



(12)发明专利

(10)授权公告号 CN 104220051 B

(45)授权公告日 2017.04.19

(21)申请号 201280067986.3

(22)申请日 2012.11.26

(65)同一申请的已公布的文献号  
申请公布号 CN 104220051 A

(43)申请公布日 2014.12.17

(30)优先权数据  
201108800-2 2011.11.25 SG

(85)PCT国际申请进入国家阶段日  
2014.07.24

(86)PCT国际申请的申请数据  
PCT/SG2012/000444 2012.11.26

(87)PCT国际申请的公布数据  
W02013/077814 EN 2013.05.30

(73)专利权人 新加坡保健服务集团有限公司  
地址 新加坡新加坡市

(72)发明人 郑敏展 林顺泰

(74)专利代理机构 北京金信知识产权代理有限公司 11225

代理人 朱梅 李海明

(51)Int.Cl.  
A61K 31/00(2006.01)  
C12Q 1/68(2006.01)

(56)对比文件

Wei Ju, et al. CP-690,550, a therapeutic agent, inhibits cytokine-mediated Jak3 activation and proliferation of T cells from patients with ATL and HAM/TSP. 《BLOOD》.2011,第117卷(第6期),1938-1946页.

Wei Ju, et al. CP-690,550, a therapeutic agent, inhibits cytokine-mediated Jak3 activation and proliferation of T cells from patients with ATL and HAM/TSP. 《BLOOD》.2011,第117卷(第6期),1938-1946页.

STEFAN FADERL, et al. WP-1034, A Novel JAK-STAT Inhibitor, with Proapoptotic and Antileukemic Activity in Acute Myeloid Leukemia (AML). 《ANTICANCER RESEARCH》.2005,第25卷1841-1850.

STEFAN FADERL, et al. WP-1034, A Novel JAK-STAT Inhibitor, with Proapoptotic and Antileukemic Activity in Acute Myeloid Leukemia (AML). 《ANTICANCER RESEARCH》.2005,第25卷1841-1850. (续)

审查员 刘东吉

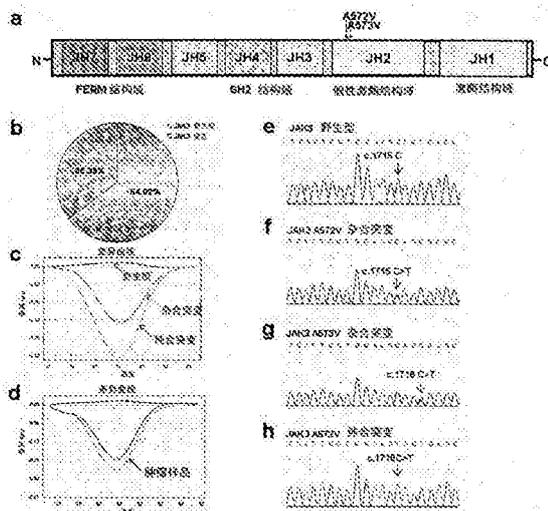
权利要求书2页 说明书11页  
序列表91页 附图3页

(54)发明名称

自然杀伤/T细胞淋巴瘤(NKTCL)易感性预测,诊断和治疗

(57)摘要

本发明涉及一种自然杀伤/T细胞淋巴瘤(NKTCL)易感性的预测、诊断和治疗。本发明涉及一种用于在受试者中预测自然杀伤T细胞淋巴瘤(NKTCL)的易感性和/或诊断NKTCL的方法,该方法包括测试JAK突变。本发明还涉及一种使用包括至少一种JAK突变的细胞系筛选能够治疗NKTCL的候选药剂方法。本发明包括一种包括至少一种JAK突变的NKTCL动物模型。本发明还包括用于治疗NKTCL的JAK抑制剂。



CN 104220051 B

[接上页]

(56)对比文件

M. TSUTSUI,et al.Frequent STAT3 activation is associated with Mcl-1 expression in nasal NK-cell lymphoma.《International Journal of Laboratory

Hematology》.2010,419-426页.

M. TSUTSUI,et al.Frequent STAT3 activation is associated with Mcl-1 expression in nasal NK-cell lymphoma.《International Journal of Laboratory Hematology》.2010,419-426页.

1. 一种用于测试受试者中包含SEQ ID NO:1的在核苷酸15792位点的由T对C的置换和/或在核苷酸15795位点的由T对C的置换的突变型JAK3基因和/或包含SEQ ID NO:3的在核苷酸124823位点的由G对T的置换的突变型JAK1基因的存在的试剂在制备用于在所述受试者中预测自然杀伤T细胞淋巴瘤 (NKTCL) 的易感性和/或诊断NKTCL的试剂中的用途,其中,所述突变型JAK3基因和/或所述突变型JAK1基因中的至少一种的存在表明受试者面临形成NKTCL的风险和/或具有NKTCL。

2. 根据权利要求1所述的用途,其进一步包括提供来自所述受试者的分离的血液和/或细胞样品用于所述测试。

3. 根据权利要求1所述的用途,其进一步包括:提供从所述受试者分离的核酸分子用于所述测试。

4. 根据权利要求2所述的用途,其进一步包括提供从来自所述受试者的分离的血液和/或细胞样品中分离的核酸分子用于所述测试。

5. 根据权利要求3或4所述的用途,其中,所述分离的核酸分子由基因组DNA或mRNA组成。

6. 根据权利要求1或2所述的用途,其中,所述测试是在基因组DNA、mRNA和/或cDNA上进行的。

7. 根据权利要求5或6所述的用途,其中,所述测试包括以下的一种或多种:序列分析、限制性片段长度多态性分析、杂交、聚合酶链式反应 (PCR) 和/或逆转录PCR。

8. 一种用于测试受试者是否表达包含SEQ ID NO:2的在氨基酸572位点的由V对A的置换和/或在氨基酸573位点的由V对A的置换的突变型JAK3蛋白和/或包含SEQ ID NO:4的在氨基酸652位点的由D对Y的置换的突变型JAK1蛋白的试剂在制备用于在所述受试者中预测自然杀伤T细胞淋巴瘤 (NKTCL) 的易感性和/或诊断NKTCL的试剂中的用途,其中,所述突变型JAK3蛋白和/或所述突变型JAK1蛋白中的至少一种的表达表明所述受试者面临形成NKTCL的风险和/或具有NKTCL。

9. 根据权利要求8所述的用途,进一步包括提供来自所述受试者的分离的血液和/或细胞样品用于所述测试。

10. 根据权利要求8所述的用途,进一步包括提供来自所述受试者的至少一种分离的蛋白质用于所述测试。

11. 根据权利要求9所述的用途,进一步包括提供来自所述受试者的所述分离的血液和/或细胞样品中的至少一种蛋白质用于所述测试。

12. 根据权利要求8或9所述的用途,其中,所述测试包括蛋白测序和/或抗体检测方法。

13. 一种用于筛选能够治疗NKTCL的药剂的方法,所述方法包括:

(i) 提供包含至少一个突变型JAK3基因和/或突变型JAK1基因的NKTCL细胞系,所述突变型JAK3基因包含SEQ ID NO:1的在核苷酸15792位点的由T对C的置换和/或在核苷酸15795位点的由T对C的置换,以及所述突变型JAK1基因包含SEQ ID NO:3的在核苷酸124823位点的由G对T的置换;

(ii) 用所述药剂接触所述NKTCL细胞系;和

(iii) 确定所述药剂对哺乳动物NKTCL细胞系的效果;

其中,所述药剂的降低NKTCL细胞系的生活力、生长和/或增殖和/或增加NKTCL细胞系

凋亡的能力是药剂治疗NKTCL的能力的指示。

14. 一种用于筛选能够降低至少一种JAK蛋白的活性的药剂的方法,所述方法包括:

(i) 提供携带至少一个突变型JAK3基因和/或突变型JAK1基因的NKTCL细胞系,所述突变型JAK3基因包含SEQ ID NO:1的在核苷酸15792位点的由T对C的置换和/或在核苷酸15795位点的由T对C的置换,以及所述突变型JAK1基因包含SEQ ID NO:3的在核苷酸124823位点的由G对T的置换;

(ii) 用所述药剂接触所述NKTCL细胞系;和

(iii) 确定所述药剂对于NKTCL细胞系的效果;

其中,所述药剂降低细胞系的生活力、生长和/或增殖和/或增加细胞系凋亡的能力是候选药剂降低至少一种JAK蛋白的活性的能力的指示。

15. 根据权利要求13或14所述的方法,其中,所述NKTCL细胞系携带以下JAK突变中的至少一种:

(i) 在SEQ ID NO:1的核苷酸15792位点由T置换C;

(ii) 在SEQ ID NO:1的核苷酸15795位点由T替换C;和

(iii) 在SEQ ID NO:3的核苷酸124823位点由G置换T。

## 自然杀伤/T细胞淋巴瘤 (NKTCL) 易感性预测, 诊断和治疗

### 技术领域

[0001] 本发明涉及癌症的治疗和/或诊断。特别地, 本发明涉及自然杀伤/T细胞淋巴瘤 (NKTCL) 的治疗和/或诊断。

### 背景技术

[0002] 自然杀伤(NK)细胞淋巴瘤是一类非霍奇金淋巴瘤(NHL)。大多数的NHL(90%)是B细胞起源的。NK细胞淋巴瘤不是由B细胞形成的。然而, 对于NK细胞淋巴瘤由正常细胞形成仍然存在争论。尤其是, 是否NK细胞淋巴瘤表征真正的NK细胞的存在或仅仅表征具有异常细胞标记的T细胞的存在是有争议的。在缺乏NK细胞淋巴瘤的确切血统的明确证明的情况下, 分类时许多研究者倾向于使用术语NK/T细胞淋巴瘤(NKTCL)。

[0003] 自然杀伤T细胞淋巴瘤(NKTCL)多见于亚洲国家和拉丁美洲的一些地区。在亚洲, 它占有成熟T细胞淋巴瘤病例的高达一半(1)。然而, 相对于更常见的B细胞淋巴瘤, 很少有人知道它的分子特征及发病机理。在这种亚型的淋巴瘤中, 基础科学和临床研究几乎没有进展, 由于目前还没有对于NKTCL公认的标准第一线治疗, 继续构成在治疗这些患者中的重大挑战。无论多药化疗和受累野放疗, 5年总生存率约为对非鼻NKTCL为9%和对鼻NKTCL为42%(2,3)。

[0004] 与相对多见的B细胞淋巴瘤相比, 关于NKTCL的分子特征和发病机理知之甚少。这部分原因可能是西方的相对稀有性和难以获取足够的活检。NKTCL的常规化疗治疗迄今取得效果差, 其结果对III期或IV期的患者几乎总是致命的。

[0005] 理想的是识别新的遗传畸变, 和NKTCL中的潜在的治疗靶, 以及NKTCL的潜在治疗剂。

### 发明内容

[0006] 本发明涉及癌症的治疗和/或诊断, 特别是自然杀伤/T细胞淋巴瘤(NKTCL)的治疗和/或诊断。

[0007] 根据第一方面, 本发明涉及一种用于在受试者中预测自然杀伤T细胞淋巴瘤(NKTCL)的易感性和/或诊断NKTCL的方法, 其包括测试所述受试者至少一种JAK基因的基因型, 其中, 突变型JAK基因的存在表明受试者具有形成NKTCL的风险和/或具有NKTCL。

[0008] 本发明还涉及一种用于在受试者中预测自然杀伤T细胞淋巴瘤(NKTCL)的易感性和/或诊断NKTCL的方法, 其包括测试所述受试者是否表达野生型或突变型JAK蛋白, 其中突变型JAK蛋白的表达表明该受试者面临形成NKTCL的风险和/或具有NKTCL。

[0009] 根据第二方面, 本发明涉及用于筛选能够治疗NKTCL的药剂的方法, 其包括:

[0010] (i) 提供包含至少一个突变型JAK基因的NKTCL细胞系;

[0011] (ii) 用所述药剂接触所述NKTCL细胞系; 和

[0012] (iii) 确定药剂对哺乳动物NKTCL细胞系的效果;

[0013] 其中, 所述药剂的降低NKTCL细胞系的生活力、生长和/或增殖和/或增加NKTCL细

胞系凋亡的能力是药剂治疗NKTCL的能力的指示。

[0014] 根据第三方面,本发明涉及用于筛选能够降低至少一种JAK蛋白的活性的药剂的方法,该方法包括:

[0015] (i) 提供携带突变型JAK基因的NKTCL细胞系;

[0016] (ii) 用所述药剂接触所述NKTCL细胞系;和

[0017] (iii) 确定所述药剂对于NKTCL细胞系的效果;

[0018] 其中,所述药剂降低生活力、生长和/或增殖和/或增加凋亡的能力是候选药剂降低至少一种JAK蛋白的活性的能力的指示。

[0019] 根据第四方面,提供一种包含至少一个突变型JAK基因的NKTCL动物模型。

[0020] 根据第五方面,本发明涉及一种治疗自然杀伤T细胞淋巴瘤(NKTCL)的方法,其包括给受试者施用JAK抑制剂。

[0021] 本发明还包括JAK抑制剂在制备用于治疗自然杀伤T细胞淋巴瘤(NKTCL)的药物中的用途。

[0022] 本发明还包括用于治疗自然杀伤T细胞淋巴瘤(NKTCL)的JAK抑制剂。

## 附图说明

[0023] 图1示出了导致NKTCL样品中JAK3A572V和A573V突变的识别的高分辨率熔解(HRM)和Sanger测序数据。图1(a)表示在JAK3基因的JH2假性激酶结构域上的A572V和A573V突变的位置。用于验证JAK3突变的高分辨率熔解(HRM)和Sanger测序数据示于图1(b)到(h)。具体地:图1(b)以饼图示出了JAK3A572V和A573V突变的百分率( $n=65$ )。图1(c)示出了标准化为野生型样品的三种基因型的HRM差异图(在平行测定中):野生型JAK3、杂合JAK3(c.1715C>T,p.A1a572Val)和纯合JAK3(c.1715C>T,p.A1a572Val)。图1(d)示出了测序且证实为杂合JAK3(c.1718C>T,p.A1a573Val)突变的福尔马林固定的石蜡包埋(FFPE)NKTCL样品的代表性HRM差异曲线。值得注意的是,由于相同的C>T的转换,具有JAK3A572V或A573V突变的样品的HRM差异曲线是类似的。JAK3野生型等位基因的代表性的测序图谱示于图1(e)中,A572V杂合突变的代表性的测序图谱示于图1(f)中,A573V杂合突变的代表性的测序图谱示于图1(g)中,A572V纯合突变的代表性的测序图谱示于图1(h)中。

[0024] 图2示出了证明IL-2对JAK3,以及STAT5磷酸化和CP-690,550对NKTCL细胞系治疗作用的数据。图2(a)示出了用或不用重组人IL-2(200IU/ml)培养,在48h后收集,并通过免疫印迹测定JAK3和STAT5磷酸化的NK-S1(JAK-突变)和KHYG-1(野生型)细胞的免疫印迹结果。用泛JAK抑制剂CP-690,550处理NK-S1、KHYG-1和K562(对照)细胞系,评价结果示于图2(b)至图2(d)。图2(b)显示了在48小时通过免疫印迹评估样品中的STAT5磷酸化。图2(c)显示了在72小时通过MTS测定分析的细胞存活率。图2(d)显示了在72小时通过膜联蛋白V-FITC染色进行评估并通过流式细胞术分析的药物诱导的细胞凋亡。实验至少重复3次。c和d中的结果代表重复3次的平均值±标准误差。\*表示通过配对Student's-t检验 $p<0.05$ 。

[0025] 图3提供显示突变NKTCL细胞系NK-S1的细胞因子非依赖性生长的数据。尤其是,用或不用重组人IL-2(0至200IU/ml)培养NK-S1(JAK3突变)和KHYG-1(JAK3野生型)。NK-S1的细胞生活力数据示于图3(a)中和KHYG-1的细胞生活力数据示于图3(b)中。用MTS测定每天监测细胞生活力持续七天,细胞生长表示为490nm处的吸光度减去在650nm处的参考。在a和

b中的结果表示重复3次的平均±标准差

[0026] 图4显示了证明JAK3A572V突变导致NKTCL细胞的组成型JAK3活性和IL-2非依赖性增殖的数据。图4A示出之前用100nM的JAK3siRNA (si-JAK3) 或对照siRNA (si-Ctrl) 处理24小时和进行增殖测定直至72小时(右面板)的NK-S1细胞的数据。同时,收集这些细胞,以及用抗磷酸化JAK3 (pJAK3)、磷酸化STAT5 (pSTAT5)、JAK3、STAT5或β-肌动蛋白的抗体作为正常化对照对蛋白质提取液进行Western印迹。图4B显示了用野生型JAK3 (JAK3WT) 或突变型JAK3的表达载体(即JAK3A572V) 瞬时转染的KHYG-1细胞的数据。通过Western印迹检测这些细胞中相对的pJAK3、pSTAT5、JAK3和STAT5的水平(上面板),用或不用IL-2进行使用这些细胞的增殖测定48小时(下面板)。所有结果表示为三次独立实验的平均值SEM。\*相对于载体对照(载体)  $p < 0.05$ 。

[0027] 释义

[0028] 如在本说明书中使用的术语“抑制剂”是指能够降低蛋白质的活性的任何物质,例如JAK抑制剂能够降低JAK蛋白的活性。特别地,JAK3抑制剂能降低JAK3蛋白的活性。降低蛋白质的活性可以是直接或间接的,例如,通过干扰蛋白质的表达或蛋白质在生物背景中发挥功能的机制。例如,JAK3激酶可能需要ATP分子与ATP结合位点的结合,这样,通过特异性结合并阻断ATP结合位点,降低JAK3激酶的活性。JAK蛋白的活性也可能需要另一种蛋白的活性,例如细胞因子受体,因而这种蛋白的活性的干扰也可以降低JAK蛋白的活性。可选择地,少数的JAK3激酶蛋白可以通过干扰在相关核酸结构域中的基因表达(例如相应mRNA的翻译)来表达,。

[0029] 按照WHO分类(6),NKTCL指的是NK/T细胞淋巴瘤。术语“自然杀伤T细胞淋巴瘤”、NKTCL和“NK/T细胞淋巴瘤”可互换使用,是指一类非B-细胞来源的非霍奇金淋巴瘤(NHL)。NKTCL具有肿瘤坏死的典型形态,血管中心(angiocentricity)以及相应的免疫表型,特别是CD56、胞质CD3的存在以及EBER几乎普遍的存在。NK/T细胞淋巴瘤不同于成熟T细胞白血病/淋巴瘤,它是T细胞谱系的疾病且与HTLV-1感染相关。

[0030] 术语“治疗/处理”包括减轻、预防和/或消除一种或多种与疾病(例如自然杀伤/T细胞淋巴瘤(NKTCL))相关的症状。

[0031] 本发明的详细说明

[0032] 本发明涉及癌症的治疗和/或诊断,特别是自然杀伤/T细胞淋巴瘤(NKTCL)的治疗和/或诊断。

[0033] 根据第一方面,提供一种用于在受试者中预测自然杀伤T细胞淋巴瘤(NKTCL)的易感性和/或诊断NKTCL的方法,其包括测试所述受试者至少一个JAK基因的基因型,其中,突变型JAK基因的存在表明受试者面临形成NKTCL的风险和/或具有NKTCL。杂合或纯合突变型JAK基因的存在表明受试者面临形成NKTCL的风险和/或具有NKTCL。

[0034] 可以测试任何JAK基因的任何一种或组合。受测试的JAK基因可以选自JAK1、JAK2、JAK3和TYK2。例如,可以测试JAK3和/或JAK1基因。通常,SEQ ID NO:1表示野生型JAK3基因。在一个实例中,包括在SEQ ID NO:1的核苷酸15792位点由T置换C和/或在核苷酸15795位点由T置换C的突变型JAK3基因的存在表示受试者面临形成NKTCL的风险和/或具有NKTCL。

[0035] 通常,SEQ ID NO:3表示野生型JAK1基因。在另一实例中,包括在SEQ ID NO:3的核苷酸124823位点由G置换T的突变型JAK1基因的存在表示受试者是易受感染的和/或具有

NKTCL。突变型JAK1和JAK3基因的同时存在还表明受试者面临形成NKTCL的风险和/或具有NKTCL。

[0036] 所述方法可以在来自受试者的分离的细胞样品上进行。分离的细胞样品可以是来自血液和/或肿瘤样品。因此,该方法可以进一步包括提供来自受试者的分离的细胞样品用于测试。该方法可以进一步包括从受试者、血液样品和/或分离的细胞样品中分离核酸分子用于所述测试。所述分离的核酸分子可以包括基因组DNA或mRNA。特别地,所述测试可以在基因组DNA、mRNA和/或cDNA中进行。

[0037] 任何合适的技术可以用于测试。例如,测试可以通过序列分析、限制性片段长度多态性分析、杂交、聚合酶链式反应(PCR)和/或逆转录PCR。特别是,例如Sanger测序和高分辨率熔解(High resolution melt)技术可以用于测试。

[0038] 在本发明的另一方面中,提供了一种用于在受试者中预测自然杀伤T细胞淋巴瘤(NKTCL)的易感性和/或诊断NKTCL的方法,其包括测试所述受试者是否表达野生型或突变型JAK蛋白,其中,突变型JAK蛋白的表达表明该受试者面临形成NKTCL的风险和/或具有NKTCL。

[0039] 可以测试任何JAK蛋白的任何一种或组合。受测试的JAK蛋白可以选自JAK1、JAK2、JAK3和TYK2。例如,可以测试JAK3和/或JAK1蛋白。通常,SEQ ID NO:2表示野生型JAK3蛋白。在一个实例中,包括在SEQ ID NO:2的氨基酸572位点由V置换A和/或在氨基酸573位点由V置换A的突变型JAK3基因的存在表明受试者面临形成NKTCL的风险和/或具有NKTCL。

[0040] 通常,SEQ ID NO:4表示野生型JAK1蛋白。在另一实例中,包括在SEQ ID NO:4的氨基酸652位点由D置换Y的突变型JAK1蛋白的存在表明受试者面临形成NKTCL的风险和/或具有NKTCL。突变型JAK3和JAK1蛋白的同时存在也表明受试者面临形成NKTCL的风险和/或具有NKTCL。

[0041] 所述方法可以在来自受试者的分离的血液和/或细胞样品中进行。所述分离的细胞样品可以是来自肿瘤。因此,所述方法可以进一步包括提供来自受试者的分离的血液和/或细胞样品用于测试。所述方法可以进一步包括从受试者、血液样品和/或分离的细胞样品中分离蛋白分子用于所述测试。

[0042] 可以使用任何合适的方法以检测相关的野生型和/或突变型JAK蛋白是否表达。例如,可以通过蛋白质测序和/或抗体检测来测试。特别地,可以利用使用对于相关的野生型和/或突变型JAK蛋白具有特异性的至少一种抗体的酶联免疫吸附测定(ELISA)。

[0043] 在本发明的第二方面中,提供了一种用于筛选能够治疗NKTCL的药剂的方法,其包括:

[0044] (a) 提供包含至少一个突变型JAK基因的NKTCL细胞系;

[0045] (b) 使所述药剂与NKTCL细胞系接触;和

[0046] (c) 确定所述药剂对NKTCL细胞系的效果;

[0047] 其中,所述药剂的降低NKTCL细胞系的生活力、生长和/或增殖和/或增加NKTCL细胞系凋亡的能力可以指示药剂治疗NKTCL的能力。

[0048] 在本发明的第三方面中,提供了一种用于筛选能够降低至少一种JAK蛋白的活性的药剂的方法,其包括:

[0049] (i) 提供携带至少一个突变型JAK基因的NKTCL细胞系;

[0050] (ii) 用所述药剂接触所述NKTCL细胞系;和

[0051] (iii) 确定所述药剂对NKTCL细胞系的效果;

[0052] 其中,所述药剂降低细胞系的生活力、生长和/或增殖和/或增加细胞系凋亡的能力是候选药剂降低至少一种JAK蛋白的活性的能力的指示。

[0053] 所述NKTCL细胞系可以携带任何突变型JAK1、JAK2、JAK3或TYK2基因中的任何一种或组合。例如,NKTCL细胞系可以携带突变型JAK3基因和/或突变型JAK1基因。特别是,哺乳动物NKTCL细胞系可携带下列突变中的至少一种:

[0054] (i) 在SEQ ID NO:1的核苷酸15792位点由T置换C(在JAK3基因中);

[0055] (ii) 在SEQ ID NO:1的核苷酸15795位点由T置换C(在JAK3基因中);和

[0056] (iii) 在SEQ ID NO:3的核苷酸124823位点由G置换T(在JAK1基因中)。

[0057] 根据第四方面,本发明还涉及一种包含至少一种突变型JAK基因的NKTCL动物模型。例如,所述NKTCL动物模型可以包括选自突变型JAK1、JAK2、JAK3和TYK2基因中的至少一种突变。特别地,所述NKTCL动物模型包含突变型JAK3基因和/或突变型JAK1基因。更特别地,所述NKTCL动物模型包括下列突变中的至少一种:

[0058] (i) 在SEQ ID NO:1的核苷酸15792位点由T置换C;

[0059] (ii) 在SEQ ID NO:1的核苷酸15795位点由T置换C;和

[0060] (iii) 在SEQ ID NO:3的核苷酸124823位点由G置换T。

[0061] 所述NKTCL动物模型也可以用于筛选能够治疗NKTCL的候选药剂。

[0062] 根据第五方面,提供了一种治疗自然杀伤T细胞淋巴瘤(NKTCL)的方法,其包括给受试者施用至少一种JAK抑制剂。可以使用任何合适的JAK抑制剂。在本发明的另一方面中,提供至少一种JAK抑制剂在制备用于治疗自然杀伤T细胞淋巴瘤(NKTCL)的药物中的用途。在本发明的另一方面中提供了一种用于治疗自然杀伤T细胞淋巴瘤(NKTCL)的JAK抑制剂。所述JAK抑制剂能够降低JAK3蛋白的活性。

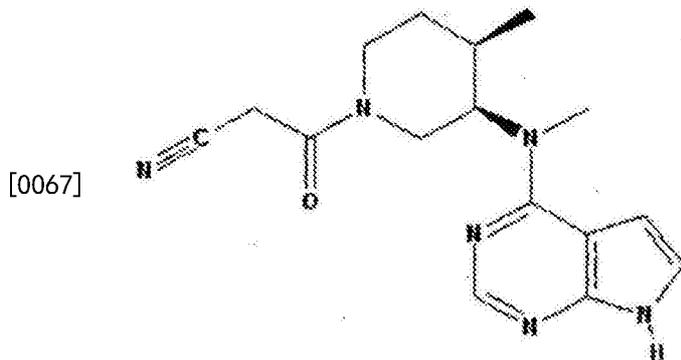
[0063] 例如,所述JAK抑制剂可以抑制JAK1、JAK2、JAK3和/或TYK2中的至少一种。因此,所述抑制剂可以是泛JAK抑制剂(pan-JAK inhibitor)。在一个具体的实例中,所述JAK抑制剂可以抑制JAK3和/或JAK1。更特别地,所述JAK抑制剂可以抑制JAK3或所述JAK抑制剂还可以抑制JAK1。

[0064] 在第一具体实例中,所述JAK抑制剂可以包括3-[(3R,4R)-4-甲基-3-[甲基(7H-吡咯并[2,3-d]嘧啶-4-基)氨基]哌啶-1-基]-3-氧代丙腈(也称为CP-690,550)。在第二具体实例中,可以包括(E)-2-氰基-3-(4-硝基苯基)-N-(R)-1-苯基乙基)丙烯酰胺(也称为WP-1034)。

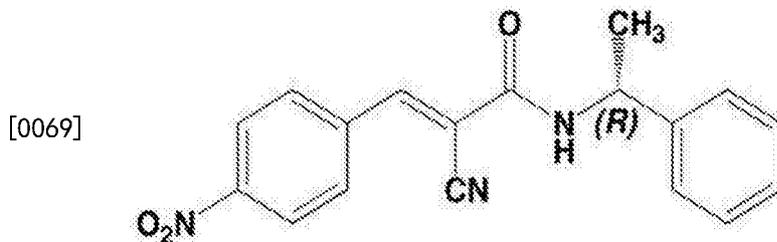
[0065] 施用JAK抑制剂的受试者可以包括哺乳动物。所述受试者可以包括人类。受试者可以在至少一种JAK基因/JAK蛋白中携带纯合或杂合突变。例如,所述受试者可以在JAK1/JAK1、JAK2/JAK2、JAK3/JAK3和/或TYK2/TYK2中携带纯合或杂合突变。特别地,受试者可以在JAK1/JAK1和/或JAK3/JAK3中携带纯合或杂合突变。更特别地,受试者可以具有选自JAK3-A572V、JAK3-A573V和JAK1-Y652D中的至少一种突变。然而,所述受试者还可以包含纯合野生型的表型。受试者可以具有JAK基因、其转录和/或翻译产物(蛋白质)中任一种的增加的表达,无论其是否携带纯合野生型、杂合或纯合突变基因。

[0066] CP-690,550是一种JAK抑制剂。它被称为托法替尼(Tofacitinib)、他索西替尼

(Tasocitinib), 或者以其商品名XELJANZ。其化学名称为3-[(3R,4R)-4-甲基-3-[甲基(7H-吡咯并[2,3-d]咪啉-4-基)氨基]哌啶-1-基]-3-氧代丙腈, 其结构式为:



[0068] 已经记载了WP-1034在急性髓细胞样白血病中具有促凋亡和抗白血病活性 (Faderl等, Anticancer Research 25:1841-1850 (2005)) (8)。它是酪氨酸激酶抑制剂的酪氨酸磷酸化抑制剂家族的成员, 其主要研究作为JAK-STAT通路的抑制剂。它的化学结构和名称如下:



[0070] WP1034- (E)-2-氰基-3-(4-硝基苯基)-N((R)-1-苯基乙基)丙烯酰胺

[0071] 现在已经一般性地描述了本发明, 通过参考通过举例说明, 而不是试图限制本发明的方式提供的下述实施例, 可以更容易地理解本发明。

### 实施例

[0072] 自然杀伤/T细胞淋巴瘤(NKTCL)的分子发病机理还不是很清楚。尚未完全确定导致NK/T细胞淋巴瘤的基因突变。在这项研究中, 在四个NKTCL患者中的两个中, 通过全外显子组测序鉴定了两面神激酶3(JAK3)体细胞激活突变(A572V和A573V)。在额外的61个病例中, 通过Sanger测序和高分辨率熔解(HRM)分析确定JAK3突变的发生率的进一步验证。总体而言, 65个病例中的23个(35.4%)包含JAK3突变。包含JAK3A572V突变的突变型NKTCL细胞系显示IL-2非依赖性生长和提示其致癌作用的组成的JAK3和STAT5磷酸化。JAK3突变的功能特性支持其涉及导致加速的细胞生长的细胞因子无关的JAK/STAT组成性活化。这些突变可能在NKTCL的发病机制中发挥显著作用。此外, 用新型泛JAK抑制剂CP-690,550, 同时治疗JAK3-突变体和野生型NKTCL细胞系, 导致剂量依赖性磷酸化STAT5降低, 降低细胞生活力和增加细胞凋亡。CP-690,550是一种泛JAK抑制剂, 不仅对于JAK3而且对于JAK1具有抑制作用。这可能是重要的, 因为在JAK-STAT信号通路系统中, JAK1和JAK3在它们的功能中相互干扰, 可能一种抑制响应于其它的抑制的一些补偿性上调。例如, 如果抑制JAK3, 可能上调JAK1以补偿JAK3的活性降低, 这可能会保留JAK-STAT信号。反之亦然。进一步举例, 使用不仅能够降低JAK1活性而且还降低JAK3的活性的泛JAK抑制剂的NKTCL治疗可能在抑制JAK-

STAT信号中特别有效。

[0073] 因此,针对解除管制JAK/STAT通路可能是对于NKTCL患者有前景的治疗。这些发现对于NKTCL患者的治疗具有重要意义。

[0074] 材料和方法

[0075] 组织样品

[0076] 从4位知情同意的NKTCL患者中获得匹配的新鲜冷冻的组织和外周血样品。本发明人进一步鉴定来自61位证实的NKTCL患者的石蜡包埋的组织块。NKTCL的诊断是根据2008年世界卫生组织(WHO)造血和淋巴组织的肿瘤分类(6)进行。所有样品均集中由新加坡保健服务集团血液病理学者审查。这项研究由新加坡的新加坡保健服务集团集中机构审查委员会(SingHealth Centralized Institutional Review Board)批准。

[0077] DNA的分离

[0078] 根据制造商的用法说明,分别使用DNeasy血液和组织微型试剂盒(Qiagen)和QIAmp DNA血液中型试剂盒(Qiagen)分离冷冻组织和配对的血液样本的DNA。对于福尔马林固定的石蜡包埋(FFPE)样品,从来自每个样品中的一个或两个10 $\mu$ m切片提取基因组DNA,用二甲苯除去石蜡,用100%乙醇将组织洗涤两次,然后蛋白酶K消化过夜。然后使用DNeasy血液和组织微型试剂盒(Qiagen)提取DNA。

[0079] 在两面神激酶中的体细胞突变的检测

[0080] 使用REPLI-g WGA中型试剂盒(Qiagen)对从每个样品中提取的基因组DNA进行全基因组扩增。对JAK1、JAK2、JAK3和TYK2的编码外显子序列通过Sanger测序进行测序以检测突变。当仅在肿瘤中而没有在配对的血液样品中检测到所述突变时,确认所述突变的体细胞来源。

[0081] 所述突变序列信息如在下表1中和在用以下序列的标识符的附加的基因组DNA、蛋白质和eDNA序列表(SEQ ID No.:1至SEQ ID No.:6)中所提供:

[0082] SEQ ID NO:1-JAK3野生型基因组DNA

[0083] SEQ ID NO:2-JAK3野生型氨基酸序列

[0084] SEQ ID NO:3-JAK1野生型基因组DNA

[0085] SEQ ID NO:4-JAK3野生型氨基酸序列

[0086] SEQ ID NO:5-JAK3野生型eDNA

[0087] SEQ ID NO:6-JAK1野生型eDNA

[0088] 表1:JAK1和JAK3突变信息

[0089]

	蛋白	ORF <sup>1</sup>	cDNA	基因
JAK1	Y652D <sup>6</sup>	T1954G	T2203G <sup>2</sup>	T124823G <sup>4</sup>
JAK3	A572V <sup>7</sup>	C1715T	C1815T <sup>3</sup>	C15792T <sup>5</sup>
JAK3	A573V <sup>7</sup>	C1718T	C1818T <sup>3</sup>	C15795T <sup>5</sup>

[0090] 表1的说明:

[0091] <sup>1</sup>ORF:开放阅读框,编码区,从ATG开始

[0092] <sup>2</sup>NCBI参考序列:NM\_002227.2(SEQ ID NO:6)

[0093] <sup>3</sup>NCBI参考序列:NM\_000215.3(SEQ ID NO:5)

[0094] <sup>4</sup>NCBI参考序列:NG\_023402.1 (SEQ ID NO:3)

[0095] <sup>5</sup>NCBI参考序列:NG\_007273.1 (SEQ ID NO:1)

[0096] <sup>6</sup>NCBI参考序列:NP\_002218.2 (SEQ ID NO:4)

[0097] <sup>7</sup>GenBank: AAC50950.1 (SEQ ID NO:2)

[0098] 采用高分辨率熔解 (HRM) 和双向Sanger测序分析的突变验证

[0099] 高分辨率熔解 (HRM) 和Sanger测序用于证实JAK1和JAK3突变和确认其在NKTCL患者群体中的流行率。结合这两种方法将大大提高FFPE样品中突变检测的精度。所述JAK2V617F突变也用上述两种方法测序。用于验证的引物组的序列列于表2 (见下文), 并包括在相应的标识符下的所附序列表中。

[0100] 表2:用于Sanger测序和HRM分析的验证引物组

[0101]

引物名称	引物序列 (5'至 3')	检测方法/ 产物尺寸	序列标识符
JAK1_Seq_Exon14F	CTGGCCTGAGACATTCCTATG	Sanger 测序/ 144 bp	SEQ ID NO.: 7
JAK1_Seq_Exon14R	TGAAAGAGAACACACTTACTCTCC AC		SEQ ID NO.: 8
JAK1_HRM_Exon14F	GCATGATGAGACAGGTCTCCAC	HRM / 83 bp	SEQ ID NO.: 9
JAK1_HRM_Exon14R	GAGAACACACTTACTCTCCACGTC		SEQ ID NO.: 10
JAK2_Seq_Exon12F	CAGCAAGTATGATGAGCAAGC	Sanger 测序/121 bp	SEQ ID NO.: 11
JAK2_Seq_Exon12R	ACAGATGCTCTGAGAAAGGC		SEQ ID NO.: 12
JAK2_HRM_Exon12F	GCTTTCTCACAAAGCATTGG	HRM / 85 bp	SEQ ID NO.: 13
JAK2_HRM_Exon12R	GGCATTAGAAAGCCTGTAGT		SEQ ID NO.: 14
JAK3_Seq_Exon12F	GCAGGTCTGTGAGCACAAAAT	Sanger 测序/167 bp	SEQ ID NO.: 15
JAK3_Seq_Exon12R	ACTGTCTCCAGCCATGCAC		SEQ ID NO.: 16
JAK3_HRM_Exon12F	CCACCTTCCCCAGTCATTC	HRM / 64 bp	SEQ ID NO.: 17
JAK3_HRM_Exon12R	GAGATGCCGGTACGACACTTG		SEQ ID NO.: 18

[0102] HRM曲线分析用于辨别点突变的存在。SsoFast<sup>TM</sup>EvaGreen Supermix® (Bio Rad, 产品编号172-5200) 用于扩增包括来自基因组DNA样品的相关突变的靶DNA片段。以600nM的终浓度使用HRM引物, 用BioRad公司的CFX96实时PCR检测系统重复进行反应。循环和熔化条件如下: 98°C 2分钟一个循环; 98°C 5秒、58°C 10秒 39个循环; 95°C 30分钟一个循环, 以0.2°C/秒从72°C至95°C升温熔化。用Biorad Precision Melt Analysis<sup>TM</sup>软件分析HRM曲线。偏离野生型曲线的HRM差异曲线被认为是包含突变。

[0103] 对于Sanger测序, 用Invitrogen公司的Platinum Taq聚合酶 (产品编号10966-083) 进行PCR, 循环为: 在95°C, 10分钟; 95°C 30秒 39个循环; 60°C 30秒, 72°C 1分钟以及72°C 最终延伸10分钟。用ABI的BigDye Terminator V3.1 (产品编号4337457) 进行测序PCR, 循环为: 在96°C 1分钟; 96°C 10秒 29个循环; 50°C 5秒和60°C 4分钟。由此产生的产物在ABI3730DNA分析仪上运行。

[0104] 细胞系、细胞生活力和细胞凋亡检测

[0105] NK-S1是来自先前描述的NKTCL异种移植 (7) 建立的细胞系。所述异种移植来源于来自发现有JAK1 (Y652D) 和JAK3 (A572V) 突变的同一患者的睾丸的转移性肿瘤。NK-S1在添加抗生素、热灭活的胎牛血清 (10%) 和马血清 (ES) (10%) 的DMEM培养基中培养超过60代。

通过细胞内染色,表型分析显示表面CD3<sup>-</sup>CD56<sup>+</sup>、粒酶B<sup>+</sup>。对NK-S1NKTCL细胞系进行测序,证实携带JAK3A572V的纯合突变,以及在JAK1密码子652上的突变。KHYG-1是从Japanese Collection of Research Bioresources得到的IL-2依赖的侵略性NK白血病细胞株,它培养在补充有抗生素、热灭活FBS (10%)、ES (10%)和200IU/ml的重组人IL-2(阿地白介素,诺华)<sup>7</sup>的RPMI培养基中。对KHYG-1进行测序,发现为JAK3密码子572和573、JAK1密码子652和658野生型。K562 (CCL-234, ATCC) 是对BCR-ABL融合基因呈阳性的慢性髓细胞性白血病 (CML) 细胞系。

[0106] 为了研究NKTCL细胞系对泛JAK抑制剂:CP-690,550 (塞莱克化学,产品编号S5001)的敏感性,在96孔板中以 $2 \times 10^4$ 细胞/100 $\mu$ L/孔接种细胞,并用CP-690,550以各种浓度或用载体对照处理。使用CellTiter 96<sup>®</sup>含水非放射性细胞增殖测定试剂盒(普洛麦格)通过MTS法评估生活力,读取在490nm和650nm(作为参考)的吸光度。药物诱导的细胞凋亡的程度是通过膜联蛋白V-FITC (BD生物科学公司)染色进行评价。在FACSCalibur流式细胞仪 (BD生物科学公司)中进行数据的采集。

#### [0107] 免疫印迹

[0108] 使用或不使用重组人IL-2 (阿地白介素,诺华),或存在或不存在CP-690,550孵育后,在指定的时间间隔采集细胞。用冰冷的磷酸盐缓冲盐水 (PBS) 洗涤细胞,并溶解在50 $\mu$ L冰冷的RIPA缓冲液 [25mM Tris-HCl, pH值7.6, 150mM NaCl, 1% 诺乃洗涤剂P-40, 1% 脱氧胆酸钠, 0.1% SDS, 1X磷酸酶抑制剂 (产品编号78420, 赛默飞世尔科技公司), 1X蛋白酶抑制剂 (产品编号12978000, 罗氏诊断公司) 和1mM原钒酸钠] 中。此后,细胞裂解液在冰上进行两次10秒、20Amp超声处理,在冰上搅拌另外15分钟。于4 $^{\circ}$ C下在14,000g下离心15分钟后,除去上清液,使用Bio-Rad蛋白测定 (产品编号500-0006, Bio-Rad实验室) 测定蛋白质浓度。在5%层积和8%分解SDS-聚丙烯酰胺凝胶上使用微型-变形蛋白四电泳系统 (产品编号165-8006, Bio-Rad实验室) 分离蛋白样品,并使用微型转印迹电泳转移细胞 (产品编号170-3930EDU, Bio-Rad实验室) 在100V持续120分钟转移到0.45 $\mu$ M硝化纤维素膜 (产品编号162-0115, Bio-Rad实验室)。用在PBST中的5%牛奶封闭膜,接着是在PBST中的5%牛血清白蛋白以及5mM原钒酸钠的兔抗-磷酸-jak1 (Tyr1022/1023) (产品编号3331, Cell Signaling)、兔抗磷酸-JAK3 (Tyr980/981) (D44E3) (产品编号5031, Cell Signaling)、鼠抗磷酸-Stat5 (Tyr694) (产品编号9356, Cell Signaling) 和兔抗磷酸-Stat3 (Tyr705) (D3A7) (产品编号9145, Cell Signaling) 的过夜孵育。使用增强化学发光 (ECL) (产品编号3407, 赛默飞世尔科技公司, 和产品编号RPN2132, Amersham) 进行可视化。使用Jak1 (6G4) (产品编号3344, Cell Signaling)、Jak3 (产品编号3775, Cell Signaling)、Stat5 (产品编号9363, Cell Signaling) 和 $\beta$ -肌动蛋白 (产品编号A1978, Sigma) 抗体以检测未磷酸化的蛋白质或作为负载对照。所有抗体在推荐的稀释液中使用。

#### [0109] 结果

[0110] Sanger测序法用于对来自具有额外节点NKTCL的四个患者的新鲜冰冻肿瘤和血液样品中的JAK1、JAK2、JAK3和TYK2的外显子区域测序。确定两种JAK3突变:A572V (p. Ala572Val, c. 1715C>T) 和A573V (p. Ala573Val, c. 1718C>T), 以及一种新JAK1突变:Y652D (p. Tyr652Asp, c. 1954T>G)。有趣的是,在相同的样品中发现JAK3A572V和JAK1Y652D突变。两种JAK3突变均位于JH2假性激酶结构域上的外显子12 (图1a), 已知其对JH1激酶结

构域具有自动抑制效果。在JAK1和JAK3中确定的所有三个错义突变被证实是体细胞起源的且通过Polyphen预测是可能有害的。

[0111] 用ENKTCL在额外的61例患者的FFPE样本中验证识别的突变,以确认他们的流行率。由该验证研究,通过Sanger测序识别另外21例具有JAK3突变的患者。总体而言,发现65例NKTCL患者中的23例患者(35.4%)具有JAK3突变(图1b)。对40个FFPE样品进行高分辨率熔解(HRM)分析和检测到14例JAK3突变(35%)。在23例具有JAK3突变的患者当中,有17例杂合A572V,两例纯合A572V,两例杂合A573V突变,一例纯合A573V突变和一例同时具有A572V和A573V杂合突变的患者(图1c-h)。没有发现额外的JAK1Y652D突变。此外,没有发现具有JAK2V617F(p.Val1617Phe或c.1849G>T)突变的患者,最近发现JAK2V617F突变存在于大部分的具有典型BCR/ABL阴性的慢性骨髓增殖性疾病的患者中和若干具有其它纯血液癌症例如骨髓增生异常综合征和急性髓细胞性白血病的患者中。

#### [0112] 讨论

[0113] JAK3<sup>A572V</sup>激活突变赋予细胞因子非依赖性增长

[0114] IL-2是NK细胞的增殖和活化必需的基本细胞因子(4)。JAK1和JAK3通过STAT转录因子的磷酸化介导IL-2受体信号(5)。根据确定的激活JAK3突变的的功能的重要性,我们测试JAK3突变是否能够赋予IL-2相对于包含纯合JAK3<sup>A572V</sup>突变的NKTCL细胞系(NK-S1)非依赖性生长。JAK-突变(NK-S1)细胞显示IL-2非依赖性生长(图3)和JAK3和STAT5的组成型磷酸化(图2a)。与此相反,JAK3-野生型KHYG-1细胞为明确的IL-2依赖性(图3和图2a)。重要的是,与用对照siRNA处理的细胞相比,用JAK3siRNA处理的NK-S1细胞在细胞增殖中表现出显著的降低,且减低的JAK3和STAT5的自磷酸化作用(图4A)。相反地,瞬时过量表达突变的JAK3(JAK3<sup>A572V</sup>)cDNA的KHYG-1细胞显示出IL-2非依赖性增殖和JAK3和STAT5的自磷酸化(图4B)。这些结果表明,JAK3激活突变是功能等位基因的增益,有助于在IL-2独立性方式中JAK/STAT通路的组成性活性。

[0115] 这项研究表明,JAK突变赋予衍生自同时包含JAK3A572V和JAK1Y652D突变的患者样品的异种移植建立的NKTCL细胞系细胞因子非依赖性生长。与经检测不携带鉴定的JAK1和JAK3突变的野生型KHYG-1(图2a)相比,NK-S1显示IL-2非依赖性生长(图3)、组成型JAK3和STAT5磷酸化(图2a)。

[0116] CP-690,550对于NKTCL细胞系的影响

[0117] 对泛JAK抑制剂CP-690,550抑制JAK-STAT通路的能力进行评价。由于活化的JAK蛋白直接使STAT蛋白磷酸化,用增加浓度的CP-690,550处理所述JAK突变细胞系(NK-S1)和野生型NKTCL细胞系(KHYG-1),并通过免疫印迹分析pSTAT5(图2b)。NK-S1和KHYG-1细胞系都显示pSTAT5的剂量依赖性降低(图2a),以及对于所述抑制剂的处理后的降低的细胞生活力(图2b)。由于其STAT5磷酸化与激活的JAK3无关,在对照K562细胞系中,CP-690,550并没有抑制pSTAT5(图2b)。如通过膜联蛋白V(Annexin V)染色显示,NK-S1的生存力减小与增加的细胞凋亡相关(图2c)。

[0118] 综上所述,通过自然杀伤/T细胞淋巴瘤(NKTCL)的两面神激酶(JAK)的外显子测序在NKTCL患者中识别JAK3A572和A573V和JAK1Y652D突变,证实JAK3突变的流行率为35.4%。包含JAK3A572V突变的突变NKTCL细胞系显示IL-2非依赖性生长和提示突变在相应的核酸结构域的致癌作用的组成性JAK3和STAT5磷酸化。体外研究表明,泛JAK抑制剂可能是一种

对于NKTCL患者的新的治疗剂。泛JAK抑制剂CP-690,550显示降低细胞生活力并导致在JAK3野生型(KHYG-1)和突变型(NK-S1)细胞系中的细胞凋亡。KHYG-1是IL-2依赖性NKTCL细胞系,从而其对泛JAK抑制剂敏感。

[0119] 参考文献:

[0120] 1.Kwong YL,Anderson BO,Advani R,Kim WS,Levine AM,Lim ST.Management of T-cell and natural-killer-cell neoplasms in Asia:consensus statement from the Asian Oncology Summit2009.The lancet oncology2009;10(11):1093-1101.

[0121] 2.Au WY,Ma SY,Chim CS,Choy C,Loong F,Lie AK et al.Clinicopathologic features and treatment outcome of mature T-cell and natural killer-cell lymphomas diagnosed according to the World Health Organization classification scheme:a single center experience of10years.Ann Oncol2005;16(2):206-214.

[0122] 3.Vose J,Armitage J,Weisenburger D.International peripheral T-cell and natural killer/T-cell lymphoma study:pathology findings and clinical outcomes.J ClinOncol2008;26(25):4124-4130.

[0123] 4.Suzuki R,Handa K,Itoh K,Kumagai K.Natural killer(NK) cells as a responder to interleukin2(IL2).I.Proliferative response and establishment of cloned cells.J Immunol1983;130(2):981-987.

[0124] 5.Lu L,Zhu J,Zheng Z,Yan M,Xu W,Sun L et al.Jak-STAT pathway is involved in the induction of TNF-beta gene during stimulation by IL-2.European journal of immunology1998;28(3):805-810.

[0125] 6.Campo E,Swerdlow SH,Harris NL,Pileri S,Stein H,Jaffe ES.The2008WHO classification of lymphoid neoplasms and beyond:evolving concepts and practical applications.Blood2008;117(19):5019-5032.

[0126] 7.Loong SL,Hwang JS,Lim ST,Yap SP,Tao M,Chong TW et al.An Epstein-Barr virus positive natural killer lymphoma xenograft derived for drug testing.Leukemia&lymphoma2008;49(6):1161-1167.

