaa 27

<210> 7372
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7372
uaaaaaaaaa aaaaaaaaa uuuaaca 27

<210> 7373
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7373
uuaaaaaaaa aaaaaaaaa auuuaac 27

<210> 7374
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7374
cuuaaaaaaa aaaaaaaaaa aauuuaa 27

<210> 7375
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7375
ucuuaaaaaa aaaaaaaaaa aaauuua 27

<210> 7376
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7376
auucuuaaaa aaaaaaaaaa aaaaauu 27

<210> 7377
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7377
uauucuuaaa aaaaaaaaaa aaaaaau 27

<210> 7378
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7378

auauucuuaa aaaaaaaaaa aaaaaaa 27

<210> 7379
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7379
gauauucuua aaaaaaaaaa aaaaaaa 27

<210> 7380
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7380
agauauucuu aaaaaaaaaa aaaaaaa 27

<210> 7381
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7381
cagauauucu uaaaaaaaaa aaaaaaa 27

<210> 7382
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7382
acagauauuc uuaaaaaaaa aaaaaaa 27

<210> 7383
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7383
cauuacagau auucuuaaaa aaaaaaa 27

<210> 7384
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7384
ccauuacaga uauucuuaaa aaaaaaa 27

<210> 7385
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7385
aguaccauua cagauauucu uaaaaaa 27

<210> 7386
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7386
caguaccauu acagauauuc uuaaaaa 27

<210> 7387
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7387
ucaguaccau uacagauauu cuuaaaa 27

<210> 7388
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7388
aaagucagua ccauuacaga uauucuu 27

<210> 7389
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7389
gcuacuucaa agcaagcaaa gucagua 27

<210> 7390
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7390
aaaaaaagag cuacuucaaa gcaagca 27

<210> 7391
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7391
aaaaaaaaaa aagagcuacu ucaaagc 27

<210> 7392
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7392
aaaaaaaaaa aaagagcuac uucaaag 27

<210> 7393
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7393
aaaaaaaaaa aaaaagagcu acuucaa 27

<210> 7394
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7394
aaaaaaaaaa aaaaaagagc uacuuca 27

<210> 7395
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7395
aaaaaaaaaa aaaaaaagag cuacuuc 27

<210> 7396
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7396
aaaaaaaaaa aaaaaaaaga gcuacuu 27

<210> 7397
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7397
aaaaaaaaaa aaaaaaaaaa aaaagag 27

<210> 7398
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7398
aaaaaaaaaa aaaaaaaaaa aaaaaga 27

<210> 7399
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7399
caaaaaaaaa aaaaaaaaaa aaaaaag 27

<210> 7400
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7400
gcaaaaaaaa aaaaaaaaaa aaaaaaa 27

<210> 7401
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7401
cugcaaaaaa aaaaaaaaaa aaaaaaa 27

<210> 7402
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7402
acugcaaaaa aaaaaaaaaa aaaaaaa 27

<210> 7403
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7403
aguuacugca aaaaaaaaaa aaaaaaa 27

<210> 7404
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7404
caguuacugc aaaaaaaaaa aaaaaaa 27

<210> 7405
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7405
acaguuacug caaaaaaaaa aaaaaaa 27

<210> 7406
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7406
aaaaacaguu acugcaaaaa aaaaaaa 27

<210> 7407
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7407
aaaaaacagu uacugcaaaa aaaaaaa 27

<210> 7408
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7408
uaaaaaacag uuacugcaaa aaaaaaa 27

<210> 7409
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7409
cuuaaaaaac aguuacugca aaaaaaa 27

<210> 7410
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7410
acuuaaaaaa caguuacugc aaaaaaa 27

<210> 7411
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7411
agacuuaaaa aacaguuacu gcaaaaa 27

<210> 7412
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7412
acacuacgag agacuuaaaa aacaguu 27

<210> 7413
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7413
uaacacuacg agagacuuaa aaaacag 27

<210> 7414
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7414
uuaacacuac gagagacuua aaaaaca 27

<210> 7415
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7415
acuuaacacu acgagagacu uaaaaaa 27

<210> 7416
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7416
auaacuuaac acuacgagag acuuaaa 27

<210> 7417
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 7417
uauaacuuaa cacuacgaga gacuuaa 27

<210> 7418
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7418
guauucacua uaacuuaaca cuacgag 27

<210> 7419
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7419
aguauucacu auaacuuaac acuacga 27

<210> 7420
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7420
caguauucac uauaacuuaa cacuacg 27

<210> 7421
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7421
gcaguauuca cuauaacuua acacuac 27

<210> 7422
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7422
agaaauugcu guagcaguau ucacuau 27

<210> 7423
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7423
uagaaauugc uguagcagua uucacua 27

<210> 7424
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7424
uuagaaauug cuguagcagu auucacu 27

<210> 7425
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7425
acucaauucu uaaaaauuag aaauugc 27

<210> 7426
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7426
ccauuacuca auucuuaaaa auuagaa 27

<210> 7427
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7427
acaccauuac ucaauucuua aaaauua 27

<210> 7428
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7428
cuacaccauu acucaauucu uaaaaau 27

<210> 7429
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7429
ucuacaccau uacucaauuc uuaaaaa 27

<210> 7430
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7430
guucuacacc auuacucaau ucuuaaa 27

<210> 7431
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7431
guguucuaca ccauuacuca auucuua 27

<210> 7432

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7432
augaauuagu guucuacacc auuacuc 27

<210> 7433
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7433
ugauuaugaa uuaguguucu acaccau 27

<210> 7434
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7434
gugauuauga auuaguguuc uacacca 27

<210> 7435
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7435
agugauuaug aauuaguguu cuacacc 27

<210> 7436
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7436
auuaauuaga gugauuauga auuagug 27

<210> 7437
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7437
aauuaauuag agugauuaug aauuagu 27

<210> 7438
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7438
caauuaauua gagugauuau gaauuag 27

<210> 7439
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7439
auuacaauua auuagaguga uuaugaa 27

<210> 7440
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7440
gauuacaauu aauuagagug auuauga 27

<210> 7441
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7441

agauuacaau uaauuagagu gauuaug 27

<210> 7442
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7442
cuuuauucag auuacaauua auuagag 27

<210> 7443
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7443
acuuuauuca gauuacaauu aauuaga 27

<210> 7444
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7444
uuacacuuua uucagauuac aauuaau 27

<210> 7445
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7445
guuacacuuu auucagauua caauuaa 27

<210> 7446
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7446
uguuacacuu uauucagauu acaauua 27

<210> 7447
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7447
uuguuacacu uuauucagau uacaauu 27

<210> 7448
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7448
auuguuacac uuuauucaga uuacaau 27

<210> 7449
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7449
cuacacaauu guuacacuuu auucaga 27

<210> 7450
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7450
aaggcuacac aauuguuaca cuuuauu 27

<210> 7451
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7451
acaaaaaggc uacacaauug uuacacu 27

<210> 7452
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7452
uuuuauacaa aaaggcuaca caauugu 27

<210> 7453
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7453
auuuuauaca aaaaggcuac acaauug 27

<210> 7454
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7454
cuauuuuaua caaaaaggcu acacaau 27

<210> 7455
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7455
ucuauuuuau acaaaaaggc uacacaa 27

<210> 7456
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7456
ugucuauuuu auacaaaaag gcuacac 27

<210> 7457
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7457
ucuauuuguc uauuuuauac aaaaagg 27

<210> 7458
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7458
uuucuauuug ucuauuuuau acaaaaa 27

<210> 7459
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7459
uuuucuauuu gucuauuuua uacaaaa 27

<210> 7460
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7460
auuuucuauu ugucuauuuu auacaaa 27

<210> 7461
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7461
cauuuucuau uugucuauuu uauacaa 27

<210> 7462
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7462
ccauuuucua uuugucuauu uuauaca 27

<210> 7463
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7463
ggaccauuuu cuauuugucu auuuuau 27

<210> 7464
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7464
uggaccauuu ucuauuuguc uauuuua 27

<210> 7465
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7465
uuggaccauu uucuauuugu cuauuuu 27

<210> 7466
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7466
aaacuaauug gaccauuuuc uauuugu 27

<210> 7467
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7467
gaaacuaauu ggaccauuuu cuauuug 27

<210> 7468
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7468
ggaaacuaau uggaccauuu ucuauuu 27

<210> 7469
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7469
aggaaacuaa uuggaccauu uucuauu 27

<210> 7470
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7470
uuaaaaagga aacuaauugg accauuu 27

<210> 7471
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7471
auuaaaaagg aaacuaauug gaccauu 27

<210> 7472
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7472
aagcauauua aaaaggaaac uaauugg 27

<210> 7473
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7473
uaagcauauu aaaaaggaaa cuaauug 27

<210> 7474
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7474
auuuuaagca uauuaaaaag gaaacua 27

<210> 7475
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7475
cugcuuauuu uaagcauauu aaaaagg 27

<210> 7476
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7476
ccugcuuauu uuaagcauau uaaaaag 27

<210> 7477
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7477
gauccaccug cuuauuuuaa gcauauu 27