[0127] 8.Faderl et al.,WP-1034,a novel JAK-STAT inhibitor,with proapoptotic and antileukemic activity in acute myeloid leukemia(AML).Anticancer Research25:1841-1850(2005)

序列表

- <110> 新加坡保健服务集团有限公司 (Singapore Health Services Pte Ltd)
- <120> 自然杀伤/T细胞淋巴瘤 (NK/CTL) 易感性预测, 诊断和治疗
- <130> FP6140
- <160> 18
- <170> PatentIn version 3.5
- <210> 1
- <211> 28840
- <212> DNA
- <213> 智人 (Homo sapiens)

```

<400> 1
gtatttatac ttttcaagtg ctgctgcaaa ggaattttt caaaattttt ttaigftcca      60
attgttttget gctgggtgat aaaaattcaa ttgacttttg tattgaattc aacggacttt      120
ttaaacctgg taacttgcctg aatttatgta ttaatttcag tagttgtcct atagattccc      180
ttgggttttt gacataaaca atcataicat cagcaaatag caacagtttt atttaccctt      240
tttttattac ttatttiatt ctgttttget tgitacagaa tcttgcatag ttgcctttaa      300
attcttgggc tcccaattca gcttctccag tagctgagge tacaagcaig taccaccaig      360
cccagccaca cctgacttgt ttattttct catataattt ttgttttaa gacaggatct      420
cgtctctgtg cccagactgg agtgtaatgg tgtgatgatg gcttactgca gccttgtcct      480
ccctgactca agcaatcctc agcctcccaa atagctggga caacagggtg gacatacacc      540
acctgcecaa tttttaattt ttttttttt ttigagacag agtctccctc tgtcaactag      600
gctggagctc agtggcgca tcttggctca ctgcaacctt cacctcccg gttcaagcga      660
ttctctgccc tcagccctt gagtagctgg gattacagge ggcctcacc acgcaaggct      720
aatttttcta tttttaccat gcttggctaa tttttgtatt tttagtagag atggggtttc      780
accatgttga tcagcttggc cttagaactc tgaccttctg attctccacc ctccagctcc      840
caaagtctgc ggattacagg cgtgagccac catgccccagc tttcttttc tttctttctt      900
ttttttttt tttagacgga gtctcactct gtcaccagc ctggagtcca gtggcccgat      960
cttggctcac tcaagctcc gcctccctgg ttcacacct tctctgctt cagcctgctt      1020
tttctttct tattacagtg gctaacaatc ccagaacaat gttgaataga ggtggtgaaa      1080
atggacatcc ttgtcttgtt tcaaatctca ggaggaagtt attcagctt ttaccatttt      1140
tgtttttgtt ttigagatgt agtctcctc tglcgcaccag gctggagtac agtggcacta      1200
tcttggctcc ctgcaacctc tgcctcctgg actcaagcca tctctccact tcagtcttcc      1260
aagtacttga gaactacaggt gcaaccacc atgcttggct aatttttcta tgttttctag      1320
agaaggatct caccatgttg cccagctaa tctccaaact ctgagctcaa atgactctcc      1380
catgttgaact tccaaaagtg ctcaattac aggcctgagc caccgtgctt ggccctgctt      1440
cactgtactc ttaattttca ttggcaagt gaagctgagg aaattttctt ggttttaaga      1500
gctatttctc ctccatttcc tctgacttct ggattcatat ccacctaaact ggttggcatt      1560
tcttacttgc tttctagatg ttacttatat aacgagata ttttaccat gacttcaatt      1620
ttgttccagc ttacacttgg attgtatttt attctttgat tgtatttatg gacttcttgt      1680
cagcagaaaa atctgggtgt ttgeatcaet gactgcccct attttctctg ggcgaagtct      1740

```

[0001]

gggtfctgtc cccagaactt ccttttttta aaaaaaatta tttatttatt tattatittt	1800
ttgataccga gtcttgctgt gtcgccagg ctggaglgca gttgtgcga ctcggctcac	1860
tgaacctcc cctccaccagg ttcagtgat tetcttgcc cagcctctg agtagctggg	1920
actgcaggcg cccgccacca caccagctg cgttttgtat ttttagtaga gatggggtt	1980
caccaggtg gcaaggccgg tctcgaaact ctaacctcag gcgatccgc cgcctcggcc	2040
tcccaaaagt ctgggttat aggcgigagc caccgcgcc gcccagaact tccitttaga	2100
gccttcacat gcccttctct gggcctgaag gtaccacttt ggtcctcacc ccaatctect	2160
cttacttatt ctcaaaatat tgcagaaacc atcacactgg aggtagcaga gaccagaaa	2220
ctcactgtac tccggaaag cagagcttc agcctcagge caagatgag aacataaggt	2280
tgcattcccg tctgctgaag ccaccaggga agtgaagaa aacctacaa ctaagcttct	2340
gcttggcact tcttccgca ggtcagctgt ggtccacta agctccacta agctgaggac	2400
ataatctata tctctttccc ttgaccacg cggcctacc caogccatca aatgagtctc	2460
agccccccgt gtccttgaca tctctctct ctcaggaaca ctgtgaatc gigaagcctc	2520
caggccttg cctgggctgt tetgctgccc agaactgccc aactcctcac attctcaggt	2580
cactctctgg ctagtcctc ttgtgttgg atttcagaat caaagccacc tctccaggga	2640
agcccccca gatccagtca tctctcttag cagaccggtc ccaggggcaa ctgatataat	2700
tattgggcaa tagctgttt atgcccctc cccctgctgg actgctcagc cccctggaca	2760
gggattgggt ctgcattgt cccgattccc tgcacacagg ctgtgtcaa taagcctctg	2820
[0002] gctgattgaa cagttaagat caacaaata cttaacaaac cattitgtgt taagacttgt	2880
gatggtgata cagagatgaa aagcttttt ttttttttt ttgagacggg atctcactcc	2940
cattgccag cctggagtgc agtggcatga ccacagctaa ctgcagctc aactcctgg	3000
gctcaggta tctccacc ctagctccc ctagtactg ggaactacagg cacatgccac	3060
cacatccagc ttattatttt gtgtgtgtg tttttttgt agagacaggg tttaccatg	3120
ttgccaccg tggctctgaa cactgggct caagccatcc tctgctga gccctccaaa	3180
gtctgagat tacaggtgt agccactgt cttggccaca acttcttaa tetattcctt	3240
tttttttt ttgagacagag tattgtctc tgcaccaggc tggagtgcg tggcacaatc	3300
tcagctcact acaacctcc cctgctcct gggttccagt gattctctg cctcagctc	3360
ccaagtact gggattacag gcacatgcca ccagccacc ctaattttta tatttttagt	3420
agagatggg tttcaccatg ttggccaggc tggctctgaa ctctaggct caagcaatct	3480
tccaccctgg gccctccaaa gtgctggaat tacagatgt agccactgta cccgctacc	3540
acttctcag tctattctct aagctctact tccgggctc tgatctatt atcctaagaa	3600
cactggccca agtctctgca ttggatgct gccgggctt tctgctctc ctatttataa	3660
cagctctac ttccaactct cctgiggctc cagattatgc tccagcaaaa acccaccctt	3720
ctcccaaga cctgatccc cctgtccccc cagatcttg cccctgtga cccctctca	3780
gtcccttcc cctctatct acccctgccc ctggcctct gactgctctt caagctgeta	3840
agatcactgc cctctcaagg tctttgccc tctgtgccc tctctctgga gcacccttc	3900
cctggccagc tcccgtctc gccctgggtc caagttccag tetgigtctg tctgacacc	3960

	ctggctttct ttgttgtctg cgaatgattg gctccttcat ttgctcattg tctcagcgcc	4020
	agatcacaag ttccaagagg ccaggccgga tccacctggt tttttaggcc tgggcccagg	4080
	gcaccacagg cagaantggg tcattatctc tccctgagtc ttttcttttt tttttaaacg	4140
	aagtcaccgt ctgttgccag gctggagtgc agtggcgcca tctcgtctca ctgtaacate	4200
	cgctctctag attcaagcaa tctctccacc tcagcctect gagtagctag gattacagge	4260
	atcaccagge ctggctaatt ttcctgtttt tagtagagac aggttticat catgttgccc	4320
	aggctggfct caaacctctg acitcaagtg atccgccgc ctcagccfcc caaagtgtctg	4380
	cgattacagg ccaccacgcc tggctaattt ttgtattttt agtagagacg gagtttcgcc	4440
	atgttgacta ggctgtctc aaactcctga cctcaagtaa tcgcccgcct eagtctccca	4500
	aagtgtcggg atgacagcgg tgagccactg ccgccagcgt ctccctgagt ctttaaggag	4560
	aaatacctca aagaagaact tgaccttctt ctggggcaac ttccctgctt ccttccctggg	4620
	caaaaccagc caggtttctt tccctgggig caaaaattagt tccactgggl gcccaacica	4680
	caatgctaac agatgggtaa acigaggcaa taagggccgg gccagagccc cacttaaca	4740
	gtgggtctag agtggctga gccctgggtg tgaccagac ccttctctgt gctatcatca	4800
	gttcccttgg cttagggggt tccagcagcc tgtctgaacg gggcggtga tgcagaggct	4860
	tccggaactt tctgccctc ctggcccgc tcccgcctc cagctccgc agggccctga	4920
	ctttcgtaa atgacagtgg ctcaggaaac caaggggccc acacaggag gagccgagt	4980
	ggactttcct ctctctgctt cccggctctg cccgcccttc gaaagtcag ggctccctgcc	5040
	cgctaggtaa gagctggcga tgcgcaggg ctcggcccag acactggggg aggatggtgg	5100
[0003]	tggcgggaga tggctgggct ggggcagggt gctgccaggg caaaggctag ctgccttcc	5160
	aggcctcgga ggaagctgc gaggcagacg tgagccgaga ctgcctctt ccgatcctc	5220
	gttctcttgg gcttccgctt tgaactaagc cgggagatgc ctgcccttgc gacctggagg	5280
	agtcatttgg catgcgcgac ggggcttgc ggttggggg tgggaggag ggaatgggaa	5340
	ggagggattg ggggggggag ttcccagccc ctacctcca ggcttccc gtcagagac	5400
	agggtaccgc accataccag gatgcagaac gttgaggatt afaaacaggg gatgccagg	5460
	cgggaggata gcttggggc aggagttcaa gcccagcctg ggcaacatag ccagacctc	5520
	atttctaca acatttttaa aaaaccaaaa aaactatggc gttttctggg accaaacatc	5580
	acctctgact ttctattttt tttgttaca gtattacaga ataataatat tctgttaaga	5640
	ttttttgtt gttttggaga tgggagtctt gctatgttgt tcaggcagggt ctctaacccc	5700
	tggcctcaag ctatcttctt gctcagccc cctgagttagc tgggatigca gtggggcgc	5760
	actgccactg aagccttati ttaaacctga ctgggcttgg gcacagtggc tcatgecttt	5820
	aatcccaaca ctttgggagg ctgaggccag cggatcactg gaggtcagga gttcagatc	5880
	agcctgtca acatgfgaa acctatctc tactaaaaac acaaanatta gccaggtttg	5940
	gtgcggggtg cctgtaattc cagctactca ggagctgag gcaggagaat cgcctgaacc	6000
	tgggaggtgg agtttgcagt gagccagat catgccactg cactccagcc tgggagacag	6060
	aacagaate cgtctctccc cctacaaaat aaataaataa aaaaaaggc tgggcaatgt	6120
	ggctcacgtg tgtaateaca gcactttggg aggccaagge aggcgaatca cctgaggcca	6180
	ggagttttag accagcctgg ccaacatggt gaaactccgt ctctactaaa aatacaaaaa	6240

ttagctgggc gctgtgggtgc gcgccigtfaa tcccagccac ttgggaagct gaggcattgag	6300
aatcgcttga acccaggagg cagaggctac agtgagccaa gatcgtgcga ctgcactcca	6360
gccfgggtga cagtgcgaga ctccgtctca aaaaaacaaa caaacaacc aaaaaactg	6420
attggctgat gttgagggga cgatagagag getatgggtgt gtgattttat tctataaag	6480
ggcaaaacta gacatcaatc tctctgtgg agagatgggg ctctccaag gttccggga	6540
ctaggaatgf gctcattctt ggictggcca tcggtgacat caaagigtcc ctttggtaag	6600
gttctttccc ccacaagact tcccttccca cagtaaccac cacaccgctg tgcgaattgc	6660
cttctctgtt tggtttaaca ggcgtttgtt gatcgttac cggcacatca tcaagaaata	6720
tacaaattaa tgcacattaa ttgagttgac actttagccc tggattgcgc tcageagacc	6780
acctcaatga ggatcctgg gagtcagccc atttcacagc tgcgaaagct gagtcttag	6840
ggctctagtc ctctgattgt cttaaacctc attagcccag gcgcagtttc tcacccgggt	6900
aatcccagca ctttgggagt ccgaggcagg aggatcactc gaggtcagga gttccagacc	6960
agccctgcga acatggtaga accccgtctc taccaaaaat acaaaaatta gccggcatg	7020
gtggcgtgcc cctgtaatcc cagctacttg ggaggctgag gcaggagaat cacttgaacc	7080
caggatgcag agtaagccga gattgtgcca ctgcactcca gccctgtaga cagagctaga	7140
ctctgtctca aaacaaaaac aaaaaacccc tcattaatgc cgcgccccc cagccacagg	7200
gcattatitt ggatcatagt ttttgtattg ttttttttt ctagagataa ggtcttgcct	7260
tgtgcgccag gctggagtgc agtgggtgta tcatagctca atgcagctc aacttgcaga	7320
[0004] gctgaaggca tctctctgtc tcagctccc aagtagctag gactatgggg gtgtgccacc	7380
atgcccctgt aatttttttag agatgaggtc tcaaaatcct agcctcaagt gatccactg	7440
ctcggcctg tcaaatgct gggattacaa ggcttttttt tcttttttag aggagctctc	7500
actatattgc ccagctgggt ttcaaacctc tggctcggc caggcgcggg ggtcacaca	7560
tgtaatccag cattttggga gctgaggca gctgatcac ttgaggccag ggtttgaga	7620
tcagtgaac cccatctctc ttaaaaatac aagaaaata gctgggcgig gtgtgccca	7680
ccgttaatcc cagctactgg ggtggtgag gcacgagaat ctcttgaact tgggagggg	7740
aggttgcagt gagctgagat tgcgccctg cactccagcc tgggtgacag cgcgagactc	7800
tgtctcaaaa aagcaaaaa cataaaaca actcctggtc tcaagctate cttctcttt	7860
ggcctcggga aatgatggga ttacagacat gagccactgc gccctgctgg aacttaggtt	7920
tttgtttgtt tttccaaca cttctctcag atctcttca ttcaggtcaa tttgagtgac	7980
ctcttttttc tcccatttt tctcagggg actcgaagcc ccaccctgg ccccaccag	8040
ctgagggccc tgagtgtgga gtttctcag ggcaagtag cagcgggtg ggaggtgtg	8100
gggctggaa gcagggggcc agtttctcc tggcccate ccaggagcc tttcttctt	8160
tcttcttttc tttcttttt ttttttttt ttttgagac agagtctgac tctgttctc	8220
aggetggagt gcagtgttac aatcttggct cactgcaacc tctgcctccc aggttcaagt	8280
gattgtctct cctcagctc ccgagttgct gggattacag gaaagcaca ccacaccgg	8340
ctaagttttg cacttttttag aggcagggtt tgcctatgtt ggccaggcag gtctcaact	8400
ectgacctca agtgatctc ccgctcggc ctccaaaaat gctgtgatta caggcataag	8460

ccaccgeacc cggcctccag cactcctttc ca+gcectcc ctgctcagaa gtccaatccc	8520
ctctgaccag gactgagggg ctittttctct ctgtgcccga ggcaagttgc actcatggca	8580
ctccaagtg aagagaagcc cctgactcct cagcgttcat gcagcccttt gtccacggag	8640
gtctgtgccc tgcattgtct gctgcccgtt cgggcccggg ggccccecca ggcctatct	8700
ttctctttg gggaccactt ggctgaggac ctgtgcttgc agctgcccga ggccagcgtt	8760
gagtgcatee ctagtggatc gggccagagg gaaggatggg gctgtgtggg gccangattg	8820
gaagctggaa tagttgctg cagaagtcag caicggagct gggcctttgg gggatgagta	8880
ggagttttgt aatggagaag ggtgtcagg gttggcttct gaggcagagg gaatggcctg	8940
tgcagacgga gagggtgac ggcacatgaa ggaacagct ggtcatacct tgaggtatgg	9000
aaggatcigg acggttgggt atgatcigg cactcccgaa ggccacagat ggggtgacac	9060
aggagggagc tgatgggacc atcccctgta ggcatectgc ctgtgtacca ctccccttt	9120
gccttgccca cggagagcct gtctgtctgg ttccccecca gccacatctt ctccgtggag	9180
gaitccagca cccaagtcct gctgtacagg attcggtagg aagtgcacct cagcccacag	9240
ggattgiaca attttatcat ctctttgcat ttccaggtgc ccacacacct gccccagga	9300
ggtatggtca ctaccattt ctcatgtgag gaaacagacc agagagggtg ggtcacttgc	9360
ccaaggtcac acagcaagtt aaaggtacaa gctgggctct gtgaggcctc egcagaatct	9420
gtcctcgcce cccaccataa tgcactect acgtagcctg ggtgtcactt taiccccagg	9480
gttctctect ctctcagag ctitttactt cccaattggt ttgggcigga gaagtgcac	9540
cgcttcgggc tacgcaagga ttgcccagt gctatccttg acctgcagct cctggagcac	9600
ctctttgccc aggtggggtt ctgcccggg ttgaccacag ggggttggg gtccaagggg	9660
caacatgagg acitggcatg aatcaggtag ggctcgtct gacctcctt gttggcagtc	9720
aggagtgagg gtcagccag gattgggggg gctcgcaggt taacaacagg gcttgaagtt	9780
ggatggcctc agctgatgct cctgtggcg gcccccagc accgcagtga cctgtgtagt	9840
ggcgcctccc cctgtggcct cagtctcaag gacagggtg agtgtctcag cctggccgtg	9900
ttggacctg cccgatggc ggcagagcag gccacgggc cggagagct gctgaagact	9960
gtcaggtgag agccaccagg ctgtggggac ggcctctgct tgggagtgag caactgtggc	10020
tccatcgggg ctittgcggg ctcccacat ggagtctcc tgcagcttt cagggtttc	10080
ctatgaacca gggcctccca cgaacccagc cctctcaac cccaggtccc agctggacag	10140
acacctgacc tcccagct aaaagcctg tgggtcctt gtcgacctg tgggcgcca	10200
tgcccctccc ctactctgag gtcgggtct catacctgac cctgaatgag agtctgtgtg	10260
tgctgtgtg cccaactagg gccgcacccc agccccggg ctaaagcctg ggtttgtgtg	10320
tgtcccggg gggaccctc ccgacgtga gggcggctc ctccccctc aaaccttga	10380
gctacaagge ctgctaccc ccaagcctgc ggcactgat ccagggcctg agcttctga	10440
cgcgagggg talicggagg aggtgcga gacccctgg cccgctgccc gcttgcagg	10500
cagaaccgca ctgctcatg gccaaagta tcatggacct ggagcggctg gatccagccg	10560
ggcccgcca gacctccac gtgggcctc ctgggcccct tgggtggcac gacggcctg	10620
gctgtctccg cgtgtgtgt gacggcgca tgccttggac ccaggagaga caggaggtga	10680
ggcgggactc ccccgtggg cggggccaac gtggggcgg ggtcgggga gggcccag	10740

[0005]

agtggtaggg gatgiggggc ggagccaaaa cgaanagactt ggggaagtgg gcgaggetta	10800
atgagggggc gggccttagtg agggaggaga ctgcgggaat gggaggggca aactgagtga	10860
agggttgggc tgagcgacce gggaaatgaaa atgggagggg ttgaggagtg ggtgggtggg	10920
cgctggaaac aggcgaagact aagaggcaga gtgaggctcc gagagctggg aggctgcgaa	10980
gcggggcagg gatcaagggg cggggtccgg cagagagaag gagcgggga ttggcagagc	11040
gggtgggaga tgttigggga tggtagggg aggtgttag aggttgagt tgataggagg	11100
gggcgcgctt fggaagggtt gaatggcaaa gggatagga gtggatggtg tggcttggg	11160
gtgggttcat ggcgctggtt tggcgggctc cagctgggce cccacttggg tactcccct	11220
cttcccagg tectecagcc cttctcgac ttccagaaa tctagacat tagcatcaag	11280
caggccccgc gcgttggccc ggcggagag caccgctgg tcactgtac caggacagac	11340
aaccagattt tagtgggtg aggatcccc tcccctcag cttaccctg agggcgggac	11400
eggcaccctc gggtttcact ggctctgac gcttctcct cgcaggaggc cgagtccca	11460
ggctgcccg aggcctctg gtctgtggc ctctggagc gctacttccg gctgaccacg	11520
gactcccagc acttctctg caaggagggt gcaccgccga ggcctctgga ggaagtggcc	11580
gagcagtgcc acggcccct cactaangga cctgtcccc atccccgccc tctgtggcca	11640
ctcaggcccc ctcccctct ctatgctca gctcctcac ctccaggag cctggacag	11700
gggtcaagtt tcaaacctac acctgccca cagtcagcg teagtgaage tgaagtatc	11760
cttctctc acaggcgac cactactct tctctctg accccaggge catttctgg	11820
[0006] agatggacaa gtgcccacc ttcactaca gctcttgtt taatctcca ggaaggcca	11880
ggcatagtgg ggcacacct caatcgagc gcttgaggg gccaggcag gaggattgtt	11940
tgaactcagg agttggagac aagctagge aacaggagag acccctctc tacaacaaaa	12000
gaaaaaaaa tagctgggtg tgggtgtga cctgtagtc cagcactcc ggaggctgag	12060
gcaggaggat caattgagc caggatfgg agctgcagt gagctgagat tgaactccag	12120
cttgggcaac caagcaagc ccigtctca ttaaacaaa caaacacaa aacaatctc	12180
cagaagagge caagactac ggetgattt ctttttctt tttttttg agcaggagtc	12240
tggctctgtc gccaggctg gactgcagt gcacgctc ggctcaatgc aaectctct	12300
tcccagggtc acgccattct cctgctcag cctcccaggt agctgggact acaggctctc	12360
gccaccacgc ccggctattt ttttgtatt tcaatagca cgggcttca cgggtttage	12420
caggatgggt ttgatctct gacctgtga tcacctgce tggccctcc aaaaatcigg	12480
gattacaggc gtgagccaag gcgctgccc catggctgat ttatanaat gggggagggt	12540
gtcacctggc aaggatcca gggctacaga gtaacctgaa ttgagccca ggtctctctg	12600
tcttctctc tctctgaetc ctcccattc cctctcact tcccacag tctggacttt	12660
gccatcaaca agctcaagc tggggctca cgtcctggct cctatgttct ccgcccagc	12720
ccccaggact ttgacagct cctctcact gctgtgctc aggtcggct actgctaggg	12780
tgggtagttg agggctgct ggaggagggt acgttgaat tgagattaa aagatcagtc	12840
agcatttggc tctgaagaa taggagggaa aagaccccc cggtgaacag aacagcatat	12900
tcaaggctt aaagactgga atgattcat ggtgctttag gaaaaaggac tgaggctggg	12960

cacagttagct tacgccctgta atcccagcac tttgggaggc tgaggttagcc agatcaagag	13020
atcaagagat cgaaacccatc ctggccaaaa tgggtgaaacc ctgtctctac taaaaatata	13080
aaacttagct gggcgtggta gtggcctct gtagtccag ctactcggga ggcctgaggca	13140
ggagaatcgc ttgaaccctgg gaggcggagg ttgcagtgag ccaaggtcac gccattgca	13200
tccagcctgg gtgacagage cagactccgt ctccaaaaa aaaaaaanaa aaagaaaaa	13260
uaggaagaag gactgagaag gagagtgtct gtcctcagt cccactcagg gcccacictt	13320
cttgcagaa cccctttagt cctgattata agggctgctt catccggcgc agcccacag	13380
gaaccttctt tctggttggc ctccagccac cccacagcag tcttcgagag ctcttgcaa	13440
cctgctggga tggggggctg cacttagatg ggtggcagt gacctcact tctgctgta	13500
tcccagacc caaaggtagc ccccttctc ccctggaatg agtggctgat ctgggacct	13560
ggctttctat gtctgtgaca gctccigtgt ggtggcaag tggcagaaac tgcaggtaaa	13620
ggtgggllag ggaagaaaag gtgalllgtt ggctcaggaa gtlagagata lalaacciti	13680
aggtctggct tgatctagge acagctagat gtgagccatg tcatctgcac ctagtctctc	13740
tccagctctc agctcttct ctgggtgaat tteactctg gacaaacccc tctgatggga	13800
caattctgag atgtgagtc tctgagctt cccagatcc ctggtgaaac ccatccctgg	13860
ttgtccacag tgcacctgc tcaataaage cccctgcagg gctccttctt tcttgtgctc	13920
tcatccaaa tccctatggg ggtttctgg atctccttc aaataaacca tgtgccagcc	13980
aggcacagtg gctcacgtct gtaataecag cacttcggga ggtgaggca gatggateac	14040
ctgaggctag gagtctgaga ccagcgtggc caacatggtg aaactccatc tctactaaaa	14100
atacaaaaat tagctgggtg tctgggcaca ctctgtagt cccagctact tgggaggetg	14160
aggcaggaga atlactfgaa cccaggaggc agaggttgcg gtgagccgag atcacaccac	14220
tgcactccag cctgggtgac agagcgagac tctgtctcaa aaaaaaaaaa aaaaaaaaaa	14280
tagccgggca cgggtggcaca cacctgtagt cccagctatt cgggaggccg aggcaggaaa	14340
atcctctgaa cctgggaggt ggaggttgcg gtgagctgag atcgcaccac tgcaccacca	14400
gctggafga cagagtgaga ctccgtctca acagcagcag caacacaaa acaaaaacaa	14460
caacaaaaag ccatgtgcc tgaagtctt atctcagggt cggcttctag aggttaectc	14520
aaactaagge atgagttage taaccttgg gacttttca cctctgatt ctggtttttc	14580
tccctcatcc tctcccata gaaaagtcca acctgatcgt ggtccagaga ggtcacagcc	14640
caccacatc atccttgggt cagcccaat cccaatacca gctgagtcag atgacatttc	14700
acaagatccc tctgtacage ctggagtggg taagaggccc tgggaaatga ggcgatacct	14760
cagtctgggg tccagagact cagatgctg gcctcagcca tatgctataa ttttaecttg	14820
cctcggtttt cccatctgta aaatggggcc agcagctatg tctcgttgg gctgggattc	14880
tgcaggaacc cctcactgg cctctctgc tctccctca ccattcagca tgaaacctg	14940
ggcatgggt ccttcaccaa gatttacgg gctgtgccc atgaggtggt gnatgvggag	15000
gcccgaaga cagaggtgct gctgaaggtc atggatcca agcacaagaa ctgcatggag	15060
gtgagacaa tgtgaccag acitttgag tccgggctgg ctggagagg ggtcgtggat	15120
gcagagaaat ttaaaaacac acagggaact ggccgtggg gctcatgctt gtcacccag	15180
cactttggga ggcctgaggca ggaggatggt ttgaagccag gagttcaaga acagcctagg	15240

[0007]

caacatagcg agacctcgtc ttgacaaaaa aatttiagge cgggcgcggt ggctcacgcc	15300
tgtaatecca gcactttggg aggctgagge ggccagatca tctgaggctg ggagttcgag	15360
accagcctga ccaacatgga gaaaccccgt ctctactaaa aatacaaaat tagccgggcg	15420
tggtggtgca tgcctgtaat cccagctact cgggaggctg aggcaggaga attgcttgaa	15480
tctgggaagc ggaggttgca gtgagtcag atcgcgccac tgcactcag cctgggtgac	15540
agagggagac tctgtctcaa aaacaaaaca aaacaaaaca aaaaaccata gatgatagtg	15600
ggaacttctg tcccgtatca gaaaatcatg gtagtgctgt gtgcactaat ggcagactcc	15660
agggccaaag gtagcctgig gccaggtgtt cccctaagc aggtctgtga gcacaaaait	15720
tgggattatt ggagtggaaag aaaccacagc atctctctct ccttcccace ttecccagtc	15780
attcttgtaa gcagcgagct tgatgagcca agtgtctgac cgccatctcg tgeigtcca	15840
cggcgtgtgc atggetggag acagtgagag cccccaccc acccaaccca cccctgctc	15900
acccaagict aggetgttct tcccactct gtictgagcc gctatctgac agccccagca	15960
acacactggg ccacctgga tgggagccgt gttcattacc ctttatitat gtctctccat	16020
catcactctt tggaaagcgg ctccagggtc tcaccatata ccagcccag aatgacctga	16080
agtcagacaa acctggcttt ctaatctctg cagctttgta caggteacgt aacctttcig	16140
agccttgggt tcatitggtg ggagcttagg atgggccagg agctgggaca gacctagaa	16200
tgtgacagcg aggggtgat gagggtgag gagggcagca cggagcactg tggatggtca	16260
gagagcctgc tgggccagcc tggggattgg gcaatgcttg tgggaagaca gagatgcatt	16320
[0008] ctaacctgga aagataagga caagtgtgga ttaggaaagg aagaggggtg ttctagccag	16380
aggacacaga atalgcuaag ggtlagaagt gagatacaga ggttggggtt ggtggctcat	16440
gectgtaatt gaaanagcca ggcaggtgga tcacctgaga tcaggagtte aagaccagtc	16500
tggccaacat ggcaagacc cgtctctact aaaaalacaa aatcagccgg gtgtggtggc	16560
atgcacctgt agttccagct acttaggagg ctgagacagg agaatacatt gaaccggga	16620
ggcagaggit gcagtaagcc gagatcgac cactgcactc cagcctgggc aacagagtaa	16680
gactctgtct caaaagaaaa gagaaaaaaa aaagtggat acagatacag acagggctca	16740
acaccttcca ggcattccag gcaaatcatt cagagatgga ggtgggagga gagtgagta	16800
ctgtatgaac agaggeagca ggggagggaa cagacagaga tgagagtttg agagacctg	16860
agagccaggg tgttgacaga acctcctcaa cacaagtga gttcagctc ccaaccccgc	16920
ctctcccctg tggcaaccag gcacctggt gcaggaattt gtacacctgg ggccataga	16980
catgtatctg cgaanaactg gccacctggt gccagccagc tggaaactgc aggtggtcaa	17040
acagctgccc tacgcccctc actatctggt gactgctct ctgctgctc caccctccat	17100
tcccagggaa ggctttctct ggggtggaaga ggaattgga gtggcctctg tagtatcat	17160
aggagtttgg taagggttcg aggggagggc attttaggtt caggttgta gaacactaga	17220
agagaacaag tcattcttgg atgtcagggc gtgtgtgtaa tgacaggct ggcaggaag	17280
aaagcttcc tagaagaagg aacatlgag ataggccctt aaaagttgag tagaagttca	17340
tcaagagaag aaagguagga aggaatgtca gctgagggga acagcctagg caaaggectg	17400
caggctagat agtgtgttgc atcccctggg gccatcagg cagttctgtt ggcaggagac	17460

cagggtgcaa	gtgtggaagg	gaagttcatt	ggaagcttga	gcaagggcct	tgaatgcacg	17520
gctgaggagc	tttcacittg	tgtcaaaggc	actgsggagt	cacaggatgg	ggtggtgttt	17580
gagaagsgga	gggacatagc	caggtcagtg	tagggsgtga	actagagggg	caagacagga	17640
tgtcaggagt	cagggacgat	gctggagcat	gtctgagcag	taccaagtgg	gttttgaagg	17700
aigtatagga	gtttgccaaa	cagaactctc	attcatcaaa	ccctcccggg	cattttcctg	17760
tgtctggccc	ccctaggagg	acaaaggcct	gccccatggc	aatgtctctg	cccgggaaggt	17820
gctccctgct	cgggaggggg	ctgatgggag	cccgcccttc	atcaagctga	gtgaccttgg	17880
ggtcagcccc	gctgtgtaaa	gccctggagag	taagtctctg	gaggtggagg	agggaggggc	17940
tgacagagcc	aaggaagtgg	atccctgctc	ccactttcat	tcctctcagt	ctcaccgaca	18000
ggatccccctg	ggtagccccc	gagtgctctc	ggagggcgca	gacacttagc	ttggaagctg	18060
acaagtgggg	cttggcgccc	accgtctggg	aagtgtttag	tggcgtcacc	atgcccatca	18120
gigccccgga	tcctgctaa	gtcagagccc	ctcaccgggc	atcggctctc	gaacccccac	18180
ttgacagaaa	gggagacttg	acatccagtc	tggggagatt	gaggtggctc	tatgggtttg	18240
gggattaccg	actgctctc	tcacctcag	aaactccaat	tttatgagga	ccggcagcag	18300
ctgccggccc	ccaagtgga	agagctggcc	ctgctgafte	aacagtgcct	ggcctatgag	18360
ccggtccaga	ggccctctct	ccgagccctc	attcgtgacc	tcfaatagct	cctctcttca	18420
ggtgcccct	gggacgggtt	gggtggggag	ggctgtgatg	tcattattgg	cccagtggaa	18480
ggagcgtggt	ttgagcagg	ccaagccctg	tgtgtctggt	gaggttggag	gggttgggta	18540
ctgtgacagt	cagtgtgagc	ttcaacagct	actgtaacga	acagtcacct	cagttcaagg	18600
ttcaacatga	tgatatttta	tttatttatt	tatttttgag	acagagtctt	gctctgttgc	18660
ctaggetgga	gtgagttgga	acaatttcgg	ctcactgcaa	ccctatacct	cttgaacctc	18720
tagtcaage	gattctctct	ctcagccctc	ctgagtagct	gggattacag	tgtgtgccac	18780
cacgcccage	taatttttgt	atttttgcca	gatafggggt	ttaccatct	tggctaggct	18840
ggtctegaac	tcctgacctc	aggtgatccg	cccaccteta	ctctctaaag	tgttgggati	18900
tcaggttga	gacacatgt	ctggtctatf	tcattctttt	aaaaaaaaat	ttgctgggct	18960
gcagtgctc	atgctatag	ttccagctat	aggtaggtgg	atcgtctgag	cccaggagtt	19020
caagaccage	ctgggcaaca	tgccaasact	ccatctctac	aaacaaacaa	acagaaaatt	19080
agccagcct	ggtgatgcat	gctgtfatgc	atftttattf	tattttattf	tatatttttg	19140
agacactate	tcctctctgc	acctaggctg	gagtgcagtg	gcgtgatcct	ggetcactgc	19200
aacctctgcc	tcctctgctc	aagcaattct	cccgcctcag	actcccaggt	agctaggatt	19260
acaagggcgt	gccaccaaac	acggctaaat	ttttgtattf	tttagtaag	acagggtttt	19320
gccatgttgg	ccgggetagt	cttgaactcc	tggctctaaa	gagatccgtc	cacctcagcc	19380
cccagtgct	gggattacag	gcctgagcca	ccacaccagg	ctggattttt	ttttttttf	19440
tttttttttc	tgtgatgggg	ttttgctatg	ttcccagge	tggctttgaa	ttactggctc	19500
aagcaactct	cttgccttag	tcctcccaat	agctgggatt	acagggcacac	acnacctgct	19560
ccagtgctat	atttagtctt	cattcaatga	gggtgtccag	gccacagga	acctctcact	19620
tagtggctgc	actcaacctc	ggcgttgggt	ccccgttggg	tcctctgcag	ataaaagaga	19680
gagtggtggg	ggtccctgat	taggtttcca	tgggtcagga	ctggaggggc	accagcctata	19740

[0009]

tcttgtceat cagcctgagc teagtcatgt ggcacattt catagcagtg gaactgggga	19800
aatgagttct cattatgtcc tccatcttfg tagccalgtg gatttgcaca ggtgtgcac	19860
tgcacgagga ggcctccttt gcctgggaca gattgggaga caccttttcc cagtctccac	19920
aaggtaacct ttgcttgcga atggccctgc cataatgcac agagagggtc aatatgcaga	19980
tggaggttgc acagcaagtc aactcaggag tggggcccag gatgagagge getgcttacc	20040
actgcccact ccccccccc agactatgag ctctctcag accccacacc tggtgccctg	20100
gcacctcgtg atggcctgtg gaatggtgc cagctctatg cctgccaaga ccccacgac	20160
ttcgaggaga gacacctcaa gtacatctca cagctgggca agtaagggtg ggcagggeca	20220
gggtgggttg gagaggcag ggcagcatcc aggtgctgg acatcagtc cgtatcccc	20280
caggccaact ttggcagcgt ggagctgtgc cgtatgacc cgttaggcca caatcacagt	20340
gcccctgggg ccgtgaaaca gctgcagcac agcgggcccag accagcagag ggactttcag	20400
eggagaitc agatcctcaa agcactgcac agtgatttca ttgtcaagta tctgtgtgtc	20460
agctatgacc cgggtgagcc agctcccga tgagigaacc aagaegtatg ggtgcttttc	20520
aaagtgaca ttcttacct cctgcccagc cactttaggt aggttggaa cgtgattatt	20580
gatccagatt cacatgggtt acagtttga atctgactc taaccttacc cagtgtgaa	20640
accttaactt ttctgagcct cagtttctcc agctgaaaaa tgggcaattg tgatatttac	20700
tttgtgttg ttgtgtttg ttgtttttt tgagacagag tctgctctg tccaccagge	20760
tggaggcagt ggctcaatct cggctcactg caacctctgc ctccaagtt caagtaitc	20820
[0010] tctgctca cctccagag tagctgggat tacaggagc tgccaccaca cccggctaat	20880
ttttgtgtt ttagtggaga tgggttttca ccatgttggc caggttggte ttgaactcct	20940
gacctcaagt gaggcttcca aagtcttggc attacaggc tgagccactg cacttggccg	21000
tgatataaa acacatcaat gtatgttga gaaagtactc aagagatatt agcaatgtt	21060
cattgttggc gttccatat tacagtcagc aaaactgagg tcagaggga cacaaggctc	21120
cactgtgaaa ggggggaaag atggggggac gacagggct gggccctct gtacagatc	21180
ctgcttctc caggccgcca gagcctggcg ctggctatgg agtacctgcc cagcggctgc	21240
ttgcgcact tectgcagcg gcaccgcgc cgcctcagc ccagccgct ctctctat	21300
tcctgcaga tctcaaggc ggggggggc gccccggac ttgtgggat tcagctggca	21360
cggcctggc aggggtctgc ttggaggtcg cgtgaagc tgaggagtgg tttgggtcc	21420
aggtctcggc agtgggtggc ttgcttagg gctcaggatc agaacttcag tggaggatgg	21480
ctcggggta gggttatagt tgggtcttgg gttgggtgc caggctcgc tttgggtacc	21540
tgccggatta tcttgggac ctctctgcac gctcacaccg cccgccgca gggeatggg	21600
tacctggct cccgccctg cgtgcaccg gaactggccg cccgaaacat cctcgtggg	21660
agcaggcac acgtcaagat cgtgacttc ggcttagcta agctgctgc gcttgacaaa	21720
gactactagc tggtcgcga gccaggccag agccccattt tctgtgggg aaccgcgcc	21780
taggtctcgc ccttattcc caggctctg gctcgcgcc cagccatgcc cccgccct	21840
cccgtgctt tgetccccag ccttagccc gcccttctc cgttgcagc ttgcccctc	21900
ccaccccc gagecccc cctcaacag cactggctc tetgtctcc gctgccctc	21960

	tgtcagcggc ccccagcctt agccccccc ttctctcagc tctcgcgcc cccaagcttc	22020
	agaaccccac cctccaaca cgetggctcc gccctcagg gctggccccc tcttagttcc	22080
	gcccttcccc cggcccagtt ctgcccctc cccctccac ggcctcggcc ccgcccceat	22140
	ctccgcccct ccgtctgccc cccgccicct ccccacagcc tttagctctc ccaggaacct	22200
	cccaggctg gagaaaccac ctatcccaca gccagggaaa ccgagaccct ggagacggga	22260
	cigacctgt caeagtcccc acctaccctg accagttccc catccaagg ctgccccct	22320
	cttctgtcc ttctacacc ctgcactcc aagacctgt cccctctca ggtatgcccc	22380
	cgaatccctc tggacaaca tctctctctg ccagtcagac gctcggagct tggggctgt	22440
	cctgtacgag ctcttcaact actgcgaca aagctgcagc cctcggccc tgagtcggct	22500
	tcccagagcc ccagacctc ttctccctcc acgcccctcg tggccaatct ccaacctgct	22560
	tgcgcctgag tccctcttta gcatgggctc acctggctcc agcatcatag gccccagtgg	22620
	ggaggacgct tcttcacctt ctgaccctt tcacggttca ggcagccct ccccgctcca	22680
	tcacagatgg cccctacccc caccacgggt ggcctctccc cctccaccac cggagctccc	22740
	tccccacca cafcgctcc tccctgctc caggagtccc tgcggatgat gggatgtgag	22800
	cgggatgtcc ccgcccctg ccgctcttg gaactgctgg aggaggcca gagctgccg	22860
	gcgctctctg cctgcccctg tgaggtgagc gcccgaggc tagcctcagt tcccagctt	22920
	gtagatfggg ccgggctctc gggcaagcca gctggcctt gactctctgt actgagaaga	22980
	aaggctagag tgtgaggccc atgaggatcc tggccccac ttgctactc tctcactgtg	23040
	tggcaagta gageacttc agagectcag ttacccttt tccaaaatga gaatagtaat	23100
	gccttatagg gtgagggag attagactcc tgaacacctg tgcctatgag gctcagctc	23160
	aaagecagc acacagtca tctccataa atgggtgta cgttcctggt tttttttt	23220
	ctttcttct tctttttta tagatgggg ctcactctgt tgcaccagct gggatgcaat	23280
	tatagctca tgcagctcc aactcctgag ctcaagtgat tcccctagti cagtgtctct	23340
	agtagcagga gctacagggt tacaccacca caetiggeta attaaaaat aatttttag	23400
	agatgggagc ctactatat tgcaccagct ggtcttgaac tctgggctc aagegattci	23460
	cctgctcag cctcccaaag tctgggact ataggtgtac atcaccatgc ctgctaat	23520
	taaaaataat tttgcccagg tctggtgct cacacctgta aaccagcac tttgaaggc	23580
	tgagcgctc agatcaccgg aggtcaggag ttcgagacta gcctggccca catggtgaca	23640
	ccctgtctct actaaaaata caaaaattac ccatgtgtgg gtgctgtga tctcagctac	23700
	ttgcaggct gaggcaggag aattgcttga acctgggagg ggaaggcttc agtgagccaa	23760
	gatcatgcca ctgactcca gccctggcca cagagcaaga ttccatctca aaataaataa	23820
	atnaataaat aaacaaaca atagataaa aataatttt ttaagagaca aggtctctct	23880
	atgtgcccc ggetggcttt gaactcctgg gctcaagca tctctctgccc ttgcccctc	23940
	aaagtcgca gatttacagg caaaagccac tctgcccctg taattttaaa aaatttttt	24000
	aaagagatgg ggtctctctg tctgctctg gctggtcttg agctcctggg gtaagtgat	24060
	ctctctgct cggcctccca aagtcctggg attacagac tgagccacca catcccacc	24120
	tctatggtt tataatcata taatcataac ctttgggaa gtgtctgaca tgcagttgt	24180
	catgataaa ttaatttct caggccaaaa acatttttt agtgccaact gtgtgcccag	24240

[0011]

acttgttggg	tgetgaagac	cctgfccfcc	cagtaactag	caaaatctga	taagaacatt	24300	
ctaggctggg	cacgatgget	catgcctata	atcecaacac	tttgggaggc	tgaggcagaa	24360	
ggatcactgg	agcccaggag	ttaagacca	gcctgggcaa	cgtagtgaga	ccttgtctct	24420	
acaaacaata	caagcaatag	ccggtgtggt	gacatgcacc	tgtggtttca	gtactaggg	24480	
aggctgaggc	aggaggatca	ctggaaccca	ggagttcaag	accagcctgg	gcaacatagt	24540	
gagacccttg	ctctacaaac	aatacaagca	atagccggtg	tgtgacatg	cacctgtggt	24600	
ttcagctacc	agggaggetg	aggcaggagg	attgettgag	cccaggaggt	taaggctgca	24660	
gtgagccatt	attgtaccac	tgcactccag	cctggacaac	agagtgcac	ccigtctcaa	24720	
aacaaaacaa	aacaaaacaa	aacaaaacaa	aacaaaacaa	aacaaagaca	aaattatggt	24780	
agtataaagt	gccttgaag	agatgaacag	agggaatgg	tgggtgggg	gtgtcaaac	24840	
agggcctett	acggggccga	cgttgaagg	aggaggagcc	tacccatgag	taaagctagg	24900	
agaagaaatt	tccagtggag	gacacggaag	ggaaaaaggc	cctggggagg	taatgagctg	24960	
ggtgccttta	agcaccagtg	cgatggagcc	agaigtgact	gcccggaaca	aatgagggaa	25020	
ggagggatgg	agatgagcga	aggaggcat	caggagagg	tggtgtttt	ttgtgtttt	25080	
ttttttttt	agacgtggt	ttgtcttgt	tggccaggct	ggagtcaat	ggcgaatct	25140	
cggtcacca	caacttccgc	ctcccagggt	caagcaatc	tctgcctta	gactcccag	25200	
tagctgggat	tacaggcaca	cggcacctgt	aattttttt	ttttttttt	ttttttttt	25260	
ttttttttt	ttttagttaa	gatggggtt	ctccatgtg	gtcagggtag	tctcgaagg	25320	
[0012]	agaagtgtg	tgtaaaatcc	ataaggctg	ggcgcgtgg	ctcacacctg	taatcccagc	25380
cccttggag	gcccaggtag	glggatlaca	tgaggtcagg	agltcaagac	cagcctgacc	25440	
aacatggtga	aaccccgtct	ctactaaaa	tacagactta	gccaggtgtg	gcggtgtgtg	25500	
catgtaatcc	cagctacttg	ggaggtgag	gcaggagaat	cgttgaacc	caggaggcag	25560	
ggtttgcagt	gagccgagat	cgcaccactg	cattccagcc	tggcaacaa	gagcgaact	25620	
ttatctcaaa	taantaafa	agtaagatcc	ataggagcc	atggagtgt	ttggagcaga	25680	
gatgggatgg	aatttaattt	gtgttttaa	actgaatgag	tgggtgget	catgcctata	25740	
atcccagcac	tttgggagcc	caagacaggt	gcatcacctg	agatcaggaa	ttttagacca	25800	
acctggccaa	catggtgaaa	ccctgtctct	actcaaaata	caaaattagc	caggcgtggt	25860	
ggcacgtgcc	tataatccca	gctactcagg	aggctgaggc	aggataattg	cttgaaccgc	25920	
ggagccggag	gttgcagtga	gcgagatca	tgccattgca	ctcagcctg	gacaacagag	25980	
ctagactccg	tctcaaaaa	acaaaaacaa	atagctgaa	tgggagtgt	gtcctttgga	26040	
ctgtcagcc	acgaccccat	tatctgtccc	cccccctca	ggttcacgag	ctcatgaagc	26100	
tgtctgggc	ccctagccca	caggaccggc	catactcag	cgccctgggc	ccccagctgc	26160	
acatgctgtg	gagcggagc	cgggggtgtg	agactcatgc	cttcactgct	caccagagg	26220	
gcaaacacca	ctccctgtcc	tittcatagc	tectgccgc	agacctctgg	attaggtctc	26280	
tgttgactgg	ctgtgtgacc	ttaggcccg	agctgccct	ctctgggect	cagaggcctt	26340	
atgagggtcc	tctacttcag	gaacacccc	atgacattgc	atttgggggg	gctcccggg	26400	
ectgtagaat	agcctgtggc	ctttgcaatt	tgtaagggt	caagacagat	gggcataatg	26460	

gtcagtggg ctctctgagt cctggcccaa agaagcaagg aaccaaattt aagactctcg	26520
catcttccca accccttaag ceetggcccc ctgagtttcc tttctgtct ctctctttt	26580
atTTTTTTT tttttatttt tatTTTTgag acagagcctc gctctgttac ccagggtgga	26640
gtgcagtggt gcatctcgg ctcagtgcaa cctctgcttc ccaggttcaa gcgattctcc	26700
tgctcagcc tccctagtag ctgggattac aggtgtgca caccacaccc ggctaaattt	26760
ttttatttt aatagagatg aggtttcacc atgaaggcca gctgatctc gaactcctaa	26820
ctcfaagtga tcttccacc tcagctccc aaagtgtgg aataatagcc atgagccaact	26880
gcaccaggc ttttttttt ttaaaillat tattattatt ttttaagagac aggatcttgc	26940
tacgttgcce agctctgtct tgaactcctg ggctacagtg atcctctcgc ettatctcc	27000
taaalagctg ggactacagc acctagtttt gagtttctg tcttatttcc aatggggaca	27060
ttcaigtage ttttttttt ttttttttt tgagacggag tctcgtctg tgcgccagcc	27120
tggagtacag tggcgcaatc tagctcact gcaagctcgc cctcctgggt tcacaccatt	27180
ctctgcctc agcctcccaa gtacctggga ctacaggcgc ccgccaccac acccgctaa	27240
ttttttgat ttttagtaga gacggggttt cactttgta gccagatgg ttccatctc	27300
ctgacctgt gatctgccc tctggcctc ccaaagtct gggattacag gcatgagcca	27360
ctgcgccgg ccctcafgta gcttaaatg tatgatctga cttctgctcc ccgatctctg	27420
tttctctgga ggaagccaag gacaagagca gttgctgtgg ctgggctct ccttttagg	27480
ggagcccgtg tatctctttg ggatccfgaa agggggcagg aaaggctgg gteccagtc	27540
accetaatgg tatctgagtg tcttaggctt ctgattttcc cactgtcca atgggacct	27600
ttctgtctc accctacaag ggcacacaag ggatgacacc aaacctggca ggaactttc	27660
acgcaatcaa gggaaaggaa ggcattctg gcagagggaa cagcatgcca agegtgagaa	27720
ggctcagagt aaggaggta agagcccaag tattggagcc tacagttttg ccccttccat	27780
gcagtgtag agtgggcaag ttccttccc tctctgggtc tcagttctgt cccctgcaaa	27840
atggtcagag ctaccacctt ggtgtgtag ggtcaacttt ctgactgtg agagggattc	27900
tcatgcaggt taagctctg ctgctctcc tcacctgcaa agctttctg ccaattttgc	27960
ctcttggaa aactcttacc catctctcaa aactccagct accacatctt tgcagcttc	28020
ctcatatac ccccaactact actgtagccc tgctcttccc tccagccca ctctggcctt	28080
gggctgggg aagtgtctgt gtcagctgt ctccctgac ctacaggttc ctfggggct	28140
ggctgagge ctcagtacag aggggctct ggaatgttt gttactgaa taaaggaatt	28200
cagtggaaaa gatlligtgc tggacttggg gcgatggga gccctcagag gtgtgtgagc	28260
tggagggat gcggttagag ctgtggcca gagacctctc agggagccac tgtgggggcc	28320
ccnaggcagg ctggtggagg aggaacctg ggtgggctt ggtggggcc ctcaaggaca	28380
gagccctct actcccagcc ccagctgctg gcttggctg cagcttggg gactgaita	28440
cagctctct gtgggtggg aaggaacagg atgtctccc ggtggtcaga ggacaagccc	28500
aggttgggg agcagagctg tgggagggg accagatca ctggggccc accacctcc	28560
caccgacgg cccccgcat gtgcacctca taactgttag aaagatgtg agagtggcca	28620
ggctcagtg ctcagctctg taatcccagc actttaagag gccaaggcag gaggatcact	28680
tgaggteagg agtatsagat cagcttggcc aacatggcga aaccgtctct attaaaata	28740