<210> 7478
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7478
caaaaacaug aaauagaucc accugcu 27

<210> 7479
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7479
ucaaaaacau gaaauagauc caccugc 27

<210> 7480
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 7480
gaucaaaaac augaaauaga uccaccu 27

<210> 7481
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7481
ugaucaaaaa caugaaauag auccacc 27

<210> 7482
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7482
uugaucaaaa acaugaaaua gauccac 27

<210> 7483
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7483
aguuuuugau caaaaacaug aaauaga 27

<210> 7484
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7484
ccaaauaguu uuugaucaaa aacauga 27

<210> 7485
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7485
uaucccaaau aguuuuugau caaaaac 27

<210> 7486
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7486
auaucccaaa uaguuuuuga ucaaaaa 27

<210> 7487
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7487
cauaucccaa auaguuuuug aucaaaa 27

<210> 7488
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7488
acauauccca aauaguuuuu gaucaaa 27

<210> 7489
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7489
ccauacauau cccaaauagu uuuugau 27

<210> 7490
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7490
uuacccuacc cauacauauc ccaaaua 27

<210> 7491
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7491
uuuacccuac ccauacauau cccaaau 27

<210> 7492
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7492
auuuacccua cccauacaua ucccaaa 27

<210> 7493
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7493
acaccucuua cugauuuacc cuaccca 27

<210> 7494
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7494
uaacaccucu uacugauuua cccuacc 27

<210> 7495

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7495
auaacaccuc uuacugauuu acccuac 27

<210> 7496
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7496
aauaacaccu cuuacugauu uacccua 27

<210> 7497
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7497
aaauaacacc ucuuacugau uuacccu 27

<210> 7498
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7498
caaauaacac cucuuacuga uuuaccc 27

<210> 7499
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7499
agguuccaaa uaacaccucu uacugau 27

<210> 7500
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7500
aaaacaaggu uccaaauaac accucuu 27

<210> 7501
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7501
caaaacaagg uuccaaauaa caccucu 27

<210> 7502
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7502
ccaaaacaag guuccaaaua acaccuc 27

<210> 7503
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7503
acuguccaaa acaagguucc aaauaac 27

<210> 7504
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7504

guaaacuguc caaaacaagg uuccaaa 27

<210> 7505
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7505
gguaaacugu ccaaaacaag guuccaa 27

<210> 7506
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7506
aggcaacugg uaaacugucc aaaacaa 27

<210> 7507
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7507
gggauaaaag gcaacuggua aacuguc 27

<210> 7508
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7508
ugggauaaaa ggcaacuggu aaacugu 27

<210> 7509
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7509
acaacuuugg gauaaaaggc aacuggu 27

<210> 7510
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7510
caacaacuuu gggauaaaag gcaacug 27

<210> 7511
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7511
gguuacaaca acuuugggau aaaaggc 27

<210> 7512
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7512
agguuacaac aacuuuggga uaaaagg 27

<210> 7513
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7513
cagguuacaa caacuuuggg auaaaag 27

<210> 7514
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7514
uaucacagca gguuacaaca acuuugg 27

<210> 7515
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7515
guaucacagc agguuacaac aacuuug 27

<210> 7516
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7516
ucguaucaca gcagguuaca acaacuu 27

<210> 7517
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7517
uuucucuuga agcaucguau cacagca 27

<210> 7518
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7518
uuuucucuug aagcaucgua ucacagc 27

<210> 7519
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7519
cauuuucucu ugaagcaucg uaucaca 27

<210> 7520
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7520
uuuuuuauaa ccgcauuuuc ucuugaa 27

<210> 7521
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7521
auuuuuuaua accgcauuuu cucuuga 27

<210> 7522
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7522
cauuuuuuau aaccgcauuu ucucuug 27

<210> 7523
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7523
ccauuuuuua uaaccgcauu uucucuu 27

<210> 7524
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7524
cugaaccauu uuuuauaacc gcauuuu 27

<210> 7525
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7525
uaauucugaa ccauuuuuua uaaccgc 27

<210> 7526
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7526
uuaauucuga accauuuuuu auaaccg 27

<210> 7527
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7527
uuuaauucug aaccauuuuu uauaacc 27

<210> 7528
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7528
guuuaauucu gaaccauuuu uuauaac 27

<210> 7529
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7529
aguuuaauuc ugaaccauuu uuuauaa 27

<210> 7530
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7530
aaguuuaauu cugaaccauu uuuuaua 27

<210> 7531
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7531
auuaaaaguu uaauucugaa ccauuuu 27

<210> 7532
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7532
aauuaaaagu uuaauucuga accauuu 27

<210> 7533
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7533
ugaauuaaaa guuuaauucu gaaccau 27

<210> 7534
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7534
caauacagcu aaaggaugau uuacagg 27

<210> 7535
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7535
acaauacagc uaaaggauga uuuacag 27

<210> 7536
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7536
agacaauaca gcuaaaggau gauuuac 27

<210> 7537
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7537
guuacuccua aaggaugauu uacaggu 27

<210> 7538
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7538
uguuacuccu aaaggaugau uuacagg 27

<210> 7539
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7539
uuguuacucc uaaaggauga uuuacag 27

<210> 7540
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7540
auuguuacuc cuaaaggaug auuuaca 27

<210> 7541
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7541
ggauuccaga auccaaguaa gacugcu 27

<210> 7542
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7542
cuugcuccca uucauaaagg acuuggg 27

<210> 7543
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 7543
cgucaauauc agcuacuugc ucuugcg 27

<210> 7544
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7544
ccgucaauau cagcuacuug cucuugc 27

<210> 7545
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7545
acugcccguc aauaucagcu acuugcu 27

<210> 7546
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7546
uguuucaaca ucugugaugg uucagcc 27

<210> 7547
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7547
auguuucaac aucugugaug guucagc 27

<210> 7548
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7548
ugacaacugc auguuucaac aucugug 27

<210> 7549
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7549
auugacaacu gcauguuuca acaucug 27

<210> 7550
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7550
ucaaauugac aacugcaugu uucaaca 27

<210> 7551
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7551
aguuaaucaa auugacaacu gcauguu 27

<210> 7552
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7552
ccugauaguu aaucaaauug acaacug 27

<210> 7553
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7553
cgucauccug auaguuaauc aaauuga 27

<210> 7554
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7554
gcgucauccu gauaguuaau caaauug 27

<210> 7555
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7555
ccucaucguu uagcaguuuu gucagcu 27

<210> 7556
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7556
cugguccuca ucguuuagca guuuugu 27

<210> 7557
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7557
cauaacagca gcuuuauuaa cuaccac 27

<210> 7558

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7558
ccauaacagc agcuuuauua acuacca 27

<210> 7559
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7559
ggaccauaac agcagcuuua uuaacua 27

<210> 7560
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7560
uggaccauaa cagcagcuuu auuaacu 27

<210> 7561
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7561
cugucucuac aucauuugua uucugca 27

<210> 7562
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7562
gcugucucua caucauuugu auucugc 27

<210> 7563
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7563
gcaaccauuu ucugcagucc accagcu 27

<210> 7564
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7564
aagcaaccau uuucugcagu ccaccag 27

<210> 7565
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7565
uuguuuuguu gagcaaagca accauuu 27

<210> 7566
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7566
uuuguuuugu ugagcaaagc aaccauu 27

<210> 7567
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7567

uagccaagaa uuucacguuu guuuugu 27

<210> 7568
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7568
cuugauugcc auaagcuaag aucugaa 27

<210> 7569
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7569
gcucucuuga uugccauaag cuaagau 27

<210> 7570
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7570
cuucucauaa guguaggucc ucauuau 27

<210> 7571
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7571
gcuucucaua aguguagguc cucauua 27

<210> 7572
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7572
aagcuucuca uaaguguagg uccucau 27

<210> 7573
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7573
gaagcuucuc auaaguguag guccuca 27

<210> 7574
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7574
gaguccaaag acaguuuuga acaaguc 27

<210> 7575
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7575
agaguccaaa gacaguuuug aacaagu 27

<210> 7576
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7576
ccacauuuau aucaucggaa cccagaa 27

<210> 7577
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7577
ugaccacauu uauaucaucg gaaccca 27

<210> 7578
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7578
cugcacaggu gaccacauuu auaucau 27

<210> 7579
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7579
gcugcacagg ugaccacauu uauauca 27

<210> 7580
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7580
uuguaauuau ugcaagugag guuagag 27

<210> 7581
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7581
caucaucuug uuuuuguaau uauugca 27

<210> 7582
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7582
ccaucaucuu guuuuuguaa uuauugc 27

<210> 7583
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7583
acaccaucau cuuguuuuug uaauuau 27

<210> 7584
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7584
uuggcacacc aucaucuugu uuuugua 27

<210> 7585
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7585
ucaauccaac aguugccuuu aucagag 27

<210> 7586
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7586
ucgaaucaau ccaacaguug ccuuuau 27

<210> 7587
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7587
gcugaacuag ucguggaaua gcacccu 27

<210> 7588
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7588
aguacacccu ucuacuaucu ccuccau 27