[0013]

```

caaaaatttag cctgggtgtc tggcacatgc ctgtaatccc agctactcag gaggetgaga 28800
cagaagaatt gcttgaaact gggatgtgga gtttgcagtg 28840

<210> 2
<211> 1124
<212> PRT
<213> 智人 (Homo sapiens)

<400> 2
Met Ala Pro Pro Ser Glu Glu Thr Pro Leu Ile Pro Gln Arg Ser Cys
1 5 10 15

Ser Leu Leu Ser Thr Glu Ala Gly Ala Leu His Val Leu Leu Pro Ala
20 25 30

Arg Gly Pro Gly Pro Pro Gln Arg Leu Ser Phe Ser Ser Gly Asp His
35 40 45

Leu Ala Glu Asp Leu Cys Val Gln Ala Ala Lys Ala Ser Gly Ile Leu
50 55 60

Pro Val Tyr His Ser Leu Phe Ala Leu Ala Thr Glu Asp Leu Ser Cys
65 70 75 80

Trp Phe Pro Pro Ser His Ile Phe Ser Val Glu Asp Ala Ser Thr Gln
85 90 95

[0014] Val Leu Leu Tyr Arg Ile Arg Ser Phe Tyr Phe Pro Asn Trp Phe Gly
100 105 110

Leu Glu Lys Cys His Arg Phe Gly Leu Arg Lys Asp Leu Ala Ser Ala
115 120 125

Ile Leu Asp Leu Pro Val Leu Glu His Leu Phe Ala Gln His Arg Ser
130 135 140

Asp Leu Val Ser Gly Arg Leu Pro Val Gly Leu Ser Leu Lys Glu Gln
145 150 155 160

Gly Glu Cys Leu Ser Leu Ala Val Leu Asp Leu Ala Arg Met Ala Arg
165 170 175

Glu Gln Ala Gln Arg Pro Gly Glu Leu Leu Lys Thr Val Ser Tyr Lys
180 185 190

Ala Cys Leu Pro Pro Ser Leu Arg Asp Leu Ile Gln Gly Leu Ser Phe
195 200 205

Val Thr Arg Arg Ala Ile Arg Arg Thr Val Arg Arg Ala Leu Pro Arg
210 215 220

Val Ala Ala Cys Gln Ala Asp Arg His Ser Leu Met Ala Lys Tyr Ile
225 230 235 240

Met Asp Leu Glu Arg Leu Asp Pro Ala Gly Ala Ala Glu Thr Phe His
245 250 255

```

Val Gly Leu Pro Gly Ala Leu Gly Gly His Asp Gly Leu Gly Leu Phe  
 260 265 270

Arg Val Ala Gly Asp Gly Gly Ile Ala Trp Thr Gln Gly Glu Gln Val  
 275 280 285

Leu Gln Pro Phe Cys Asp Phe Pro Glu Ile Val Asp Ile Ser Ile Lys  
 290 295 300

Gln Ala Pro Arg Val Gly Pro Ala Gly Glu His Arg Leu Val Thr Val  
 305 310 315 320

Thr Arg Thr Asp Asn Gln Ile Leu Glu Ala Glu Phe Pro Gly Leu Pro  
 325 330 335

Glu Ala Leu Ser Phe Val Ala Leu Val Asp Gly Tyr Phe Arg Leu Thr  
 340 345 350

Thr Asp Ser Gln His Phe Phe Cys Lys Glu Val Ala Pro Pro Arg Leu  
 355 360 365

Leu Glu Glu Val Ala Glu Gln Cys His Gly Pro Ile Thr Leu Asp Phe  
 370 375 380

Ala Ile Asn Lys Leu Lys Thr Gly Gly Ser Arg Pro Gly Ser Tyr Val  
 385 390 395 400

[0015] Leu Arg Arg Ser Pro Gln Asp Phe Asp Ser Phe Leu Leu Thr Val Cys  
 405 410 415

Val Gln Asn Pro Leu Gly Pro Asp Tyr Lys Gly Cys Leu Ile Arg Arg  
 420 425 430

Ser Pro Thr Gly Thr Phe Leu Leu Val Gly Leu Ser Arg Pro His Ser  
 435 440 445

Ser Leu Arg Glu Leu Leu Ala Thr Cys Trp Asp Gly Gly Leu His Val  
 450 455 460

Asp Gly Val Ala Val Thr Leu Thr Ser Cys Cys Ile Pro Arg Pro Lys  
 465 470 475 480

Gln Lys Ser Asn Leu Ile Val Val Gln Arg Gly His Ser Pro Pro Thr  
 485 490 495

Ser Ser Leu Val Gln Pro Gln Ser Gln Tyr Gln Leu Ser Gln Met Thr  
 500 505 510

Phe His Lys Ile Pro Ala Asp Ser Leu Glu Trp His Glu Asn Leu Gly  
 515 520 525

His Gly Ser Phe Thr Lys Ile Tyr Arg Gly Cys Arg His Glu Val Val  
 530 535 540

Asp Gly Glu Ala Arg Lys Thr Glu Val Leu Leu Lys Val Met Asp Ala



Gly Ala Leu Val Ala Val Lys Gln Leu Gln His Ser Gly Pro Asp Gln  
 850 855 860

Gln Arg Asp Phe Gln Arg Glu Ile Gln Ile Leu Lys Ala Leu His Ser  
 865 870 875 880

Asp Phe Ile Val Lys Tyr Arg Gly Val Ser Tyr Gly Pro Gly Glu Pro  
 885 890 895

Glu Leu Arg Leu Val Met Glu Tyr Leu Pro Ser Gly Cys Leu Arg Asp  
 900 905 910

Phe Leu Gln Arg His Arg Ala Arg Leu Asp Ala Ser Arg Leu Leu Leu  
 915 920 925

Tyr Ser Ser Gln Ile Cys Lys Gly Met Glu Tyr Leu Gly Ser Arg Arg  
 930 935 940

Cys Val His Arg Asp Leu Ala Ala Arg Asn Ile Leu Val Glu Ser Glu  
 945 950 955 960

Ala His Val Lys Ile Ala Asp Phe Gly Leu Ala Lys Leu Leu Pro Leu  
 965 970 975

Asp Lys Asp Tyr Tyr Val Val Arg Glu Pro Gly Gln Ser Pro Ile Phe  
 980 985 990

[0017] Trp Tyr Ala Pro Glu Ser Leu Ser Asp Asn Ile Phe Ser Arg Gln Ser  
 995 1000 1005

Asp Val Trp Ser Phe Gly Val Val Leu Tyr Glu Leu Phe Thr Tyr  
 1010 1015 1020

Cys Asp Lys Ser Cys Ser Pro Ser Ala Glu Phe Leu Arg Met Met  
 1025 1030 1035

Gly Cys Glu Arg Asp Val Pro Ala Leu Cys Arg Leu Leu Glu Leu  
 1040 1045 1050

Leu Glu Glu Gly Gln Arg Leu Pro Ala Pro Pro Ala Cys Pro Ala  
 1055 1060 1065

Glu Val His Glu Leu Met Lys Leu Cys Trp Ala Pro Ser Pro Gln  
 1070 1075 1080

Asp Arg Pro Ser Phe Ser Ala Leu Gly Pro Gln Leu Asp Met Leu  
 1085 1090 1095

Trp Ser Gly Ser Arg Gly Cys Glu Thr His Ala Phe Thr Ala His  
 1100 1105 1110

Pro Glu Gly Lys His His Ser Leu Ser Phe Ser  
 1115 1120

<210> 3  
 <211> 140282  
 <212> DNA

<213> 智人 (Homo sapiens)

<400> 3

```

gigtgatggc acgcaccigt agtccctgct actcaggagg ctgagggcagg aggatcgatt      60
gagcctggga ggtaagact gcagtgacct gigtatgtgc cacigcactic caaagcaaga      120
ctctgactca aaaaaaaaaatt atttgcatga aaacttcat tegttagaa gacttgata      180
gaaacattga aatacaccta tgaattaca ttaagttaa ggaacagitt acaaagtac      240
aigtatgcca tgactatatt tatafnaaaa atatgcccg tggnaaanga taatgggaag      300
aaaaatata atatggtgac tgattatat caggtttgca agattacagt caatttttt      360
tccagattcc aatittttgga aacaaattc atgatttga caatggggat ttagtttagt      420
ttagtgttgt tgaaaaaaca tcatgtttg catctaacat attttccat ttttatctaa      480
gcaatagctt ttgcagagga agactgatgg ggacatattc ttttgatgaa gatttatgtg      540
tgaactgtg tgatgatgtg atggttgggt ggttgttatt aattttctaa taagaggett      600
ctacacigca tttggtttaa ttaaatitag atgtatgta tggattgcat gttagaagga      660
aatatttcta tctttttgtt ttacactatt gfgtctctcc tatatateat atatttact      720
gagtggcatt ttttttttt tttgagacag agtctctctg tegtetaggc tggagigcag      780
tggigtgctc taggtcact gcaacctccg cctcccagat tcaagcgggt ctctgctc      840
agcctctcga gtactgtgga ctacaggfgc atgccaccac gccctggetaa tttttgtatt      900
ttttgtatt tttagtagag acagttttgc catgttggcc aggcctgtct tgaactctg      960
acgtcaggig atccacctgc ctggcctcc caaagtctg ggattgcagg attacaggca     1020
[0018] tgaaccactg caaccggccc tttttgttt gttttgttt tttgagatgg aatitttctc     1080
ttgttgccca ggttggagtg cagtgggtgc atcttggctc actgcagcct ctgccttccg     1140
ggttcaagct attttctgc ctccagctcc cgagaagctg gaattacagg tcccaccac     1200
catgcccaac taatttttt tatttttagt agagacgggg ttccaccatg ttggccagge     1260
tggttttgaa ctcttgccct caagcaatcc accccgtctt gccctcccaa agtgetagga     1320
ttacaggigt gagccactgt gcccgccgt ttttttttt ttttttttt gagacaggg      1380
ctcactctgt ttcccaggct tcagtgeagt ggcaccatac tagctcactg cagccttgat     1440
ctcttggct caagtatcc ttccacctcg actccagat agctgggacc acaggaigt      1500
gccaccacac tcagttattt ttgtatttt ttgtagatac agggitttgc catgttgcgc     1560
aagctggctt caftttgac tctgaacct atttgaaact cctgaactcc caaatgctg     1620
ggattacagg tctaagccac caagcctgga tcagtactg tttaaaactt tctcttctc     1680
aaacataaaa ctgaatttt tatcctgitt agtcggtgac atccagtcgg tggatcttt      1740
ggtcagctta ttaaccaatt cagaaaaatt gggagtcatg cgagattcct ctctctgctt      1800
cagtagccac atctaactcg tcaaccaagca ctgtccatc tatctctca ggccttttgc     1860
atcttctca gtaacctcc ccagtcact gccttagata ggctgtcact tctgcagct      1920
tgcagtttta caatgacatg taattaact ccttgcctc caatcatct tccacattat     1980
ccctagacta gtggttctca gtgggtgtg atttgcacc ccaggggaca ttggcaacg     2040
tctgaagaca tttttggaag tcacagctgg gaaaggagga ggttggggag ttgcggggg     2100
gtigtatggg ggaacaagag gacttgcac tagcacctag tagtcagagg tcagagatgc     2160

```

tgctaaacat	ectacaatgc	acaggacacc	cccactacaa	caagaatttt	ccagcccaca	2220
atgtcaatag	tgcrtagatt	gagagccctt	gccctagggt	gattcttcta	aaacaaaaac	2280
cttaaatctc	tcaaaaaaaaa	aaaccacta	ttttatttta	ggcaaaagtt	tttgcattgg	2340
aitcaacttt	tctatctccc	cagtcacaca	gcataactt	atTTTTTTT	tttaagagaa	2400
ggggtctccc	tctgttgcce	aggetaaagt	gcagtgggt	gatcttagct	cactgcagcc	2460
tcaaacctct	gggtcaagt	gatctccag	cactcagctc	ccaagtagtc	ggaaatacag	2520
gcattgtcca	ccatgccagc	ctagtttacc	ttttttttt	ttttttttt	tttgagaggg	2580
agttctctct	tgctgccagc	gctggagtc	agtggcaca	tctcagctca	ctgcaaacct	2640
tgctcccg	cttaaacgca	ttctgtgcc	tcagtctccc	aagtagctga	gattacaggt	2700
tcccgccacc	acgtccagct	aatTTTtga	TTTTtagtag	agaTgggggt	tcccatggt	2760
ggccaggctg	gtctcaaat	ctgacctca	agtattggc	ccacctcgcc	ctcccaaggt	2820
gctgggatta	caggcgtgag	ccactgcacc	tggcctttgt	ttgtttggtt	gtttttattt	2880
tagagacagg	gtttgtgtgt	gttgcctaac	ttgggtgcaa	actctctggc	tcaagcagtc	2940
ctctctctct	agctctccaa	agtctgaga	ttacaggcat	gagccgccc	acctagccag	3000
catatactat	taetgectga	atatgcccgt	acctctgac	tctgcctccc	tgctggctac	3060
ttgaagctta	ttctgacttc	ctcagacteg	gctgggtgac	tgtctctctgt	gactaccatt	3120
acaggaccgg	gaatcaciga	attgttactt	gctgtctct	ctgactgcat	tgagcattca	3180
gaggtcagga	acctagctca	TTTTTTTTT	ctctgaatct	tcactcaccta	gcacaatgct	3240
tgttatagac	gaacagatct	aaactgaatc	caggccctct	ccccctgatt	ccacctgtg	3300
aacagccaga	ttcgttcgtg	ggcacaatgg	gttcaactgct	gccttctctga	ctttctcttt	3360
ctctttacate	ctcactctgaa	atgetgttct	ttcagctctc	tgtctctctct	catgtcagtc	3420
tcaacctgtt	tttatgttcc	agctcaataa	aaacctctac	cacttctctga	gcccattgcca	3480
tggtggctat	attatcatag	ttcaccctca	gcacaccccc	tttaagggaag	gcattatccc	3540
tatttaacag	gtgaagaaaa	tgatgcaaac	agccctgagg	tgttgttcag	agtgtggcag	3600
atgagacaag	acttgcacac	aaacacctac	aatgcagcca	acctgggttg	ctctctctct	3660
tgctctgact	tcggctcttc	tttgcctctc	tttctgtac	ttctggaagg	cactttggag	3720
atctttttgt	ctctctctcc	actgagaatt	gagtcactca	agaattgttt	agggcaaac	3780
aggtggttac	tgttgaggcc	caaacctcaa	attcagtagt	ctaattcgga	tgcttgactt	3840
tattccacac	ccagaatatc	ttgtcagtt	tcagttgcag	taactcaagt	gatcaggaac	3900
tgctcagcag	ggttagtgaa	gtcagcagag	gtggggcagc	ctctgtctcc	agccctgaag	3960
ctgcagaatt	ctgacctgct	acggccctcg	aggattttca	tcaggggatt	gtcaggggga	4020
agtcctctgga	ggtttttaag	catgggagtg	tgtggaacag	atttgaattt	ttaaaagttc	4080
attgtagaga	attaattggg	ggctggagtg	aatggagtg	cgatttaaga	gatgttctgt	4140
gtccctccag	gtgagagatg	gtgacagctc	ggaccgtgtt	cccggaaact	agacaagtga	4200
actgattgga	gagataccta	aggaaaataa	attgttagga	tttctctctg	gactgectac	4260
gaagtaigaa	tcttggctac	agtgtgacct	tgattaaagc	actaaagact	taatttcttc	4320
ctcatggata	agatgatgct	actactttga	gagattatta	gtaaaaatg	aaaagcctg	4380
tacatgcatt	aggtatcagt	gaatgtagtt	ctaattccta	ttatgcata	gctttttttt	4440

[0019]

ttttcgtaaa gagcttttaa aatacgaat gggttggatc tgcagtagct tgtccaagct	4500
ggggcctgta ttgttaaatt ctttttagtc tagtgetcca ctactctctc tctactgag	4560
ctggggtlaag aagcggagcg tatacggagg agcgggatg catttctgca tgcagcgeac	4620
aaaggtgtgg cggagggggc tccagagctg ggaggggtca atctacgggc gaatcttggc	4680
aattttactc cccgcgatag atgacctcgc gtectagatg agtttctaga ttctagaatc	4740
tagaggacgc ggtgaacaga gacgagtggg ggcagcttcg cgagcgaagc cggatggggg	4800
cgggcgggt aggcgggagg cgcagagtct ccgccgggac cgcgaccocg ccccgtttc	4860
cgggcctggc gctggtagc tccgagggg gtgggcccg cgccacggg ggtagggcgg	4920
gccgcggggc gggcggggc gggacgggag gcggtgcgtc gctgagcga ggcccgggc	4980
gcccgggagt atectggagc tgcagacagt gcgggcctgc gccagtcctc ggtgtctctc	5040
gcccggaacc ctctcagcc ctgggcgccc gcacgctggg gcccccggg gctggccgcc	5100
tagcgagcct gccggtcagc cccagccagc gcagcgacgg ggcgctgctt ggcccagcgg	5160
cacacggaag tggtagtgt caccgsgga gtaggaggag ccggggggc cgcggtcggc	5220
aggcgaggag cgcgcagccc ggaactggcg gaggcgggc caccgctctt ggtcggctct	5280
taggctgcgc gggccggct gctctgagc gcagctcagg acccccgccc tccggcgggg	5340
aaggcgggga tttccagccc cgcggagccc gcgggcggcg aggaggtcgc cggcggggg	5400
ccccggcgc ggagaagagc ggttaagcca ggcgcctccc tcccagcgc cgcacggcaa	5460
gttttcaaaa acaagcccgg agcgcgctgt ctgacatctt gttatacca ccccagata	5520
[0020] caggcgggg ctggagggt gacttcccta gctcttcta ccgcaactt gaccgccagc	5580
tcccggcggc ggtggcagcg cagaaaggtt ttctctctc gccccaggaa ggaggctgag	5640
ggtcttagct ttttctctc ctgctgctc cagcaggga aagtctctg gatttgagc	5700
tgggtgttgg gcgtccgca actcgggaaa cggccctcc cctcttagt tctgttagga	5760
accagcctc aggtagccag cgagaagtgg gaaaggagc cctgggcgag aggaccagg	5820
aagggaaca gtaggagaga actaccggg gaattgcga tcccactgga aaggactga	5880
ttaaccgaaa ctggggtgg tctctgctc cctcactca actccatcc cgcactctg	5940
gcgaccggga gcatcggagg actaatagac actcctcca agtcactccc caggctcct	6000
gggatgtggc ctctctgat gtgtgtttac caggaactt ctgataaaa gatcgatgt	6060
ttgccaggtg tttgtcaca cgttttttg agggtttgca ctccatgatt tctgtgtgt	6120
tctggggaa ggggacccc tcttctctc cactctctt actacgtgc tgtgactgc	6180
ctctgcccc tggttgagta catcgtata catgcatgg acactttcc ccccaagta	6240
tagggtttt ctctactgg caggaattt cagtggtata aattgtcat tacttctt	6300
aggagtaaa acatgggtag ttaagtagt agaataatgc agagagat gtaaatcagc	6360
gcgtgtttg ttttgctat tttttatft ttgaagaaa agatttgagt taaatatgg	6420
tataggeaca gtagattttg ttaagatga gcaattcgt ttgattgaat cttgttctt	6480
cccttccaa aacccatta tggttgttt ctgattttg ctttgggtg ctctgatgt	6540
ttccaagacc aggggattat ttccattgaa ggataaatgt gttctttgt actttgtgt	6600
gaagattaat ggagaccacc agggttccag acatttctg tacaatatgc ttgtaatgt	6660

ggagaaaatg tctcccctgt atagatccag atcacattta aagatgtgaa gacatcatab	6720
tggaatgaact ttggacattta taaataggaa taatcataac ctcttcttaa ttctgtatat	6780
catattaact aagtgccttg actgagictt agtttctgca aatagataca aaactatggt	6840
tttttactgc taggattgca gttgtaiaact ccacacigaa tacagccagt ttaaaiggtt	6900
tcctccattt cataciatac taattaitta ctaccattgg gaaatgattg tagagaatgc	6960
ataaattaga tataggtaaa ataattcaaa catttccaa aatataacta catttcagtt	7020
gttataaait aggatcttaa catgagcttg gctaaagcca tatacttccg actgaaacaa	7080
gcattgagaa cgtgtagggt gatactcatt tctgtagaga gaacaagaga acactaaggt	7140
ataactgcatt agcaagacc atgactctgt ttttctaatt ctccagattc tctggtgttt	7200
ttttcccctc aaagacacat cccattttgt atgiccitat gtccctgataa gataatagca	7260
tgtctttaga agatttattg tctgagatgt gaatttccat acaaataaat ttttcttgtt	7320
cattttcaca tttaaaacca ttattttaag tggatgggga attggcttat taatggaate	7380
tcctgtaaga aggaacattg gatgttctgt gattattgtg gctcagtggt ataigzaacc	7440
ttgtcattga acagagatgt tggaaagAAC tttcagattt ttttagacta gtaagggtat	7500
gattttgcac ccaatgagat aittgcagtt tctggagaca tttttggtt ttacaacttg	7560
gggaaaggga gcggtgctac tggtagccat ctagtgttta gagcttaggg atgctactaa	7620
acatccfata acgcacaaga cagccccca tcccaacaa agaattatcc atctcagtag	7680
tgcaccaggt aagaagtcct gctttggaat actgagtaag gagcaagaag atctggctc	7740
ttgtggcaaa ttttttact tcagggcacc tcttttcttc atttgcaaaa tggagataaa	7800
aatattctcc ctggtcactt cgcagagttt tgggggaaag tcaggtaaat aatgcatgga	7860
aaactgtgacg tgetatgca atcataacta atatgaagag fatttttcat aagtgaaaca	7920
ttagatttac cggtagttga gggaaaccagg gttaaagcaa tatgttgagt aaaaagccgc	7980
ctgtggatgg ttgatattta tcaattctt tcttattcat ttttggggt aaagttttt	8040
ttagtatact tagttttctt atgtcagaa catgtacttt ttactctat aatttctta	8100
agcaaaaggtt atttttccca tcatatacaat aaggagaatt cactatagaa aaattagaaa	8160
atataggaaa gttagaaata gaggaacaa gtcattcatg ctctactcgc ttgtccattt	8220
aagcacactc acatccttgc caatttcttt tctataagag cagttaggat tcagagaatg	8280
atgagagaga gtagctggtg accaaggaag ggttccttg tttctgtgcc ctfcatttct	8340
ttctttttta ataattacga tgtaaaggta aattacatta tagtaggcat cagagacate	8400
ggttcattgt ttttattatt atttttatt ttcagatgg tctctcactc tctctccag	8460
tctggaatgc agtggcacag tctagctca ctgcaacctc tgcctcccag gtccaagtga	8520
ttctctgccc teagctccc gagtagctgg gattacagge acgttccacc atgcttgggt	8580
aafttttgg ttgtttttta gttagatgg gatttacc a tgtggccag gctggctag	8640
aaacttctgat ctcaagtgat ccgctgcct tggcttcca cagtctggg attacagcg	8700
ttagccaccg ccgctggcct ggttcattgt ttttatactt tcttctctgc ctccaagcca	8760
tgttctcaat cagcttgttt cctctctgct tcttactete cccctgctc agctagtggt	8820
gccactgttg ctctctgct cagaaacct ctggttacct gggatttcaa acagctgtca	8880
tgttgaaatg actgggttcc agggaccgga aactaattcc tgtgagtatt ctctctctg	8940

[0021]

agggtcacca	gccttcttgg	cagtttaagg	cgacagaaa	gcataaaaca	ttaagctcat	9000
ttccgtgata	cctccacitc	tgagggttta	tgatecaiga	ttctttgtag	ttggcagtg	9060
gcacacattc	ttccttggtg	ctctgcggat	aaactgcca	gtcccaggc	aagacctgct	9120
ttagaagcaa	aaggataatt	tcttitaagt	ctactctgge	cagaagatag	agctggcggt	9180
tgttgggata	tttttaactc	gcagtaactg	aatttattta	acagtaactat	tcacactagc	9240
atfttataca	ttcttttatt	cafttagcaa	afacttgitt	agctcttga	gtgaatcica	9300
gagagtgaat	agacagacaa	caaaacaggt	acaaatctgt	cctcgtgtgg	aatttacagt	9360
ctagtggag	accctgaggg	catgttcagt	tttacagttg	cagactatat	gcattgaaaa	9420
gagtaaatct	ttgtgattgt	agaatgtttc	ctagaacctc	tcattggcact	cctttgaagt	9480
ttgaggacta	ggaagtagct	tccecttgtt	atctttcttt	ttttaatggt	acagattaat	9540
tcattctttg	tatgcacaga	catctctttg	gtacctatta	agtgcctggc	agaaggataa	9600
gacatagitt	atatggaaat	aaacttggtt	tacatggctg	taacacattg	tgggtgatgc	9660
tgtagtagca	gtcagaatta	agagctccag	gacctgaag	agagctaatt	cctgcgtgga	9720
gcccttgtca	aatgettttt	tgaagagget	tcatttgagt	tggccctca	ggagtgagta	9780
ggagttcctt	tgttttaggg	tgggaaggaa	gtctaggcag	agatacagtg	tgaccaagga	9840
cataaaagtg	ggcatgtacg	tgggtcagct	ggcagacttg	gaagtggcca	ctagattaga	9900
gcaaaagactg	cttggggagg	agcggaaagg	ggtagggcag	gacatgcagg	ttggatccag	9960
attgtgaaga	ccgtagctct	ttccaçaaat	tigtgagcag	tgtttagtta	gggaactgagg	10020
[0022]	cctcgttga	acgaafgagt	ggggaagatg	agaagccatt	tgaagtttcc	10080
alaacatcgt	tagcaaatga	agaccigaag	cactgaagat	tcatalgaagg	gtgagcttca	10140
tctgaccatt	gtgcaactct	ctctctccca	tcccagaaaa	cgctttttat	tatctgcat	10200
ttatcaacta	tccagaagac	taactaggaaa	caagaaaggc	ttcgagccaa	gcaagatgic	10260
atgaagtcca	tccatgcttt	tcttacagtg	gaataaaacc	tactttgatt	tgcctttaat	10320
ttataaagac	ttttttttga	cagtttatct	aactggtttt	taagccattt	ggaaattaaa	10380
tacaagaaac	ctaagaggca	agagttggtt	agtggatgaa	tacaggaaga	catgttctca	10440
gagccaagca	gtgtaatttt	ttatcttaga	agtgaataag	gagtttctac	tggtttatga	10500
caaggagaac	caaaactcaa	aagtgaanca	atctggggca	tttagtgag	ggcaaacacc	10560
attgtcaaca	agctagcaat	ttgagtttgc	attgttaatc	acagcacagt	atggtgtttg	10620
gtatggtaa	tgatcatcaa	gcatgaaga	agaggtaag	ttgttgagca	taaatgaagt	10680
gaaagttcac	atctctagca	gaaaaggcca	acttcagatg	tctcatttag	gggttaggag	10740
gtatgtaaga	aggtctgagg	acaatataag	aagctgcttt	cagagaattt	ctgtagacaa	10800
attcaaagaa	gaggttttct	tcagggtgaa	acaccagtga	ggaatctttg	ctttaacica	10860
gggaagatta	cttaagagtg	agctgcgaga	gaaggttgac	tgtgaaacct	aggaagagga	10920
gctgcggccg	tctgcataga	agatagtaat	aacttgaagc	cgctgttagg	agactaaatc	10980
acatcaattt	atggtacctc	tgagtagaaa	acagactgat	tgattgtctt	ttagccttgt	11040
tttgtttttt	gattctgata	gtctgttttt	ggagctcttg	gatctacaet	gtatgatttg	11100
atcctagctg	tgagtttga	agcaagttac	gctgttttcc	ttatccatag	aatgacaata	11160

aagacagtac ctacctciga ggttgitttg agggttgaat gaactatgett aagattttga	11220
agtgatgcca gcatgagctg aaaaatgtct agctatitit acattttiat ttattttgag	11280
acaaggctc ggcctgfcac ccaggctgaa gtgcagtggt gtggtcataa ctcaagtcaag	11340
cgttgacctt ctgggtcaca gcaatcctcc ccaccicage ctcccgagta gcaggaaacca	11400
cagacatgtg ccacaatacc cagctaatit ttaaaatggt ttgttgagag aggtttcatt	11460
ctgttatcca ggetggctc gaactcctgg gcicangcaa tccctctgcc ttggcctccc	11520
aaagtitttg gataataggc atgaaccacc atgacctggt tatitititit taatgatiga	11580
tcaataggat ggtatitita aaaaaaacc tcaaatata ttcagaatgt ttaacatagt	11640
agggaagatg ccaccagtag atacaaaaca aaaactaaca gataatitct atgttagatt	11700
tcagttagca atgagtaant cnaaaaagaa ggcagtttct caaatctaga agggtttatt	11760
acgtagacag tgcacaaagt gctaggtaaa ttaggttita ctcttatitit taaggaaaaa	11820
tgactaacaa aggtgctitit atitaaatit aagtgccalc caaggtafat aatitggtag	11880
gaatgtatit gaetttctgg gaaagttaat gtgaagatac tgtgttgacc tcactgattc	11940
agtttaacta gcaagttgtg ggctatttggc agaggcacca tgtatacctg tttgtaaaac	12000
gggtcttcca gagtgtgtg gaaattaast ctctgtasa tcagataata ctccaggag	12060
tttgcctgtt aaggaaatit aagagtttaa agggactctc aaatatgtat tcagttteta	12120
tggaatgccc ttttacagtt tctgtttcca taacatatt ttgctttcct aaagcaagat	12180
ttacccaaaa tgtaaaagtg tgcacaaagt tggcccttcc tcaataatcat agatgtgtgt	12240
tttaaaatat tttaaatgta tttccttctt ggtgatgtat atgttggact ggtttcttgg	12300
gtctgggcat tatttatact caagaacagt tgttgccacg tgattggaas agcctattg	12360
atgctatitc catcccatat gctttgacag caaaggagtt agctgtatct tcccttgtct	12420
tcaccctcta gaatgagaaa gacaagaaag ctccctaat ttgatttgtat ggagggggag	12480
tgggtagcaa agtccacite agctgaaaag gctgacctgt aggtatttaa aacataaati	12540
taggtctgtt atttcaecat acacttggta actcagacig gcttgaatat aaagtagasa	12600
tagctaagaa ccatttgtaa tgaatgcaac tcttatttgt ttttaatggt gttttaagga	12660
cttaagggta ttagaaciga caacagtita ttcagftaag cacaatitita tctggaggct	12720
tgtttgcaca gtttaattga tcaggttcta gtaagctat ataacagttt ttttcaatta	12780
tgatttaaaa taatgtttat attgtactaa gagaaaagat sacagaaaa acctcaagga	12840
aaaaataate tgcacaaatg gtgtcttccc agataaaaat tttgttatta aactagtttg	12900
giggatcaca cacagggatg cggacagatg caatataat tataaagaaa gaagtacaat	12960
ggetttttgc caggtglacc tgcacaccca ttitagcact aaticacata acatagacta	13020
aaaagtaata tgetaatgct ttaattlaat atctgactg attttgttca gttaaaacca	13080
tictgtaaaa cttaaggcaa gtccacgaat cacagtatac gggttaictt tttggnaaaa	13140
tcatttgatg tatgggtgta aciccaagga accicatgtt tttactttgt tagaacgacc	13200
atccacttgg gttggttgga agtaggaaga agtcagagga ggtcatattg gcccaaacat	13260
aaattglaag cccacttgat gtgatttagg aagcaggcca cctaccatct acaagctggc	13320
tgaatacaca atgctcttag gtttcatgt ttgttccitt attcagcaac tctctgtaga	13380
tctcaactga tgtgagaaca agatgggctt ggetcctgcc cttagaaaag ttccctgcta	13440

[0023]

gttgaaaaa caatfcagca attatattac tgtttgttac agtgatgetg agtaccggga	13500
gagaigtcag aggtggggtg taagaaaagg gagtctttgc agtacacttt ttttttttt	13560
tgagacggag tctctctctt tctctcagge cgggetgcag tggcctatc tctctcact	13620
gcaacctctg cctcccgggt tcacgccatt ctcttgcctc agccicccaa gtggetgga	13680
ttacaggctc ccgcaccgcg gccccgctaa tttttgtat ttttagtaga gaccgggitt	13740
cacctatgta gccaggatgg tctctatctc ctgacctctg gatccgctg cctctgctc	13800
ccaaagtctt gggattacag gctcccga ccacgcctgg ctaatttttt gtatttttag	13860
tagagacggg gtttcacctg gtttagccag atggtctcga tctctgacc tctgatctg	13920
cctgctctag cctcccgaag tcttgggatt acaggcatga gccactgca cccgctgca	13980
gtacactttt atacatggaa atctgaagtg tgaagagct gtcccaagag aatgaggagg	14040
atttccagtg agaggcacga atatgtcca aagacctatg gtgggacca cacctgca	14100
ctggtgcaga gagaacaag gtggaggctg gtgagctagg aaggaaectg gtcagcagg	14160
gccctatgtg ctttattact ttgggctt ataatgcatt aggggaagt ttgaagttta	14220
agcagggtag taacatgatg agatttgtgt cccatgaaaa aacggaagga tccctccac	14280
tcactgtgc ccttagagca cctctctctt ctctctctt tcccttctt ctctctctt	14340
ataccttgaa aaccttact tctctccacc cactctctt ttaaccttt gcaaacctgac	14400
tgccacctt acactatga gactctctt ttgaggtcac cagtacctt cttctctgca	14460
catittaca cttttttct gccctagta tctaaaacag tctatctgc tgaaaacctc	14520
[0024] cttctgca gatctctc aacctctg gtctctgt tctgagacac agtaaggact	14580
tctctctct gtatgtctt gttctcttt tgagtatct ctctctctt cactctctt	14640
cctcccaca tgaggatgt tctaaagtt ctgtaatgg tagattata tgttgcgaa	14700
actgtcaga tgaccactt ttgctgagc tccagtgtc ctttttatt tatttctt	14760
cctctctct ctttacctc cccaatact gtttgcacag ttcagacac tattcaagc	14820
actggggaca ctggggaaca agagaggaaa gttccctgc cttaagtagc caacagtct	14880
agatgttaa cacattgata aacaagataa tttcaggtg tgataatgca aatagagaa	14940
gtagcaagg tatggtagt gaatcttag gttgggggt tgggagaagg gcctctgtc	15000
tgagaaagt acattaaat tctccctga aggatgagta atgagtaga gccaggcagt	15060
gcaatgatc gtaagaaaa tgtaactagc agagggata gccagtcca cgcctctca	15120
gtggatgag ctttccatt cacactggc tctctctg tggtctctt gacacctcc	15180
atttaactg tccagattg atacctctt tctctctg cctctctct aataatgat	15240
gattctctg ttttggttaa taccctctt atccaccacc ctgaaaacct taggcagca	15300
gtctgaaac tttgtgagg gaaagacagt aaacttttc agctttgagc acagtacagt	15360
ctgtcacaag tactgaatc gctattgtg caccaatgta gatatagaca gtatgtaac	15420
caatgaggt gctgtgctc caatacaact tttgtatgg acactgacat tctattttc	15480
acttgtaaca aaatatttt ctttttttc caaccttta aaaatgctc agctatttg	15540
cttcaaaaat gggcagcgc agccagatt tggctcacag gccaggatc gctccccct	15600
gccttagact aacctgac tctctctt cttttgccc accccacctc cctctagc	15660

	cccttcaggc ctcctccct ggtattcgta ttcagcaoct ttgccactcg ctgtcccccac	15720
	tgcctgcagcc ttccctttggc ttctcttiacc tgggtgatct atcatitggc actctatgtc	15780
	caatgtgcaga cactatttag ctcccaacttt aagtgcagca atgetgtatt tatctttccg	15840
	tgtcigaacta ctgatcaca gcccttagaa gccctattg cctatagaaa acaatccaaa	15900
	ctccacetta gctctgatagt aaaggcttct taigtcaaaa cctcagttta actttctagc	15960
	atactctect attctctcc ttctacactg tccczaaata gattaticat tattttgctt	16020
	tcaatgttcc ccactctttt ctgtgttctt gttcatitaa tgcacttttc ccgtgctca	16080
	tgccttccat ctgtcagaat tccatagctt tcaaggcccc tcaaatgtc cctggtctct	16140
	tcctctgcc ctcctaccc caacaagcgg tgtgtatata catagtcctc tgggtggtgtg	16200
	tgatccctctg ttcagtaagc tctgttctct gctctgtctt ctgttctttt gcagacacac	16260
	ctccactatg cagtcacagag gcccttgagg acaggaacca tctcttttctt cgtaaatgtca	16320
	cccttccag taggcacacg gcigtcttatt gaataaacac agatcctgtg tacacttgcct	16380
	caaatgttac aaaaatttgc gagattcaac agtggaaaca ttttactgaa gggaaatcgg	16440
	tcaaatfaca tccctgattc ttgtataggt ggtacagttt tgtaaaggat catcaagtat	16500
	tttggaaagc tcaattgctc tgcacagtc ttagataaat aaattcgggc aagtatttga	16560
	tctctctctt cagagaaaaa aattgatgtg tttcttttfa tataaagaga aaaagaaaaa	16620
	gaaaaaatgt gatctgtaac tcaattatgt tccctgtctag aaagctcaaa gatacgttat	16680
	ttgectgttt ttagtgtcta tccagtttcc ttacaataat ctctctgect cagctctctc	16740
	atcggattac ttgtcacatg tgttaaatcc ttcttttaat tcatggttct gttgtatata	16800
[0025]	tcctttatata ttatataaggt agcctcaact ctctcttttt tggagagtgg taatagaaat	16860
	ataaataafa aaatgattgc ctttggtttc cccaacctgt ggtgacaaca agataataaa	16920
	acagatactt atcctatata aaacagcca aaaggctttg ggacaatag ggaatcatga	16980
	tgtgggtttg gtggaaaagc agcaaacgac ctgtgaagga tctgttagtc tgaagaitaa	17040
	gggtgtcttg ggttagtca tgcctccca gctctgtggg attgttagca catcatccca	17100
	ctgtgggagg agagtggca cggcactag actatttatt agcttttact gtgtcagttg	17160
	ttgggttatg tattttgat ttgataitaa atttaactt tgtantagcc agagacttg	17220
	atcttattgg catcatttcc cagatgagca gagctaataa atggcagaac tagaattcaa	17280
	atctgaggct ctctggcaat gaaaacaaca acaaacatg tttctactct tcaagagac	17340
	ttttctctt ggaattgca ttgtcccttt cttctcttct ctctccctgac attggtattt	17400
	aaaatgagaa cctaggaaac ttgtttcttc taacctaatg tttttgaage agtttttaggt	17460
	ccttgagat gtgccctgat gtgtctatac aatatagtat ttggtattgt tagatataaa	17520
	gaagacctga ggccgagtgc ggtcgtctat gccataate ccagcactt gggagggcca	17580
	ggcagcgaga tcaactgagg tcaaggattc aagaccagcc tggccaacac agtgaacccc	17640
	catctcttct aaaaatacga aaaaagaaa aaaagaaatt agctgggctt ggcagcagc	17700
	acctgtaatc ccagctactc agggagctga ggcgggagan ttgatgaac ctgggaggca	17760
	gaggttgcag tgaactgaga tgaatccact tcaactctgc ctgggggaca gagcaagact	17820
	ctgtctcaaa aaaaataaaa aaaattttt gttttttagg ttttggggca ggcagttgg	17880
	gttcatttag ctgtctcaaa gtaagtttgg tatattttt tgaantattt agtttaaaag	17940

tigtattgct gttttgaca ttttaagtea gacgagattt actgftgctt tatattacct	18000
gactgttata taacacgtcc tggittace tgtgtgggtc tgagcgtacc agatgtggtg	18060
ttatgaaaag cgtgctggac ttggaaccag gacgagccga tgtgagctg tccictgcca	18120
cttactaget ctgtgacttt gggctcataa ttgagcetta ttttttctc aattgtaaat	18180
ggactgtgta gacctgtcac agaggaagtt ttgtgaagct taatgaggt agaactaca	18240
aaatagcttc agacagtgc tggatccag cagcatttaa cgaaagtac ccactgtcac	18300
cccaaatact gaatattgcc agaaaatctg taastgatta cataatgttt acacctttat	18360
aagtggtaac ttltaggtta aatattatc aagttatgaa cctctgattt aggaacctc	18420
cttatgcaaa tggttggett cccactacag aaacatcagt aataagatag tggtttagac	18480
teccaaatct gcgaccagtc tgtatgtttg aatccctgct taigatcagt catagctgag	18540
tgatcgtggg caagttatc aaccgettig tgcctcagtt tectcactg taaaaggata	18600
ataggataat aatggctcct accttatggg attgtgaaaa ttaaatgaga atgtgtgitt	18660
atgtatgtgt gtgtttgtct gtattgtac caatacccta ttggagtta ccactattat	18720
ttactgttcc tcttctcttt tectcctgt gtaaacagcc ccataagtta tctggaagtt	18780
ccctagtate tctttcttat ctctctgtac tgaagactc cttttcttc tctctttggt	18840
cccgtgtrag ttgcttcatt ttaattgagg ctatctgttt ctagtgtgca atacattctc	18900
attgatccct tccctataca ttcttgcct agacactttg aaaaagtgtt ttgttttgg	18960
gtgaaaactg aacatittct aataatgact cataaaccca gccagggttt aaggatactc	19020
[0026] ctatatcaag gaaaatgaaa gctafacagt ctcaagcaaa tgaaaaaact atataaaatg	19080
ccaaattgtt tattgaatgt ttatgccaga aalleagatc aataaacctga gccllagaat	19140
ggttgatgtt taaagttacc cggcttttaa gtggaggaae ctagatttga tcaaagccag	19200
accaaccctg cctttggttt caaatccct aagctcactt gcttaataa ggctcttagg	19260
caaccacctc agactccatc tgcaccctt atgaacctac actctgcttt cctcacact	19320
cctgcttttg agatggcaaa atcacttatg gttctttttg gctgcagtaa tgtttctgc	19380
tattttgcca gggcaaatgt atagcgttct agatacttta tgtgttaaat tggcctttg	19440
tgtttgctt tggaaactta accacattta ctgcagtgct tctgggggaa atgtgcgcca	19500
agttcaaac aaccaactgg gaatgaatte titaaaaggc agaacttctg cctggcggg	19560
tggctcacgc ctgtaatccc agcactttgg gaggccgagg cggcggatc acgaggtcag	19620
gattcgagac calcttagct aacacgttga aacctgtct ctactaaaaa tacaaaaaat	19680
tagctggcgc tgggtggcggg cgcctgtagt cccagctact cgggagctg aggcaggaga	19740
atggcgtgaa cccgggaggt gtagcttcca gtgagcagag atcgagccac tgcactccag	19800
cctgggcgac agagcgagac tccgtctcaa aaaaaaaaa aaaaaaaaa aaaaaggcag	19860
aacttgttta tagctaaggc ctgctgggtt atttatitga gtgtgttacc tgcattgta	19920
tgcittaaag gcttctgtgt catgcctgaa gcgacatatt ctggaatgta tacattattg	19980
cacttccctg gitaattgtc ctactgtttg ctgacctttg tacactgaac caictccatt	20040
gtgtttgcca cgtagtagga acctgtgaa gagaactatt tagtccctt taaagatcaa	20100
tggttcttta taetttctg tatgcttgat atatttcaat ttaaaaaaat cagtggagta	20160

aggaaggate	aggcaacatt	gaaagaggaa	tattgccaca	cagttgccsa	tctgatgaaa	20220
atactgcfta	tgctaggtcg	aattgagact	ctgaaaggta	tttgggagcc	agacacttat	20230
gagaatacat	attgctttga	atattggaag	aaagcaaaagc	agteaacaag	atttcttctt	20340
ggcttggagt	tttgtttact	tttctcaggt	tagaatigat	agttctaatg	gttttaagaa	20400
gtcatggaga	acaggcccac	catgaaacctg	aaatatttgg	tctgagtta	tagecaitgt	20460
ciagtaata	ctgttaagg	gttattagca	cacaatgac	ataaaatctt	gtaatacttt	20520
taagaggigt	aagaaaitga	agtcacctga	gaataccfcc	ttctgatttt	acagtggaga	20580
aataaaggaa	tcagagtgtt	taagtgaacti	gcctaagacc	tgtctgggcc	accactttag	20640
ggattgtttt	ttaatccatc	atcatgctgg	atttgttact	gagcgataaa	atggtacaga	20700
aggtagicac	atagagaatt	taggaaataa	aatactcatt	tgttcaata	cttctcagga	20760
ggttgagata	tatctatggg	tagaagattt	agaggttatt	taagagaaat	taggattgtc	20820
tagggctccac	cccttaccgt	ggggattctg	aagggcagtg	tcttatgaga	gaagagagat	20880
caagttactt	ggtagtgag	atgttctagg	tgtctcagtc	aaggctggc	cggatggeta	20940
gcactgaact	tgtgtggatg	tttgttcaaa	ctaatacagc	tacgatttgg	ttgttcttaa	21000
gaatgataaa	actttgttct	agttttitaa	attgtaafaa	taattctgta	agcatttaag	21060
aagaatgctt	tctttaatgt	tgactttttt	tttttttga	gacagagtct	tgtctgtct	21120
ccogggctgg	agtgcaatgg	catgatctcg	gtcactgca	acctctgctt	ccgggttga	21180
gtgattctgc	tgcctcagcc	iccagagtag	ctgggactac	agggcaccgc	caccacgcca	21240
ggctaatttt	tgtatcttta	gtagagaagg	ggtttcacca	tgttggccag	gatggtctcg	21300
atctccigac	cttgtgatcc	gcccgcttg	gcccgccaaa	gtgctgggat	tgcagggtga	21360
agccaactgg	ccggccetaa	tgttgacatt	ttttactctt	acaagaagct	gttatgtttt	21420
tacttattct	ttctagttct	ttatcgataa	tgtataaata	tgtactgtat	tatgtaattt	21480
taatgctgg	atacatatac	ctgtcttctt	aaactttttt	attctatttt	aatagagtct	21540
ttgtaataat	caitttttgaa	tgtagtattt	agttgtgfta	atttatttta	ttttcttaa	21600
gtaatctatg	atagaantaag	ctatttctgt	ttttacagaa	tattgtaggg	aaactttaaa	21660
aacacacaat	tageattttt	ctgctgctaa	tigtcttatt	aggatgaaig	catagattta	21720
ctgtgtcaaa	ggttataacc	aattttatga	cctttagtat	gtaattctgg	aaaattaaac	21780
agaaacttaa	gtcacaaaatg	gccttaaaaca	tggcagaa	gctgctgatt	tctgactgt	21840
tgtacaggca	accactggc	aagtaacatg	tcaaatacgg	accattataa	ttccttatca	21900
taaaggcaga	tacagtttct	ttcaaggac	atgaaaataa	tttatftgct	tttgatgect	21960
tttctcactg	ggaaatgata	ttctgtaagt	gcacaatgtg	cacttgaatg	tgaagttgta	22020
gtgaggattt	ttatttttat	ttttgtacaa	cigggttata	ataaaggaaa	caacttttat	22080
gtacttteta	ggctgatgaa	atacctagt	aaatgcagta	caitttttgca	tgactaatag	22140
gagttagggc	ggggctttga	cttttaccac	agtcaggfta	aaatcacctg	tttgetggtt	22200
tccctaaagc	agtgaigtat	tgcctttgc	ttactttttt	gttagttggg	aaatgtatct	22260
tactttgaig	actggigttt	ttctgcttag	tgggatattt	ttctgtgaa	ccaggataaa	22320
caattctata	atgcaaatct	gaacacatca	ctgcttict	taaaatcttt	cactagetgc	22380
cctttgctgt	taggattaa	tctatccaaa	ctccttagca	tggatgaa	agcctctcat	22440