<210> 7589
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7589
caguacaccc uucuacuauc uccucca 27

<210> 7590
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7590
ccaguacacc cuucuacuau cuccucc 27

<210> 7591
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7591
gagcuccagu acacccuucu acuaucu 27

<210> 7592
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7592
aaacaaugga augguauuga guccucg 27

<210> 7593
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7593
cugcacaaac aauggaaugg uauugag 27

<210> 7594
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7594
acugcacaaa caauggaaug guauuga 27

<210> 7595
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7595
aagcaacugc acaaacaaug gaauggu 27

<210> 7596
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7596
gagaauaaag caacugcaca aacaaug 27

<210> 7597
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7597
uuucaauggg agaauaaagc aacugca 27

<210> 7598
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7598
uuuucaaugg gagaauaaag caacugc 27

<210> 7599
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7599
auuuucaaug ggagaauaaa gcaacug 27

<210> 7600
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7600
ggauauuuuc aaugggagaa uaaagca 27

<210> 7601
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7601
uggauauuuu caaugggaga auaaagc 27

<210> 7602
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7602
uuggauauuu ucaaugggag aauaaag 27

<210> 7603
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7603
cagcuacucu uuggauauuu ucaaugg 27

<210> 7604
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7604
gcagcuacuc uuuggauauu uucaaug 27

<210> 7605
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7605
ccgcuucuug uaauccugug gcuuguc 27

<210> 7606
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 7606
ccaguccaag aucugcaguc ucauucc 27

<210> 7607
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7607
cguauccacc agagugaaaa gaacggu 27

<210> 7608
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7608
caggccagcu gauugcuauc accuggg 27

<210> 7609
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7609
cgauuuacag gucaguauca aaccagg 27

<210> 7610
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7610
acgauuuaca ggucaguauc aaaccag 27

<210> 7611
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7611
uuucuuaccu aaaggacgau uuacagg 27

<210> 7612
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7612
gcuuucuuac cuaaaggacg auuuaca 27

<210> 7613
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7613
cuuuuauaag cuuucuuacc uaaagga 27

<210> 7614
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7614
gcuuuuauaa gcuuucuuac cuaaagg 27

<210> 7615
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7615
cuggcuuuua uaagcuuucu uaccuaa 27

<210> 7616
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7616
ccacacuggc uuuuauaagc uuucuua 27

<210> 7617
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7617
auucacccac acuggcuuuu auaagcu 27

<210> 7618
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7618
ccuaccaagu cuuucuggag uucugca 27

<210> 7619
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7619
auuuacaaac aggccuaaaa ccauucc 27

<210> 7620
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7620
gauuuacaaa caggccuaaa accauuc 27

<210> 7621

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7621
agauuuacaa acaggccuaa aaccauu 27

<210> 7622
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7622
caucuccuuc caagguaugu aucuguu 27

<210> 7623
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7623
acaucuccuu ccaagguaug uaucugu 27

<210> 7624
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7624
acuuccacac augaacaucu ccuucca 27

<210> 7625
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7625
gaaacuucca cacaugaaca ucuccuu 27

<210> 7626
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7626
agaaacuucc acacaugaac aucuccu 27

<210> 7627
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7627
gagaaacuuc cacacaugaa caucucc 27

<210> 7628
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7628
ugagaaacuu ccacacauga acaucuc 27

<210> 7629
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7629
caucaacgug agaaacuucc acacaug 27

<210> 7630
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7630

aaacaucaac gugagaaacu uccacac 27

<210> 7631
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7631
aaaacaucaa cgugagaaac uuccaca 27

<210> 7632
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7632
aaaaacauca acgugagaaa cuuccac 27

<210> 7633
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7633
caaaaacauc aacgugagaa acuucca 27

<210> 7634
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7634
gcaaaaacau caacgugaga aacuucc 27

<210> 7635
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7635
uggcaaaaac aucaacguga gaaacuu 27

<210> 7636
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7636
cugcaaaagc uguggcaaaa acaucaa 27

<210> 7637
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7637
gcugcaaaag cuguggcaaa aacauca 27

<210> 7638
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7638
acucaucuga guauaacgcu gcaaaag 27

<210> 7639
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7639
ugaaaacagc aaauguuacu caucuga 27

<210> 7640
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7640
uugaaaacag caaauguuac ucaucug 27

<210> 7641
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7641
guugaaaaca gcaaauguua cucaucu 27

<210> 7642
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7642
cuauuaaugu ugaaaacagc aaauguu 27

<210> 7643
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7643
acacuacagc uguauagaga gaaaggc 27