[0027]

ggtcacagcc ttcctttect tccattccct ttcttgcagt cagcactcca gccctttctga	22500
ccgtttttgt ttcttaataa tatttgatc tetcttactt ctaggacagt aagttctgta	22560
gattccittgg tgaatataca gcccttagaga ctgcaagaat tctgagcagt atttctaagg	22620
gtagatttc cctccaagta ceattaacat tetgggetgc cacattleaa gatttactct	22680
ggagatgtga ggtggaagcc atgttaaatg getggaagat agtccctgtg gagagataag	22740
ctttatcatt ttatttttac caggtgtggt gcagtgagtg ttgaaaagcc ttccacaaaa	22800
aatagagctc tcttttttcc cctgttatga ttaaataact ggctgctaata ctttcatgat	22860
gaagagagaa gcccaaaagc aatttcagaa catggatctc atgctgatta gtggttaata	22920
tgattteaca tggatagtat tecttgtggt tgaagttat tttattgggt agatctgca	22980
aatacacaag gctagtttat ctttgcacaa acttgtgaca agcttatagc taactcctt	23040
ggggaacaca gttcacattt aagattttgc ctccaggeacc tetgttcagc tttatgetgt	23100
gtctttcaga ttctagatat gaaactggtt tgacattaat acctagcatg atagcttttt	23160
agatacactc ttgtcttcca ttaagtcaga caaaatctgc agagccctagc actatgctca	23220
gtatatgagc tgetttgtct gtgtactttg gttcatcaga gagtcagtat acctagcag	23280
tcagtaaaac gtcatlgatt agatttggat ttaataaatt taagcctggc caataattag	23340
tgggaaccaa accaaggcaa cctatagtaa atggagcatt gcacgaaga tctcagttct	23400
tcaantaagg cacagataaa ggatcctat gtattacctt cctgttcttg gatttaattg	23460
ttcaaatggt tcaeccaaaa cctcaattc aggetaatat ttaggcattc tcttctatgt	23520
[0028] tataacctag gtaatttga aacatttga ttctaaatc tatttctgta taaactttct	23580
atgaatttga tctctctccc tctctatatt atatagtata galctaaatt gaaaaattca	23640
ttgttccctt cagaggata agagtattct ggcccagctg gaaatgitat gttaaatttg	23700
aaattctact acctaaattt tggacttgtg tactactgtt ttagttaggc tataatgatac	23760
tgcagataaa gttccaasac aatctgtggt gaaaaaatc ttgttcaggg acctgttgtt	23820
cagtgaact gcttttctgt tgggtacctg taticttttt tggtaagit aaaaaaaaa	23880
aaggatttat tggcctatgt ctttaagggg ttgggggagg acctatggtt catggactcc	23940
aaggatataa aggcattccc ctctcagta agaactctgc tattctgctt cctgttcatt	24000
ggtcttatgt tctgcaaaa tgggtttta tcacatgat ttgaatagag aacagttggc	24060
tgtccaaga tgatgtctgt ttatcaaatc tcctgaaag acttgtgttt gtgtcaccct	24120
tggcttggaa ggtgacagt gcaggcatgg atgggggtca ggtggacac tgtgatctgt	24180
agtgttaaca gaatcactg gtatgagaag ttcttagaga gataaaaaca gatgacagct	24240
gtaatatatt gaactggcag ttaaaaaatt ttttttaagt ttggaaat aaacaacata	24300
aaatttacca tgtgagccat ttttaagctt acagttcagt agtgtaagt acattcacgt	24360
tgtttacat ctaacttcca gaactctttt catcttgcaa aactgaaact ctgtaccag	24420
tagataataa ctaccattg ctttttctg ctactctctg ccaactacca ttctactttt	24480
tctatctatg gatttgacta ctctggctac ttcttataag ttgaaattgc cataatgtcc	24540
tttttacta gcatgtttca cttagcataa tgcctcaag gtttatccat gtttttgcac	24600
atgatggaat ttcttctctt ttaaggctg aataatattc cattgtatgt atatacaaca	24660

ttttgtttat	ccatctatgt	tgttggatgc	tgggtggct	tctacctttt	gacigtgttg	24720	
aatgataftt	ctatgaacat	gggtttgcaa	atctctogtt	gagacctgc	tttcagttgt	24780	
tttgtgaact	gccacttttt	tggataactc	tcatttgaaa	ctatgttcat	ctttttttcc	24840	
ttaaaaactg	cccgaatta	actctttttg	gtgccagta	agtggaaaat	tcagaacage	24900	
aaaatgtttg	ctttattcaa	caaacacctt	ctcaaaatct	agaaaacaaa	gaacattaga	24960	
gaacactgtg	gaagtaagta	tgattgtggg	tagctggctg	acgtagaaga	ttttaatttt	25020	
tactatgatg	cataaafatg	taccttttga	agttttagca	gacaagagca	tgaggtecga	25080	
tcatagaact	atgacittgg	ggaagtiacc	taaagccttg	ccagccaeca	tttacttatt	25140	
tgcagagagg	gggtttgfta	tacctgttag	ggtaattag	actattaaat	gagataacat	25200	
gtgcagaaca	calagccagt	gglaggigtg	cagtaagttg	tttctctct	cctgtattct	25260	
tccaggggaa	tagaagacga	ccactgtgtg	aggatctctg	tattgttcag	ctctgatgct	25320	
ctctctactg	tgggtggtag	atctccctct	taacaagget	ttcttgcaa	gcatttttaa	25380	
actttacatt	ttcttatttt	tttatttttg	ttattgatat	tttgtttggc	ataggtaetg	25440	
tattgacatg	gttcagaaag	caaaccaggg	ccgggtgccg	tggtctatgc	ctgtaatecc	25500	
agcacactgg	aagccgagg	tgggtggatc	acttgaggtc	aggagttaan	gaccagctgg	25560	
ccaacatggt	gaaaceftat	ccctactaaa	aatacaaaaa	ttagctgggc	gtgttgccag	25620	
ggcctgtac	tcaggagtat	cccagctact	caggagcctg	aggccagagg	atgctttgaa	25680	
ccctggaggt	ggaggtttga	gtgagctgag	atcacaccac	tgcactccag	cttgggcgac	25740	
agagcaagac	tctgtgtcaa	agaaaaaaaa	aaagaaagca	aaccagtata	acagggttaca	25800	
[0029]	aatgagaag	gtttgtctcc	atttttgttt	gtccgtcaac	ttcgttccct	gtttccctaa	25860
gtctctttct	catctctagg	acctattaa	gtaagtatat	atctgtatc	ttttttttat	25920	
tgtacataag	gtaaatatat	actataact	attccacct	ttctttttt	cattttacca	25980	
tatactctcc	tctctttct	tattagtaca	tcaagtattt	tctctgtgta	atagaccatg	26040	
acttatitaa	ccagteccca	tgttaaggac	atttgtttg	cttctgcact	tttctgttta	26100	
taaatagtc	fattttgtga	actttgtatg	tagaaggcca	gataaattcc	cagaagtggg	26160	
attgctgggt	taaaagataa	ttgcattaat	aatttttatt	aatattctca	attgctcccc	26220	
atggggttag	taccttttcc	catgctttga	aatttacata	ttttttgtca	ttgcagacac	26280	
ctctcaccce	ttgctgtata	cttctttttg	aactgccatc	tigttaacat	ggagagaact	26340	
ggcaagtcca	ggcatttct	tcttgtgttt	cgtaaggcct	agtggactgt	tggagtgett	26400	
tccaagcagg	tgcagggtt	tgagattgta	gtgtgatatg	cgactagggg	ttctgcccct	26460	
cccgatgtgc	tctgtttccc	gtctcaggac	ctgaggatgg	aatggctgag	tgtgtttgta	26520	
gcccanggtg	ccaagtgett	ctcgggggag	aatcagttgc	tctgtgcatt	aaagcagtat	26580	
tggctgtctc	ctcccctct	tggaaagttt	tgttctgttt	ttttaatttc	ataacttttt	26640	
acaaaagfta	ttctatttta	ttgaagactt	agaatccaga	gaaaagacaa	aaatcaactg	26700	
gactctcaaa	acctttgtta	atatttttcc	gaatctctc	tcaatctgtg	gtgtatcccc	26760	
aacataaafg	gtgtttatat	actgcataat	gtttcataac	ctttttttcc	atttcttagt	26820	
gtatcatgac	tattgttaaca	tctttcagta	gtgataiacc	cttgccecca	acacatgca	26880	
atgtttttgtg	tagattttcta	ttgggtggct	tcaccgtgat	tctgtgttcc	tggatgaaca	26940	

tttatgtttg	tcttgttagt	caacaaccct	acgatgaaaa	tccttctggc	taaattcttg	27000	
atgttattat	tgtttgctta	gaatacattt	ctagaattag	caaacaataa	taacatacag	27060	
gaattagaac	tictaggtca	aaagacatgt	acacatigct	ctccaaaagt	gacatattat	27120	
ttatattect	aaatgagagt	accactgca	tcatactcaa	tttgtggata	taataatttt	27180	
ttaaaaattt	ccaatttatt	agtaaaaagt	gataaatcta	tcitttactc	tgtagatatt	27240	
taattactgg	tacatttaaa	cttttttttt	tttttttttt	tttgagacag	agtcttgcac	27300	
tgttgccccag	gctggagtgc	aatggtgcga	tctcggtcca	ctgcaagctc	cgctctctgg	27360	
gttcatgcca	tctctctgcc	tcagctctcc	aagtagctgg	gactacaggc	acctgccacc	27420	
acacccggct	aattttttgt	acttttagta	gagacgggat	ttcactgtgt	tagccagcat	27480	
ggctctgata	tcctgacctc	gtgatccgcc	taectcgccc	tcccnaagtg	ctgggattac	27540	
aggecgtgagc	cactgcgcct	ggcctaacct	tttttttttc	aagtttgaga	actcattttt	27600	
ttgatgtgga	ttgectagtc	aagccctttg	ctcattttat	tactggcgtg	tttctctttt	27660	
ttttttttat	ttatlaaagc	tacatattgt	aaggatatta	gttttctgtc	acatatggtt	27720	
caaatatttt	tcctcaagtt	tacttatata	ttagaacct	ttgtttatag	aagttttata	27780	
tttcatgaa	ctcacatcaa	teactcaitt	cttataaag	gcttctgctt	ttggtgcat	27840	
gtttgagaga	ccctttgatg	cctctaatc	tacaaatatt	taactcttag	acttaataatt	27900	
tggtatattt	gtcatttgaa	atgataggat	gtttatittt	gtctatgatg	taagagggat	27960	
tctaatittt	ttattttctc	tgactatcca	gttgctctac	cacaaaaaat	catcatctcc	28020	
[0030]	ccacfanact	gaaatccatg	tttttaca	ttgctttttt	gttttttaac	acattcgaaa	28080
alltacaeta	aaactctata	aaaagggcat	tagagtcaca	aggctctate	cctggactgt	28140	
tttcaggcag	ttgatgccag	tgagacattg	aagagggtgt	ctaacctctt	cttagacttg	28200	
gittctcttg	gggattcaca	ctgaccacc	anlcagggtg	ttatggtcat	ctgatgaggt	28260	
aataggtatc	aattctgaac	catttatatg	gaagtaatct	ttatagtget	actaattagg	28320	
agagcccagg	tattctgag	gaactataac	catagtcaaa	atttgataia	ataaagtita	28380	
gttattgtct	tttgaagaa	ttaggaaaac	taaagaata	acttctctga	cttttgagtt	28440	
atttccattt	agccaaatag	ggcctaatg	taaataataa	aaaigggcct	gttttaatta	28500	
tttatcttga	catggattaa	atatagtatt	taatttcttt	aatgattaaa	tatagacagc	28560	
aatgtaatg	ctgtactttt	cacatgacgc	aattcatttg	gcctttttct	ttttttaaaa	28620	
aaatlaagac	agttacttta	tttagaacag	gaaagtgggt	taagcaactg	agagltgtcc	28680	
ctglaaatatg	agaggttctt	ccctegtctc	acttccacc	ttaaaatata	attttaggag	28740	
aaaaaaglat	cttatatttg	glttaattatg	ttatctacga	ttacaccttt	tgctaaggca	28800	
ggcatggcat	ttgctgatgt	ttggctttaa	gtctaagaat	attgtccaga	tagaacatgc	28860	
taaatgttta	catttgagtt	aatgttgaat	acttgaacta	acatagggat	gccagaccac	28920	
tactcttgat	ttaattagag	atttgtacac	atttccagtt	tttccatgt	aagatcagtt	28980	
ttattgttcc	ttfaaaaaata	tcttgatgaa	ataatcttgc	aaaggaaaga	taacctagca	29040	
tcaagtctgc	gatafaaaaa	caaaaataaa	atgattttct	gactcagttat	catgttttatt	29100	
acctttacaa	atagtgtatt	agtccttttag	agagcccacc	tatgctgect	gtgccaaaag	29160	

tgtcattgat	tgctcttgag	tatcaaagtg	gttcataaccg	gttatctagc	aaagggccag	29220
attgtctctg	catagtaactt	tccatccaga	gtgaaatgat	gataaatcc	cacacgaagt	29280
atatgtatfat	ctttttctcc	ctggcaattc	agatccatgt	gtctcttata	tcttttatgt	29340
caaaatacct	acttccatcc	aagataiatc	gaatttcac	attcaaatgt	aaatgtttct	29400
cataagacat	catcttttcc	tetaaattgg	taatttatct	ttgcataatg	ttattaigt	29460
catccaggag	tagtttctct	ctctttggat	tttatataa	ttctggatcg	ttctgtiatt	29520
tgtaggaac	aaccaagctg	acacagtcgc	tccaggccga	ctgggcctcca	gtcggtaggg	29580
ctttctctag	ggctttctct	ggggatctgt	agtgtaaacc	acacctgect	aatcttccct	29640
gtttctccta	gagaacactg	gaaagtccca	ggggacactg	gccctgacct	aggettttcc	29700
tttggtcttt	agattcagac	atttccacta	aacttagaga	gtcaagtacc	tggattcatg	29760
ttgaaaatct	gatagtagtt	gactttigaga	cccaggttta	gtcatgtcat	gtgctgagct	29820
tiggitttctt	cailllcaaa	atglagcccg	lllgiggag	ttlgaalga	acaicacagc	29880
ctgagggttc	cccttccate	cccagtttct	ctgatagagc	agaggactct	gaaaggaggc	29940
cagttttttt	attcetaacca	tgggaaattt	gaaataatgt	ttgacttctt	ttgettattt	30000
tttttggtcc	ctaaaafatt	tgafttggtca	agataaatca	tctttgtttt	atttttcatt	30060
tctgataaatt	atcagaataa	taactggata	agtcaccagt	aaagccccaa	ctgaaangaat	30120
ttgtagtcatt	gttgtccact	tttatattta	aaagtgtttc	tctagagtta	aggaaatgaat	30180
tttttttttc	ccagatgtgg	atgcaagtta	caataaatte	tiggcccttt	tgaaccatta	30240
gggattaatc	attttgggtt	aaccattttc	tagatgttga	gaatttattc	ttataataac	30300
cacaaaactt	caactacttt	atlttatltt	tattattatt	atltttgagt	tggagtccat	30360
agcccaggct	ggagtgcagt	ggcagatct	tggcttcact	gcaaccctg	cttgcactgt	30420
tcaggtgatt	ctctctcctc	agccttccaa	gtagctggga	ttacaggtat	gcgcaccac	30480
gectggctaa	ttttgtattt	ttagttagaga	cagggttttg	ccaigtgtct	cagggtgtct	30540
ttgaactcct	gacctcaggt	gttccaccca	tctcagcctc	ccaaaatgct	gagattacaa	30600
gogtagtga	ctgactgcgc	ctggccaaaa	cttaactac	ttfaafgaaa	aaatccgaaa	30660
atataatttt	tctgttcttg	aactgsagcg	actgaataca	gtttattttc	tctttattaa	30720
tcatgttccg	ctacaaatgt	aatttgtgtt	gagcactgtg	tttatggagc	atagcataaa	30780
ttggagtaga	aagacctggg	tttaaatctc	accacctact	gactcttgcc	tacgaacagt	30840
aaaccctctc	taacctcatt	tcttccattt	tttaagaaat	tgaaatigag	ccaggtgcag	30900
tggcttatgc	ctgtaacccc	agcagittgg	gagcccgagg	tggscagatc	acttgagccc	30960
cagaatttga	gaccagcctg	gccaacatgg	tgaaacctca	tctctactaa	aaatacaaaa	31020
attagccagg	tgtgtgtgca	caacacttga	atcccagcta	atcgggaggc	ttaggcaaaa	31080
gaatcggttg	aaactgagag	gcagaggttg	cagtgagtgg	agattgtgcc	actgcactcc	31140
agcctggcca	acagagtgag	actatctcaa	aaaaaaaaaa	aaaagaaatt	gaaattggta	31200
taagctaggt	cttctgtaaa	tgatgactct	tacaataggg	attccctgca	ggtctgttga	31260
gttatgtgta	tttgcattgca	catgtacaca	cacggtgtat	ttgttccata	gtaactagct	31320
ttggacttcc	tgttgtgect	tctattgttt	ttctgtcaac	ttaccggttt	tctctccttg	31380
aagctatcag	tatccctgtg	tgtagtgcct	gctctcatag	gatttatagg	tttgttgaca	31440

[0031]

tctagttact	tgtatTTTTat	acacagcfcf	aagtgagaag	gcttggcaat	atgtaatgtt	31500
cgTgaatatt	tgtatgaaat	tcagcagcat	ttactttggg	gaactcatat	tttatgtgtg	31560
cttcaaaaaca	atgaaactta	gcactaftae	aacacaggag	tatatttga	tcctggcttt	31620
tatttataaaa	gaaatagtat	tgagccacce	agttggggga	tacacagtct	aagtagttat	31680
tctcttattt	tgtttctggT	tcccactttt	atfgacttaf	atagcacaca	tacagtagtg	31740
gcataatacc	agctggattt	cagagigcag	aatgaaacca	tgggitttc	tgtgagattt	31800
tttaggcctt	atataggaat	tatatgcattg	actaggacct	tataaattat	gtatctacta	31860
igtgccccagc	tcctagtata	tacctaaftt	aatccctgaa	caactctttt	gtgttacaig	31920
gtattatecc	tgtttaaaga	tgaagaaacc	aatatttga	taaattaaat	accctatttt	31980
ataaatgagt	aagctttttc	tgaattcaga	gttcatgcat	tttaccagta	agecatgctt	32040
tccgcttact	gcaaaactagt	gactccaaac	tctgcaaac	tgtgaaacta	ttgtgaactt	32100
gtgigaatgt	atggaagtig	gcactgatta	gacgtttgaa	cittcttctt	tgtcctgtgt	32160
tatgcattgt	aatctgceat	ttctgttcc	tagctgtatg	gtcaccetta	gaggtatgag	32220
ttgtcttat	atgtatatgt	tcattgcttag	atctgttget	cacagaatca	tctgacatcc	32280
ccatttcgtt	gaatctaggc	agcagggtt	atggcagcca	gaaaagtgtg	ccctgggggc	32340
aagaatgtct	ttagggaaaa	atatgttatt	gtctttcaga	tagtagttct	ccaaacagtt	32400
gctccaacag	ttcctatgaa	aagattgctt	gagcccagga	gttcaaggca	gcagtgagcc	32460
atggTcaTgc	cattgcactc	cagccTggac	aacaaagtga	gaccctgtct	caagagaaaa	32520
[0032]	gaaaagnaana	aaatgctagg	tggatcttca	gtttagtcca	gttaattaag	32580
attaactatt	aattataaca	ttagaaatgc	caggggggga	tagagacccg	tgaltctgtt	32640
ttggggggca	ctagaaaaca	gttcttgaga	cactgggtct	gccatctacc	tttaccceaca	32700
tcataTcctt	atgtagacat	aaaatattaa	gagagacttc	atgaggaggc	atttctcagt	32760
ttcttttTgt	atgaactcta	citttagttg	agaacaatga	aagtgtatgg	tttgggtttg	32820
gagaacgagt	ttacttacta	gtttgattta	cagtgaatca	tgtctttggg	atttataaat	32880
ggttttagta	ttgagaagta	gaggagataa	atagttctgg	tgtcaaggga	agcggagcaa	32940
taaaatgaag	ctgaacaatg	accattaaagc	ccaagccaat	cagatcatct	gtgtgcctta	33000
atagaaggct	gatgatcttg	gttcaggctc	tcacttagtt	catgtaataa	catggaatca	33060
agagttcaga	caagtataaa	tgtttctggg	tcttgtttcc	taactaggct	tagtttatag	33120
gccagaaaaga	tcttctact	atcctgttat	tactggggca	gtcatgaaa	agagcccttc	33180
tatttatagt	gactgaagac	ataaaatcac	acagtacatc	taaaaggttt	catcaaaagt	33240
gttctttacg	aaagagtatt	tttttatatc	ttgtataat	tgaacttttt	tttaaaaaaa	33300
actttttttt	ttcagccatg	aaattacatt	cittctttagc	cttaaaagact	ttgacattct	33360
cccttggggag	gccgaggtgg	gcagatcacg	aggTcaggag	atcagagacca	tcctggctlaa	33420
cacagTgaaa	ccccgtctct	actgaaaaat	acaaaaaatt	agctgggtgt	ggtggcgggc	33480
acctgtatgc	atagctactt	gggaggctga	ggcaggagaa	tggcaTgaaac	ccgggaggca	33540
gatgttgcac	tgagccgaga	tcgcgccact	gcactccage	ctgggagaca	gagtgagact	33600
ccctctcaaa	aaaaaaagaa	gattttgaca	ttctctgttc	aagaaacttt	tacagtgaga	33660

gtaatttagt gtatctcaga caatgfigga gtgatcgaig gttgggttcc cttgttccaa	33720
ggtagaafat caaatgttca gttgacttgt tgatggatca gtttgacctc gcittaaagga	33780
tatgtctgaa aaactgaaat aatgaggtea acattttcca ggtttttttt tgteatteta	33840
tgatcgacta agtctgcttt ggttttcagt tactaatcag tgttccaeta atgectattt	33900
agaaacttta ttttgaata attatagati gacaagaagt tgtaacagag ggectgtgtt	33960
gtataatga agttaacag tgatagctc etttcttct agaaaggctt tcaattfatg	34020
gaaaaatag caaaggtaaa agatgctcgg cgttggacct ttgaaacttc tttcggaaft	34080
agtattttga atgacccat acaactagaa taatggctga aatttctatg gtgctggtea	34140
ggactgtgac tgtggccga gcafagatg attttctfgr aaaccaaaag tactactaga	34200
aggagaagaa lgrtgggag ctctctggg gttggagctt atgctctcgg agactllgag	34260
ttttctgtgg gtgtaagttt tgcaaaigt cctggtagcc ctgaagctag agttgtcaaa	34320
gtaacaggtg gtagctggga gccagcttgg cagtggafea gctaccctaaa tagccaaagt	34380
tgtcaactct acatgaggtc ctgtagacca aactgggggt ggggaggatt agocccatac	34440
aaatagtga tecttttttt tttttttta aacagtcatt tgaatatftt tctgtanaag	34500
gcctaagctt taggcattta ggatgattgt aatgcactg ctttgiatc ttttcacat	34560
atatttgatt taftaafata aattgccc tttgtacat aaaaatggtc aatatttgc	34620
agtticatat ggtacaacct actgttttct gctgtacat tggaaattct caccaccgtg	34680
ggataccatg tttcaagaa acgttggctt agcctcttca tttatggaag aatatagca	34740
cttatggtgt tetaagtaga ttaactaact taatcttttt acaagcaaat gaggtaggtg	34800
ggctectagtg ttttctgct ttttaggac acagagctag taagtgttg agctgggctt	34860
acaccctggc taetggctac agggctgtgc tgtttctcag ctcttgtgtt tggccctacc	34920
ctccagtea tacttggaa agtctgggt gtctagacag gtgatgggtg agtgacataa	34980
ggtaccctct tttgtcttca tgggagaaat aactggattt cccaagaaat gaattaatc	35040
ttccacaata caagagcttt agagttttaa caagatact tcttcaagg tgcaccctaa	35100
ttctacactt gcaatggagg gtgcaatgig tcaaatgtgt atttttatct taaataccna	35160
atactcttag agtccatcca tgggctgtg gagttaggg taaatgtaga ggettatttg	35220
gcctaataat gaaagtatgg atagttattg ccatggagga ggagggtgaa tgtttttag	35280
agteccatcc aaccttgaaa tctgattct ctgataaact tccacctctc ctctgttget	35340
taatctttga tcttagacct ggaaggagag gaggcaactc agtcaatgaa ggagttttat	35400
ttagtaattg cacattgccc tcttctgccc ggateccata ttgacactgg agtaaggeta	35460
gaggctggga gacaaggccc catgggagct ttgtgaaatg gggaggggca aggtgtgtc	35520
cttgaccctg ctgtttgtgg ggcagctgtc ctagggttgg agacacacac cggctgttcc	35580
taagaigtcc ctactggatc ctgtcagttc gccctccagc attcttggat ttattgtgca	35640
ccatttatgg ctccacagtc cactagatga aattgtaag actcaatag gtgctctcc	35700
agggacttcc cctttcttc tcccttagca tcagagatga cccgtcagcg ttgcaagcag	35760
ttctgtggtg gcacatcaag tattctgtca cagcaggaaa gactggataa acatcaaggg	35820
actgccaaga ccagacttct cttcagctct gactaggagg aaagaggaca ggttgttgg	35880
gagttggttt aaagatgaat tatggctgg gtgcgggtgc tcaagcctgt aatctcagca	35940

[0033]

ctttgggagg ccgaggcagg cagatcacga ggtcaggaga gttcgagacc agcctgacca	36000
acatgggegaa accccatctc tactaaaaaa tacaaaaatt agctgggcgt ggtggcacac	36060
gccgtgaatc ccagctactc aggaggctga ggcaggagaa tcgcttgaac ccgggaggcg	36120
gaggttgcat tgagccctga tcaegccatt gcaactctagc ctgggcaaca agagtgaaac	36180
tctgtctcaa acaaacaaaa aaaagagtta tgactggtct ttctcatttc atctgctgat	36240
gggtagagga gggaaagggt cagaaatatt tcttttaata ccctctcagt atgaatgaat	36300
gattttgacc tagtttaggt tttggtctgg tggatgtgag attggaatat aatttgtttg	36360
gcagggtcat ccccaaggat gctctatgca tctgcgttct igtcccctg gctagaatgg	36420
aateaaagga gaagcttctt cactctattt tcagaggag cagggagagt agtgggtgat	36480
atccccacag ccagaaatag attggctctc aagtaaattg gtttgataag ttgattatga	36540
atcttctcga aaactgctgt gcccttagga acctctggagg gctctactag tggacctca	36600
tcatcactct gatgagcact tactatggtc taggcactga ctgtgagaaa tacaaatgag	36660
taaaataata tcatagcccc caggatagtc tggtaggtga catttacaat acaatgtaag	36720
ctaaggttgt aattaatgtg tttaacaaag tactgtggca gcacagagaa gagagtgact	36780
acgtttggag tccacaggac ttccaccgaa agatgaggca tcigaccctg acittgagag	36840
gatgaaccag aactctgtag gtccagtaga tggaaagttt tcaaagaatg caggcagaca	36900
gagccttggg aacagtcag gttagggggg cactctgtg ggtccacaac ccgagcttct	36960
cgccccctctc atttcgtaat ggcctgcaag ctcttctctc actgttgttt tcttttacig	37020
[0034] ctctgtgat tcatctgat gagtcacgac aacctctgt tgcagtgat ccacgtctcc	37080
cagtlaggaa acgaccctgc tcttcactgc ctggttctct ggigtggtg cctccagcct	37140
tcagtctccc ctctcagag ctgtgacaag aggttcttac agccttaaaa ataaaaagca	37200
gcttcatatg ttttgccttt gtgttatita ttgcactatt tgttagcaaa gtttcccagg	37260
actggagcgg gaggtcattt gagagatgtc tcttgggatt ccaactgaac tctttccac	37320
tgatcccaat tggtagaccag gaacaggagt tgcctttggt cccttaccac tctccatggt	37380
tccagcttc ctaagatacc ctgtcccctc ctgcattttg gtcagcactt atctttcctt	37440
ctgctttgtg ctctctagtg tcttgggtca ctctctgtca gctcccaaat tccagaggfg	37500
gacctgggtt aggccatttg ctgtaigtct tttagtgtgt attgcttgag aatgctcata	37560
tttatgtagt atattccgta gtgctgaaa attctaagga ccacagcgat tttgaatgat	37620
tcaaagttag tcacttcagt atgaacagct gtgaatttaa aggcanaacc aggattcttt	37680
gaaagcaaaa actttcttta gagcagcggc gtgcttgggtg aggcanaatag attgcatttt	37740
gtgggtccag aatatagacag ttcccctttt atacgttaca tctttgtcat gtagtcagag	37800
acatgcagat cctttgaagt gaattctggc accacaattt tgtagagaca gtcagtgtag	37860
tacagcafta gaagggcata cgatgtgtca ttgaataac tctgtttgaa gagcagcgt	37920
cagcccatgg cagagattgc tgaggggatg gtcagacga gagcaggtg gtattgggc	37980
attgtgaaaa catgcgtgaa aggccttttg gaatcctgct ttttggcagt gttgtgcaag	38040
tccctcagaa attttgtcac ttccttggg aacatgtaca acagggatac gtcacttagg	38100
cagagactac tcaagggctg aaaaatgcta cactcaftaa tagtttctct gagctggaga	38160

ttggtcacat ctgatgtctg gatggfggcc attgtttgta aaastagctt agaagttcaa	38220
aacgzgggta ggagccctgt gtcttttttt ctteccctgga aagggaaagt tttttgagct	38230
gtggaacttc gagtataaac taactttttt gtaecttgtt ttgetcatct gtaaatgggg	38340
ataacagtgg taccacacctt atgggaigtg caggattcaa tzaatataaa acatttggca	38400
tgatgectgg cacttatage taccactggt gtagtgitta attatattta ttatttttc	38460
tcattgttac tgtcttttc taittgagat ttctcggagg ttctgtactt gttttaaag	38520
tataattctt tccatggett taectccgt tagcagtggc ttaattctaa ctgggagaaa	38580
aaaccttga tttgtgtaa tttctlaai tcccttgtct taectttggg atggtggagt	38640
tgggaggcca gtccagagtc agatgtcagt ggggaacaga gattgtggc agtcccagge	38700
agaggcaggt gccagctggg acigtctagt gccctcicaa ttatttgatg gtggaatgga	38760
tgattattgc agtttgciaa taaaaaaaa caaacatag cgttagtggt aggagtagct	38820
gagtgaangt atatgggaat tcigtgtaet atctttgcag gtcttagta aatctaaaa	38880
tatttcaaaa tgaasattaa agccccagca acaaaagcag atgtagcacc atgctgacac	38940
tagtaaatgc ttaataaacg tttgttggat gcaagagtga gtgagtgagt taggtttgaa	39000
cccaaccteg acaactfatta gctagattac ctttggfcaa ttaactgctt tatgaatctc	39060
agatttctta tttattfatt taattattt tttagacag agtctcctc tctcggcagg	39120
ctgtagtaca gtggcgcgat ctggctcac tgcaacatcc gaectccctgg ttcangcgt	39180
tctctgctt cagectccca agtagctggg attacagcca tgtgccacca caccagctc	39240
atthttgtaa ttttagtaga gacagggttt cggcatgtt gccaggctgg tctcaatctc	39300
ctgaactcgt gatccccca cctcggcccc ccaacgttct gggattacag gcgtgagcaa	39360
cccaacctgg cccagatttc ttattataa agtgcctgta tgtctacctc acagtgttgg	39420
taigagcgtt aaatgagatg taaagaacct gatcagagga tccagttata tggtaagtag	39480
tctaaagtgt aggtattatt attgttaag atatgtggg cactttgtt attgaatac	39540
ccccccctc cttttttaga gcaaaaaacc atttaaaaa tacatitagg tttcttgcag	39600
ttttttctg ttatgaacaa caettccatt aataggatta atagctgat agctagatct	39660
ctgtgtgtgt acattatgta ttcttaggat acatttctga gactcactg ggttcttatt	39720
ttttggctct tttattccc ttaccagagt gcctcccgat agttttgtaatt tttgtaacaa	39780
tttaccatta aagaacagag ttttgatagg cagagatggg agagttaggag agaggagta	39840
gccgtacac aaaaggattg cctcctttac cccaaaggtt gaggcctctg aatgctggtc	39900
tgacttcta gggatgatgc cctcggagcg tagtaattgc ctaggataca accactcage	39960
cttggtccac catggttaga caccaccat gctgggtgct ctactgccaat ggttggggag	40020
ggctgaatgt tttcaccctg ttcttgggg aggtggggac ttgatgagt gacacccggc	40080
giggacagct accacctgcc catggttagat gaaaccttac ttctgatggg aatggccctc	40140
ccttcttatg ggagttagt tctcatgga gtgggttga acaaggatga gcagtaatc	40200
cagggtact tagaattgc ttctctgaa tattagaacg tgaagaggac tttgagggaa	40260
tccagatgg tggttttgac tctttgaaa tcaaggaacc ctatttcata tcaagtccga	40320
tgtggaatct cagtgtacta aagatttat ttttttiatt atacattaag ttcigggata	40380
catgtgcaga acgtgcaggt ttgttaeata ggtatnacag tgccatggtg gtttctgca	40440

[0035]

cccataacc	tgteatetae	atitagtatt	tctcctaag	ceatcccacc	ectagteccc	40500	
cacccccga	ctggcccgg	tgigtgatgt	tcccctccc	gcatecatgt	giteicaitg	40560	
ticaactccc	actiatgagt	gagaacatgt	ggtgtttggt	ttitggitec	tgtgttagtt	40620	
tgctgagaat	gatgatitcc	agcttcatec	atgtccctgc	aaaagacatg	aactcactct	40680	
tttttatggc	fgcatagtat	tecatgggtg	atatgtgcca	catittctat	atccagteta	40740	
tcaitgatgg	gcatttgggt	tggatccaag	tatttgcctat	ggigaacagt	gctgcaataa	40800	
acatatatgt	gcattgtctc	ttatagtaga	atgatttata	atcatttggg	tataatacca	40860	
gtaatgggat	fgctgggtca	aatgtatatt	ctagtictag	atccttgagg	aattgccaca	40920	
ctgtcttcca	caatggttga	actaatttat	actcccacca	acagcataaa	gtgttcciat	40980	
ttctcacatc	cittccagea	tcgttggttt	cctgaactttt	taatgalcgc	catctgact	41040	
ggcatgagat	ggatctctcat	cggtgttttg	aattgcgttt	ctctaatgaa	cagtatgat	41100	
gagctttttt	cccctatggt	tgttggccac	ataaatgtct	tcttttgaga	aatgtctggt	41160	
caittccitt	gcccscigt	tgalgggtt	gttttttctc	taiaaatttg	titaagtitt	41220	
tigtatattc	tggatattag	ccccttgcga	gatggataga	ttgcaaaatt	ttctcccat	41280	
tcctgatatt	gectcttcc	tcctgatgata	gittctttttg	ccgtgcagaa	gctcttttagt	41340	
ttaattagat	cccatttgc	aatttggct	ttgtttgcca	ttgcttttgg	tgttataatc	41400	
atgaagtctt	tgcccctg	tggtctctga	ttatggtttt	aggtctttaa	gtttaagict	41460	
ttaatccgct	ttgagttaat	ttttgtataa	gggtgaagga	aggtgtccag	tttcagtitt	41520	
[0036]	ctgcatatgg	ctagccagtt	tcccaccac	caittattaa	atagggaaac	ctttcccct	41580
tgcttgttta	ggctcagattc	gtcaaatgct	agatggttgt	agatgtgtgg	tgtttattct	41640	
gagccctttg	tctgtttcca	ctgtctata	igtctgtttt	ggtaatagta	ccatgccgtt	41700	
tgtttactg	tagccttcta	gtatagttt	aagtcaggta	gigtgatgcc	cccagctttg	41760	
ttctttttg	aagagattaa	tcttataagt	tcagacttgt	aggtatcata	acttataaga	41820	
atcatccatt	tacttacct	aaataaatgg	atttacaaga	gattaatttt	atagtttcag	41880	
actttaggt	atcfaactt	acaagaatca	tccatttact	tatggtaaag	tcagagaaac	41940	
aatgaagctg	ctgtagttag	cactgaattt	taacttgggt	tctgagtggc	agtcccagtc	42000	
aaatgccagt	tccattacc	aggttccatc	tggatttaatt	tttgtttgca	gtatagaaaa	42060	
gtctgatttg	catggataag	taattgcaga	taagaatagt	ttgctaatac	cttgcaattt	42120	
caggatactc	tttaattaaa	ttgatccaga	agcctgaaag	atgaataggg	ggaactttgg	42180	
tctccaagga	gaatcacact	gtttaacaaa	tactttcaat	cittattaca	aactgcaaga	42240	
cagatgataa	tgtatggtea	ctctttttat	tacaatgcag	ccgtttatga	attcatttgc	42300	
tttgcataa	ctgactattc	cccctgtata	agagcataag	ccagcagatg	tgcctgagat	42360	
ttacctggca	tttaactgaa	catactgcag	gtgtgctata	gcagtatact	tgettgaaca	42420	
gttttaaggc	accagacaag	tacaggcctg	aattttttaa	aagataattc	cagtttccct	42480	
cagaatcagt	gacatattta	caagatacia	atataagctt	agaattggca	agagcagett	42540	
tattctgagg	tctacaggaa	gataatgtga	acacatttgt	catcatcagt	gtgctaaaat	42600	
ttccaataaa	atttgaatci	gtggagitt	attataatci	ctaaaatcat	taatatatta	42660	

	ecttaaaaaat aabaatgaat actttttttg cagagttttt tttttttgtt tttttttttt	42720
	ttttttgcag agttttatag cactcagaac cttttggttg ctcagaacat agcttgaaaa	42780
	tectgatctt tccatattg cagcctcagt ccttttataa atgatgagat tcaggctctg	42840
	ggggtgaagt gactttccaa atgtaaitcc agaagttact gggaagcca agaggaagag	42900
	ticttgggtc tctttatgct cctctaaagct atttttctct gctgagcagt taggactcct	42960
	ggaggggaca ggaagctgtg tgetcaagtg acatccttc tttagttttg tgtgtgcata	43020
	tttgttagg cacatgaatg cactcttcta tactactag gtgcagttag agctggcttc	43080
	agggagaaaag ggaanlgegt gattttgggg tccccagct gagcctaett tttctgcag	43140
	tattctttgt tctggaatct tctcctcacc ctitttttge atggaactt aatctattca	43200
	ggctcccaact ttcaggcttc tctgctctga caagtaactag aggccaatat gatagactag	43260
	tctgagttaa aagggtgcag tgaaggaacc agctaccct cctgtttttt gtattatcat	43320
	aagcaacctc tggcatagaa tgetttcacc ccaagcggct gtttcagggg cactggcagg	43380
	tttggagggg caittgtgtt tgaatagtca gtgcctttt tgcattaaa ctccatggt	43440
	agagagacc agccttaaga aataagactg accctccata gggtctctgc tagtctatai	43500
	attgtctttg tgaanaftag aaaacagcat ctgtctgag tgggttagcc ctgcaccaga	43560
	gagtgtgccc tggetagtaa aagcagatg ggatttcage cctcacttc ttacctcagt	43620
	tggcattct tggcagtgcc caacctgccc aaccatagc tgtagtctg attctactg	43680
	ctatcttcca gccaaafaca gggctttgt attcttttge attatacaga tgtgttctt	43740
	gtggctgctt aatagacgtt ttagttgact gatactcact gttgaccaaa tagagagaat	43800
[0037]	ggcactttgc aggatgttta tttctctctg tccccatage agcagcaacc atcagcaacc	43860
	tgttaacctc aggtattctat agttcattca tttattaatt caacagctac ttttaaata	43920
	cctataatgt aaaaggagac aggtaccaca gctacaaaga gcacctctt tggagtcaaa	43980
	tctgggtttg aagtttctt tttctgttga ttgtctgtt aatatttgc aaattattaa	44040
	actttctgag cctcatttat tcttcaatt gccacttat tcaacagata tttattgagc	44100
	atttcccttg gctggatgaa gatgaaaaa aaaggaagac agcagcagtt ctitccctca	44160
	tctctagtga gzatgtggac acaaaacaaa tactatgact aacacataac aattctagcc	44220
	tgtcataagt gccctgagga aaagaacaaa ggatgtgcta aatgaatag gacctgggga	44280
	gtggggggag gggacacggg agaccgtgcc agagagacag agctctttct taatagggtc	44340
	gtcagggtae gcccatcaga ggtgagcaca taagcagacc caaagaatgg tgaggactg	44400
	gccctgcagag agcagctcagg gctgaagagt cagcttggac aaagggtgga agtagttggt	44460
	atatittgagg acataaaaaat atggacttgg gccataatgg aagacaaggt tggaaacagt	44520
	gatgatgata acagtageca gcaactgttt agttcttget atgtccagac actgtgctga	44580
	gtccttccac atacattaac tcttctaatg ctgaccacaa tactacggag catgtgttac	44640
	gatcattggt ttacagatga agaaattgag gcaagatgg gataaataac ttaccagga	44700
	tttccagct gccacgtggt agagctggga ttcaaacaca cgtgttctgg ttcagactg	44760
	tgtttatafc tctatgctg tagtcccagt gaaggctggg tcatgccaga cctcagtttc	44820
	gtcaicagta aatggaaact aatattgiga ttaaacacaaa tgtgtataga atggcagcca	44880
	cataagtca taagcattca tcagggtgac tgtatatac gtggtggtgg tggttgtggt	44940

cagcattgta gaaaaataca ggggtgcatt aggaangtaac cctctagggg agggccgtgt	45000
atactgataa tcgttaatgt aaggaggaca gggtaaggg ccttgaggaa agtctgtgca	45060
tgaacagtgc tgcgatgget ctgaagtggg tcagtttggt ccacctgggc agtctggagc	45120
cacttggggg tggggggagg ggatcctgct gttgagctcg gaaaaatggg caggagteac	45180
atacttggg gcaggtagga ggagcatttc cctgcacca tcaggtgagc aaagatctag	45240
tgtgtactca gagtggaaa gtggggtctg gagacaatag cactggccgt aggagagagg	45300
caggaactgg agtgaagata gtttagagcc agcactcact gggccttgat gccattgcga	45360
agctttcagt ttatgatca ggaatgtgt gttccigggg tccacagctt gttttaaaga	45420
tctaatttgg gtatctctc agctttctgt gactctgget gacgacaga gaggaaatit	45480
gttttgctt ttatitgata tctctctgt catctacctt aaggagcctg cccacctcct	45540
gggttcaaac agaggagagg taccactata gtgggaagct ttatgacccc actcctccag	45600
acaggtggtt ttataggtga ttgcaaaafa ctggcacagg ctggagcta gacagatctg	45660
ggctgataa tctggcctt aacagcattt gacctgggt ctgtgtttg ggcctcattt	45720
agttccctgt aaagtaggga ttatataccat gtctcattgt tatataaagg tcaataaagt	45780
gcctgacact atgtccctga agaacaatgt aagtgctcag atgagttag tcggaattac	45840
tagattgcat ggtgtggaag gccagttac ccacaggaag tcagttttaa ccgactaatt	45900
gtctctccc atatttttga ggtcaggaag cctaatcagt tggcaggact cattggagcc	45960
acattgagat ggattttaaa gtcattccca gctctgtgg gacatcagge catgatgat	46020
[0038] acacagittt ctctctctg ttttattttt ccttaaggct ttatttctt aaagcagitt	46080
taggtttaga gcaaaaattt ttttttttga gacagagttt cctctttgct tcccaggetg	46140
gtgtgcaatg gtgcaatctt ggctcacttc ctgggttcaa gcaattctc tgcctcagac	46200
tcctaagtag ctggcattac aggtgtgegc caccacacc tgcctacttt ttgtatttt	46260
ttttttttt agtagagatg gtgtttcact gtgttagtca ggtgtgtctt gaactcttga	46320
cctcaggtga tccgcccgc tcagccccc aaagtctgg gattacagge atgagccact	46380
ggcccagcc tagagcaaaa ttaagaggaa gttacagatc tcacacttgc ataacctccc	46440
tcataaccac catttccac cagaatggtt catttgttgc acttgatgaa cctacactga	46500
catcattatc acccaaatgc catagtttag attaggtccc actcttgag ttgtgcattc	46560
tatgggttg gacaaatgta tgatgacatg taccatcat tctatcacac agagtattt	46620
cactgcccta aaaaacctct gtgctttgcc tttcagccc ctgctgacca tgtgtatttg	46680
ctgctctggt tttagatcat cattatgggg ttgaaaaat agcactctat aaaggtgitt	46740
gtgcttttaa gtgaatgta gcagttctac agtccctgccc agtagatccc atctttcaat	46800
ttgctgaaga tactgattct gttttctgt tacttcagaa caaacagagg aattttgaa	46860
gaactaccac ccacttctc agacttactg agcactgct taggagccac acatagttct	46920
aaggttgatg catgacatac aaagacaaga ccttacttgg cctcatagca gacacagct	46980
ggggcagtgg accctgtgtg ttgtctctt tgatgcggg ctgggtacct ttgacattta	47040
ggaggtcatg gctaggaata ctaggaatcc tataatgtgc acagcaatag tccgtggat	47100
agaagaattt tctatagcc tcatgactt tcaaatgtct cccagacat tcttcaggg	47160

aaaaagcctg	ttcataatit	ictgaaccta	gaacctgtaa	ttccaittta	tgtaacggac	47220
tttttgcatt	gttttgcatt	acccttaatt	tictaggaat	gccactactt	tgtaaatga	47280
tacgatafac	tatataagat	actacacfat	tttgtttgta	actttgocaa	aagetgttta	47340
ccatititfat	aaatcacctg	ccaatgttgg	tgtgcatgta	tttgtgtcat	caagaataat	47400
aigcaagfat	ctgacigcat	ttatagitat	tgcaittcaga	gttgttctgt	tgttgtatta	47460
gactacttca	ttatgtcttc	tgatgtactc	gtgacagagc	aattactatt	gaaatafata	47520
ticttacaga	taetttttaa	ttctttatit	afagttagga	cattatatta	tgttgaait	47580
gtataitagt	tatatiatit	tigatittea	tttcagggta	gtaaaggag	agcattatga	47640
cataaatgit	ttaaaaaagc	gcaggagctg	gggtgggggg	cgttgggaac	egtgtgtctg	47700
atgcacigga	accataicag	taagacctgg	caaagtgcag	agaatctgt	gggggaaaga	47760
gtttaagctt	caitttgttt	taagtcatgg	catgtgiggc	cttgatttca	aactctgtgt	47820
tigaataaag	tgttttttgg	ctgggtgttt	cgaagtitta	gaaaatggga	gtgtataggt	47880
agatgigaag	tggttacagt	ggtttagtca	cagcaccctg	ggcatgagaa	icttagccag	47940
agggactcta	atttgtgaca	tagtcaccac	agcaaccaat	ggaaatgtcc	ccaigtgato	48000
tgaaccaaaag	tggttttfga	gigttaaaaa	atgtgtgttt	aataagctaa	aattatctgt	48060
taactgttcc	aagggtgatt	tttgtatit	caagcatgca	caattctaat	taaatgcat	48120
tgtgtaatca	cttgtgtct	cagtgtagtt	tataatgagt	tagaataatg	aagggttagt	48180
gagactggaa	gttagagacg	cagagagcct	tctgtctfaa	ggtatcctta	aacagatagg	48240
tgttaggacc	agcaaatagt	gatcccagaa	acacaataca	atatttaatg	aagtgtctaat	48300
tatgttgcgt	gtcagtcatt	gtaggctgca	attgatggag	ctagggtgtg	gaggaggagg	48360
aggttggatt	gggatggccc	tgaagggtta	gtaagttagaa	igttaatgga	aagaacctgc	48420
aatgttttcc	taceccaact	ttccaagtta	ttattatcca	cagagtcaca	ttgcttfgta	48480
ttccaaatit	actttatagt	agetaataag	tatctttit	atttagtacc	taacgtatga	48540
tttccactgt	ggttggctct	tgacaacagt	tagtgagag	egaatigata	ctagagatgc	48600
agaaatglaa	gcttagaag	ctcaagtgic	caggaccaca	cagagctcat	aagtggcaga	48660
gccaggattt	aaactcaggt	ttagctgatg	tcaaaagcac	tctttatggt	cttttfgata	48720
tttttgcct	agagatggtg	tcatgatta	gcttgtttac	ttaccaacca	ttttctattc	48780
agattataaa	gcagatctca	tttggccgag	acttgagat	ttaagtittt	gafatgtaat	48840
ctaigtatga	atttaaatga	ggtatggtta	gaaagttcca	gccagtttag	taatttagca	48900
ccitaaagca	ttcaacaagc	atggtttaacc	aaaaacctaa	atcatactaa	atgtttgaag	48960
tgttgaacag	gaggaatat	ttttatattg	ttactagtca	gctttaaaaa	aaaatgtgtt	49020
tataaactga	gaagtctagg	tacatgacat	ttatactcct	gatgtttgac	tgctttfgga	49080
aattcccacg	tgtgacttcc	tgttaagctt	ggctgaatga	actgacaggg	gattccagcc	49140
cttactgtat	aattaaaggt	aaagatacag	aatgcattct	tctactccca	actattgtgt	49200
agttagtigt	agctaccaat	gaaattatca	ggtcaatgca	aaaaacctct	tgtttttatt	49260
tatacagcgt	acaggatgg	tctgattagt	tgttctcaag	taactaaactg	gggggtgggg	49320
ggcaitttagt	agigtgtttg	ttgtgtttt	tttttccat	aagaacaate	aaatgaggaa	49380
actaatagca	ctgtggcctg	cttagggaat	ttttgtcact	gaaagaactg	ctgcaagccc	49440

[0039]

tgtgtctcag gaagggatgat ggaatgteta aatgtccatc tgtcgggaga agattgaagt	49500
ccctatgccg atctactctg ctigtgcaac ittgtgattt gcagccagtt actlaatctc	49560
tctttactgt tgttgactga agteatgcta tagctggtat ttcataatac aaggacagag	49620
ttcaagaatt atcttcttgg ttggaatgg aaaggaggta tctciggagt caagtccaaa	49680
tggtaagcc atctcactct agaaactcac tgtacaaagg gactaagaag ggaatagaga	49740
agctgccttg ttataaaaag gtgatccac tccaatagt ataatcacia caatttctaa	49800
gaggttttat ttcaaccact tattttctta tccttaggtt acacatcagt ttggtgagaa	49860
gagctcagtt ttgtgtttta gatgagctga gtgcttgtct cagttcagcc acttgctagc	49920
tgcatagctt tatgcaaggc acttfaattc tctgaatctc tgtttcttta tctgtaaaat	49980
gatttccagt gaectactat atactctagt aggtcactgg aaatcagttt agttaataga	50040
tgtgaaagtg cttttgacac ttcaaagggc tgtctaaatg tctgtatgag cctgaaggat	50100
agttgttatg ctttcagttt tcaatgctct aggtgctctg gcagaaaggg agaggcaggg	50160
gagtcataat ttgacaact aacttggggt cctatgatcg aaageccaga aatctcact	50220
tagatititt ccctaatacga gcagcttctg cctggatttt ggagtgtggt agaaacatat	50280
gctacactta ttaaaggggt ttggcactct gtaatgtggg attactggca tagaagatga	50340
aatgataaag gaacatctca tcatattcag atgtgtgagt catgcacgct tatgagttac	50400
tctgaaaaat ggaattataa tagaaaaggc catgagttca acttacatta ttttcttgg	50460
ctttagcagt tttcaggtta aaagtcactg gatacattta actgtcttaa agcatagcat	50520
ttataaaaag cttttagaac ttagaatgta caaaagcacc tgaattggaa actgtgtctc	50580
ttatttttct tctcagtagg atattagggc cagttttgca ctggacctgt tctgtgtac	50640
tgccttgata cttaactcag tcaatgaatc agtaagcagg aatataatga ctctataac	50700
cctattggcc ttcagggagc ttcattgtca ttattctctc ctgctgttt tacagtgagg	50760
aaaactgagg gccagaaggg ttccttgaat tctcaagge ccaaggttag gttctggcag	50820
aggcagggtt agaactcatt cagtcacac catgctgtct ccagtgata tgtgttgat	50880
gagaanaatt ccactgccag catfaattta atttaattta attttagttt ggtctagtgt	50940
agtctagctt tggattagtt taagacagag tcttctctgt tctcccagge aggagtgcag	51000
tggcatgact tcaactcttt ccaatctctg ctctctagge ttaagcaatt ctctgtagt	51060
tctcagcttc ccaagtagct gggactacag gtatgtgcca ccacaccag ctaattttta	51120
tgttttatgt agagatgagg tctcgcctat ttgcccagge tggctctgaa tctctggct	51180
caagtatctc acctgccttg gccctccaaa gtcttaggat gacacatgtg ccaccacact	51240
tgtctgtttt attccattta aattacagtt cattttgtgt aagccacttt tcccgtttc	51300
egtcaatttc agatttggaa atacttttca aggattatcc ttaatactac atctctctt	51360
tatgcttaaa aattttgttt gattctttta ccagaaatga tcatagtgat ttttaacttt	51420
caatagggag ctactttttc attaattact tgggtcatat ttgtcactg attcttagca	51480
ctttttcttt ttgatgtctt ttattattta ttgagaacaa ttgagttct taictctgtc	51540
caggccctgt ctttagcagg tcttgagggt gagaaggcac taagtatgg aaggacctca	51600
tccaagaacc cgactctgtc ctgagaggat ctagggtgtc cgtcaggccc caccctatt	51660