<210> 7644
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7644
caggccaauc acaaugcacg uucagac 27

<210> 7645
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7645
cuguucccau aggaaacuca gcuuggu 27

<210> 7646
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7646
cagaacaaaa agcguacuuc gacuguu 27

<210> 7647
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7647
aaggaccaga acaaaaagcg uacuucg 27

<210> 7648
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7648
cgaccaaaaa ggaccagaac aaaaagc 27

<210> 7649
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7649
ucgaccaaaa aggaccagaa caaaaag 27

<210> 7650
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7650
uuacuccucg accaaaaagg accagaa 27

<210> 7651
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7651
aauccauuug uauuguuacu ccucgac 27

<210> 7652
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7652
aaauccauuu guauuguuac uccucga 27

<210> 7653
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7653
caaauccauu uguauuguua cuccucg 27

<210> 7654
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7654
ccaaauccau uuguauuguu acuccuc 27

<210> 7655
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7655
ucacucccca aauccauuug uauuguu 27

<210> 7656
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7656
gauccauucg ugugcauucu ucacugc 27

<210> 7657
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7657
ugauccauuc gugugcauuc uucacug 27

<210> 7658
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7658
gugauccauu cgugugcauu cuucacu 27

<210> 7659
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7659
uaaaacaaag aacaagcaag gcuaggg 27

<210> 7660
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7660
gcaccacuac agauauuaaa acaaaga 27

<210> 7661
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7661
cagcaccacu acagauauua aaacaaa 27

<210> 7662
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7662
ucagcaccac uacagauauu aaaacaa 27

<210> 7663
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7663
aaaaaauaaa agcaagcaaa gucagca 27

<210> 7664
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7664
cugcaaaaaa uaaaagcaag caaaguc 27

<210> 7665
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7665
aguuacugca aaaaauaaaa gcaagca 27

<210> 7666
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7666
acuaacaguu acugcaaaaa auaaaag 27

<210> 7667
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7667
aaacuaacag uuacugcaaa aaauaaa 27

<210> 7668
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7668
aaaaacuaac aguuacugca aaaaaua 27

<210> 7669
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 7669
uaaaaacuaa caguuacugc aaaaaau 27

<210> 7670
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7670
cuuaaaaacu aacaguuacu gcaaaaa 27

<210> 7671
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7671
acuacuuaaa aacuaacagu uacugca 27

<210> 7672
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7672
acacuacuua aaaacuaaca guuacug 27

<210> 7673
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7673
cauaacacua cuuaaaaacu aacaguu 27

<210> 7674
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7674
acauaacacu acuuaaaaac uaacagu 27

<210> 7675
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7675
gaacauaaca cuacuuaaaa acuaaca 27

<210> 7676
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7676
agaacauaac acuacuuaaa aacuaac 27

<210> 7677
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7677
uagaacauaa cacuacuuaa aaacuaa 27

<210> 7678
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7678
cuagaacaua acacuacuua aaaacua 27

<210> 7679
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7679
guucacuaga acauaacacu acuuaaa 27

<210> 7680
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7680
agguucacua gaacauaaca cuacuua 27

<210> 7681
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7681
cagguucacu agaacauaac acuacuu 27

<210> 7682
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7682
ccauuacucg guucuuagaa aucagaa 27

<210> 7683
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7683
acaccauuac ucgguucuua gaaauca 27

<210> 7684

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7684
guucuacacc auuacucggu ucuuaga 27

<210> 7685
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7685
augaauuagu guucuacacc auuacuc 27

<210> 7686
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7686
ugauuaugaa uuaguguucu acaccau 27

<210> 7687
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7687
gugauuauga auuaguguuc uacacca 27

<210> 7688
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7688
cgugauuaug aauuaguguu cuacacc 27

<210> 7689
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7689
uuacaauuag cgugauuaug aauuagu 27

<210> 7690
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7690
auuacaauua gcgugauuau gaauuag 27

<210> 7691
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7691
ccagauuaca auuagcguga uuaugaa 27

<210> 7692
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7692
guuacacguc uccagauuac aauuagc 27

<210> 7693
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7693

auguuacacg ucuccagauu acaauua 27

<210> 7694
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7694
gcuacacaau guuacacguc uccagau 27

<210> 7695
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7695
aggcuacaca auguuacacg ucuccag 27

<210> 7696
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7696
auacaaaagg cuacacaaug uuacacg 27

<210> 7697
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7697
uauacaaaag gcuacacaau guuacac 27

<210> 7698
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7698
uauuuauaca aaaggcuaca caauguu 27

<210> 7699
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7699
cuauuuauac aaaaggcuac acaaugu 27

<210> 7700
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7700
ugucuauuua uacaaaaggc uacacaa 27

<210> 7701
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7701
cugucuauuu auacaaaagg cuacaca 27

<210> 7702
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7702
ucugucuauu uauacaaaag gcuacac 27

<210> 7703
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7703
uuucuaucug ucuauuuaua caaaagg 27

<210> 7704
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7704
auuucuaucu gucuauuuau acaaaag 27

<210> 7705
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7705
cauuucuauc ugucuauuua uacaaaa 27

<210> 7706
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7706
ccauuucuau cugucuauuu auacaaa 27

<210> 7707
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7707
cggaccauuu cuaucugucu auuuaua 27

<210> 7708
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7708
ucggaccauu ucuaucuguc uauuuau 27

<210> 7709
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7709
aaacuaaucg gaccauuucu aucuguc 27

<210> 7710
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7710
gaaacuaauc ggaccauuuc uaucugu 27

<210> 7711
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7711
ggaaacuaau cggaccauuu cuaucug 27

<210> 7712
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7712
aggaaacuaa ucggaccauu ucuaucu 27

<210> 7713
<211> 27

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7713
auuaaaaagg aaacuaaucg gaccauu 27

<210> 7714
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7714
aagcauauua aaaaggaaac uaaucgg 27

<210> 7715
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7715
uaagcauauu aaaaaggaaa cuaaucg 27

<210> 7716
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7716
auuuuaagca uauuaaaaag gaaacua 27

<210> 7717
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7717
cugcuuauuu uaagcauauu aaaaagg 27

<210> 7718
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7718
ccugcuuauu uuaagcauau uaaaaag 27

<210> 7719
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7719
gauccaccug cuuauuuuaa gcauauu 27

<210> 7720
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7720
caaaaacaug aaauagaucc accugcu 27

<210> 7721
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7721
ucaaaaacau gaaauagauc caccugc 27

<210> 7722
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7722
guucaaaaac augaaauaga uccaccu 27

<210> 7723
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7723
uguucaaaaa caugaaauag auccacc 27

<210> 7724
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7724
uuguucaaaa acaugaaaua gauccac 27

<210> 7725
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7725
aguuuuuguu caaaaacaug aaauaga 27

<210> 7726
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7726
cgauaaaguu uuuguucaaa aacauga 27

<210> 7727
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7727
uaucccccgau aaaguuuuug uucaaaa 27

<210> 7728
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7728
guaucccccga uaaaguuuuu guucaaa 27

<210> 7729
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7729
acaccucuua cugauuuacc cuaccgc 27

<210> 7730
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7730
uaacaccucu uacugauuua cccuacc 27

<210> 7731
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7731
auaacaccuc uuacugauuu acccuac 27

<210> 7732
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 7732
aauaacaccu cuuacugauu uacccua 27

<210> 7733
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7733
aaauaacacc ucuuacugau uuacccu 27

<210> 7734
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7734
caaauaacac cucuuacuga uuuaccc 27

<210> 7735
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7735
aaggcucaaa uaacaccucu uacugau 27

<210> 7736
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7736
aaaacaaggc ucaaauaaca ccucuua 27

<210> 7737
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7737
caaaacaagg cucaaauaac accucuu 27

<210> 7738
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7738
ccaaaacaag gcucaaauaa caccucu 27

<210> 7739
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7739
uguccaaaac aaggcucaaa uaacacc 27

<210> 7740
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7740
acuguccaaa acaaggcuca aauaaca 27

<210> 7741
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7741
gguauacugu ccaaaacaag gcucaaa 27

<210> 7742
<211> 27
<212> RNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7742
aggcaacugg uauacugucc aaaacaa 27

<210> 7743
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7743
gggauaaaag gcaacuggua uacuguc 27

<210> 7744
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7744
ugggauaaaa ggcaacuggu auacugu 27

<210> 7745
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7745
acaacuuugg gauaaaaggc aacuggu 27

<210> 7746
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7746
caacaacuuu gggauaaaag gcaacug 27

<210> 7747

<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7747
gguuacaaca acuuugggau aaaaggc 27

<210> 7748
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7748
agguuacaac aacuuuggga uaaaagg 27

<210> 7749
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7749
cagguuacaa caacuuuggg auaaaag 27

<210> 7750
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7750
uaucacagca gguuacaaca acuuugg 27

<210> 7751
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7751
guaucacagc agguuacaac aacuuug 27

<210> 7752
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7752
uuguaucaca gcagguuaca acaacuu 27

<210> 7753
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7753
ccgcaucugu ugaagcauug uaucaca 27