[0040]

gacttaggac cattatigtt tttatagtag ctacttgaaa gactcattag gaaaagtcac	51720
gcttttgttc atttctgttt tcaacctagc taaggagaca tatattacaa gtaataatg	51780
gcacaaattg gcaaatgatg aaagfccagg ggattattgc ctaggtagaa ttttagaag	51840
atgatgtgga gaaataggaa cacttttaca ctgttggta gactaaacta gtteaaccat	51900
tgtggaagac agtgtggcga ttccctcagg atctagaact agaataatca tttgaccag	51960
ccatcccatt actgggtata tcccacaagg aatataaate atgtgctat aaagacacaf	52020
geacacgtat gtttatagcg gcactattea caatagcaaa gacttggaac caacccaat	52080
gtccateaat gatagactgg attaagaanc tgtggccat atacaccatg gaatactatg	52140
caaccataaa aaacgatgag ttcatgtctt ttgtagggac atggatgaag ctggaaccg	52200
tcaccticag caaacigtcg caaggacaaa aaaccaaca ccgcaigtic igactcatag	52260
gtgggaattg aacaatgaga acacttggac acaggaagag caacatcaca caccaggccc	52320
tgttgtgggg tggggaagt ggggaggat agcgttagga gatatactta atgtaaatga	52380
caagttaaca gggtcagcac accaacatgg cacatatata cctatgtaac aaacctgeac	52440
gttgtgcaca tgfaccctag aactaaagt ataataataa aaaaaagggt aaaaggagcc	52500
aggtgaaatt aafatcctat ttcaacatgt aatcaatag agaattgttt atgagatact	52560
tataaatttt tctctctcga aaaaaagggt gctgccatc aagatggctt ttaangaagc	52620
gtagtaittg attactggag aggataaggt aattgatttt tttcaagtt tcagttattt	52680
gttaatgtaa tctccaacac attatacaca catgattca tgtatctaaa ggagaaatat	52740
ttcttagtta agtggaaaaat agtgcagcta gcttctgaa gatcttcatt ctaagcagct	52800
ttatagtgaa acatttcatt tagaaatcig gaccatcttt cttcagttta ctgtaateca	52860
calicactga gtgaacttg tatgtctcat tggaaaccag ttatctcag ggeccctggg	52920
cattctttct ggeccaacta acatctggat tgaatgcca gatgcaagac ataccagtct	52980
gctctagtac ctctagctcc attaaataca aagagggga tcaaaactcag ttecttggcc	53040
tgaccaagga cctgggtggag catgttttca gcaaggcat ctgattitaa aggagagaac	53100
tagcttagct gccaggccct tgactaangta gtatctcaga ataaagtaat tgaanaatna	53160
tgagtaicta cttaggctct ctaaataiat tfaattttct atggaggga ctttttaaat	53220
tgaanaatgt atcaacatag agaagactat gtaaacagta tgtgtatagt tagagaaaa	53280
tacctatgta tccaccatc aggttaangaa agagaacatt actggtatct tagaaateac	53340
ctggtagtec cctccactgc acttccctca gaggtaacag tcaccccac tttggtatta	53400
atcatgcect ttetaccagt gtatatgtcc ccagagcaag cataaaccta ggtgtataag	53460
gaaagggcag tgatgccatc tctagaigaa ggcctccagg agaagagctt catggctct	53520
ggltgaattc attacccttg tgcitgaaca gaaactctgg gtcaggctcg gatccagagi	53580
tgagaggttg cagggacctt tttgggaaag tcaatggaaa agatcalgaa tgatttgtg	53640
gaaacagggc ttctcatagt tggaggiacc tagaagactg cagtggccc agctgttgg	53700
agcctgggag gagtggagtc aagaggaatg tgctgtcca cctggctta tgtccagctc	53760
tcaggaatag gccaaatgga ataactctgc ggggtgaaat agtcttctgc tgattcagc	53820
agcaggacac agcaggggaa caggaatttc atcagtgcac gattaagaaa aaccaaatc	53880
cattaggaat ttggctcagg ctcccccagg cttctacec tcaatgcagt ctacgggat	53940

[0041]

cttggcagtg actgcectca acataagtat cectcaagtt gccctgctca catggggatt	54000
ggteatectc tgaggetggc cacagctttt gtgttgagac cgctctgttc tgttctctg	54060
ggagttccct tcacttcctc ttgttitaat ctttatitcc tgtgttgag cctgtctect	54120
gttattttca gaaggatgca tagcagtttg ttttttgaga tttttgatgt etaactgtat	54180
cttgattttt ccttcactc tegttagataa ttggctggf tatagacttc tgggttggaa	54240
gttttttccc ttcagaattt tgcaggcatt gggctgctgt ctctttctt ggtgcagctg	54300
ttaaaaagcc tgagaatatt ctcaattttt gatcttttga atgtagcctg ttttattctc	54360
ttttggaagc tttatagacc ctgttttcca atgttatgaa atttcccagg aatgcccaca	54420
acaggttett ttctccattg ttttgatggg cctttccaac ctggcaactg gtageccttg	54480
gttctgggaa atctttctca aatggttttg ctgatgattt tctcccctcc actttctttg	54540
tcttttcttt aggaattcag acatgtgact gctctggattg ccccttttaa tttctttatc	54600
tctttctctc tattttcaaa ctgttctttt ctaacctatt tcttaactt ttttttttt	54660
ttttgagaaa gggctcact ctgtcaceca ggcctgatgg agttcagcgg cagaatctcg	54720
gctcactgca acctctgctt cccggttcaa gctattctcc caoctcagcc tctcagtag	54780
ctgggactac agatgatgc caccacaact ggetaatttt tgiattttta gcagagacag	54840
ggtttcaata tgttggctcag ggtgatcttg aactccagac ctcaagagat cccctctcct	54900
cagctctcca aaatctggg attatagtca tgagccactg cgcctggcct ttctctaaac	54960
attatcttcc aaccttttta gttttgaaa attaagatat tatttacctc cagcaaagct	55020
[0042] taicaatget aagtgttct ttggctgitt tgacsatcat afaggtttgt gcagttacca	55080
ccctaaacaa aatatagAAC attctatca acctagaagl tccgtagggc cctttcccag	55140
ctgtgttttc atttctgta ttatcttttt aatattcgag agctcccttt ttctctgaaa	55200
tgttacttta aaaaangaac attttattct tgattcaca ataaaaggta ttcttttctc	55260
ttctgaaga cattaatttt taaagtttct tctctgtgta atgttttctc tgagtgtctt	55320
ttttctatct ccatgtctgc attagaggct ttctcagac atatgtttac ctgtgctggt	55380
tgtttatgat taaacttga ggaaggctga gcatgtgctt cgggcttctg aactttgaac	55440
gtcactaaga gtgagccatt cattggggaa ctcccagct ctgtgtcttt aggtcagtc	55500
tgttgagatg gtcacattcc tcagaagaca gtattccagt ctctcactg gaggctagg	55560
gactggetgc cagcatttct ggagctgcag ggaagagggt gaaggctgta gcatcctggc	55620
cccagcact cagcatgtgt geagatgccc tctttctgct tgeccagagg ttccatgct	55680
tcactgaca tetctagta caggacctt tgccttatcc ttccagaaa ctaaacctct	55740
agatattgtt ttctttataa taaaatagtc actagccaca tggtagcac itaaatttaa	55800
attaacattt aataasatta agaaatcggg ttctcagtta cagttagcat cttttaatg	55860
cctggtagcc acatgtgact ggetgcccga ctggacacag cacagataca aaactttcc	55920
attattgtgg accattttac tggacagtgc tggcttagac ttttgctggg gcagaggagt	55980
ggccaacggg attcttttct tcaaacacct ttctctggcc ctctttcttc acccagta	56040
ctgtgcttcc ettcagttc ctgtgacttt ggagacttct gtgtataag ttaatttggf	56100
tatcagcttt tgecattgtc agcttgggat ttagtatttg tggattatcg aagtcaattt	56160

[0043]

```

tttttttaca tatccaacta ctttccagtt tccaaagtgg tagttttctc ctcttctttt 56220
ccccattacat atttgtgaat ttggctctta acagaaaage catgctgtat ttattatact 56280
actttatata ttttanaaat atgtactafa ttttagtggg gtttcagaag ggagtgaant 56340
tgggtatttc tgttcaactc gccattttag ctgggaatcc tgcctcattt accttcacaa 56400
tcctataaagg tataratgig gttattctca tttatagtg aagagaggca ggtaaaataa 56460
ttagctcaag gtcacatagc tagtaagtgg gatttgaagt tggatcagac ttaaaaaate 56520
agagagcftt ttttattaaa tagtgttgg ccitactctg tattgaggaa agaccacccc 56580
atcacacggt ccccaagtgg caatactata gttatagttg tgttttaaat aecatgtgtt 56640
tggctgggca cagtggctca tgcctgtaat cctagcactt tgggaggcag agatgggtgg 56700
atcacttgag gtcaggagt cnaagaccagc ctggccaaca tgggaaacc ccactctctac 56760
taaaaataca aaaattagcc gggcaigtgg gtgcacacct gtaatcccag ctactcagga 56820
gactlgaggca ggagaatcac ttgaacccca gaggcagagg ttgcagtgag ctgagatcac 56880
gccactgcgc tccagcctgg gtgacagatg agaactctgc tcaaaaaaac aaacaaaaac 56940
caigtatttg cccagatact tcccagttat ccttacaacc acttaataaa agaggtcagc 57000
cttggatagt tctgtctcag aaaggttctt ttctctcag ctgtttattt cgttgttttg 57060
ggacttttaca acctctaaac ttgtgttag ctttttctt agcagttctc aaagtgttta 57120
gagtcagaag catccattg tttacttaa acctttatt tgaagcatct atgtcattc 57180
tcttatatta aaattgttcc ctcttctatt aaectcactt tccataagge agcagtaga 57240
tctgttttat ttttgaatcc ctagtgcctg gcccttctc tgaggtaggg gattcatagt 57300
gtttgttca acatcaictt ttatttggac cattgcagtt gcttccaaac tgcctgtctc 57360
tgccttctgt cagctctctt caaaaagacc tgacattggg ctttctcaaa atcaacaatc 57420
actggcctcc tctaaaccgc atgttagagt ctggctact cagcaigtgc tagagggttg 57480
accaagcctg cctctgtcca ctgctgtagc cccatgtctg gccactcacc ccccaacgca 57540
ccctccagtg caccantgig cacttttga aaggaccact acatgctctc aaacttgtgc 57600
tcttatctct gccagaaatg tctatctcc agtcccacct aittctgtta ttfaatatct 57660
attttctgc aaatcccagc cccaggacat tctctgtgaa acctctctg atccacctt 57720
atatggagtt agaagattat ttttctccc acacacttcc tttcaatcc tccctcctc 57780
cctcccctcc tcccctctt ctctcttcc ttcttctctt ccttctctcc tctctctt 57840
ccttctctt tctctctt cctctcttcc tccctcctc cctcccctt ggaatcttgc 57900
catatgtatt attctgcagt ttgatitct tcttaatac gaagcttate atgttgaac 57960
tattgaaiga ttagtcagtt ctattagtt ctgttccata ggaattatta tcaattgtag 58020
accaattct agcagagagg ctggcacall gtaggcacac aaaaattatt tattgagiga 58080
aattgagcca tgggttggag tgagtccatg gcagttcact tgcatttat tctctttgaa 58140
ttctctctc agtaggggtg tcaatgttcc cagtatafge ctattctfat tttcccagca 58200
tagttatgaa tagttcttga tgttttaata tctcttagtt ggtacagtas atttatatgga 58260
cacccagcc tgggcaataa ggcgagaacc tgtctctaca aaaaaataga aaaattagcc 58320
aggcctgatg gtgtgcacgc ctgtctctc gctattctg gacgttgagg tgggaggatt 58380
cagcattgag cctgggagge caagattgca gtgagccaag attgtgccac tgcactccag 58440

```

cttgggtgac agagtgagac ctgtctcaaa aaaacitafa tataattttt atatgtatat	58500
ggccacceta ccaattaaac agatctaatg ggaagetcat ttacettat ccagtgaac	58560
agctagagag taataaatat ttggggfatg aggttgcatl tgaaacattg aatccagttt	58620
ctttccagcc agccaateag caaagcecca aatcacacac tggaaaaaat tacctttgat	58680
gcatcttcaa agcctaaatg tttcatgttc cagaaggact gctgattect tttagaagta	58740
cttttacaag aagtgggtta cctttcagaa atggaccctt tttgttgtt ctgccgcctc	58800
ccagcagtat gaccttggca aagttctccc ggaatgtaaa atggggatga gagtagtctc	58860
gcttiacagg gttaatgttg caattgagat cttcatgta gagtgattag caftgttagt	58920
ggcatagtaa gtgcttagca aatatacagc tttattattg gtgttatgat cgtgaccatt	58980
actatctttt gacatagact agttitagaag acgttggfita tggctctgaa aggagtgaet	59040
aggatctgcc ccacagcttt ctgattgcaa tggtagtccc cttaactgcc tgtcaatgca	59100
ggatgctact gcactgtaga ggatggaaaa agaaaatcag taagaagaaa tcatgtgtgg	59160
gttgcaaaag agagagtaga atgacataac tgtggttgcct agttagtcag gggctagctg	59220
tgtctacctt ggaaaatctt ggtgggtcag atitggattg acattagaac agatgggect	59280
cagaatcacc tggagagttc aaaaaatgtt ctactctggg ttccagcctc ggagaccctg	59340
atggatgtag ggttaaggatt ggaatcata tattttttaa aagctcccag gtaattctga	59400
tacacagctg ggtttgagaa ttactcgatg gactgacctt ttattacctt ataattctgt	59460
aaagcatttc ctgatcattt gctatttaat gtaaggcaga tgatgacata ggggtcagaa	59520
[0044] aacagaggaa gattattgga gagcctgaat taatggaatt aaattttatg agagttttga	59580
alltaagect gtcataaate tgtgtgtttg ttgtctagga tecttgccta tatttagate	59640
atttgaatg aaataacaga aaattgttaa atcaggaaca aagctctgtt agaaatgtaa	59700
aaataatcaa atatgaacct agctatgctt ggatttaaaa ctgaaaggta gatattttct	59760
ectgacattt gaaaatgttt tcaactttta ttgctcttac tggaaaggag aaagaactta	59820
gctaggtgca tatcatggat acttgactgg gtccaggfca ttacttagat gatitaaatg	59880
aagggcattg ggttaggagt cagtagacct gegtggagte tcagctcaga taettctctt	59940
tgcaaacctt gagttagtta ctccagtcct ctttttggca tgtatttaca tatctgtaaa	60000
acggagacaa tgttattggc ctctatccgg catgatattg ttgggggtgt aatgaggaca	60060
tgtatgtgat aggaatgtaa agctgtgatg aacacagaga gtaccatata gtctctgttt	60120
gcttggggca gcccagttt acacctgtt gttgggtataa ttattgatag cacactcttt	60180
aaetctcagg tateccagtt tggctgataa attataggf caccctgtat tcataacacc	60240
catctattgt ttactattaa tctttcgaag taggaaggtt ttctggcctc attctgttg	60300
ccccaaatcc ctacccaaat aagtattctt tagatgcttt ctggtagttt tcttcaattt	60360
tatgtgaatt tcatctctcc aactacattg gtcagtagat aataattgtt ttttttttct	60420
actectgaat aattttcttg ttatcatgg tattagcatt ttaaacatte taattgcca	60480
ttttggttgg tgcatcttaa gaaagtaaat ttgaagtcca ggcagaggac agaggaaacc	60540
cagcgggaaa tggcittgtg gaagtacact aaaaatgaag agtacagttt gtttctgat	60600
gttctgaect ggtgttttgg aatctaaatg cctatgttg attttttttt tttttttttt	60660

	tgagacagag tcttgccttg tcatccaggc tggagtgcag tggcgcaate tgcactcagt	60720
	gcaaccctctg cctcccaggt tcaaaactatt ctctgcgtc agtctectac tghtaatctca	60780
	gtagctggga ctacaggcgc tggccaccat gcctggctaa tttttgtatt ttcagtagag	60840
	acaaggtttc gccatgttgg ccaggcigt caccgaactec tgacctcaag tgaicagccc	60900
	gccttagcct cccaaagtgc tgggaticca ggcgtgagcc accacacctg gccataigt	60960
	gatattteta agtacagcgt taactcttca aagtaattgg gaagaccaca aaagctctag	61020
	atgaaatttc aaatctccct etteccccgg agaaatttaa gaactaccat cagaaaaact	61080
	tttcaatcct caaataacat tttcttitec ettttttgac aacgagagca atgcatttga	61140
	tcatgtttct cccctgcttt tttttgacc cctaggaaac tcaaaagccaa attcgtagcc	61200
	catcciaaaf gtctatgtgg aaagcagtag actacaaata actttccact agccttgact	61260
	ttttgtcccg taftacaate tcttagtcc tggattitaa aaatacgtat ttctgtttta	61320
	ticaatgtgt tcttataaac tgccctggaa tcttctgggt taagttaaag attaaataaa	61380
	taacgaatat aaagatggt tcatagtite ascattatit tcatgaaatt gtttgaatt	61440
	tagaaggcac aagcttttgt ggtacagaga cctatactgc ctgagagtca ataaagaata	61500
	tactctggtc taecatccca ctgaggaggt cacctccca cagaacaggg ctaaagagag	61560
	caaattacct ccatafcttg cctattaacc tcttggaaa atgattggtt acacttagtg	61620
	tatgcaggtg ggaataagag caagcgcctg tcttattttt ttgagcccti gcttatttt	61680
	tttgttgtat ggtctcactg ttgtccaggc tggagtgcag aggtgctgtc acagctcatt	61740
	gcagccctga cctcccaggc tcaagtgatc ctcccacttc agcctcccaa gtagctggga	61800
[0045]	ctacaggcat gtgccaccac acctggctaa atttttttt ttttttggga gagagggggt	61860
	ttcaactatgt tgcctaggct ggtcttgaac tcttggcctc aagagatctt ctgcccctat	61920
	ccttccaaag tgcctgggatt acaagcagga gccactgtgc ctggcctaga agatctgttt	61980
	tctttctct gaataattct tgtgacactg tctctccctc catctcttct tgtttctttg	62040
	tcatttttcc cagctatcct tttttcttgg tcttgcctc ttctcccctc catctcaaaa	62100
	cctttgaica caagctagtt tcttttccac atcatctgct cccctctact aaagctatit	62160
	tcgccccca cctgtttcag ctgtgtctgc ctctgagccc ctctttcacc acgcccaga	62220
	tggggtgcac gtgccagctt cctgtcagc agctcttctg agcagcaact gctgctaaca	62280
	agcttccca aaactaggaa aagagataca ccattaaata ccaagcagta atttggagac	62340
	aaaagaaaa atcacatctg attggaatgc cttacgttgc atccagatag tttggtagga	62400
	aggagaaata aaaatgttgc ggaatagctag cataatgcta gatagcagta gcagtagaant	62460
	ctcagttctt ctgtcttttt gtaattagct cgttcttctg ttcatctatt catctattct	62520
	ttcactcage aaccacttat ctgtgtctgt tatattgcca gtatgttttt cttgggtctg	62580
	ggctttttga tgatagagct ttctgagacc tgggacctg cctgggaatt tagtatctc	62640
	ttgtttctg ggetggagaa agactgctc taattataca gtttctccta tgeatagagg	62700
	ttatattctt aaatacagtg tacactgaat etttatttta acaaggggtg tgtgtgtgtg	62760
	tgtgtatggt tgccaigaac atacacacag tatattctaa aaatttggg catatgcttc	62820
	cattttaaca agcttgaat acagcaattt gaatactga ttaagattat tcaaaacta	62880
	ttttactagt aaaaggaata aaaacctgaa gactagccea gatagaagac ttaacctct	62940

gcttctgctc tggggttttt gggaccttct cccanaagca ctaatttaag taaaacataa	63000
ttaaataata tatttttcaa teiacgtagt aaaactttta ctaattggaa caaaigagaa	63060
ggaagacttg ectgaacata ttgaaagctg cacagtagaa tatgtaaaaa ggaatggcac	63120
aagtggaat ggtgctcag tagagagccc catatcatgt tgagatgaat aaggataag	63180
ctgaatagat gcatcatttt gagaggctca ctgccgtgag agtaagtacc agaaaaacta	63240
gccttataag cettataiat gccttaatag aggtttaatg ttaaagaatt tgataagaat	63300
tactttgat tagtgatta aagttetaac ctgagcagta ctgacttgac ttctctttat	63360
attaccaata ctatttagag ataaatgggt atcciaaag tgcctgaaat gttctgtctg	63420
ttaaggaggt cagtagteta ctttgcact ttttttctt taccagttc atttttggac	63480
agatggtaca atgcctata cacttgtgag catgtctcaa gtcccaiat cgaanaatat	63540
gatttaaaa tgtttaggct agtgagaata acagagttaa gagtcataat tctatttcaa	63600
ttaatgaata cagttttggt gtgagctggg tctactttgc tttttagtag tccatattac	63660
ttgatagtaa agagacaigt gcgtttcagt agtaigtgtt ttattacact tggaggtaac	63720
ttctgtgccc ttccaggggc tccacctata aaattagggg gatcctggca tgtcagggct	63780
gagggtacac tcataacaca tcttgttttt titaacttta agttcagggg tacatgtgca	63840
ggtttgttat ataggtaaac ttgtgccatg catgtttgtt gtacatatta ttccatcacc	63900
caggtattaa gccatgacc cattagttat ttttctgat cctctccctc cteccacct	63960
tcaccttcca attgccccca gtgtgtgatg tcccccgctg tgtgtccaaa catatcttat	64020
[0046] ttgatgtct tattgaacct gggctcaggg aggtgaaagg atttattatg gcagagcett	64080
taacgggtcc agcacttttt ctaaattcta ctttgcgtta ggtctgagaa aagcccagaa	64140
gtttattgtg ctagaacaat gttatctct ctttcagaat caaaaccttt cagaaccag	64200
cttttcaat ttctaatagc tattcctccc taaggatgc caggaggaat atgtaagtat	64260
atttagatag aacgtatgca tacatctcca tcttttagaa acacctccac ttccaacccc	64320
atgtactgff atttccattt cagaactgga attagctgtt ggaagcatct gaattgttcc	64380
cttccctatc atctttctc tttttacaaa tacagtttta ccaaaacaaa cccagttata	64440
aaggcaitac tggaaagttt actgtacttt gcatccataa atattctttt ttttttttt	64500
gtctcttccc tcaactgttaa gagaagtctg ctggacaagg agttttgagt atgtgcattt	64560
agtgggtaga tagtggtaaa aggaaaaaga aaancatgca ctggcatgaa aggtagtagt	64620
ataactcctc ccgtttttcc tttaaagctt taagaggtag tgtggaatag cagaaacagt	64680
cttccctat atttetaaag atctgggttc aagacctggc ttttgcattt tacttgcct	64740
atgagtcata tcacctctct gtgtcaatat ttatgtatc actcaccact tattgagett	64800
tgtctgtcat acactgcaga tacaacaaaa ctgtcacagc cctgccttct tgaigtatt	64860
gttaagacaa tgatagtgc tgagaatggc gtatgtacag tgtaggggc gagaaatcgt	64920
gggatattgg acatattttg aagctaaagc tgatagaatt ggtgatggtt tagatgtggg	64980
atgtgagaga aagatgtgtc aagactgact cctggggggt tttgctteta caacatggtg	65040
aactactggca tttactgaga gagtgaatgc tggggaggag ggagsaggtg tgtgttgatg	65100
gtgtgggaat tccaggttgc tttttatata gatgatggtt tggatgctg ttaacttcca	65160

	agtagagatg ctgaagaggt agttgggatt tttttttttt tttctttttt gagatggagt	65220
	tttgcttttg ttgcccaaggc tggagagcaa tgggtgtatc ttggcttact gcagctcccg	65230
	ccctcccaggt tcaaaccaatt ctgctgccc agcctcccaa gtaactggga ttacaggeat	65340
	gcaccaccac gccacagctaa ttttgtattt ttagtagaga tggggtttca ctgtgttgg	65400
	caggctgate ttgaactect gaccctcaagi gatccactca ccitggcctc ccaaggtagt	65460
	tggatatttg agatcggagt tctgagatag aaatttggac attgtttgca tgcattggc	65520
	atttgaacca tgcacacagg tgagatcact tcagttagata gagaanaagt gaagattgag	65580
	gcctgagtc ttgggccacc gacatttggc gactgagaag tgggggagct cctcttgcc	65640
	tctgagaatg agaatgctgg aacctgacct ctcttccca tttaggttgt ttgtaggat	65700
	catgtgagat aggtacacat aaacacacat caaaaacaac ttagtctta attgcatgac	65760
	taaatatagg agtaaggag gttacaigga taaatcactt tttcacttga ttttcttct	65820
	gaaagtctat tttatggat tgggtgaggt gcgtgcaaat ttgttatatg gcagaggctc	65880
	ccaatgtgta gatgtgtaaa tgtgggattt aaggggatga agacaggag ggtatttggg	65940
	aaatittaca gggggcctac tgtacaatat ctgctttcaa tacgattatt tcttcttta	66000
	ttagtcaga aatatafata gcagttagat ccatgageta ttaccittan caggattctc	66060
	atactaaaa aatttaaac tgatatttga catatgtaga gctatgtaca tttataaaaa	66120
	catgtatgca ttctaaatgt gaatcggata cagttgacgt tgtctgcttt tgtggacaga	66180
	tatctgcttg gattcccagg tttctgtaag ctgtttgaac ttgtttcacc tcagtctgct	66240
	ctgccccttc tctgtaccg tctctgcact ggagatgagg cagggtttcc tgaactgtgg	66300
[0047]	gctctgttct gggaaagccc tgtagccagc tcttagagaa gacttgcaga aagatgtggg	66360
	atgagaacag gaagatcaag tgggttgaag gggaaaaaac aagaaggccg aggcnaataa	66420
	aggeagagga tcatttggga gggagttgag gaaaggggcc tccactgttc cctaggtgac	66480
	catattttct ctccctcttt gggtaatttt ctttgtccct acctgtttta tcagaattgc	66540
	aaggattttt cccaggtgtt tgggttggg agtagtaggt aaatataact tttccgggc	66600
	attacctctt ggaatatctg ettgaaggta aaattgcaaa aatggctcat tctcccctac	66660
	tttatgaac actgttttag tctaatttta ttatattgaa atcttagatt ttatcccatg	66720
	cttgtgttta tccaatttta tagggtgtgt gtgtgtgtat atatgtgtgt ggggaatgtg	66780
	aatataigtg aatgaatgcc tttctagag aatctggtat attaagtcac ctaccaaga	66840
	agaaaagtct tctgagattg atgctgtcag ataaatctat agaatttggc aatgaaaga	66900
	gagcatagag aacatctgat ccggactttt ccaaatgtat attcattta aaaagaagtg	66960
	ccctggcttg atgatttttt tgggagttgg agactcactg catttatata ctatgaaagg	67020
	cttaagaget ettgctgtta aaaatattat ttaactatgt ttaaccagtg tttctccat	67080
	ttttcacta tggaccctca tttctctct ctctcttttt agcaggatat gtacatagaa	67140
	cagttactat cattgcacag aagfacaaga ttccagaaaa cataatttgg gaatgctaat	67200
	ttaattetta ccttcaaat gaatgcgata ettcatttct gttgggttgt gttcccatat	67260
	glagtatgag caggttgaat gaattaatca attactgtgt cactctcgac tgtgacattt	67320
	tctggctcag attcggttaa tcaatatita aaaattatat ctgtttctat attaaagaac	67380
	cttctctttt ttgttctta ctagaacct agtgtctaat acagtgcctg acncatagta	67440

gtgtctcagt aaatgttact gaacaafat ataccigtta gattcagagc actgaactag	67500
ctatgtcttg aggetgcaga gagaatgac ttgtttttgc tctcaaggaa cttgtagtea	67560
agtcattaac tttcctaaga gcatggaatg tgccatggag aggtcccaaa ttagagcttg	67620
attgtgataa tctataggac aaagatagat tggacattat ttctgacctt gtgtcagatg	67680
tggtgattac aacacagctg gtttatgta acataacttt catgacaaga agtgtctttc	67740
agtaantagtc actgcagcag ccacatagtc gttttatccc tggcaagac tttatgatgc	67800
tatcagcact aagagattgg agctagtatt attcccattt tagtagataa aagagctaag	67860
gctcagagat ttagagacat gtctaagttg acataacctc tgaactgaaa gccagaatta	67920
ggaccagggt atgtgattct aaaccttttg cacttatcca ctaggcttcc tgtctctca	67980
ccaatactag tatctttcat tgtctcattt gtattagaag ctacacctga acaggetcag	68040
agaattacac atttccagtc ttcatgtgtt cctgtctctg ctccctctgt ccccatgcca	68100
tgagggtcgc tttctttaca gctgatgicg tagctagggt gagttttgga gcaggtata	68160
aaaagtttac agactttggg ccagatggg tggcttacac ctgtagctcc agcactitgg	68220
gaggccgagg ccggtggatc acctgaggtc aggagtcca gaccagcatg gccaacatgg	68280
tgaaaceccg tctctactaa aaatgcaaaa ataacaccag cgigtgtgtg caigcctgta	68340
atcccagcta ctcggaaggc tgaggcagga gaatccttg aacctgggag gtggaggttg	68400
cagttagctg agatcatgac attgcactcc agcctgggtg acaagagcaa aactctgtct	68460
ctttgtcctt accaaceatg ttggcagcat ccatactca ggctgcagat aggagaagga	68520
[0048] attaagnaaa cggggcaaaag accttacagt ggtctccagg gtagaagctg ccacacagta	68580
cttttgcctt tatectgttg gccaaactta ctacatggt catatcttgc cgc aaaggaa	68640
gctggcaatt gtatgcacta itgtgagcat tcttgtgcac agctaaaaat tactgttgaa	68700
gaagaggaag gacaatggca faaatcagc tgcctctcc accactgctt attgggtctt	68760
ggtgcccatt cactcccctc ttctgacttt tgcttagtag ctaatecttt tcectgtct	68820
tacctttaic ctttaactcc ctctctctca ttatttaaat gtctcaagt ctctccatc	68880
ttaacatgcc ataacacaca cacacacaca cacacacaca ctctctctct ctctctctct	68940
ctctctctct ctcaaaatt catgagtaaa ggcaccatgt cccagtgct catgttatat	69000
actcagatcc ttgtgcaggc catagtacat aggggttttt caacaactct ttgttgagag	69060
agcaagtggg tgagtgaagg gttgnaacat ttcccctctat cctttatcct cggattgaca	69120
gagagatgct gctgtctgtc ttaacatcta tggcacaat gacagactg atgattttac	69180
tccccttagt gctgaggagg ctgtttggga ccatgaagta gttctagaaa tgfatcgtgc	69240
tgagaagagc actaaaggga glaaaataca catcagttct ggttttgttg cttactagct	69300
acaatgacat ttggcaaat atgtaatgtc ttgagcctc agtttctca ttgaggaag	69360
tgaagactcc attgacctca caatgatfaa attagaasac tgtataaag aatcaccccc	69420
tgataatatt attttggctt cttatgggta tttttaagat taaggagtat catcatcct	69480
atittatttc tctaaaataa tatttaaaaa aacgtaaatg cccatacaa tagagtatta	69540
tttggtcaca aaaagaatga agcacgttg catgetacag catggatccc ctgaggacat	69600
tggttaggtg aaagaagcca gacacacaca ttatatgatt caatttctat gaaatgtcta	69660

	gactagceta atagaccagt ggttgciaagg ggatgcgata ggggagaatg gagagtgaca	69720
	lgggglllclt llllggggig gtgaaaigtll ciggaaaglag atagtgatga lggllgcactl	69780
	cttttgagat tacactaaga accactgaat tgtgcaecta aaaaaataagt taanaaitta	69840
	aatgicatta tagggcatta taattataag taagagaata cttttaaac tgtgtcfaag	69900
	ttttggltca cagttigtca atgattcttc tghtaacagaa accaacatct ggttggtttt	69960
	ttgagttttt tcacctgctg gctgacctta cttgacatac tgtattagac tttctttatc	70020
	ttfccagccc tacgcaactc tcagcacact gggaaactc agggcatggt gttccattag	70080
	aaagaagagt aagcatgtgg gcctctictgt gggtaecatg atgggagaga atagaaaata	70140
	agaagttaaa taattctctg caattctgtt aggcataaa actacacatt taatattata	70200
	aaacagtttt ataaatgcac ttggctiatg gtgtctgcat ggattaggtg agtacttcig	70260
	gaaggaggtg gggatagtca gagaaggcat gctggggaag gaaatgttta aacatttctt	70320
	tccttacacag acattttattg aaiatctggc atgccttagg catgtttatt tgggtttgta	70380
	tgtaccaga taacagctgc agtcccctgc ctccaggctgc tcaaaagacag cgaagacaga	70440
	tgattctaca gacagttagg gacagagatg taagtctac tccaaaggta agcacaggac	70500
	tccttgaacg cctcaettgg gaaatgggag aagtcaggga aaccttgatg gagatgattc	70560
	ctgagctagg aactgaaagga tgagtgggza cagcaaaaggc ttggaggaca aagtcatgct	70620
	ggattacagg aactgcaggt aactcagtac gtttgagatt cagggcacaa atgggatga	70680
	gccaatgaaa gttgattaca agtagccttg taagccaigt caccetaagag agtaagaaat	70740
	aaaagagttt tagagcatga tacttccaga ttagcagctc agaaataaga ctgctgcat	70800
[0049]	tgtagagact tggaaataga gccgaccaga atgaagccag aaactttcag gagattgttg	70860
	cagtaatttg ggagataagt gggtagagac aacagagtta gaacagagac aacagagtta	70920
	gaacgattag ggettgetcc ccaagtggat atggtccag ttcctaggac tccaagatct	70980
	ctgtccaett cgtgtctca cttcatgtca gtctgacccc agcctgctt ctaagctctg	71040
	tttctctctc tcaatgaaat gcttaagctt tgtgcttact gtcaccagaa ctgcttgg	71100
	gatttaagt ctgttaacct tgattacacc ttatcttca cctagaatgg agctcatctg	71160
	ttccctttac cttcttagat ctctgactta tgaatcttt ggaataattc catgctagaa	71220
	tgatctcttt gtctctgaa gtcatagcac ttaatatctc tatcagtcac tgacaaataa	71280
	ttatgttttg ccttgcaca tctcttaatt gcttgaatt gctagtcaat cttgagccat	71340
	tgcagcaggt agagaggtga atggcctc ctgaattctt actcccagcc ctaatttctt	71400
	gtataacca gggggaatga cttttctccc ctcattagtg tagtaacaca tatttgatgc	71460
	agaacactta gaaaactctt aaaagtgtgc aaaatgaagt aactactatc acaaacacct	71520
	tggataaetc acaggttaatt attcttgtaa tgtctctccc atccattttg tcaccgttct	71580
	tttaggatta catgtgtgag tctatgcate atagctagga tcactctata catgctgttt	71640
	ticaatttga ttitttcatt accataatgt aagattcttg tgtcaaaaca taggagaate	71700
	tcaagltca aattgaaagt ggagctaaat tgttctcagg gagagttgta cagatgagta	71760
	tcccctatct gaaatgcttg agaccagaca attttcagat ttcagatttt tgggatttta	71820
	taataatlag aciatgetta cccattgagc atcccnaatc tgaaaatca aaatcttcca	71880
	atgagcattt ccttcaagaa atgtggtagt caaaaagta tattttggag catttcagac	71940

ttcagatfff ttgatttggg ttgctcagcc ttacccaaaa ctgaatagtg actatctctg	72000
ggaggagga gsgaacitt gcttttcag tgatacttt ctataatggt gaatgtgtc	72060
atftatgatg agtctaaatg atftitagag ttgtcaccca tagtttatag gtgacagtaa	72120
tttatacttc tacctaatcc aggcattat ttacatttaa aaagaagtat aacaccaact	72180
ttactgacta gatagafaaa caattttaat ttactgaaaf ttaccctttt caccatgatt	72240
ataggtctff ttccattag ttgtttccat ttcccttggc gtctaatgac tttagattga	72300
gtcttaggta ataaatacat gtgatctttc acaagtcact tagtgfttct aagctttagt	72360
ttgcitafga glagaataag aggaatgata ctccaaatta ttgtgaggat tgagaicaag	72420
tattgaaagt gctttgtaaa ttgtaaaaag tatataatta ttgatttttt attgattttt	72480
atatttagca atggcatga gcagttaac caactttgct tttttaaaaa ttcaatttga	72540
gaaagactaa aaaggcagag gtgcttcat taatatttat ttgggtgcaa tgtgggatcc	72600
atgagatttg ggtttgtgcc acatttctgc tgctaatat tagctatata tacagctgaa	72660
atgcaactaa caagcacagt ttggccagg ccagaaatg ttccaggagc acctggctgg	72720
acatacaica gagagcttgg tgaccigata aagcattcat gcaagctcct ggagactggt	72780
taactggatg acagtagaag gaaactaitt atgcaaatit tgctaaciga agttctccca	72840
caccctttag tccacatttc acagcttgt gagatgaaa tgggtcaaaa tcaggttcta	72900
ataatctctt ttgctatctc agtcaagcct gagaaggctt gatatggtct tctgaatcat	72960
caagggaagg tagaatttca tccaacatga cttttgtgca ttgtctgtat tcagctccct	73020
[0050] ggaaacatag gtgcttfaat ttatcagtt atccagaaca ctgaattctg gafaatagag	73080
gaacagggct gtgtaaacaa ctctgtgag taatagatgg cctcctggcc tctggtttct	73140
gactctgtat tcccttttat ccaaggacaa gatgttacia aaataattca gactgactcc	73200
caagggcagc cccgtgaact tctgtgccc tccgactgtg ctagcagagg aggatgagtc	73260
accagcagea gaatgttga cctccagtg ctattatgg atgtccagc cagacgcgac	73320
aaccagggaag acaagcttfg gaaaagttct ttctgactca ttaacatcat gatitacaca	73380
agaaaacctc tagcttctca ttttatitfa ttttttaaag aagtttctt ttgtatgtg	73440
tgtatagcga ggtggggcaa aggtatgat cctcaaatg aatattcaaa ttactctta	73500
cccatacagc tatttgaact gtttctcag ttaaatitfa ttgtccttcc tcaatgtaca	73560
gtgectatat atccatcaaa gactagcaga ttcatlaaga atctttaaaa agaaggacat	73620
tatititaca cagttgaatt tcaggtgtcc taigcccatg ccttcccat catttctat	73680
gtgtgagaac cccacccca cgtagcacac ctccacatac tggggacttt ccacttgagg	73740
aattcacatg aatctgggga ctgtcattct ccttgggtag taccctca gaagaaaac	73800
cagactcctt agggggcatt tctagcctgg gccagtttt cctcttacc tcatititit	73860
tgttcttaca caaacctgtt tagtcttcag tcaagtccct taccctcgg ctttctctct	73920
cctctctctc cctctctctc tctctctctc cctctctctc cctctctctc tctctctctc	73980
cccccccc cccccccc cctctctctc cccccccc cctctctctc tctctctctc	74040
tctctctctc cctctctctc tttttttt tttttttt ttggatgca gtcttctct	74100
gttccccagg ctggagtga gtggcacagc tcaactgaac ctccaccttc tggtttaagc	74160

	gattctcctg cctcagccic ccaagtagct gggactacag gtgctcaeca ccacacctgg	74220
	claaftllllg lallllllagl agggacaggg lllcaccatg llggccaggc lggiclcasa	74280
	gtctctgacct caagtgatcc acccgectcg gccttccaaa gggetgagat tgcaggcgtg	74340
	agccatcgtg cccaaccoca ctttccitct ttigtatatt cttaatgttt cccitatttg	74400
	gaatgttctc ctcacicagc tccgttittc atcctgtttg tateccacct tcttcttagt	74460
	gatagtagta gtattgcatg cctgctgtga gccagtittc ctactgtgtt tatgtatata	74520
	ttttccaag agtttaaat aagcctgtaa aataattatg attatcctta ttgcaaatg	74580
	agaaaacagt catagaaagt taanaaitat tcaaaagccag ctactaagtg gcagggcctga	74640
	ggttttccg agcctgaaca ttcaaccoca ccatgctggg ttccctgcc gtcctctgga	74700
	tccgatcaaa ctcactacac cagccccact cttagacctt ctccagacgt gctcttttgc	74760
	cttggctggg tggctcctgt gtttggcaat cagtcatgta ttattacctt gctatgtgct	74820
	tgggttgeta atctctctt ggcgatatat cttttgttgt ttctctttct tcttactgag	74880
	cigtgcatcg caggccttac acaatgcgtt ttigtgtatt ttacttaatt aatgatgtcc	74940
	tggaacaagt gagttatttc tccatgatat atttagccca attagtatt tacatcctac	75000
	cataatattt gcctccacta attgctaagt agtcttgcaa attatccttc agtctctttt	75060
	tictatgctt ttattctcgg gaaggaaaga caaaagaagc tccgtggetg gagtctgtag	75120
	tgtatcccat cccctgcaaa gaaccaaca gaaaaattaa gtggaatgac caggcattgc	75180
	cactaaaatg ttgataactt tgaaatggat gccagtttgg ctaaatcaaa gtgttctctg	75240
	ttagacaagg gctattcgtg aaagaattgt gaatgtaagc atgctctgga ctgtgcttca	75300
[0051]	aggatgcaaa aaagtgcact tgagactgcc ttctatgtg cagagtggga aaaggagcat	75360
	ttatcttgag aaagaataac tgcateigat caccgttttc aattcattga tagggaaata	75420
	caattaaaga ttcttaacct atttcaggat acccatctac catctaaate tccaagactt	75480
	ggatagcttc cccgttcccg agtagtccc cattgacagg catgcactga acicttcatt	75540
	tacgataacc gttgtttcca tgaatacac tgaaaatttt gcacagtgc aaggtacaca	75600
	gaatggattt tgaattcttt lggttgtacg aagcatccct agatgtgac atgaagttag	75660
	acacctggga ctgtgagaaa ataagtcatg tgaagaaga gtggtttggc agaattitaa	75720
	aaatagaect tccatgcttt gtgggtatag ttctacata ttctagatct ttgtggfacc	75780
	attataigge tglaggaggt aaccaactga agagctttct gggaggagaa gcitattigt	75840
	aaatgaagac tgtgcatatg cgttgtatgg gtctcagtc accgtgttgt attgaaacat	75900
	cataggefat acattgigag aaaagagaag taatcttctg gtaaccaaaag aagtttgagg	75960
	tgaatatatg ctcactgttt catattcagc tggggaatgt ctcaactgtt tatattcact	76020
	ttcttatatt tgcctgaaata aaaacaaaaa taaggtaat ttgattagta gtaacctgt	76080
	tgggtctttt aaaacagttt ttccaacct gtagtctgtt aatctttact ggcctgtgaa	76140
	atctgttttg tgggtcttct ttagcattta aaaaatgatt aatataaga aaatgtagaa	76200
	tagaaggtag agggaaatgc acatagiaag gatcaatate tttttgtgaa acttgtatgt	76260
	catatacaca catgtgtaet acaaaatata ttttttacgg tggatcatgg tcaaaaaaga	76320
	cigcaaaagt gtittaagca tggctgicag cataggttcc taggataica gacaatgaig	76380
	tgtaacccta gcctgattct tgctgaaatg ctaggggaaa ctggggcaga ctggggagga	76440

gtgagaggtg gcacagtgge tccagagggc ctgtggtagc ctgccgatcc tgcctgccc	76500
tgatctgctt cccgccttgg tgaagactaa gtgcattact cattatatgg atagggttcg	76560
ctgagagctc tgcagcagt ttaagattgg agtcttggtt ggcagggcag ttccaagct	76620
gaacataaaa actggttaca gtttttgggt tgagggggcc aagtgtaggg gggccatgta	76680
gagaagattt tttcttgaga tttcctgggt ttttttggtt tgtttttga gacgtagtct	76740
tgcctgaca cctaggctag agtgcagcag catgatcttt gctctctgca cctctgctt	76800
cccgggttca agcattctc ctgcctcagc ctctgagta gctgggatta caggcaccca	76860
ccaccacgcc cggctaaect tttttgtttt ttgttttttg ttttttttag tagagacggg	76920
gtttcaecat attgcccagg ctggtttga actcctgacc tcaagtgate cgeccacctt	76980
ggcgtcccaa agtgcctgga ttacaggcgt gagccattgt gccccgcctc gttttgtttt	77040
gtttctctc ctaacttaca ttttgaggca atagctagat acctttggtg catagactga	77100
aatggacatt tgcatttgg ggggttgctt agcattggaa cccctttgt ttctagagtg	77160
gtctcccaat gttgctgtag aagctgaagg agtgcagac acataactga gggcaacta	77220
ggttcaacct ctctgattcc tctctgctag gactttgaat ctggaggag tgggcaaac	77280
atacagaggt ggcttgagat cattcatgga agcagcagag ttgggagtcc agtcttggtg	77340
atggctggtg accggtggag gctglcggag cagtgggtc ctatcagcc tgttctctg	77400
tctctctgct tttcctttaa actcatttta cctttaggta agcagagctg gtttctgtg	77460
attgtaccca agaacttga tggatatag gaagcatggt agatttgggt ctgccctaaa	77520
[0052] tgaacttagt atgtgacagg tgagaagaag taggtgaatg ctggtagac acaaatagta	77580
aaatttagca aggggtggaa ggattcaggg ttgttttctt ttgtattctt ttaaattatg	77640
ggtaccttca agctttgtca gatgacttat cagcaggaga tttctatgct ttacattgtg	77700
acattttgga aatacatggt aataaaaaat gagctatggt aggtgcagta caaaatggtt	77760
tcaactttt ataagttagg gttgtttta ttgtttctt tttcagttt taagcttttt	77820
aaaagccttg cgcatactca cagaaaactg atttctaat ggggtgagc atttatittt	77880
agcattaaga gatttaggga aatcttgaat catcaccaca acaacctgt aaagtagata	77940
cttctattat tctgaggaaa caaactcaac agaggttaag aaactggcct anggtctcag	78000
acagtgggtg tttagagctg gatctggacc caggttaggg tgactccaag agcaggcttt	78060
taactgcttc tataaggaac tttgagggc atccaactt tttcattat gcagggtttg	78120
agctcagaga ggttaagagg ctgtctcaac accagcagc tctagtga tctgggctgg	78180
aaactgggcc tttttctgac tgggtgggaag aagctctcgc acaagctctg ttcctcttg	78240
accttccctt ctttctctg ctgtctgctt tttctctgca agattcttcc tgtctgcata	78300
ctctttctg cacaaattgt ctgtgattt tcttcttcc tggcctttat ttttatttt	78360
tttaagaac agctgtacct ttcctctctc ttttcagtc ttctccattt ctgaaaactg	78420
agagcagatt cctctctctt taatccctc tcageccaaa gcattggcct tgtgtctct	78480
gtttttgact cccatggctc tcagtgtctg tctctcagca tgcctcaca gcccttccc	78540
tggggttccc gtgtatatgt tagcttggc agctgtcagt agattglaag atttttggca	78600
tgtcagatg tattttgttt acttctttgg attcccctga agtcccacac ctgtcccag	78660

	gcagagtggg aaatggaaag gggagtgagg ctacagctga gaaatgtgtt tgagacctat	78720
	cicacccttc acitggccagc tgcctgtggg aacgccctag ccgagctctc ccaictgaag	78780
	ggcctgtgaa actcgaatgt ggtttagatg tgaaaacctt ttttaagcca taaagtgeta	78840
	tataaatgca aggttttatt gtgatggcac aagtgcctca gaagtatttt tgggataaat	78900
	gattaaaaag cacatattgt gccctgggtg gtigtgtcat gccctgaacc ttaacaattt	78960
	gggaggetga gatgggagga ttgcttgagc ccaggagtat gagaccacct tgggcacct	79020
	agtgagacct ctctcccaa aacaacaaca acaaaaatta actgaatgtg gtatgtgtca	79080
	cctgttatec caccticttg ggaggtgag gcaggaggtt cacttgaacc caggaggcca	79140
	aggetcagc gagccatgat tgtgccacta taitccagcg tgggtgacag agegagatc	79200
	caiccccttc caiccccttc aaaaaagcac atactaigaa gacaagccat tctccctacc	79260
	ccgcatgttt ttgagtgtcc atttgtgcca ccaagtcttt gaccttgggg taaggatag	79320
	gatggctcca ctaaaictta taitcattgc tcttaataa gattatggat gtgttagtgg	79380
	taattagttt aaaaagaaga aaagtitttt agaaaaagaa aagtaacaaa gtcctttgtt	79440
	acaaatgtgc ttftagaag acacttactg actttaagca aagtaactga tttactttta	79500
	tcaaaaactg tctctcactg aatgcaggct ccttgggagc agtgcgaagc accgaacct	79560
	tgagctgcca ttgattattt aatcctctct agtttattgt aaatgsagca gcacttacgg	79620
	ttctggggtt ttcttgaat tctctctata gttagaagtg agttattctg tctggcaggc	79680
	gtggcatata gaaaagccat agttctgact tcttgacagg aaaaatagca gattttgtat	79740
	ttatattgat tcttcttttt ggetggaatc catcagcttt acagtatctt gtgatgettt	79800
	catcagaact gttattccac gtctcagcat agcagtgggg tcccagtage aatagataca	79860
	agtcatttcc ggigtctcta tgggtgtgaa gccactggca gtttccctgg ctgtttgtgt	79920
	aggttagget gttaggagge ttctgttcca catgttgeta ggaacttctc ctcacactgt	79980
	ggcagtgggt ccagggcaga gcattagtag tgggcaggaa cacagggag gctggggcca	80040
	tgcagtgatt ttttaaaiga cagtccttcc agtctacaga aggaagagtg ttggagtaag	80100
	atcagctccc tgggtgtgtt ttagactatg aaaagtacta aaaaaccaga gaagacagtg	80160
	gtgttctgta tggggacagt ttagagcagt tcttcccacc tgtggaacca gcagggtctc	80220
	tagaatcagt agtcacgtgt ttgactctg gcactctcgc tgattagcgt aaaacctctc	80280
	atgcttttta tgagaattaa gtgcgagtgc ctaactccag gctcaagata ttgaaatgct	80340
	tagtagafat tgtttttttt ttcttgact ggaactgtat atttcatcaa gctgtaatca	80400
	gttttaacaa ttaigtgcaa aataigagtg cttactgcat gctaaactct gttgggcatt	80460
	ttacatgcct tgactgactt aactctaat agcccagtga gataaatgct atttttatct	80520
	ccccacttcc accaagaaca ttgaaggfta gggatattaa ctaacttgcc taagattaca	80580
	atagctagtc ggtggagaag ccagaattca aaccaggtt gcaatgactc cagcccgtgc	80640
	tcttaactgc ttigtctgtt cactctagct ttatgaaatg gggttttgat ttgtatctag	80700
	gcttttgcct agaateccta tttagacttt gctcttcgaa gcagattcat agcccacttt	80760
	agtcctgtgc cataaagact attttatatt gcgtcaatac ctttttgtac acttacacat	80820
	ctatagcttc ttgcataaag ggcattgtag gtactttagt aagagttttt gaaagtgttt	80880
	tgtttttaaa aagagacaae atcttgcctt attgcccagg ctggactcaa actcctgggg	80940