<210> 7754
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7754
ucugaaccau uucuauaacc gcaucug 27

<210> 7755
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7755
uaauucugaa ccauuucuau aaccgca 27

<210> 7756
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7756

uuuaauucug aaccauuucu auaaccg 27

<210> 7757
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7757
guuuaauucu gaaccauuuc uauaacc 27

<210> 7758
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7758
aguuuaauuc ugaaccauuu cuauaac 27

<210> 7759
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7759
aaguuuaauu cugaaccauu ucuauaa 27

<210> 7760
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7760
auuaaaaguu uaauucugaa ccauuuc 27

<210> 7761
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7761
aauuaaaagu uuaauucuga accauuu 27

<210> 7762
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7762
ugaauuaaaa guuuaauucu gaaccau 27

<210> 7763
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7763
uuugaaugaa uuaaaaguuu aauucug 27

<210> 7764
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7764
uuuuuuugaa ugaauuaaaa guuuaau 27

<210> 7765
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7765
uuuuuuuuuu ugaaugaauu aaaaguu 27

<210> 7766
<211> 27
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7766
uuuuuuuuuu uugaaugaau uaaaagu 27

<210> 7767
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7767
uuuuuuuuuu uuugaaugaa uuaaaag 27

<210> 7768
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7768
uuuuuuuuuu uuuugaauga auuaaaa 27

<210> 7769
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7769
uuuuuuuuuu uuuuugaaug aauuaaa 27

<210> 7770
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7770
uuuuuuuuuu uuuuuugaau gaauuaa 27

<210> 7771
<211> 21
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7771
accucacuug caauaauuau a 21

<210> 7772
<211> 21
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7772
uaauuauugc aagugagguu a 21

<210> 7773
<211> 21
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7773
uaaccucacu ugcaauaauu a 21

<210> 7774
<211> 21
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7774
uaaccucacu ugcaauaauc c 21

<210> 7775
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 7775
accucacuug caauaauuau acgaa 25

<210> 7776
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 7776
accucacuug caauaauuau aauaa 25

<210> 7777
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 7777
accucacuug caauaauuau aagca 25

<210> 7778
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<400> 7778
accucacuug caauaauuau aagac 25

<210> 7779
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7779

gucuuauaau uauugcaagu gagguua 27

<210> 7780
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7780
ugcuuauaau uauugcaagu gagguua 27

<210> 7781
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7781
uuauuauaau uauugcaagu gagguua 27

<210> 7782
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7782
uucguauaau uauugcaagu gagguua 27

<210> 7783
<211> 104
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<220>
<221> modified_base
<222> (22)..(24)
<223> a, c, t, g, u, unknown or other

<220>
<221> modified_base

<222> (25)..(104)
<223> a, c, t, g, u, unknown or other and this region may encompass 1 to 5, 1 to 10, 1 to 20, 1 to 30, 1 to 50, or 1 to 80 nucleotides

<220>
<223> see specification as filed for detailed description of substitutions and preferred embodiments

<400> 7783
accucacuug caauaauuau annnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 60

nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnn 104

<210> 7784
<211> 106
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<220>
<221> modified_base
<222> (1)..(80)
<223> a, c, t, g, u, unknown or other and this region may encompass 1 to 5, 1 to 10, 1 to 20, 1 to 30, 1 to 50, or 1 to 80 nucleotides

<220>
<221> modified_base
<222> (81)..(85)
<223> a, c, t, g, u, unknown or other

<220>
<223> see specification as filed for detailed description of substitutions and preferred embodiments

<400> 7784
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 60

nnnnnnnnnn nnnnnnnnnn nnnnnuaauu auugcaagug agguua 106

<210> 7785
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<221> modified_base

<222> (22)..(27)
<223> a, c, t, g, unknown or other

<400> 7785
taacctcact tgcaataatt annnnnn 27

<210> 7786
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7786
cagcgtggac aatggctact caagctgatt tgat 34

<210> 7787
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 7787
ugguguagaa cacuaauuca ucatc 25

<210> 7788
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 7788
ugguguagaa cacuaauuca uactc 25

<210> 7789
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 7789
ugguguagaa cacuaauuca uaacc 25

<210> 7790
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic oligonucleotide

<400> 7790
ugguguagaa cacuaauuca uaata 25

<210> 7791
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7791
aauuaugaau uaguguucua caccauu 27

<210> 7792
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7792
gcuuaugaau uaguguucua caccauu 27

<210> 7793
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7793
gacuaugaau uaguguucua caccauu 27

<210> 7794
<211> 27
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7794
gaucaugaau uaguguucua caccauu 27