[0053]

cttaagcagt	tctcctgect	caacttcfca	ctgaaagata	tttttaafcc	ttgtaccnac	81000	
cctctaggca	gsatgtttcc	tcttaggta	atgggtagg	aaactggctt	agatgaaaat	81060	
gacttgcfca	tggtcacact	tgctagtata	gagttatgg	gaacctacac	accttggatt	81120	
actgtgeitt	tttctattgc	ataatgttgc	ttactttgta	cttcaietf	tcatttacag	81180	
ctgttaccga	acatacttct	tgatcaccta	atttgtctg	aggataaage	actaaataca	81240	
agacaaaaaa	aaaaaatcct	gatcttccctg	tagttttcat	tgttgigtta	ggtttccita	81300	
ccaacgttaa	gactgctgcc	tgctgaaata	gttgattaag	gcttaagatt	tttagcttta	81360	
aaatttctta	agataattaag	aagctgattt	cagggcattt	ctaaattac	atattttict	81420	
ttcagttttt	ctgagttcat	accttaattc	ataaacattt	tagttgtatt	ttctacttea	81480	
gaaatcaaaa	ggtttgattc	ctttaaggca	aacacaaagt	aattcattgt	aggigtgatg	81540	
gtttctttta	tatccatagt	attttaattc	ttgtcattga	gtttcactgt	caaccagtct	81600	
gttttaaacg	gtaaaaatct	ggcagtgccc	ctggccaaa	gtggtctcat	ctgatgatc	81660	
atatttatga	acattaaaaat	agcttatttt	tatttcttgg	tccactatcc	aaaatgtgtg	81720	
ttcttccctt	ggcagatac	cagtcittca	aaagatgccc	ttgaaaattt	aagagagttc	81780	
cagtttttct	agatagattt	ctggaatttt	gcatectgga	aaaatttctg	acattttatc	81840	
tattgcagtg	aggctttggt	ccaaccaca	gaattgtgtc	ttgtttcttt	tattttttcc	81900	
ctttgttggg	aagtgtcaga	tatacttgtc	ttttttataa	gactgtggta	aacgtgaagca	81960	
atttgagtaa	cccacaaaat	ttcccgtatt	tttttttcat	gtaaacage	acctacaaaa	82020	
[0054]	ttgagctaca	aaagtaatcc	ctgttcacca	aaagsaaggt	atittcttfc	aaatccttga	82080
caattttata	aataaattcg	gggtggaagaa	ttcactgeta	tcaccaaaaa	ccttctgatt	82140	
actcttccct	gtcttctctg	tttcttaagt	gtctttatat	tcatttgagt	tgggaattga	82200	
accagtgaa	tcattttctt	tttaaagggt	attttgtgat	tgtctctggt	gnatctttct	82260	
ageattgatg	atttttctct	ttgtatattg	cagcaagaaa	cttgaattta	tttcttggaa	82320	
ttatccaaag	tgtttattaa	taaaactga	cttgcctctt	tttctactig	ctctaaaaat	82380	
aatcagctag	atcacattgt	ctgttttatt	ttagaagaaa	tattatttgg	atgaagccat	82440	
tacacaaatg	ctgtagcaca	cacacaaaaa	aaccgcttgt	catcttgaat	gaggacagtt	82500	
gtcatttcat	ataaagtgga	tcagcagcct	taggtttaaa	gtcttiagaa	cagtgectcc	82560	
catgtcttct	aagtgtctatg	tgggtgtttt	ctatttttat	cttcagaatg	gcaattccct	82620	
gagagttagg	attttgttgt	tattgaaatg	gcattcaaaa	gcatacacgt	taatgcatat	82680	
tgtcttgaaa	ttctgtttct	gttcttgttt	tctcgaagag	tttaactctct	aggetaagca	82740	
tcacaaaatct	ataccatttt	actgttgtgt	tcataatac	tggaggctcag	tttgaagatt	82800	
aggtataatg	tgattgcaat	gtagtattgc	ttgcagaaga	gacagaatga	ttgaaaaacc	82860	
aaactcctct	tgattactgg	tttttgtaga	attctagtfc	taaaagaatc	ttagtgattt	82920	
tagtcagatc	cttgaattct	acatgaggct	aagagaagtt	ccatgactcc	taagttgaag	82980	
taacacatgg	ctgatagtg	catattaaaa	aactttttaa	gttctggcca	gggtgtgggg	83040	
ctcacgcttg	taatccagc	actttgggag	getgaggcgg	geggatcacg	aggccaagag	83100	
atcgagacca	tcctggccaa	catggtgaaa	cccgtctctt	actaaaaata	caaaaaatag	83160	

ctggacgtag	tggcgcctgc	ctgtagtcctc	agctactcgg	gaggctgagg	catgagaatc	83220
actlgaafcl	gggaggcaga	ggllgcagtg	agclgagatc	atgccactgc	actccagcci	83280
ggcgacagag	tgagacttag	gctcaaacaa	aaacaaaaca	aacaacaaca	gaaaacacc	83340
tttgaagtt	ctaaaaaggt	ttatalggt	gcccttctga	atggagcctg	ggcctggtgg	83400
aacttacagt	tctcttcctg	tcttaaaagg	ctgagttgtg	accttttccg	ggtttgagge	83460
atgcttttca	gtactccctt	ctggctcagtt	ttcactgac	cttggcagct	ggtaaccgta	83520
tgcctgtgagg	aaacctgggg	tagacagget	ccagacatgc	agttagcaag	cactgectat	83580
ggactggcta	gtgctgttgg	gtgcccgaat	gtaaaaagga	gtattgtgag	gttttctctgt	83640
tcaagcaacg	ggagagacaa	gcttagctcc	ttctgtctat	aggacctttt	tcaccacaca	83700
tgcctgactct	tttgcctgaga	ctgctacttc	cgllttggct	tcctgcccga	cctccatgga	83760
catcatttgc	atcttaactc	aatgtccctt	ccctccctgag	ccccagacca	gatcacatct	83820
cctctatctt	atgtctctta	cttttctctc	atagcatttt	agctctttgt	aatgacctct	83880
ttctgtacat	cttagtttga	ttccattctt	cccattgact	gtaagctcca	cgtaggcagg	83940
gacctgattg	ccctgttctt	ttgaatttag	ttagtttctg	cagagctggt	tgaaaatact	84000
tgttgaaaga	gtgaafctct	tcaacaagta	tagcactcga	agtcctgctt	atgagcagaa	84060
gcaaggcatt	agcatgtage	tagtttctaa	gtgctgttct	gaggcagggc	aggtgtttta	84120
ttcacataat	taaaacaatt	gattatatta	atitttaaaa	aaactttgtg	cagtgatttt	84180
aatcttggta	aaattggcca	tacaaaaata	gccaaatcaa	agtcacacaa	atcaaatcca	84240
tacttgtctc	ccctgcccgg	ctttccatca	ttacttttac	ttaaagtctta	cccactgcag	84300
aaagccttcc	caagccagcc	cttgcacagc	tcagtcacca	gagctaacaa	catcctgacg	84360
cactcacact	atigatttta	ggttgccttt	gtgtttccat	ttgtgctgct	tcaaaccttc	84420
tattgtaagg	ccctgtgggg	atgctggcct	cgtggcctca	gaggtaacce	atctccctct	84480
cccccttccg	tgtgcccctg	taatgectgg	gactatgctc	ttcttaaaac	tggattctga	84540
taaaatgtgt	tngtggcca	gacagaaaac	tgaggtgata	atcactgtta	atttgagaac	84600
caattttgaa	tcaccaaggt	tggtagctta	ttatttgcaa	aaataattgg	attctactgt	84660
taaaagaatt	gtgagaagca	acaaggaaag	cigttaaaat	aatacaagc	tcgtgtgtgt	84720
tgtgtgtgtg	tgtgtgtgtg	tgtgtgtgtg	tgtagacaag	gttggggcgg	ggtaattctta	84780
gaaggaaatg	gaaattaaag	tgccgctttt	tgggtgtctt	aaactattgt	tcacacaatc	84840
aggagagggg	ctgttgatgg	aaaaagcaca	caatcttcat	ttacattgga	caggacactc	84900
catatcggga	agcaaaaaat	ccctgcttcc	ttctttgatg	cggtgaagtt	agtaacctct	84960
ttgatttttg	cacccctaaga	tgtctctctg	tctctctgat	gtcctaggcc	atttttttgt	85020
tttgttttgt	tttttctctt	cttctctctca	aatgcttttt	cttgcctgct	tatggtttgg	85080
gctgcttctt	taatgaaaat	gccctcttat	ttcagatgc	aattacctct	gccactgatt	85140
tatttatitia	ttttgtctt	tagccttctt	ctgaagtage	tttggaaagt	agagaagaaa	85200
atccagtttg	cttcttggag	aacactggac	agctgaataa	atgcaggtat	gtagatttgc	85260
atatttttaa	aaaaggaaaa	tactctgctt	taaaaaaatt	gatgaaaccg	tgttcttgag	85320
gctgiaggcg	tattgtgtct	attgccctta	attttttgaa	attgatgtat	ttattcatct	85380
ccaatgttga	gtatgctgtg	taaaaaaac	ctcaaataca	aaagtatagg	aggtacagag	85440

[0055]

faaaagttaa	acttcccctg	taatctctcc	tagatgttca	ccactattaa	gaatttatfg	85500	
facgttcttc	tagattttia	taigcatgig	cataatcata	ttatacatgt	tgtgcatatg	85560	
catgatcata	ctatecatat	tatgcititt	tcattitgca	gaatgtcctg	lgeatctttc	85620	
tgtgttgatt	catatgcage	ttatgtttat	ctttttgac	agccacatag	tagtctgccc	85680	
tgttttgitt	agtgagfctc	ctcctactgg	acattgtcag	ttggattttt	ttcttatttc	85740	
tttttttttt	ttgagtcgga	ctcttctctc	gtcaccagge	tggagigcag	tggigtgatc	85800	
tcggctcgeg	gcaacctecg	ctttcccagg	ttcaagcaat	ctctctgtct	cagcctcccg	85860	
agtaggtggg	attacagggc	catgccacca	cgcccagcta	atttttctat	ttttagtgga	85920	
gacagggggt	tcaccatggt	ggtcaggctg	gtctcaatct	cgtgacctcg	tgatecgccc	85980	
gccttggcct	cccaaagtc	tgggattaca	ggcatgagcc	accacaccca	gcegatTTTT	86040	
tcataattca	aacaatgtga	catcctgtaa	atatataaatt	acatgcattt	gcctgtttat	86100	
ttccttagag	ttagagggig	caacaetgtc	ttggattctc	tcocctgtca	egtctataaa	86160	
gactctcaag	gacaaaggtt	talcttaecat	tatgaagcag	gcttttagct	actctgtitt	86220	
ccatcacagt	ttttcaatgt	gggatggggg	taggggttca	gtgctgggtt	ttaagtggtt	86280	
cttgccttgt	gatctgaatt	teaagttiaa	ttatgaacta	acigtctcag	gcigtcttcc	86340	
agaagattct	ggtcttcaga	tttatitgga	aattaaacag	ttaaaattga	atacctctca	86400	
gtttgtagca	ttgaggcata	cttggttaat	gtccctcttt	tcagaatctc	tcctcaccag	86460	
gggagctaat	agaccaagca	aatgaatttg	gigaagagaa	ctgtgactgc	tgtctgcctc	86520	
[0056]	gtatgacitt	ctctgttttg	gggagcctcc	ttgggtcatt	ctgcaagcac	ccattatgtg	86580
taagcctctg	tgcctcttae	ggatatagag	aaaaatgact	cagttcttat	ctcaaggaac	86640	
tcacagcatg	tgcataagat	gcttaaatft	ctgttgcta	gtgcagtggg	ataagtttag	86700	
gagcaagaag	cgagggcctt	agggaatggg	atggaggttc	agagatggct	tcctgcagga	86760	
ggegatactc	gagctgaatt	ctaaagaaag	ttgaagtttg	ccatgcaagg	gataaggtag	86820	
aaagatactc	ctatagagga	atcagigtga	gtgaaggcag	gagggtgaga	agtagcattg	86880	
ggtaggggag	gatacagtaa	cactgacagc	cttgtgggtt	tcaagcatga	agcaagaagc	86940	
tcagagtgat	agaagataag	gtgaggaagg	ctggccggcc	agaigtatga	gcagggctct	87000	
gttccagagt	ctcagaattg	ctctgtagat	taatgggaag	cccttggagg	atctggtatg	87060	
tgttatggag	aaattacttt	aggggtttaa	gtgaaggttg	gcttggcaga	caggaagaaa	87120	
gtagtaggag	tgtgggttca	gcaatttagt	ttgtagccca	ttggtattgg	gcaagaagaa	87180	
gaaagaatgt	gtagggcttt	ccctcaattc	ttcctctctt	cttggccttg	cccaaggcta	87240	
agttgctgag	gttggttctt	tggccctagg	tgtctccctc	ttggagggtg	cttatgtgaa	87300	
ttacttactt	acgcactttt	caccaggggt	ttctaactgt	tccaaagtaa	ggcctctctc	87360	
tgcctctctg	gtgctgcgtc	aaagtccfgc	cgctctctct	ggggtggtag	gaaccagcct	87420	
ccattcatta	attgttatgg	cccttccatg	tgaacttaiga	acatgaattg	gtcatcattt	87480	
tgtgtgcagt	gtctcaggtg	gggatgtgaa	gagagataag	atacgggttca	lgecctcacc	87540	
atccttgcct	tttagtggga	gatggacatg	aaattaaaat	getgattctt	gccataagtc	87600	
tgttcaaaag	ttatgtgatt	ccagtagaaa	cagcagcaga	atttgttaact	aataatcagt	87660	

	ectttaacat tgttggttcc agaafggct acatttttca attacaactt ggttgcaaat	87720
	ggagaaaaa aaltcaggcc atgiclaaaa tlalclgal llllgaanaa alggclgac	87780
	catattttca aaaatacata attaataaat tacaattcat taattagtat gcataattat	87840
	tttccatggt ttcatctctt atgagaictg acatgttttg tttccaggaa ggaaggggc	87900
	aggggagagg tacgtateca ataccaaac caaaigtitc tgcititita ccttcagaac	87960
	actccctttt gccataagaa ctittagcac atagagtac cacatagtct tgttttctt	88020
	ccacaacagt atctaaatat aaaagaggac tgcaatgcca tggctttctg tgetaaaatg	88080
	aggagctcca agaagactga ggtgaacctg gaggccctg agccaggggt gnaagtgate	88140
	ttctatctgt cggacagga gccctccgg ctggscagtg gagagtacac agcagaggaa	88200
	cigtgcatca gggtgcaca ggcatgacct gagtaciagg agctgccag ggciggggt	88260
	ttaccaaca cactagtcca gaagatctgg gggtctctgc cctttgtagc gctgctgggc	88320
	agaaagagt gtggactctg gactcaggt cctccctgccc tctgccactg ccacttgcac	88380
	gtagccttag gccagigatt ctaattctga gggittcctt ttcaacttcc ttcatctgca	88440
	gagtggcttc ttctctctcc gtcactaatg aactataaga taccaggga tgactcttga	88500
	cttctgtgga tccaggetca gttctcattt cccacactct gtacaattgg aataafatca	88560
	gcactagatg aggtgetacg taaaacactt gggactaagt cctctctcag caagttagct	88620
	atctcaatat cttaataatt attcgaaact tctcttaaaa agtttgacct ctcttctgc	88680
	tgcctgact gccctcccat gcatggigt gagtgaagt gagaactga gtgttgcctt	88740
[0057]	gtggcttagt caagtccca agttgtgaaa aggacgagge tctcaacaac acaagctttt	88800
	ttttctctt tcaagtgaga gttgtcttaa agttagcctg ttgccctcag aaggtggaa	88860
	aecaaagtc ctttcatct ttgaactga ggaacttgc agtttttct tgectgattt	88920
	taaatgaca gttaaatcat agaaattag ttaaatcaca gatctaatcc acttggattg	88980
	tgatgatggt tgtacaactg agtaaataca ctagaactct ttgaattga caettaaaaa	89040
	ttggtaatt ttataatag taattatct ctcaagctg ttttaaaaag gttctatcaa	89100
	ctcttttat gatgatgaag tagcattta tgatgccga cagccigatc ctaactttac	89160
	ttatcccacc tttaaccttc agaacaactc tgaggggata ggttggttat tttagaatt	89220
	gcttatcttg ttagtagtac agcttgitta gaaaacctac cttcttctg atatttctt	89280
	ttctgccfca atcttcaca caccagagt tcaggaaaag gggagaggct tafggtatgg	89340
	ggaagagctg agtagctct tactgactaa acctgacaca gaataaaatg gctgaggtg	89400
	tatagattat tagtgggaaa aatccagtaa tatttcaag ttattttgac taggccgaaa	89460
	tgtgtacaaa taaccatctt tagacagcag cttaagtgt gtttgaatt atcagaacac	89520
	ctagatgtaa atcagtgtt ctaaagttt ttttaagct ttgtttttt gttttctccc	89580
	ttcccttg agatttggtt tatattgttt attctctctg ccaagctct tgcateagc	89640
	acagcaggia taacctcacc tcagtttga agcaaagtc attgttgac agtcattggg	89700
	ctctgttaa tgagggacca aggagctgct gggaaagaga tgagaggaga gagcctgtga	89760
	gctgagat ggacacagtc gctggacctc ctataactct ggccttaggg tcagccagtt	89820
	tgggtgtctg gttctagcc tacttatag aaaatgagt gtgtctcttc tghtaactggc	89880
	tcaacagaat atfgcagaaa ctcatcaatt tcagaaatac ataetgaatg ccacagctc	89940

ttgtagctct caetgttact acagaaagtg atgtttgagg geagtattgt ttttttctct	90000
gtttttcacc tctgtggggg aaagtittgt ttagtctca ttgattcacc cctcaglag	90060
ctgtgtcttg gtttgattct cagctctgca ttttactaga tgagtaacct tgaatcatac	90120
taaatctcag gagaccacag attctttgtc tgcaagatgg tcaaaaatgt atttaccica	90180
ttagataita ggaggattaa agggtaatac ttttttttaa atttaaaatt ttaatatitt	90240
ttagagatgg ggtcttgcct tctcccttag actggagtgc agtggttcca tcatagcica	90300
ctataactgt gacctcctgg gctcaaaagg tectccagtc ttagcctccc aagtaaciat	90360
gactacaggc atgtgccacc atgcttgctt caitttitatt atttatggag gtcctgatat	90420
gttgcccagg ctgggtgcga actcttgacc tcaagtatc ctcttgettt agcctcciga	90480
agttttggga ttacaggtgt gagccaccaa actcagccaa aaaattattt atttatttat	90540
ttatttgitt gttttgttgt ttgagacaga gttttctctt gtcacctagg agtgcagtgg	90600
catgatcttg gctcactact acctccacct cccaggttca agcattctc ctgccttagc	90660
ctcccgaata gctgsgatta caggtgcaca ccaccacgcc tgctgtggg gtttcaccat	90720
gttgcccagg ctggcttga actctgaet tcaagcagtc tgcctgctg ggcctccac	90780
agtctgaga atattatagg cctgagccac ttgcccggc caagataata aatttagagt	90840
ctgtttgctt gatgctgac acctagccct cagtaaatgt tagtattatt gttttactac	90900
tcagtacttt tatataaaga gatattctt tgatctttct gtttatgggt agtaatactg	90960
ttagaatcag acctgtgta gaattacsga cagttccatg gttasaataa gttacactc	91020
[0058] agatattgaa gtgttggtgc acctcaaat gtggatatgc ataaagaaag gctgggttct	91080
cagcccagtc cacaaaagcc accttatgaa tgaaaatcta tagcatattt gaattattg	91140
tcctaataat actgaatca aaagccattt gcctatgttc ccaaggaana ctcccitfa	91200
cagittaaet ccatattctc ggtttataag aaagactata acctctgaag ggtaactgtt	91260
catattgctt gagaagcatg gattgagtg ttcaggagag cactagatag ctgccnaggt	91320
atctgiagct tcttaactca gtgtctgctt tggagagagt ccccgcttgg gtgtctggg	91380
ccagggaggg ggcctgtca gtgtcagctt cactgcagat gtcogattg gaaacaagt	91440
gcctattacc teatattctc ccaggttttt tctcatttaa gtttacctca tcttagttg	91500
aggcctggct gcttatgaaa atatcagtaa tagctgatta ttggcagica ttctccccc	91560
aacctgccta tgtttcaggt tcataaaatt ttantcatgg gcttagaagt gagtgactc	91620
ataatctccc tggcttttcc catcattctc ttattgacgg agccaactgg tggagtggag	91680
aggcagggga gcactgittg gccagctttg tgaagccata tatcttcttg ctagtgtgtt	91740
actaaataaa aaatatttgt gataatcata cagagtactt aagaagtata tttattata	91800
atggtaatag attttaatca ctgacaaaaa tcactttggt tattatttat tctbataagc	91860
attttgcata ctactgccag gaatttgitt gcattgtetga tgtataatca cgagcgtgtt	91920
agaattgttt aagtctttc tgtaggaaac agatggaaga tttecccaac tcccagagt	91980
tttccgatta gcaaagtgca catcaggcag gatctgtgaa cctctcagat aggggttttt	92040
ttgaagctgg atttgataag gctctgtgac ggataacctgt aatgagaaat atcatcagag	92100
ttttattttt aaatgatca naatttgitt gccaggagct acagtcata tttctgggga	92160

gtcatagttc ttgatgatta tgatcaaac agcctgaccg aacctggctg gaagtctgtt	92220
tgceelaaga ggatatlagl gaaccagatl cillglggal gagagagttc ctialcillg	92280
catatattgg gtttagaac agatggccaa atgtatccgc cttgatttcc tgatgtgttt	92340
ttttactttt cctcaggfat ctctcccttt tgtcacaacc tctttgcect gtaigacgag	92400
aacaccaage tetggiatge tccaaatcgc accatcaccc ttgatgacaa gatgtccctc	92460
cggetocact accggatgag gtatgggaag taetgacctg gtacctgctt ggctccctct	92520
geactgaggg acagtgtgca gctggagccc ctgagtcact taccangaag taitgtatgc	92580
atttttgtaa tttgtaactt ttgtatttgc ttgatgtgag aaaggacttc ttcagtattt	92640
ggaatacaat tcaagatgag ttgatcacc ttctctgccc acattttaga aaagaaatct	92700
tgataaggca gaggatattt tgaatagaat tagtgtccta cagcagagtt tttcaaatgg	92760
gtaatcatag ttatgaattt aafttagtgg attcacagtt atgaattcaa tttaatftag	92820
tgaatttaag aaaaangaac aggagacgat actatcagea tatatacata acctaaat	92880
aiftttttaa cttttgagat atatatatai atatatatai atatatatai atatatatai	92940
atacacacta tafatataaa ggtcatgata taaaataitt ttcttactaa aagtigcaac	93000
taaaaagctc gagaacattt gctgaagtg ttaactagaa attctaggtt ggcttgcctc	93060
tctgggagtg gatgttttga ctactccttg aggatttttg gctgtggagc tghtaatttt	93120
cttctgatgg gcacctgctt ttctcccatt attgcagact ttgagaaatg tcacaggtga	93180
cacagacagt cagtacttca atagctgcag tctctgagt ttgtasacat attigttag	93240
taactagaat ggaaafatg ttagttaaat acttgctaag cagaagttaa tgtgtgttta	93300
gcagtgaga ttataaatag ggtggatcct ttttgaanag caggttaact tacagaggta	93360
ttaaacagct agataagctc agatgctaat agaatgcagg gatttgetag aaaagccctc	93420
tgaaatctcg gagaattcac agtateatag ctactatttt tgggagaatt tggtaggatt	93480
gtcaccatta cacaaatgct gggatgtttt tctcagttga cactgaacca gatctaacct	93540
tctttgataa tcatcttagg gctgaatttt tctcttcttt tctatgctta accaaagcti	93600
cacctggaga ggaaagctgt gtgccgtgga gatttcaggt cccagctgag ccitctggci	93660
attggctttg tttttccaca tghtaatctg cttttgttgg cctggggatt gctgtgtga	93720
tcagcaatga aatgggttgt tgcagtttga agtctggaag gggtafctcc ctgggttcta	93780
attctttccc tctagtttcc tgtactcagc tcagagtcta gaatggtagc ttttaggatt	93840
ggaaaagacc aaagttacct aattcaactc tttcattttt ttttcagtgg aaaaactaat	93900
accagaaaaa gggaagagag ttaaccctaaa aattacatct agtgaattgt ctgattagct	93960
ttacaattga ggcattgtag agctctttga ggcaattagc ttggttctct gactgectgg	94020
ctattaaagg ctgtctttgc ctgttccctc tttctgttag ctgacctgaa gtgcagggtt	94080
gcttcacttt tagcaacttg actctgtacc tgaatgtgtg cttaacacagc atattgcttt	94140
gttaccacag gccctttgaa ettgaaaaa aaaaatacca ccttaageta aaacatttgc	94200
ctgatgacaa actacaaaga ttttgaacc tcataatctc accactaaag gagcgtaaa	94260
tgaaaataaa tgttggatgt gatttcagtg gactaccagt tttacttttg gaaatattct	94320
tgtatttcaa ttatcgtttt ctgtttttag ataatgcttt tgatagttgt tgggtaatca	94380
tagttatcct caggtatctc tctcttttgt cacaacctct ttgcccgta tgaigagaac	94440

[0059]

accaagctct tatafatata ttttagcata agacnaccat attctgtatt ccttttcaaa	94500
aatatatttc ttgctttttt aaacaattga atttcacagl ccattaaaac attliataga	94560
agcetaaaga gagtttgttg tgtataatat ctgcatataa acttaaaaata tgcagttatc	94620
tgtacataat tttctcaaaa acttgcagtg cgtagctctg aittgatgctt atttgcctt	94680
ttttctttc tectttcttc ctgctttgtt cctccacgtc attttgaaaa ggaatatagg	94740
caggatcatf tctacattta ttgatgtcat ttttaatttt ttttcattg gcatgctata	94800
gtatctggaa tttttgtgta ccaggtttga tgagcacctt tataattaat tttaaaaagg	94860
igtgtggaat gctctcttc agtgtgtctt caagcttggf cttatgggtg atagggaggg	94920
tactgattct ggtagctcat gatttaaaat tttgttaata tttttgacat cttattaagg	94980
agaaagctgc cggccttatt ttaggctccc tcatctctg tttaccitta gctttgttc	95040
cagtgagaaa gctacacatt atgtttggte tectcagcct gatgctgctt gatiatciga	95100
cctaaaggct tccaagacaa agatggtecc acagggctct cagcagcctg gaagaatate	95160
gttttcaga ccagattgaa gatttgttc tgeccagagg gagtttgttg ggeccctate	95220
tctaccagat ccaaggactg tttctcacag agactcagta ggaigtgaa gaagaaggcc	95280
gltgctcctt tggctcaggg aacatctgct ttttccctc ctgccaccte ccttggcagt	95340
ggagggtgac ctgtctctct ccttggcacc tcatcagaga ttctctctc ttggacaaca	95400
ccctccatcc tgggaacctt tttcttccct tatctcggga aaccttccat attgtaceta	95460
cttctcattc tcttattaet gcttctctc gccatcaaac agcatttacc cctctgttg	95520
[0060] gccattctgt cagaacctt cttgaaect ctgtagctgg ttcactcctt ccttctgct	95580
tgtcccaggg agaggatcgt ggctaagttc tctggggcac gtgtctgtt ctaaccttga	95640
agagcagtc caggctggg tacagcatga gtggcagcct cctgccagc tgalagcct	95700
agctttccac tgcaccagc ggaggtaag ggaacagtec agcagcttca gaggectgac	95760
gtgctcatg ctgccctgg ctctcagat gtgtgattct tctgtgtgt gagagagaca	95820
ccaagccca cagtcaaat ctgagtcact ttctgaaatt acaaggaaga tggctgtat	95880
agaatcattg aagattataa aaatgttgg ttttacctt aaagtaactt ctttgttat	95940
cctttccatg ttaattgela cctccctgagf ttattcatct tttgtttate taicaagcat	96000
gtgttcagta gctgttaggt accaggcact gggattcagt ggtgagcagg acagctgcag	96060
cttttgcctc cgtgcacagc tcacggcatt gctcgaatga tgcacagge atctgcttct	96120
ctctgccct tccgtttcta tcttccatgg gcttccctc ccaggagagc gtgcctcata	96180
tgtgctggc tttctgttct tgetctgctt gctttgcatg gtcagagctc tgtagccigg	96240
catttaatta ttctgttcca gcttccctc ctgggtgctt tttccctcc tgcaccctc	96300
cttggcaatg gagggcgacc tgtctctctg geacctgcc agagactgct atatgtcaa	96360
ggacaactta tctttaagc acagtcccta gacacacac ttgttagggg cccataaaat	96420
gtctaatctc acttaaaatc agaaaacata gttgagaaat ataacttga atattttta	96480
tggaggaagg gaaaagtgtt tagggcctat ggaagtcaca gtgtagctct gcttgtgata	96540
cgtgcccatf tgtgtgttgc tggatagttg ctgctggacc tgaccggtg ctcccagaga	96600
caggaacica cagagtacga gaaacatgcc tgagagccct ccaatctca ggccttaact	96660

cagggecifgg	cttgtcttag	gctctgcaaa	catagcacag	tgacagttgt	tgaagtgtag	96720
cagcagciftl	llgcagggaa	agagggagil	gialllalig	ctlelecatg	acaiggtlci	96780
tttctcatta	gttcatgggc	aagtcagggc	aaagagacct	aggtagcage	tgagtctgta	96840
gcctacagat	gxectgggct	ggcttggctc	agtcacttcc	cttagtcact	tccacacatt	96900
ccagaaattg	tgtttttctt	acagggtgaca	gaggaagtta	tatatggaag	gtagggitag	96960
gggeaccaac	ccctctgca	attgacaate	catgcataac	tttgacctc	caaacatag	97020
ctaataataa	tagcceactg	ttgactggaa	gccttaccaa	taacataaac	agactagtaa	97080
cctgtatata	tcttaigtat	tcatgatgta	ctttttctg	aaattaaaaa	aaaaaaattt	97140
ctgtctiaca	cagttctgca	gttttttcaa	actgttgcaa	atctccaaaa	aaattttcaa	97200
tatacliaft	gaaaaaaaaa	tcigtgtatg	aatggacttc	tgtggttcaa	accatgctg	97260
ttcaaggggc	aactgtagta	gttaagagaa	caggcttttg	tagttttagg	tcacctagcc	97320
tcttggaaac	tcagtittcc	tcctctgtaa	aatgaaigaa	accttccctg	tagagttgct	97380
gigaagatta	aatascataa	tatatafaaa	gtctttgta	actctgttca	fgatgctgt	97440
agtgggtgtt	gggtagctct	cttttaaaat	ectattcctc	atgtaagata	cacctcagt	97500
tgaatagcag	caatctggga	agttaggaac	actgccactg	aagctgtata	tcttgattgc	97560
gtatgaaac	taagtctcag	gaatgttaaa	atgtcaatca	aattggtctt	ggattcaggg	97620
tagaatgggc	ttagcagtgt	ggctgatggt	aagcgtcag	ggagctgtgg	tcagcatgga	97680
gttcacagca	gcaggfgttt	ccctattctg	gaagcatagt	gagaagtcag	aggagctgtc	97740
tttgtatct	tcgggaagtc	actttagctc	cttgagtcct	agaggagggtg	ctgatgggac	97800
acttctcagc	cagcgtctgt	aagaaggaaa	gagatggtga	gaggctacaa	ggggcagggt	97860
tgtctgctgt	cttctcaggg	cacttcagcc	tccggcactg	accactgttg	gtgagccagg	97920
acgeccctgc	cacatctggg	teccctttgc	cacaattggc	attcattttc	ctgccttcca	97980
ggttctattt	caccaattgg	catggaacca	acgacaatga	gcagtcagtg	tggcgtcatt	98040
ctccaaagaa	gengaaaaat	ggctacgaga	aaaaaaagat	tccagatgca	acccctctcc	98100
ttgatccagc	ctcactggag	tatctgtttg	ctcaggtagg	aagtttgggc	ccaggagaag	98160
ctggagittg	tgggatggga	gaggcatigt	agagctcaga	ccccctgctg	cagctgaact	98220
tgggtgigt	agagtgtctt	aaggcctggt	ctgggtaagt	tcttgcacac	cctggacttg	98280
ccccaaagta	ggagaaaaaa	ggcagcatft	cagctttcca	agaggctggt	tatccagett	98340
gtggctttg	gggcttccct	tctttcctat	tcctttcctt	ttcccacct	cctaccattt	98400
tatttttcat	ccgtattaat	agccttatgt	gcagaggta	gaggaagct	ctgcttgta	98460
gaagatgtaa	ttaaacaggg	ctgaagaagg	cacttctcag	cagccgtagt	aatgtctggg	98520
gaggaaggag	atggccactc	tgtcactigt	ggtaggatag	aaagattaga	cgtagaaaaa	98580
aaaaaaaaag	agaaggtaga	atcacctgaa	attacattta	ctctgagatt	gctaaagatt	98640
ttagtagtat	gcttctgtat	tttaacatgc	aaatttagat	actgtataga	ttttgaaat	98700
attttatggt	tcattttggt	tgttaactg	cttttttatt	catctgattt	tttttattgt	98760
tgtctctca	aatgtcaatt	aaaaatattg	tcttcgttgt	tttaatgact	ttgtaacaat	98820
tcattttatt	aaacaattat	gactggatgt	ctgcgtacta	tttgcctcag	gcacttgtac	98880
ctgctaagat	gctggagatg	ctggagtgaa	caagacagac	atggcctctg	catgcatcag	98940

[0061]

atgtacatca agtttagaaaa caagcaata asatgafaca tagataatac gtaagaaatt	99000
atggaagta ctgtgaaagc agaagcttgc aatagagaal atggacaggg ggglttgaat	99060
gggaagacct aatttasate atagtatcag agaaggtctc tetaaggagg taacatttat	99120
aatgaatect gaagaataaa aaggaatctg caattctaag agaggggtgg gggactattt	99180
cttccatgta gagtgtctca gcagcagcac tactgacctt ttggcccaga tgattctttg	99240
ctgtgatggc ctgcccctatg cattgtaggg tattfiaccag caicccctgcc tccacceagt	99300
agatgccagt agcactctct ccttagcagt gatgacaaa aatgtcttca atattgccga	99360
ctctcctctc agcctcagtt gaaaagatct gatgtagagg gaacagaatg ggggaaggcc	99420
ctgagggcca gtagagctgc aaggagagac catgtggctg cagaccagag gagggtgatg	99480
gggaacgagg ctggagaggc aggtgggggc agattgcata cacagagcct tgtaggagct	99540
ggcaaggggt tatgctttaa ccttgagttg ggtgggaagc catttgggaag gcttcatttt	99600
atgtatgitt caagtcgatg attcttctta cacgtgaaa gcagattgtg ctgggtccaa	99660
gaglacactc gaaacataca agctgagagt ctgcagcaat gatcctggga gaaaaaatgc	99720
tggtttggcc tagttagca acagtggcag tggagcaaaa tgagttagat tgcgttcat	99780
cttgaagata gaattgatag gatttgcigt tgagttgat gtggaagctg agagaattg	99840
aggaatcaaa gatgatgact gggttictgt ttgggtgat gtcgatgga taatggagtc	99900
attcccaca caggaaggt ctgggggaa gagggtggg aagggcaga aatcaggagt	99960
ecttttgg agatgcctgt gaaacatca agtggagatt tcaagtagga aattgagta	100020
[0062] tgaggttga gtccagagga naagcgtca ttatttaac ttagtcaacc gttcctggac	100080
atttctgtt tttctgttt tccctttat gctattactt tatagtctgt tgtgaacaac	100140
tgcatacgtg ggtgtctctg tacaegtctt gtttattatt accttagagt ataccattat	100200
gtgtagatc acacacgtat cagtatactt gtgtcagagt tatgtccac tgtagggett	100260
tagttactaa ttgtccatta tctccatcc atctatgect tagaactgcc atagagacaa	100320
cagagaaagg ggacagtga cagcccagg cagatctgt gtggaaaaa agaaaatgaa	100380
ctggccattt tttagatgtc tttttgatt cagcttcca gttttgtga tccatagctg	100440
agatttattc tttaaccttc ccgggagcag aggtgtaaag gaagagtgt ccatacttga	100500
agaataagca tggcgttaga ttgaccttt ggaggctcag gaatangta cttgaggtag	100560
ctgtacagtg aatgittaca aaaaaaccac agccaacag gacagtcca ggttttctt	100620
tgcctctcac acattactgg catagatcat ttttctcag aagtttttg aatgtcagtg	100680
accttctct acctgagaga aacaagatc ccatggtga aaagaagaga aacgggagca	100740
gtgggagccc tccatccaaa aaccattaat ctgaagttct tcagggaag agagcatctc	100800
acatatgcag gaacacttct cccaggcttt gtccctgcc tgcctcaagc tggagaaagg	100860
cttaagagtt cacactttag tgttctatgt actttaagte atttgatgaa aaccgaatgt	100920
ggctgtagca cggcattgaa cagtgtctt gccaggctct agatttaac ccagcctacc	100980
acttgctaag ccctgggccc ccagggtact caattctct acttgacttg gggttttata	101040
actgctgac gttagatact cctagtcatt tattctttt tttctctta gagtggaatc	101100
tccaggagat caggaacgtg gtttagtita ttgctgttc cctagcactt agaataacat	101160

ctagcccata	attagttctc	aataatfacc	aatgaagga	gtgacigaat	agggcctgtt	101220
tactgttttg	tgccttagat	tectcaictg	tiggagatga	cgatgttaac	atccacgttg	101280
taagggtfta	tgaggactaa	ataaaggagc	caagcaactg	gtggcagcac	tgaggcaggg	101340
tttaatcagt	gggagccgce	actggaatta	tcgttttcac	tctgtacaaa	gctgggctgg	101400
gcactgctgg	ttagccttgt	tttagtitti	gtgtttaaag	ttcccgtag	ttcttagaat	101460
gctgtgcacc	tccatcagtg	gggggtata	ttttgtgac	acatttcact	atgggaaact	101520
cgaacggtag	atgtgggaaa	atgfacatgt	ggtgatgatg	cactgcggaa	cgttccctt	101580
tccttagagc	tacaccagaa	tggagggaga	gccceatcaa	ctctgtacac	caagctccta	101640
gacaaggcca	tctaangcatg	tttgtggaat	tcatgcatga	tcagacctca	gccacgtgfc	101700
accttccctt	gccttggcgc	agtcacagcc	tagtacacag	tgtttgtcag	cgtcacttct	101760
atggcgaagg	gacttctgat	gtctgtactg	ttcccacgtg	cctggcatag	tgetcagtca	101820
aigtittgtt	aatgaatga	gcgggggaga	acaictctctg	agccccctca	cacccacctc	101880
tgtttaaag	agctctgatg	ctagagaaac	tgccaatctg	attctgtctg	ttgctgtgct	101940
gegittctag	gggcccctc	cctgtgtagt	agcattcttg	tcagatcaa	aaacgggtgg	102000
gctctcatgg	ttctccccc	ttgetcttag	ggacagtatg	atttggtaa	atgctggct	102060
ctattctgag	cccacaagac	cgagcaggat	ggacatgata	ttagaacga	gtgtctaggg	102120
atggctgtec	tggccatctc	acactatgac	atgatgaaga	agatgcagtt	gccagaactg	102180
cccgaaggaca	tcaggfnaag	cttcccactg	gctgaagaat	tgatgtgag	gatgggtgtg	102240
ttttacatg	ttcttaeaca	tttcagctta	attactgcca	gggtttggct	gaectttgct	102300
ctctatgaaa	cccagatctt	ccttagaatg	tttactacat	acacgtagcc	taattataat	102360
tgigtcttga	tttggatgt	tggctgctaa	tctcagaat	tigtctttgg	gtgaaatttc	102420
tgagctgagg	atgccaataa	aattagtgcc	cccagacct	tctcgtccc	ctcttgcct	102480
atggtgaca	ctgtctctca	tcactgcatt	ttttctttt	gttttgacc	catcttaaaa	102540
atcttctca	gtacagttct	gtaagcagct	actaccatcc	caagcctgaa	ctctgaacac	102600
gttccagtag	ttcactacag	agctgttaaf	tctaattgtg	gaattgatca	actactatta	102660
aatatctcaa	gaaaattgca	tttaactaaa	aatatcgttt	gagatcaagt	ctctgtgaag	102720
gaatatttaa	gttctgtcca	tctatgacat	ccaatagttt	ttttcacca	gtggctatt	102780
aggatggfca	taaatgaaga	cagctctcatt	tgaagaagg	gatttcttag	ctgcattgtt	102840
tgtgatagcc	ggcgtgctgc	ttctcattag	gttctctctt	gtttctctt	gccttgacc	102900
agagtctaga	gcagatcaca	gcttctctct	cagtgatgca	ggatitgagt	cgatactget	102960
caacigtctc	ttctctttt	ttctgtgccc	ttcactttgg	gtacttctct	ttatttttt	103020
cataagctaa	attgaaaaat	gacagttctt	ctctaatctt	gttatattac	attaatctaa	103080
aagaaaaata	acatttgttg	aggatgaatc	ccaaactca	caatttctca	ctgttctgaa	103140
gccactccat	gcggcagggg	tgaccggggg	ccaggtgctg	tctcagctct	gggagtaaca	103200
agcagatcag	tctccgcatt	tggccccag	tggacttgtt	ctttgtttca	gggtactca	103260
acgttcttct	taacattgac	tcctgttcta	gcagtatctc	agcttgttta	gattctgttt	103320
gttgtagata	ctcggccact	agcaccigga	taggttaacta	atctttcage	ttacctgttg	103380
atcttttaaa	taatafatct	gattcatatt	ccatggcaa	acactaagtc	tttgtatta	103440

[0063]

attagcitta giatgtetit cfcctctctc cctcactct cctctctctc cctctctctg	103500
tgggggtgct tggggggacg gagttttgct gttgttggcc aggetgaagi acaaiaggcat	103560
gatettggct caccgcaact ttggcctccc aggttcaagc gattctcttg cctcagcctc	103620
cfigagtagct gggattacag gcatgtgcca ccafacctgg ciacittlat atitttagta	103680
cagatggggt ttctccatgt tggccaagct ggtctctcac tccgcaecte agatgatecg	103740
cccgcctcgg cctcccaaag tgcctggatt acagcctga gccaccgcc ctagccttcc	103800
ttctcattt ttaaaataaa aaatgtgac tgtttagaaa agttataaat cagacatgca	103860
aatagaacat acaagcatt tctcatcaca caaaigaca attgctccta acaccttgca	103920
gaccatttcc taactgatgc tcaatcttag taacagtgtg tagatgtag tactaatgtg	103980
cacaagaatg gigaagctag caagcaaaaa tftagatgcc ctgccttggg gaccagaaa	104040
attgggcaat actttagca attccattt cagtgaatc tgggagcat gtgccttctc	104100
ttctctccc agttctatt caccctcctc tcttatgat ggtcctctc agtgctaact	104160
ccactaacg tctctggga atagatctc ctctccatt tggcaacatg tggattcatg	104220
gacttagatt tgtttctaaa ctatttctc ctaacctgta caigaaaagg agatgtactt	104280
tctaeigtc tttagctac aagegatata tccagaaac atgaaataag tccatcagac	104340
agaggacct tctcaccagg atgcgataa ataagtitt caaggattc ctaaaggaat	104400
ttaacaacaa gaccatttct gacagcagcg tctccacgca tgacctgaag gtgaaatac	104460
tggetacctt ggaaactttg acaaaactt acggtgctga aatattttag acttccatgt	104520
[0064] tactgatctc atcagaaaa gagatgaatt ggttctctc gaatgacggt ggaacgctc	104580
tctactacga agtgatgtg actgggaatc ttggaatcca gtggaggcat aaaccaaatg	104640
taagtggctg ttggcagctg atcaagaga acattcccgt gtcacatagc gtatgctgtt	104700
tatctctctg gagtcatctg tctgcatgct cactctccc ataggctgag ttattttagg	104760
agaccatgta tcatcatal ttatttctc cctcttagca caagctctaa ataagtattt	104820
attgagttat gtagagaaat ataacaacat gtataalacg tagtagtata ataataatg	104880
csgatagttc ctgagtgctt acctgtgccc aagtactttt ctaagtattt tataagtatt	104940
aaactcaitc ttcttaaaaa taaaaaac cttgaggaa giatgtctat taictccatt	105000
ttacggatga atacaagag gccacagaaa gtttaagaaat ttgcccaagg tcataactaa	105060
taagcatttg tccaagaat tgaacttagg cctctggctc cgtgaaattg actaattgat	105120
tttctttat gggagcttct ttatgagata ttatttggat gaagaaatag agcagagtg	105180
cttaagagca tgggttttag acccaogctg acggggttca gatcctagct tcatgacita	105240
tatggcctta ggagagttat ttcaccttta tcagcagcta aaaattactc cctctgttaa	105300
tggaggtacc tactgtctaa ctcataaggt tftgaagaaa ctaaaccgca tttagcacia	105360
agcctggcaa tacaataaat gttgaataaa ttattatage cgttacaatt attattactg	105420
taattaataa tattaagta aatgtgggtg ggtgcagtgg ctcacacctg taaccccagc	105480
actttgggag gctgaggcag gcagatcact tgagccagg agtttgagcc tagcctgggc	105540
aacatgtgta aacctatct ttacaaaata taccaaaatt agcaggatgt ggtggcacgt	105600
gccctgtgct ctagctactt gggaggctga gttgggagga tgcctgagc ctggaggctc	105660

aaggctacag	tgagccatga	cttggccact	gtgctccagc	ctgggtgaca	gcaagacact	105720
giclcnaaaa	allaaalaaa	lgaalaaaal	algagactca	lilicicctc	cigililiali	105780
ctcatgctaa	aacaataatg	cttgatactt	actgagggtt	ttctgtataa	taggtattat	105840
actatgttag	ttagcacttg	tctaactca	gagaacctg	tgaagatga	agctatftca	105900
tgaataagga	aaatgaggct	caaagagatg	atgtaactag	ttcagtaatt	ggcagaggca	105960
ggaacttaac	ctagatctct	ggctccagg	gctcatgcga	cacaaaatat	tttcactigt	106020
geagatata	attattcagt	gtgtagatta	ttcaagcat	gaaatcctg	tcctctctgg	106080
aaaaicccga	cttgagtact	gttacnaagi	caagacgatt	ggtgatagga	gaaagctcat	106140
gttcagctca	gtgtaactg	ggaagagtat	gttatctgtt	tgtgtcagag	catgtgtagt	106200
agtciggaag	tgaggagacc	tgaatgtaga	tgcatgicta	gtgagcagtg	atttcccttt	106260
ctgagtttcc	gtgeacattg	cgtattatat	agtttagaca	gtgtgctcat	taaggctctt	106320
tcagatatg	aaagcccagg	atttccigat	acaaccctg	tccttggtcc	taacctgca	106380
ggtgccaaact	cccccaatcc	tgcaagtcca	gaagagctgg	ctttctcttc	cttgaceta	106440
ggccctgcac	aggtttccca	gcagcactga	ecttttacca	atagaaaatg	aagaaagcaa	106500
cttaacctgc	tcccttttat	gtatcttctc	aggtgttftc	tgttgaaaag	gaaaaaata	106560
aactgaagcg	gaaaaaactg	gaaataaac	acaagsagga	tgaggagaaa	aacaagatcc	106620
gggaagagtg	gaacaatttt	tcttacttcc	ctgaaatcac	tcacattgta	ataanggagt	106680
ctgtggctcag	cattaacaag	caggacaaca	agaaaatggt	aagtttctcc	cagaagctct	106740
taagtctgga	tctggfgatg	agagggagaa	ttctctgagtt	ccgttctgca	gcacatgatt	106800
ttcagagttc	ctgtcciaaa	gagaaaacag	gattttctta	ttgaagccaa	aaagttceta	106860
ttaccaaggc	attctcagtg	tttfaaagtt	acaccgatac	attccagtgc	ctttctttgg	106920
tctcagaaat	gtgaactctg	cttaggattt	gcttccctcc	caaatacacc	tcagcatcaa	106980
tatttaattc	acaaagctag	tggatttga	gaaaagaaa	accagcgaat	gtcagtgttt	107040
cttccccagg	gttctggcac	ggctctctg	ctgagctgaa	gtgcaagca	ggaagcccca	107100
cgttgccctc	agccgagcct	egccacagf	ggcagtcac	gatattggtg	cagccacacc	107160
ccagtgactc	tccgacagag	gaaagggigt	tfaatctcac	ttctctttt	ttgtatcac	107220
ttgaggacat	aatctaaaca	agcaggaagt	gggaactctg	ccaaaataaa	cctgtttgtg	107280
tcaggsgaag	tcacagccaa	caacatgcag	agagagcggc	tsgtgagaca	gctagcaetc	107340
ttaaagtgag	tggagccaac	accaggaag	gccacattct	gccaaaatgt	ggeagatact	107400
gtgtcacaat	gataacgctc	agtcttgagg	aagagcctgg	tgatacggtt	tagggcagac	107460
agtcactctc	tgtattcag	aataactigt	ctttctgata	taacctttg	gaaaacagtt	107520
tggtaacctg	ttaaaagcct	tgaanaatati	tatatatccc	tctgttcagg	aatctagaga	107580
atgaatctat	cttccagaaa	caatgtgaga	ggcaggttat	ggtttatgaa	taagaafatt	107640
cattccagta	gtaattaaag	tgtcaaaatt	ctgaaaataa	cttaaatata	caataatagg	107700
agaatagga	aataaatcac	aaattgctg	agaagcagaa	tattagaaaa	tcaggttgct	107760
gaatttttta	atgacctgga	aaaaagtc	gggaaaaag	caggatataa	aactttacct	107820
afagaatggg	accagttttg	ttcaaaaat	caataggtat	gcatgtatat	acacatgctc	107880
ttagaaaaat	aaatattaac	agctacttat	ttatgggtgc	attatgagtg	gttttaattt	107940

[0065]

tcttattete cectctcttt tttttaaaca aaaaacitac aitaatttta ttagaaaaat	108000
atagtaaaaa caaagtgaag agggagaagt agaagagctc agatggatgt taatgaaag	108060
atgcgaaatg gagggagaaa agaagaagt cgttgatgg agcacatcct ggatcagg	108120
ccccgtgita tatgetgeat cctggatatt aggccccgtg tcatatctg catectgga	108180
attaggeccc gigtcataig ctgcatcctg gatattagc cccgtgcat atgetgcatc	108240
ctggatttita ggccccgtgt catatgctgc atcciggata ttaggcccc tgcataigc	108300
tgcacccctgg atattaggcc cctgtcata tctgcatcc tggataatag gccccgtgt	108360
atatgctgca tccitgggtat taggccccgt gttatatgct gcatcgtggg fattaggecc	108420
tgtgttatat gctgcatcct ggttattagg cccccgita tatgetgeat cctggatatt	108480
aggccccgtg tcacatgctg catcctggat attaggeccc gtgttatatg ctgtgectgt	108540
atcttggctt gctttagtec ttgtaagaac ettaggggac tgagcatcag ctctacttga	108600
aatgaggaaat ctgagactaa tcaagaggca tgggatcttg cacagggtca ctcaagtgaga	108660
aagtggcagg cacttgccea gctctgctg gttcctgect gtcaatttg cctgtgttc	108720
tttggcttct aaggcgttat catccccag agaccgccaa gggagtggg gagaggctga	108780
catgtccatg atctggetct tcaacgtggt giatgcttg tgcacatitt atgacctgc	108840
cccatcctgt cctgtcctgg ttgacacagt caagcttagc accaacacaa gttggtgcat	108900
ccatcateta agtcagagct caccctggcc acatgggcca atgactctat gccaaagccac	108960
agtctgtgg agggagcagg agggaggcag gaagaaagaa atacttgatt ctccattag	109020
[0066] tttgttttct tttaccagc tagcccttac tgtgtgctag gtacttccta ttctgagcat	109080
ttcaaaaata ccacctatt taatttcat gtcaacccta tgggtgagta tgataagggg	109140
aaactgagc acgaagaggt taagtaacct gtccaaggte acagagctgt taggttaaag	109200
cattigaaat tgccaatatt tgaccattt gacctatana aatgatgatt ccataigcat	109260
aaacctacta gcaggctggag agctgcat ttgaaccag agcagctgce tctagacct	109320
gagctgagg ttgaccactg ctccatgctg ccagttttaga atctcatgcc ctctgtgct	109380
ctctccagcc atgggattcc caagccctt aatcagcag tcttttgaag aaacctgat	109440
accagcatgt tgtcaagtca gacctcatg tacccttct ctctacatct ccttggcatc	109500
ctctatttct gtttagactc ctgtctcag gaaatgtaag tgcagatgtg gtcttacta	109560
tcatgtgct gggtagggg ctgccagcc cagcctgcc cttgttcaga gcattttaa	109620
tttctcttc agggatatcc gcagtggtt gcttgctac accgcaagg cagtgtctc	109680
agtgtggttt ctttttttg aagtgcatt ctatgggtga cctgcccctc tccagcctc	109740
cttctcata gccccaggca tcttctctc ggcattacag ctgcaatagg cccctgacct	109800
ccctcctgcc gagggtctg tctccctgct tctttttcc ctctactgct ctctatttc	109860
tgcaccctgc ctctctttc tacaggcta tgaagagtc attttgcct ttttgaagc	109920
ctcagatgct ttttaatgtt tttttgtgag tcaaaagctc aaatcatgce ttttgcatac	109980
cttccccctg caggaaatgt ccttgattga cctgatagtt cctgtcaaat gggcagctc	110040
ttcagggate aatgatcagg acanaagtac ccaaatctc caacacaggt gtcttccaga	110100
acaccttctc tgatgaaat cccctccctc ctctctcca caggtgctt tgcctcttc	110160

cactctgagt aagacactct gctctctcca actctcagag ctccctagcc ttaatctagc	110220
aaactcttca ctgggcctgg gattattcct agattaaaaat ccgggagttt caccttctag	110280
agcaagtctg ctatgagatg aaccacactg cctctgttfc tttctctcta agcaggaata	110340
atgccgattt agccattcac cgttgagtgc caagatcaag gtgcatgctt tgccccttcc	110400
ccctccact ttltgacctc tgccaccttg attcaggctt cctcttctcc cctctggacc	110460
caggggacag ettctctgca tgtctccctg cctgccacag cctccccac cggctcacc	110520
ccaacacaca cacacacaca cacacacaca cacacacaca cacacacaca cacacggacc	110580
caggggacag ettctctgca tgtctccctg cctgccacag cctccccac cggctcacc	110640
ccaacacaca cacacacaca cacacacaca cacacacaga gtcactgat agtttgagat	110700
aatagaiggg aaaatgigtg gaacagtgaa agtctatat aatgcaagg gggatcgggc	110760
acagtggctc acggcigtga tcccagcact ttgggaggec aaggtgggag atcactcgag	110820
gicaggagt caagaccagc ctggccaaca tggigaaacc ccgtatctac taaaaataca	110880
aaaattagcc aggttctgat gcaggigtct gtaatcccag ctacttggga ggcctgagca	110940
gaagaatcgc ttggaccagc gaggcgaggg ttgcagttag ccgagatctc accactgcac	111000
tcagccctgg gcgacagagt gaaactccat ctcaaatasa taaataaata aataaataaa	111060
taaataaata aataaafaaa taaatgcctg caaggggtat atttagtatt gatgaaagg	111120
tttcccttt ggggttccca ttgggttata aaaatcttct cactgtgcac ctccctacag	111180
agtcagccac ttaagctgat agagacatga tgaaccctg ggaatttctt ctctctcaac	111240
aggaactgaa gctctcttcc caccaggagg ccttgtctct tgtgtccctg gtagatgctt	111300
acttccgctc cacagcagat gcccatcatt acctctgcac cgaactggcc ccccgttga	111360
tcgtccacaa calacagaat ggtgtctatg gtccaatctg gttgttctta gaaccttacc	111420
agltgcccctt ggtgtgcaga gaccctgtgt tttagtgatg gggcaigtca tcatgttita	111480
ggtcaggcca gttgaccatg ctgcccgtga cttgttggct gctctcttct cctccctgct	111540
gtccaagctc tggtcaggcc ttccctgtaat ctctaccat cctcttttga gcagcccctc	111600
aatctctgctt ctttacttgg atctctcttc atagtttaac cccctcacct ctccatagct	111660
gatcaagaag tactacactt tctgatttct tctgtgtgca aacaatgttg gcaattcaag	111720
aaacactgaa cacagctgag cgtgctgcca tgtgcccgtg gtttcagctc cttgagaggc	111780
tgaggtggga ggatcacttg agcccaggag ttcaattctt gccctggcna catagcaata	111840
tcccctctct aaaaatata aaagagaaa aagaaagatc agatgatgat ctccagatca	111900
gacagtgtaa taaatggaat tctcagtcag cttgtcccaa ggtgccaggt gaacagtggg	111960
gaccctgagg gtaatacagc cttaaggcca gaagggctg tgtgggatgc cttgtccca	112020
ctgcatctca gaaactggcag ccigtgtctg agtacctctg gtgatggcca atgtgtgagg	112080
cagcccctgg attggagctc tgactgtgag agatgtgcat accttcttga tatggagctg	112140
tagttgctt cctctgtaact tctgcttact cacttgaatt ctgctctttg agncaacagg	112200
gattcttttg accttctctt acatattgaca gcccttcagg caaaggaaaa cagccagctg	112260
ctgtgtttct tctgagctc tcttttcaga ccacagaata tctggggaag cctctcttct	112320
gccaccttcc acatgatgtg ctctcactct tcttccctct tccggctgce ttgtggacag	112380
gtagcttagt agtcacatgg ccttgccctt gagaggctca cagactcata gggaaacaga	112440

[0067]

cacacaaaaga atggcagagc aaggggtfga gcatttfgaaa agcgtcttct gccaatgtcc 112500  
cagecatggt tgtgcttcag gcccaggca ctgctcttc ccttggecca gaatgccctt 112560  
ectecagaat ctgcacagcc tccacttctt tcaggtgcta gtcagatata acctatctcg 112620  
tgaagtcttc ctfgaccacc ttatatacaa tcatacctct tcecttctc eafcccaaac 112680  
atgttggeca ctgcactcta ccttattttc ctccagtgge agttgttacc tectgagata 112740  
ctatgtttat ttacataaca taacatttgt tecttgcttg aciacctca cctcccagaa 112800  
tatgagcttc ccaaaggetg gggctgcatt getcactgct ttcttagcac acacagggtc 112860  
tgacacaltg taggccctca gtgagtattt gtigaatgaa lggatatttc atgtttgalt 112920  
ggatgctgac attccttgcc taaagagcct gctcagagta ggtggcatte aaatctgatt 112980  
aaaccaaaga atcaatgatg ccttgccagg ccttaaagca cggaaagggt acctagatga 113040  
gaggtcagca catgcaaagg catggcgag ttagaaagta ccaatgtcc ctgtctctct 113100  
aaaacacacg aacctggcg gccctctctc accagcactt agcaagcagc actcacctca 113160  
tgcagggatg tattcagta glattcactg ctctctacat gccaggactc actgtctctg 113220  
gggatacaaa gaaatgtaag acaggcctgt tctactaac atctgtccag tctcactga 113280  
tgtattctct cagtgtgagc ceatggtgat acaacaataa acaacatgac ctccagttcc 113340  
cacccecatg aggtttgtgc ttccactggg ctggctaggg gtggaggga ggegtggcag 113400  
atgtctatca ccagctcca gagaggctct tctgtctga gctggagatg atgtctgtag 113460  
ggaatgcggg gacaagcagg getcattgce ttgggcagga gctgagtcc tcttctaac 113520  
[0068] ctgggagact ccatcggtcc tgaggccact cgtatttcc gctacgctca tggatgcat 113580  
cagaggggac tttagatcc caggeagggc agatagtgtg atggggctgt taagacttga 113640  
ggcagctcag gagagtggat agcccagagg ttcaaagtc tgtttggtgt gagctcttcc 113700  
tccccttgcc tacttctccc tctagtacag aaacgccat caataaattg eggcaagaag 113760  
gaagcgagga ggggatgtac gtctgaggt ggagctgca cgaacttgac aacatctca 113820  
tgaccgtcac ctgctttgag aagctgagg tcagtcagga cactggttig gaccaggcca 113880  
tacagccatg aggtgtccag ttagccctgg ttcaggagct gctcagaca gaaccacct 113940  
tggcagggtg gaactgaaaa gccctgggtct ctgagaagat cctgggagg tcaggcaagg 114000  
gcccctgctc tcaaaaggag actgctcccc agtagccaga cccctgcatc ctcccctgt 114060  
agggcccttc ttccttcatg ggaccatgg tgggggtcca ccatggctct ggaagacaga 114120  
acatgaccag aaaaccaatt cacaccaac acttgaaag tatagtgtca ttatttagag 114180  
tggittattt agaactcagt ccaccatcat ctcaacca gagctatgcc tgtctacagc 114240  
attcactggt acaaacagc gcccaaatgc cacttctcc acatggcta acacagtttt 114300  
ttccaatgg tagcttcaga cacttaaca aattgcacc ccatcttaga acaatgaata 114360  
gagatgtctt ttagtgattg aagcgtagct gaagctgggg atgatgtgag atacattctg 114420  
agggetaaga tattcaccag aattactgac ttgectcac tagaccaca atgcctttgt 114480  
tattcatgta attaaaaaaa ctacaaagt gaatattttc aaagacagt agttttacaa 114540  
aacactttac atcagtacac tttatcagt actggttagg ctccacatgc atggggagac 114600  
ctgggacagc gaggggctt tggcacggag ggtagaagca ggaaggacag cttattggcg 114660

aacccctggg	gctggactca	gtcaagagtg	ggaggaggaa	acggcagaag	gaaccagcgc	114720
tgccaagfgl	ccggglgal	gcnaigcagg	aacaccacca	ccgcccagg	ctctlgclga	114780
acagctgggc	ctcgggcte	cgtggctcag	agcctgtcag	gtteattgce	tteccagaat	114840
gcttgccgtc	tattcatcag	tcattggagg	aagtttaatg	tgtttacgat	ggaggggtgc	114900
atgagacage	ccagcctect	ccgaaagtgg	aatggcctg	tgcagtacca	agagtgtccg	114960
tgaetoceta	acaatgtcac	atcaccctgg	gaaaacagea	gtcatagaaa	tgattacttc	115020
caccgcacac	tgtgcccac	engaccctgt	gccaaagctt	gtacctactt	gtgctttttt	115080
aagccttqta	atagccatat	taggttagtg	atattatccc	attgtacaga	tgaagtaact	115140
gagattitga	atatcatctc	ctagtttaca	gcattatgta	gtctttctgg	ccctcattgt	115200
ttaccactaa	aalagittag	ttigtacaaa	aagagcccat	gagggaaaac	tgcttatacc	115260
tcctatctgg	caccacagtg	tcccaaacct	gggtcagaca	ctgaacacca	gctcccagtg	115320
tggttttctc	caagtggaga	catggcctgg	aagggtcag	tttgagctg	ttecttga	115380
agtttgicca	tcatsattat	tacctatata	ataatctctg	ctggaactta	taaagggett	115440
actaagtttt	tcaatacacc	atgttagata	attgtagcaa	caatcotaig	aggttggatt	115500
ttcatgaact	ttatctfaca	ggtgaaaaac	caagtgaagc	ttttgtagan	atagctactg	115560
tgtctgctgt	agfattaact	cccttttate	aatgcttctc	ctgagcctt	gttttattat	115620
ttagttagtt	gttggfifga	ttatttatgg	ataataaact	ttatttttga	ataattttag	115680
atttacagaa	atgttacaga	gatgggtcaa	aattactctt	catgcagctt	cccctaagt	115740
taatatctta	cataceccatg	ccgaccacca	ttttaaacat	gtaatttctg	gtcatttccc	115800
gaatagcagg	tgcagggtgc	ccagaagcag	ttcaagaact	ttcagatcga	ggtgcagaag	115860
ggccctfaca	gtctgcacgg	ttcggaccgc	agcttcccac	gcttgggaga	ccctcatgagc	115920
caccctcaaga	agcagatcct	ggcaccggat	aacatcagct	tcattgctaaa	acgctgctgc	115980
cagcccaage	cccagagttc	gtctccctgt	gccagagcca	ggtgtatcc	catcagtaat	116040
gtgctgagac	cvngatcgac	caaaacacgc	tgactgactt	aaacaagtg	gacccctccc	116100
acagtttcta	gglttttttt	attgagttta	attacacttc	tgtcccacac	tcaatccaa	116160
tcccttgagt	gtgagcattt	ictgtagaag	aggcatatac	ctttctcagc	atctcattag	116220
gctgcagaaa	gaggcatgct	cagcattagt	aagcagaaaa	tcacttcttt	cttctttaag	116280
ataaaaatgce	ttgaggagtc	tctgtfcact	ggtttattta	tctgagagat	attcctggca	116340
catettttgt	gggccaagaa	ctatatcaga	tgcгаааааа	cagaaatgca	taaggctcag	116400
tccttctctc	ctgggggttt	ccagcctaa	tgtgtatgtt	acaggtaaat	gaggccaetg	116460
cagtttgtga	tgggtgtttt	aactaacata	gatafcatac	ccgtggagtca	aacagaaagg	116520
gatggctaaa	atccctgagt	tccgtggcac	aggggctgc	ctggaggagg	cagctcttga	116580
actgagtgtg	ggaggatgag	tggaggttg	ccagtccggt	cagggcatct	cggeaccgtc	116640
aaacagaggc	atggcgagg	gctgccatga	aggtgaaggt	gaaaggaagg	tgaaggtgga	116700
aggagagggc	aggtgagct	gagcttaggg	tgtgggggcc	ttgagtgcct	tgccatggag	116760
ctgggtcttt	atctctcagg	ctgtaggggc	caggagggat	caggagtgta	aatggatcca	116820
aggggagacc	actcagctgt	ttcttgtaaa	gcctctigaa	tggcgtcact	gatgttctgc	116880
aggtggattt	gtctctttaga	atgtgaggac	tggaaagaca	cgttagaggtc	acacagtcaa	116940

[0069]

ctgtctcatt ttatagatga gaaaattgag gcccagaaga gcgaagtggg tctcatnaaa	117000
ggteagegtc aaagaggggc ttgagtgcca ggcetaacct gagtgccta gctcttgaga	117060
acggtttatt ttgctgctec tcacctcaag atgctgcctt teatgcgtca ggttcttccc	117120
ttagaaggag gaaggcctca aagaaggagc agcacgattg ccaactgaggc cccatgagtg	117180
tcagaggaag accctctgag gagtctttat ctgggacaca tcttgttctt ccaagcgaac	117240
ggtccataaa accctcacac caccaggagt ggcagagga agcagcacca ggalagaag	117300
ggacctgggt tcttgatggt tgaatcagtt ttgggtctca gcaaggggct tgtcaactgaa	117360
cttggtgaaa gaggagggac ttgtgttctt gatcagatag ggttccctgc caggtcaga	117420
gaataaetgc agcctttgtt tcatgcttg aggatttcc gcaaaggtaa aaacacatct	117480
gccacttggc tgtgagacct cagagtaagt tcaaacccta aagcccaaca gcccattta	117540
ttcacageaa cacactggaa cgaaccccag ttgaggetcc tgaacctcag tgetgaatgt	117600
gttccctggt gcctttccca cctgaactgt aactcttaag acaggacctg agtctcactc	117660
accactctat ggcctcgtgg ggaggacagt gccagcacg ggtcagcgt gaataatgcc	117720
tgtcaagtga acaggtagca ggagctctg gatggtgggt gcctactgtg gccagggcag	117780
tttaigtacc taccicatit atttcateta cacagtagct tttgtagat attacaaagg	117840
tgatgaaatt gagacttgag atggtlaagt acttgctcaa gcccatgtag ctagtagtat	117900
cggtagttag tagaacagta gtaataatta ataagaacgg ctgatcatat gtgagcaggg	117960
cttacagitt gccagggctt gtttgagat ctttcatggt ttaagtcatt tagtctcaa	118020
[0070] aataaccag aatagtgtt tatcccaatt atactgccc aagatcactt aggtagagga	118080
tgagtgggga tttgaactca cgttgctga ctccaagtc agtgattcct tctgtaccac	118140
tgcctccacc ctgcccaggt cacactgtct ttggaaaggt gcagccatca gcttaggact	118200
ttagagcagg caccaattct cctgacctg ggagagtaag aataaggcct gtgtgtgagg	118260
ctctcttaca taggtccccc aagctctct ctcttccctt tgcctatgce aaattagaga	118320
agtggggaaa tctgaaaaat tagacatgag aatattgigt tgggttcttc agtctctctg	118380
ctctctaac caeggggttt tgatagccag acctgatct gggttctca cttgaaaatg	118440
caactaagaa actcttcatg ggataaanaa naagcaaagt gaaaaagcag gagccattc	118500
agagtggggc tgacggctca gcaggtecca catctctagt cctgtgctct gtgtccagct	118560
ccaetaecca tctceacte cagaacctg atgatacagg asgaatgatg acagtgacta	118620
agatgtaatg ccagtcataa tcacggcggc aaccagtcag ggagcgtttt actccatacc	118680
gggeactgaa ggcagccgtt ccttgcgtc atcccattct tccacaggt aacctatgaa	118740
ggacacaact gtggcccaca ttttctagt gaggaaacac ctctatggag gcactgtggc	118800
ttccccatt cacattgtta acctgggtgc catgttccct gaagtgccta tgcnaagaat	118860
agtcataaaa tggcttcggf tccatccgc tctcattcc caagtggctc tgcctcctgg	118920
cctcttgcct gtggacacca gccacgggac ccttcttga tgcctttct cctgagttga	118980
gttgagcctg agttgcctct gaatcggatt ttcccaggt aacagagtgg agtcaggaaa	119040
atggtatgga gggagcagcc tctggaaaaa gagtgcacag gttgtgagaa caaggggagc	119100
ctctccctga gccctgttct tggacccac atttcttctc ccgattaggg ccaggatgt	119160

	tgtgggaagg gtagagacga gagcactctt gacttcagtg tgaatcctaa gattacgaac	119220
	tgccigcccl lgggcccaatl acllaaicic tcagaalcic tglillicca tcialaaaai	119280
	ggggataaga atactgtgta ttccacagga ttgtcataag gacaaaggag ttaatgtgta	119340
	taatgctcat agaacaccgg ctggcaigga gaaaacagtc gzaatatgtg agcttaaaaa	119400
	attagaaagg aaaagaatgc cctgicctga gggatagcag ggattagaga cgtggccctg	119460
	tgcagggacc cggcgetcag cagccattgt ctcccagcgg tztgtgtggt ggectccatg	119520
	ggttgtgect ggetgttcta cagatgttct tttaggaact tctttctgtt acagtcacgg	119580
	aatcaggact ggaatggcta caftttctcc cctaacttgt tattgtcttc tagtgcagga	119640
	aagaggaagt gaagggaaat gcafttctgt tgtcattttg ctaatatcc tgettcagtt	119700
	aaaaaaatg atgaaaacat acaagcttc: agagaticcc agaatacttt cccigctagt	119760
	cagaatctgg aaggctcttt ctggccittat gataacctcg ttccettgcag tagctccata	119820
	gcgggaaagg tgattictat ggattgtaga tttcctgccc tccaggattt tgtaatgtgt	119880
	tgggtttgct gtttgaatca gtagaatctg ggggatagtc tacitaaacc tgcataatga	119940
	ggggccattt ggfaagcgc: tctccatgtc aggcactgct ggtaccacga gcttcagaca	120000
	gggcactggt atgggtctcc tgcctgctc tcttggtcca aaaccagcgt ttgttcaect	120060
	cctctctggt tcccatcat cccctggccc cgggtactgc tcttctcttc catagctctc	120120
	atcctttaga aagacgccag tcaftcattc actcatttaa caaatsataa ttgagtgcct	120180
	actatgiacc gggctgtgga ggtggagaag aaaataagat agacagtctc tgacttcttt	120240
[0071]	cagtttccag tcttacattt taaattttaa tttcattagg gaaactgttt ctgaccttcc	120300
	ttaccagaac agatcttgcc atgccaacct tggagcacca cacacctggt ctttagagga	120360
	gctgaacaaa ttgtagcttt ccafttaatt gtttatttgg gagttttgce tctgtcgtta	120420
	ccctctgagc tccctggagg taggagccat atgectattg aataageact tgtcgaatga	120480
	ctgaagcagc aagcgcgccg acaccgttcc caccgcccc gctcagcaga cgttggctgt	120540
	ctgagagctc gnatcttggg tctgtgtctc agactcccc aatctcttcc acagaaatct	120600
	ccaacctgct ggttggtaet aagaaagccc aggagtgcca gcccgctac ccaatgagcc	120660
	agctgagitt ccatcggatc ctcaagaagg aictggtgca ggtgagtcac ggetgcaggg	120720
	tgtgggcccg ctgttgctct gcttccccac gatggagcag cttggggatc tgggggaagg	120780
	aaggctgtgt ttggggaat cttagtagaa aaagaacagc gagacttcc tttgatggca	120840
	aaagccgtac aaccattgcc tccatctct tcaaccttgc tgatgctctc cagagacatg	120900
	ttttgaggta agtggtttgg teagctttg tgggcttacc tagaacagca gggaccttct	120960
	gtgtgagct gaaggggtgg cagggcagga ggtgctctc cacagggag catgcccac	121020
	acacctgct gectgcagca gctgtgtgta tggagcact ccagagtcca gteetgcact	121080
	tictgatgat gcttccagaa ggagcagagc tcaggaggag agaacacagc gagggacaa	121140
	gaggacaicg acactctggg cctgaaggag aactatctt agaaacagat cccagcttt	121200
	ggaggccttt ttcccagaa tctacagct gagcggggag cccagatct ccccaggggc	121260
	tgcctggag ctgttctgg tgggtgagc eccagggaaa gccaccttcc tgttctgcca	121320
	ccgcicccca gccctgttgc ataggccac: gcgttgggt atcagggaga tggtcggca	121380
	gccttgaga gaagcaagca cggggccact caccacctg ggagatggca gcgcttggga	121440

ggtgttgag ggtgagggcgg aagctgcctg ctgtgaagga gccctggggag agtggcactc	121500
gggggtttgt tactttacct ttttcagtga gtccccgaga ttgttggatg gggcttgagg	121560
gagtggaaat ccacagctaa actgcctcae ttccctcgtg gtacatttct tcaccaaagg	121620
cccacattg ttctctattc ctctcgtggt gtgagagctg tgtctcgaga ttacagtcac	121680
cagagccaca gtttcatagc ctcttttctg tgtagaactt gacatagtct gtggggcctg	121740
ctctttttcc cttgcctcga gccccaagc aggtaaccaac cactctccat gccctccaca	121800
tccactttagc caacagagat caagcattac acgtgcgagg cacgattgct gcttcagcag	121860
gctcctgict attttgaggg ggtaatcacg ttagcaagag tcaagttcca aagtagggaa	121920
gtacageagg atgtggacct aatcttgaga ggacggagat agcttcctgg gggaaagcgt	121980
atcaaagcag agtcccagac caggcacagc gctcacaca gtggctcaca cctgtctcc	122040
cagcgtttg agaggccaag gcgggaggat cgcttgagcc taggagtcca agaccagcct	122100
gggcaacaca atgagatccc atctctacta aaaatacaaa tgaaaaaatg agctgcgtgt	122160
agtggtaagc agctgtagtc ccagcctcctc aggagcctga gtgggaagga ttgcataagg	122220
ccaggagttt gaggttgtagc tgagctatga ttgtgctgct gcactcccgc cagggttag	122280
agcgagacc cgtctgggga aaaaaaaaaa tcagggtctc ctcttgagg atgaactcaa	122340
gtagctaggc aagggtgagg gaacagcctc agaggaggat gaagtggcc atatggcct	122400
ttgtgggtcc ctgcagaatc ctgacagcat ggtgtcatga ctggccacg ggaagagcaa	122460
ttattctgaa agcatatggtc ttttacggga tgtctgga atacagctc ccataacct	122520
[0072] gatggatcac tcatgacag atgcagctt astgsatagc caaagacct gccaggatac	122580
agcagacagg gtggatgcat cgccattgg ctctgacaga taacaaatgg tggcatttgt	122640
gcaaatat atacctgatt aacaatggtg tatgttcta tgggggataa gactgattcc	122700
ctaggatca gtgacagtc cttttctga ttcccaggg gtctcaaat aatagaataa	122760
tggatctca gtttacaagt ttgtggtgc taatgtcaac aactgacat tgcctaagtt	122820
tcgtgaatcc catttgatt tccaaatatt aagaattta aaagcagaat tatigcaact	122880
tgaactggaa ggtctctcag aaatagaica tggatggtt aggctttgc acgatcctc	122940
tcattcagtc ctctgcccac tcatctggg gtattgttcc cttcacatg tcaggaatc	123000
caggacacat caccceaggc tccacctca tttcacatt gccatctct ctgtgaggt	123060
gccagggcaa atgcaggtgt accttgcacc actaatttta astctagcg tgcattgaca	123120
cacatgagca cacacactgg ataatggat gggaaacaga tggttccagt gtgagaaact	123180
gtgctacct gtgccagagg gcttcagata acacatggt ccaccagatg ggtttctacg	123240
cateccccgc tgtgcctgag ctgtaccag gagctccat ccctgttcc tggtttgatt	123300
cttaccacag ccctatgagc tcagtacct tattacctc atttcagaa agtgggcaga	123360
gattgcccc atgtcacatg gccagcgggt agtagagctg ggatttgcaa gcctcttcac	123420
agggtagcac agcctgtgag tagaggagct gectggggc tectctcttg agtctctct	123480
ggaggcctg ggtgggacc atgtggctgg ctgttgatgg cctgtttgc agtgtctga	123540
catgttagga ctgtgttttg gccaaagct gttcttagg gtgaaagca aggagccgtt	123600
tagggagtag gaggactgt tectggggc cagcaaatgt caccactgt tttggccaaa	123660

tagcttgttg	ttttctctgg	aggcctgggg	accacgagct	ggggcaggga	gcectcttgc	123720
ctttgcccga	lcccattgal	aglcctagtl	cccattgagg	acccattccc	agaaggteca	123780
tcacttcagg	gcacagagag	gtcaccacag	cttctgcttc	ttccctcagg	gcgagcaect	123840
tgggagagge	acgagaacac	acatctattc	tgggaccctg	atggattaca	aggatgacga	123900
aggaacttct	gaagagaaga	agataaaaagt	gatcctcaaa	gtcttagacc	ccagccacag	123960
ggatatttcc	ctggcaagtg	tcctctctg	aaectctccc	ctccctctc	ccgtttctgg	124020
agccagtga	acacaatggg	ttgagaagaa	cccttgccct	tcctgtgccc	cagtggtttt	124080
caaaacttgc	tttactcag	aaftttttc	tccacatag	atcttagtgg	accctgcatg	124140
tagagtaagt	gaggtgggtt	gaacagctcc	tcacactcag	cttgtgccc	cccttccacc	124200
cccaaccccc	acetticcta	aggacaggtc	caggtggctg	tgtgtggag	ccctaggact	124260
ctggccaaat	ggttcaaatg	tcctgataca	gtccatggct	ctcaccacac	agtciggaaa	124320
acgaaagccc	agaggagtaa	aaggactcac	ccaggattct	acagactatt	agagtgcac	124380
agtcaaaatc	tgagcagaga	tggcctgctt	tcatttcccc	tttgttccag	catagtgcata	124440
aaatagggta	tttcccagag	ctgaaaaggaa	gagagagagg	tggcctgag	tatccagtgg	124500
gaaaattctt	agccagcttc	ccccaccagc	ctgctctgc	atcctgttag	gtttctaaa	124560
taaacctcac	atccctgcca	ggttggccca	gagaaacaagg	cttggcagtg	ccctctgaca	124620
gccaaggcca	gaggattgat	gttcagggcc	tgggttgccg	acagtgtga	gccttctctg	124680
gtccactggc	tttccccca	acagagcccc	tgggagcag	ccccctggag	gctggccctga	124740
gacattccta	tgctctgctc	gcccacaggg	cttcttcgag	gcagccagca	tgatgagaca	124800
ggcttcccac	aaacacatcg	tgtacctcta	tggcctctgt	gtccgagcag	tggagagtaa	124860
gigtgttctc	tttcaaaagg	gtgggtggcc	tggctggaga	gcttgggtgc	tgtggagatg	124920
gtggaggctc	ttcccacctt	cacgttgccc	agccttcttg	cccttctttt	tgcagttgag	124980
gagattgagg	gactgagcag	gtcaattgct	taagttaata	gtgaggtgg	aaataaaacc	125040
aatgtctttt	caftcatttg	tgtaatgltt	cttctcaac	gctggccaag	aaacctacac	125100
tgtctatagc	ctggagagct	gaggtgagtg	aaatgaggtc	aagcccacaa	gagtcaggcc	125160
caaggagctc	tggcaggtg	agcagagtga	gcgcacccca	caagcagcaa	gaegctggct	125220
ctcgaatagg	actgcttccc	attttaccca	caggcagctt	tggccctttc	ttggttgta	125280
agccactgag	ccggtggccc	cttgggtctc	tgtctcacac	tgagaaggag	gggtggcctt	125340
ggcctctgag	ttcctgacat	gtaagtgttg	aagaagagcg	attttttttt	taaccccagg	125400
tgacttcttc	ctgttggaa	ccaacaatgt	gagctgttcc	gtgtactcac	acaggagtcc	125460
tgttgagagg	gaagtittgc	cgtgtgagcg	gcttgacctc	tgcattcacag	tgtgtttag	125520
aacagcagca	gtgttggcgg	ttgttcccag	agcccttgtt	ctctgtgtca	ggccctccgc	125580
caagcttctc	caggccttgt	gacattttag	cgccatctgt	tattacagat	gagggaaattg	125640
aggctcagag	aagtgtcact	tgtctcagtc	caccgtttag	aagaagagct	tgggttgaa	125700
cttggccttt	ccagctctga	agccccgca	ccattgcacc	ccccaggat	atctgtgtac	125760
tcctagagccg	agtagtgccc	actgaagtgg	actgtctgaa	gggatgaa	gagaggaccg	125820
tgcacacagc	caggttccag	acatgctat	ttttatgctt	acagatatca	tgggtgaa	125880
gtttgtgaa	ggggctctc	tggatctctt	catgcaccgg	aaaagcagtg	tccttaccac	125940

[0073]

accatggaaa ttcaaatgtg ccaaacagct ggccagtgcc ctgagctact tggtagaat	126000
gtcctgatgt ccataatggt cccaccagaa accagagtggt cctgggaggg gtggcaggaa	126060
ggaggtgcta gccaaagcagc tagaggggccc tgccttggg ttccatgggg ccagggcctc	126120
gtggttgaac aaagggtgtgc ctgggtcctt ctgaagatgg tegtftgggg ccgttccctg	126180
tgtccacatg agttctgttt agtgggaaat gttagcacgt cagagggecg acttgcaaac	126240
tgcagcatat ggaatggcaag gcfgaaagca gtgcagtagc tgitgagtga atgagtgaac	126300
tgccagcctc tagtagctga cgtgtggagt gtcaccatg ggtcagctgt tcaggcgctt	126360
cacagattct aatcagtaic atgctcacga agcccaatga gatacgtgcc actatitgac	126420
cacatteagt gatgagggag ctggagccaa ggggcacctg tgatgtcct aagtcacaca	126480
gatgattggc agcaggggca gcctgtccag atctggctgt agctgggggt aggaagagat	126540
gacctgaggg accagggttg gaaatagaat gcgggaagga gcagcttggc taaacttgac	126600
cttttactc tgcaggagga taaagacctg gtccatggaa atgtgtgtac taaaaacctc	126660
ctcttgccc gtgagggcat cgacagttag tgtggcccat tcatcaagct cagtacccc	126720
ggcaccacca ttacggtgct gcttaggcaa gggtgtctc ccctctctc cctctgccc	126780
caccccgagt caggggcaag tcagcagaga gaagggtgg gcctgggtg gctctcttt	126840
agagagtcat ttttttttg tattttagta gagacgggt ttccacctgt tggccaggat	126900
ggtcttgatc tcttgcctc tcttaagtc ttgaacagc ccccttctg cctctgccc	126960
tgggtgaigg cccccacct gggatgttt gctgatccta agcccaggge ttcagaagcc	127020
[0074] tggcttcaac cgacctcct gggagcttg gagcaggga cccatctgt ggtgtgacc	127080
cagaatgatg tatcagaagt gctgggtgt gctggaggg ctgcacgct gcaggccccc	127140
cgacacaggg ctatgtggc atgggccatg tttgggcaca ctgcttgaag tagttcttc	127200
aattgctcac tgitctgct gcagtagag taattgaac cctaggagat cccagaacct	127260
gtcccatcag tgtgtctgt gcttccaga atgcattga cgaatccat ggattctcc	127320
tgagtgtgii gaggactcca agaacctgag tgtggctgt gacaagtga gctttggaac	127380
cacgctctg gaaatctgt acaatggcga gatecccttg aaagacaaga cgtgtattga	127440
ggtgagcagg tgttccggg gcctgagac aagtgaggc tttcaggtc tcgtgggctt	127500
cccaggagt gtcggaagc tggcactgt ggaagagat ggcattgggt tgaatctct	127560
cacggcccta ctgggtgtg gacctcaca atgtaactga acttccgtg gctcagtt	127620
catcatctat aaaatgggga taatcagtaa ctactttag gttgtttgt aagattaat	127680
aatgcataata gagtgcagg catgcagtag aagctcgata gatgttatag tattattat	127740
ctgagatttt aagtgcctgt tattcagca aattaccaca caaatacgt tggagttct	127800
attgtgtatc aggcataca cttgggaaaa gctggagggt cactataaaa taagatacag	127860
gccttgcctt cccttgagg ccttagggtg tggtagggag ttaggctaaa ataacaacgg	127920
taagaattcc agaaagaata cctgaaagt tcaccctaag agccctgca attaggtagg	127980
atggtgtcat taccctcatt tgacagatca ggtaacgtg actcaggtag ccccacttac	128040
ctgggttct cagctagaat gcaaaacagg cgaggtgtgg acctctctca aatctacctg	128100
tggaaaaagt ggagactcta actccaaagg ggtaaaagtag taaaaatcac aatgaaagac	128160

	cattgtcctt	tcattctcagt	gaetgcaatt	ggaatgtgct	cctgttgitt	agagggggca	128220
	ggcaicagll	icggclgtga	gagccaggll	tcagtgctgl	gtcgggagcc	tggglaglli	128280
	gggtgtcctg	gccttgagtg	tctggagtgg	ggaagggaat	aacagtgate	aggtgggaaa	128340
	ggccattfgg	gttcagattt	ttaaaagccc	tgattccagg	ctgcagaacc	tacattttac	128400
	tgggggtggc	atgggacaag	gaaggatttg	ggtagaggag	ggaggggctt	ggaggtcggc	128460
	cttgggatgt	tcttctggat	gcagttagctg	ggatggacag	aggagagacc	tggagggaga	128520
	caggggcccc	gagtcctctca	gcaatgggag	ccccatgtcc	ggaatgcca	gcggaagtc	128580
	agagtgcagg	gtggagata	tigaagaggt	agaaccttta	tgacttgcca	gttaatgatg	128640
	gtgcaggact	tgggaaagga	tcitaaaccc	gcagggaaac	catcagatct	acagatctgc	128700
	tatttggaa	tttcagccta	ggcttllggg	aaatcatal	ttatttttaa	cttccttgg	128760
	tccttggaaa	tgaacaaca	tacctttgt	catcagtcag	tatttattga	gcacgtgctg	128820
	cgtaacctgg	gcigaacagc	atacagggtg	gtgtaaggaa	ggacctgtgt	ctttaataaa	128880
	ataggggtct	ctctccacct	aagtcacctt	gggttagatg	gttttcttgc	aggtctgact	128940
	gacgcaggg	tggtgagtg	acactcaagg	acaagagcaa	ttctcagctc	cttaattcca	129000
	gtcctccctc	ctccctgtcc	tctggggcct	gccaccacca	ccccaccaca	gggcccacgg	129060
	ggaccagaga	ggaacctagt	accttggag	tccagctatg	aagtagaaac	tggaatgcag	129120
	tggtttcact	tcattctcca	aaagtagcat	aagttcttgt	ttctasaatt	taaagtaata	129180
	aacagttgaa	gaaaaffttt	aaaatgaac	tattaaaaa	agaaaacagc	aatcactgca	129240
[0075]	ttcttgcact	ccctgaccac	tgtaaacact	ttggcatttt	gtcttccagc	ctgtttgtat	129300
	ctctcttttt	taaacaaaat	tggggccatg	ctagatagag	ttatataaaa	ttctgagttt	129360
	ttcattitaa	taetgagaat	gctttccigt	gagattaaat	cataattttt	acaaaittaa	129420
	tgtaagagtt	aattgttttg	tttaatttac	ttgactaatt	ttatatttgg	catttaagtt	129480
	ttcaaatlcc	cagtgctctg	ictaatctcg	caggaaacat	cttgtacat	aaatatttgt	129540
	tcatactcga	tttattctg	agtcattcag	tcattgaagt	taatgcacca	gagggtttga	129600
	agaatctgaa	gattttttgta	eatgttggcc	aattgtattc	cagaaagcct	gcatgcctti	129660
	acttgaatga	agcttttttg	gactgggcta	tagtggccag	tctccttgaa	tttggactat	129720
	tcagtattag	gactgtgatt	lcccttgca	agaataaggc	agcagtaaca	aacctttacg	129780
	aaatctacct	gtaagtggag	atgttagaaa	tcgaatgagg	aattggcaat	tccacctgac	129840
	ctgggctcga	gaagttttgta	ggtggttctt	ttggtttctt	ccatgtgccc	ctcttgttta	129900
	cagaagaga	gattctatga	aagccggctg	aggccagtga	caceatcatg	taaggagetg	129960
	gctgacctca	tgaccgcctg	catgaactat	gaccaccaac	agagggcctt	cttccgagcc	130020
	atcatgagag	acatttaata	gcttgaagag	cagagtaaga	cctgccatgt	gctgctttaa	130080
	cccagctfgg	ggagaacacg	gagcctgggt	ggcaatccct	ggcaatcgac	tgcctttcac	130140
	tctgttttct	ttctctctct	gttagatcca	gatattgttt	cagaaaaaaa	accagcaact	130200
	gaagtggacc	ccacacattt	tgaanaagcc	ttcctaaga	gcatccgtga	cttgggagag	130260
	gtaagtiaca	cccgtgctgc	ttctgtctga	tggcagagcc	ctccgccate	cacagcgcca	130320
	ctctctgcac	gtacagctgc	ctctcattct	tttctattct	ggggccaggt	ccatgagcga	130380
	aagcaccctta	ctgcaattgg	gggccacctt	catcacaagg	gattgtgtct	ttctccatgt	130440

gacacacggc acggacggaa tgcacgtccc fgccctgcatg cacgactgtg tatgcacacg	130500
ggactctggg cagctcccct gagagacttg agttttctct acaggacaga agagaatgga	130560
aagagggaga gatgggggag taggtataga tatggtggaa taggaaaatc cttgcctctg	130620
actttcccgg gcatatataat cctgtaaget tctctctttt tcttttgcce cggagagaca	130680
gggtctcgtc ctgtgtccca ggctggagtg agtgggtgta tcatagctca ctgcagcctc	130740
aacttcccag gctcaagcaa tcttctctgc teagccctct gagtagctgg aactacaggc	130800
acacgcccc atgctgggta atatttttta ttttttattg tagaaatggg gtcttgcctat	130860
ggtgactagg ctgctctcag actcctggcc tcaagcaagg aggcctccca aagtgctggg	130920
attatagcca taagccacca tacccagccc tgaaggctc tttagagcag ggataggttt	130980
attgcacaga atcccanaat agagtgtcag cgtttctttg gaccttaaat gggagtttcc	131040
aaacagttaa ttgtgactag agaagctact gagattgtg tctttatata gattttctgt	131100
agtcctggtt atgaaacaga cttgatacat ctccaggatc tgcctgtgtc cagccactgt	131160
gccagccatt gtcagaagca tggcaicctt agtcccccc accgtcccc aggccagttt	131220
ctgtatgcag cgagtgcctc aggagccagc tccgatttgg ggacttggcc accactgtcg	131280
ctgicaggtg gcttggcttg aacctgactt cacgtctctt aaagactcct caigcatttg	131340
ctcttttcag ccatgctgtg gggcctgtcc tgaacctga gcccaggctt tttagagaac	131400
ggcagttgtc ctgcaggccc agaaaataacc ttcatttctt gtggtcatag aaattgggat	131460
tgatgagttg gttcaatcgt accctgctact ttgtcttggc tcagtaactg aggggacagt	131520
[0076] ttgtgaggcc aagagagcca ggggctgta gtgagcaagt acagtccagg tgagaggctt	131580
ctgctgcaa gcccagacag cgagaacccc tggccctcag gggaacggct gtgaggagca	131640
agacttctgt gtgttccgtg gccctacgat ggcttccct gataacagca catgcactt	131700
tccctccagg gccacttgg gaaggtgag ctctgcagg atgacccga aggggacaa	131760
acaggggagc aggtggctgt taaactctg aagcctgaga gtggaggtaa ccacataget	131820
gatctgaaaa aggaaatcga gatctaaagg aacctctatc atgagaacat tgtgaagtac	131880
aaaggaatc tgcacagaaga cggatgta tgcaggctg ggtccggtt taaagattg	131940
gtgactgtct agggtcataa agccagctc naaacaggca ctccgtggcc ttacctggc	132000
gtctgacatg ctagctggtg gtcccacac actctcaagg ctccaagtc atatgcaaaa	132060
tccctcagca gctgcaggc tccctgaggag gccaccagc cccctccatc cagggctgg	132120
ttccagcact gtctctccac gtcacttgc cttatgctt atgaaactga ttcctactct	132180
acctccacc accttctgtt ctgatccaat actagccagg gtatttcaat tctagtgt	132240
ctaaatcaaa gtggcaagta atatttacta ataattgtat cttatttga agccagcctc	132300
tactcatggt agtgaattg acagctgatg ataattttt tttttttt tttttttt	132360
agacggagtc tgcctctgtg gccaggctg gactgcagtg gcgcaatct ggctcactgc	132420
aagetccgcc tcccgggtc accccattct cctgctcag cctcccaggt agctgggact	132480
acaggcgcgc gccatcacgc ccgctaatt tttttgtatt ttttagtag aggggtttc	132540
accgtgttag ccaggatggt ctgactctc tgacctgtg atccgccgc ctcggctcc	132600
caaagtgtgt ggattacaag cgtgagccac cgcgccagc ccgataatt ttgaaaacag	132660

tcatttgcct gtggtttaca gagcactcgc actgttatct cagtgagtgc ttaigcctgt 132720  
 gaggiaggla caccatlgil accaalcicca ticactgcgc aggatcllga ggealaagag 132780  
 gtcaagtaac atgcctgtaa tgaaggggcg aagctggcgt cacctcaggc cctctgtctc 132840  
 atatccctgtg cccctgcctc tcccaltggt cccctcattg gcagccctcag actgaiggat 132900  
 gttttttcta aacaggagga aatggatatta agctcatcat ggaatttctg ccttcgggaa 132960  
 gccttaagga atacttcca aagaataaga acaaaataaa cctcaaacag cagctaaaaa 133020  
 atgccgttca gatttgaag gtaaaaaata aagacatcat gttacagatt aagacatcag 133080  
 gcactctgtc ctgggiaatt ggittgiaai ttgaactctaa gtgggtaagt ttaigataat 133140  
 tatactgttt gtttttctct gcattatitta gatgaaaagt tagcttctac taagaaagta 133200  
 aacggattia aaiatggtta ttttaaigtg taillaittg aatcagittg ttcttaatat 133260  
 tcttgcaata aagtcagaac caaaaaaatt gtcagtgata tgtgaatgaa atgacatttc 133320  
 tattttttct gatgaagtga tagataatac aatctaaagt gactttagca atgtgcttga 133380  
 ctttaecttc tctctctcag gggatggaci atttgggttc tggcaatac gttcaccggg 133440  
 acttggcagc aagaatgtc cttgttgaga gtgaacacca agtgaanaat ggagacttgc 133500  
 gtttaacca acaatffgaa accgataagg agtattacac cgtcaaggat gaccgggaca 133560  
 gccctgtggt ttgtaactg aatcaacca ctaggtttta tcaatgcttc atagagtta 133620  
 cactgtttta ataggecctt tctggctata ttaatgtgtc tcaatctctc ggcctgaetc 133680  
 aaggttagag aaggtffaga acatttggaa ttgattgata tttatcttca agaaacacac 133740  
 ctttcagcct gtttcattga aagcagccta tataaatgac tgagcttcat atgacaccgt 133800  
 cttccaagga atgaaagaaa tctaaccacc agctcaacat tccatagcttt ccaggagagg 133860  
 geatcatct gatgcagtc ttaaaaactg ggcaggtgg agagaateta gttctttct 133920  
 taaacacatt cctgcagagg gaggtcttag gacagagtgg gcattgcaga ttcagggaac 133980  
 tcttgacagc agcagagcaa aacctacggg agacctggt gtctcatgaa taccagagg 134040  
 ttcccaggtt agnaggccac acactggcta caaccatgtc tcagccggga acactgtcca 134100  
 gggagagggc tcttacatc tctaccgca: cctgccactg aaccacataa cgaataace 134160  
 aatcagcact cccctagggt eatcctacat ggacacaaac atagacctct cccacttatg 134220  
 gagectaaac ttactcatte attcatttaa gaaaatgcat caaggfctg ctttgtgcca 134280  
 gtacttgaga tatggtgaac aagtagccg agtttagagt ttaacaggct aggcagcaa 134340  
 cgcatggag caggaacat acagaagggt tccggcttgg tttctggaa gtctgagta 134400  
 ttcagaaga acctgaaga ttcatgctgg tttagacaga cggttgctag acagcatgct 134460  
 tgactaggaa gaatgagaca agagcagtcg atttcccagg aactgaacct cagtgagtc 134520  
 agatcatgga ataggaggtt tgcaggagga agcttgagtc atggagctgg gacttcatct 134580  
 caagaacaat gggatgtctc tggagagttt aaggaggagc actttgtttt aaaaagacca 134640  
 ceactgaatg aagggaacaa gatfggagcc agggagtctg gagccagga gtctggagcc 134700  
 agggagctg atttggctgc ttcaacagct caggccagag ctagtacag catgaattag 134760  
 gacagggact gggagagtga cagtagggtt tgagagaagt gactaggttc aaggagtata 134820  
 taaggagatt ggttgcggtg gaatgccttc attttggct tgggcaagtg ggtgtcatte 134880  
 agcaaagtag gcaatgctgg aagaggattg gacagcagc ccacattgtg cagtgagcc 134940

[0077]

actgctgtct catttagagc ctgcaggcaa atcagaacctg gggctcatca ttacacggcc	135000
acctectccc ataccttgag agcatgttct cagtgaatg aagagcacag acttggcgtg	135060
ttatitttag gcagatacgt gctaccgaga gcctgtaaag gataccgtac tataggtcag	135120
atgtgcacca tagcagcgt taacatggat gtgtaaaata tafaafacac agtcagatgc	135180
tgtattaaat tafaagaaaa accgaagagg tgatttttca gttatccctg aatgtcggat	135240
ggagtggtcc tcccaggaaa tgaagitttg tgttctgctt cctttcaagg tatgtccag	135300
aatgtttaat gcaatctaaa ttttatattg cctctgacgt ctggctttt ggagtcactc	135360
tgcaigagct gctgacttac tgtgattcag atctagctc catggctgta agtcttactt	135420
ttctcttcct tgaatccag tacceattta aatgtgtcc atcctctgc ttggttaact	135480
tttgttttta aatggaatcc aatgaatgta ttataatgga aatgtcact tteccattaa	135540
cttggtttgc tacttgaccag ttatttggta atctctaaag tcttgettcc acaacgagcc	135600
eggagttteta taggatgacc ttgactctca aggatcttat ctgtgtagag atgaaggcca	135660
gttttatggg aaaatgagca agttaagtgg ggtagcactg ggtagggacc agccttgtct	135720
gtgcctctct cattctctaaa tcagatcatt ttcttgggaa cagactctct gaecagcaca	135780
agcacaagga gtgttggta gagctcaga cactggttag agacagatca ttgaaagca	135840
ataaggattt tggattttta tttaaagta ciaaggagaa aagcctttt attgtactt	135900
aaatttcag ttgattgtag aaatttcacc ttaactgtt tggcaattat gtaaatactt	135960
gcaaagttaa acgttttgtt tgattttatt ttatatagtt gttcctgaaa atgataggcc	136020
[0078] caaccatgg ccagatgaca gtcacaagac ttgtgaatac gttaaaagaa ggaaaacgcc	136080
tgccgtgecc acctactgt ccagatgagg tatctatggg ccacgtcaca gtaataacac	136140
tccattteta ttatgttttc gcagcttag ttgtccagca atgggtagag gggagagcga	136200
ggaaatgatg cagtgaagtc ctgtfaaat agtttctga agctgaattt cacataagat	136260
aaetgagaaa tgccttttgg gctagatga tagccaccag ttaggttcag agcaaggatt	136320
ccctccaaaa gccagccctt cttatccac ttgcttccc cagagggaca ggttttggtg	136380
tagccttagt gtgacaaata catataattg catttttgt gtgtaagtt atccacita	136440
ttagcattta taattcagtt ttctaagta atfgagcctt taatactaaa ctcttgagac	136500
tgtgtaagac acactgaaca gtatgagta gagagtgagg cagccagtct ggaaagtcca	136560
agtetgaact gagattctgc tteacctct aactggitta caggaatgac ctggattita	136620
ttcagccag tcaaccttg agcttctca atgttaaat attattatg aactagatt	136680
gtatcccatt ttctgtgttt taacctatc aaatactctt gttttctag tcttaagga	136740
aaagtcattg catttccaaa attatttct tactctgat attctgtta ttttttaag	136800
ttccagatc taacattttt actgttgtta ctctttctt ttacaggtt tatcaacta	136860
tgaggaaatg ctgggaattc caaccatcca atcgacaag ctttcagaac ctatttgaag	136920
gatttgaagc acttttaaaa taagaagcat gaataacatt taaattccac agattatcaa	136980
gtccttctcc tgcaacaaat gcccaagtc ttttttaaaa atttctaatg aaagaagtt	137040
gtgtctgtgc caaaaagtca ctgaactcat acctcagtac atatacatgt ataaggcaca	137100
ctgtagtgct taataatgtg aaggacttcc tctttaaatt tggtaaccagt aacttagtga	137160

cacataafga caaccasaaat atttgaagc acttaagcac tccctcctgt gaaagaata	137220
laccaccall lcaiclggcl agllcaccal cacaacigca liaccaaaag gggalllllg	137280
aaaacaggga gttgaccaa ataafaicig aagatgattg cttttccctg ctgccagctg	137340
atctgaaatg ttttctgctg acattaatca tagataaaga aagatfgatg gacttagccc	137400
tcaaaattca gtaicciatac agtaactagac caigcattct taaaatatta gataaccaggt	137460
agtatatatt gtttctgtac aaaaatgact gtattctctc accagtagga cttaaacttt	137520
gtttctccag tggcttagct cctgttccct tgggtgafca ctaccacca tttttgagaa	137580
agctggttct acatgggggg atagctgtgg aatagataat ttgctgcatg ttaattctca	137640
agaactaage ctgtgccagt gccttccaa gcagataacc tttaatcaga actcattccc	137700
agaaccigga tgetattaca caigcttita agaaacgta atgtatatec ttttataact	137760
ctaccacttt gggccaagct attccagcac tggttttgaa tgcgtatgac aaccagctg	137820
aataccacat acgctgcact gtiettagag ggittccata cttaccaccg atctacaagg	137880
gttgafccct gttttiacca tcaatcatca cctgtgtgtg caacacttga aagaccggc	137940
tagaggcact atggacttca ggaaccacta gacagtittc agtttctgtg gagtagctg	138000
ggtaatcaaa aatgttffag cattgattca atgtgaacga ttacggtctt tatgaccaag	138060
agteigaaaa tctttttgtt atgctgitta gtattcgttt gatattgtta cttttcact	138120
gttgagccca aatcaggat tggttcagtg gcagcaatga agttgccatt faaatttgtt	138180
catagcctac atcaccagg cctctgtgic aaacctgtgg ccaactcata tgcactttgt	138240
ttactcttta tacaataaaa tatactaaag acittacatg catatgcctt ttaatatata	138300
gatttcattt tcaaaagcatt tcaaaccaatt tgcctacata gaaaaatac agtatagttt	138360
tggggggagg aaggggtggg ttacggctct tactactaac aaacaaacaa acaccacttg	138420
atttgeactt cttcactggt gtcccagtg attgataacg gggcacaggc cagtatgat	138480
ggcatgacca ctgtgctgta gtcagacac ctttgtttgt ttgttttagt tcttcaacc	138540
tcttctgtct ttgactgact gacttttgc agctctgtg caaaaitcac catctttctt	138600
ttcttctggt tglttgtttg tttgtactat agtggaggtg tgaactagca ttgaagagge	138660
tgaatgcaac aggaaaatgg gaaagagaag tgcaggcctt gaaaaccca ttagtcatct	138720
gctataicac tgaatgatgc ctaattetta tcagttactt ataggtagta tacttagaaa	138780
ttaccttaaa ctttctagct gtcagtcatt ttccaacaga agctagtata tgcaataaat	138840
tagaccaagt gaaattcttt acaaaagcata caacatatgt accaaitcta gacttcataa	138900
ttaaaacagg atatccacat catagtiaaa aataacaagt ccccaaatg acgagafatt	138960
taatgatctg atttcaaaaa gccccggatt gagatcccaa attccctatc aattaattac	139020
agtcttataa cataaacaaa cttagaatit tctagatgga aaaaggtttc tcatgatttt	139080
aafaccaagg tcttcaagaa atggigtatgt caaaagtcat catagtcctt aaagataaaa	139140
ctttttcac aagtaaatgg ggtfaaataa ctgatttttc accetaaac actatcaaaa	139200
agagtgagag agaaagcaga gagtgaggta tagcttatta gctcaaaatg gttataaata	139260
ctgtgactcc ttaagactcc atcagaaagt gcagtattga ctgcttiact atactatatt	139320
gtgaaaataa tagggcattt agtgalcaaa ataggcccca ttctagtcat tagatcatta	139380
ctagtctacg ctatgaaatg agcacagaaa cccatgttcc tttccactta caagtctgct	139440

[0079]

```

taaaggctaa aggtctgctt ttaggtgaat tgaaggaat agttgctatt agaattagtg 139500
ctattagatc agggatcagc aaactatata taaaiggcca gatacttgaa attttaggcc 139560
ataaggcttt ttaggcccac acagctctcg ttgaagetaa tcagttctgc ccttgtagcg 139620
taagagtgcc acagacaaca cgtaaatgaa tgagcatggc aacgtcccaa taaaagttaa 139680
tttatggaca ctgaaatcig aatttcatat aaatttcatg tcataagitt tctttttcc 139740
tccaaccatt taaaaatgta aacattagtc itagcttgca ggcagcacia aagcgggtgg 139800
tagaccaaat gtggaccacg ggtgtagttt gccaaacct tttattagat caccaaagtt 139860
acttttctta aaafaccttc tattttcac agaaggtata aatggfaaac aacatcttaa 139920
agcatcggta gtagtggata ccttgatata cactgtcact ctcttaccgg gittaatttt 139980
gcatggctgg tctggcgta attgagtgct catglagagc atctttataa tattaccac 140040
agcacattg gtacttgcac ccttgtagtt ctaggaaaag tectaanaat ctataaatgc 140100
aattacttct agggaaagta aattgaaatg cacattggct tataagaaac tcattcttct 140160
aagctcagg aaacaacact gtttccatt tattgttca aacttctttt atataaggtg 140220
tcagaattat tcccagtcct aaatcaagga atattggaac attgttagtt tetccatgg 140280
at 140282
    
```

```

<210> 4
<211> 1154
<212> PRT
<213> 智人 (Homo sapiens)
    
```

[0080]

```

<400> 4
Met Gln Tyr Leu Asn Ile Lys Glu Asp Cys Asn Ala Met Ala Phe Cys
1          5          10          15

Ala Lys Met Arg Ser Ser Lys Lys Thr Glu Val Asn Leu Glu Ala Pro
20          25          30

Glu Pro Gly Val Glu Val Ile Phe Tyr Leu Ser Asp Arg Glu Pro Leu
35          40          45

Arg Leu Gly Ser Gly Glu Tyr Thr Ala Glu Glu Leu Cys Ile Arg Ala
50          55          60

Ala Gln Ala Cys Arg Ile Ser Pro Leu Cys His Asn Leu Phe Ala Leu
65          70          75          80

Tyr Asp Glu Asn Thr Lys Leu Trp Tyr Ala Pro Asn Arg Thr Ile Thr
85          90          95

Val Asp Asp Lys Met Ser Leu Arg Leu His Tyr Arg Met Arg Phe Tyr
100         105         110

Phe Thr Asn Trp His Gly Thr Asn Asp Asn Glu Gln Ser Val Trp Arg
115         120         125

His Ser Pro Lys Lys Gln Lys Asn Gly Tyr Glu Lys Lys Lys Ile Pro
130         135         140
    
```

Asp Ala Thr Pro Leu Leu Asp Ala Ser Ser Leu Glu Tyr Leu Phe Ala  
 145 150 155 160  
 Gln Gly Gln Tyr Asp Leu Val Lys Cys Leu Ala Pro Ile Arg Asp Pro  
 165 170 175  
 Lys Thr Glu Gln Asp Gly His Asp Ile Glu Asn Glu Cys Leu Gly Met  
 180 185 190  
 Ala Val Leu Ala Ile Ser His Tyr Ala Met Met Lys Lys Met Gln Leu  
 195 200 205  
 Pro Glu Leu Pro Lys Asp Ile Ser Tyr Lys Arg Tyr Ile Pro Glu Thr  
 210 215 220  
 Leu Asn Lys Ser Ile Arg Gln Arg Asn Leu Leu Thr Arg Met Arg Ile  
 225 230 235 240  
 Asn Asn Val Phe Lys Asp Phe Leu Lys Glu Phe Asn Asn Lys Thr Ile  
 245 250 255  
 Cys Asp Ser Ser Val Ser Thr His Asp Leu Lys Val Lys Tyr Leu Ala  
 260 265 270  
 Thr Leu Glu Thr Leu Thr Lys His Tyr Gly Ala Glu Ile Phe Glu Thr  
 275 280 285  
 [0081] Ser Met Leu Leu Ile Ser Ser Glu Asn Glu Met Asn Trp Phe His Ser  
 290 295 300  
 Asn Asp Gly Gly Asn Val Leu Tyr Tyr Glu Val Met Val Thr Gly Asn  
 305 310 315 320  
 Leu Gly Ile Gln Trp Arg His Lys Pro Asn Val Val Ser Val Glu Lys  
 325 330 335  
 Glu Lys Asn Lys Leu Lys Arg Lys Lys Leu Glu Asn Lys His Lys Lys  
 340 345 350  
 Asp Glu Glu Lys Asn Lys Ile Arg Glu Glu Trp Asn Asn Phe Ser Tyr  
 355 360 365  
 Phe Pro Glu Ile Thr His Ile Val Ile Lys Glu Ser Val Val Ser Ile  
 370 375 380  
 Asn Lys Glu Asp Asn Lys Lys Met Glu Leu Lys Leu Ser Ser His Glu  
 385 390 395 400  
 Glu Ala Leu Ser Phe Val Ser Leu Val Asp Gly Tyr Phe Arg Leu Thr  
 405 410 415  
 Ala Asp Ala His His Tyr Leu Cys Thr Asp Val Ala Pro Pro Leu Ile  
 420 425 430  
 Val His Asn Ile Gln Asn Gly Cys His Gly Pro Ile Cys Thr Glu Tyr  
 435 440 445

Ala Ile Asn Lys Leu Arg Gln Glu Gly Ser Glu Glu Gly Met Tyr Val  
450 455 460

Leu Arg Trp Ser Cys Thr Asp Phe Asp Asn Ile Leu Met Thr Val Thr  
465 470 475 480

Cys Phe Glu Lys Ser Glu Gln Val Gln Gly Ala Gln Lys Gln Phe Lys  
485 490 495

Asn Phe Gln Ile Glu Val Gln Lys Gly Arg Tyr Ser Leu His Gly Ser  
500 505 510

Asp Arg Ser Phe Pro Ser Leu Gly Asp Leu Met Ser His Leu Lys Lys  
515 520 525

Gln Ile Leu Arg Thr Asp Asn Ile Ser Phe Met Leu Lys Arg Cys Cys  
530 535 540

Gln Pro Lys Pro Arg Glu Ile Ser Asn Leu Leu Val Ala Thr Lys Lys  
545 550 555 560

Ala Gln Glu Trp Gln Pro Val Tyr Pro Met Ser Gln Leu Ser Phe Asp  
565 570 575

Arg Ile Leu Lys Lys Asp Leu Val Gln Gly Glu His Leu Gly Arg Gly  
580 585 590

[0082] Thr Arg Thr His Ile Tyr Ser Gly Thr Leu Met Asp Tyr Lys Asp Asp  
595 600 605

Glu Gly Thr Ser Glu Glu Lys Lys Ile Lys Val Ile Leu Lys Val Leu  
610 615 620

Asp Pro Ser His Arg Asp Ile Ser Leu Ala Phe Phe Glu Ala Ala Ser  
625 630 635 640

Met Met Arg Gln Val Ser His Lys His Ile Val Tyr Leu Tyr Gly Val  
645 650 655

Cys Val Arg Asp Val Glu Asn Ile Met Val Glu Glu Phe Val Glu Gly  
660 665 670

Gly Pro Leu Asp Leu Phe Met His Arg Lys Ser Asp Val Leu Thr Thr  
675 680 685

Pro Trp Lys Phe Lys Val Ala Lys Gln Leu Ala Ser Ala Leu Ser Tyr  
690 695 700

Leu Glu Asp Lys Asp Leu Val His Gly Asn Val Cys Thr Lys Asn Leu  
705 710 715 720

Leu Leu Ala Arg Glu Gly Ile Asp Ser Glu Cys Gly Pro Phe Ile Lys  
725 730 735

Leu Ser Asp Pro Gly Ile Pro Ile Thr Val Leu Ser Arg Gln Glu Cys  
740 745 750

Ile Glu Arg Ile Pro Trp Ile Ala Pro Glu Cys Val Glu Asp Ser Lys  
 755 760 765  
 Asn Leu Ser Val Ala Ala Asp Lys Trp Ser Phe Gly Thr Thr Leu Trp  
 770 775 780  
 Glu Ile Cys Tyr Asn Gly Glu Ile Pro Leu Lys Asp Lys Thr Leu Ile  
 785 790 795 800  
 Glu Lys Glu Arg Phe Tyr Glu Ser Arg Cys Arg Pro Val Thr Pro Ser  
 805 810 815  
 Cys Lys Glu Leu Ala Asp Leu Met Thr Arg Cys Met Asn Tyr Asp Pro  
 820 825 830  
 Asn Gln Arg Pro Phe Phe Arg Ala Ile Met Arg Asp Ile Asn Lys Leu  
 835 840 845  
 Glu Glu Gln Asn Pro Asp Ile Val Ser Glu Lys Lys Pro Ala Thr Glu  
 850 855 860  
 Val Asp Pro Thr His Phe Glu Lys Arg Phe Leu Lys Arg Ile Arg Asp  
 865 870 875 880  
 Leu Gly Glu Gly His Phe Gly Lys Val Glu Leu Cys Arg Tyr Asp Pro  
 885 890 895  
 [0083] Glu Gly Asp Asn Thr Gly Glu Gln Val Ala Val Lys Ser Leu Lys Pro  
 900 905 910  
 Glu Ser Gly Gly Asn His Ile Ala Asp Leu Lys Lys Glu Ile Glu Ile  
 915 920 925  
 Leu Arg Asn Leu Tyr His Glu Asn Ile Val Lys Tyr Lys Gly Ile Cys  
 930 935 940  
 Thr Glu Asp Gly Gly Asn Gly Ile Lys Leu Ile Met Glu Phe Leu Pro  
 945 950 955 960  
 Ser Gly Ser Leu Lys Glu Tyr Leu Pro Lys Asn Lys Asn Lys Ile Asn  
 965 970 975  
 Leu Lys Gln Gln Leu Lys Tyr Ala Val Gln Ile Cys Lys Gly Met Asp  
 980 985 990  
 Tyr Leu Gly Ser Arg Gln Tyr Val His Arg Asp Leu Ala Ala Arg Asn  
 995 1000 1005  
 Val Leu Val Glu Ser Glu His Gln Val Lys Ile Gly Asp Phe Gly  
 1010 1015 1020  
 Leu Thr Lys Ala Ile Glu Thr Asp Lys Glu Tyr Tyr Thr Val Lys  
 1025 1030 1035  
 Asp Asp Arg Asp Ser Pro Val Phe Trp Tyr Ala Pro Glu Cys Leu

Met	Gln	Ser	Lys	Phe	Tyr	Ile	Ala	Ser	Asp	Val	Trp	Ser	Phe	Gly
1055						1060					1065			
Val	Thr	Leu	His	Glu	Leu	Leu	Thr	Tyr	Cys	Asp	Ser	Asp	Ser	Ser
1070						1075					1080			
Pro	Met	Ala	Leu	Phe	Leu	Lys	Met	Ile	Gly	Pro	Thr	His	Gly	Gln
1085						1090					1095			
Met	Thr	Val	Thr	Arg	Leu	Val	Asn	Thr	Leu	Lys	Glu	Gly	Lys	Arg
1100						1105					1110			
Leu	Pro	Cys	Pro	Pro	Asn	Cys	Pro	Asp	Glu	Val	Tyr	Gln	Leu	Met
1115						1120					1125			
Arg	Lys	Cys	Trp	Glu	Phe	Gln	Pro	Ser	Asn	Arg	Thr	Ser	Phe	Gln
1130						1135					1140			
Asn	Leu	Ile	Glu	Gly	Phe	Glu	Ala	Leu	Leu	Lys				
1145						1150								

<210> 5  
 <211> 5449  
 <212> DNA  
 <213> 智人 (Homo sapiens)

[0084]

<400> 5  
 cacacaggaa ggagccgagt gggactttcc tctcgtgce tcccggctct gcccgccctt 60  
 cgaaggtcca gggtccttgc ccgctaggca agttgcactc atggcacctc caagtgaaga 120  
 gacgcccttg atcccicagc gttcatgcag cctcttctcc acggaggctg gtgcccttgc 180  
 tgtctctgct cccgctcggg gcccccggcc ccccacagcc ctatctttct cctttgggga 240  
 ccacttggct gaggacctgt cegtcaggc tgcacaggcc agcggcatcc tgccctgtga 300  
 ccactccctc tttgctctgg ccacggagga cctgtcctgc tggttccccc cgageacat 360  
 cttctcgtg gaggatgcca gcacccaagt cctgtgttac aggattcctt tttacttccc 420  
 caattggiti gggctggaga agtgcaccg cttcgggcta cgcaaggatt tggccagtgc 480  
 tatecttgac ctgccagtc tggagacct ctttgcacag caccgcagtg acctgtgtgag 540  
 tgggcgctc cccgtgggcc tcagtctcaa ggagcagggt gagtgtctca gcctggccgt 600  
 gttggacctg gcccgatgg cgcgagagca ggcccagcgg ccgggagagc tgetgaagac 660  
 tgtcagctac aaggcctgcc taaccccagg cctgcgcgac ctgatccagg gctgagctt 720  
 cgtgacgcgg agccgtattc ggaggacggt gcgcagagcc ctgcgccgag tggccgctg 780  
 ccaggcagac cggeactcgc tcatggcnaa gtacatcatg gacctggagc ggetgatcc 840  
 agccggggcc gccgagacct tccacttggg cctcccttgg gcccttgggt gccacgacgg 900  
 gctggggtg ctcccgctgg ctggtagcgg cggcatcgcc tggaccagag gagaacagga 960  
 ggtcctceng cccttctcgc actttccaga aatcgtagac attagcatca agcaggcccc 1020  
 gccgcttggc ccggccggag agcaaccgct ggteactggt accaggacag acaaccagat 1080  
 tttagagccc gatttcccag ggcctgcccga ggctctgtcg ttctgtgggc tctgtgacgg 1140

ctacttcagg	ctgaccacgg	actcccagca	cttcttctgc	aaggaggctg	caecgccgag	1200
gctgctggag	gaaglggccc	agcagtgcca	cggecccaic	acictggact	ttgccalcba	1260
caagctcaag	actgggggct	cacgtctctg	ctctatgttt	ctcegcogca	gcccacagga	1320
ctttgacage	ttccfctca	ctgtctgtgt	ccagaacccc	cttggctctg	attataaggg	1380
ctgcccate	eggccagccc	ccacaggaac	cttccctctg	gttggccca	gcccaccaca	1440
cagcagcttt	cgagagctcc	tgccaacctg	ctgggatggg	ggctgcacg	tagatggggt	1500
ggcagtgacc	ctcacttctt	gctgtatccc	cagacccaaa	gaaaagtcca	acctgatctg	1560
ggtccagaga	ggtcaagccc	caccacate	atccttgggt	cagcccacat	cccatacca	1620
gctgagtcag	atgacatttc	acaagatccc	tgtgacage	ctggagtggc	atgagaacct	1680
gggccatggg	tccttcacca	agatttaccg	ggctgtctgc	catgaggtgg	tgatgggga	1740
ggcccgaagg	acagaggtgc	tgtgaaggt	catggatgcc	aagcacaaga	actgcatgga	1800
gcaattctgt	gaagcagcga	gcctgaigag	ccaagtgtcg	taccggcate	tcgtctgtct	1860
ccaogccgtg	tgcattggctg	gagacagcac	catgggtcag	gaatttctac	acctgggggc	1920
catagacatg	tatctgcgaa	aacttgccca	cttgggtcca	gccagctgga	agctgcaggt	1980
ggtcaaacag	ctggccfacg	ccctcaacta	tctggaggac	aaaggccctg	cccattgcaa	2040
tgtctctgcc	cggaaaggtgc	tcctggctcg	ggaggggctt	gatgggagcc	cgcccttcct	2100
caagctgagt	gaccttgggg	tcagcccctg	tgtgttaagc	ctggagatgc	tcaccgacag	2160
gatcccctgg	gtggcccctg	agtgtctctg	ggagggcag	acaattagct	tggaagctga	2220
caagtggggc	ttcggcgcca	cggtctggga	agtgtttagt	ggcgtcacca	tgccatcag	2280
tgccttggat	cttgcctaga	aactccaatt	ttatgaggac	cgccagcage	tgcggccccc	2340
caagtggaca	gagctggccc	tgtgtattca	acagtgcatt	gcctatgagc	cggtccagag	2400
gccctccttc	cgagccgtca	ttcgtgaact	caatagcctc	atctcttcag	actatgagct	2460
ctctcagac	cccacacctg	gtgccctggc	acctcgtgat	ggctctgga	atgtgtccca	2520
gctctatgcc	tgccaaagcc	ccacgatctt	cgaggagaga	cacctcaagt	acatctcaca	2580
gctgggcaag	ggcaactttg	gcagcgtgga	gctgtgccgc	tatgaccctg	taggcgacaa	2640
tacaggtgcc	ctggtgcccg	fgaaacagct	gcagcacagc	ggcccagacc	agcagaggga	2700
ctttcagcgg	gagattcaga	tcctcaagcc	actgcacagt	gatttcattg	tcaagtatcg	2760
tgggtctcage	tatggcccgg	gccgccagag	cctgcccctg	gtcatggagt	acctgccacg	2820
cgctctctgt	cgcgacttcc	tgcagcggca	ccgcccctgc	ctcgaigcca	gcccctctct	2880
tctctatfcc	tccagatctt	gcaaggccat	ggagtaacct	ggctcccgcc	gctgcgtgca	2940
ccgcgacctg	gcccaccgaa	acatccctgt	ggagagcgag	gcacacgtca	agatcgtctg	3000
cttggcccta	gctaagctgc	tgcccttga	caaagaactac	tactgtgtcc	gcgagccagg	3060
ccagagcccc	attttcttgt	atgcccccca	atcctctctg	gacaacatct	tctctcgcca	3120
gtcagacgtc	tggagcttcc	gggtctctct	gtacagctc	ttacctact	gcgacaaaag	3180
ctgcagcccc	tcggccgagt	tcctgcccgt	gatgggatgt	gagcgggatg	tcccgcctct	3240
ctgcgcctc	tggaaactgc	tggaggagg	ccagagctg	cgggcctc	ctgcttcccc	3300
tgtgaggtt	cacgagctca	tgaagctgtg	ctggcccctt	agcccacagg	accggccate	3360
attcagcgc	ctggcccctc	agctggacat	gctgtggagc	ggaagccggg	ggtgtzagac	3420

[0085]

tcattgccttc actgctcaacc cagagggeaa acaccactcc ctgtcccttt eatagctcct	3480
gcccgcagac ctctggaita ggctctgtit gactggctgt gtgacctag gcccgagct	3540
gcccctctct gggcctcaga ggccttaiga gggctcteta cttcaggaac acecccatga	3600
cattgcaitt gggggggctc ccgtggcctg tagaatagcc tgtggccttt gcaatttgtt	3660
aaggttcaag acagaatggc atatgtgtca gtgggctct ctgagctctg gcccaagaa	3720
gcaaggaacc aaatttaaga ctctcgcatc tteccaaccc cttaagccct ggcccciga	3780
gtttcccttt ctgtctctct ctttttattt tttttatttt ttttttatt tttgagacag	3840
agccctgcctc tgttaaccag ggtggagtgc agtggigcga tctcgctca gtccaacctc	3900
tgcctccag gttcaagcga tctctctgcc tcagcctccc gactagctgg gattacaggt	3960
gtgcaccacc acaccggct aattttttt attttaata gagatgaggt taccatga	4020
tggccaggct gatctcgaac tcttaacctc aagtgtcct ccaccctag cctcccaag	4080
tgttgaata atagcatga gccactgac ccaggctttt tttttttaa atttattatt	4140
attattttta agagacagga tcttctacg ttgccagc tggtctttaa ctctgggct	4200
acagtatcc tctgcctta tctctctaaa tagctgggac tacagacct agtttgagt	4260
tctctgtctt atitcaatg gggacatca tctagctttt tttttttt ttttttgag	4320
acggagtctc gctctgtcgc ccaggctgga gtacagtgc gcaatctagg cteactgaa	4380
gctccgctc ctgggttca accattctct cgcctcagcc tccaagtag ctgggaetac	4440
aggcgccgc caccacacc gctaatttt ttgtatttt agtagagac gggttacc	4500
[0086] ttgttagcca ggaatggttc catctctga cctctgate tgcctctc ggctcccaa	4560
agtctggga ttacagcat gagccactgc gccggccct catgtagctt taaatgtatg	4620
atctgaette tctcccca tctctgttct tctggaggaa gccaaagca agagcagtg	4680
ctgggctgg gactctgctc tttagggag ccctgtatc tcttgggat cctgaaagg	4740
ggcagaaag gctgggtcc cagtcaccc taatgtatc tgagtgtct agggcttcag	4800
tttcccacc tgtccaatg gaccttctc gtcctcacc tacaagggc acaaaggat	4860
gacaccaaac ctggcaggaa ctttccagc aatcaaggga aggaaggca tctctgag	4920
agggaacagc atgccaagcg tgagaagct cagagtaag aggttaagag cccaagtatt	4980
ggagctaca gttttgcc ttcctatgag tctgacagt ggcaagtcc ttctctctc	5040
tgggtctcag ttctgtccc tgcanaatg tcagagctta cccttggct gtgcaggctc	5100
aactttctga ctggtagag gattctcat gcaggttaag cttctctgc tctctctac	5160
ctgcaaaact tttctgcc ttttgcctc ttgaaaact ctatccatc tctcaaaact	5220
ccagctacca catccttga gccctctc atataccccc actactactg tagcctgtc	5280
cttccctcca gccccactct gcccctggg ctggggaagt gctctgtcc agctgtctc	5340
cctgacctca ggttctctg gggctgggc tgaggctca gtacagagg ggctctgaa	5400
atgtttgtg actgaataaa ggaattcagt ggaaaaaaa aaaaaaaa	5449
<210> 6	
<211> 5053	
<212> DNA	
<213> 智人 (Homo sapiens)	

<400> 6		
tcagacagct	gaggccctgc	gcccagtcgc
gctgtctctc	gcccgcacc	ctcctcagcc
60		
ctgggcgcgc	gcacgcctgg	gccccgcggg
gctggccgc	tagcgagcct	gccggtcgac
120		
cccagccagc	gcagcgacgg	ggcctgcct
ggcccaggcg	cacacggaag	tgcctctctc
180		
tgaagtagct	ttgaaagta	gagaagaaaa
lccagtttgc	ttcttggaga	acactggaca
240		
gctgaataaa	tgcagtatct	aaataaataa
gaggactgca	atgccatggc	tittctgtct
300		
aaaaatgagg	gctccangaa	gactgaggtg
aacctggagg	ccccctgagc	aggggtggaa
360		
gtgatcttct	atctgtcga	caggagacc
ctccgctgc	gcagtggaga	gtacacagca
420		
gaggaactgt	gcctcgggc	tgccgtatct
ctcctcttgc	tcacaacctc	
480		
tttgcctctg	atgacgagaa	caccaagctc
tggtatgctc	caaatcgcac	catcaccttt
540		
gatgacaaga	tgctccctcg	gctccactac
cggaatgaggt	tctatttcac	caattggcat
600		
ggaaccaacg	acaatgagca	gtcagtgtgg
cgctcattctc	caaagaagca	gaaaaatggc
660		
tacgagaaaa	aaaagattcc	agatgcaacc
ctctccttgc	atgccagctc	actggagtat
720		
cigtctctc	agggacagta	tgatttggcg
aaatgcctgg	ctcctattcg	agaccccaag
780		
accgagcagg	atggacatga	tattgagaac
gagtgtctag	ggatggctgt	cttggccatc
840		
tcacactatg	ccaatgatga	gaagatgcag
tgcccagaac	tgcccgaagga	catcagctac
900		
aagcgatata	tccagaaac	attgaataag
tccatcagac	agaggaaact	tctcaccagg
960		
atcgggataa	ataatgtttt	caaggatttc
ctaaaggaat	ttaacaacaa	gaccatttgt
1020		
gacagcagcg	tgctccagca	tgacctgaag
tgaaataact	tggtctacct	gaaactttg
1080		
[0087]	acanaacatt	acggtgctga
aatatttgag	acttccatgt	tactgatttc
atcagaaaat		
1140		
gagatgaatt	ggtttcattc	gaatgacgg
gaaaacgttc	tctactacga	agtgatggcg
1200		
actgggaate	ttggaatcca	giggagccat
aaaccaaatg	ttgittctgt	tgaaaaggaa
1260		
aaaaataaac	tgaagcggaa	aaaactggaa
aataaacaca	agaaggatga	ggagaaaaac
1320		
aagatccggg	aagagtggaa	caatttttct
tacttccctg	aaatcactca	cattgtaata
1380		
aaggagtctg	tggtcagcat	taacaagcag
gacaacaaga	aaatggaact	gaagctctct
1440		
tcccacgagg	agcccttctg	ctttgtgtcc
ctggtagatg	gctacttccg	gctcacagca
1500		
gatgccatc	attacctctg	caccgacgtg
gccccccgt	tgatctcca	caacatacag
1560		
aatggctctc	atggtccaat	ctgtacagaa
taccgcaata	ataaatgtcg	gcaagaagga
1620		
agcgaggagg	ggaatgactg	gctgaggtgg
agctgcaccg	actttgacaa	catcctcatg
1680		
accgtacct	gcittgagaa	gctgagcag
gtgcagggtg	cccagaagca	gttcaagaac
1740		
tttcagatcg	aggtgcagaa	ggccctctac
agctctcagc	gttcggaccg	cagcttcccc
1800		
agcttggag	acctcatgag	ccactcaag
aagcagatcc	tgccgcagga	taacatcagc
1860		
tctatgctaa	aaactgtctg	ccagcccaag
ccccgagaaa	tctccaacct	gctggtggct
1920		
actaagaaga	cccaggagtg	gcagccctgc
taccctatga	gccagctgag	tttcgatcgg
1980		
atcctcaaga	aggatctggt	gcagggcag
caacttggga	gaggcacgag	aacacacatc
2040		
tattctgaga	ccctgatgga	ttacaaggat
gacgaaggaa	cttctgaaga	gaagaagata
2100		
aaagtgatcc	tcaaaagtctt	agaccctcagc
cacagggata	tttccctggc	cttctctgag
2160		
gcagccagca	tgaatgagaa	ggtctccac
aaacacatcg	tgtacctcta	tgccgtctgt
2220		

gtccgcgacg	tggagaatat	catggfaggaa	gagtttgtgg	aagggggctc	tctggatetc	2280
ttcatgcacc	ggaaaagcga	tgtccttacc	acaccatgga	aattcaaagt	tgccaaacag	2340
ctggccagtg	ccctgagcta	cttggaggat	aaagacctgg	tccatggaaa	tgtgtgtact	2400
aaaaaccfcc	tcttggcccc	tgagggcate	gacagtgagt	gtggcccatt	catcaagetc	2460
agtgaccccc	gcacccccat	tacgggtctg	tctaggcaag	aatgcattga	acgaaatccca	2520
tggattgetc	ctgagtgtgt	tgaggactcc	aagaacctga	gtgtggctgc	tgacaagtgg	2580
agctttggaa	ccacgctctg	ggaaatctgc	tacaatggcg	agatccccct	gaaagacaag	2640
acgctgattg	agaangagag	attctatgaa	agccgggtgca	ggccagtga	accatcatgt	2700
aaggagctgg	ctgacctcat	gaccctctgc	atgaactatg	accccaatca	gaggcctttc	2760
ttccgagcca	lcatgagaga	callaataag	cttgaagagc	agaatccaga	fatigtittca	2820
gaaaaaaaa	cageaaactga	agtggacccc	acacatittg	aaaagcgtt	cctaaagagg	2880
atccctgact	tgggagaggg	ccaatttggg	aaggttgagc	tctgcaggta	tgacccccgaa	2940
ggggacaata	cagggagca	ggfggctgtt	aaatctctga	agcctgagag	fggaggtaac	3000
cacatagctg	atctgaaaa	ggaaatcgag	atcttaagga	acctctatca	tgagaacatt	3060
gtgaagtaca	aaggaatctg	cacagaagac	ggaggaaatg	gtattaaact	catcatggaa	3120
ttttgctctt	cggaagcct	taangaatat	cttccaaaga	ataagsacaa	aataaacctc	3180
aaacagcage	taaaatctgc	cgctcagatt	tgttaaggga	tggactattt	gggttctcgg	3240
caatcagttc	accgggactt	ggcagcaaga	aatgtccttg	ttagagtgta	acaccaagtg	3300
aaaattggag	acttctgttt	aaccanaagca	attgaaaccg	ataaggagta	ttacaccgtc	3360
aaggatgacc	gggacagccc	tgtgttttgg	tatgctccag	aatgtttaat	gcaatctaaa	3420
ttttatattg	ccctcagctg	ctggcttttt	ggagtcactc	tgcattgagct	gctgacttae	3480
tgtgattcag	attctagctc	catggctttg	tctctgaaaa	tgataggecc	aaeccatggc	3540
cagatgacag	tcacaagaat	tgtgaatcag	ttaaagaag	gaaaacgctt	gcegtgcccc	3600
cctaactgtc	cagatgaggt	ttatcaactt	aigaggaaat	gctgggaatt	ccaaccatcc	3660
aatcggacaa	gctttcagaa	ccattattgaa	ggatttgaag	cactttttaa	ataagaagca	3720
tgaataacat	ttaaattcca	cagattatca	agtctctctc	ctgcaacaaa	tgeccaagtc	3780
attttttaa	aatttcta	gaaagaagtt	tgtgttctgt	ccaaaaagtc	actgaaactca	3840
tacttcagta	catatacatg	fataaggcac	actgtagtgc	ttaatatgtg	taaggacttc	3900
ctctttaaat	ttgtaccag	taacttagtg	acacataatg	acaacaaaa	tatttgaag	3960
cacttaagca	ctctctcttg	tggaaagaat	ataccaacct	ttcatctgge	tagttcacca	4020
tcacaactgc	attacaaaa	gggattttt	gaaaacgagg	agtigaccaa	aataataat	4080
gaagatgatt	gcttttccct	gctgccagct	gatctgaaat	gttttctctg	cacattaate	4140
atagataaag	aaagattgat	ggacttagcc	ctcaaatte	agtatclata	cagtactaga	4200
ccatgcattc	ttaaatatt	agafaccagg	tagtatafat	tgtttctgta	caaaaatgac	4260
tgtattctct	caccagtagg	acttaactt	tgtttctcca	gtggcttagc	tcctgttctt	4320
tgggtgact	actagcacc	attttgaga	aagctgtctc	tacatgggg	gatagctgtg	4380
gaatagataa	tttctgcat	gtaattctc	aagaactaag	cctgtgccag	tgtttcteta	4440
agcagtatac	ctttaatcag	aactcattcc	cagaacctgg	atgctattac	acatgctttt	4500

[0088]

	aagaaacgtc aatgtatata cttttataac tetaccacit tggggcaagc tatccagca	4560
	ctggttttga atgetgtatg caaccagtct gaataccaca tacgctgac tgttettaga	4620
	gggtttccat acitaccacc gatctacaag ggttgatccc tgtttttacc atcaatcacc	4680
	accctgtggt gcaaaccttg aaagaccgg ctagaggcac tatggacttc aggatccact	4740
	agacagtitt cagittgctt ggagtagct gggtaatcaa aaatgittag tcattgattc	4800
	aatgigaacg attacggctt ttatgaccaa gactctgaaa atctttttgt tatgetgitt	4860
	agtattcgtt tgatattggt acttttcacc tgttgagccc aaattcagga ttggttcagt	4920
	ggcagcaatg aagttgccat ttaaattigt tcatagccta caccaccaag gtcctcigt	4980
	caaacctgtg gccactctat atgcacttig ttactcttt atacaataa atatactaaa	5040
	gactttacat gca	5053
	<210> 7	
	<211> 21	
	<212> DNA	
	<213> 人工的	
	<220>	
	<223> JAK1_Seq_Exon14F	
	<400> 7	
	ctggcctgag acattcctat g	21
	<210> 8	
	<211> 26	
	<212> DNA	
[0089]	<213> 人工的	
	<220>	
	<223> JAK1_Seq_Exon14R	
	<400> 8	
	tgaaagagaa cacacttact ctccac	26
	<210> 9	
	<211> 23	
	<212> DNA	
	<213> 人工的	
	<220>	
	<223> JAK1_HRM_Exon14F	
	<400> 9	
	gcatgatgag acaggtctcc cac	23
	<210> 10	
	<211> 24	
	<212> DNA	
	<213> 人工的	
	<220>	
	<223> JAK1_HRM_Exon14R	
	<400> 10	
	gagaacacac ttactctcca cgtc	24
	<210> 11	
	<211> 21	
	<212> DNA	
	<213> 人工的	

	<220>		
	<223>	JAK2_Seq_Exon12F	
	<400>	11	
		cagcaagtat gatgagcaag c	21
	<210>	12	
	<211>	20	
	<212>	DNA	
	<213>	人工的	
	<220>		
	<223>	JAK2_Seq_Exon12R	
	<400>	12	
		acagatgctc tgagaaaggc	20
	<210>	13	
	<211>	20	
	<212>	DNA	
	<213>	人工的	
	<220>		
	<223>	JAK2_HRM_Exon12F	
	<400>	13	
		gctttctcac aagcatttgg	20
	<210>	14	
	<211>	20	
	<212>	DNA	
	<213>	人工的	
[0090]	<220>		
	<223>	JAK2_HRM_Exon12R	
	<400>	14	
		ggcattagaa agcctgtagt	20
	<210>	15	
	<211>	21	
	<212>	DNA	
	<213>	人工的	
	<220>		
	<223>	JAK3_Seq_Exon12F	
	<400>	15	
		gcaggctctgt gageacaaaa t	21
	<210>	16	
	<211>	19	
	<212>	DNA	
	<213>	人工的	
	<220>		
	<223>	JAK3_Seq_Exon12R	
	<400>	16	
		actgtctcca gccatgcaac	19
	<210>	17	
	<211>	19	
	<212>	DNA	
	<213>	人工的	
	<220>		
	<223>	JAK3_HRM_Exon12F	

---

	<400> 17 ccaccttecc cagteatte	19
	<210> 18	
	<211> 21	
[0091]	<212> DNA	
	<213> 人工的	
	<220>	
	<223> JAK3_HRM_Exon12R	
	<400> 18 gagatgccgg tacgacactt g	21

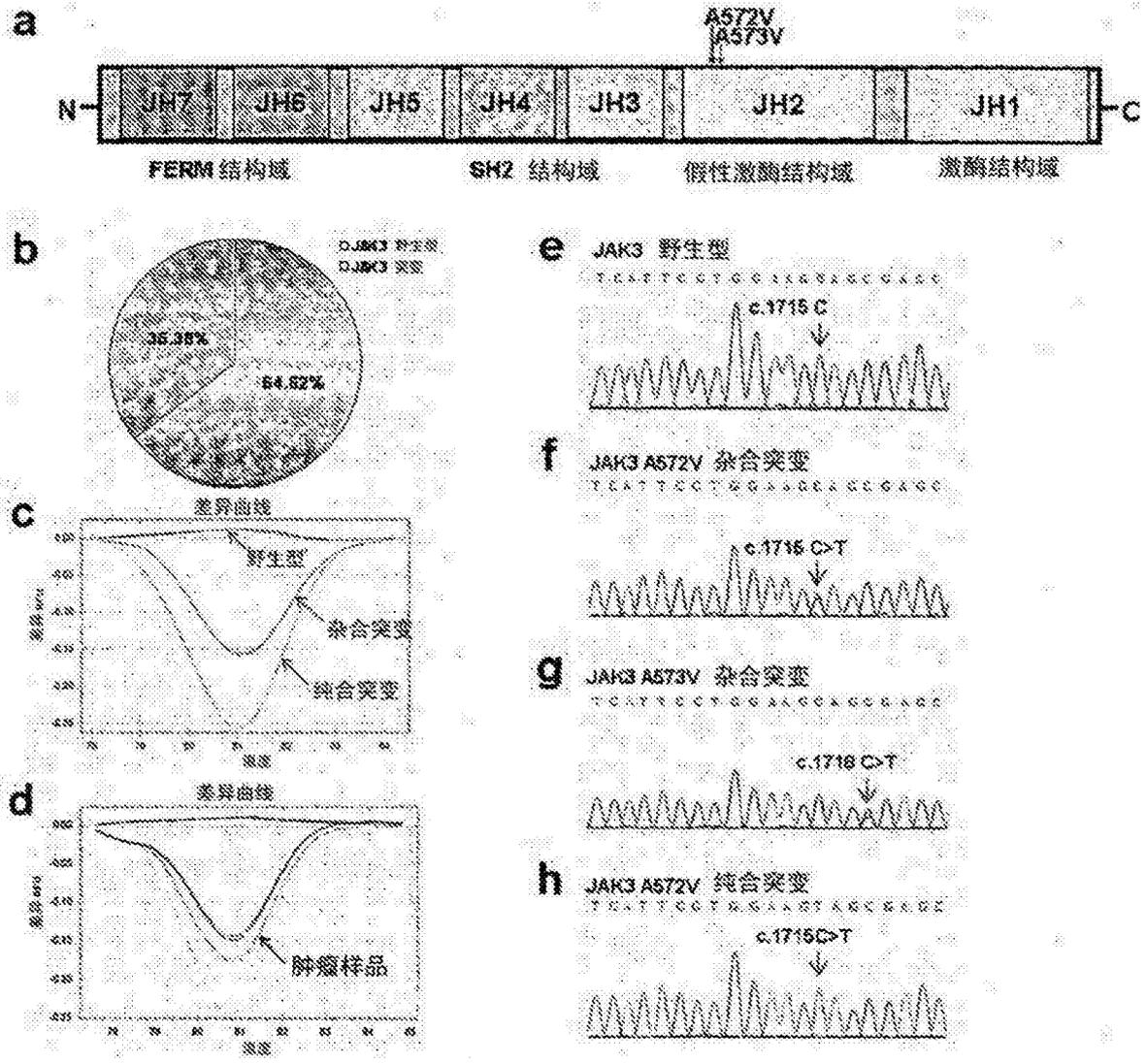


图1

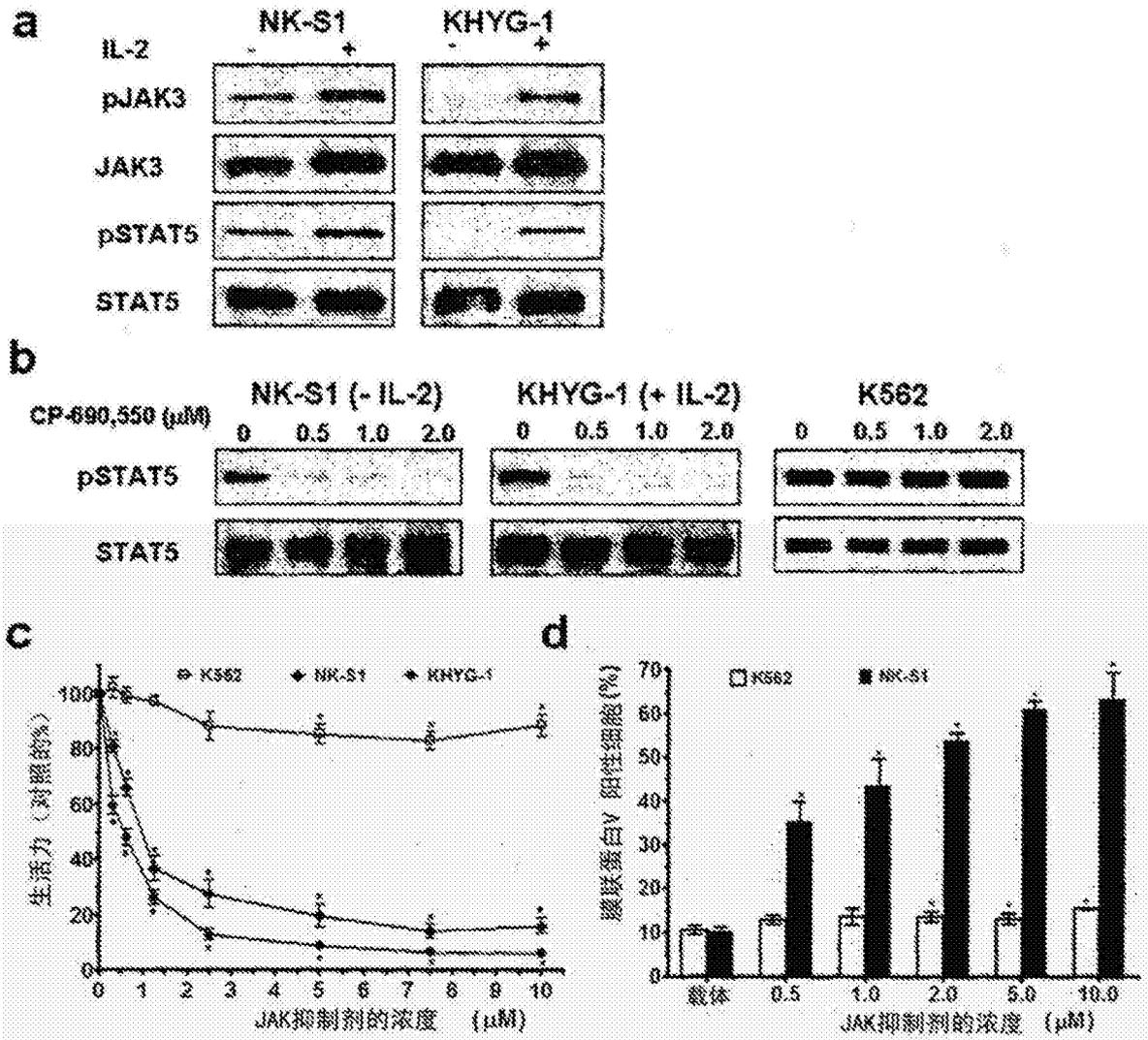


图2

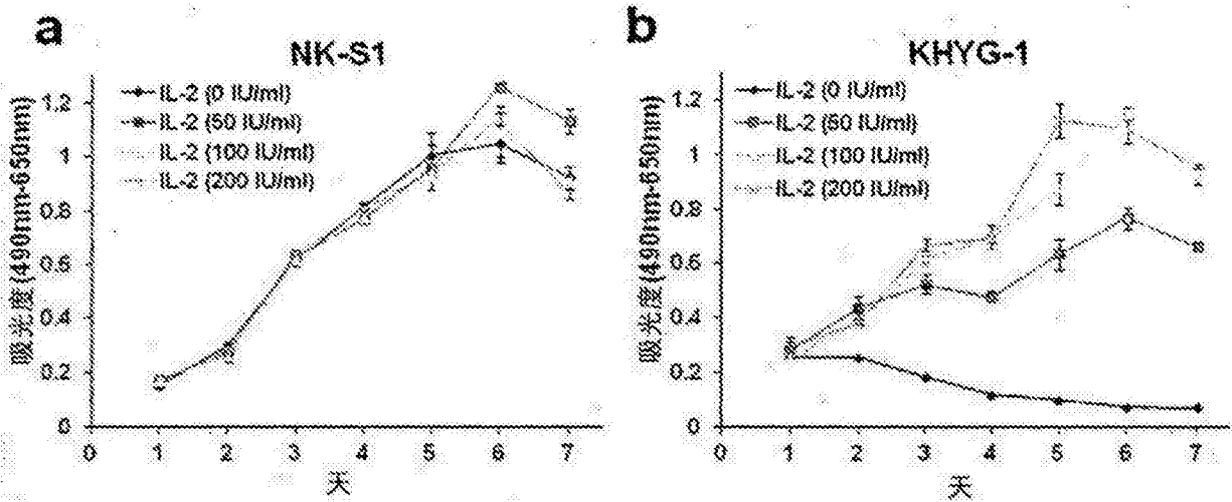


图3

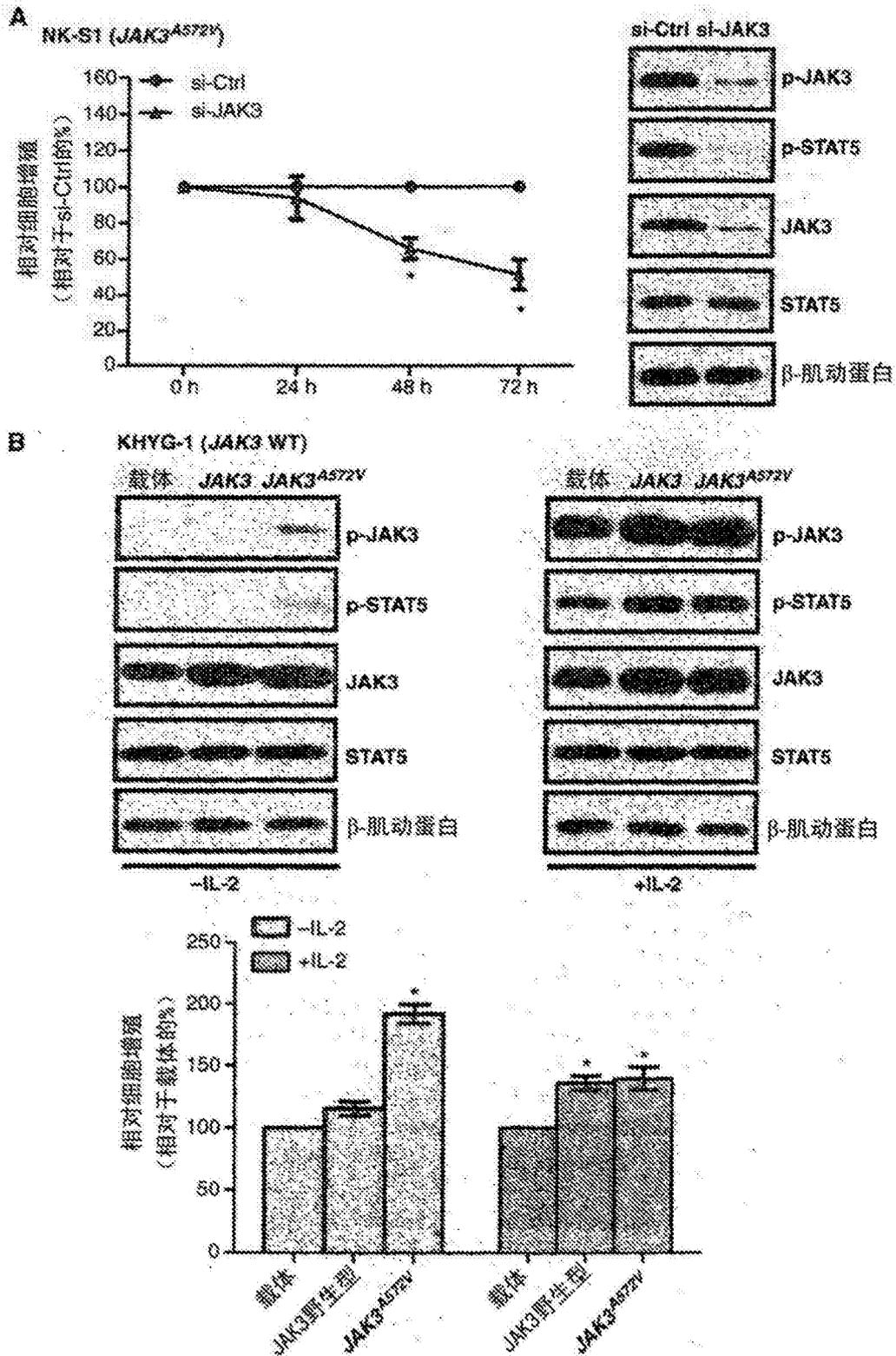


图4